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ANALYTICAL REPORT

PREPARED FOR

Attn: Lauren Dolginko
Roux Environmental Eng & Geology DPC
209 Shafter St
Islandia NY 11749

Generated 3/6/2026 3:19 PM

JOB DESCRIPTION

2828 W 28th Street

JOB NUMBER

460-311364-1

Eurofins Edison
777 New Durham Road
Edison NJ 08817

See page two for job notes and contact information.

my EOL

Eurofins Edison

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Compliance Statement

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Authorization



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Authorized for release by
Elizabeth J Flannery, Project Manager I
Elizabeth.Flannery@et.eurofinsus.com
732 549-3900

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Job Narrative
460-311364-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/14/2024 7:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3°C and 1.4°C.

Method 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS
Samples RXMW-1_P (460-311364-1), RXMW-5_P (460-311364-2) and FB_09132024_P (460-311364-3) were analyzed for Per- and Polyfluoroalkyl Substances by LC/MS/MS. The samples were prepared on 9/18/2024 and analyzed on 9/19/2024.

The low level continuing calibration verification (CCVL) and continuing calibration verification (CCV) associated with batch 240-627555 recovered outside of control limits for IDA compound(s). Section 14.3.3 of the finalized EPA 1633 states that the recovery of target analytes for the CCV(s) must be within 70 - 130%, unless the analyte is not of concern for a given project. Since target analytes associated with this IDA are within spec, data is reported.

Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: FB_09132024_P (460-311364-3). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Ion abundance ratios are outside criteria for the following sample: RXMW-5_P (460-311364-2). Quantitation is based on the theoretical ion abundance ratio; therefore, these analytes have been reported as an estimated maximum possible concentration (EMPC). The affected analytes have been flagged.

Sample Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
460-311364-1	RXMW-1_P	Water	09/13/24 12:05	09/14/24 19:15	New York
460-311364-2	RXMW-5_P	Water	09/13/24 13:30	09/14/24 19:15	New York
460-311364-3	FB_09132024_P	Water	09/13/24 12:20	09/14/24 19:15	New York

Detection Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Client Sample ID: RXMW-1_P
Lab Sample ID: 460-311364-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	11.3		6.25	1.67	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	7.35		3.13	0.78	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	11.4		1.56	0.39	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	10.5		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	377		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	4.78		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.61		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.67		1.56	0.40	ng/L	1		1633	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.81	J	1.56	0.39	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15.6		1.56	0.39	ng/L	1		1633	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.01	J	6.25	1.56	ng/L	1		1633	Total/NA

Client Sample ID: RXMW-5_P
Lab Sample ID: 460-311364-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.66	J	6.24	1.66	ng/L	1		1633	Total/NA
Perfluoropentanoic acid (PFPeA)	1.65	J	3.12	0.78	ng/L	1		1633	Total/NA
Perfluorohexanoic acid (PFHxA)	2.43		1.56	0.39	ng/L	1		1633	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.93		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorooctanoic acid (PFOA)	27.9		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorononanoic acid (PFNA)	2.33		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.56		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.09		1.56	0.40	ng/L	1		1633	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	2.33		1.56	0.39	ng/L	1		1633	Total/NA
Perfluorooctanesulfonic acid (PFOS)	32.9		1.56	0.39	ng/L	1		1633	Total/NA

Client Sample ID: FB_09132024_P
Lab Sample ID: 460-311364-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Edison

Method Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Method	Method Description	Protocol	Laboratory
1633	Per- and Polyfluoroalkyl Substances by LC/MS/MS	EPA	EET CLE
1633	Solid-Phase Extraction (SPE)	EPA	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client Sample ID: RXMW-1_P
Lab Sample ID: 460-311364-1

Date Collected: 09/13/24 12:05
Matrix: Water

Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**11.3**		6.25	1.67	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoropentanoic acid (PFPeA)	**7.35**		3.13	0.78	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorohexanoic acid (PFHxA)	**11.4**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoroheptanoic acid (PFHpA)	**10.5**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorooctanoic acid (PFOA)	**377**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorononanoic acid (PFNA)	**4.78**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorodecanoic acid (PFDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoroundecanoic acid (PFUnA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorododecanoic acid (PFDoA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorotridecanoic acid (PFTrDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorotetradecanoic acid (PFTeDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorobutanesulfonic acid (PFBS)	**6.61**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoropentanesulfonic acid (PFPeS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorohexanesulfonic acid (PFHxS)	**7.67**		1.56	0.40	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.81**	**J**	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorooctanesulfonic acid (PFOS)	**15.6**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorononanesulfonic acid (PFNS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorododecanesulfonic acid (PFDoS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorooctanesulfonamide (PFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.56	U	1.56	0.48	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.56	U	1.56	0.41	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	15.6	U	15.6	3.91	ng/L		09/18/24 10:06	09/19/24 00:33	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	15.6	U	15.6	3.91	ng/L		09/18/24 10:06	09/19/24 00:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	**3.01**	**J**	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.13	U	3.13	0.78	ng/L		09/18/24 10:06	09/19/24 00:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.13	U	3.13	0.95	ng/L		09/18/24 10:06	09/19/24 00:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.25	U	6.25	1.56	ng/L		09/18/24 10:06	09/19/24 00:33	1

Client Sample ID: RXMW-1_P
Lab Sample ID: 460-311364-1
Date Collected: 09/13/24 12:05
Matrix: Water
Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.13	U	3.13	0.78	ng/L		09/18/24 10:06	09/19/24 00:33	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	7.82	U	7.82	1.95	ng/L		09/18/24 10:06	09/19/24 00:33	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	39.1	U	39.1	9.77	ng/L		09/18/24 10:06	09/19/24 00:33	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	39.1	U	39.1	11.6	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluorodecanesulfonic acid (PFDS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.13	U	3.13	0.78	ng/L		09/18/24 10:06	09/19/24 00:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*94.9*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C5 PFPeA	*91.4*		*35 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C5 PFHxA	*75.7*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C4 PFHpA	*85.0*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C8 PFOA	*83.3*		*60 - 140*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C9 PFNA	*106*		*55 - 140*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C6 PFDA	*119*		*50 - 140*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C7 PFUnA	*108*		*30 - 140*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C2 PFTeDA	*85.3*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C3 PFBS	*112*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C3 PFHxS	*107*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C8 PFOS	*112*		*45 - 140*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C8 FOSA	*105*		*30 - 130*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d3-NMeFOSAA	*105*		*45 - 200*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d5-NEtFOSAA	*113*		*10 - 200*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
M2-4:2 FTS	*149*		*60 - 200*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
M2-6:2 FTS	*141*		*60 - 200*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
M2-8:2 FTS	*132*		*50 - 200*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C3 HFPO-DA	*80.8*		*25 - 160*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d7-N-MeFOSE-M	*98.8*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d9-N-EtFOSE-M	*89.5*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d5-NEtPFOSA	*71.0*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
d3-NMePFOSA	*80.6*		*15 - 130*	*09/18/24 10:06*	*09/19/24 00:33*	*1*
13C2-PFDoDA	*105*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:33*	*1*

Client Sample ID: RXMW-5_P
Lab Sample ID: 460-311364-2
Date Collected: 09/13/24 13:30
Matrix: Water
Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.66**	**J**	6.24	1.66	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoropentanoic acid (PFPeA)	**1.65**	**J**	3.12	0.78	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorohexanoic acid (PFHxA)	**2.43**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoroheptanoic acid (PFHpA)	**1.93**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorooctanoic acid (PFOA)	**27.9**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorononanoic acid (PFNA)	**2.33**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorodecanoic acid (PFDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoroundecanoic acid (PFUnA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1

Client Sample ID: RXMW-5_P
Lab Sample ID: 460-311364-2

Date Collected: 09/13/24 13:30
Matrix: Water

Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorotridecanoic acid (PFTrDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorotetradecanoic acid (PFTeDA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorobutanesulfonic acid (PFBS)	**3.56**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoropentanesulfonic acid (PFPeS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorohexanesulfonic acid (PFHxS)	**3.09**		1.56	0.40	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoroheptanesulfonic acid (PFHpS)	**2.33**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorooctanesulfonic acid (PFOS)	**32.9**		1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorononanesulfonic acid (PFNS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorododecanesulfonic acid (PFDoS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorooctanesulfonamide (PFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.56	U	1.56	0.48	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.56	U	1.56	0.41	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	15.6	U	15.6	3.90	ng/L		09/18/24 10:06	09/19/24 00:47	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	15.6	U	15.6	3.90	ng/L		09/18/24 10:06	09/19/24 00:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.12	U	3.12	0.78	ng/L		09/18/24 10:06	09/19/24 00:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.12	U	3.12	0.95	ng/L		09/18/24 10:06	09/19/24 00:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.24	U	6.24	1.56	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.12	U	3.12	0.78	ng/L		09/18/24 10:06	09/19/24 00:47	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	7.80	U	7.80	1.95	ng/L		09/18/24 10:06	09/19/24 00:47	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	39.0	U	39.0	9.75	ng/L		09/18/24 10:06	09/19/24 00:47	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	39.0	U	39.0	11.6	ng/L		09/18/24 10:06	09/19/24 00:47	1
Perfluorodecanesulfonic acid (PFDS)	1.56	U	1.56	0.39	ng/L		09/18/24 10:06	09/19/24 00:47	1

Client Sample ID: RXMW-5_P
Lab Sample ID: 460-311364-2

Date Collected: 09/13/24 13:30
Matrix: Water
Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.12	U	3.12	0.78	ng/L		09/18/24 10:06	09/19/24 00:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*98.7*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C5 PFPeA	*99.6*		*35 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C5 PFHxA	*85.5*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C4 PFHpA	*97.7*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C8 PFOA	*88.3*		*60 - 140*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C9 PFNA	*109*		*55 - 140*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C6 PFDA	*107*		*50 - 140*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C7 PFUnA	*101*		*30 - 140*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C2 PFTeDA	*78.2*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C3 PFBS	*121*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C3 PFHxS	*111*		*55 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C8 PFOS	*115*		*45 - 140*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C8 FOSA	*109*		*30 - 130*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d3-NMeFOSAA	*103*		*45 - 200*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d5-NEtFOSAA	*107*		*10 - 200*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
M2-4:2 FTS	*142*		*60 - 200*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
M2-6:2 FTS	*149*		*60 - 200*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
M2-8:2 FTS	*142*		*50 - 200*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C3 HFPO-DA	*84.9*		*25 - 160*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d7-N-MeFOSE-M	*102*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d9-N-EtFOSE-M	*91.9*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d5-NEtPFOSA	*71.3*		*10 - 130*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
d3-NMePFOSA	*80.0*		*15 - 130*	*09/18/24 10:06*	*09/19/24 00:47*	*1*
13C2-PFDoDA	*93.5*		*10 - 150*	*09/18/24 10:06*	*09/19/24 00:47*	*1*

Client Sample ID: FB_09132024_P
Lab Sample ID: 460-311364-3

Date Collected: 09/13/24 12:20
Matrix: Water
Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.75	U	6.75	1.80	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoropentanoic acid (PFPeA)	3.38	U	3.38	0.84	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorohexanoic acid (PFHxA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoroheptanoic acid (PFHpA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorooctanoic acid (PFOA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorononanoic acid (PFNA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorodecanoic acid (PFDA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoroundecanoic acid (PFUnA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorododecanoic acid (PFDoA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorotridecanoic acid (PFTrDA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorotetradecanoic acid (PFTeDA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorobutanesulfonic acid (PFBS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoropentanesulfonic acid (PFPeS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorohexanesulfonic acid (PFHxS)	1.69	U	1.69	0.44	ng/L		09/18/24 10:06	09/19/24 01:00	1

Client Sample ID: FB_09132024_P
Lab Sample ID: 460-311364-3

Date Collected: 09/13/24 12:20
Matrix: Water

Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorooctanesulfonic acid (PFOS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorononanesulfonic acid (PFNS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorododecanesulfonic acid (PFDoS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorooctanesulfonamide (PFOSA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.69	U	1.69	0.52	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.69	U	1.69	0.44	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	16.9	U	16.9	4.22	ng/L		09/18/24 10:06	09/19/24 01:00	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	16.9	U	16.9	4.22	ng/L		09/18/24 10:06	09/19/24 01:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.38	U	3.38	0.84	ng/L		09/18/24 10:06	09/19/24 01:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.38	U	3.38	1.03	ng/L		09/18/24 10:06	09/19/24 01:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.75	U	6.75	1.69	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.38	U	3.38	0.84	ng/L		09/18/24 10:06	09/19/24 01:00	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.44	U	8.44	2.11	ng/L		09/18/24 10:06	09/19/24 01:00	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	42.2	U	42.2	10.6	ng/L		09/18/24 10:06	09/19/24 01:00	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	42.2	U	42.2	12.6	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluorodecanesulfonic acid (PFDS)	1.69	U	1.69	0.42	ng/L		09/18/24 10:06	09/19/24 01:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.38	U	3.38	0.84	ng/L		09/18/24 10:06	09/19/24 01:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*124*		*10 - 130*	*09/18/24 10:06*	*09/19/24 01:00*	*1*
13C5 PFPeA	*109*		*35 - 150*	*09/18/24 10:06*	*09/19/24 01:00*	*1*
13C5 PFHxA	*101*		*55 - 150*	*09/18/24 10:06*	*09/19/24 01:00*	*1*
13C4 PFHpA	*110*		*55 - 150*	*09/18/24 10:06*	*09/19/24 01:00*	*1*
13C8 PFOA	*113*		*60 - 140*	*09/18/24 10:06*	*09/19/24 01:00*	*1*
13C9 PFNA	*129*		*55 - 140*	*09/18/24 10:06*	*09/19/24 01:00*	*1*

Client Sample ID: FB_09132024_P
Lab Sample ID: 460-311364-3

Date Collected: 09/13/24 12:20
Matrix: Water

Date Received: 09/14/24 19:15

Method: EPA 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	141	*	50 - 140	09/18/24 10:06	09/19/24 01:00	1
13C7 PFUnA	133		30 - 140	09/18/24 10:06	09/19/24 01:00	1
13C2 PFTeDA	92.9		10 - 130	09/18/24 10:06	09/19/24 01:00	1
13C3 PFBS	132		55 - 150	09/18/24 10:06	09/19/24 01:00	1
13C3 PFHxS	130		55 - 150	09/18/24 10:06	09/19/24 01:00	1
13C8 PFOS	134		45 - 140	09/18/24 10:06	09/19/24 01:00	1
13C8 FOSA	140	*	30 - 130	09/18/24 10:06	09/19/24 01:00	1
d3-NMeFOSAA	137		45 - 200	09/18/24 10:06	09/19/24 01:00	1
d5-NEtFOSAA	144		10 - 200	09/18/24 10:06	09/19/24 01:00	1
M2-4:2 FTS	202	*	60 - 200	09/18/24 10:06	09/19/24 01:00	1
M2-6:2 FTS	186		60 - 200	09/18/24 10:06	09/19/24 01:00	1
M2-8:2 FTS	178		50 - 200	09/18/24 10:06	09/19/24 01:00	1
13C3 HFPO-DA	107		25 - 160	09/18/24 10:06	09/19/24 01:00	1
d7-N-MeFOSE-M	131		10 - 150	09/18/24 10:06	09/19/24 01:00	1
d9-N-EtFOSE-M	122		10 - 150	09/18/24 10:06	09/19/24 01:00	1
d5-NEtPFOSA	95.9		10 - 130	09/18/24 10:06	09/19/24 01:00	1
d3-NMePFOSA	105		15 - 130	09/18/24 10:06	09/19/24 01:00	1
13C2-PFDoDA	113		10 - 150	09/18/24 10:06	09/19/24 01:00	1

Isotope Dilution Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA	13C7PUA
Lab Sample ID	Client Sample ID	(10-130)	(35-150)	(55-150)	(55-150)	(60-140)	(55-140)	(50-140)	(30-140)
460-311364-1	RXMW-1_P	94.9	91.4	75.7	85.0	83.3	106	119	108
460-311364-2	RXMW-5_P	98.7	99.6	85.5	97.7	88.3	109	107	101
460-311364-2 DU	RXMW-5_P	104	105	86.5	104	91.7	120	116	108
460-311364-3	FB_09132024_P	124	109	101	110	113	129	141 *	133
MB 240-627485/1-A	Method Blank	98.6	93.7	86.5	89.9	91.7	107	113	105

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFTDA	C3PFBS	C3PFHS	C8PFOS	PFOSA	d3NMFOS	d5NEFOS	M242FTS
Lab Sample ID	Client Sample ID	(10-130)	(55-150)	(55-150)	(45-140)	(30-130)	(45-200)	(10-200)	(60-200)
460-311364-1	RXMW-1_P	85.3	112	107	112	105	105	113	149
460-311364-2	RXMW-5_P	78.2	121	111	115	109	103	107	142
460-311364-2 DU	RXMW-5_P	80.4	136	118	120	111	108	114	155
460-311364-3	FB_09132024_P	92.9	132	130	134	140 *	137	144	202 *
MB 240-627485/1-A	Method Blank	74.1	109	107	116	113	110	122	158

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M262FTS	M282FTS	HFPODA	NMFM	NEFM	d5NPFSA	d3NMFSA	PFDoDA
Lab Sample ID	Client Sample ID	(60-200)	(50-200)	(25-160)	(10-150)	(10-150)	(10-130)	(15-130)	(10-150)
460-311364-1	RXMW-1_P	141	132	80.8	98.8	89.5	71.0	80.6	105
460-311364-2	RXMW-5_P	149	142	84.9	102	91.9	71.3	80.0	93.5
460-311364-2 DU	RXMW-5_P	151	150	87.3	107	88.8	75.6	79.8	107
460-311364-3	FB_09132024_P	186	178	107	131	122	95.9	105	113
MB 240-627485/1-A	Method Blank	150	143	91.6	112	92.5	76.6	79.1	96.6

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA
PFDoDA = 13C2-PFDoDA

Isotope Dilution Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA	13C7PUA
Lab Sample ID	Client Sample ID	(10-130)	(40-150)	(40-150)	(40-150)	(30-140)	(30-140)	(20-140)	(20-140)
LCS 240-627485/3-A	Lab Control Sample	91.1	84.1	79.2	81.5	83.9	103	107	96.0
LLCS 240-627485/2-A	Lab Control Sample	91.4	81.5	77.5	81.6	86.5	97.1	110	100

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFTDA	C3PFBS	C3PFHS	C8PFOS	PFOSA	d3NMFOS	d5NEFOS	M242FTS
Lab Sample ID	Client Sample ID	(10-130)	(25-150)	(25-150)	(20-140)	(10-130)	(10-200)	(10-200)	(25-200)
LCS 240-627485/3-A	Lab Control Sample	72.2	97.3	101	106	98.0	107	108	137
LLCS 240-627485/2-A	Lab Control Sample	73.2	103	96.8	104	103	108	115	142

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M262FTS	M282FTS	HFPODA	NMFM	NEFM	d5NPFSA	d3NMFSA	PFDoDA
Lab Sample ID	Client Sample ID	(25-200)	(25-200)	(25-160)	(10-150)	(10-150)	(10-130)	(10-130)	(10-150)
LCS 240-627485/3-A	Lab Control Sample	125	126	84.7	97.4	86.5	69.8	75.3	93.7
LLCS 240-627485/2-A	Lab Control Sample	138	124	77.2	100	95.8	73.2	75.3	92.4

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA
PFDoDA = 13C2-PFDoDA

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 240-627485/1-A
Matrix: Water
Analysis Batch: 627555

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 627485

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	8.00	U	8.00	2.13	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoropentanoic acid (PFPeA)	4.00	U	4.00	1.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorohexanoic acid (PFHxA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorotridecanoic acid (PFTrDA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorotetradecanoic acid (PFTeDA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoropentanesulfonic acid (PFPeS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.52	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoroheptanesulfonic acid (PFHpS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorononanesulfonic acid (PFNS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorododecanesulfonic acid (PFDoS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorooctanesulfonamide (PFOSA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.62	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.52	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	U	20.0	5.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	U	20.0	5.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	U	4.00	1.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	U	4.00	1.22	ng/L		09/18/24 10:06	09/18/24 23:52	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	8.00	U	8.00	2.00	ng/L		09/18/24 10:06	09/18/24 23:52	1

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 240-627485/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	4.00	U	4.00	1.00	ng/L		09/18/24 10:06	09/18/24 23:52	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	10.0	U	10.0	2.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50.0	U	50.0	12.5	ng/L		09/18/24 10:06	09/18/24 23:52	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50.0	U	50.0	14.9	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.50	ng/L		09/18/24 10:06	09/18/24 23:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	U	4.00	1.00	ng/L		09/18/24 10:06	09/18/24 23:52	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*98.6*		*10 - 130*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C5 PFPeA	*93.7*		*35 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C5 PFHxA	*86.5*		*55 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C4 PFHpA	*89.9*		*55 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C8 PFOA	*91.7*		*60 - 140*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C9 PFNA	*107*		*55 - 140*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C6 PFDA	*113*		*50 - 140*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C7 PFUnA	*105*		*30 - 140*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C2 PFTeDA	*74.1*		*10 - 130*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C3 PFBS	*109*		*55 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C3 PFHxS	*107*		*55 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C8 PFOS	*116*		*45 - 140*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C8 FOSA	*113*		*30 - 130*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d3-NMeFOSAA	*110*		*45 - 200*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d5-NEtFOSAA	*122*		*10 - 200*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
M2-4:2 FTS	*158*		*60 - 200*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
M2-6:2 FTS	*150*		*60 - 200*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
M2-8:2 FTS	*143*		*50 - 200*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C3 HFPO-DA	*91.6*		*25 - 160*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d7-N-MeFOSE-M	*112*		*10 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d9-N-EtFOSE-M	*92.5*		*10 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d5-NEtPFOSA	*76.6*		*10 - 130*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
d3-NMePFOSA	*79.1*		*15 - 130*	*09/18/24 10:06*	*09/18/24 23:52*	*1*
13C2-PFDoDA	*96.6*		*10 - 150*	*09/18/24 10:06*	*09/18/24 23:52*	*1*

Lab Sample ID: LCS 240-627485/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	100	107.3		ng/L		107	58 - 148
Perfluoropentanoic acid (PFPeA)	50.0	53.80		ng/L		108	54 - 152
Perfluorohexanoic acid (PFHxA)	25.0	28.65		ng/L		115	55 - 152
Perfluoroheptanoic acid (PFHpA)	25.0	28.18		ng/L		113	54 - 154
Perfluorooctanoic acid (PFOA)	25.0	29.31		ng/L		117	52 - 161
Perfluorononanoic acid (PFNA)	25.0	25.77		ng/L		103	59 - 149
Perfluorodecanoic acid (PFDA)	25.0	26.59		ng/L		106	52 - 147

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 240-627485/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	25.0	27.26		ng/L		109	48 - 159
Perfluorododecanoic acid (PFDoA)	25.0	23.56		ng/L		94	64 - 142
Perfluorotridecanoic acid (PFTrDA)	25.0	23.41		ng/L		94	49 - 148
Perfluorotetradecanoic acid (PFTeDA)	25.0	26.17		ng/L		105	47 - 161
Perfluorobutanesulfonic acid (PFBS)	22.1	24.73		ng/L		112	62 - 144
Perfluoropentanesulfonic acid (PFPeS)	23.5	27.11		ng/L		116	59 - 151
Perfluorohexanesulfonic acid (PFHxS)	22.8	25.63		ng/L		113	57 - 146
Perfluoroheptanesulfonic acid (PFHpS)	23.8	25.75		ng/L		108	55 - 152
Perfluorooctanesulfonic acid (PFOS)	23.2	22.89		ng/L		99	58 - 149
Perfluorononanesulfonic acid (PFNS)	24.0	23.47		ng/L		98	52 - 148
Perfluorododecanesulfonic acid (PFDoS)	24.2	17.98		ng/L		74	36 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	93.4	95.35		ng/L		102	67 - 146
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	94.8	103.5		ng/L		109	61 - 151
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	95.8	100.9		ng/L		105	63 - 152
Perfluorooctanesulfonamide (PFOSA)	25.0	29.44		ng/L		118	61 - 148
N-methylperfluorooctane sulfonamide (NMeFOSA)	25.0	29.72		ng/L		119	63 - 145
N-ethylperfluorooctane sulfonamide (NEtFOSA)	25.0	30.74		ng/L		123	65 - 139
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	27.27		ng/L		109	58 - 144
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	25.91		ng/L		104	59 - 146
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	250	257.2		ng/L		103	71 - 136
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	250	277.1		ng/L		111	69 - 137
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	100	101.3		ng/L		101	63 - 144
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	94.2	106.4		ng/L		113	68 - 146
Perfluoro-4-methoxybutanoic acid (PFMBA)	50.0	50.54		ng/L		101	55 - 148
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50.0	61.26		ng/L		123	48 - 161
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	93.2	91.23		ng/L		98	56 - 156
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	94.2	88.02		ng/L		93	46 - 156
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.5	51.10		ng/L		115	56 - 151

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 240-627485/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropropylpropanoic acid (3:3 FTCA)	125	115.7		ng/L		93	62 - 129
3-Perfluoropentylpropanoic acid (5:3 FTCA)	625	537.8		ng/L		86	63 - 134
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	625	598.2		ng/L		96	50 - 138
Perfluorodecanesulfonic acid (PFDS)	24.1	23.20		ng/L		96	51 - 147
Perfluoro-3-methoxypropanoic acid (PFMPA)	50.0	50.13		ng/L		100	51 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*91.1*		*10 - 130*
13C5 PFPeA	*84.1*		*40 - 150*
13C5 PFHxA	*79.2*		*40 - 150*
13C4 PFHpA	*81.5*		*40 - 150*
13C8 PFOA	*83.9*		*30 - 140*
13C9 PFNA	*103*		*30 - 140*
13C6 PFDA	*107*		*20 - 140*
13C7 PFUnA	*96.0*		*20 - 140*
13C2 PFTeDA	*72.2*		*10 - 130*
13C3 PFBS	*97.3*		*25 - 150*
13C3 PFHxS	*101*		*25 - 150*
13C8 PFOS	*106*		*20 - 140*
13C8 FOSA	*98.0*		*10 - 130*
d3-NMeFOSAA	*107*		*10 - 200*
d5-NEtFOSAA	*108*		*10 - 200*
M2-4:2 FTS	*137*		*25 - 200*
M2-6:2 FTS	*125*		*25 - 200*
M2-8:2 FTS	*126*		*25 - 200*
13C3 HFPO-DA	*84.7*		*25 - 160*
d7-N-MeFOSE-M	*97.4*		*10 - 150*
d9-N-EtFOSE-M	*86.5*		*10 - 150*
d5-NEtPFOSA	*69.8*		*10 - 130*
d3-NMePFOSA	*75.3*		*10 - 130*
13C2-PFDoDA	*93.7*		*10 - 150*

Lab Sample ID: LLCS 240-627485/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.073		ng/L		101	44 - 157
Perfluoropentanoic acid (PFPeA)	4.00	4.221		ng/L		106	57 - 148
Perfluorohexanoic acid (PFHxA)	2.00	2.471		ng/L		124	62 - 149
Perfluoroheptanoic acid (PFHpA)	2.00	2.136		ng/L		107	56 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.189		ng/L		109	57 - 161
Perfluorononanoic acid (PFNA)	2.00	2.207		ng/L		110	53 - 157
Perfluorodecanoic acid (PFDA)	2.00	2.360		ng/L		118	43 - 158

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 240-627485/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	1.871	J	ng/L		94	50 - 155
Perfluorododecanoic acid (PFDoA)	2.00	1.914	J	ng/L		96	60 - 141
Perfluorotridecanoic acid (PFTrDA)	2.00	1.912	J	ng/L		96	52 - 140
Perfluorotetradecanoic acid (PFTeDA)	2.00	2.468		ng/L		123	52 - 156
Perfluorobutanesulfonic acid (PFBS)	1.77	1.837	J	ng/L		104	63 - 145
Perfluoropentanesulfonic acid (PFPeS)	1.88	2.062		ng/L		110	58 - 144
Perfluorohexanesulfonic acid (PFHxS)	1.82	2.090		ng/L		115	44 - 158
Perfluoroheptanesulfonic acid (PFHpS)	1.90	1.940	J	ng/L		102	51 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.874	J	ng/L		101	43 - 162
Perfluorononanesulfonic acid (PFNS)	1.92	1.870	J	ng/L		97	46 - 151
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.564	J	ng/L		81	30 - 138
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.47	7.596	J	ng/L		102	52 - 158
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.58	7.867	J	ng/L		104	48 - 158
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.66	8.544		ng/L		111	46 - 165
Perfluorooctanesulfonamide (PFOSA)	2.00	2.346		ng/L		117	47 - 163
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.00	2.425		ng/L		121	54 - 155
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	2.106		ng/L		105	49 - 156
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.047		ng/L		102	32 - 160
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.093		ng/L		105	51 - 154
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.64		ng/L		108	56 - 151
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.28	J	ng/L		96	60 - 147
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	8.00	8.241		ng/L		103	58 - 154
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.54	8.827		ng/L		117	61 - 148
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.244		ng/L		106	49 - 154
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.446		ng/L		111	47 - 160
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	7.46	7.366	J	ng/L		99	44 - 167
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	7.54	7.458	J	ng/L		99	36 - 158
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.56	3.842	J	ng/L		108	56 - 144

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 240-627485/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			10.0	9.412	J	ng/L		94	32 - 161		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			50.0	41.83	J	ng/L		84	39 - 156		
3-Perfluoroheptylpropanoic acid (7:3 FTCA)			50.0	47.94	J	ng/L		96	36 - 149		
Perfluorodecanesulfonic acid (PFDS)			1.93	1.962	J	ng/L		102	50 - 144		
Perfluoro-3-methoxypropanoic acid (PFMPA)			4.00	3.969	J	ng/L		99	48 - 150		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C4 PFBA	*91.4*		*10 - 130*
13C5 PFPeA	*81.5*		*40 - 150*
13C5 PFHxA	*77.5*		*40 - 150*
13C4 PFHpA	*81.6*		*40 - 150*
13C8 PFOA	*86.5*		*30 - 140*
13C9 PFNA	*97.1*		*30 - 140*
13C6 PFDA	*110*		*20 - 140*
13C7 PFUnA	*100*		*20 - 140*
13C2 PFTeDA	*73.2*		*10 - 130*
13C3 PFBS	*103*		*25 - 150*
13C3 PFHxS	*96.8*		*25 - 150*
13C8 PFOS	*104*		*20 - 140*
13C8 FOSA	*103*		*10 - 130*
d3-NMeFOSAA	*108*		*10 - 200*
d5-NEtFOSAA	*115*		*10 - 200*
M2-4:2 FTS	*142*		*25 - 200*
M2-6:2 FTS	*138*		*25 - 200*
M2-8:2 FTS	*124*		*25 - 200*
13C3 HFPO-DA	*77.2*		*25 - 160*
d7-N-MeFOSE-M	*100*		*10 - 150*
d9-N-EtFOSE-M	*95.8*		*10 - 150*
d5-NEtPFOSA	*73.2*		*10 - 130*
d3-NMePFOSA	*75.3*		*10 - 130*
13C2-PFDoDA	*92.4*		*10 - 150*

Lab Sample ID: 460-311364-2 DU
Client Sample ID: RXMW-5_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	2.66	J		3.141	J	ng/L				16	30
Perfluoropentanoic acid (PFPeA)	1.65	J		1.735	J	ng/L				5	30
Perfluorohexanoic acid (PFHxA)	2.43			2.220		ng/L				9	30
Perfluoroheptanoic acid (PFHpA)	1.93			1.645	J	ng/L				16	30
Perfluorooctanoic acid (PFOA)	27.9			23.34		ng/L				18	30
Perfluorononanoic acid (PFNA)	2.33			2.301		ng/L				1	30
Perfluorodecanoic acid (PFDA)	1.56	U		1.71	U	ng/L				NC	30

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 460-311364-2 DU
Matrix: Water
Analysis Batch: 627555

Client Sample ID: RXMW-5_P
Prep Type: Total/NA
Prep Batch: 627485

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	1.56	U		1.71	U	ng/L				NC	30
Perfluorododecanoic acid (PFDoA)	1.56	U		1.71	U	ng/L				NC	30
Perfluorotridecanoic acid (PFTrDA)	1.56	U		1.71	U	ng/L				NC	30
Perfluorotetradecanoic acid (PFTeDA)	1.56	U		1.71	U	ng/L				NC	30
Perfluorobutanesulfonic acid (PFBS)	3.56			3.095		ng/L				14	30
Perfluoropentanesulfonic acid (PFPeS)	1.56	U		1.71	U	ng/L				NC	30
Perfluorohexanesulfonic acid (PFHxS)	3.09			3.005		ng/L				3	30
Perfluoroheptanesulfonic acid (PFHpS)	2.33			2.518		ng/L				8	30
Perfluorooctanesulfonic acid (PFOS)	32.9			33.55		ng/L				2	30
Perfluorononanesulfonic acid (PFNS)	1.56	U		1.71	U	ng/L				NC	30
Perfluorododecanesulfonic acid (PFDoS)	1.56	U		1.71	U	ng/L				NC	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.24	U		6.85	U	ng/L				NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.24	U		6.85	U	ng/L				NC	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.24	U		6.85	U	ng/L				NC	30
Perfluorooctanesulfonamide (PFOSA)	1.56	U		1.71	U	ng/L				NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.56	U		1.71	U	ng/L				NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.56	U		1.71	U	ng/L				NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.56	U		1.71	U	ng/L				NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.56	U		1.71	U	ng/L				NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	15.6	U		17.1	U	ng/L				NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	15.6	U		17.1	U	ng/L				NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.24	U		6.85	U	ng/L				NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.24	U		6.85	U	ng/L				NC	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.12	U		3.43	U	ng/L				NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.12	U		3.43	U	ng/L				NC	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.24	U		6.85	U	ng/L				NC	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.24	U		6.85	U	ng/L				NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.12	U		3.43	U	ng/L				NC	30

Method: 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 460-311364-2 DU
Client Sample ID: RXMW-5_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 627555
Prep Batch: 627485

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
3-Perfluoropropylpropanoic acid (3:3 FTCA)	7.80	U		8.57	U	ng/L				NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	39.0	U		42.8	U	ng/L				NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	39.0	U		42.8	U	ng/L				NC	30
Perfluorodecanesulfonic acid (PFDS)	1.56	U		1.71	U	ng/L				NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.12	U		3.43	U	ng/L				NC	30

Isotope Dilution	*DU %Recovery*	*DU Qualifier*	*Limits*
13C4 PFBA	*104*		*10 - 130*
13C5 PFPeA	*105*		*35 - 150*
13C5 PFHxA	*86.5*		*55 - 150*
13C4 PFHpA	*104*		*55 - 150*
13C8 PFOA	*91.7*		*60 - 140*
13C9 PFNA	*120*		*55 - 140*
13C6 PFDA	*116*		*50 - 140*
13C7 PFUnA	*108*		*30 - 140*
13C2 PFTeDA	*80.4*		*10 - 130*
13C3 PFBS	*136*		*55 - 150*
13C3 PFHxS	*118*		*55 - 150*
13C8 PFOS	*120*		*45 - 140*
13C8 FOSA	*111*		*30 - 130*
d3-NMeFOSAA	*108*		*45 - 200*
d5-NEtFOSAA	*114*		*10 - 200*
M2-4:2 FTS	*155*		*60 - 200*
M2-6:2 FTS	*151*		*60 - 200*
M2-8:2 FTS	*150*		*50 - 200*
13C3 HFPO-DA	*87.3*		*25 - 160*
d7-N-MeFOSE-M	*107*		*10 - 150*
d9-N-EtFOSE-M	*88.8*		*10 - 150*
d5-NEtPFOSA	*75.6*		*10 - 130*
d3-NMePFOSA	*79.8*		*15 - 130*
13C2-PFDoDA	*107*		*10 - 150*

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
J	Indicates an estimated value.
U	Analyzed for but not detected.

Glossary

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

LCMS

Prep Batch: 627485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-311364-1	RXMW-1_P	Total/NA	Water	1633	
460-311364-2	RXMW-5_P	Total/NA	Water	1633	
460-311364-3	FB_09132024_P	Total/NA	Water	1633	
MB 240-627485/1-A	Method Blank	Total/NA	Water	1633	
LCS 240-627485/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 240-627485/2-A	Lab Control Sample	Total/NA	Water	1633	
460-311364-2 DU	RXMW-5_P	Total/NA	Water	1633	

Analysis Batch: 627555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-311364-1	RXMW-1_P	Total/NA	Water	1633	627485
460-311364-2	RXMW-5_P	Total/NA	Water	1633	627485
460-311364-3	FB_09132024_P	Total/NA	Water	1633	627485
MB 240-627485/1-A	Method Blank	Total/NA	Water	1633	627485
LCS 240-627485/3-A	Lab Control Sample	Total/NA	Water	1633	627485
LLCS 240-627485/2-A	Lab Control Sample	Total/NA	Water	1633	627485
460-311364-2 DU	RXMW-5_P	Total/NA	Water	1633	627485

Lab Chronicle

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Client Sample ID: RXMW-1_P
Lab Sample ID: 460-311364-1
Date Collected: 09/13/24 12:05
Matrix: Water
Date Received: 09/14/24 19:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			627485	CLB	EET CLE	09/18/24 10:06
Total/NA	Analysis	1633		1	627555	EBY5	EET CLE	09/19/24 00:33

Client Sample ID: RXMW-5_P
Lab Sample ID: 460-311364-2
Date Collected: 09/13/24 13:30
Matrix: Water
Date Received: 09/14/24 19:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			627485	CLB	EET CLE	09/18/24 10:06
Total/NA	Analysis	1633		1	627555	EBY5	EET CLE	09/19/24 00:47

Client Sample ID: FB_09132024_P
Lab Sample ID: 460-311364-3
Date Collected: 09/13/24 12:20
Matrix: Water
Date Received: 09/14/24 19:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			627485	CLB	EET CLE	09/18/24 10:06
Total/NA	Analysis	1633		1	627555	EBY5	EET CLE	09/19/24 01:00

Laboratory References:
EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-311364-1
Project/Site: 2828 W 28th Street

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-02-25
Iowa	State	421	05-31-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	11-14-24
New Jersey	NELAP	OH001	06-30-25
New York	NELAP	10975	02-27-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	02-27-25
Texas	NELAP	T104704517	08-31-25
USDA	US Federal Programs	525-24-5-34740	01-13-26
Virginia	NELAP	460175	06-15-25
West Virginia DEP	State	210	12-17-24

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
CAL 1_00019	11/29/24	07/15/24	MEOH, Lot 235547	2 mL	PFAS EIS Mix_00017	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native B_00021	80 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.1884 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.1868 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.1896 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.1916 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.1864 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.1884 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.2 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.05 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.05 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.1 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.05 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.05 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.5 ng/mL
							Perfluorobutanoic acid (PFBA)	0.2 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0444 ng/mL
							FBSA	0.2 ng/mL
							Perfluorodecanoic acid (PFDA)	0.05 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.05 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.0485 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.0482 ng/mL
							PFECHS	0.0922 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0892 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.05 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.0477 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.05 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0456 ng/mL
							FHxSA	0.2 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.1 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.1 ng/mL
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.0481 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0465 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.05 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.1 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.047 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.05 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotridecanoic acid (PFTrDA)	0.05 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.05 ng/mL
					PFAS NIS Mix_00016	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00017	01/09/25	07/09/24	MEOH, Lot 254457	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native B_00021	12/04/24	06/04/24	MEOH, Lot 234213	10 mL	PFAS Native A_00008	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							FBSA	5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							PFECHS	2.305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							FHxSA	5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
..PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
...11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
...3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
...4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
...5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
...6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
...7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
...8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
...9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
...DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
...HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
...NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
...NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
...NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
...NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
...NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
...NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
...PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
...PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
...PFBSA_00001	02/01/28	Wellington, Lot FBSA0123I			(Purchased Reagent)		FBSA	50 ug/mL
...PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
...PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
...PFDoS_00001	11/21/27	Wellington, Lot LPFDoS1122			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
...PFDS_00001	11/10/27	Wellington, Lot LPFDS1122			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
...PFECHS_00001	03/14/28	Wellington, Lot PFECHS0223			(Purchased Reagent)		PFECHS	46.1 ug/mL
...PFEESA_00001	01/20/28	Wellington, Lot PFEESA1022			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
...PFHpA_00001	11/10/27	Wellington, Lot PFHpA1122			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
...PFHpS_00001	08/22/27	Wellington, Lot LPFHpS0822			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
...PFHxA_00001	09/15/27	Wellington, Lot PFHxA0922			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
...PFHxS_00001	08/24/27	Wellington, Lot brPFHxSK0822			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
...PFHxSA_00001	12/01/27	Wellington, Lot FHxSA1122I			(Purchased Reagent)		FHxSA	50 ug/mL
...PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
...PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
...PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
...PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
...PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
...PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
...PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
...PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
...PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
...PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
...PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
...PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00016	01/09/25	07/09/24	MEOH, Lot 254457	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28		Wellington, Lot MPFDA0123		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27		Wellington, Lot MPFHxA0922		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27		Wellington, Lot M3PFBA0822		(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28		Wellington, Lot MPFOA0223		(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27		Wellington, Lot MPFOS1022		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27		Wellington, Lot MPFNA0722		(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28		Wellington, Lot MPFHxS0123		(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 2_00017	12/04/24	08/08/24	MEOH, Lot 235238	2 mL	PFAS EIS Mix_00020	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native B_00024	200 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.471 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.625 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.467 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	3.125 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.474 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3.125 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.479 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.466 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.471 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.125 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.125 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.125 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.125 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1.25 ng/mL
							Perfluorobutanoic acid (PFBA)	0.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.111 ng/mL
							FBSA	0.5 ng/mL
							Perfluorodecanoic acid (PFDA)	0.125 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.125 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.12125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.1205 ng/mL
							PFECHS	0.2305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.223 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.125 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.11925 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.125 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.114 ng/mL
							FHxSA	0.5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.125 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.12025 ng/mL
							Perfluorooctanoic acid (PFOA)	0.125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonic acid (PFOS)	0.11625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.125 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.1175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.125 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.125 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.125 ng/mL
					PFAS NIS Mix_00019	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00020	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native B_00024	12/04/24	07/19/24	MEOH, Lot 254457	10 mL	PFAS Native A_00008	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							FBSA	5 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							PFECHS	2.305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							FHxSA	5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
...11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
...3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
...4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
...5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
...6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
...7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
...8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
...9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
...DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
...HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
...NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...NEtFOSAA_00001	10/18/27		Wellington, Lot brNEtFOSAA1022		(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
...NEtFOSE_00002	05/11/28		Wellington, Lot NEtFOSE0623M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
...NFDHA_00001	06/08/27		Wellington, Lot 36OPFHpA0522		(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
...NMeFOSA_00001	11/11/27		Wellington, Lot NMeFOSA1122M		(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
...NMeFOSAA_00001	04/20/27		Wellington, Lot brNMeFOSAA0422		(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
...NMeFOSE_00004	05/11/28		Wellington, Lot NMeFOSE0523M		(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
...PFBA_00001	10/18/27		Wellington, Lot PFBA1022		(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
...PFBS_00001	10/04/27		Wellington, Lot LPFBS1022		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
...PFBSA_00001	02/01/28		Wellington, Lot FBSA0123I		(Purchased Reagent)		FBSA	50 ug/mL
...PFDA_00001	08/22/27		Wellington, Lot PFDA0822		(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
...PFDoA_00001	07/12/27		Wellington, Lot PFDoA0722		(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
...PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
...PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
...PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
...PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
...PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
...PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
...PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
...PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
...PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
...PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
...PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
...PFNA_00001	07/12/27		Wellington, Lot PFNA0722		(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
...PFNS_00001	11/21/27		Wellington, Lot L-PFNS1122		(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
...PFOA_00001	01/30/28		Wellington, Lot PFOA0123		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
...PFOS_00001	09/15/27		Wellington, Lot br-PFOSK0822		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
...PFOSA_00001	12/06/27		Wellington, Lot FOSA1222I		(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
...PFPeA_00001	07/11/27		Wellington, Lot PFPeA0722		(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
...PFPeS_00001	01/24/28		Wellington, Lot LPFPeS0123		(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
...PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
...PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00019	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 3_00013	11/29/24	06/04/24	MEOH, Lot 245549	2 mL	PFAS EIS Mix_00014	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native B_00021	500 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.1775 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	1.5625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.1675 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.8125 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.185 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.8125 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.1975 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.165 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.1775 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.3125 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.3125 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.125 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.625 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.3125 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.3125 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.125 ng/mL
							Perfluorobutanoic acid (PFBA)	1.25 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.2775 ng/mL
							FBSA	1.25 ng/mL
							Perfluorodecanoic acid (PFDA)	0.3125 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.3125 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.303125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.30125 ng/mL
							PFECHS	0.57625 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.5575 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.3125 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.298125 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.3125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorohexanesulfonic acid (PFHxS)	0.285 ng/mL
							FHxSA	1.25 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.625 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.625 ng/mL
							Perfluorononanoic acid (PFNA)	0.3125 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.300625 ng/mL
							Perfluorooctanoic acid (PFOA)	0.3125 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.290625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.3125 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.625 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.29375 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.3125 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.3125 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.3125 ng/mL
					PFAS NIS Mix_00013	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00014	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native B_00021	12/04/24	06/04/24	MEOH, Lot 234213	10 mL	PFAS Native A_00008	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							FBSA	5 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							PFECHS	2.305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							FHxSA	5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
..PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
...11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
...3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
...4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
...5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
...6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...7:3-FTCA_00003	08/10/28		Wellington, Lot FHpPA0823		(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
...8:2-FTS_00001	09/15/27		Wellington, Lot 82FTS0822		(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
...9Cl-PF3ONS_00001	11/08/27		Wellington, Lot 9ClPF3ONS1022		(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
...DONA_00001	01/30/28		Wellington, Lot NaDONA0123		(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
...HFPODA_00001	08/16/25		Wellington, Lot HFPODA0822		(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
...NEtFOSA_00001	01/18/28		Wellington, Lot NEtFOSA0123M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
...NEtFOSAA_00001	10/18/27		Wellington, Lot brNEtFOSAA1022		(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
...NEtFOSE_00002	05/11/28		Wellington, Lot NEtFOSE0623M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
...NFDHA_00001	06/08/27		Wellington, Lot 36OPFHpA0522		(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
...NMeFOSA_00001	11/11/27		Wellington, Lot NMeFOSA1122M		(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
...NMeFOSAA_00001	04/20/27		Wellington, Lot brNMeFOSAA0422		(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
...NMeFOSE_00004	05/11/28		Wellington, Lot NMeFOSE0523M		(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
...PFBA_00001	10/18/27		Wellington, Lot PFBA1022		(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
...PFBS_00001	10/04/27		Wellington, Lot LPFBS1022		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
...PFBSA_00001	02/01/28		Wellington, Lot FBSA0123I		(Purchased Reagent)		FBSA	50 ug/mL
...PFDA_00001	08/22/27		Wellington, Lot PFDA0822		(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
...PFDoA_00001	07/12/27		Wellington, Lot PFDoA0722		(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
...PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
...PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
...PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
...PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
...PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
...PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
...PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
...PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
...PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
...PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
...PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
...PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
...PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
...PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
...PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
...PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
...PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
...PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
...PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
...PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00013	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 4_00020	11/29/24	06/28/24	MEOH, Lot 245549	2 mL	PFAS EIS Mix_00014	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00008	10 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	2.355 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.335 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.37 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.395 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.33 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.355 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.625 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.625 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.625 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.625 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.25 ng/mL
							Perfluorobutanoic acid (PFBA)	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.555 ng/mL
							FBSA	2.5 ng/mL
							Perfluorodecanoic acid (PFDA)	0.625 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorododecanesulfonic acid (PFDoS)	0.60625 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.6025 ng/mL
							PFECHS	1.1525 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.115 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.625 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.59625 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.57 ng/mL
							FHxSA	2.5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	1.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	1.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.625 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.60125 ng/mL
							Perfluorooctanoic acid (PFOA)	0.625 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.58125 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.625 ng/mL
							Perfluoropentanoic acid (PFPeA)	1.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.5875 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.625 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.625 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.625 ng/mL
					PFAS NIS Mix_00013	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00014	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..NEtFOSE_00002	05/11/28		Wellington, Lot NEtFOSE0623M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27		Wellington, Lot 36OPFHpA0522		(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27		Wellington, Lot NMeFOSA1122M		(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27		Wellington, Lot brNMeFOSAA0422		(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28		Wellington, Lot NMeFOSE0523M		(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27		Wellington, Lot PFBA1022		(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27		Wellington, Lot LPFBS1022		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28		Wellington, Lot FBSA0123I		(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27		Wellington, Lot PFDA0822		(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27		Wellington, Lot PFDoA0722		(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
..PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27		Wellington, Lot PFNA0722		(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27		Wellington, Lot L-PFNS1122		(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28		Wellington, Lot PFOA0123		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27		Wellington, Lot br-PFOSK0822		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27		Wellington, Lot FOSA1222I		(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27		Wellington, Lot PFPeA0722		(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28		Wellington, Lot LPFPeS0123		(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27		Wellington, Lot PFTeDA1022		(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00013	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 5_00013	11/29/24	08/08/24	MEOH, Lot 245549	2 mL	PFAS EIS Mix_00020	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00008	20 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							FBSA	5 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							PFECHS	2.305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							FHxSA	5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
					PFAS NIS Mix_00019	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00020	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28	Wellington, Lot FBSA0123I			(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
..PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27		Wellington, Lot PFNA0722		(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27		Wellington, Lot L-PFNS1122		(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28		Wellington, Lot PFOA0123		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27		Wellington, Lot br-PFOSK0822		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27		Wellington, Lot FOSA1222I		(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27		Wellington, Lot PFPeA0722		(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28		Wellington, Lot LPFPeS0123		(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27		Wellington, Lot PFTeDA1022		(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27		Wellington, Lot PFTrDA1022		(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27		Wellington, Lot PFUdA0822		(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00019	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28		Wellington, Lot MPFDA0123		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27		Wellington, Lot MPFHxA0922		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27		Wellington, Lot M3PFBA0822		(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28		Wellington, Lot MPFOA0223		(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27		Wellington, Lot MPFOS1022		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 6_00014	11/29/24	06/04/24	MEOH, Lot 245549	2 mL	PFAS EIS Mix_00014	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00008	50 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11.775 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	11.675 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	78.125 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	11.85 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	78.125 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	11.975 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	11.65 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	11.775 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	12.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	3.125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.125 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	31.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	3.125 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	3.125 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	31.25 ng/mL
							Perfluorobutanoic acid (PFBA)	12.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	2.775 ng/mL
							FBSA	12.5 ng/mL
							Perfluorodecanoic acid (PFDA)	3.125 ng/mL
							Perfluorododecanoic acid (PFDoA)	3.125 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	3.03125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	3.0125 ng/mL
							PFECHS	5.7625 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	5.575 ng/mL
							Perfluoroheptanoic acid (PFHpA)	3.125 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	2.98125 ng/mL
							Perfluorohexanoic acid (PFHxA)	3.125 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	2.85 ng/mL
							FHxSA	12.5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	6.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	6.25 ng/mL
							Perfluorononanoic acid (PFNA)	3.125 ng/mL
							Perfluorononanesulfonic acid (PFNS)	3.00625 ng/mL
							Perfluorooctanoic acid (PFOA)	3.125 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.90625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	3.125 ng/mL
							Perfluoropentanoic acid (PFPeA)	6.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	2.9375 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotetradecanoic acid (PFTeDA)	3.125 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	3.125 ng/mL
							Perfluoroundecanoic acid (PFUnA)	3.125 ng/mL
					PFAS NIS Mix_00013	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00014	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..5:3-FTCA_00003	08/02/27		Wellington, Lot FPePA0722		(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28		Wellington, Lot 62FTS0123		(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28		Wellington, Lot FHpPA0823		(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27		Wellington, Lot 82FTS0822		(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27		Wellington, Lot 9ClPF3ONS1022		(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28		Wellington, Lot NaDONA0123		(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25		Wellington, Lot HFPODA0822		(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28		Wellington, Lot NEtFOSA0123M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27		Wellington, Lot brNEtFOSAA1022		(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28		Wellington, Lot NEtFOSE0623M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27		Wellington, Lot 36OPFHpA0522		(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27		Wellington, Lot NMeFOSA1122M		(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27		Wellington, Lot brNMeFOSAA0422		(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28		Wellington, Lot NMeFOSE0523M		(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27		Wellington, Lot PFBA1022		(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27		Wellington, Lot LPFBS1022		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28		Wellington, Lot FBSA0123I		(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27		Wellington, Lot PFDA0822		(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27		Wellington, Lot PFDoA0722		(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00013	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CAL 7_00013	11/29/24	06/04/24	MEOH, Lot 245549	2 mL	PFAS EIS Mix_00014	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00008	250 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	58.875 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	78.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	58.375 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	390.625 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	59.25 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	390.625 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	59.875 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	58.25 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	58.875 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	62.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	15.625 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	15.625 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	156.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	31.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	15.625 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	15.625 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	156.25 ng/mL
							Perfluorobutanoic acid (PFBA)	62.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	13.875 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							FBSA	62.5 ng/mL
							Perfluorodecanoic acid (PFDA)	15.625 ng/mL
							Perfluorododecanoic acid (PFDoA)	15.625 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	15.1563 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	15.0625 ng/mL
							PFECHS	28.8125 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	27.875 ng/mL
							Perfluoroheptanoic acid (PFHpA)	15.625 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	14.9063 ng/mL
							Perfluorohexanoic acid (PFHxA)	15.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	14.25 ng/mL
							FHxSA	62.5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	31.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	31.25 ng/mL
							Perfluorononanoic acid (PFNA)	15.625 ng/mL
							Perfluorononanesulfonic acid (PFNS)	15.0313 ng/mL
							Perfluorooctanoic acid (PFOA)	15.625 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	14.5313 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	15.625 ng/mL
							Perfluoropentanoic acid (PFPeA)	31.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	14.6875 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	15.625 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	15.625 ng/mL
							Perfluoroundecanoic acid (PFUnA)	15.625 ng/mL
					PFAS NIS Mix_00013	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS EIS Mix_00014	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..NEtFOSAA_00001	10/18/27		Wellington, Lot brNEtFOSAA1022		(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28		Wellington, Lot NEtFOSE0623M		(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27		Wellington, Lot 36OPFHpA0522		(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27		Wellington, Lot NMeFOSA1122M		(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27		Wellington, Lot brNMeFOSAA0422		(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28		Wellington, Lot NMeFOSE0523M		(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27		Wellington, Lot PFBA1022		(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27		Wellington, Lot LPFBS1022		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28		Wellington, Lot FBSA0123I		(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27		Wellington, Lot PFDA0822		(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27		Wellington, Lot PFDoA0722		(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
..PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27		Wellington, Lot PFNA0722		(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27		Wellington, Lot L-PFNS1122		(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28		Wellington, Lot PFOA0123		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27		Wellington, Lot br-PFOSK0822		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27		Wellington, Lot FOSA1222I		(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27		Wellington, Lot PFPeA0722		(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28		Wellington, Lot LPFPeS0123		(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
.PFAS NIS Mix_00013	11/29/24	05/29/24	MEOH, Lot 234213	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CCB_00029	11/08/24	08/08/24	MEOH, Lot 235547	2 mL	PFAS NIS Mix_00019	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS NIS Mix_00019	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
CCB_00029	11/08/24	08/08/24	MEOH, Lot 235547	2 mL	PFAS EIS Mix_00020	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
.PFAS EIS Mix_00020	01/26/25	07/26/24	MEOH, Lot 234235	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
CCB_00030	01/28/25	08/21/24	MEOH, Lot 235546	2 mL	PFAS EIS Mix_00021	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
.PFAS EIS Mix_00021	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
ICV CAL1_00018	11/20/24	08/21/24	MEOH, Lot 235546	2 mL	PFAS EIS Mix_00021	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native B_00025	80 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.1884 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.1868 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	1.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.1896 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.1916 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.1864 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.1884 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.2 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.05 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.05 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.1 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.05 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.05 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.5 ng/mL
							Perfluorobutanoic acid (PFBA)	0.2 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0444 ng/mL
							Perfluorodecanoic acid (PFDA)	0.05 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.05 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.0485 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.0482 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0892 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.05 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.0477 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.05 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0456 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.1 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.1 ng/mL
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.0481 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0465 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.05 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.1 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.047 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.05 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.05 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.05 ng/mL
.PFAS EIS Mix_00021	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native B_00025	12/04/24	08/07/24	MEOH, Lot 254457	10 mL	PFAS Native A_00008	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
..PFAS Native A_00008	12/04/24	06/04/24	MEOH, Lot 235238	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
...3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
...4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
...5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
...6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
...7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
...8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
...9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
...DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
...HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
...NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
...NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
...NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
...NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
...NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
...NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
...NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
...PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
...PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
...PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
...PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
...PFDoS_00001	11/21/27	Wellington, Lot LPFDoS1122			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
...PFDS_00001	11/10/27	Wellington, Lot LPFDS1122			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
...PFEESA_00001	01/20/28	Wellington, Lot PFEESA1022			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
...PFHpA_00001	11/10/27	Wellington, Lot PFHpA1122			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
...PFHpS_00001	08/22/27	Wellington, Lot LPFHpS0822			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFHxA_00001	09/15/27	Wellington, Lot PFHxA0922			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
...PFHxS_00001	08/24/27	Wellington, Lot brPFHxSK0822			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
...PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
...PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
...PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
...PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
...PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
...PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
...PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
...PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
...PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
...PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
...PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
...PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
ICV CAL4_00033	01/20/25	08/21/24	MEOH, Lot 235546	2 mL	PFAS NIS Mix_00020	10 uL	13C2 PFDA	0.3125 ng/mL
							13C2 PFHxA	0.625 ng/mL
							13C3-PFBA	1.25 ng/mL
							13C4 PFOA	0.625 ng/mL
							13C4 PFOS	0.5975 ng/mL
							13C5 PFNA	0.3125 ng/mL
							18O2 PFHxS	0.59125 ng/mL
.PFAS NIS Mix_00020	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	13C2-PFDA_00001	12.5 uL	13C2 PFDA	62.5 ng/mL
					13C2-PFHxA_00001	25 uL	13C2 PFHxA	125 ng/mL
					13C3-PFBA_00001	50 uL	13C3-PFBA	250 ng/mL
					13C4-PFOA_00001	25 uL	13C4 PFOA	125 ng/mL
					13C4-PFOS_00001	25 uL	13C4 PFOS	119.5 ng/mL
					13C5-PFNA_00001	12.5 uL	13C5 PFNA	62.5 ng/mL
					18O2-PFHxS_00001	25 uL	18O2 PFHxS	118.25 ng/mL
..13C2-PFDA_00001	01/18/28	Wellington, Lot MPFDA0123			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..13C2-PFHxA_00001	09/08/27	Wellington, Lot MPFHxA0922			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..13C3-PFBA_00001	08/05/27	Wellington, Lot M3PFBA0822			(Purchased Reagent)		13C3-PFBA	50 ug/mL
..13C4-PFOA_00001	02/14/28	Wellington, Lot MPFOA0223			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..13C4-PFOS_00001	11/08/27	Wellington, Lot MPFOS1022			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..13C5-PFNA_00001	08/04/27	Wellington, Lot MPFNA0722			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..18O2-PFHxS_00001	01/18/28	Wellington, Lot MPFHxS0123			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
ICV CAL4_00033	01/20/25	08/21/24	MEOH, Lot 235546	2 mL	PFAS EIS Mix_00021	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00009	10 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	2.355 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.335 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.37 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.395 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.33 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.355 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.625 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.625 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.625 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.625 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.25 ng/mL
							Perfluorobutanoic acid (PFBA)	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.555 ng/mL
							Perfluorodecanoic acid (PFDA)	0.625 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.625 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.60625 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.6025 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.115 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.625 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.59625 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.57 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	1.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	1.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.625 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.60125 ng/mL
							Perfluorooctanoic acid (PFOA)	0.625 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.58125 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.625 ng/mL
							Perfluoropentanoic acid (PFPeA)	1.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.5875 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.625 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.625 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.625 ng/mL
.PFAS EIS Mix_00021	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27		Wellington, Lot MPFDoA1222		(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27		Wellington, Lot M2PFTeDA1122		(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26		Wellington, Lot M3HFPODA1023		(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27		Wellington, Lot M3PFBS1122		(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28		Wellington, Lot M3PFHxS0123		(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28		Wellington, Lot MPFBA1023		(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27		Wellington, Lot M4PFHpA1222		(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27		Wellington, Lot M5PFHxA1122		(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27		Wellington, Lot M5PFPeA0922		(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27		Wellington, Lot M6PFDA0922		(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27		Wellington, Lot M7PFUdA0522		(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27		Wellington, Lot M8PFOA0522		(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27		Wellington, Lot M8PFOS0522		(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28		Wellington, Lot M8FOSA0123I		(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27		Wellington, Lot M9PFNA1122		(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27		Wellington, Lot d3NMeFOSAA1022		(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27		Wellington, Lot dNMeFOSA1122M		(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27		Wellington, Lot d5NetFOSAA1222		(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27		Wellington, Lot dNEtFOSA1022M		(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29		Wellington, Lot d7NMeFOSE0224M		(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29		Wellington, Lot d9NEtFOSE0124M		(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.PFAS Native A_00009	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27	Wellington, Lot LPFDoS1122			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27	Wellington, Lot LPFDS1122			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFEESA_00001	01/20/28	Wellington, Lot PFEESA1022			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27	Wellington, Lot PFHpA1122			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27	Wellington, Lot LPFHpS0822			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27	Wellington, Lot PFHxA0922			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27	Wellington, Lot brPFHxSK0822			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFUnDA_00001	08/22/27		Wellington, Lot PFUdA0822		(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
ICV CAL4_00034	01/20/25	09/11/24	MEOH, Lot 235546	2 mL	PFAS EIS Mix_00024	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
					PFAS Native A_00009	10 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	2.355 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.335 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.37 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	15.625 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.395 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.33 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.355 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.625 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	6.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.625 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.625 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	6.25 ng/mL
							Perfluorobutanoic acid (PFBA)	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.555 ng/mL
							Perfluorodecanoic acid (PFDA)	0.625 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.625 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.60625 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.6025 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.115 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.625 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.59625 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.57 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	1.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	1.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.625 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.60125 ng/mL
							Perfluorooctanoic acid (PFOA)	0.625 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.58125 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.625 ng/mL
							Perfluoropentanoic acid (PFPeA)	1.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.5875 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotridecanoic acid (PFTrDA)	0.625 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.625 ng/mL
.PFAS EIS Mix_00024	03/10/25	09/10/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
.PFAS Native A_00009	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27	Wellington, Lot LPFDoS1122			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27	Wellington, Lot LPFDS1122			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFEESA_00001	01/20/28	Wellington, Lot PFEESA1022			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27	Wellington, Lot PFHpA1122			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27	Wellington, Lot LPFHpS0822			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27	Wellington, Lot PFHxA0922			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27	Wellington, Lot brPFHxSK0822			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
PFAS EIS Mix_00025	03/11/25	09/11/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
.13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
.13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
.13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
.13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
.13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
.13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
.13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
.13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
.13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
.13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
.13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
.13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
.13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
.13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
.13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
.13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
.13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
.d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
.d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
.d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
.d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
.d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
.d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
PFAS Native B_00027	12/04/24	09/10/24	MEOH, Lot 235546	10 mL	Methanol FC4L_00009	9900 uL	Methanol	990000000 ng/mL
					PFAS Native A_00009	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.71 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.67 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.74 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.79 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4.66 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.71 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.25 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.25 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.25 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							FBSA	5 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.2125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							PFECHS	2.305 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.1925 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.14 ng/mL
							FHxSA	5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2025 ng/mL
							Perfluorooctanoic acid (PFOA)	1.25 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.1625 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.25 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
.Methanol FC4L_00009	07/30/26	Fisher Chemical, Lot 235546			(Purchased Reagent)		Methanol	100 %
.PFAS Native A_00009	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28	Wellington, Lot FBSA0123I			(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL
..PFDoS_00001	11/21/27	Wellington, Lot LPFDoS1122			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27	Wellington, Lot LPFDS1122			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28	Wellington, Lot PFECHS0223			(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28	Wellington, Lot PFEESA1022			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27	Wellington, Lot PFHpA1122			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27	Wellington, Lot LPFHpS0822			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27	Wellington, Lot PFHxA0922			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27	Wellington, Lot brPFHxSK0822			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27	Wellington, Lot FHxSA1122I			(Purchased Reagent)		FHxSA	50 ug/mL
..PFMBA_00001	08/02/27	Wellington, Lot PF5OHxA0722			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27	Wellington, Lot PF4OPeA0722			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27	Wellington, Lot PFNA0722			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27	Wellington, Lot L-PFNS1122			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28	Wellington, Lot PFOA0123			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27	Wellington, Lot br-PFOSK0822			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27	Wellington, Lot FOSA1222I			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27	Wellington, Lot PFPeA0722			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28	Wellington, Lot LPFPeS0123			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27	Wellington, Lot PFTeDA1022			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27	Wellington, Lot PFTrDA1022			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27	Wellington, Lot PFUdA0822			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
PFAS Native M_00026	12/04/24	09/10/24	MEOH, Lot 235546	10 mL	Methanol FC4L_00009	8750 uL	Methanol	875000000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFAS Native A_00009	1250 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	58.875 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	78.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	58.375 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	390.625 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	59.25 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	390.625 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	59.875 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	58.25 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	58.875 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	62.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	15.625 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	15.625 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	156.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	31.25 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	15.625 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	15.625 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	156.25 ng/mL
							Perfluorobutanoic acid (PFBA)	62.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	13.875 ng/mL
							FBSA	62.5 ng/mL
							Perfluorodecanoic acid (PFDA)	15.625 ng/mL
							Perfluorododecanoic acid (PFDoA)	15.625 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	15.1563 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	15.0625 ng/mL
							PFECHS	28.8125 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	27.875 ng/mL
							Perfluoroheptanoic acid (PFHpA)	15.625 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoroheptanesulfonic acid (PFHpS)	14.9063 ng/mL
							Perfluorohexanoic acid (PFHxA)	15.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	14.25 ng/mL
							FHxSA	62.5 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	31.25 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	31.25 ng/mL
							Perfluorononanoic acid (PFNA)	15.625 ng/mL
							Perfluorononanesulfonic acid (PFNS)	15.0313 ng/mL
							Perfluorooctanoic acid (PFOA)	15.625 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	14.5313 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	15.625 ng/mL
							Perfluoropentanoic acid (PFPeA)	31.25 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	14.6875 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	15.625 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	15.625 ng/mL
							Perfluoroundecanoic acid (PFUnA)	15.625 ng/mL
.Methanol FC4L_00009	07/30/26	Fisher Chemical, Lot 235546			(Purchased Reagent)		Methanol	100 %
.PFAS Native A_00009	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	11Cl-PF3OUdS_00001	100 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	471 ng/mL
					3:3-FTCA_00001	125 uL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	625 ng/mL
					4:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	467 ng/mL
					5:3-FTCA_00003	625 uL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	3125 ng/mL
					6:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	474 ng/mL
					7:3-FTCA_00003	625 uL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	3125 ng/mL
					8:2-FTS_00001	100 uL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	479 ng/mL
					9Cl-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	466 ng/mL
					DONA_00001	100 uL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	471 ng/mL
					HFPODA_00001	100 uL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	500 ng/mL

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					NEtFOSA_00001	25 uL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	125 ng/mL
					NEtFOSAA_00001	25 uL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	125 ng/mL
					NEtFOSE_00002	250 uL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					NFDHA_00001	50 uL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					NMeFOSA_00001	25 uL	N-methylperfluorooctane sulfonamide (NMeFOSA)	125 ng/mL
					NMeFOSAA_00001	25 uL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	125 ng/mL
					NMeFOSE_00004	250 uL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFBA_00001	100 uL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFBS_00001	25 uL	Perfluorobutanesulfonic acid (PFBS)	111 ng/mL
					PFBSA_00001	100 uL	FBSA	500 ng/mL
					PFDA_00001	25 uL	Perfluorodecanoic acid (PFDA)	125 ng/mL
					PFDoA_00001	25 uL	Perfluorododecanoic acid (PFDoA)	125 ng/mL
					PFDoS_00001	25 uL	Perfluorododecanesulfonic acid (PFDoS)	121.25 ng/mL
					PFDS_00001	25 uL	Perfluorodecanesulfonic acid (PFDS)	120.5 ng/mL
					PFECHS_00001	50 uL	PFECHS	230.5 ng/mL
					PFEESA_00001	50 uL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFHpA_00001	25 uL	Perfluoroheptanoic acid (PFHpA)	125 ng/mL
					PFHpS_00001	25 uL	Perfluoroheptanesulfonic acid (PFHpS)	119.25 ng/mL
					PFHxA_00001	25 uL	Perfluorohexanoic acid (PFHxA)	125 ng/mL
					PFHxS_00001	25 uL	Perfluorohexanesulfonic acid (PFHxS)	114 ng/mL
					PFHxSA_00001	100 uL	FHxSA	500 ng/mL
					PFMBA_00001	50 uL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFMPA_00001	50 uL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFNA_00001	25 uL	Perfluorononanoic acid (PFNA)	125 ng/mL
					PFNS_00001	25 uL	Perfluorononanesulfonic acid (PFNS)	120.25 ng/mL
					PFOA_00001	25 uL	Perfluorooctanoic acid (PFOA)	125 ng/mL
					PFOS_00001	25 uL	Perfluorooctanesulfonic acid (PFOS)	116.25 ng/mL
					PFOSA_00001	25 uL	Perfluorooctanesulfonamide (PFOSA)	125 ng/mL
					PFPeA_00001	50 uL	Perfluoropentanoic acid (PFPeA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFPeS_00001	25 uL	Perfluoropentanesulfonic acid (PFPeS)	117.5 ng/mL
					PFTeDA_00001	25 uL	Perfluorotetradecanoic acid (PFTeDA)	125 ng/mL
					PFTrDA_00001	25 uL	Perfluorotridecanoic acid (PFTrDA)	125 ng/mL
					PFUnDA_00001	25 uL	Perfluoroundecanoic acid (PFUnA)	125 ng/mL
..11Cl-PF3OUdS_00001	01/29/28	Wellington, Lot 11ClPF3OUdS0123			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	47.1 ug/mL
..3:3-FTCA_00001	01/31/28	Wellington, Lot FPrPA0123			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50 ug/mL
..4:2-FTS_00001	01/09/28	Wellington, Lot 42FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46.7 ug/mL
..5:3-FTCA_00003	08/02/27	Wellington, Lot FPePA0722			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ug/mL
..6:2-FTS_00001	01/09/28	Wellington, Lot 62FTS0123			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47.4 ug/mL
..7:3-FTCA_00003	08/10/28	Wellington, Lot FHpPA0823			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ug/mL
..8:2-FTS_00001	09/15/27	Wellington, Lot 82FTS0822			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	47.9 ug/mL
..9Cl-PF3ONS_00001	11/08/27	Wellington, Lot 9ClPF3ONS1022			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	46.6 ug/mL
..DONA_00001	01/30/28	Wellington, Lot NaDONA0123			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.1 ug/mL
..HFPODA_00001	08/16/25	Wellington, Lot HFPODA0822			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ug/mL
..NEtFOSA_00001	01/18/28	Wellington, Lot NEtFOSA0123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50 ug/mL
..NEtFOSAA_00001	10/18/27	Wellington, Lot brNEtFOSAA1022			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50 ug/mL
..NEtFOSE_00002	05/11/28	Wellington, Lot NEtFOSE0623M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ug/mL
..NFDHA_00001	06/08/27	Wellington, Lot 36OPFHpA0522			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50 ug/mL
..NMeFOSA_00001	11/11/27	Wellington, Lot NMeFOSA1122M			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50 ug/mL
..NMeFOSAA_00001	04/20/27	Wellington, Lot brNMeFOSAA0422			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50 ug/mL
..NMeFOSE_00004	05/11/28	Wellington, Lot NMeFOSE0523M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ug/mL
..PFBA_00001	10/18/27	Wellington, Lot PFBA1022			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50 ug/mL
..PFBS_00001	10/04/27	Wellington, Lot LPFBS1022			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.4 ug/mL
..PFBSA_00001	02/01/28	Wellington, Lot FBSA0123I			(Purchased Reagent)		FBSA	50 ug/mL
..PFDA_00001	08/22/27	Wellington, Lot PFDA0822			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50 ug/mL
..PFDoA_00001	07/12/27	Wellington, Lot PFDoA0722			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFDoS_00001	11/21/27		Wellington, Lot LPFDoS1122		(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48.5 ug/mL
..PFDS_00001	11/10/27		Wellington, Lot LPFDS1122		(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48.2 ug/mL
..PFECHS_00001	03/14/28		Wellington, Lot PFECHS0223		(Purchased Reagent)		PFECHS	46.1 ug/mL
..PFEESA_00001	01/20/28		Wellington, Lot PFEESA1022		(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.6 ug/mL
..PFHpA_00001	11/10/27		Wellington, Lot PFHpA1122		(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50 ug/mL
..PFHpS_00001	08/22/27		Wellington, Lot LPFHpS0822		(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47.7 ug/mL
..PFHxA_00001	09/15/27		Wellington, Lot PFHxA0922		(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50 ug/mL
..PFHxS_00001	08/24/27		Wellington, Lot brPFHxSK0822		(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.6 ug/mL
..PFHxSA_00001	12/01/27		Wellington, Lot FHxSA1122I		(Purchased Reagent)		FHxSA	50 ug/mL
..PFMBA_00001	08/02/27		Wellington, Lot PF5OHxA0722		(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50 ug/mL
..PFMPA_00001	08/02/27		Wellington, Lot PF4OPeA0722		(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50 ug/mL
..PFNA_00001	07/12/27		Wellington, Lot PFNA0722		(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
..PFNS_00001	11/21/27		Wellington, Lot L-PFNS1122		(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48.1 ug/mL
..PFOA_00001	01/30/28		Wellington, Lot PFOA0123		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..PFOS_00001	09/15/27		Wellington, Lot br-PFOSK0822		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.5 ug/mL
..PFOSA_00001	12/06/27		Wellington, Lot FOSA1222I		(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50 ug/mL
..PFPeA_00001	07/11/27		Wellington, Lot PFPeA0722		(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50 ug/mL
..PFPeS_00001	01/24/28		Wellington, Lot LPFPeS0123		(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47 ug/mL
..PFTeDA_00001	10/18/27		Wellington, Lot PFTeDA1022		(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50 ug/mL
..PFTrDA_00001	10/18/27		Wellington, Lot PFTrDA1022		(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50 ug/mL
..PFUnDA_00001	08/22/27		Wellington, Lot PFUdA0822		(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50 ug/mL
WDM_00018	10/29/24	07/29/24	MEOH, Lot 235547	2 mL	Bile Salts B_00002	10 uL	Taurochenodeoxycholic acid	25.05 ng/mL
							Taurodeoxycholic Acid	25 ng/mL
							Tauroursodeoxycholic acid	25.05 ng/mL
					PFAS EIS Mix_00019	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
.Bile Salts B_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	5 mL	Bile Salts A_00002	100 uL	Taurochenodeoxycholic acid	5010 ng/mL
							Taurodeoxycholic Acid	5000 ng/mL
							Tauroursodeoxycholic acid	5010 ng/mL
..Bile Salts A_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	4 mL	TCDCA Stock_00002	1000 uL	Taurochenodeoxycholic acid	250500 ng/mL
					TDCA Stock_00003	1000 uL	Taurodeoxycholic Acid	250000 ng/mL
					TUDCA Stock_00002	1000 uL	Tauroursodeoxycholic acid	250500 ng/mL
...TCDCA Stock_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	50 mL	Taurochenodeo_00001	50.1 mg	Taurochenodeoxycholic acid	1002000 ng/mL
....Taurochenodeo_00001	05/02/28		Sigma, Lot SLCJ5790		(Purchased Reagent)		Taurochenodeoxycholic acid	100 %
...TDCA Stock_00003	05/01/25	05/01/24	MEOH, Lot 9077-02	50.1 mL	Taurodeoxycho_00001	50.1 mg	Taurodeoxycholic Acid	1000000 ng/mL
....Taurodeoxycho_00001	05/02/28		Sigma, Lot SLCM0559		(Purchased Reagent)		Taurodeoxycholic Acid	100 %
...TUDCA Stock_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	50 mL	Tauroursodeox_00001	50.1 mg	Tauroursodeoxycholic acid	1002000 ng/mL
....Tauroursodeox_00001	05/02/28		EMD Millipore, Lot 3959057		(Purchased Reagent)		Tauroursodeoxycholic acid	100 %
.PFAS EIS Mix_00019	01/25/25	07/25/24	MEOH, Lot 234235	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28	Wellington, Lot M242FTS0123			(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27	Wellington, Lot M262FTS1122			(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27	Wellington, Lot M282FTS1122			(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL
WDM_00019	01/20/25	08/21/24	MEOH, Lot 235546	2 mL	Bile Salts B_00002	10 uL	Taurochenodeoxycholic acid	25.05 ng/mL
							Taurodeoxycholic Acid	25 ng/mL
							Tauroursodeoxycholic acid	25.05 ng/mL
					PFAS EIS Mix_00021	10 uL	M2-4:2 FTS	1.1675 ng/mL
							M2-6:2 FTS	1.1875 ng/mL
							M2-8:2 FTS	1.1975 ng/mL
							13C2-PFDoDA	0.3125 ng/mL
							13C2 PFTeDA	0.3125 ng/mL
							13C3 HFPO-DA	2.5 ng/mL
							13C3 PFBS	0.58125 ng/mL
							13C3 PFHxS	0.59125 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C4 PFHpA	0.625 ng/mL
							13C5 PFHxA	0.625 ng/mL
							13C5 PFPeA	1.25 ng/mL
							13C6 PFDA	0.3125 ng/mL
							13C7 PFUnA	0.3125 ng/mL
							13C8 PFOA	0.625 ng/mL
							13C8 PFOS	0.5975 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C8 FOSA	0.625 ng/mL
							13C9 PFNA	0.3125 ng/mL
							d3-NMeFOSAA	1.25 ng/mL
							d3-NMePFOSA	0.625 ng/mL
							d5-NEtFOSAA	1.25 ng/mL
							d5-NEtPFOSA	0.625 ng/mL
							d7-N-MeFOSE-M	6.25 ng/mL
							d9-N-EtFOSE-M	6.25 ng/mL
.Bile Salts B_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	5 mL	Bile Salts A_00002	100 uL	Taurochenodeoxycholic acid	5010 ng/mL
							Taurodeoxycholic Acid	5000 ng/mL
							Tauroursodeoxycholic acid	5010 ng/mL
..Bile Salts A_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	4 mL	TCDCA Stock_00002	1000 uL	Taurochenodeoxycholic acid	250500 ng/mL
					TDCA Stock_00003	1000 uL	Taurodeoxycholic Acid	250000 ng/mL
					TUDCA Stock_00002	1000 uL	Tauroursodeoxycholic acid	250500 ng/mL
...TCDCA Stock_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	50 mL	Taurochenodeo_00001	50.1 mg	Taurochenodeoxycholic acid	1002000 ng/mL
....Taurochenodeo_00001	05/02/28		Sigma, Lot SLCJ5790		(Purchased Reagent)		Taurochenodeoxycholic acid	100 %
...TDCA Stock_00003	05/01/25	05/01/24	MEOH, Lot 9077-02	50.1 mL	Taurodeoxycho_00001	50.1 mg	Taurodeoxycholic Acid	1000000 ng/mL
....Taurodeoxycho_00001	05/02/28		Sigma, Lot SLCM0559		(Purchased Reagent)		Taurodeoxycholic Acid	100 %
...TUDCA Stock_00002	05/01/25	05/01/24	MEOH, Lot 9077-02	50 mL	Tauroursodeox_00001	50.1 mg	Tauroursodeoxycholic acid	1002000 ng/mL
....Tauroursodeox_00001	05/02/28		EMD Millipore, Lot 3959057		(Purchased Reagent)		Tauroursodeoxycholic acid	100 %
.PFAS EIS Mix_00021	02/12/25	08/12/24	MEOH, Lot 235546	10 mL	13C2-4:2-FTS_00001	50 uL	M2-4:2 FTS	233.5 ng/mL
					13C2-6:2-FTS_00001	50 uL	M2-6:2 FTS	237.5 ng/mL
					13C2-8:2-FTS_00001	50 uL	M2-8:2 FTS	239.5 ng/mL
					13C2-PFDoDA_00001	12.5 uL	13C2-PFDoDA	62.5 ng/mL
					13C2-PFTeDA_00001	12.5 uL	13C2 PFTeDA	62.5 ng/mL
					13C3-HFPODA_00002	100 uL	13C3 HFPO-DA	500 ng/mL
					13C3-PFBS_00001	25 uL	13C3 PFBS	116.25 ng/mL
					13C3-PFHxS_00001	25 uL	13C3 PFHxS	118.25 ng/mL
					13C4-PFBA_00002	100 uL	13C4 PFBA	500 ng/mL
					13C4-PFHpA_00001	25 uL	13C4 PFHpA	125 ng/mL
					13C5-PFHxA_00001	25 uL	13C5 PFHxA	125 ng/mL
					13C5-PFPeA_00001	50 uL	13C5 PFPeA	250 ng/mL
					13C6-PFDA_00001	12.5 uL	13C6 PFDA	62.5 ng/mL
					13C7-PFUnDA_00001	12.5 uL	13C7 PFUnA	62.5 ng/mL
					13C8-PFOA_00001	25 uL	13C8 PFOA	125 ng/mL
					13C8-PFOS_00001	25 uL	13C8 PFOS	119.5 ng/mL
					13C8-PFOSA_00001	25 uL	13C8 FOSA	125 ng/mL
					13C9-PFNA_00001	12.5 uL	13C9 PFNA	62.5 ng/mL
					d3-NMeFOSAA_00001	50 uL	d3-NMeFOSAA	250 ng/mL
					d3-NMePFOSA_00001	25 uL	d3-NMePFOSA	125 ng/mL
					d5-NEtFOSAA_00001	50 uL	d5-NEtFOSAA	250 ng/mL
					d5-NEtPFOSA_00001	25 uL	d5-NEtPFOSA	125 ng/mL
					d7-NMePFOSAE_00004	250 uL	d7-N-MeFOSE-M	1250 ng/mL
					d9-NEtPFOSAE_00004	250 uL	d9-N-EtFOSE-M	1250 ng/mL
..13C2-4:2-FTS_00001	01/20/28		Wellington, Lot M242FTS0123		(Purchased Reagent)		M2-4:2 FTS	46.7 ug/mL
..13C2-6:2-FTS_00001	11/24/27		Wellington, Lot M262FTS1122		(Purchased Reagent)		M2-6:2 FTS	47.5 ug/mL
..13C2-8:2-FTS_00001	11/10/27		Wellington, Lot M282FTS1122		(Purchased Reagent)		M2-8:2 FTS	47.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..13C2-PFDoDA_00001	12/21/27	Wellington, Lot MPFDoA1222			(Purchased Reagent)		13C2-PFDoDA	50 ug/mL
..13C2-PFTeDA_00001	11/16/27	Wellington, Lot M2PFTeDA1122			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..13C3-HFPODA_00002	10/24/26	Wellington, Lot M3HFPODA1023			(Purchased Reagent)		13C3 HFPO-DA	50 ug/mL
..13C3-PFBS_00001	11/21/27	Wellington, Lot M3PFBS1122			(Purchased Reagent)		13C3 PFBS	46.5 ug/mL
..13C3-PFHxS_00001	02/01/28	Wellington, Lot M3PFHxS0123			(Purchased Reagent)		13C3 PFHxS	47.3 ug/mL
..13C4-PFBA_00002	11/02/28	Wellington, Lot MPFBA1023			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..13C4-PFHpA_00001	12/12/27	Wellington, Lot M4PFHpA1222			(Purchased Reagent)		13C4 PFHpA	50 ug/mL
..13C5-PFHxA_00001	11/24/27	Wellington, Lot M5PFHxA1122			(Purchased Reagent)		13C5 PFHxA	50 ug/mL
..13C5-PFPeA_00001	10/04/27	Wellington, Lot M5PFPeA0922			(Purchased Reagent)		13C5 PFPeA	50 ug/mL
..13C6-PFDA_00001	09/15/27	Wellington, Lot M6PFDA0922			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..13C7-PFUnDA_00001	06/08/27	Wellington, Lot M7PFUdA0522			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..13C8-PFOA_00001	05/30/27	Wellington, Lot M8PFOA0522			(Purchased Reagent)		13C8 PFOA	50 ug/mL
..13C8-PFOS_00001	05/19/27	Wellington, Lot M8PFOS0522			(Purchased Reagent)		13C8 PFOS	47.8 ug/mL
..13C8-PFOSA_00001	01/18/28	Wellington, Lot M8FOSA0123I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..13C9-PFNA_00001	11/24/27	Wellington, Lot M9PFNA1122			(Purchased Reagent)		13C9 PFNA	50 ug/mL
..d3-NMeFOSAA_00001	10/18/27	Wellington, Lot d3NMeFOSAA1022			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..d3-NMePFOSA_00001	11/11/27	Wellington, Lot dNMeFOSA1122M			(Purchased Reagent)		d3-NMePFOSA	50 ug/mL
..d5-NEtFOSAA_00001	12/30/27	Wellington, Lot d5NetFOSAA1222			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..d5-NEtPFOSA_00001	11/07/27	Wellington, Lot dNEtFOSA1022M			(Purchased Reagent)		d5-NEtPFOSA	50 ug/mL
..d7-NMePFOSAE_00004	02/16/29	Wellington, Lot d7NMeFOSE0224M			(Purchased Reagent)		d7-N-MeFOSE-M	50 ug/mL
..d9-NEtPFOSAE_00004	02/16/29	Wellington, Lot d9NEtFOSE0124M			(Purchased Reagent)		d9-N-EtFOSE-M	50 ug/mL

Reagent

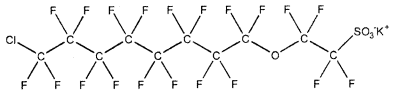
11Cl-PF3OUdS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 11Cl-PF3OUdS **LOT NUMBER:** 11ClPF3OUdS0123
COMPOUND: Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: $C_{10}F_{20}ClSO_4K$ **MOLECULAR WEIGHT:** 670.69
CONCENTRATION: 50.0 ± 2.5 µg/mL (K salt) **SOLVENT(S):** Methanol
47.2 ± 2.4 µg/mL (11Cl-PF3OUdS acid)
47.1 ± 2.4 µg/mL (11Cl-PF3OUdS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/30/2023
EXPIRY DATE: (mm/dd/yyyy) 01/30/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This compound is a minor component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/07/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

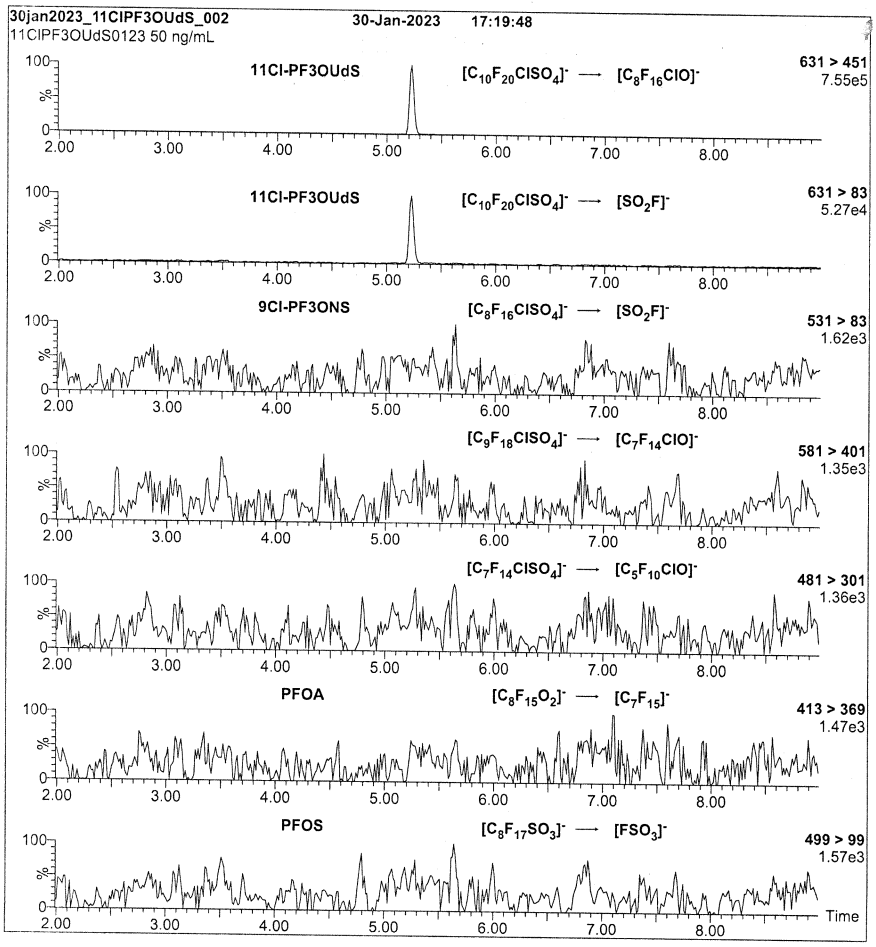
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **11Cl-PF3OUdS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (11Cl-PF3OUdS)

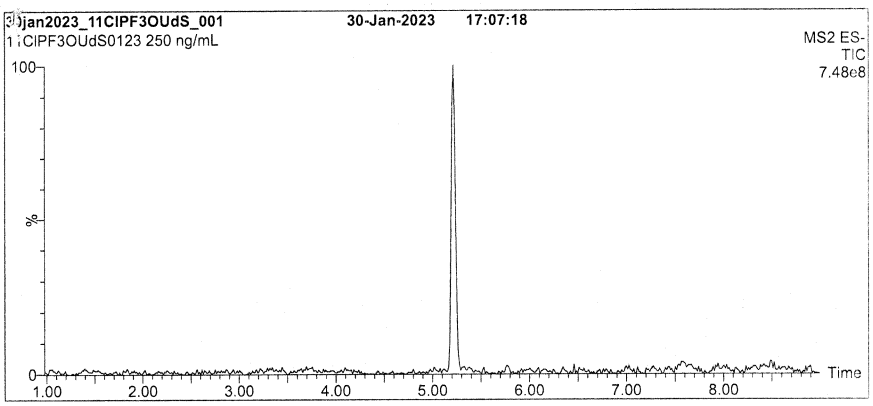
Mobile phase: Same as Figure 1

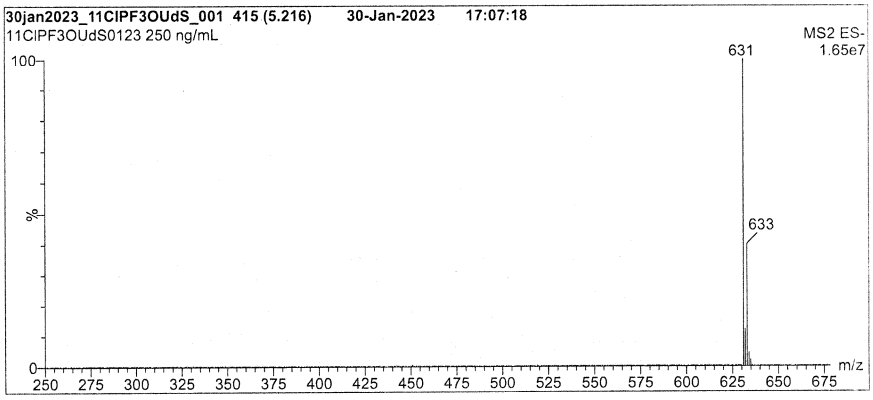
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.73e-3
Collision Energy (eV) = 24

Figure 1: **11Cl-PF3OUdS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

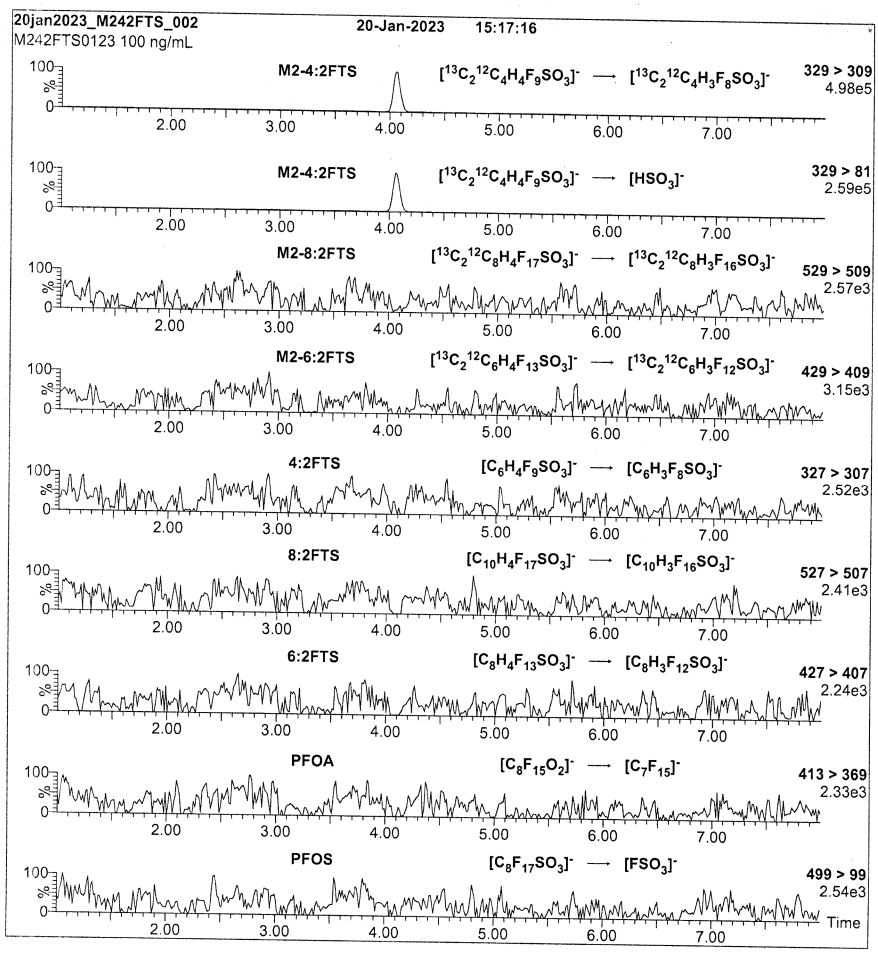
Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C2-4:2-FTS_00001

Figure 2: **M2-4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-4:2FTS)

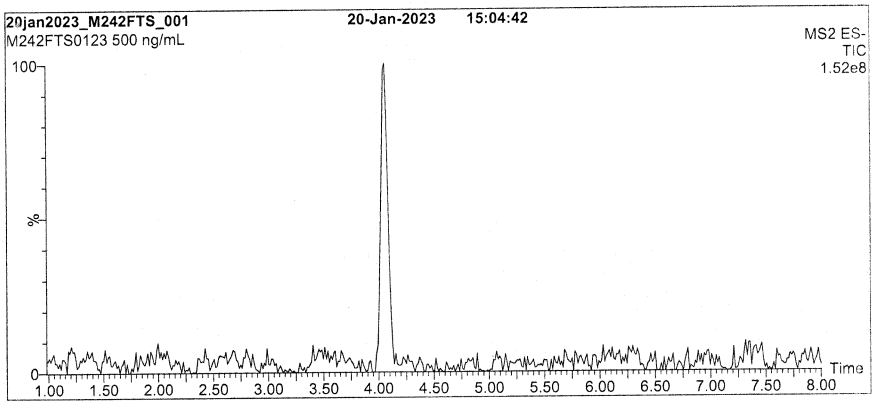
Mobile phase: Same as Figure 1

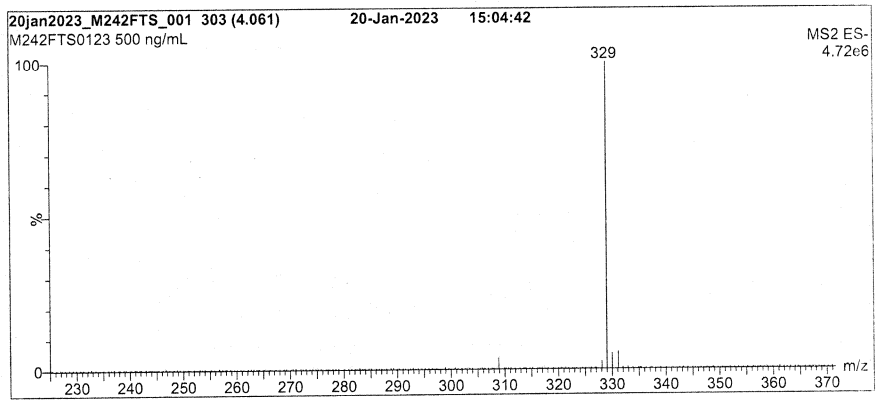
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.69e-3
Collision Energy (eV) = 18

Figure 1: **M2-4:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 80% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

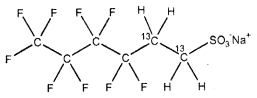
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-4:2FTS
LOT NUMBER: M242FTS0123
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate

STRUCTURE:



CAS #: 2708218-88-4

MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4H_4F_9SO_3Na$	**MOLECULAR WEIGHT:**	352.12
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 46.9 ± 2.3 µg/mL (M2-4:2FTS acid) 46.7 ± 2.3 µg/mL (M2-4:2FTS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	01/20/2023		
EXPIRY DATE: (mm/dd/yyyy)	01/20/2028		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 4:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 4:2FTS and M2-4:2FTS will produce signals in the m/z 329 to m/z 309 channel during SRM analysis. We recommend using the m/z 329 to m/z 81 transition to monitor for M2-4:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

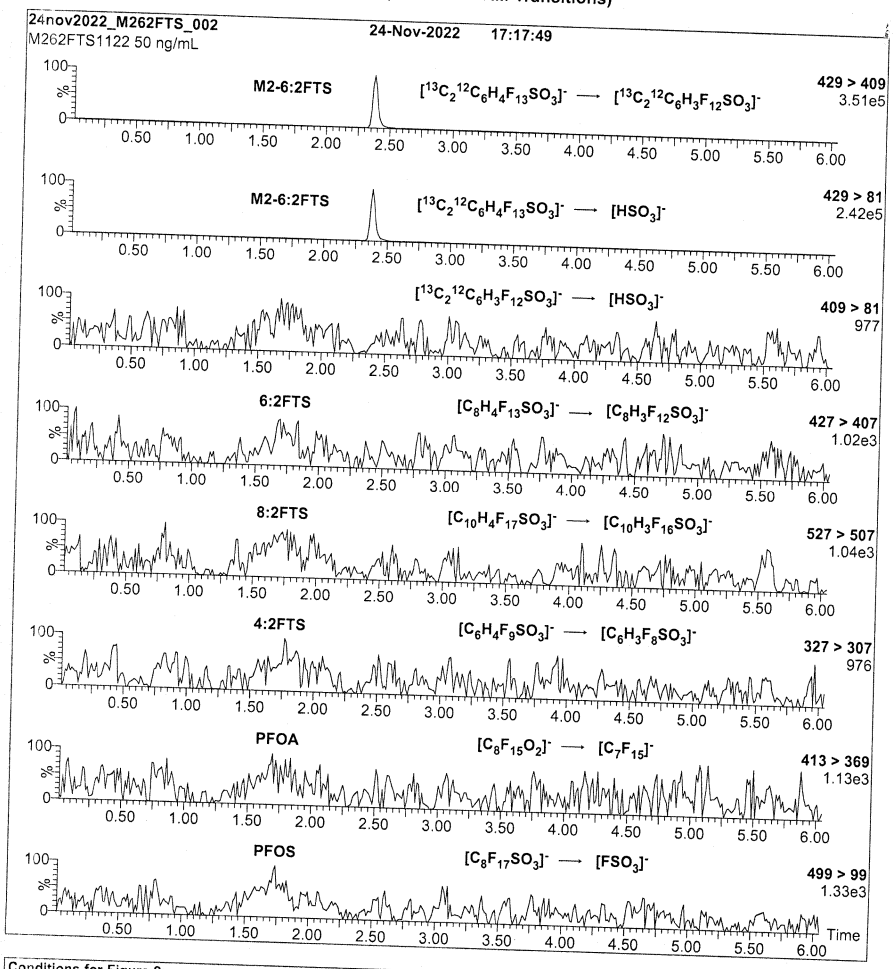
Certified By: _____ **Date:** 01/31/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Reagent

13C2-6:2-FTS_00001

Figure 2: **M2-6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-6:2FTS)

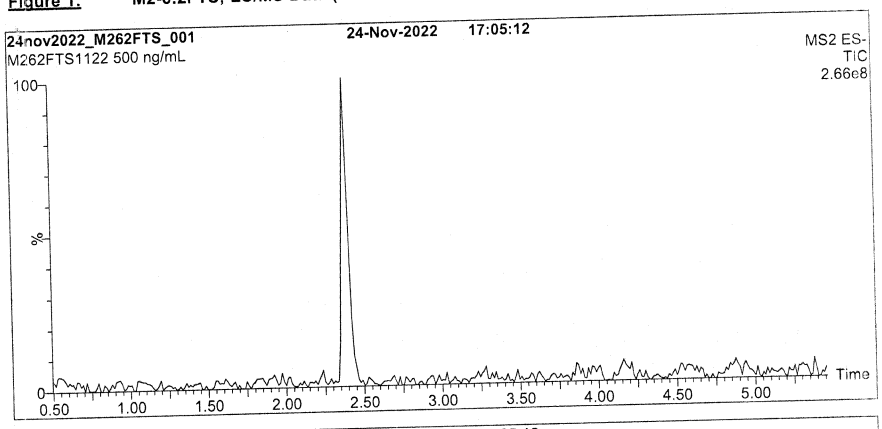
Mobile phase: Same as Figure 1

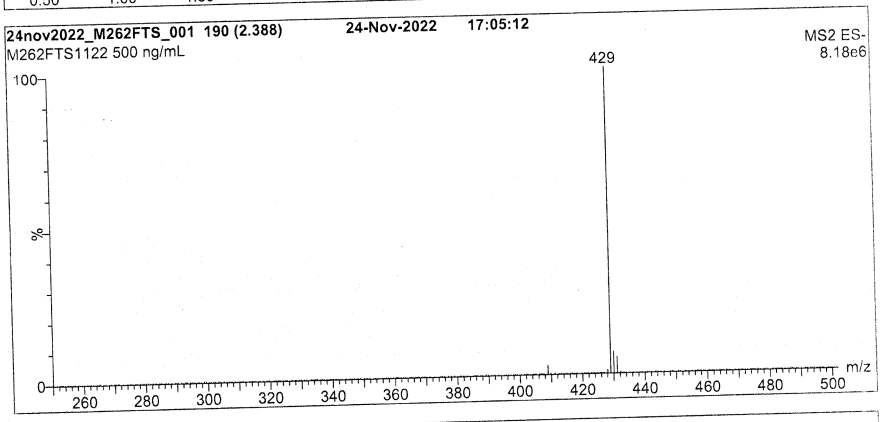
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.67e-3
Collision Energy (eV) = 20

Figure 1: **M2-6:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

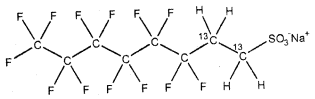
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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-6:2FTS
LOT NUMBER: M262FTS1122
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate

STRUCTURE:
CAS #: 2708218-89-5



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$
MOLECULAR WEIGHT:	452.13
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 47.6 ± 2.4 µg/mL (M2-6:2FTS acid) 47.5 ± 2.4 µg/mL (M2-6:2FTS anion)
SOLVENT(S):	Methanol
CHEMICAL PURITY:	>98%
ISOTOPIC PURITY:	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	11/24/2022
EXPIRY DATE: (mm/dd/yyyy)	11/24/2027
RECOMMENDED STORAGE:	Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 6:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/13/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

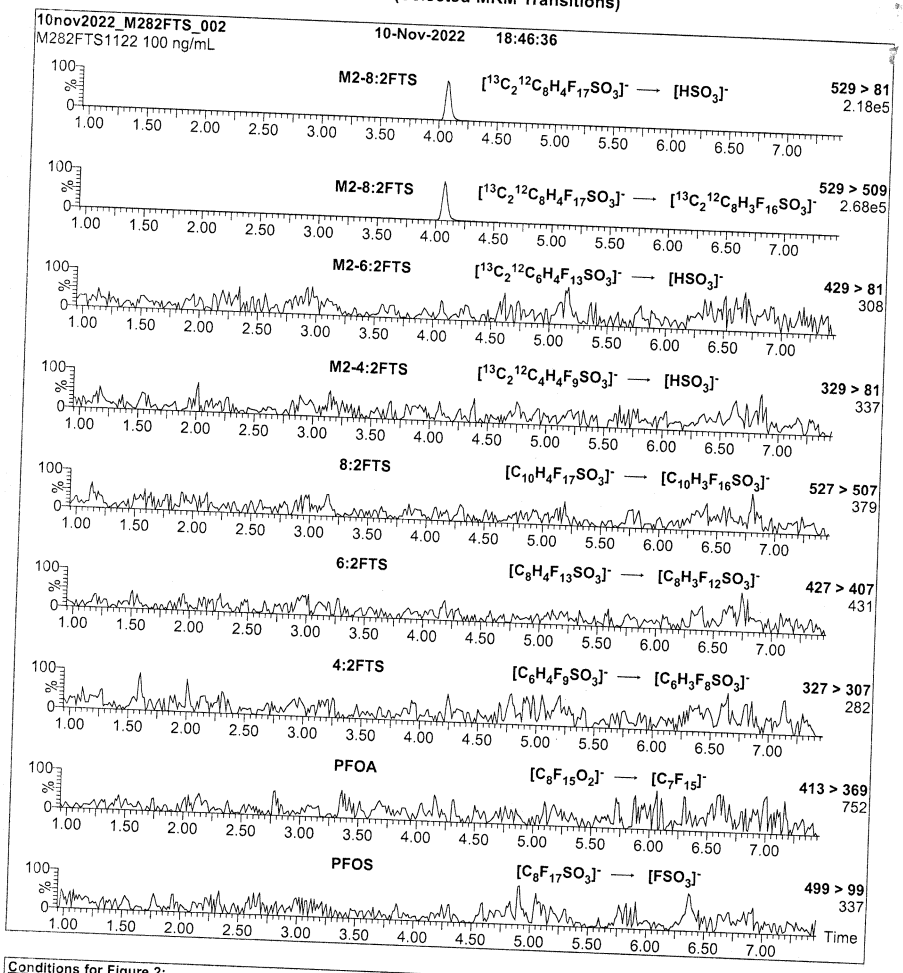
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Revision#:9, Revised 2020-12-23

Reagent

13C2-8:2-FTS_00001

Figure 2: **M2-8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-8:2FTS)

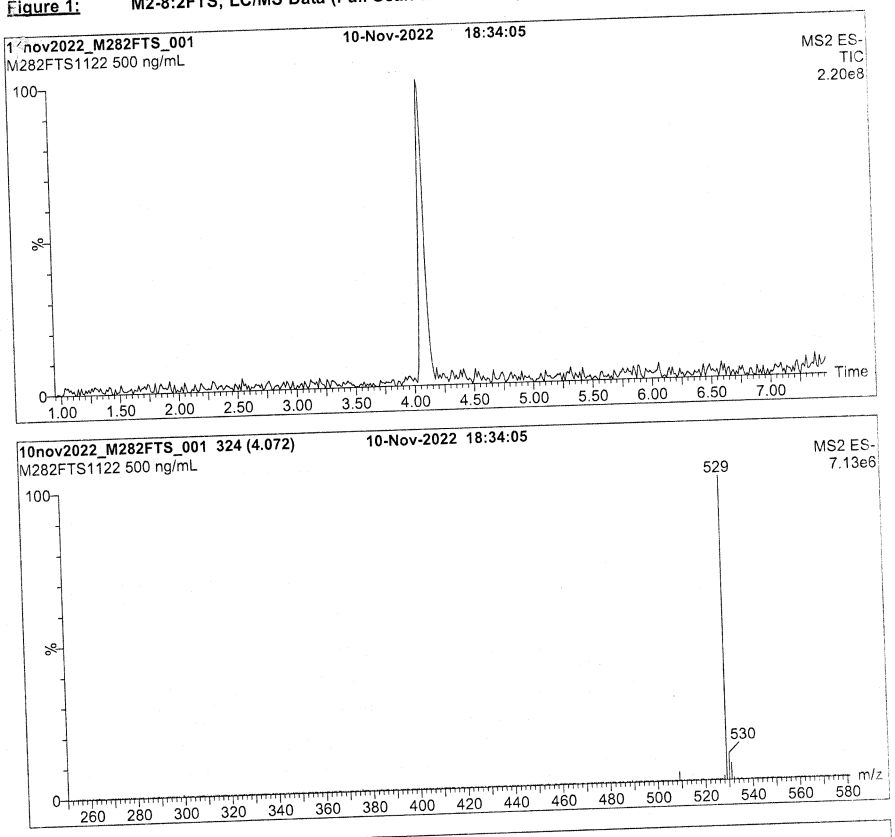
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.02e-3
Collision Energy (eV) = 35

Figure 1: **M2-8:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**



Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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Revision#:9, Revised 2020-12-23

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

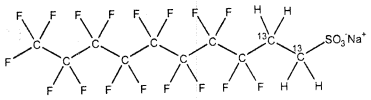
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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-8:2FTS
LOT NUMBER: M282FTS1122
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate

STRUCTURE:
CAS #: 2708218-90-8



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$
MOLECULAR WEIGHT: 552.15
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
48.0 ± 2.4 µg/mL (M2-8:2FTS acid)
47.9 ± 2.4 µg/mL (M2-8:2FTS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy) 11/10/2022
EXPIRY DATE: (mm/dd/yyyy) 11/10/2027
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager **Date:** 11/18/2022 (mm/dd/yyyy)

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Revision#:9, Revised 2020-12-23

Reagent

13C2-PFDA_00001

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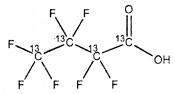
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFBA
COMPOUND: Perfluoro-n-($^{13}C_4$)butanoic acid

LOT NUMBER: MPFBA0123

STRUCTURE:

CAS #: 1017281-29-6



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	01/20/2023		
EXPIRY DATE: (mm/dd/yyyy)	01/20/2028		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/16/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

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Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

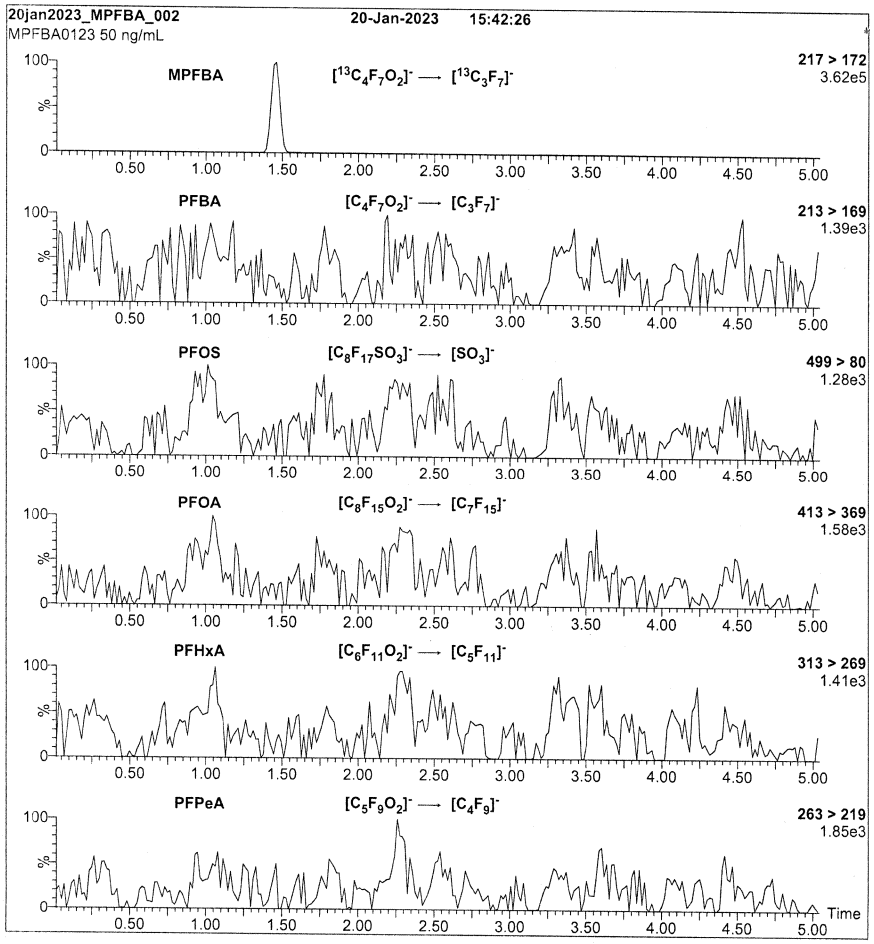
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFBA)

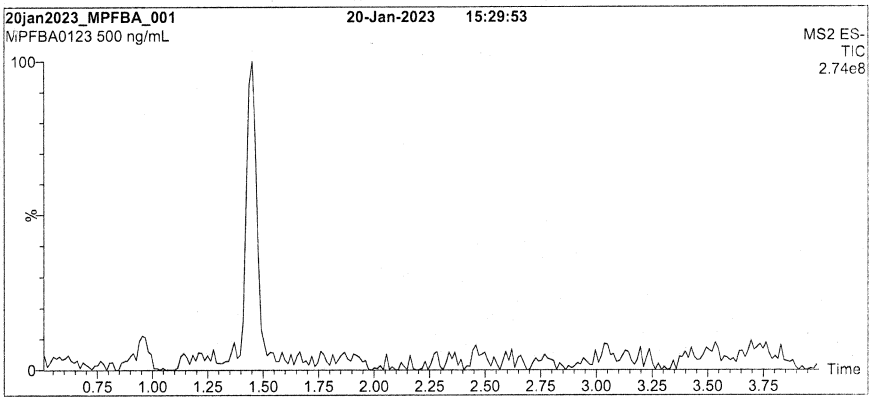
Mobile phase: Same as Figure 1

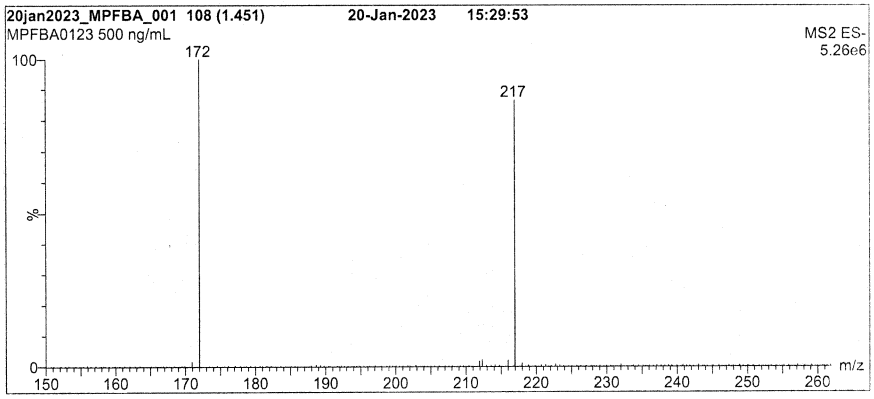
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.69e-3
Collision Energy (eV) = 8

Figure 1: **MPFBA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 80% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C2-PFDoDA_00001

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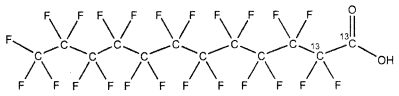
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFDoA
COMPOUND: Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid

LOT NUMBER: MPFDoA1222

STRUCTURE:

CAS #: 960315-52-0



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{10}HF_{23}O_2$	**MOLECULAR WEIGHT:**	616.08
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	12/21/2022		
EXPIRY DATE: (mm/dd/yyyy)	12/21/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ **Date:** 01/13/2023 (mm/dd/yyyy)
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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

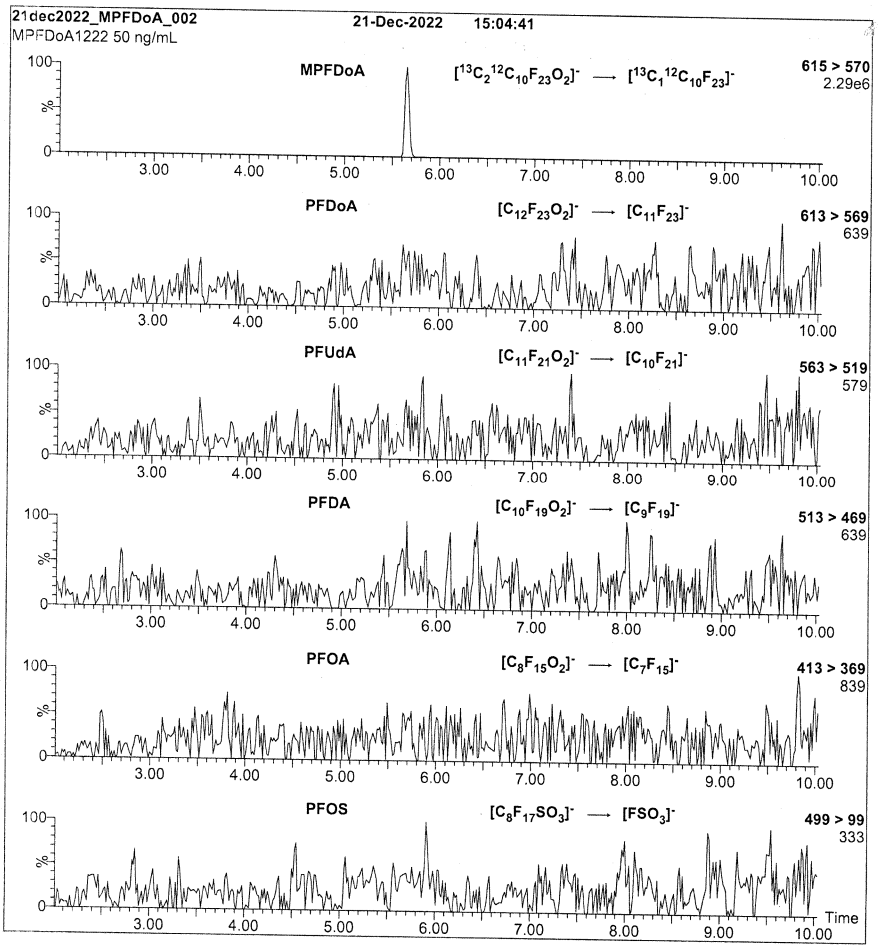
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFDoA)

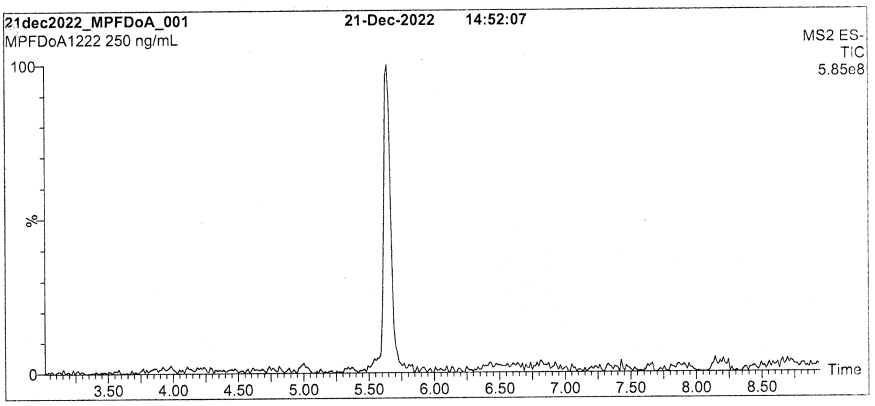
Mobile phase: Same as Figure 1

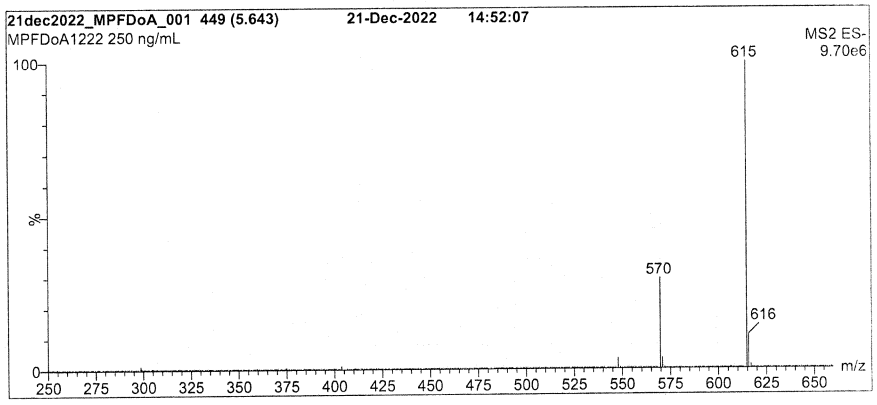
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.65e-3
Collision Energy (eV) = 12

Figure 1: **MPFDoA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C2-PFHxA_00001

WELLINGTON LABORATORIES

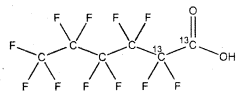
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFHxA
COMPOUND: Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid

LOT NUMBER: MPFHxA0922

STRUCTURE:

CAS #: 960315-47-3



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4HF_{11}O_2$	**MOLECULAR WEIGHT:**	316.04
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	09/08/2022		
EXPIRY DATE: (mm/dd/yyyy)	09/08/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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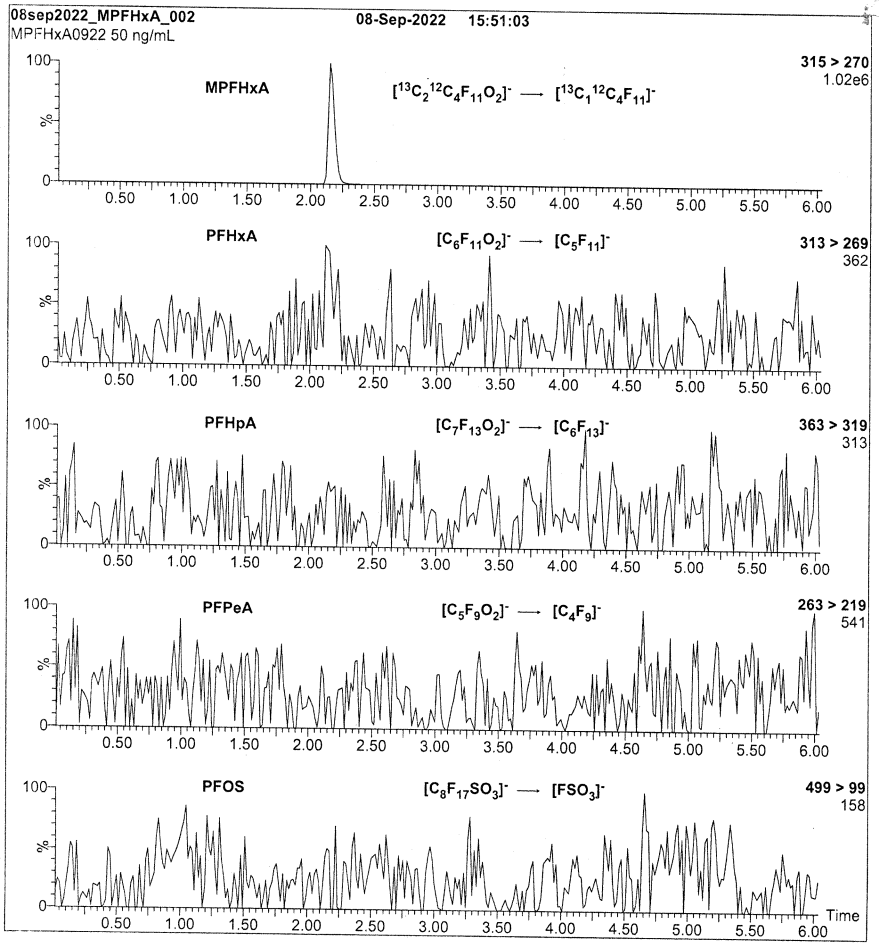
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **MPFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFHxA)

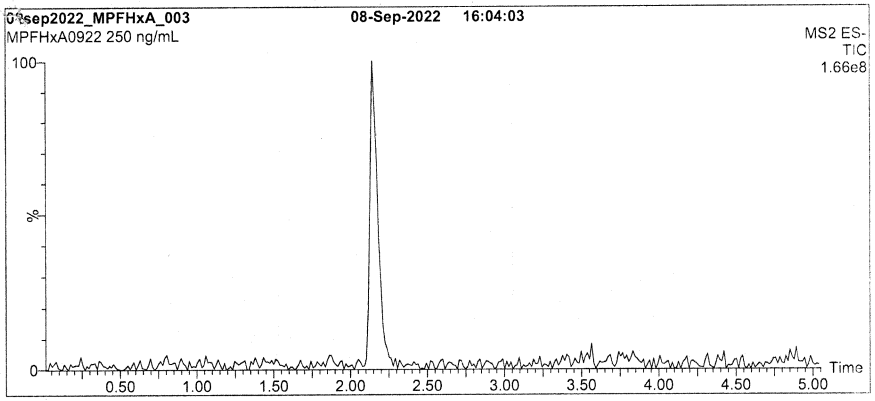
Mobile phase: Same as Figure 1

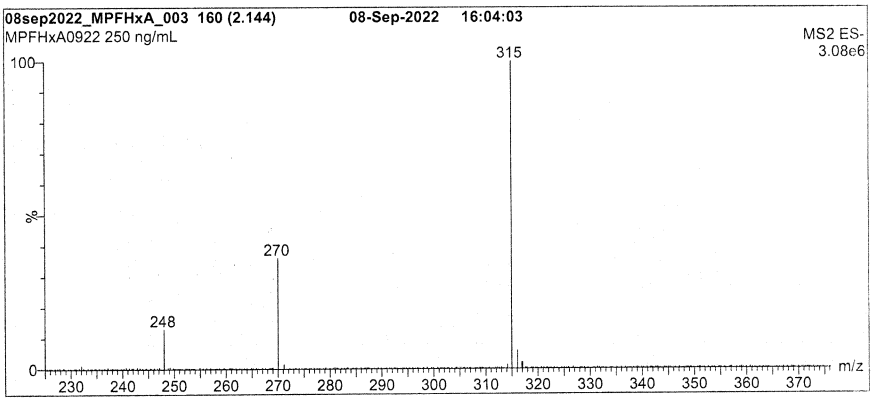
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 8

Figure 1: **MPFHxA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C2-PFTeDA_00001

WELLINGTON LABORATORIES

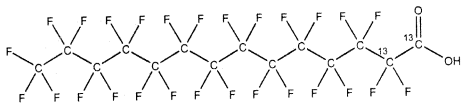
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2PFTeDA
COMPOUND: Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid

LOT NUMBER: M2PFTeDA1122

CAS #: Not available

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_{12}HF_{27}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 716.10
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/16/2022
EXPIRY DATE: (mm/dd/yyyy) 11/16/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2\text{-}^{13}C_2$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/25/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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QUALITY MANAGEMENT:

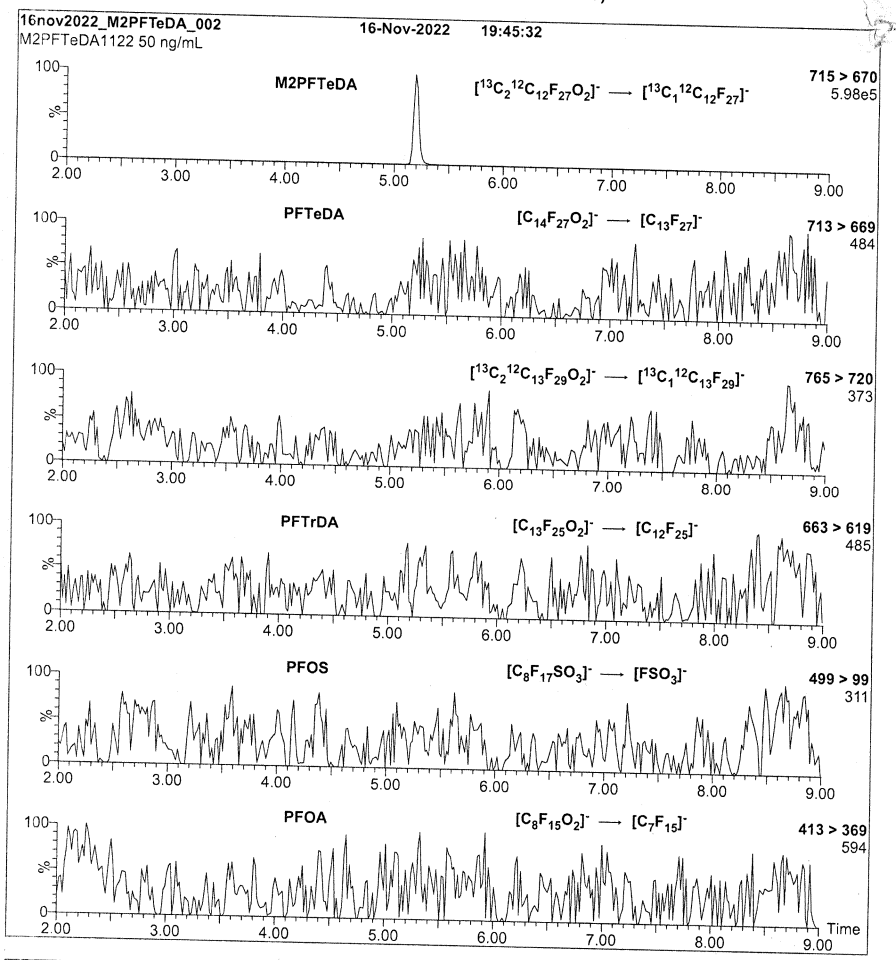
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **M2PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2PFTeDA)

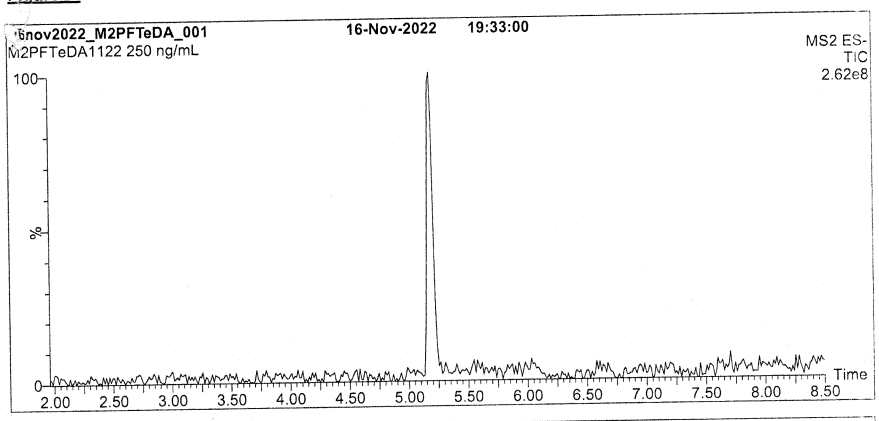
Mobile phase: Same as Figure 1

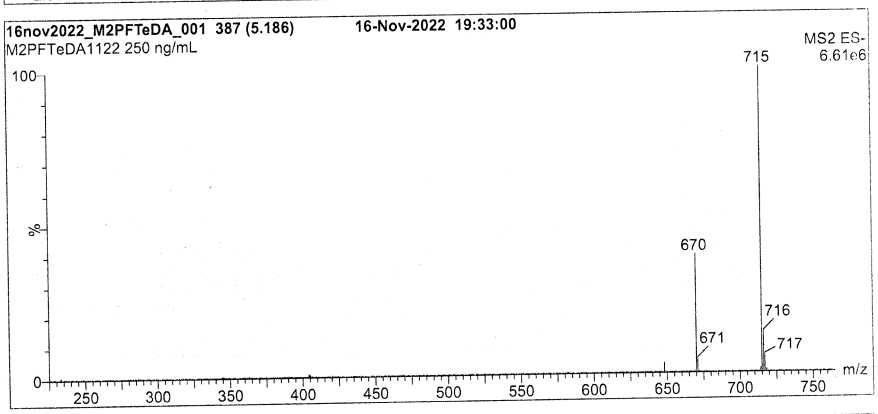
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.89e-3
Collision Energy (eV) = 14

Figure 1: **M2PFTeDA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% H_2O / 70% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C3-HFPODA_00002

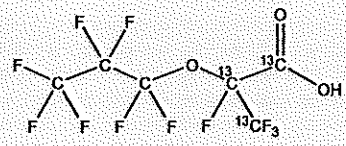
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA1023

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3HF_{11}O_3$	**MOLECULAR WEIGHT:**	333.03
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	10/24/2023		
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This product is also known as ($^{13}C_3$)hexafluoropropylene oxide dimer acid and commercially known as ($^{13}C_3$)GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/30/2023 (mm/dd/yyyy)
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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

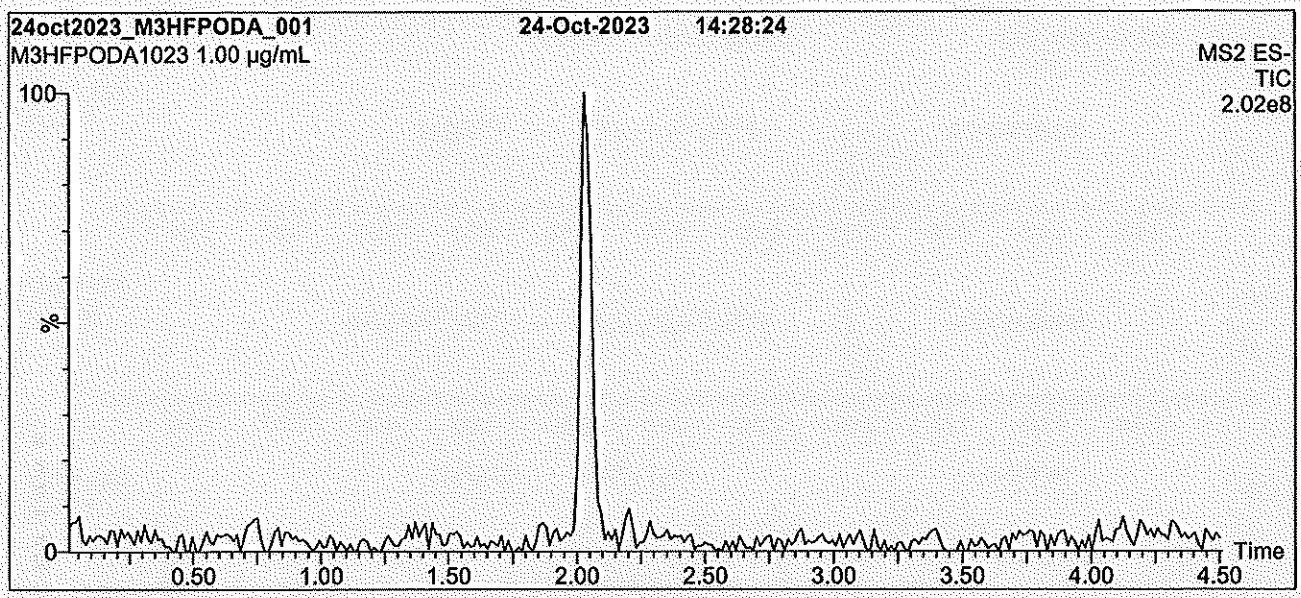
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

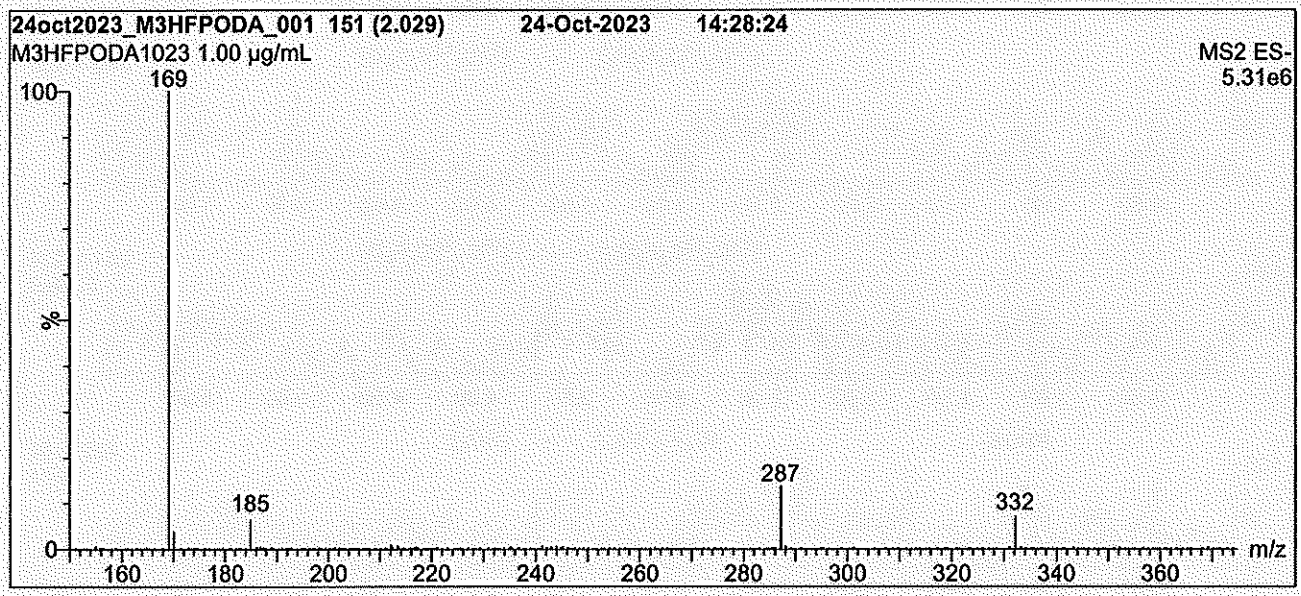
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **M3HFPO-DA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

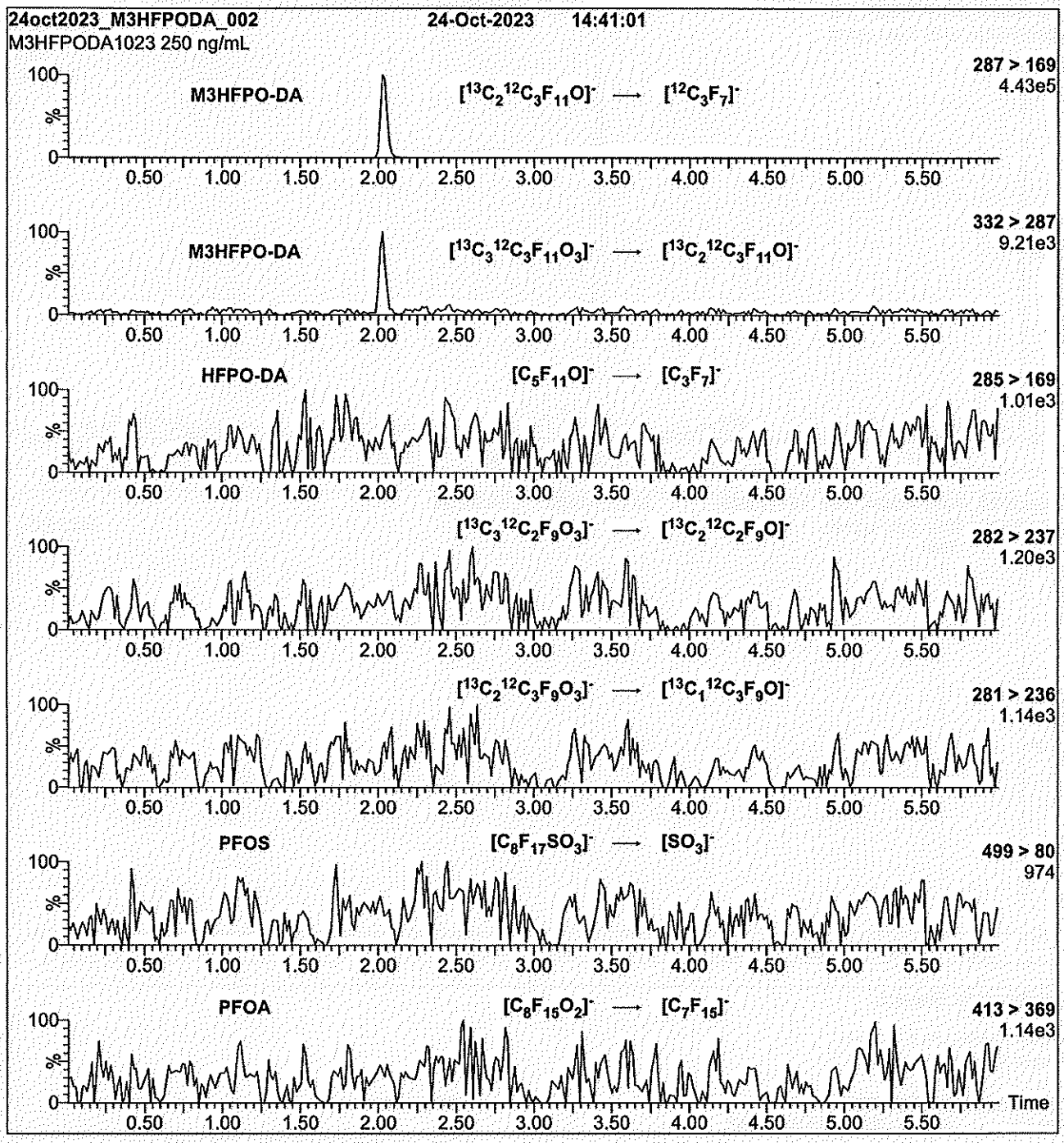
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **M3HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3HFPO-DA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.39e-3
Collision Energy (eV) = 8

Reagent

13C3-PFBA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFBA
COMPOUND: Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid

LOT NUMBER: M3PFBA0822

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_3{}^{12}CHF_7O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 217.02
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/05/2022
EXPIRY DATE: (mm/dd/yyyy) 08/05/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C (2,3,4-$^{13}C_3$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-($^{13}C_3$)propanoic acid and also contains ~1.0% of perfluoro-n-(1,2,3,4-$^{13}C_4$)butanoic acid due to the naturally occurring isotopic abundance of ^{13}C in the unlabelled carbon atom.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/15/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

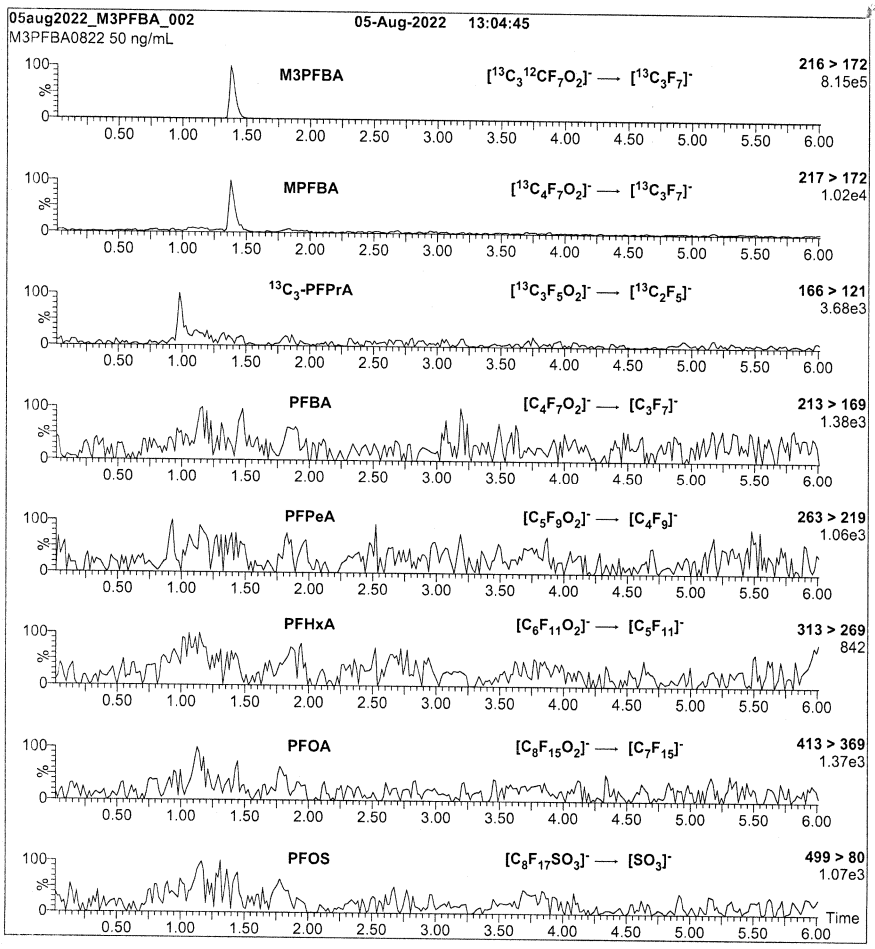
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M3PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFBA)

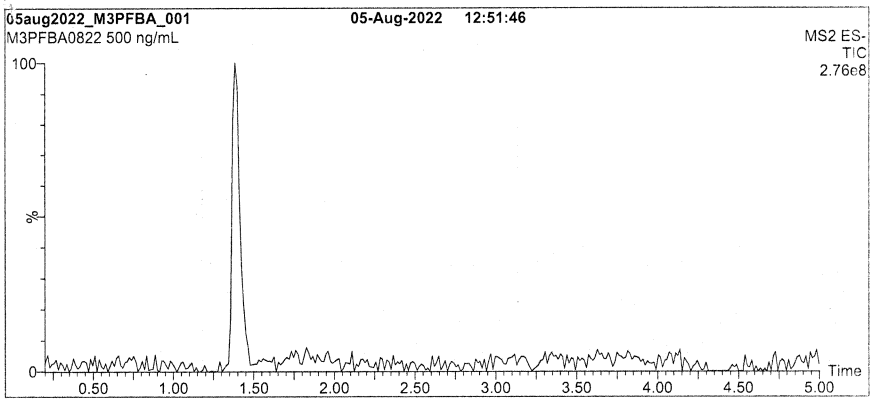
Mobile phase: Same as Figure 1

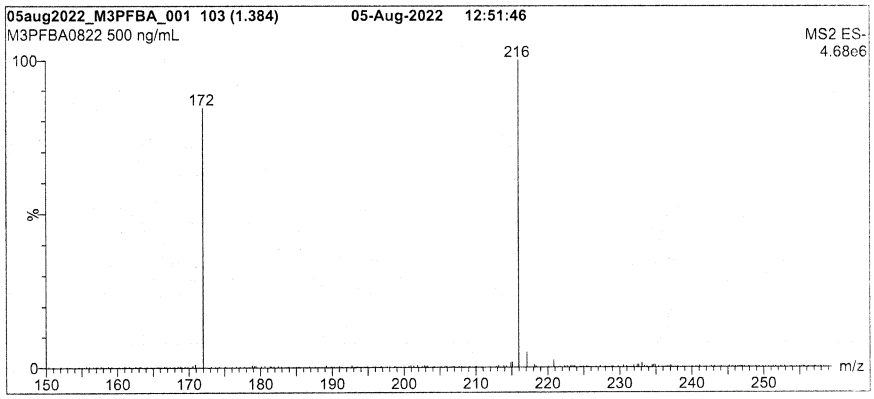
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.27e-3
Collision Energy (eV) = 8

Figure 1: **M3PFBA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C3-PFBS_00001

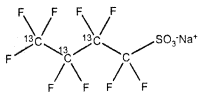
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFBS
LOT NUMBER: M3PFBS1122
COMPOUND: Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate

STRUCTURE:

CAS #: 2708218-84-0



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CF_8SO_3Na$	**MOLECULAR WEIGHT:**	325.06
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 46.6 ± 2.3 µg/mL (M3PFBS acid) 46.5 ± 2.3 µg/mL (M3PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($2,3,4\text{-}^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	11/21/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/21/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/24/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HANDLING:

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HOMOGENEITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

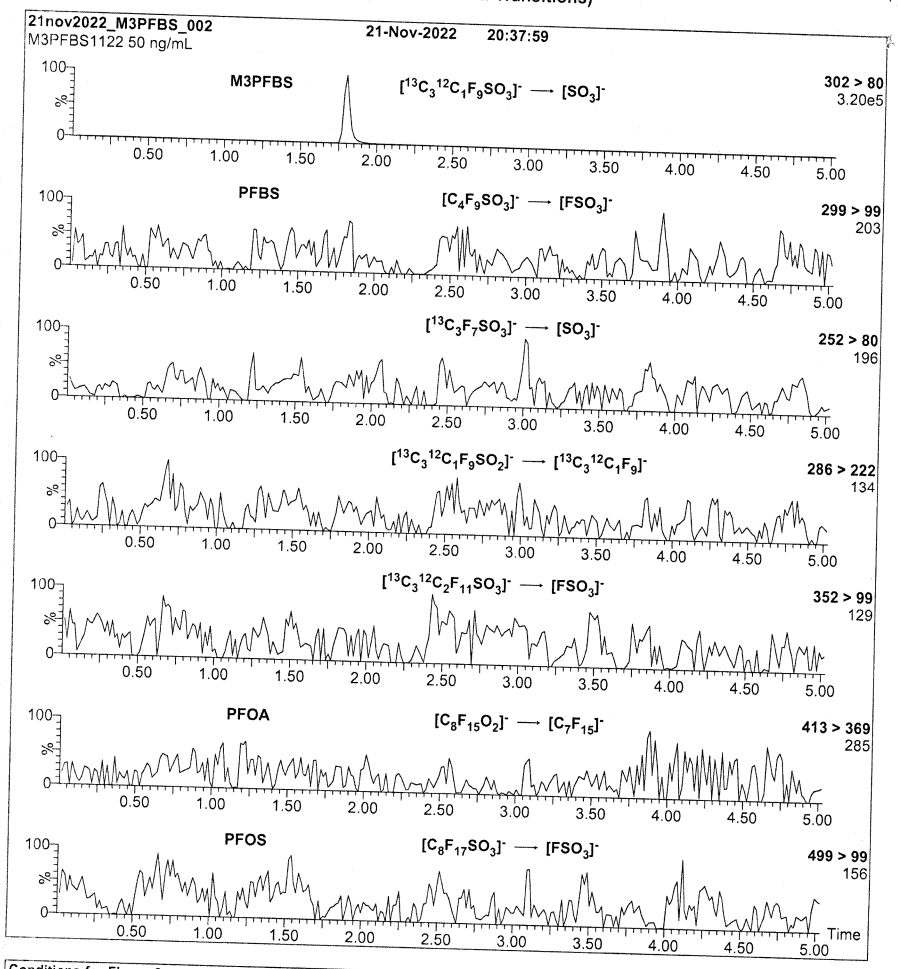
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M3PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFBS)

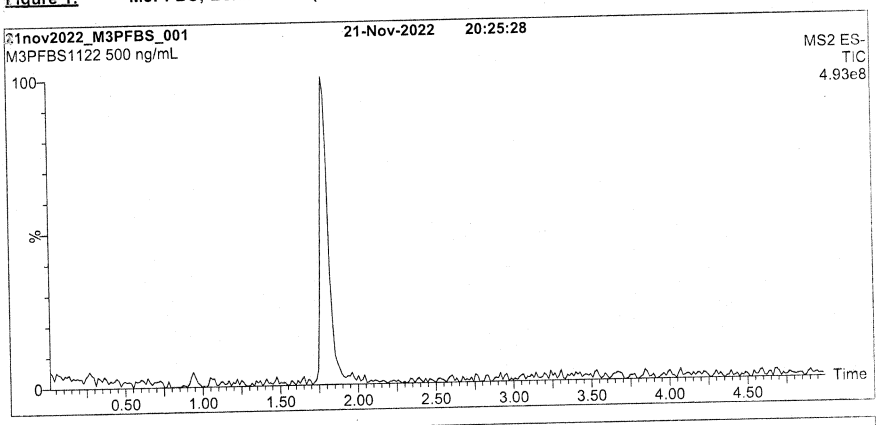
Mobile phase: Same as Figure 1

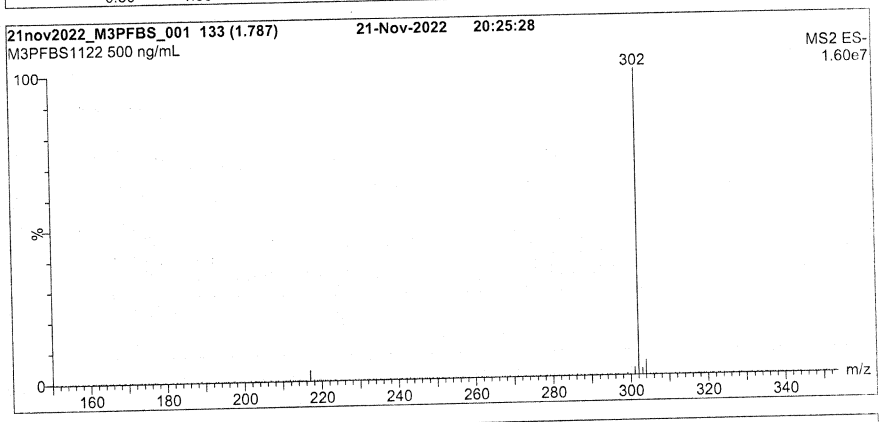
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.93e-3
Collision Energy (eV) = 30

Figure 1: **M3PFBS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

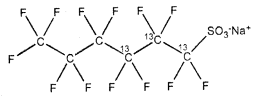
13C3-PFHxS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFHxS
LOT NUMBER: M3PFHxS0123
COMPOUND: Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate

STRUCTURE:
CAS #: 2708218-86-2



MOLECULAR FORMULA: $^{13}C_3{}^{12}C_3F_{13}SO_3Na$
MOLECULAR WEIGHT: 425.07
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
47.4 ± 2.4 µg/mL (M3PFHxS acid)
47.3 ± 2.4 µg/mL (M3PFHxS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3-$^{13}C_3$)
LAST TESTED: (mm/dd/yyyy) 02/01/2023
EXPIRY DATE: (mm/dd/yyyy) 02/01/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/07/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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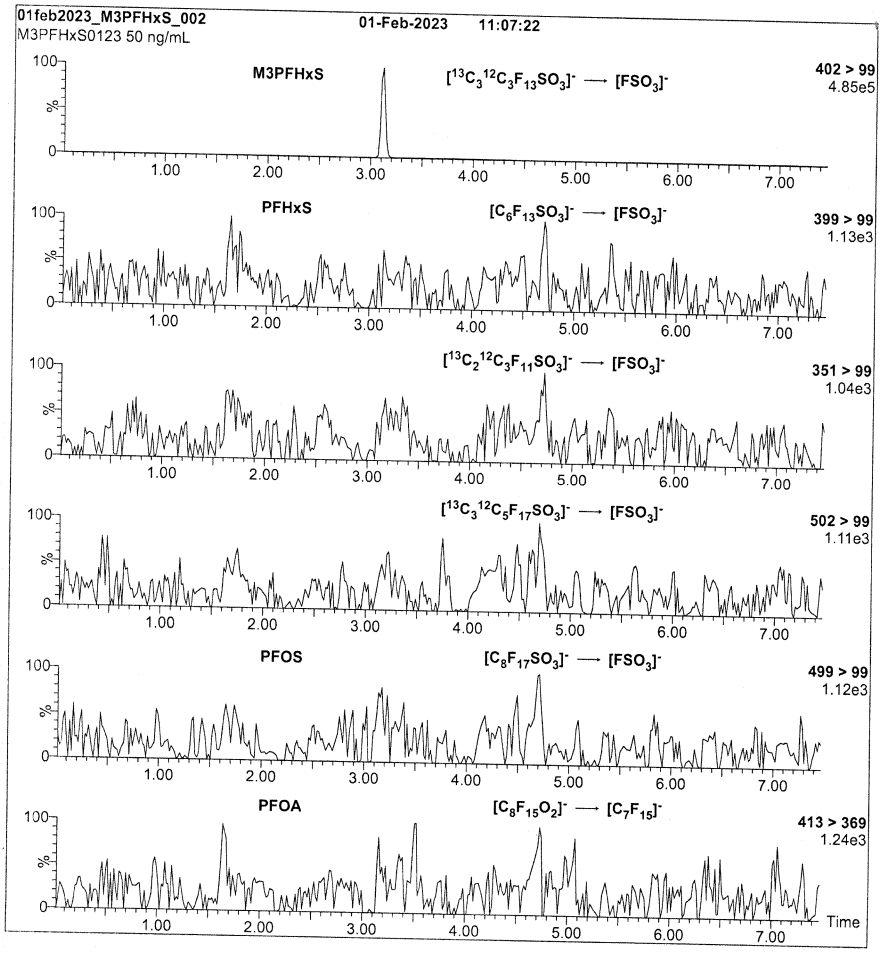
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **M3PFHxS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFHxS)

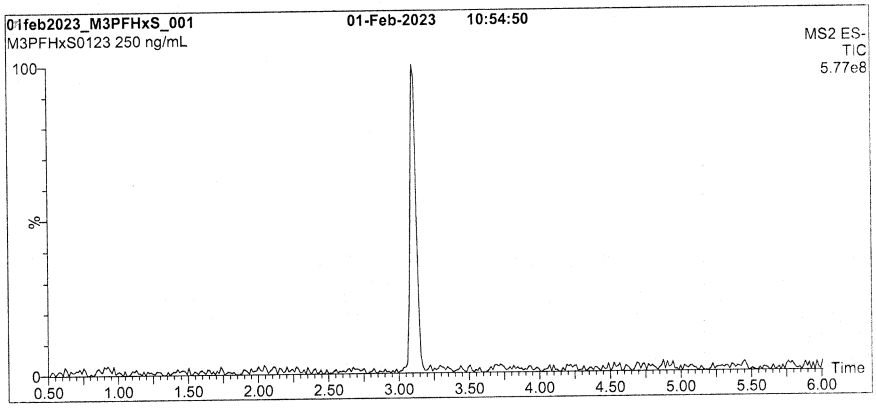
Mobile phase: Same as Figure 1

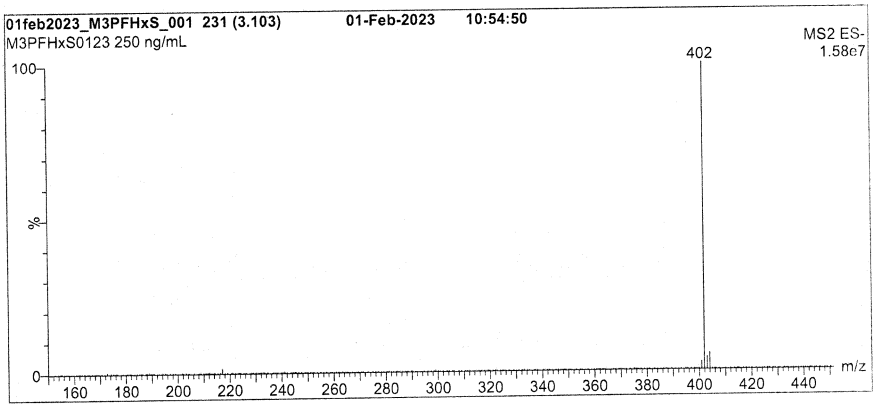
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 32

Figure 1: **M3PFHxS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

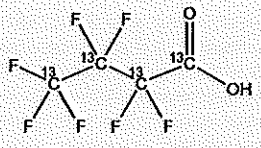
13C4-PFBA_00002

WELLINGTON LABORATORIES

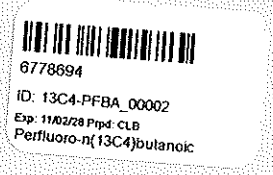
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFBA
LOT NUMBER: MPFBA1023
COMPOUND: Perfluoro-n-($^{13}C_4$)butanoic acid

STRUCTURE:



CAS #: 1017281-29-6



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	11/02/2023		
EXPIRY DATE: (mm/dd/yyyy)	11/02/2028		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/06/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

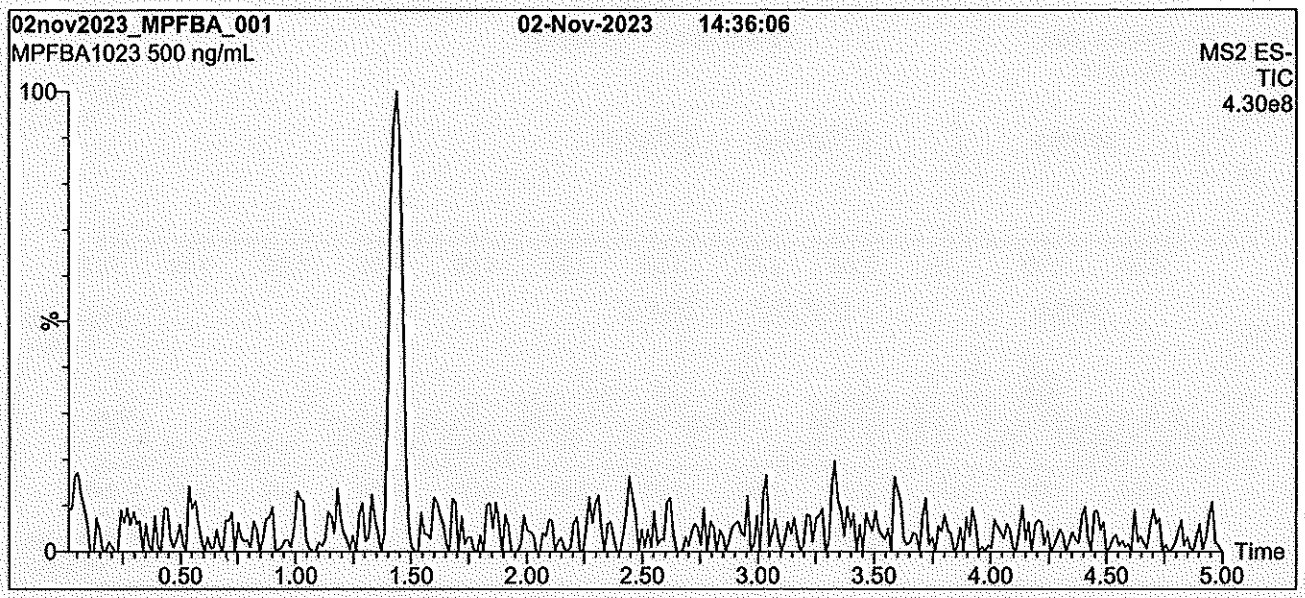
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

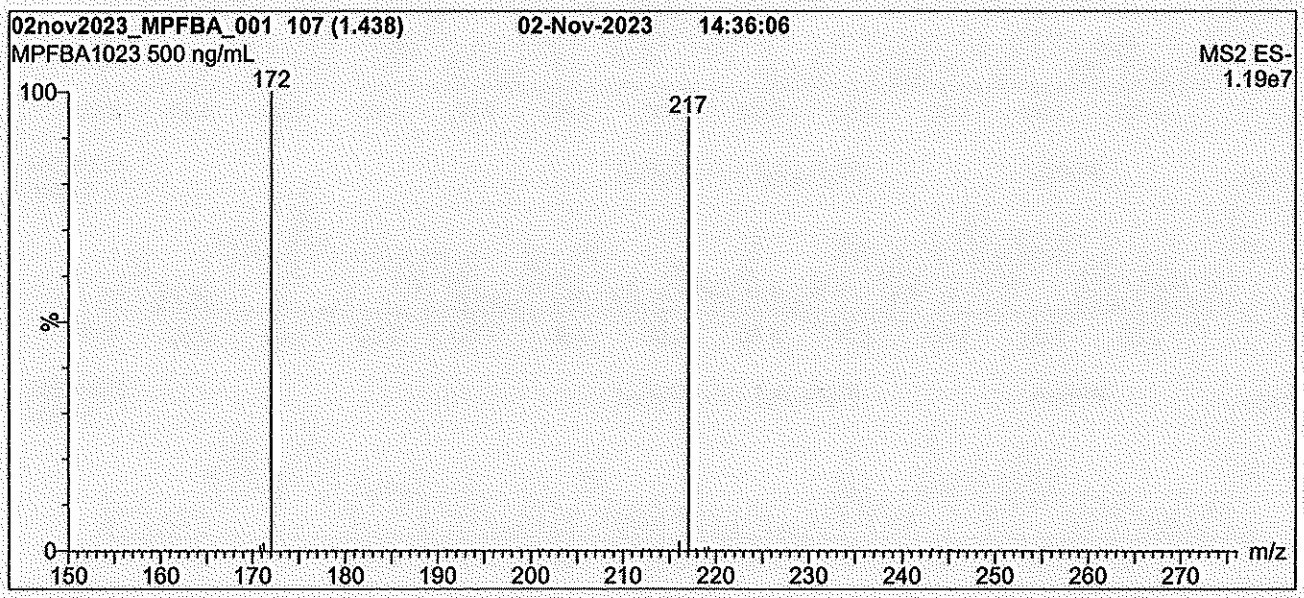
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **MPFBA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

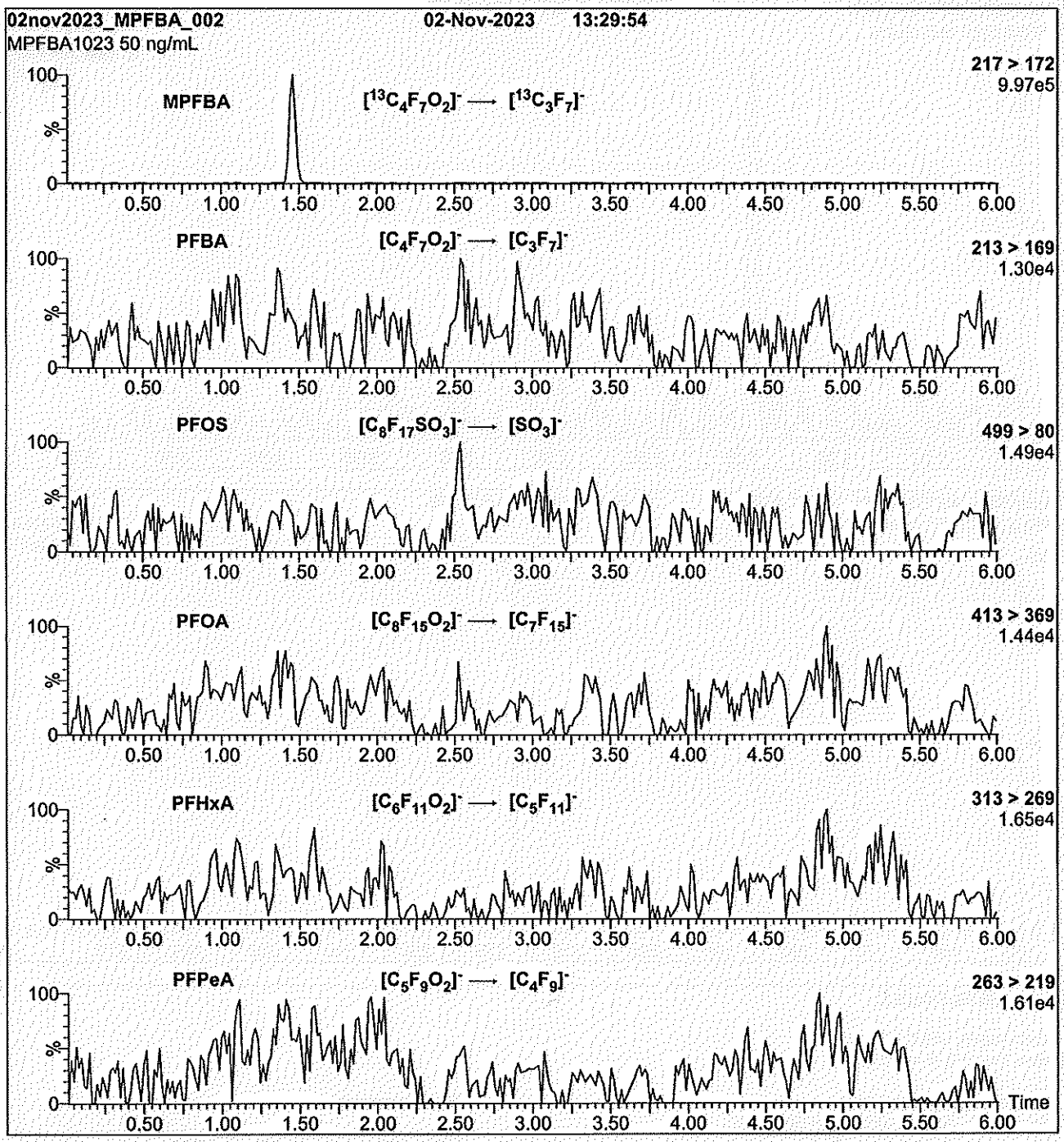
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFBA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.44e-3
Collision Energy (eV) = 8

Reagent

13C4-PFHpA_00001

WELLINGTON LABORATORIES

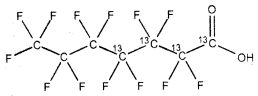
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M4PFHpA
COMPOUND: Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid

LOT NUMBER: M4PFHpA1222

STRUCTURE:

CAS #: 2328024-55-9



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_3HF_{13}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 368.03
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/12/2022
EXPIRY DATE: (mm/dd/yyyy) 12/12/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4-$^{13}C_4$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.03% of perfluoro-n-heptanoic acid (PFHpA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/13/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

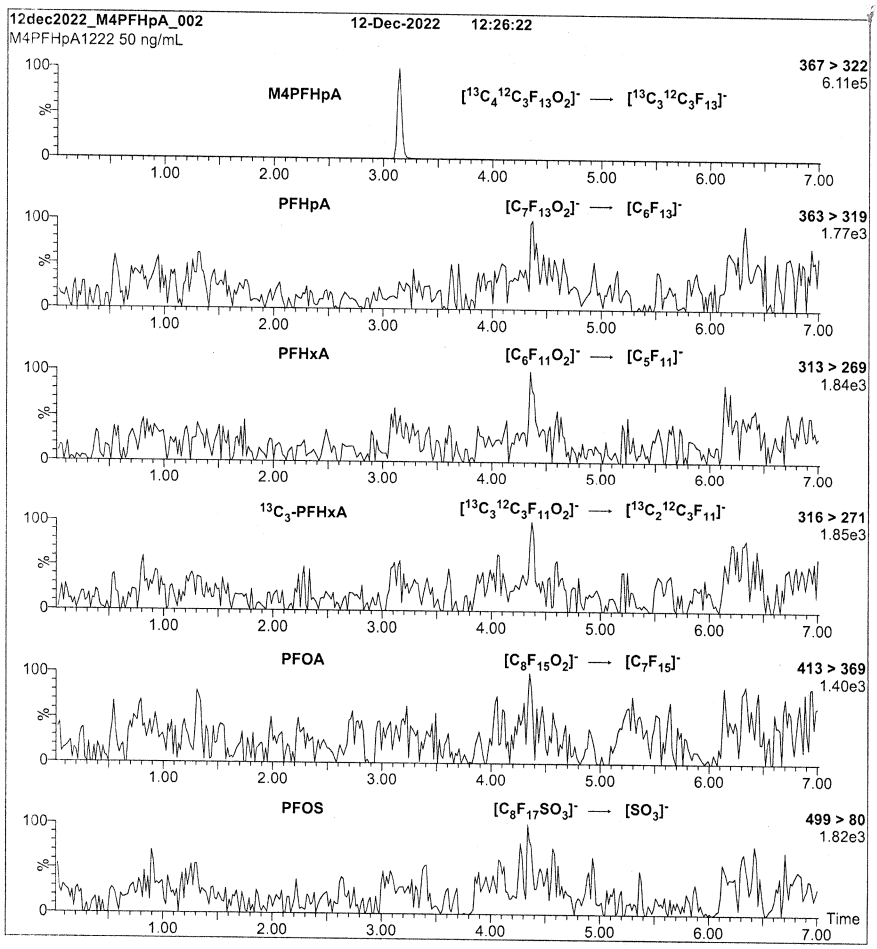
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M4PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M4PFHpA)

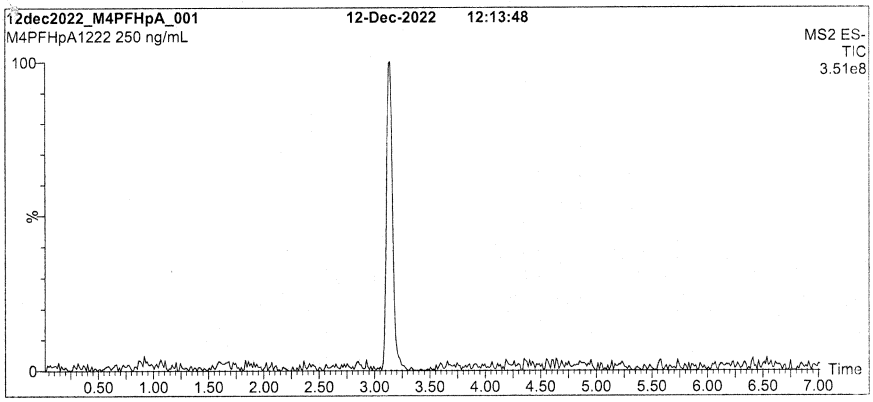
Mobile phase: Same as Figure 1

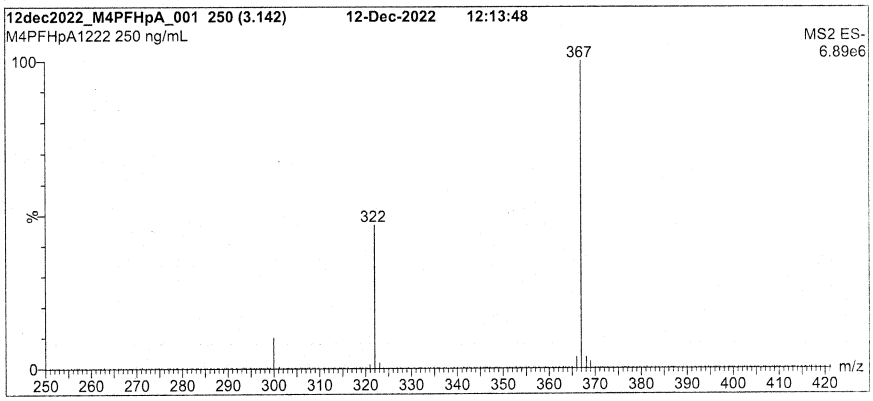
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.73e-3
Collision Energy (eV) = 8

Figure 1: **M4PFHpA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C4-PFOA_00001

WELLINGTON LABORATORIES

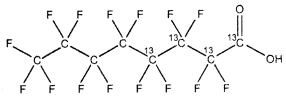
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOA
COMPOUND: Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

LOT NUMBER: MPFOA0223

STRUCTURE:

CAS #: 960315-48-4



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_4HF_{15}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 418.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 02/14/2023
EXPIRY DATE: (mm/dd/yyyy) 02/14/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4\text{-}^{13}C_4$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/17/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

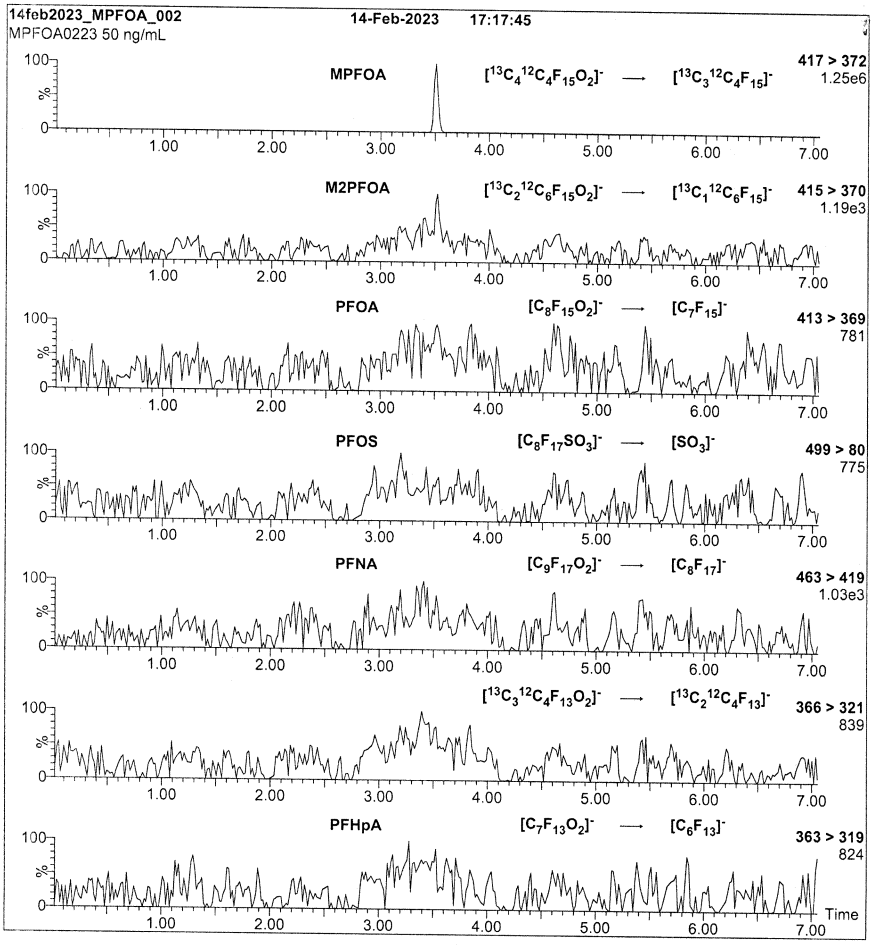
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFOA)

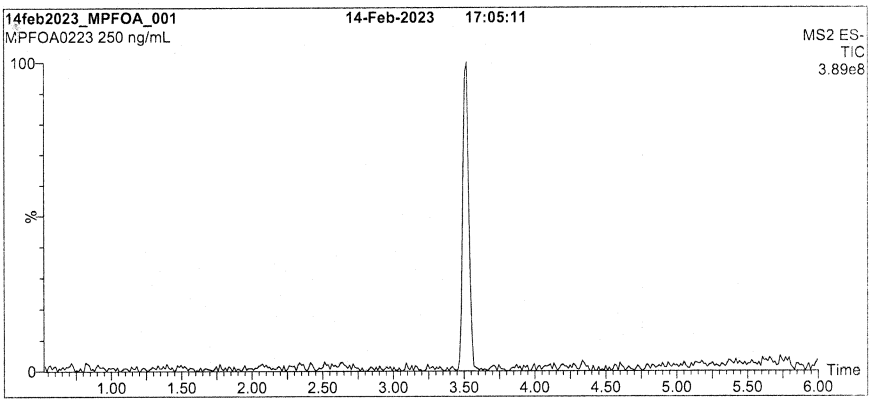
Mobile phase: Same as Figure 1

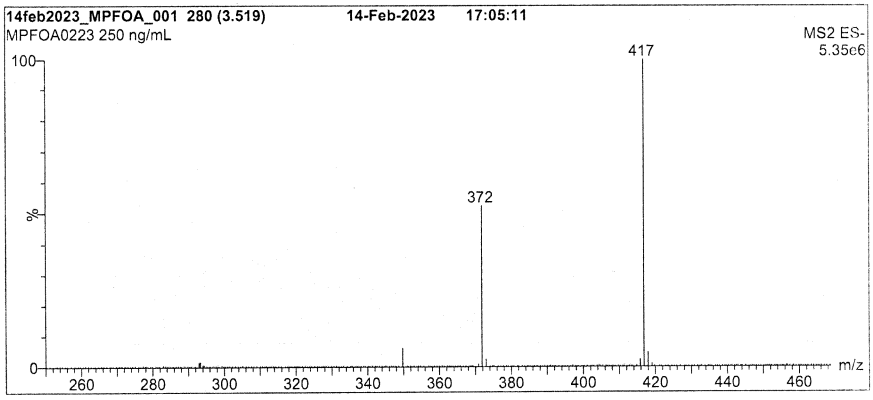
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.59e-3
Collision Energy (eV) = 8

Figure 1: **MPFOA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

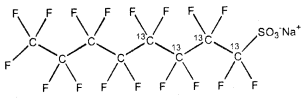
13C4-PFOS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS
LOT NUMBER: MPFOS1022
COMPOUND: Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate

STRUCTURE:
CAS #: 960315-53-1



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_4F_{17}SO_3Na$
MOLECULAR WEIGHT: 526.08
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
47.9 ± 2.4 µg/mL (MPFOS acid)
47.8 ± 2.4 µg/mL (MPFOS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy) 11/08/2022
EXPIRY DATE: (mm/dd/yyyy) 11/08/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.7% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager **Date:** 11/11/2022 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

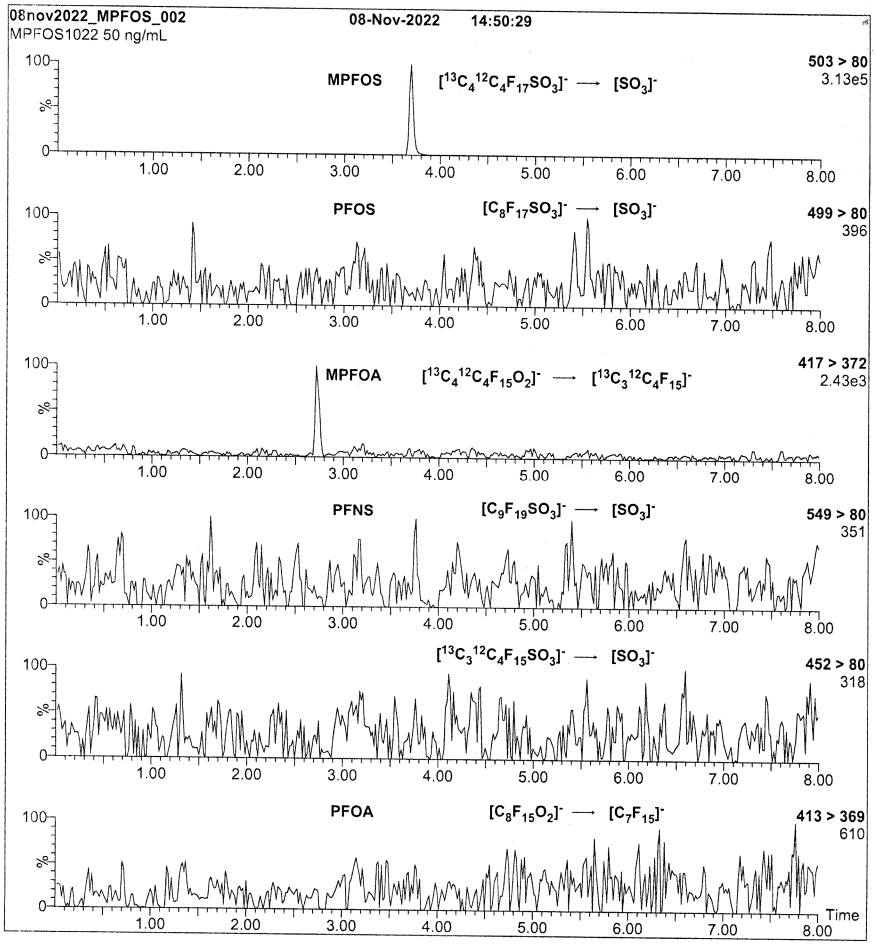
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFOS)

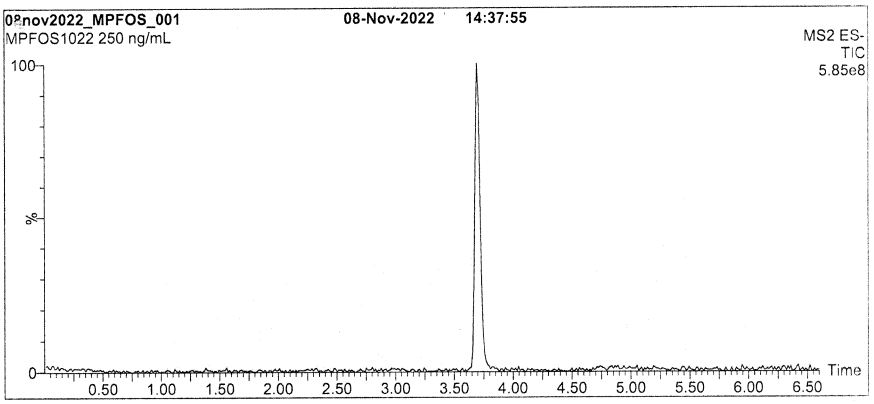
Mobile phase: Same as Figure 1

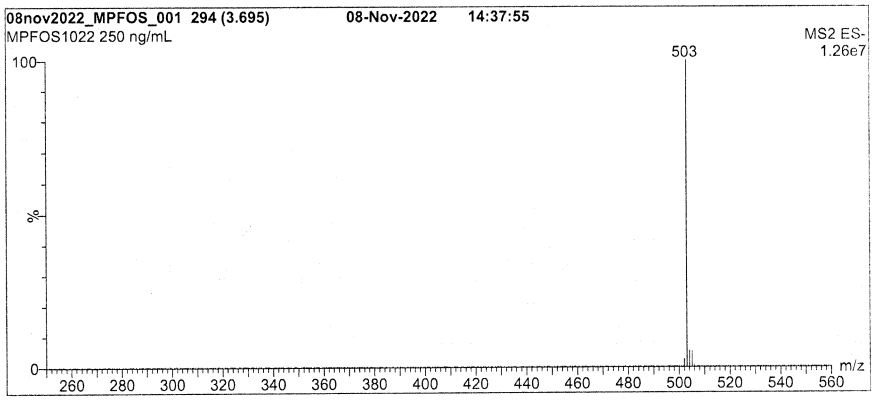
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.84e-3
Collision Energy (eV) = 42

Figure 1: **MPFOS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C5-PFHxA_00001

WELLINGTON LABORATORIES

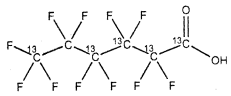
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M5PFHxA
COMPOUND: Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid

LOT NUMBER: M5PFHxA1122

STRUCTURE:

CAS #: 2328024-54-8



MOLECULAR FORMULA: $^{13}C_5{}^{12}C_1HF_{11}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 319.02
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/24/2022
EXPIRY DATE: (mm/dd/yyyy) 11/24/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4,6\text{-}^{13}C_5$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/13/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c\left(y(x_1, x_2, \ldots x_n)\right) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

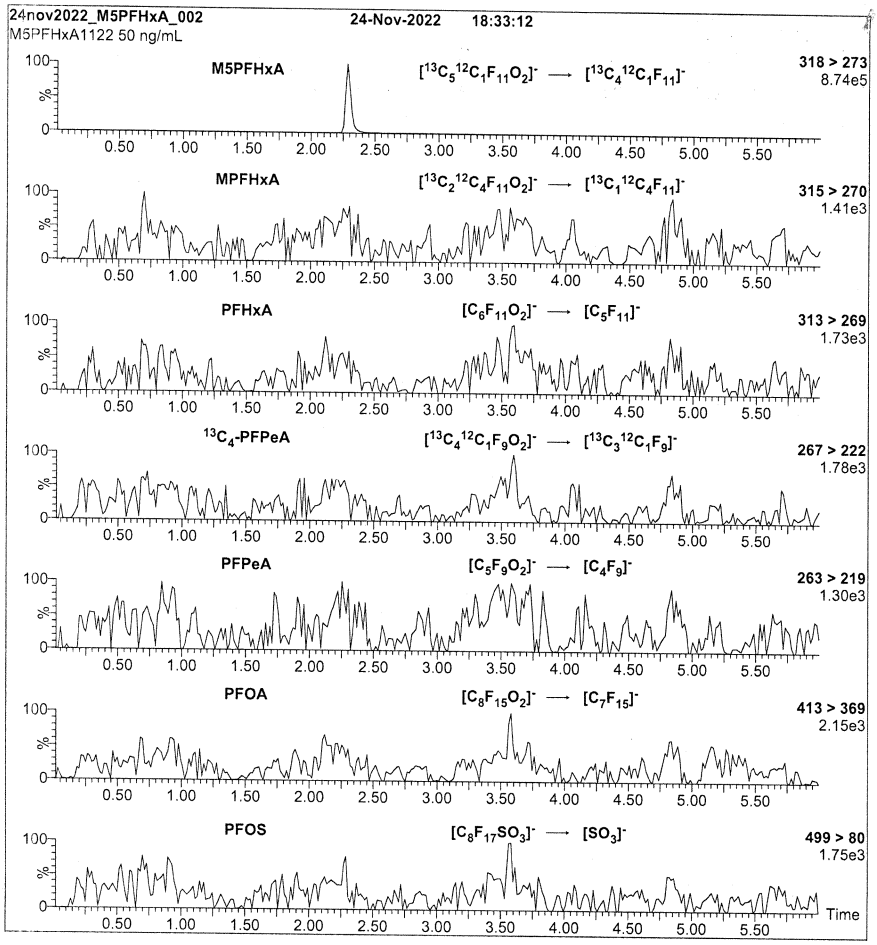
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M5PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M5PFHxA)

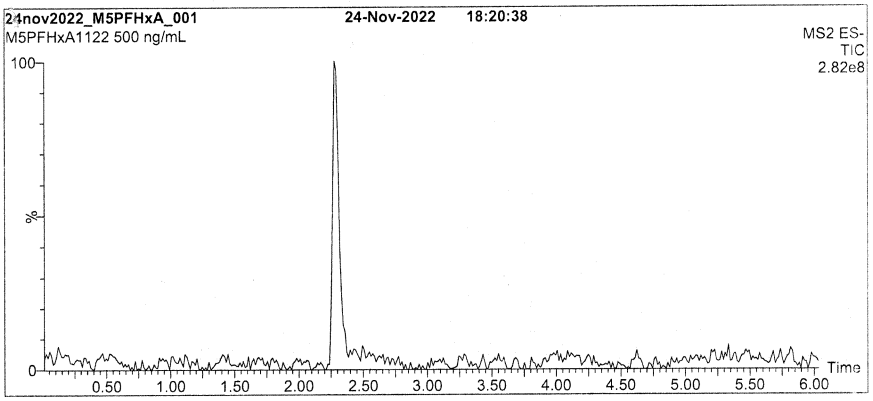
Mobile phase: Same as Figure 1

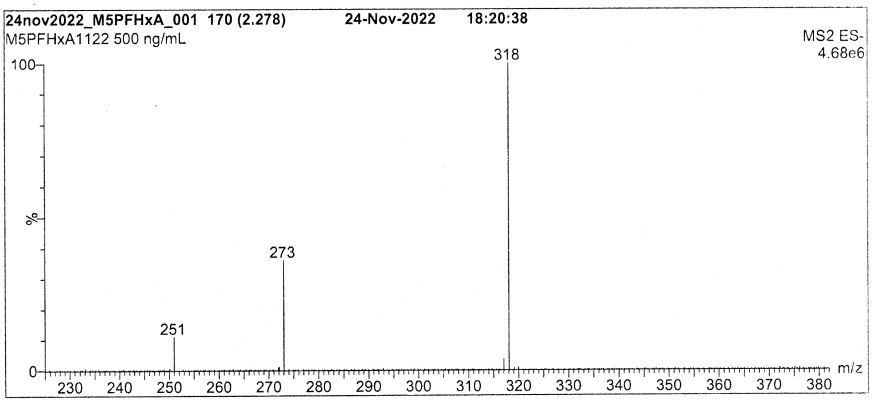
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.80e-3
Collision Energy (eV) = 8

Figure 1: **M5PFHxA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C5-PFNA_00001

WELLINGTON LABORATORIES

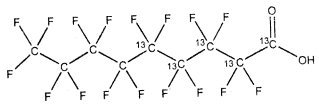
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFNA
COMPOUND: Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid

LOT NUMBER: MPFNA0722

CAS #: 960315-49-5

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_5{}^{12}C_4HF_{17}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 469.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/04/2022
EXPIRY DATE: (mm/dd/yyyy) 08/04/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4,5\text{-}^{13}C_5$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/18/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

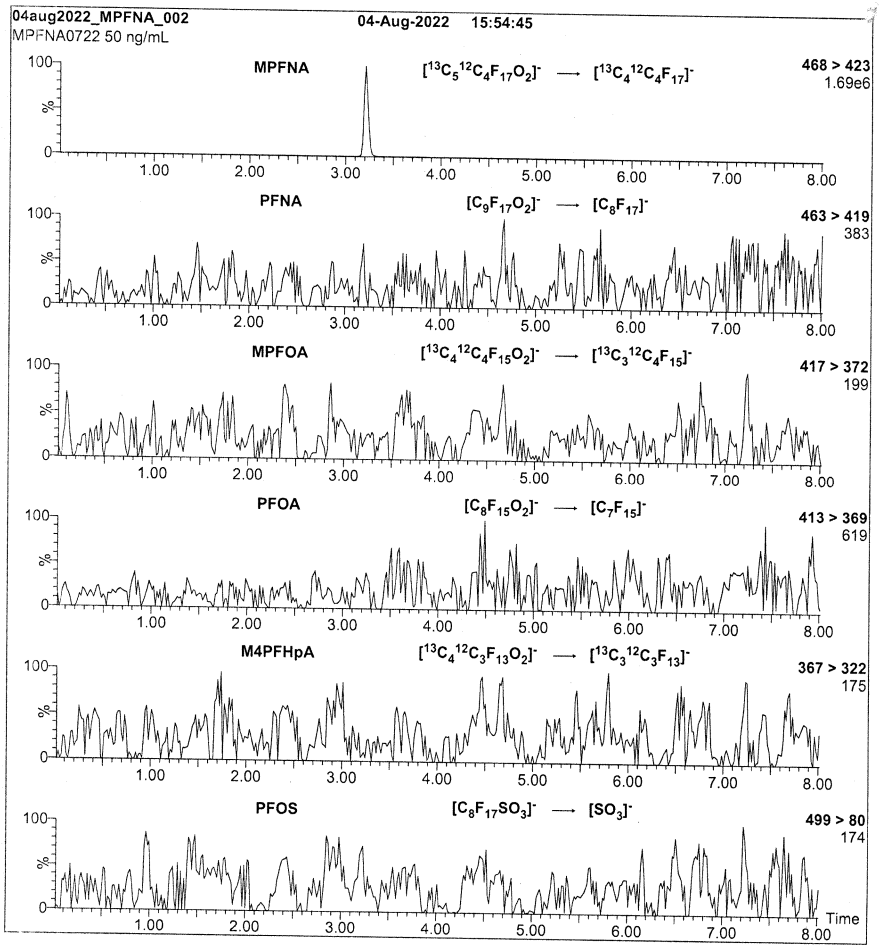
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFNA)

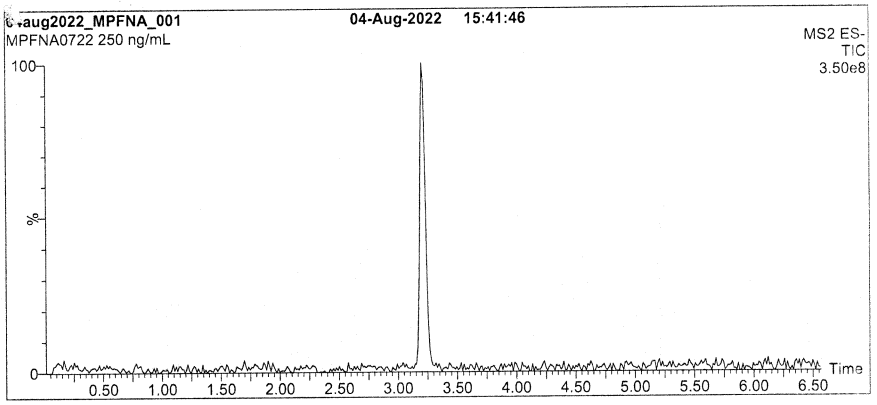
Mobile phase: Same as Figure 1

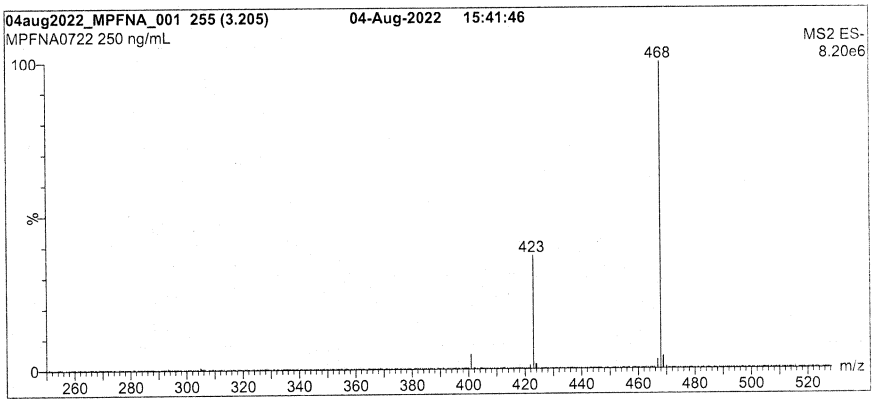
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.27e-3
Collision Energy (eV) = 10

Figure 1: **MPFNA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C5-PFPeA_00001

WELLINGTON LABORATORIES

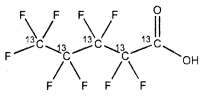
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M5PFPeA
COMPOUND: Perfluoro-n-($^{13}C_5$)pentanoic acid

LOT NUMBER: M5PFPeA0922

STRUCTURE:

CAS #: 2283397-79-3



MOLECULAR FORMULA:	$^{13}C_5HF_9O_2$	**MOLECULAR WEIGHT:**	269.01
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	10/04/2022		
EXPIRY DATE: (mm/dd/yyyy)	10/04/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/31/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

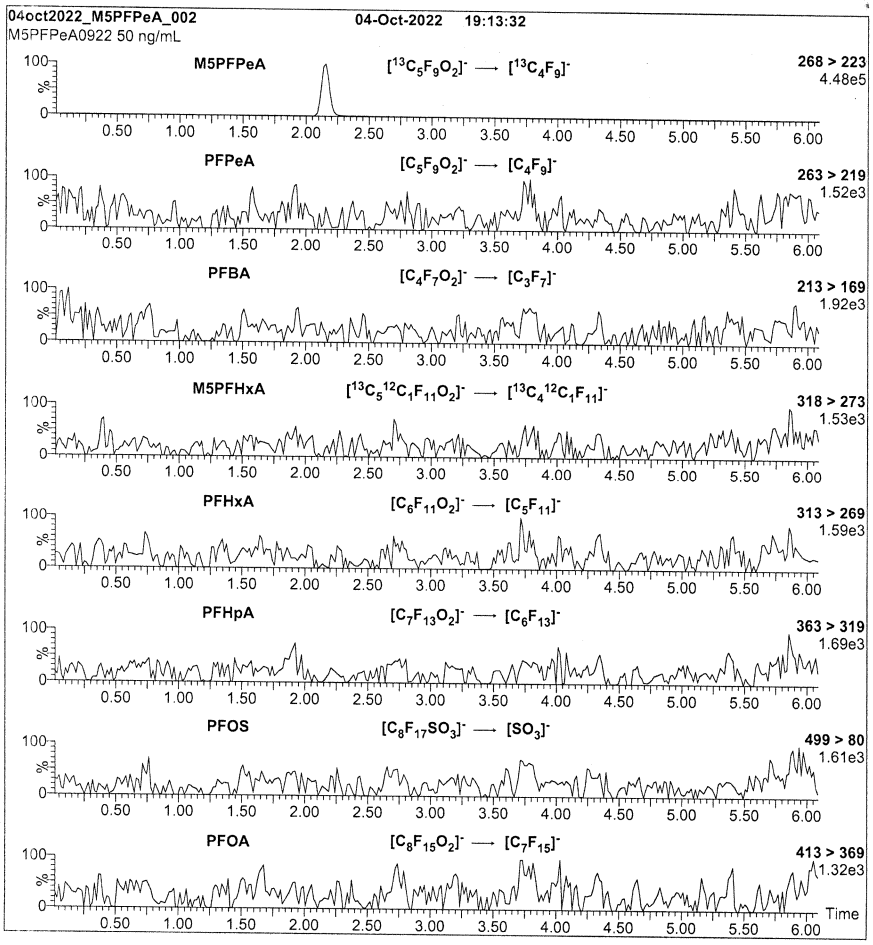
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **M5PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M5PFPeA)

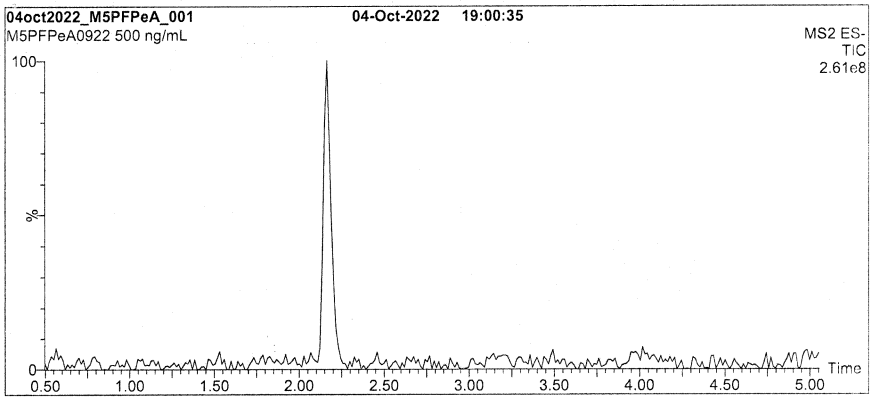
Mobile phase: Same as Figure 1

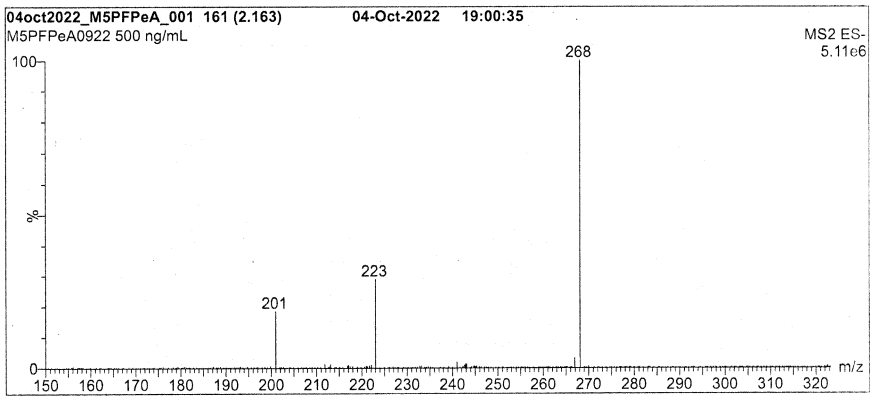
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 8

Figure 1: **M5PFPeA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C6-PFDA_00001

WELLINGTON LABORATORIES

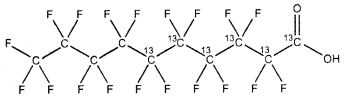
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M6PFDA
COMPOUND: Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid

LOT NUMBER: M6PFDA0922

STRUCTURE:

CAS #: 2328024-56-0



MOLECULAR FORMULA: $^{13}C_6{}^{12}C_4HF_{19}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 520.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/15/2022
EXPIRY DATE: (mm/dd/yyyy) 09/15/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4,5,6\text{-}^{13}C_6$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/01/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

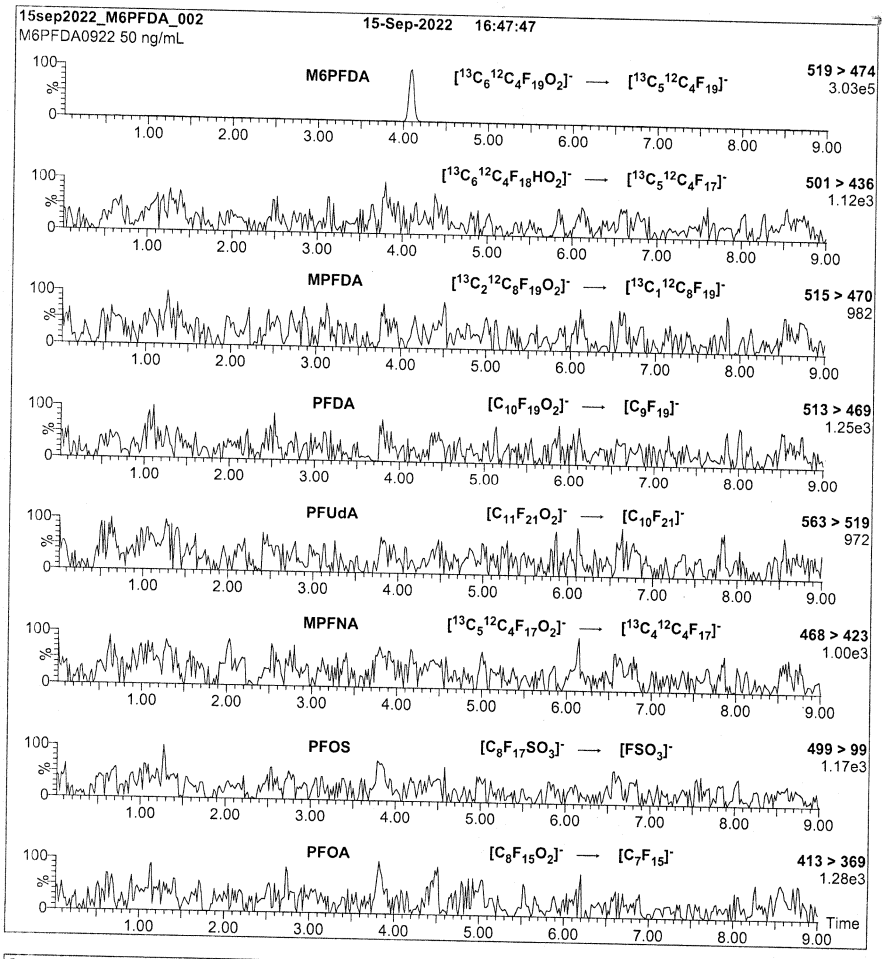
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M6PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M6PFDA)

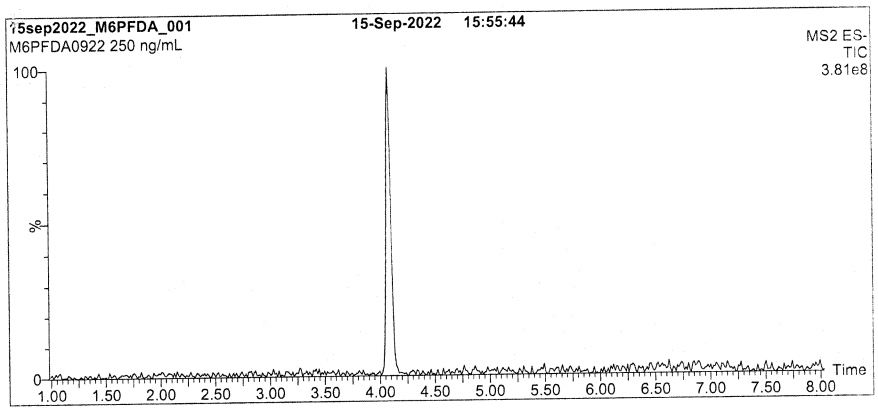
Mobile phase: Same as Figure 1

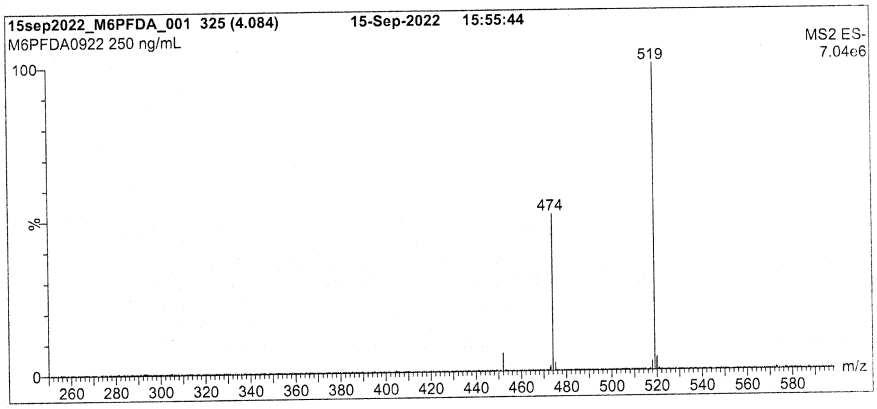
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 10

Figure 1: **M6PFDA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

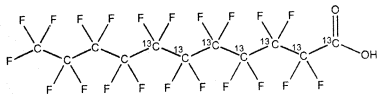
Reagent

13C7-PFUnDA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M7PFUdA
LOT NUMBER: M7PFUdA0522
COMPOUND: Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid
CAS #: Not available
STRUCTURE:



MOLECULAR FORMULA: $^{13}C_7{}^{12}C_4HF_{21}O_2$
MOLECULAR WEIGHT: 571.04
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4,5,6,7-$^{13}C_7$)
LAST TESTED: (mm/dd/yyyy) 06/08/2022
EXPIRY DATE: (mm/dd/yyyy) 06/08/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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HOMOGENEITY:

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QUALITY MANAGEMENT:

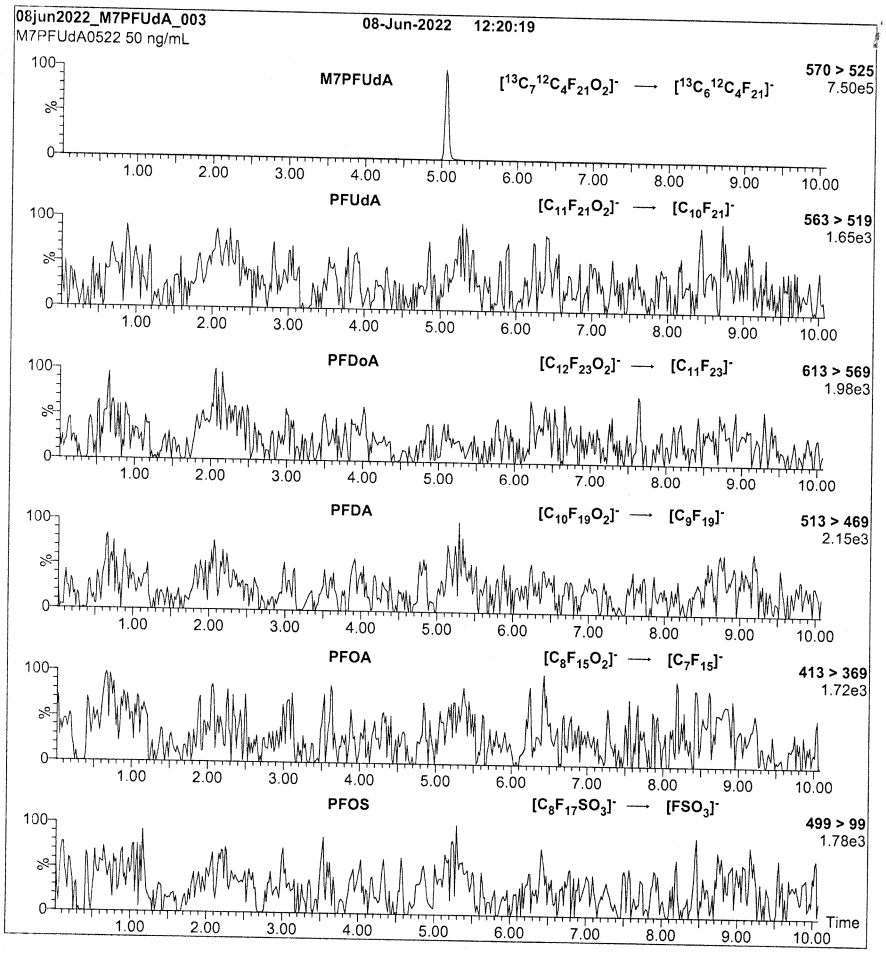
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **M7PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M7PFUdA)

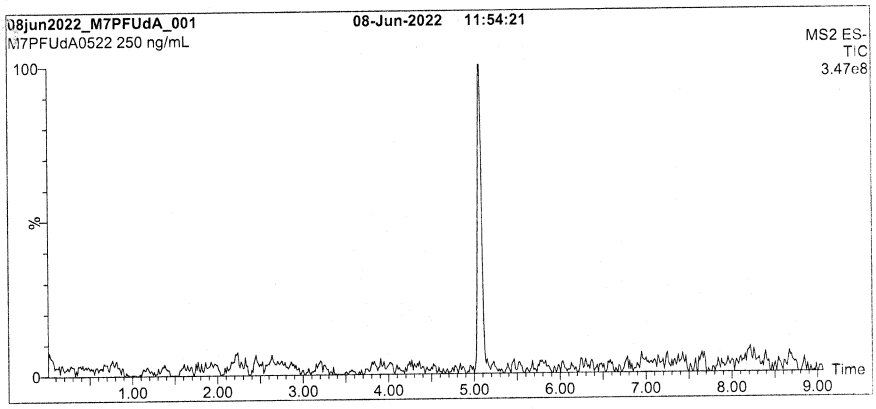
Mobile phase: Same as Figure 1

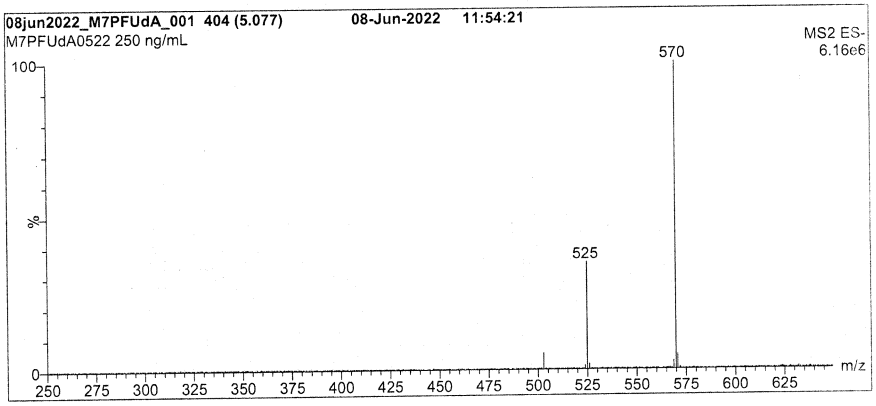
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.14e-3
Collision Energy (eV) = 12

Figure 1: **M7PFUdA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C8-PFOA_00001

WELLINGTON LABORATORIES

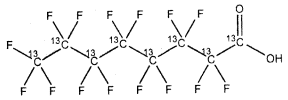
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M8PFOA
COMPOUND: Perfluoro-n-($^{13}C_8$)octanoic acid

LOT NUMBER: M8PFOA0522

STRUCTURE:

CAS #: 1350614-84-4



MOLECULAR FORMULA: $^{13}C_8HF_{15}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 422.01
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/30/2022
EXPIRY DATE: (mm/dd/yyyy) 05/30/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_8$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~1.0% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

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Certified By: _____ **Date:** 06/02/2022 (mm/dd/yyyy)
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All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

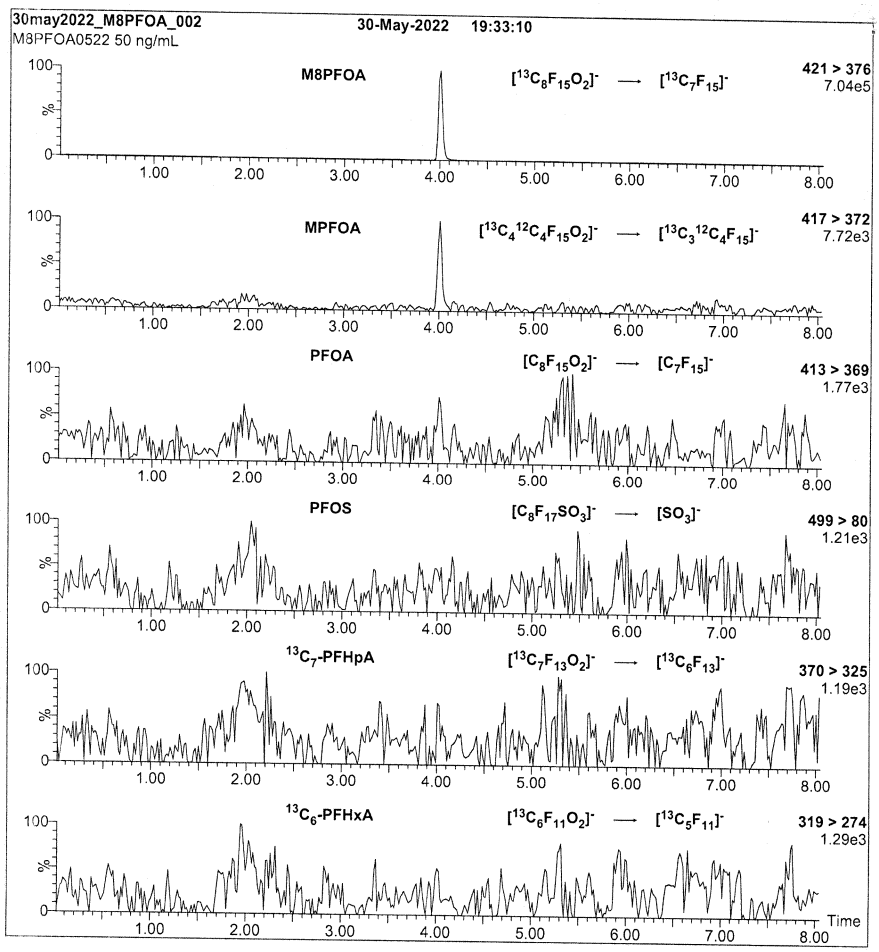
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M8PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8PFOA)

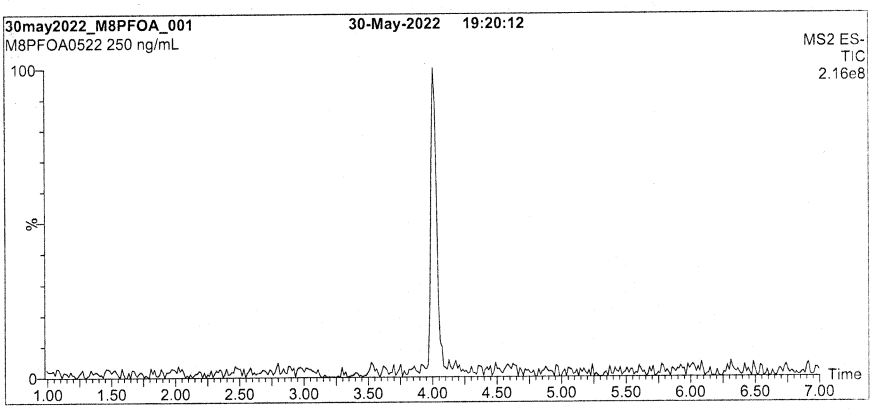
Mobile phase: Same as Figure 1

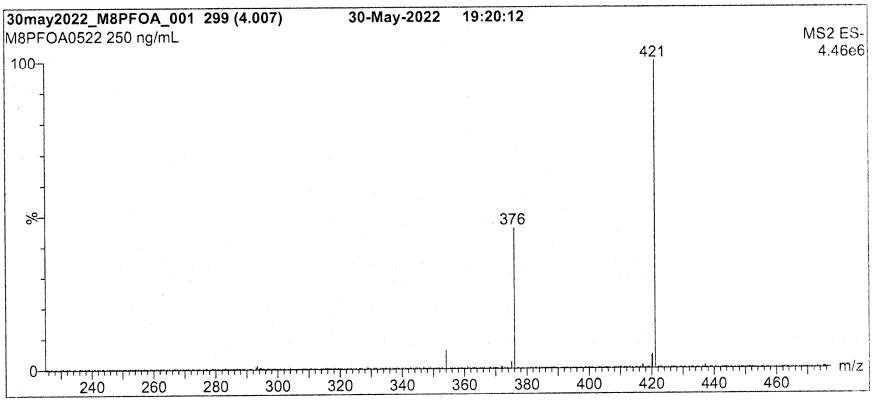
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 8

Figure 1: **M8PFOA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C8-PFOS_00001

WELLINGTON LABORATORIES

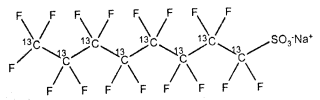
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M8PFOS
COMPOUND: Sodium perfluoro-1-($^{13}C_8$)octanesulfonate

LOT NUMBER: M8PFOS0522

CAS #: 2522762-16-7

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_8F_{17}SO_3Na$
MOLECULAR WEIGHT: 530.05

CONCENTRATION:
50.0 ± 2.5 µg/mL (Na salt)
47.9 ± 2.4 µg/mL (M8PFOS acid)
47.8 ± 2.4 µg/mL (M8PFOS anion)

SOLVENT(S): Methanol

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_8$)

LAST TESTED: (mm/dd/yyyy) 05/19/2022
EXPIRY DATE: (mm/dd/yyyy) 05/19/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.2% of sodium perfluoro-1-($^{13}C_7$)heptanesulfonate ($^{13}C_7$-PFHpS) and ~1.1% of sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate (MPFOS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager **Date:** 05/25/2022 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

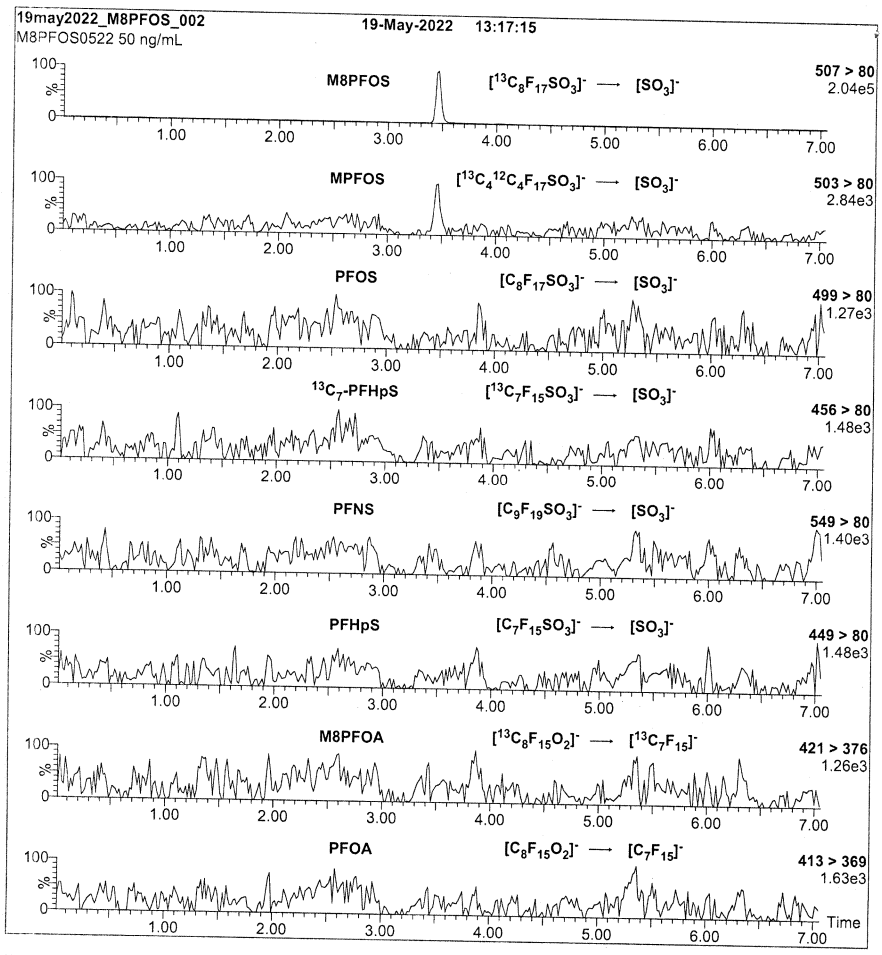
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M8PFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8PFOS)

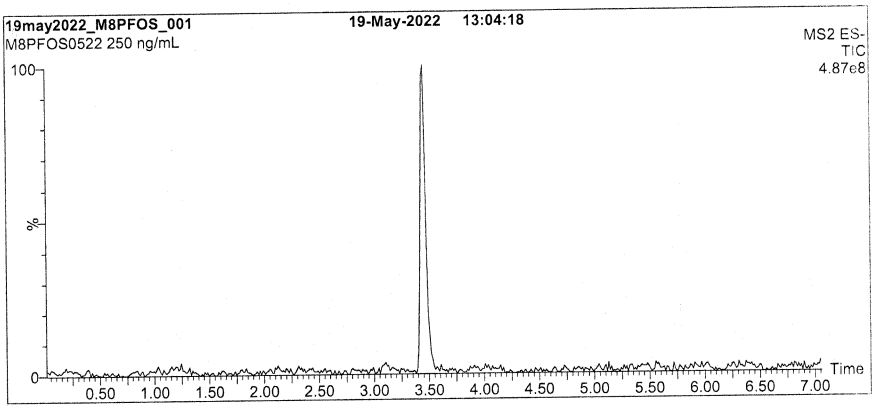
Mobile phase: Same as Figure 1

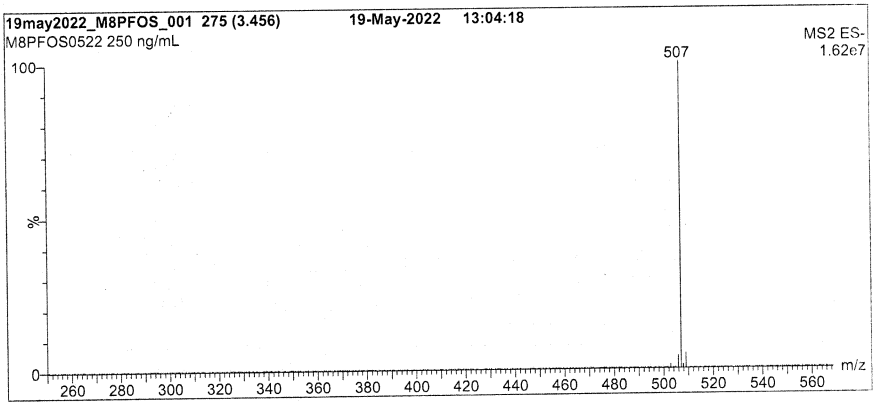
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.22e-3
Collision Energy (eV) = 64

Figure 1: **M8PFOS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C8-PFOSA_00001

WELLINGTON LABORATORIES

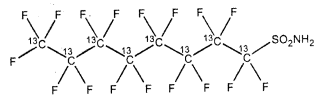
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M8FOSA-I
COMPOUND: Perfluoro-1-($^{13}C_8$)octanesulfonamide

LOT NUMBER: M8FOSA0123I

CAS #: 1365803-60-6

STRUCTURE:



MOLECULAR FORMULA:	$^{13}C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	507.09
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	01/18/2023		
EXPIRY DATE: (mm/dd/yyyy)	01/18/2028		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.9% of perfluoro-1-($^{13}C_4$)octanesulfonamide and ~0.2% of perfluoro-1-($^{13}C_7$)heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/25/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

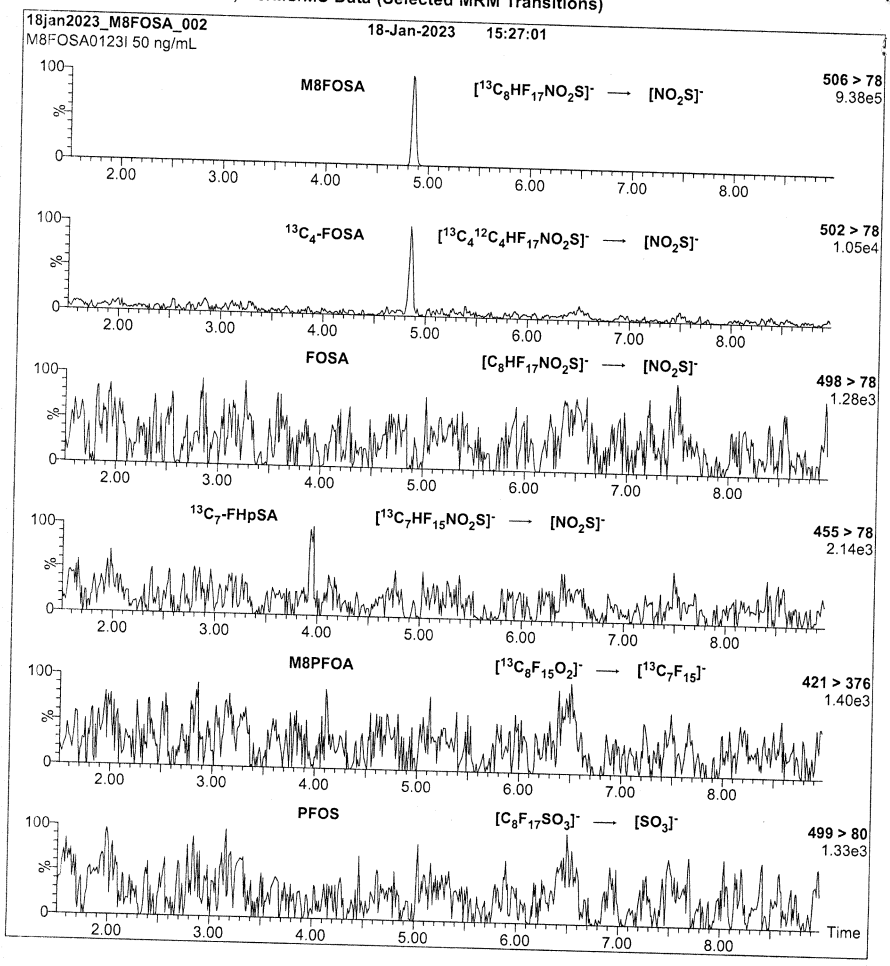
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M8FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8FOSA-I)

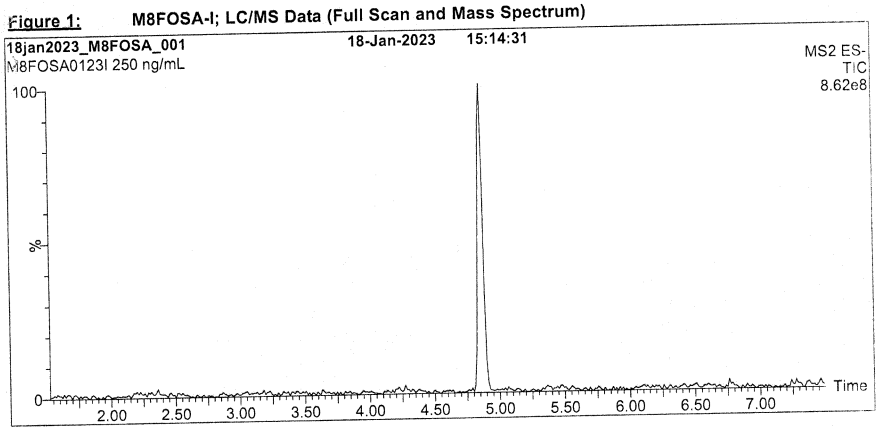
Mobile phase: Same as Figure 1

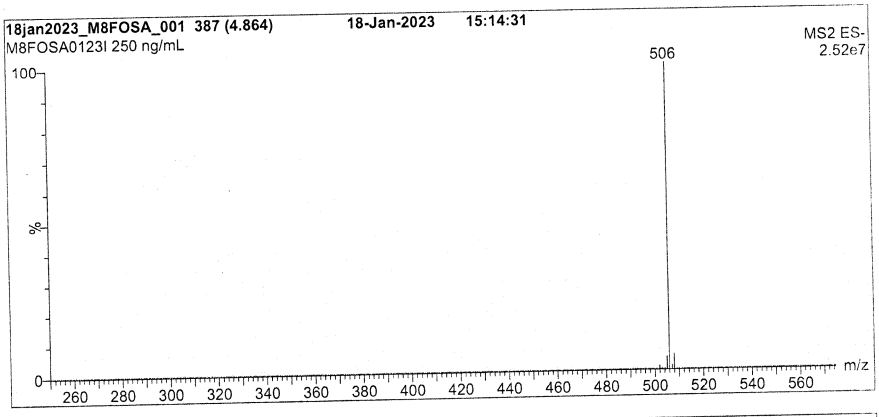
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.63e-3
Collision Energy (eV) = 30

Figure 1: **M8FOSA-I; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

13C9-PFNA_00001

WELLINGTON LABORATORIES

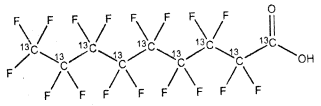
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-($^{13}C_9$)nonanoic acid

LOT NUMBER: M9PFNA1122

CAS #: 2283397-80-6

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_9HF_{17}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 473.01
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/24/2022
EXPIRY DATE: (mm/dd/yyyy) 11/24/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99% ^{13}C ($^{13}C_9$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~1.0% of perfluoro-n-($^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/09/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

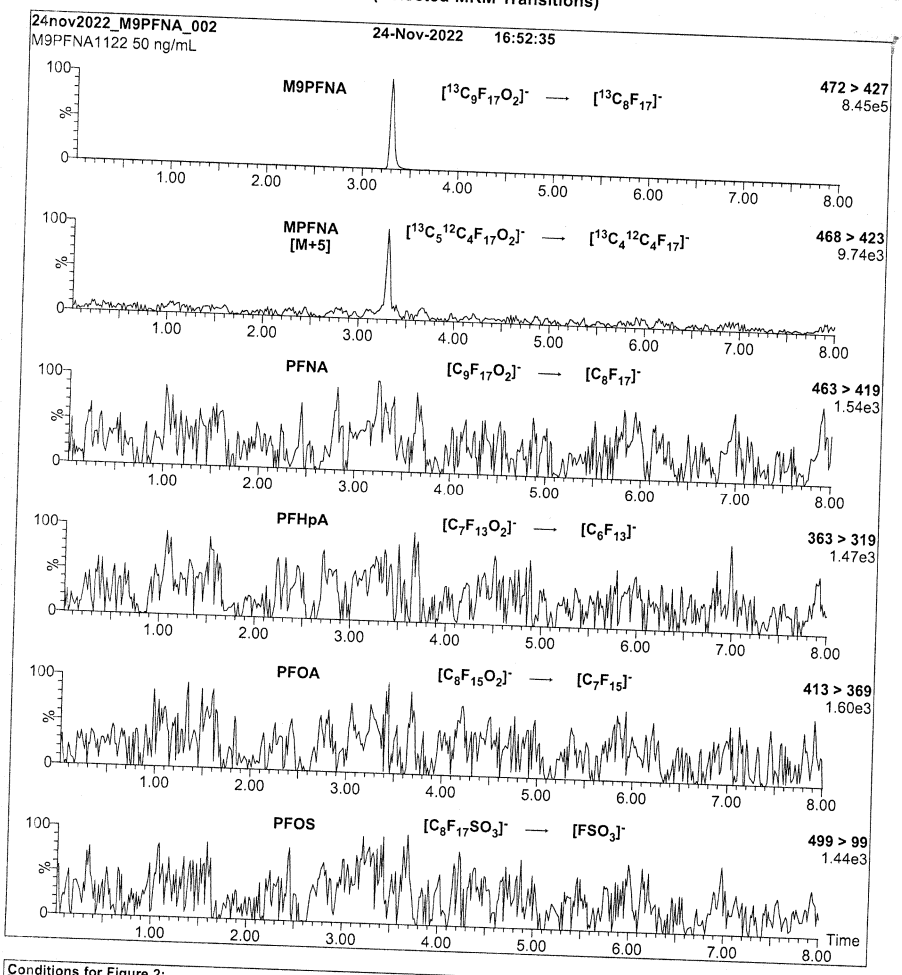
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **M9PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M9PFNA)

Mobile phase: Same as Figure 1

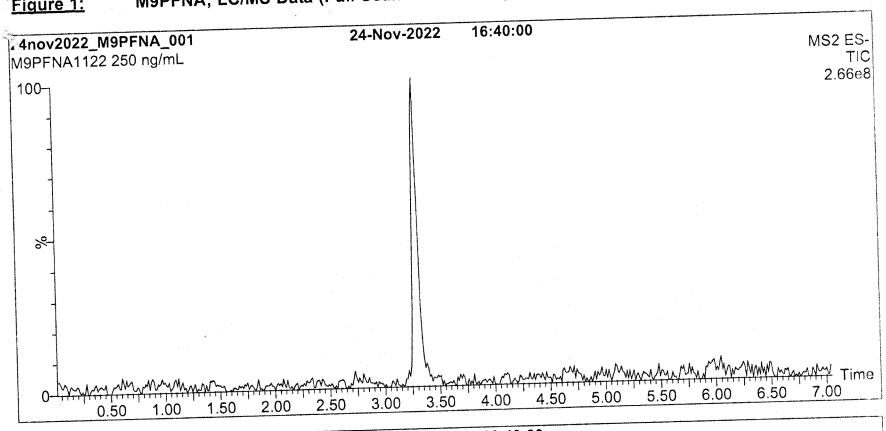
Flow: 300 µL/min

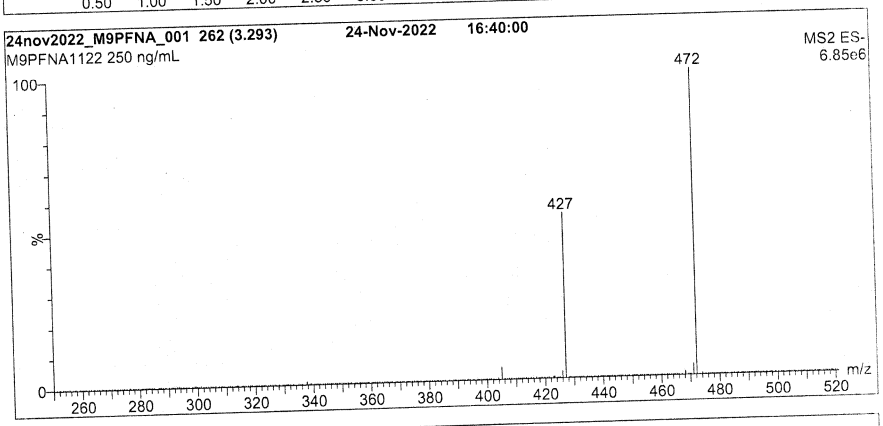
MS Parameters:

Collision Gas (mbar) = 3.84e-3
Collision Energy (eV) = 10

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Figure 1: **M9PFNA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Reagent

18O2-PFHxS_00001

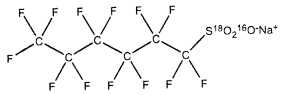
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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFHxS
COMPOUND: Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate

LOT NUMBER: MPFHxS0123

STRUCTURE:



CAS #: 1585941-14-5

MOLECULAR FORMULA:	$C_6F_{13}S^{18}O_2{}^{16}ONa$
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 47.4 ± 2.4 µg/mL (MPFHxS acid) 47.3 ± 2.4 µg/mL (MPFHxS anion)
CHEMICAL PURITY:	>98%
LAST TESTED: (mm/dd/yyyy)	01/18/2023
EXPIRY DATE: (mm/dd/yyyy)	01/18/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 426.10
SOLVENT(S): Methanol

ISOTOPIC PURITY: >94% ($^{18}O_2$)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~0.6% of sodium perfluoro-1-octane($^{18}O_2$)sulfonate ($^{18}O_2$-PFOS) and ~0.3% of sodium perfluoro-1-heptane($^{18}O_2$)sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/23/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

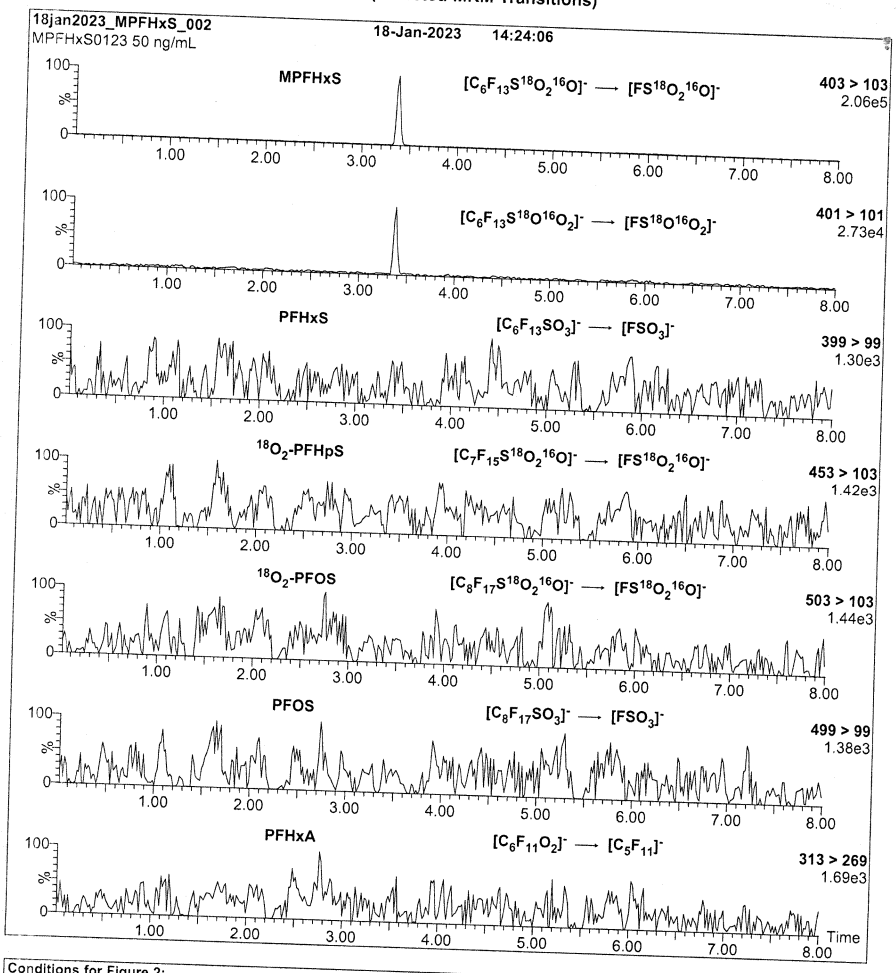
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFHxS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFHxS)

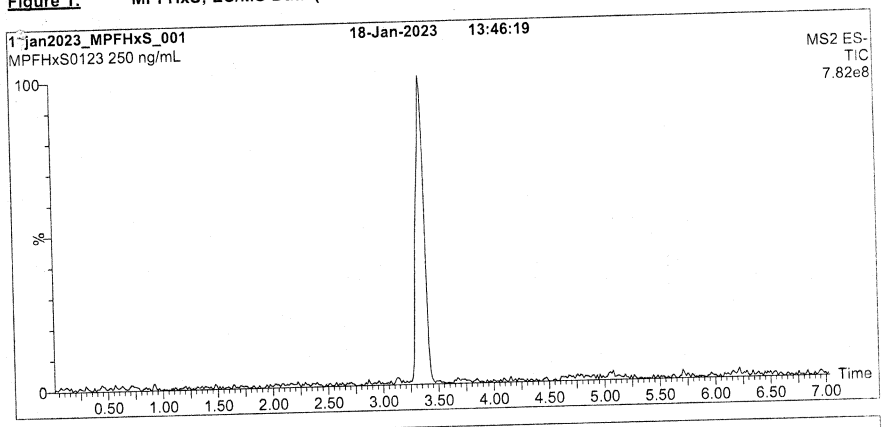
Mobile phase: Same as Figure 1

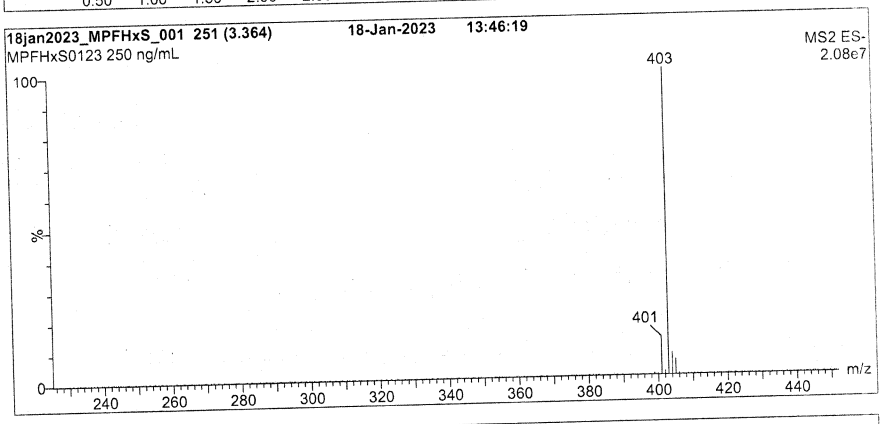
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.63e-3
Collision Energy (eV) = 32

Figure 1: **MPFHxS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

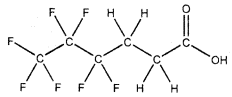
Reagent

3:3-FTCA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FPrPA	**LOT NUMBER:**	FPrPA0123
COMPOUND:	3-Perfluoropropyl propanoic acid		
STRUCTURE:		**CAS #:**	356-02-5



MOLECULAR FORMULA:	$C_6H_5F_7O_2$	**MOLECULAR WEIGHT:**	242.09
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	01/31/2023		
EXPIRY DATE: (mm/dd/yyyy)	01/31/2028		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/15/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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Revision#:9, Revised 2020-12-23

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

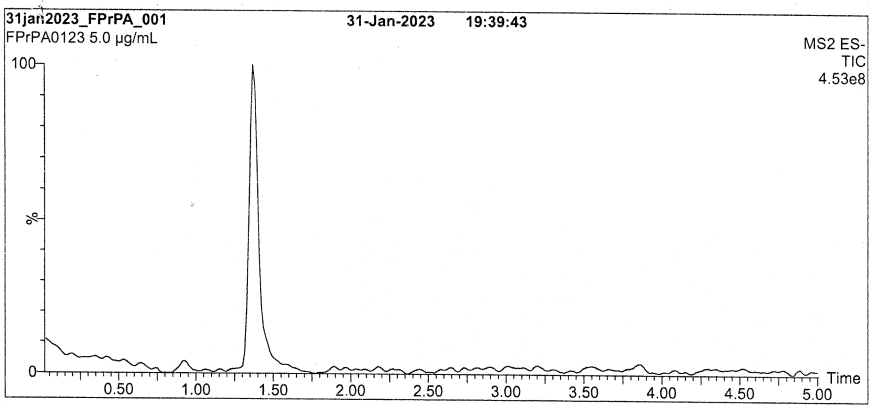
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

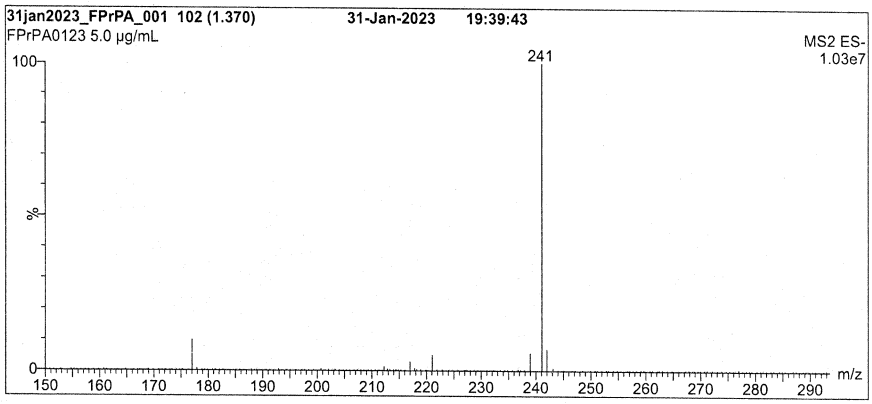
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **FPrPA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

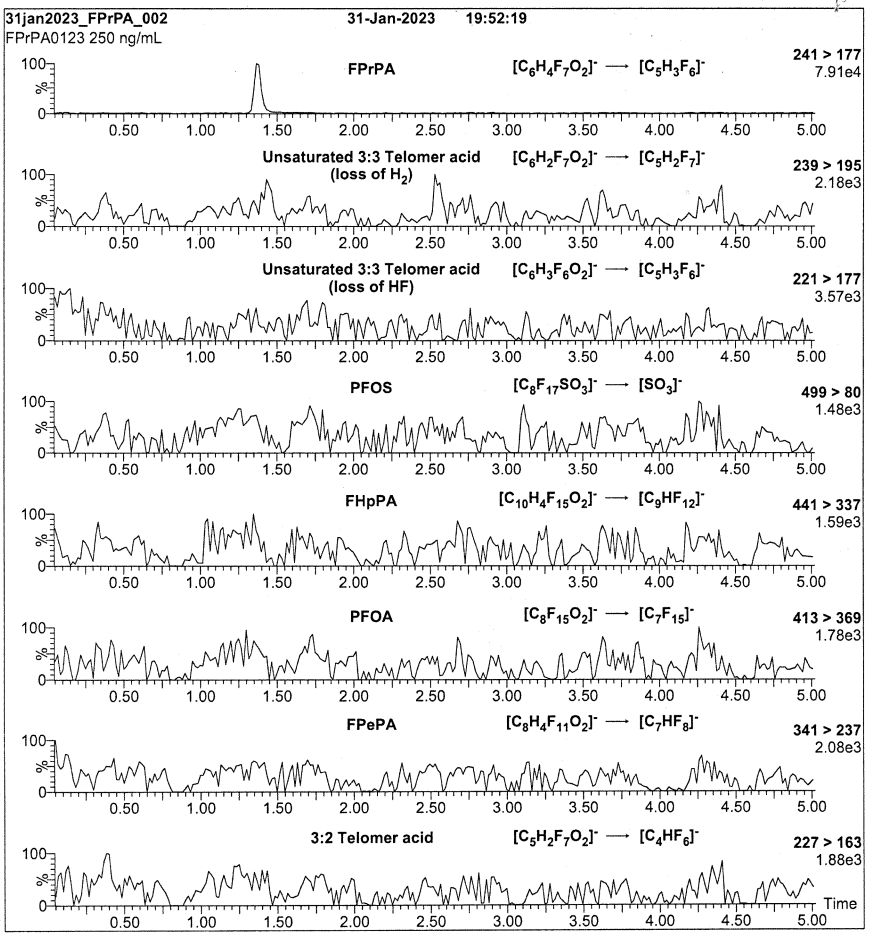
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **FPrPA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FPrPA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.71e-3
Collision Energy (eV) = 10

Reagent

4:2-FTS_00001

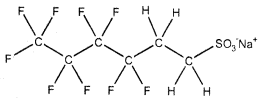
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 4:2FTS
LOT NUMBER: 42FTS0123
COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexanesulfonate

STRUCTURE:

CAS #: 27619-93-8



MOLECULAR FORMULA: $C_6H_4F_9SO_3Na$
MOLECULAR WEIGHT: 350.13
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
46.9 ± 2.3 µg/mL (4:2FTS acid)
46.7 ± 2.3 µg/mL (4:2FTS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/09/2023
EXPIRY DATE: (mm/dd/yyyy) 01/09/2028
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/11/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

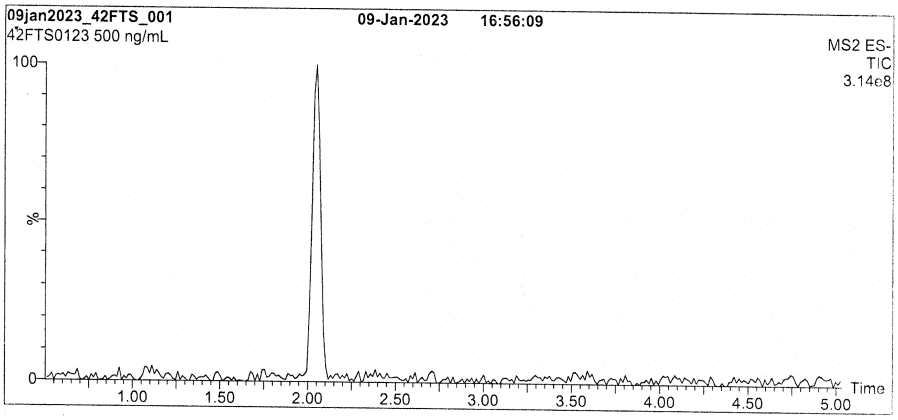
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

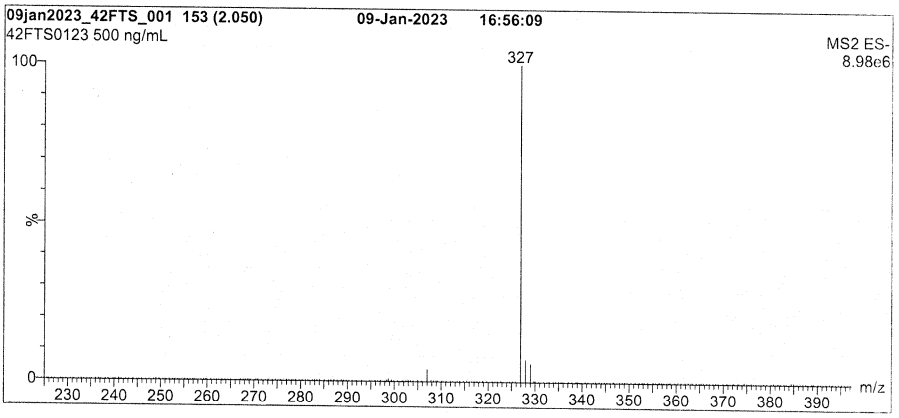
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **4:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

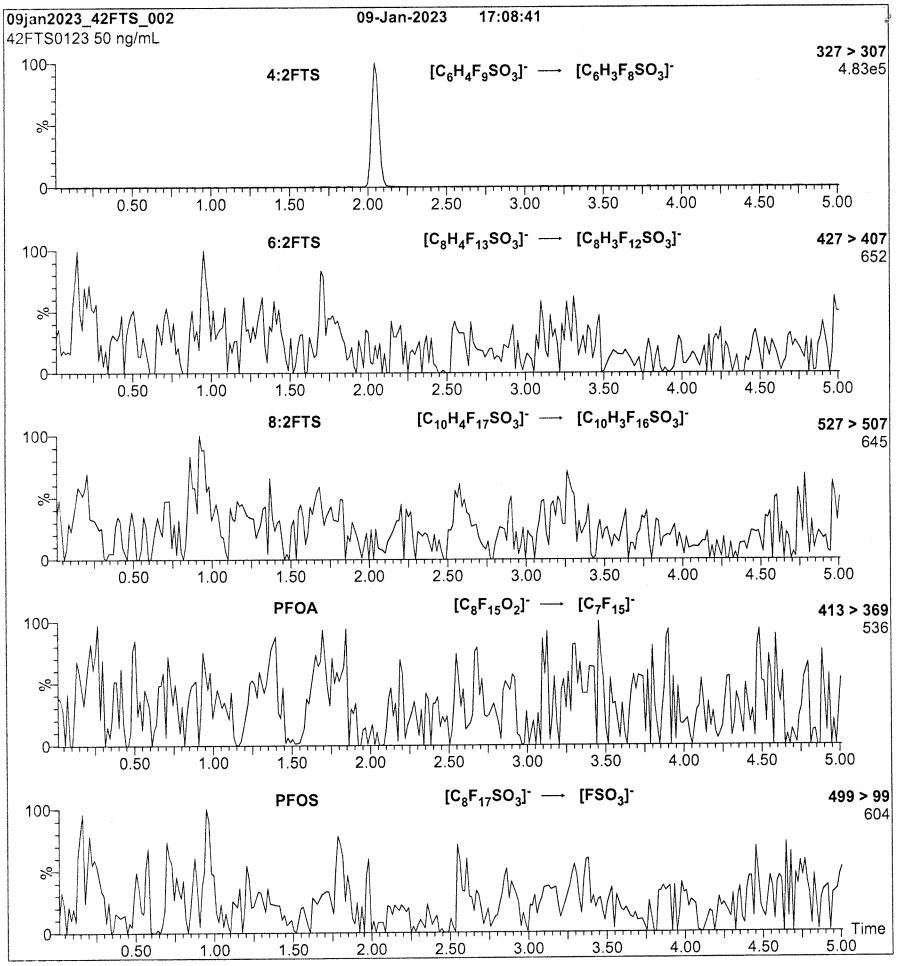
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	On-column (4:2FTS)
Mobile phase:	Same as Figure 1
Flow:	300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 18

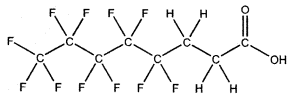
Reagent

5:3-FTCA_00003

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FPePA	**LOT NUMBER:**	FPePA0722
COMPOUND:	3-Perfluoropentyl propanoic acid		
STRUCTURE:		**CAS #:**	914637-49-3



MOLECULAR FORMULA:	$C_8H_5F_{11}O_2$	**MOLECULAR WEIGHT:**	342.11
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/02/2022		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2027		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains <0.5% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by ^1H NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/10/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

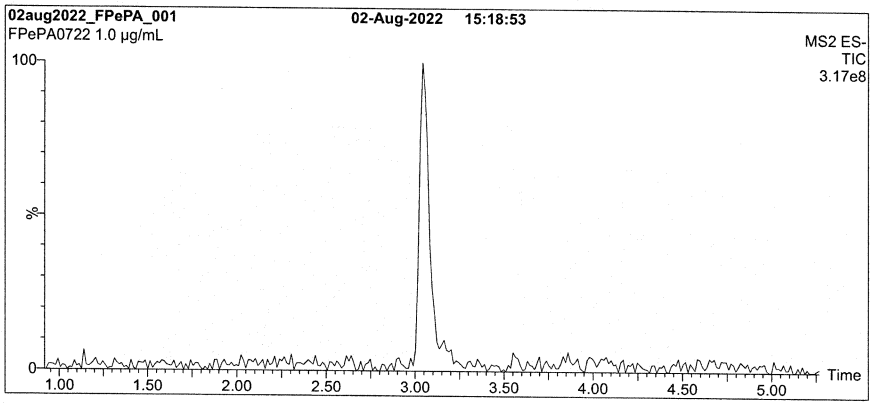
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

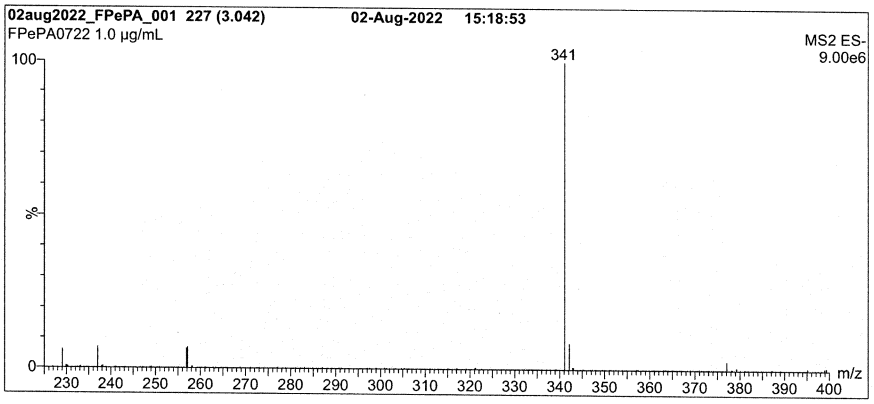
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **FPePA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

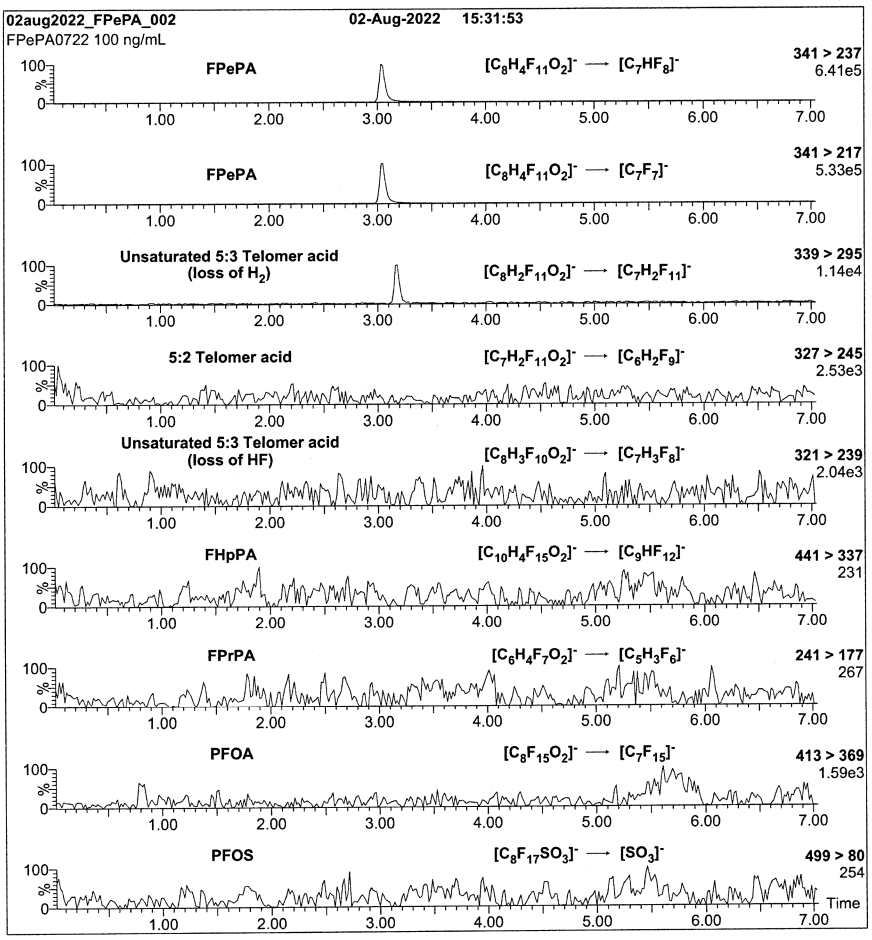
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 18.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **FPePA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FPePA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 10

Reagent

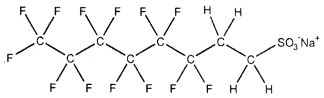
6:2-FTS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0123
COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctanesulfonate

STRUCTURE: **CAS #:** 27619-94-9



MOLECULAR FORMULA: $C_8H_4F_{13}SO_3Na$ **MOLECULAR WEIGHT:** 450.15
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
47.6 ± 2.4 µg/mL (6:2FTS acid)
47.4 ± 2.4 µg/mL (6:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/09/2023
EXPIRY DATE: (mm/dd/yyyy) 01/09/2028
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/11/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

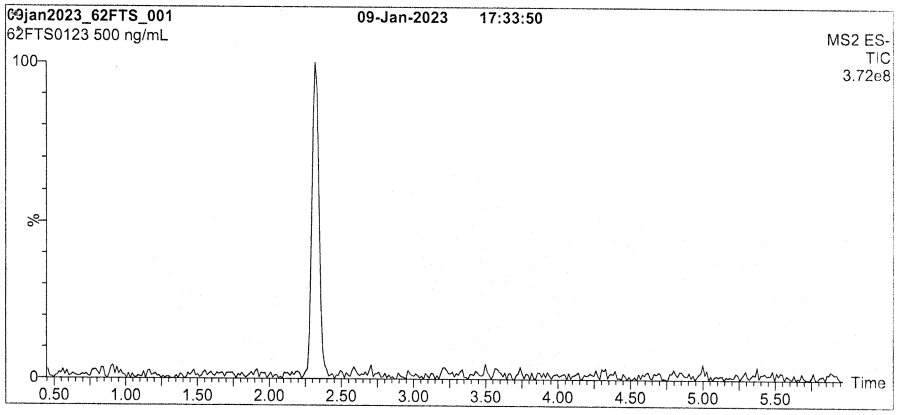
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

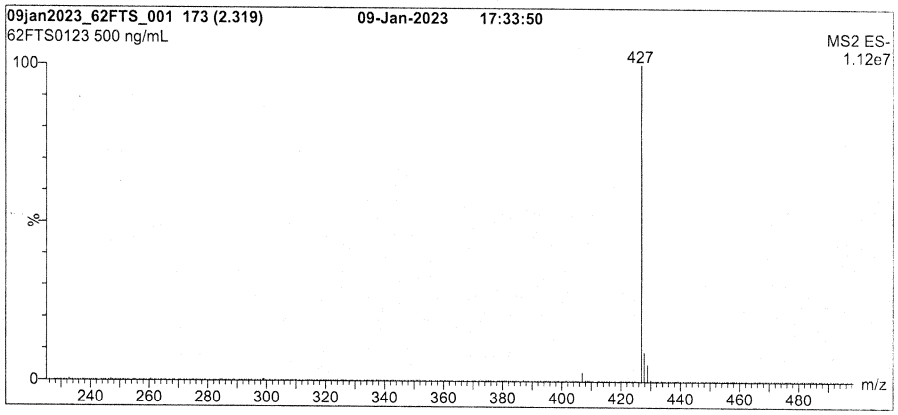
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034:2016 REFERENCE MATERIAL PRODUCER

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Figure 1: **6:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

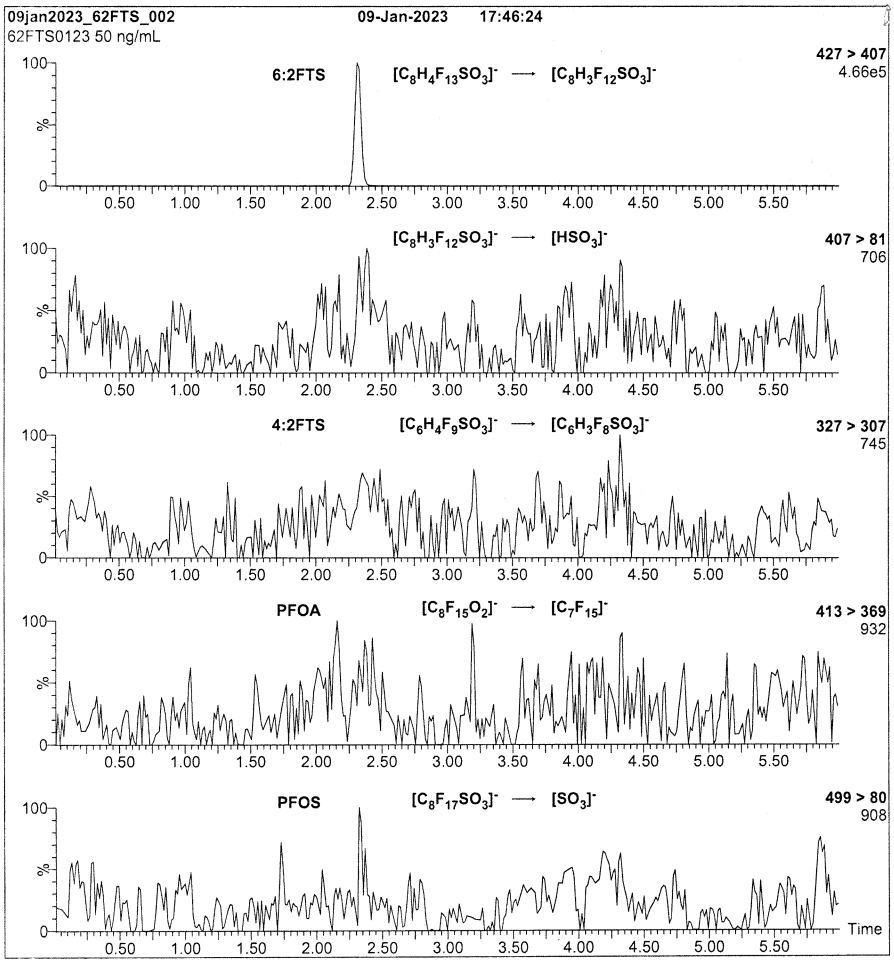
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (6:2FTS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 20

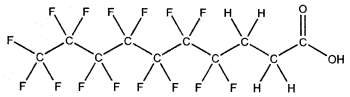
Reagent

7:3-FTCA_00003

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FHpPA	**LOT NUMBER:**	FHpPA0823
COMPOUND:	3-Perfluoroheptyl propanoic acid		
STRUCTURE:		**CAS #:**	812-70-4



MOLECULAR FORMULA:	$C_{10}H_5F_{15}O_2$	**MOLECULAR WEIGHT:**	442.12
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/10/2023		
EXPIRY DATE: (mm/dd/yyyy)	08/10/2028		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.1% of 3-perfluorohexyl propanoic acid (6:3 telomer acid) and ~0.2% of perfluoro-n-heptanoic acid (PFHpA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/11/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

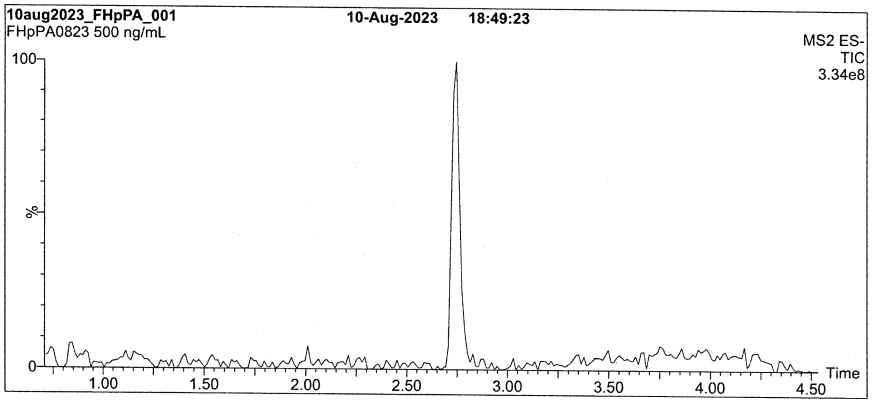
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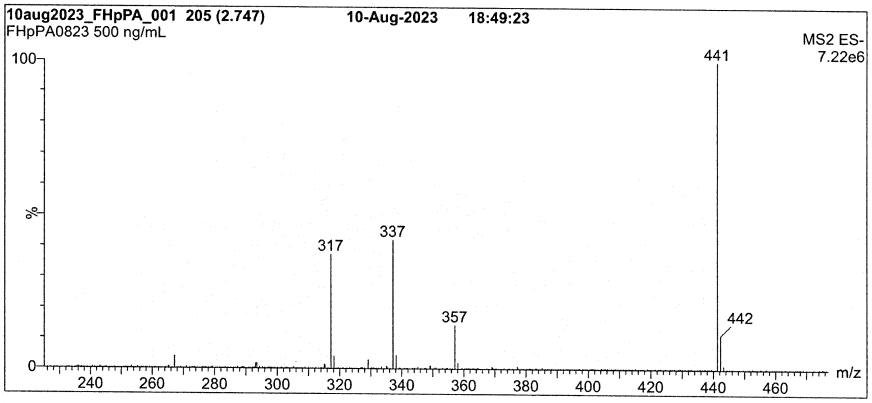
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **FHpPA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

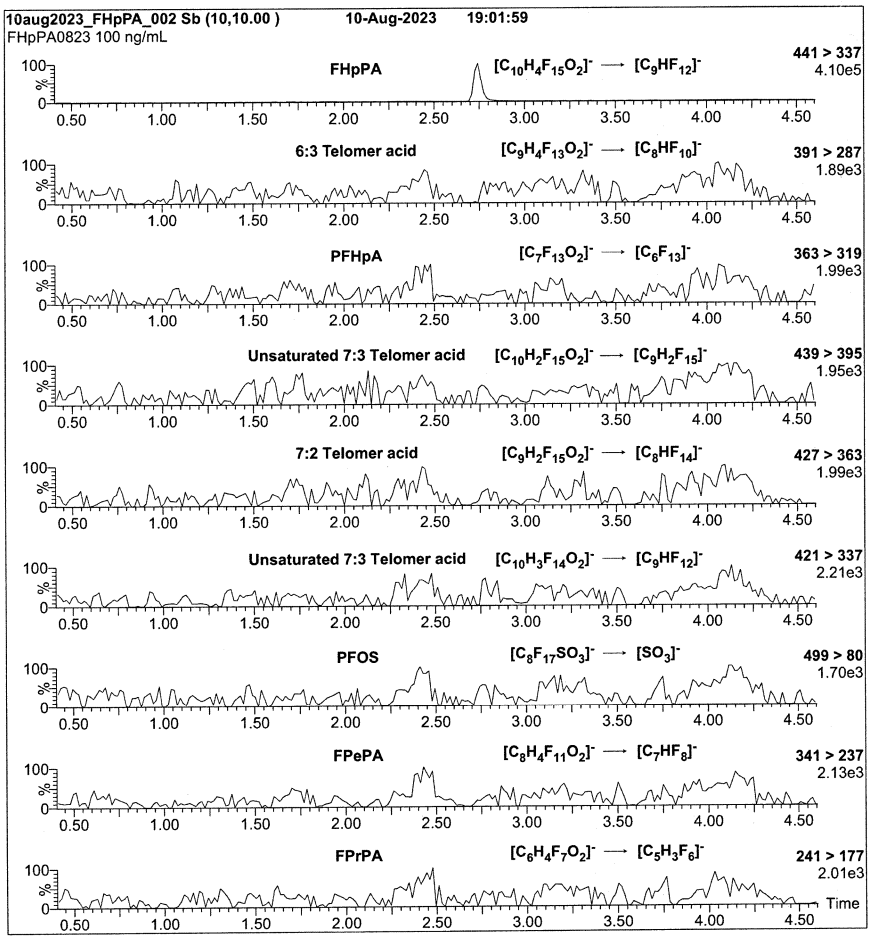
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 28.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **FHpPA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FHpPA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.36e-3
Collision Energy (eV) = 8

Reagent

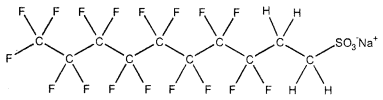
8:2-FTS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0822
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecanesulfonate

STRUCTURE: **CAS #:** 27619-96-1



MOLECULAR FORMULA: $C_{10}H_4F_{17}SO_3Na$ **MOLECULAR WEIGHT:** 550.16
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt) **SOLVENT(S):** Methanol
48.0 ± 2.4 µg/mL (8:2FTS acid)
47.9 ± 2.4 µg/mL (8:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/15/2022
EXPIRY DATE: (mm/dd/yyyy) 09/15/2027
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

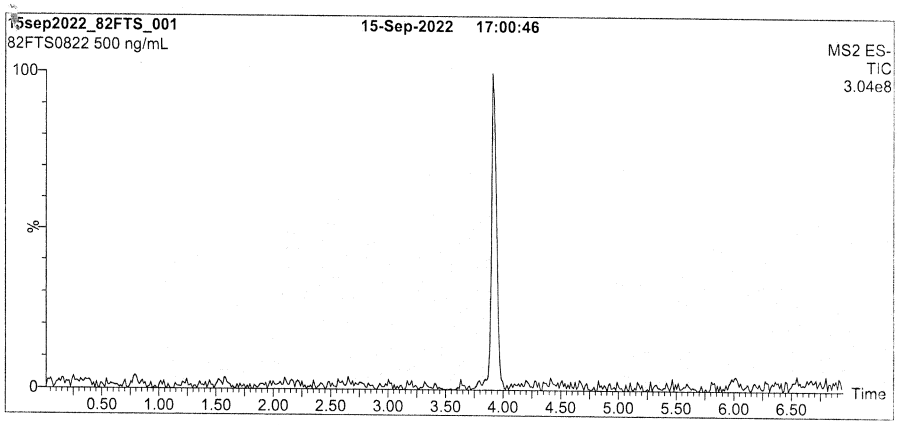
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

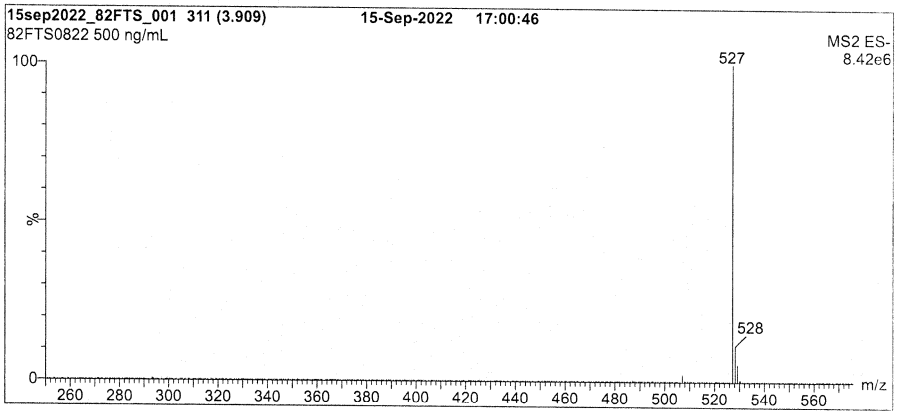
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **8:2FTS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.75 min.
Time: 12 min

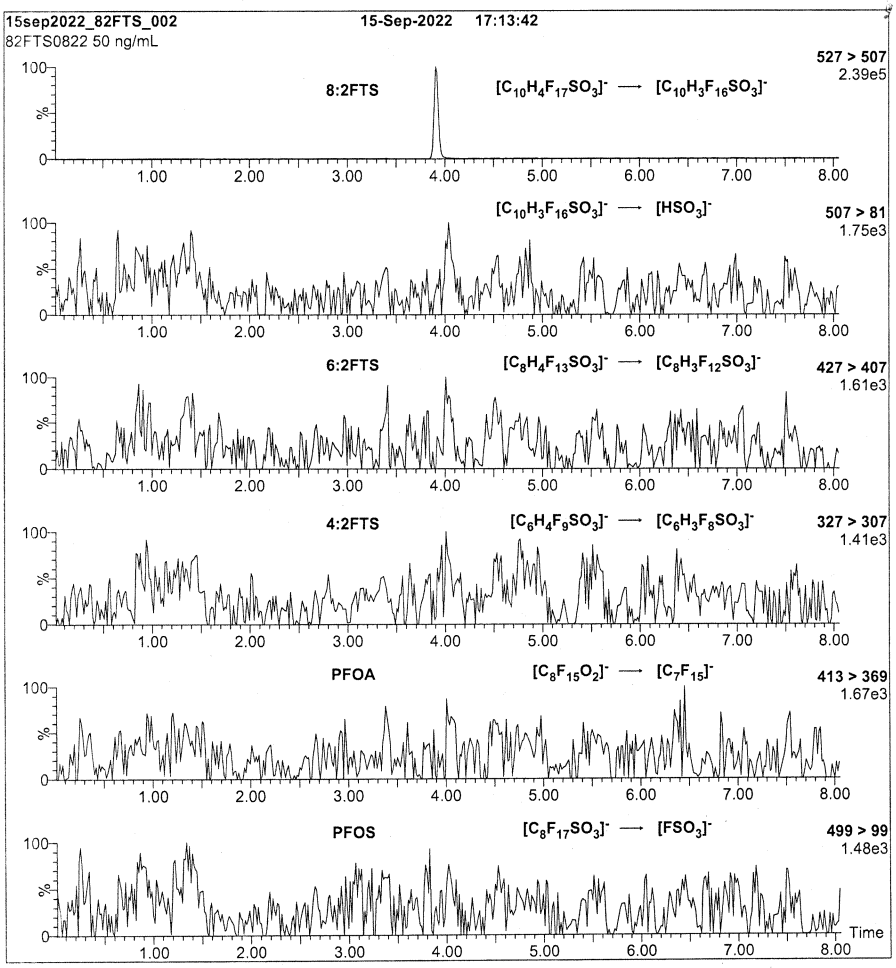
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C)= 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (8:2FTS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.25e-3
Collision Energy (eV) = 26

Reagent

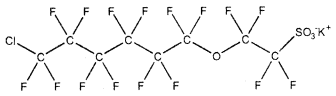
9Cl-PF3ONS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 9Cl-PF3ONS **LOT NUMBER:** 9ClPF3ONS1022
COMPOUND: Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate

STRUCTURE: **CAS #:** 73606-19-6



MOLECULAR FORMULA: $C_8F_{16}ClSO_4K$ **MOLECULAR WEIGHT:** 570.67
CONCENTRATION: 50.0 ± 2.5 µg/mL (K Salt) **SOLVENT(S):** Methanol
46.7 ± 2.3 µg/mL (9Cl-PF3ONS acid)
46.6 ± 2.3 µg/mL (9Cl-PF3ONS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/08/2022
EXPIRY DATE: (mm/dd/yyyy) 11/08/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This compound is the major component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/17/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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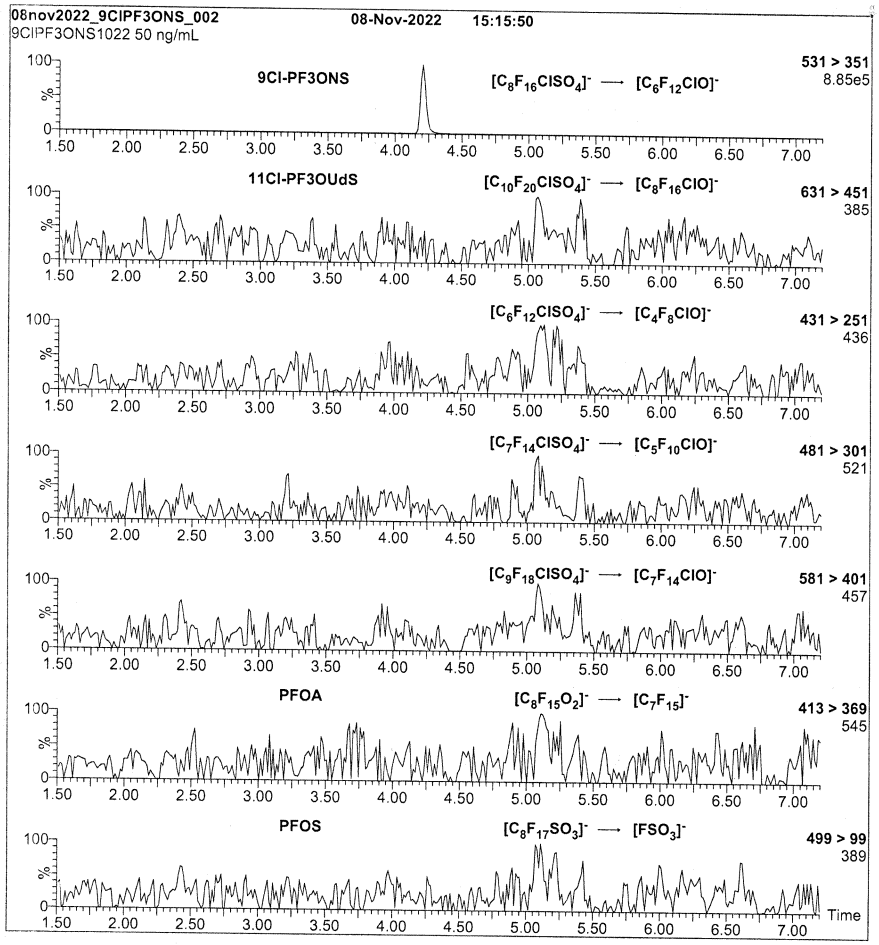
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **9Cl-PF3ONS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (9Cl-PF3ONS)

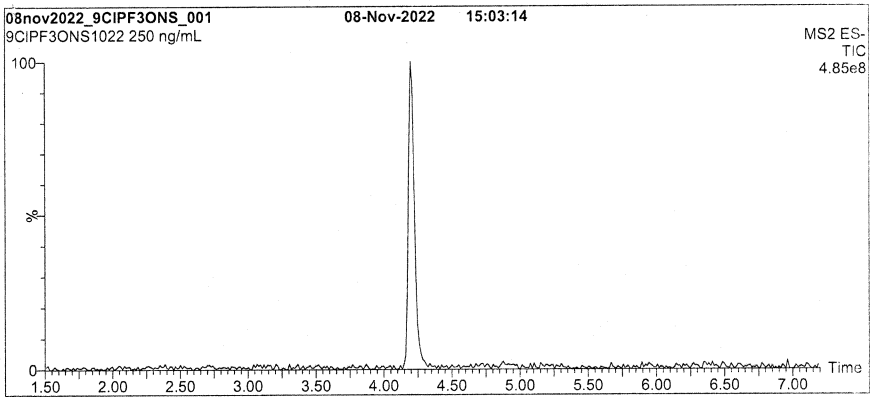
Mobile phase: Same as Figure 1

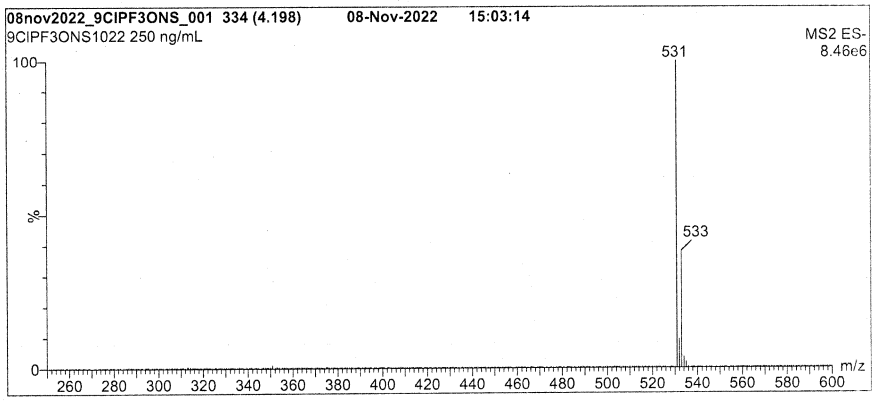
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.84e-3
Collision Energy (eV) = 20

Figure 1: **9Cl-PF3ONS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

d3-NMeFOSAA_00001

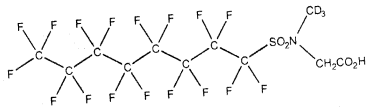
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA
COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

LOT NUMBER: d3NMeFOSAA1022
CAS #: 1400690-70-1

STRUCTURE:



MOLECULAR FORMULA: $C_{11}D_3H_3F_{17}NO_4S$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 574.23
SOLVENT(S): Methanol
Water (<1%)

ISOTOPIC PURITY: ≥98% $^2H_3$

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2022
EXPIRY DATE: (mm/dd/yyyy) 10/18/2027
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager **Date:** 10/24/2022 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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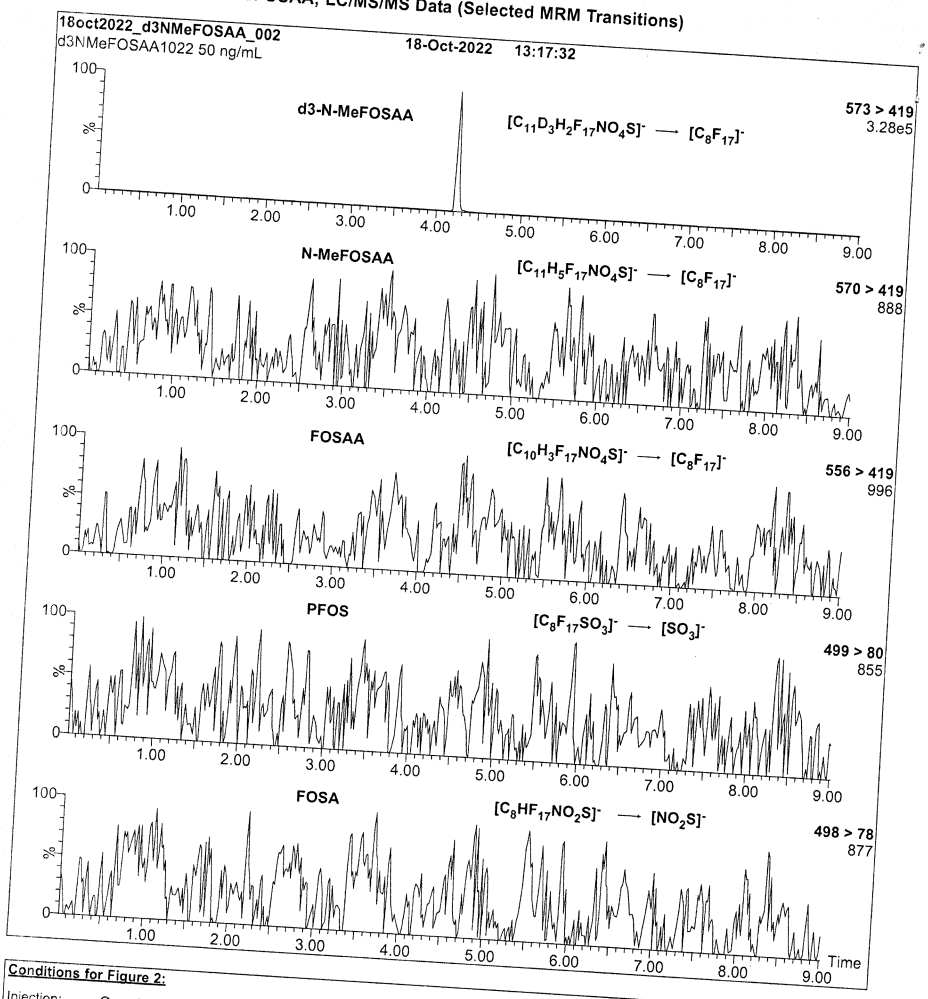
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Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Figure 2: d3-N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: On-column (d3-N-MeFOSAA)

Mobile phase: Same as Figure 1

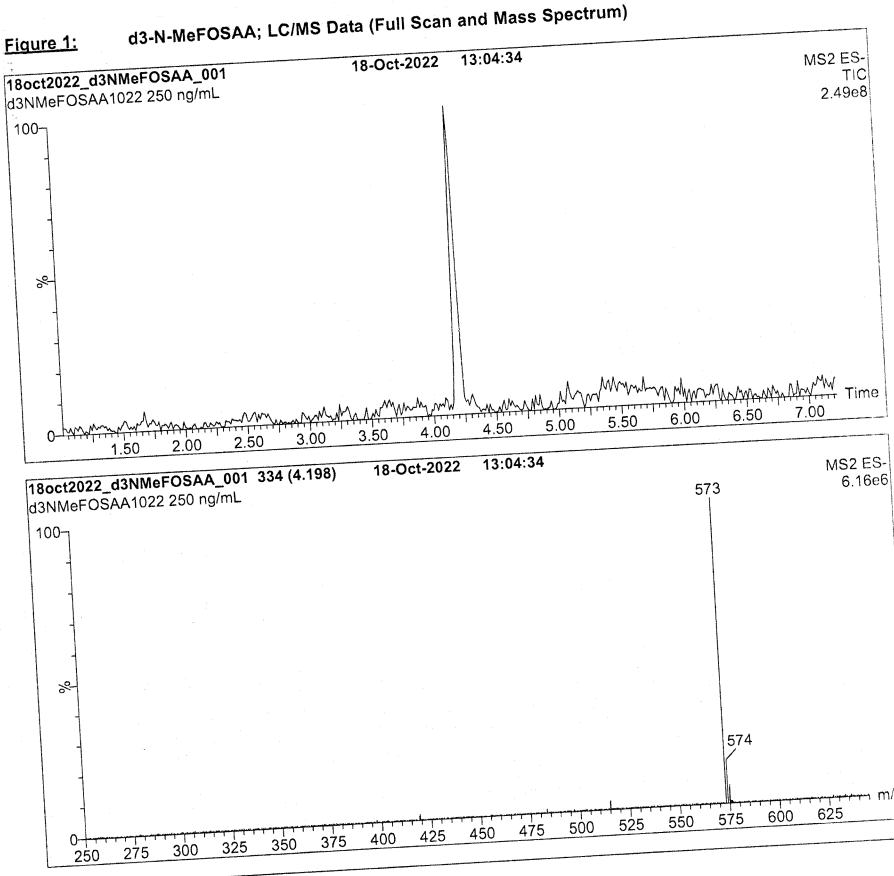
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 18

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Figure 1: **d3-N-MeFOSAA; LC/MS Data (Full Scan and Mass Spectrum)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Reagent

d3-NMePFOSA_00001

WELLINGTON LABORATORIES

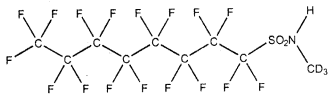
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d-N-MeFOSA-M
COMPOUND: N-Methyl-d_3-perfluoro-1-octanesulfonamide

LOT NUMBER: dNMeFOSA1122M

STRUCTURE:

CAS #: 936109-37-4



MOLECULAR FORMULA:	$C_9D_3HF_{17}NO_2S$	**MOLECULAR WEIGHT:**	516.19
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_3$
LAST TESTED: (mm/dd/yyyy)	11/11/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/11/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: _____ **Date:** 11/14/2022 (mm/dd/yyyy)
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QUALITY MANAGEMENT:

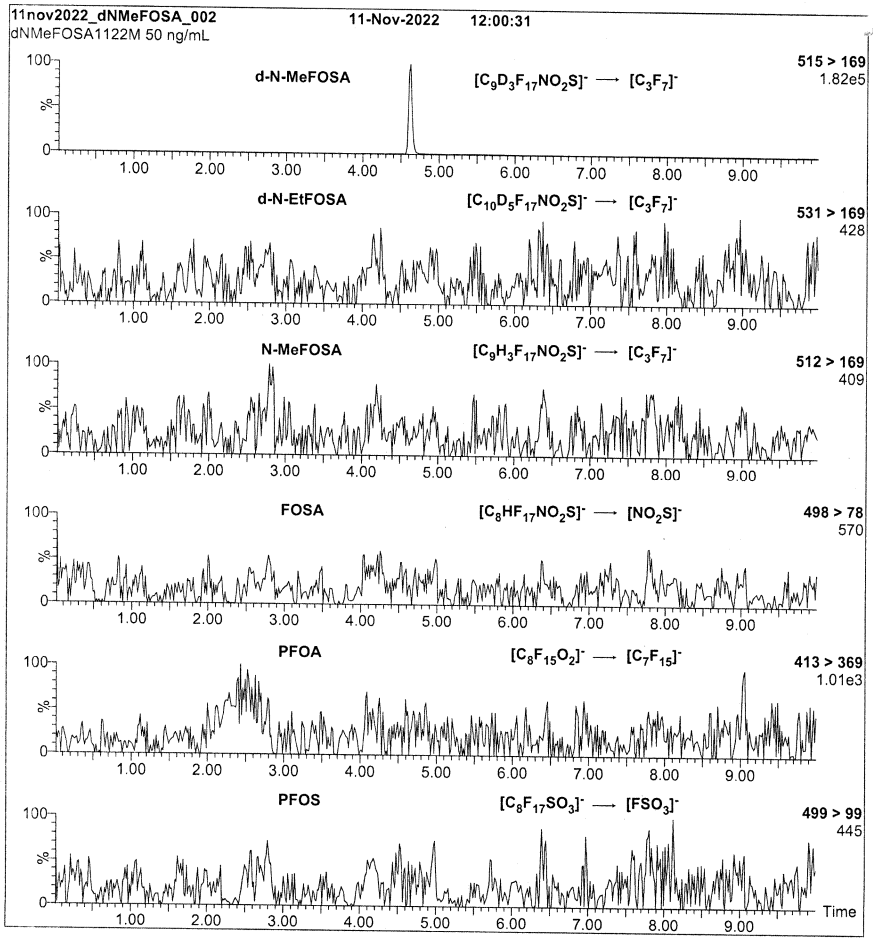
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **d-N-MeFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d-N-MeFOSA-M)

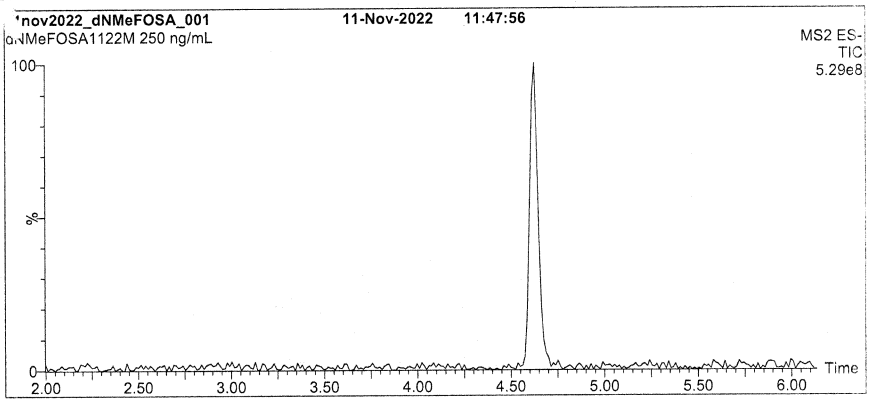
Mobile phase: Same as Figure 1

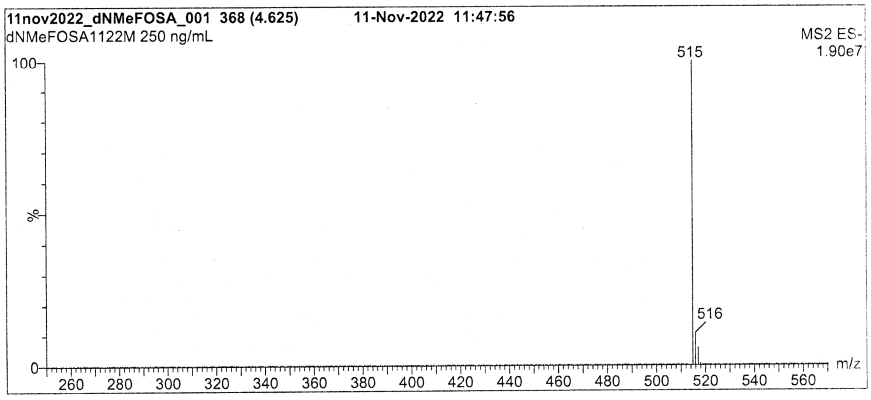
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.89e-3
Collision Energy (eV) = 24

Figure 1: **d-N-MeFOSA-M; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% H_2O / 70% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

d5-NEtFOSAA_00001

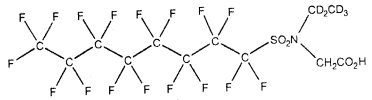
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA
LOT NUMBER: d5NEtFOSAA1222
COMPOUND: N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE:

CAS #: 1265205-97-7



MOLECULAR FORMULA: $C_{12}D_5H_3F_{17}NO_4S$
MOLECULAR WEIGHT: 590.26
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥98% $^2H_5$
LAST TESTED: (mm/dd/yyyy) 12/30/2022
EXPIRY DATE: (mm/dd/yyyy) 12/30/2027
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager
Date: 01/13/2023 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

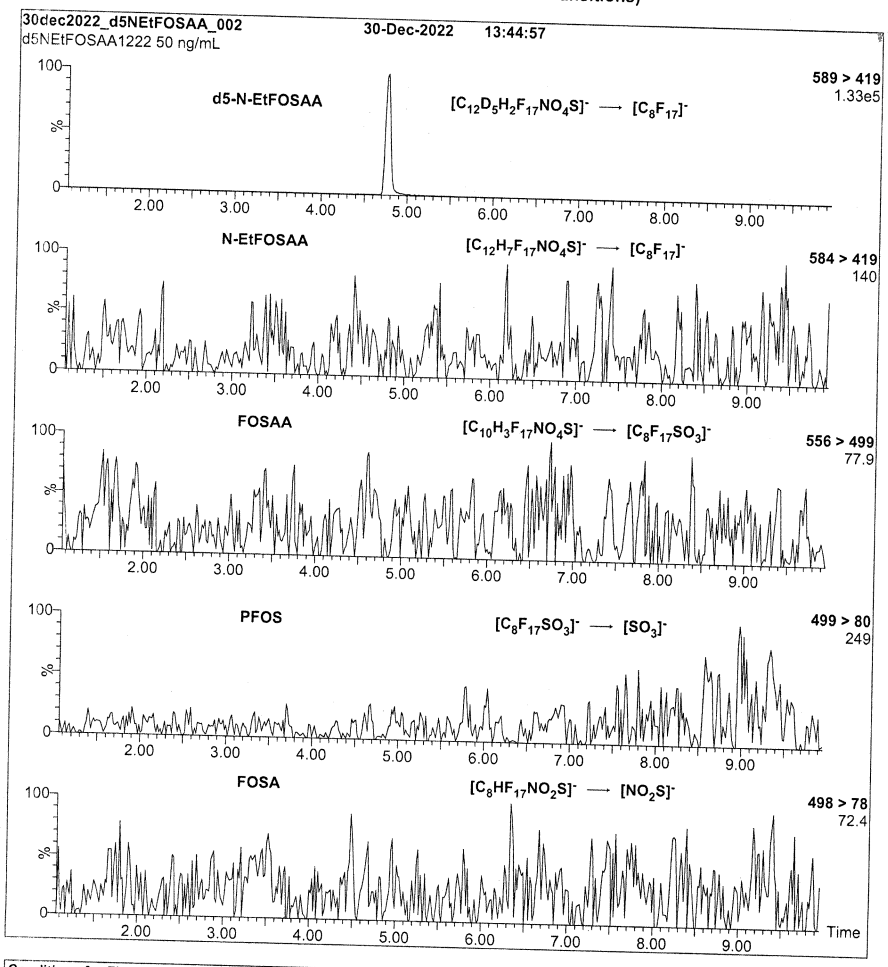
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **d5-N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d5-N-EtFOSAA)

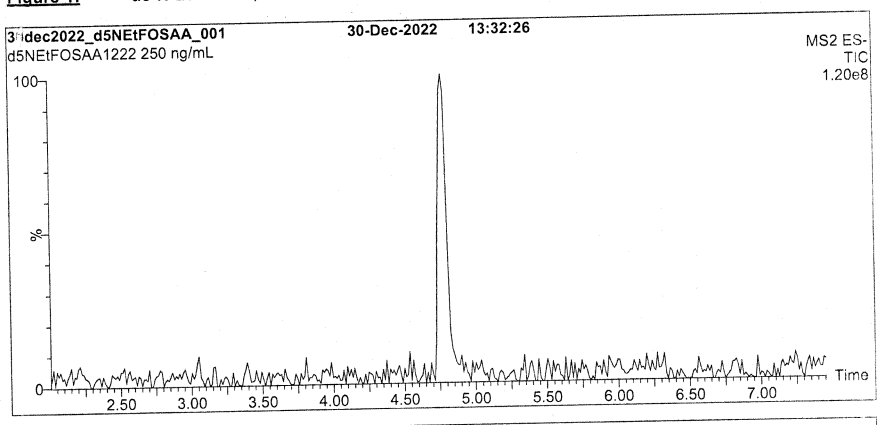
Mobile phase: Same as Figure 1

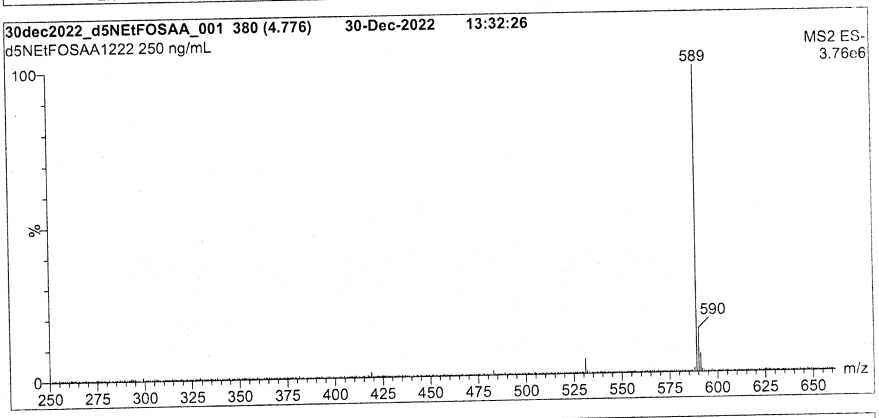
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.67e-3
Collision Energy (eV) = 18

Figure 1: **d5-N-EtFOSAA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

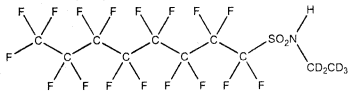
Reagent

d5-NEtPFOSA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	d-N-EtFOSA-M	**LOT NUMBER:**	dNEtFOSA1022M
COMPOUND:	N-Ethyl-d_5-perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	936109-40-9



MOLECULAR FORMULA:	$C_{10}D_5HF_{17}NO_2S$	**MOLECULAR WEIGHT:**	532.23
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_5$
LAST TESTED: (mm/dd/yyyy)	11/07/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/07/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.3% of an unknown isomeric impurity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

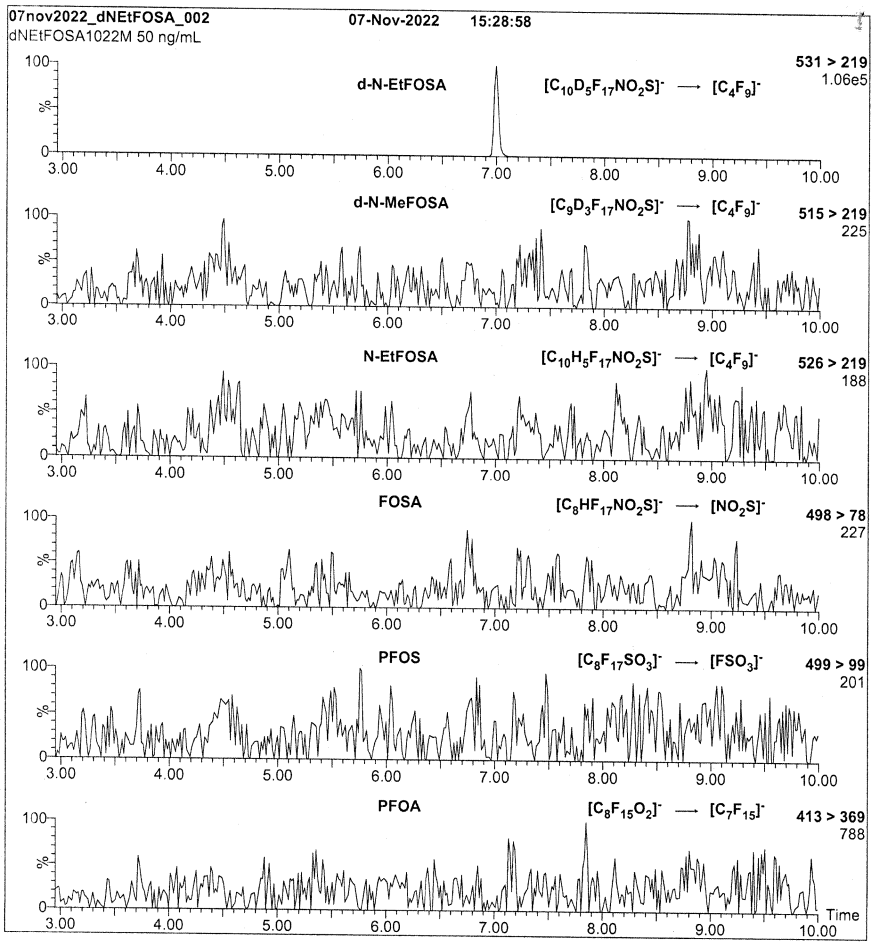
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **d-N-EtFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d-N-EtFOSA-M)

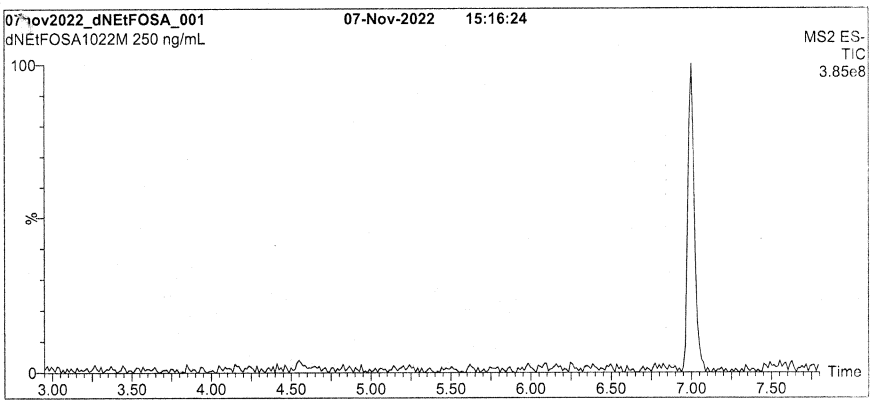
Mobile phase: Same as Figure 1

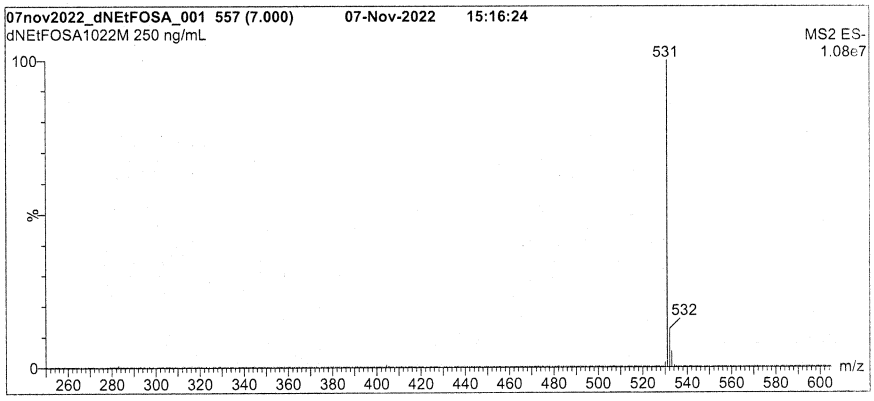
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.05e-3
Collision Energy (eV) = 24

Figure 1: **d-N-EtFOSA-M; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

d7-NMePFOSAE_00004

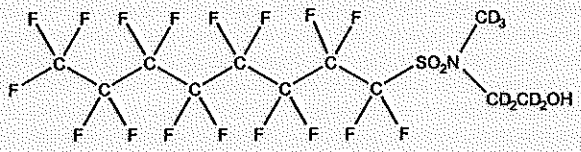
WELLINGTON LABORATORIES

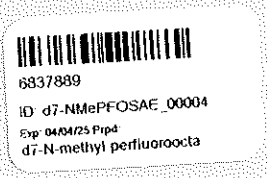
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d7-N-MeFOSE-M **LOT NUMBER:** d7NMeFOSE0224M

COMPOUND: 2-(N-Methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE: **CAS #:** 1265205-95-5





MOLECULAR FORMULA:	$C_{11}D_7HF_{17}NO_3S$	**MOLECULAR WEIGHT:**	564.27
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% ^2H (D)
LAST TESTED: (mm/dd/yyyy)	02/16/2024 (HRGC/LRMS) 02/15/2024 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2029		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/22/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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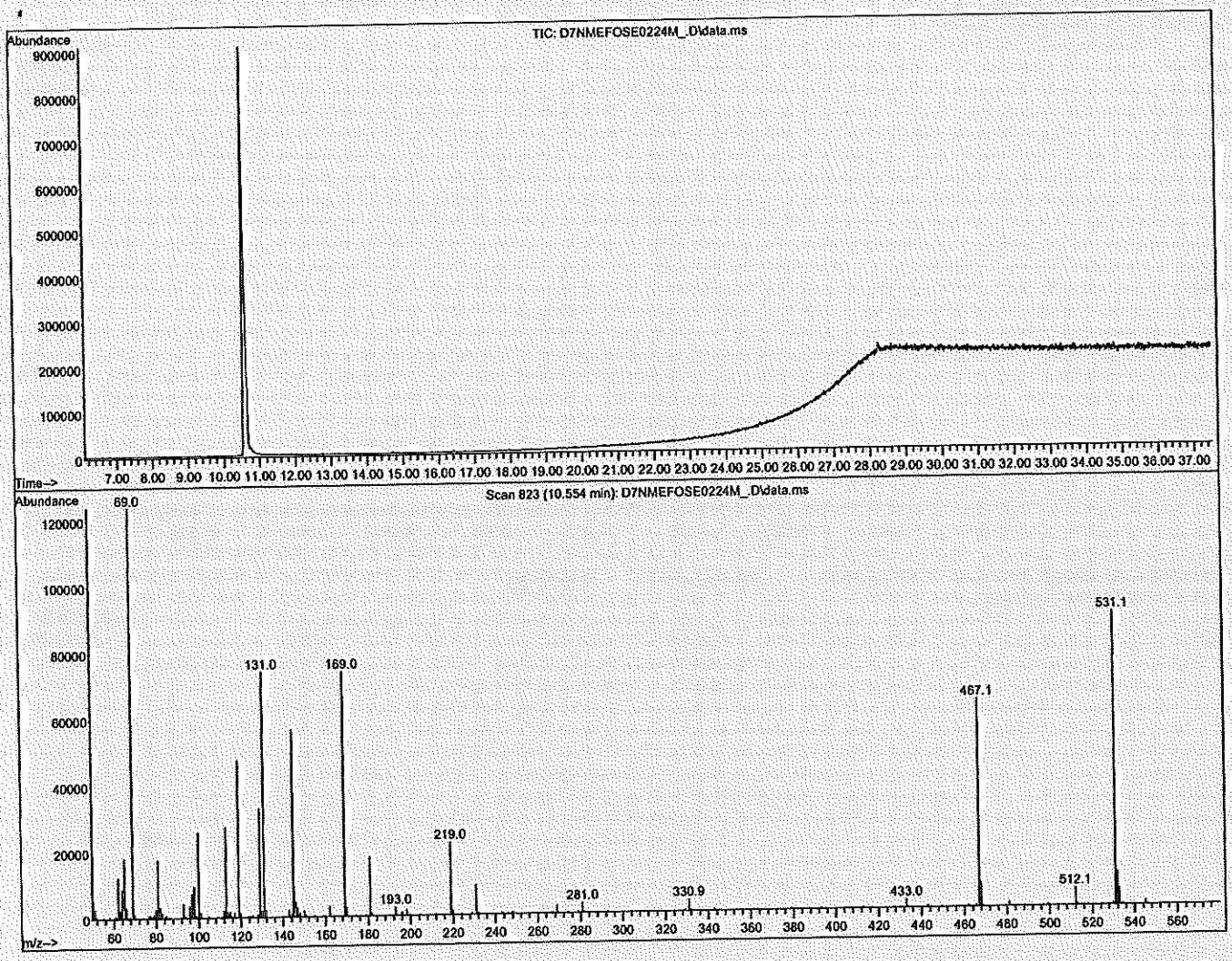
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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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Figure 1: d7-N-MeFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)



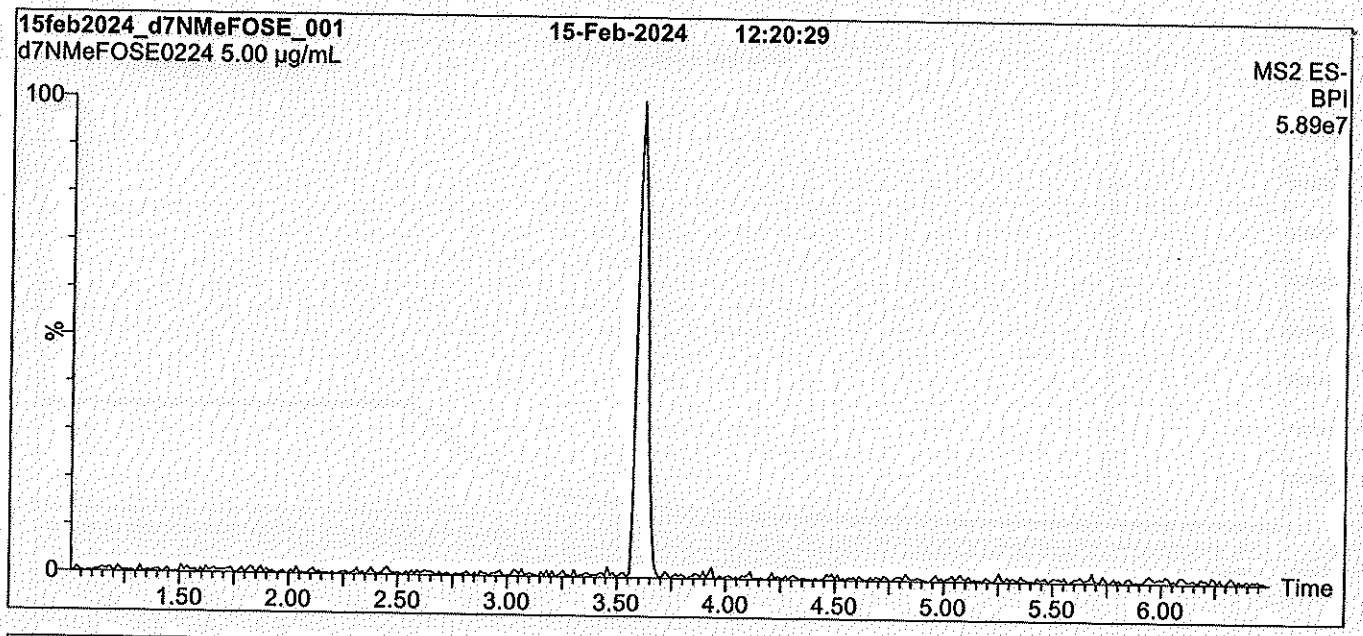
Conditions for Figure 1:

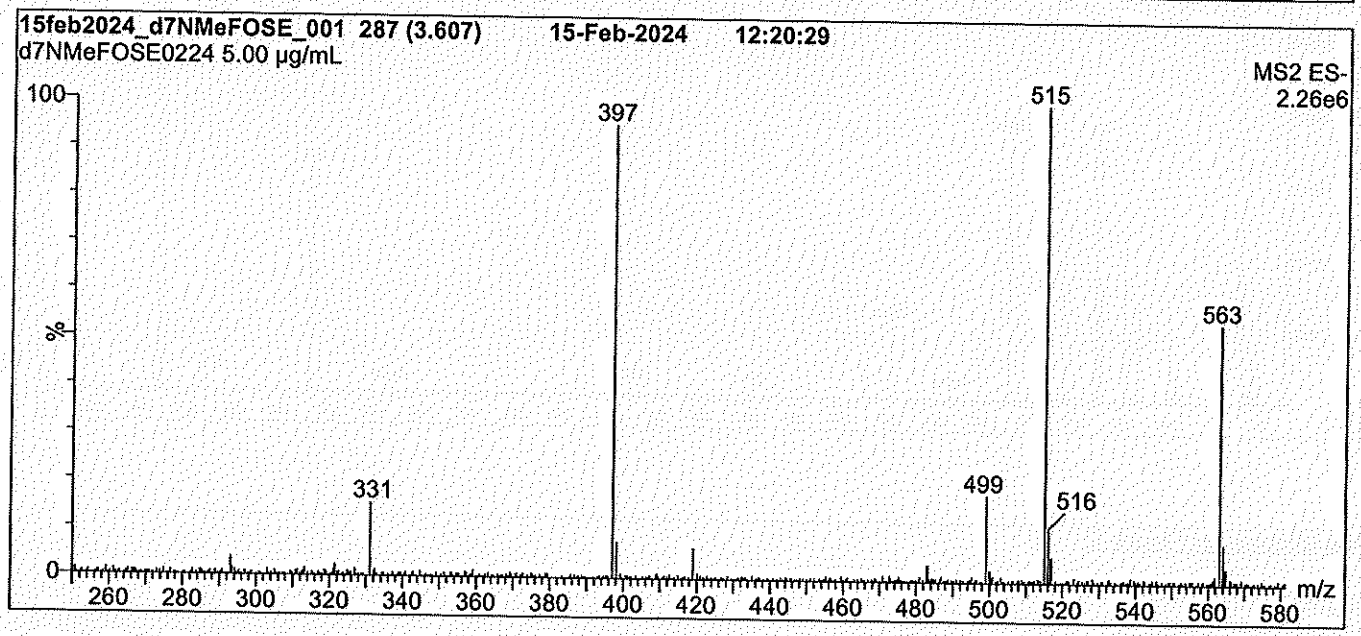
Agilent 7890A HRGC
Agilent 5975C MSD

Chromatographic Conditions:

Column:	30 m HP-5MS UI (0.25 mm id, 0.25 µm film thickness) Agilent J&W
Flow:	Constant at 1.0 mL/min
Injector:	250°C (Splitless Injection)
Oven:	100°C (5 min)
	10°C/min to 325°C
	325°C (10 min)
Ionization:	EI+
Detector:	230°C
	Full Scan (50-1000 amu)

Figure 2: **d7-N-MeFOSE-M; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 2:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% H_2O / 70% MeOH
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

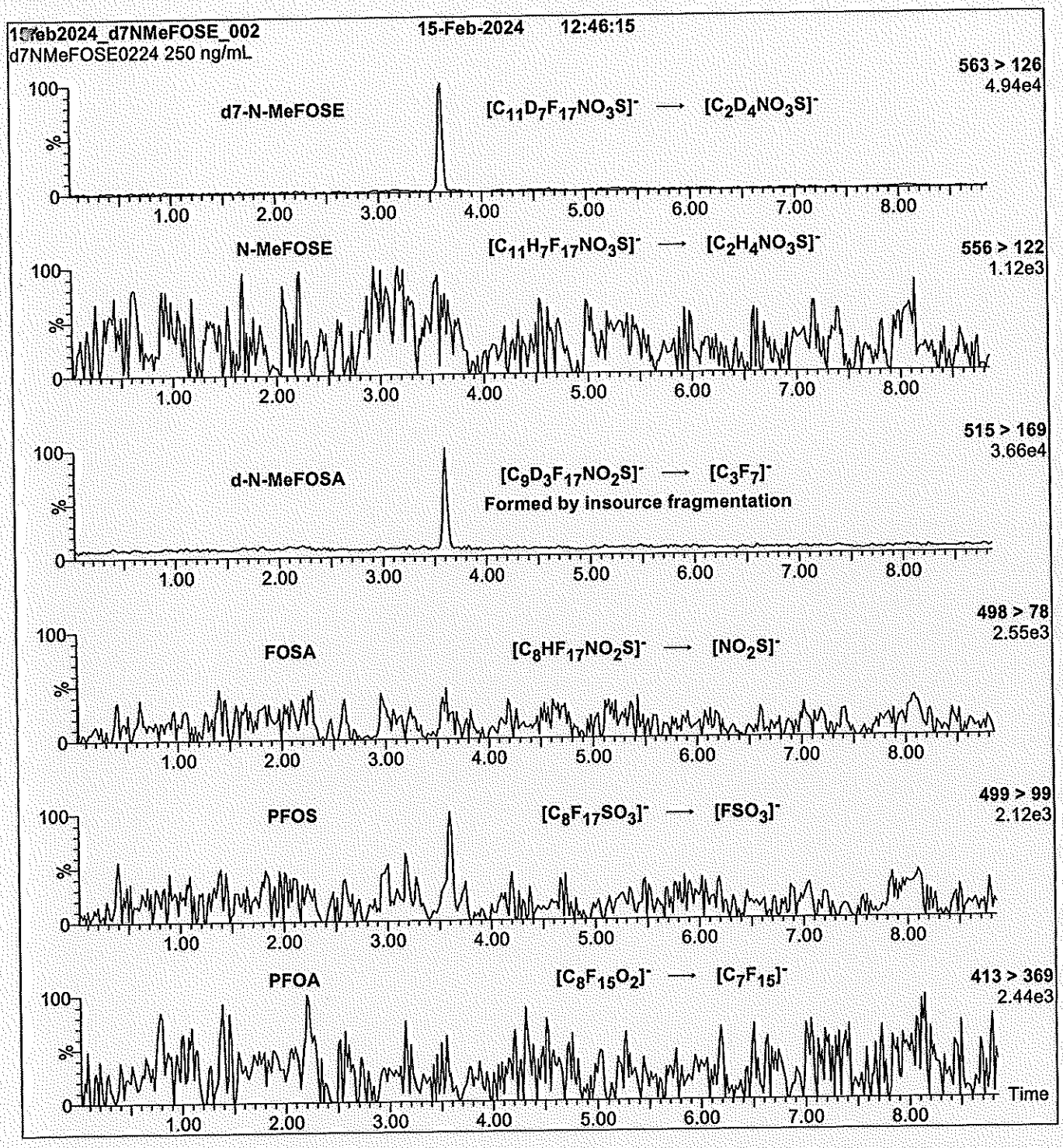
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (L/hr) = 1000

Figure 3: d7-N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 3:

Injection: On-column (d7-N-MeFOSE-M)

Mobile phase: Same as Figure 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.12e-3
Collision Energy (eV) = 36

Reagent

d9-NEtPFOSAE_00004

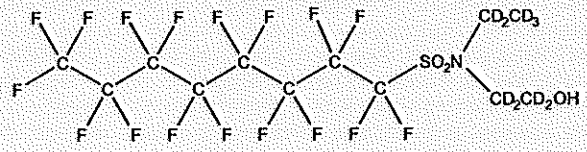
WELLINGTON LABORATORIES

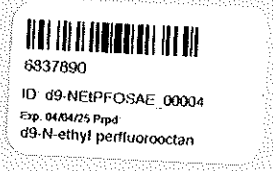
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE0124M

COMPOUND: 2-(N-Ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE: **CAS #:** 1265205-96-6





MOLECULAR FORMULA:	$C_{12}D_9HF_{17}NO_3S$	**MOLECULAR WEIGHT:**	580.31
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% ^2H (D)
LAST TESTED: (mm/dd/yyyy)	02/16/2024 (HRGC/LRMS) 01/19/2024 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2029		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/20/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

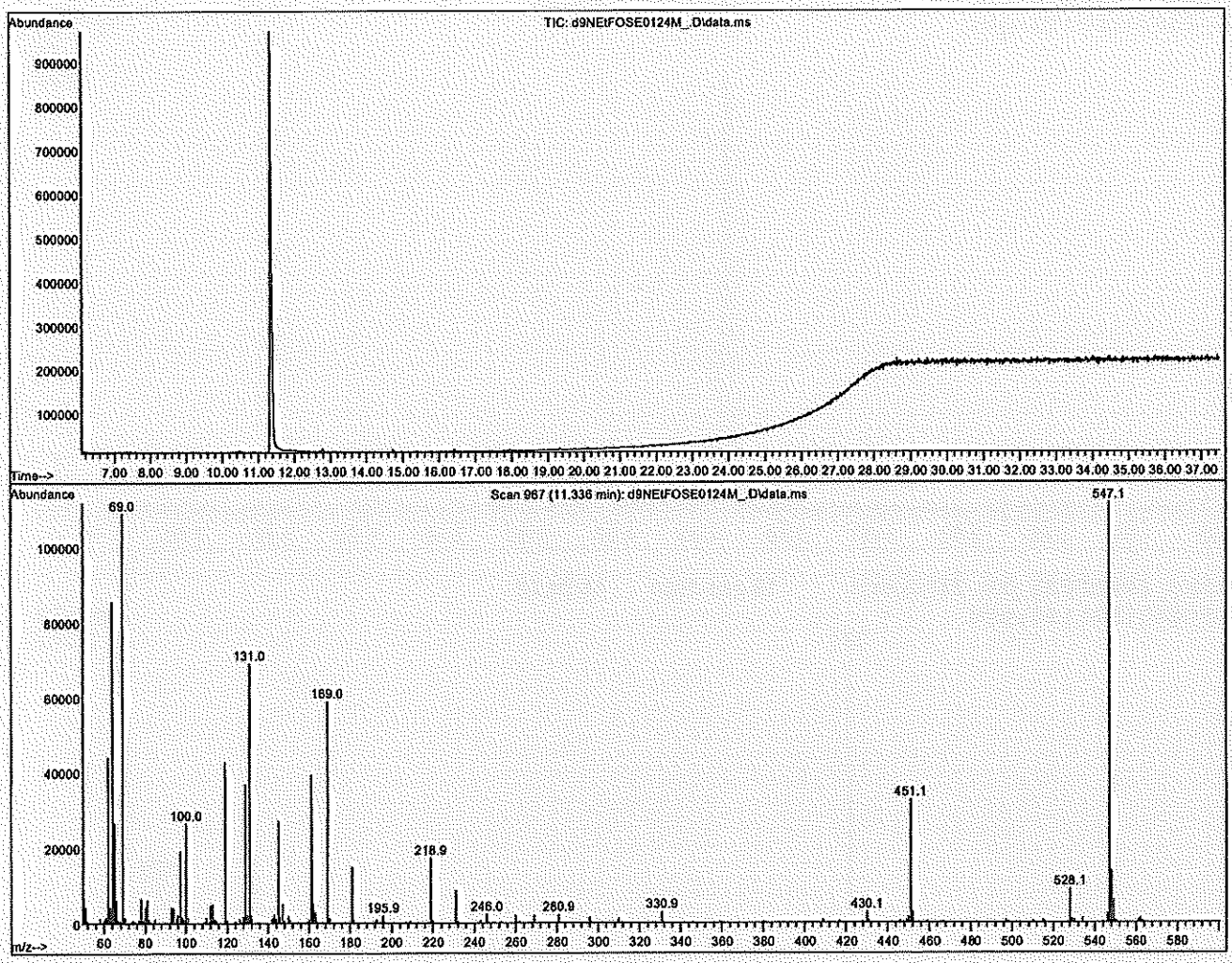
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **d9-N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



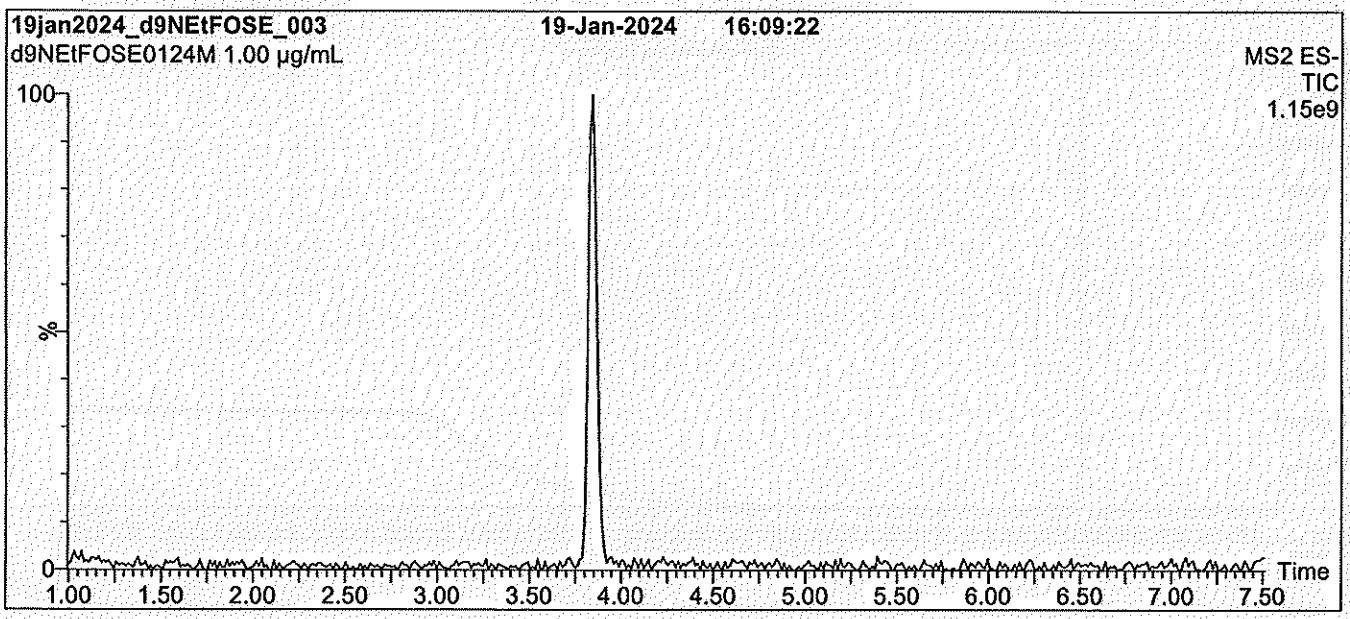
Conditions for Figure 1:

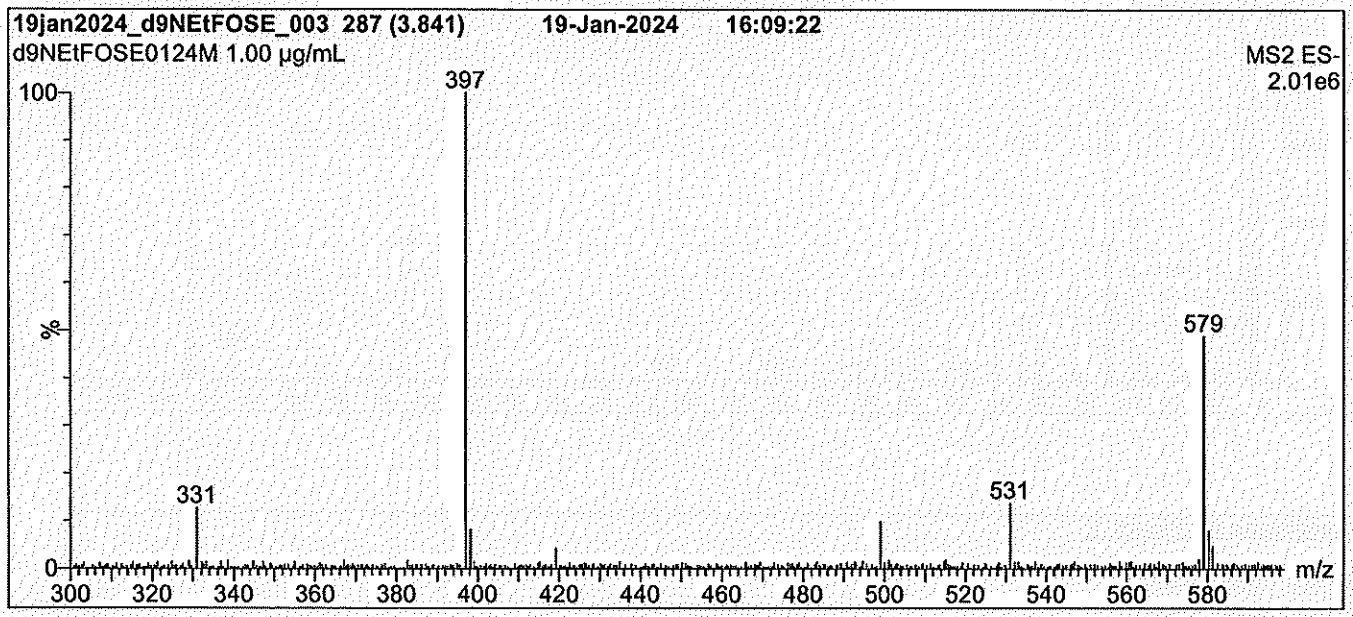
Agilent 7890A HRGC
Agilent 5975C MSD

Chromatographic Conditions:

Column:	30 m HP-5MS UI (0.25 mm id, 0.25 µm film thickness) Agilent J&W
Flow:	Constant at 1.0 mL/min
Injector:	250°C (Splitless Injection)
Oven:	100°C (5 min)
	10°C/min to 325°C
	325°C (10 min)
Ionization:	EI+
Detector:	230°C
	Full Scan (50-1000 amu)

Figure 2: **d9-N-EtFOSE-M; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 2:

Waters Acquity UPLC I-Class
Waters Xevo TQ-XS MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% H_2O / 70% MeOH
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

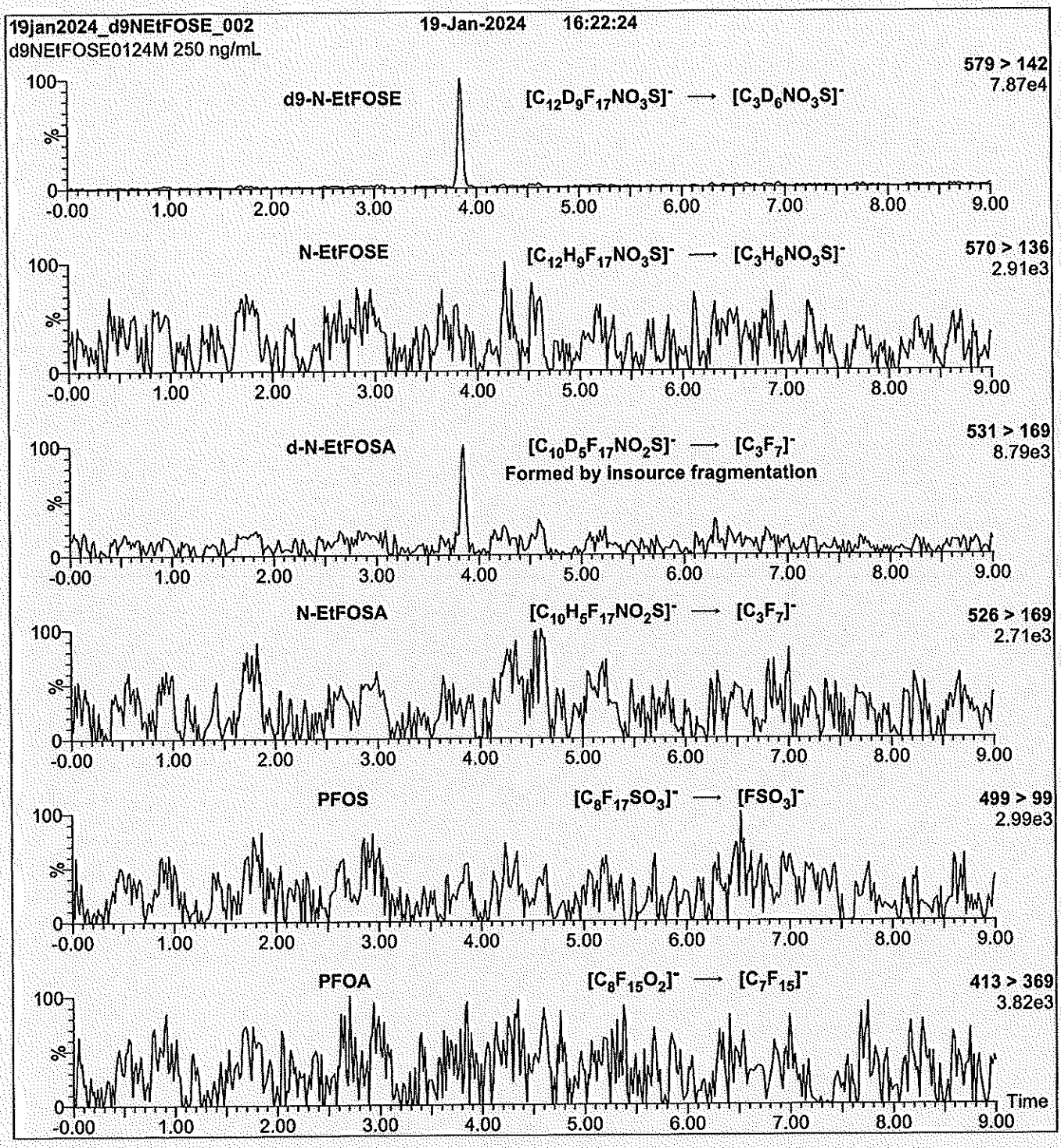
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (L/hr) = 1000

Figure 3: d9-N-EtFOSE-M; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 3:

Injection: On-column (d9-N-EtFOSE-M)

Mobile phase: Same as Figure 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.29e-3
Collision Energy (eV) = 32

Reagent

DONA_00001

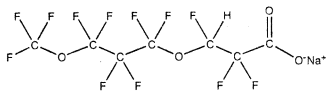
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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: NaDONA
LOT NUMBER: NaDONA0123
COMPOUND: Sodium dodecafluoro-3H-4,8-dioxanonanoate

STRUCTURE:

CAS #: 2250081-67-3



MOLECULAR FORMULA: $C_9HF_{12}O_4Na$
MOLECULAR WEIGHT: 400.05
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
47.3 ± 2.4 µg/mL (NaDONA acid)
47.1 ± 2.4 µg/mL (NaDONA anion)
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/30/2023
EXPIRY DATE: (mm/dd/yyyy) 01/30/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Product is commercially known as ADONA.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/13/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

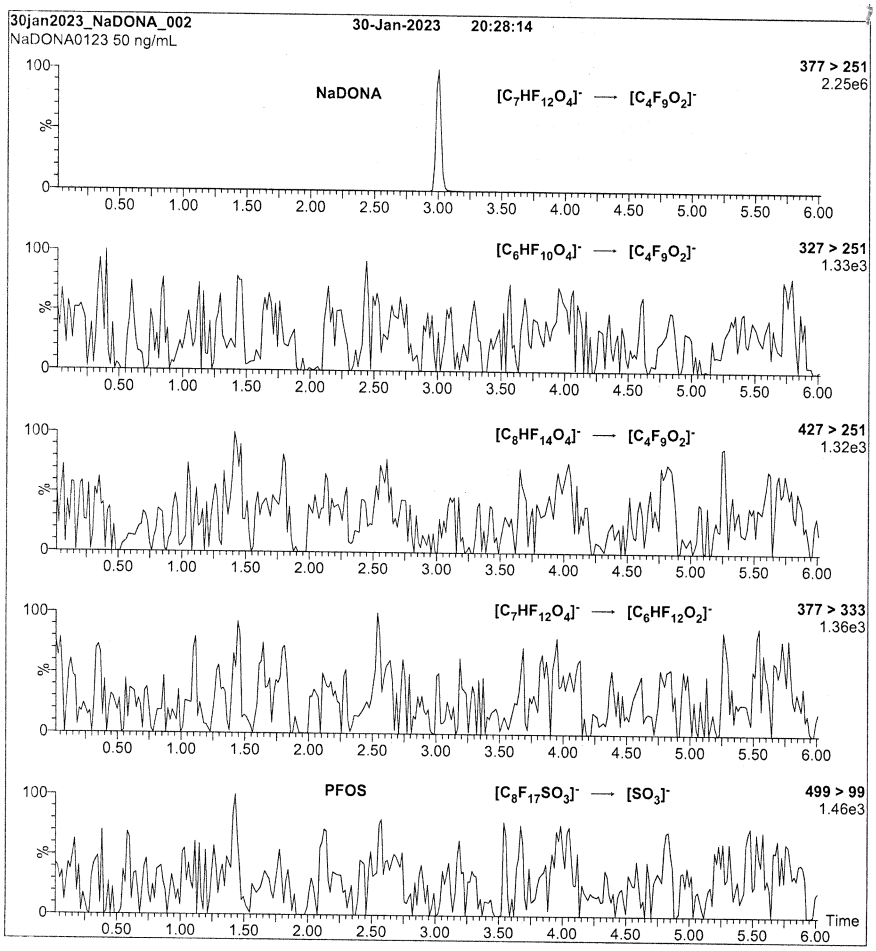
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **NaDONA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (NaDONA)

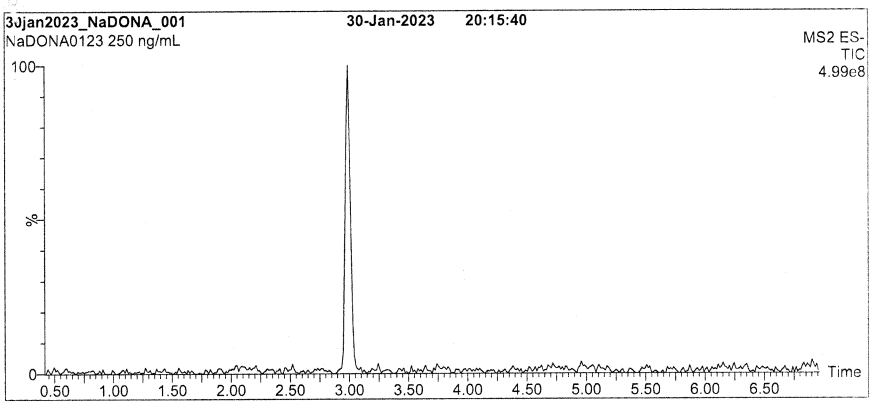
Mobile phase: Same as Figure 1

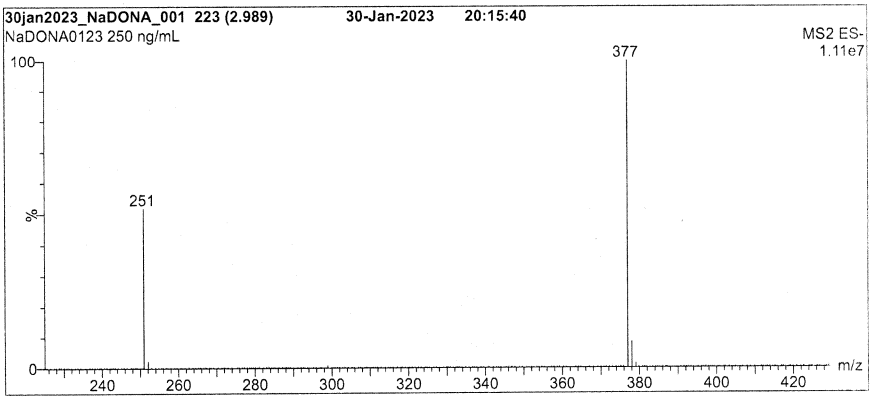
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.73e-3
Collision Energy (eV) = 10

Figure 1: **NaDONA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

NaDONA0123 (3 of 4)
rev0

Reagent

HFPODA_00001

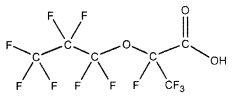
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0822

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA:	$C_6HF_{11}O_3$	**MOLECULAR WEIGHT:**	330.05
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/16/2022		
EXPIRY DATE: (mm/dd/yyyy)	08/16/2025		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/19/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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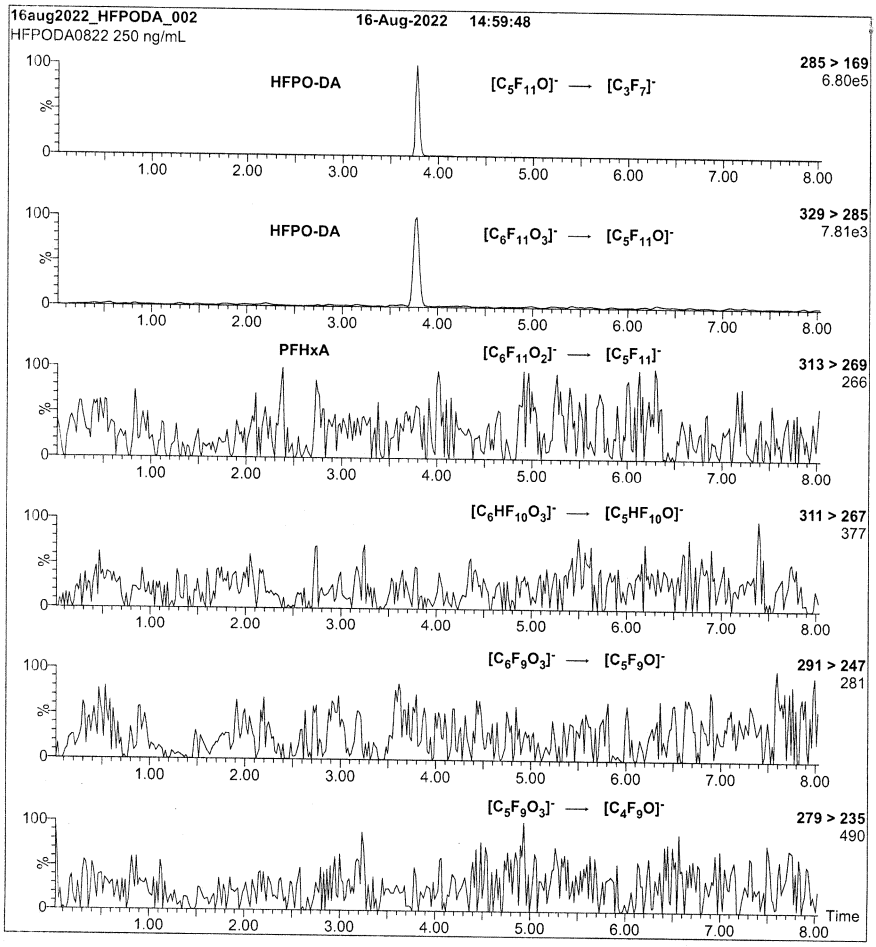
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (HFPO-DA)

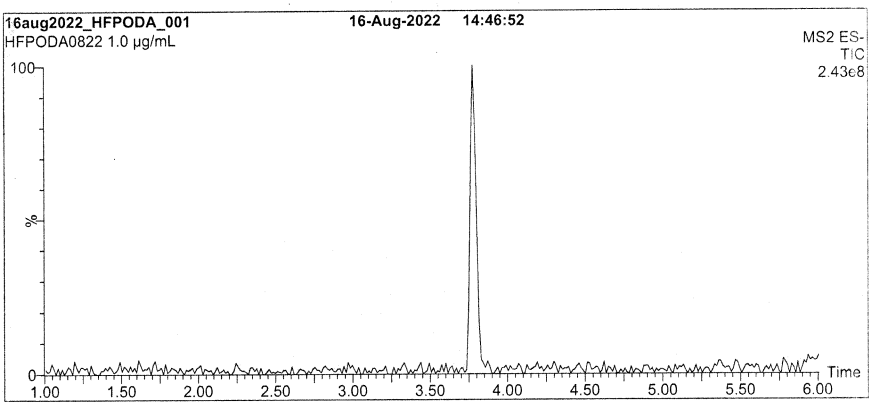
Mobile phase: Same as Figure 1

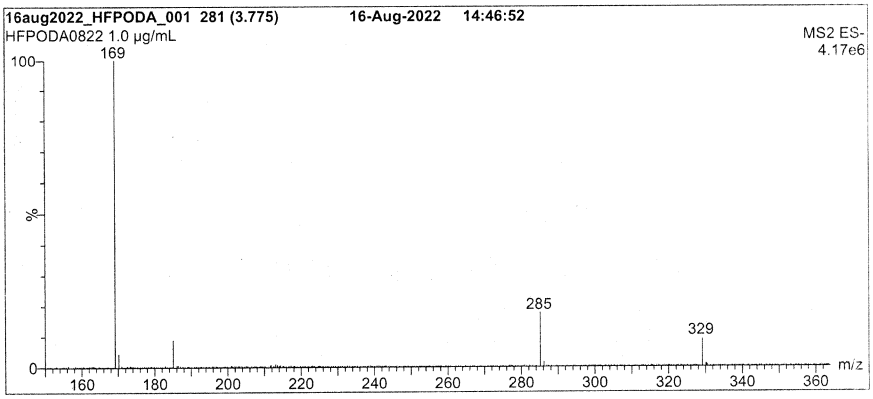
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.33e-3
Collision Energy (eV) = 8

Figure 1: **HFPO-DA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (L/hr) = 1000

Reagent

NEtFOSAA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NEtFOSAA

N-Ethylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NEtFOSAA
LOT NUMBER:	brNEtFOSAA1022
CONCENTRATION:	50.0 ± 2.5 µg/mL
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	10/13/2022
LAST TESTED: (mm/dd/yyyy)	10/18/2022
EXPIRY DATE: (mm/dd/yyyy)	10/18/2027
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

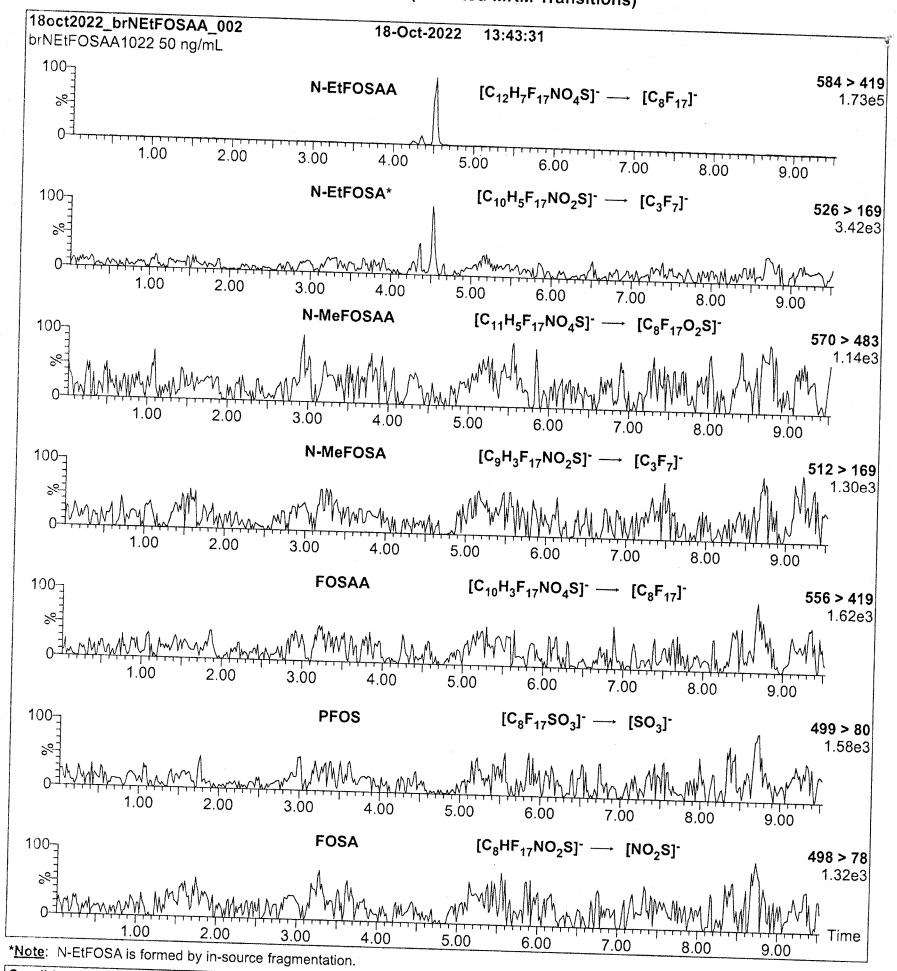
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 3: **br-NEtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



*Note: N-EtFOSA is formed by in-source fragmentation.

Conditions for Figure 3:

Injection: On-column (br-NEtFOSAA)

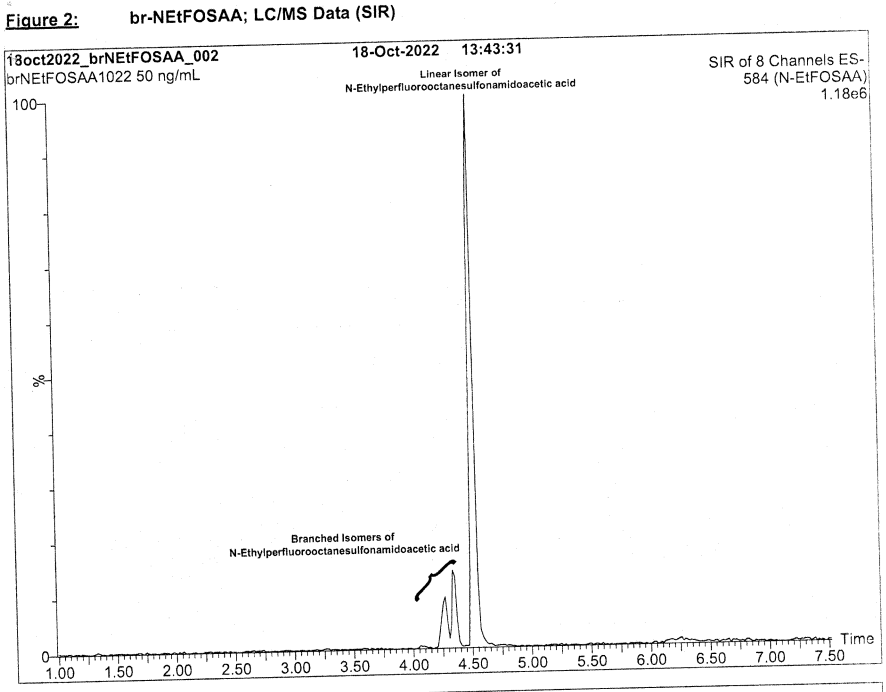
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 18

Figure 2: **br-NEtFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

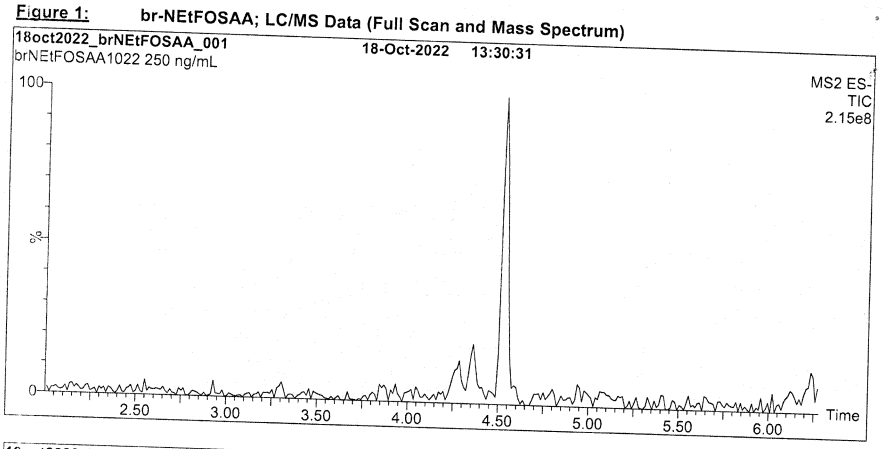
Flow: 300 µL/min

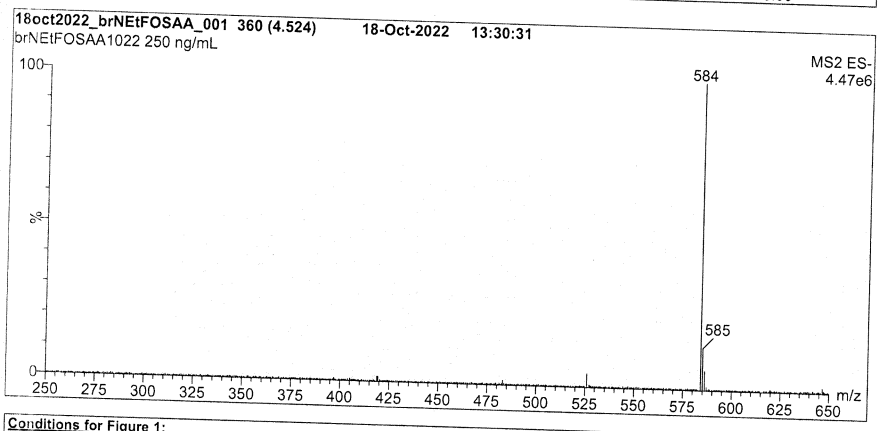
MS Parameters:

Experiment: SIR (8 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = Variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 1: **br-NEtFOSAA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Table A: **br-NEtFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2NCH_2CO_2H$ C_2H_5	77.5
2	N-Ethylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_2)_2SO_2NCH_2CO_2H$ CF_3 C_2H_5	2.3
3	N-Ethylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_2)_3SO_2NCH_2CO_2H$ CF_3 C_2H_5	2.2
4	N-Ethylperfluoro-5-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_2)_4SO_2NCH_2CO_2H$ CF_3 C_2H_5	5.4
5	N-Ethylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF(CF_2)_5SO_2NCH_2CO_2H$ CF_3 C_2H_5	10.4
6	N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3C(CF_3)(CF_2)_4SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3
7	N-Ethylperfluoro-4,5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF_2)_3SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3
8	N-Ethylperfluoro-3,5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF_2CF(CF_2)_2SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3
9	Other Unidentified Isomers		1.3

* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 11/24/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

Reagent

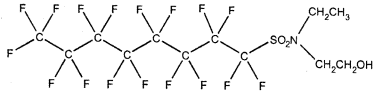
NEtFOSE_00002

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE0623M
COMPOUND: 2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA:	$C_{12}H_{10}F_{17}NO_3S$	**MOLECULAR WEIGHT:**	571.25
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/04/2023 (HRGC/LRMS) 05/11/2023 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	05/11/2028		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/17/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

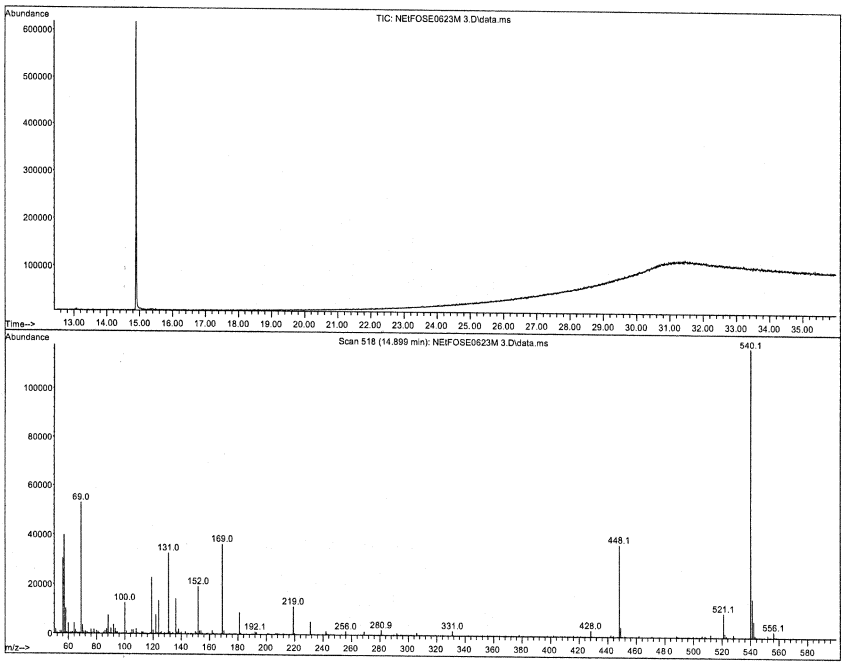
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



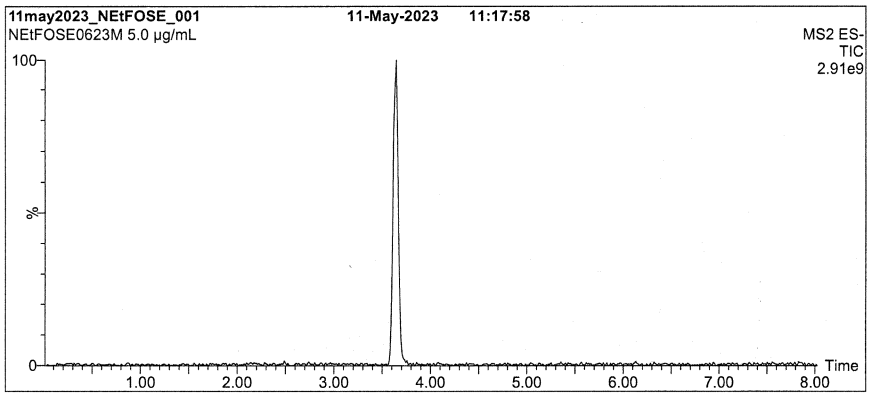
Conditions for Figure 1:

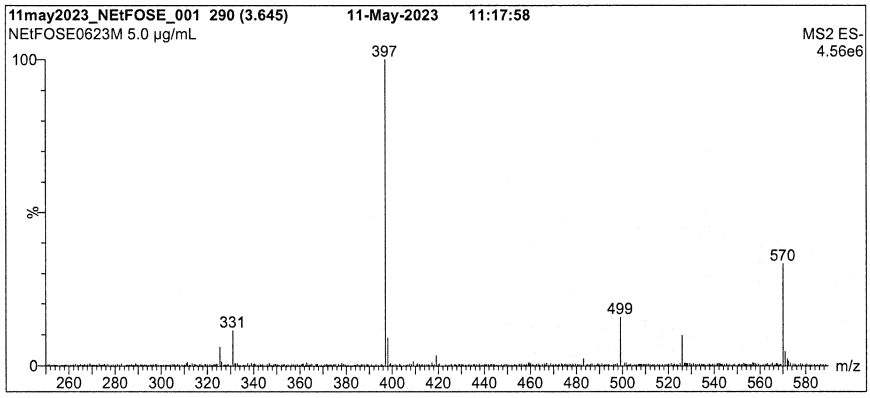
Agilent 7890A HRGC
Agilent 5975C MSD

Chromatographic Conditions:

Column:	30 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W
Flow:	Constant at 1.0 mL/min
Injector:	250°C (Splitless Injection)
Oven:	50°C (3 min) 10°C/min to 325°C 325°C (10 min)
Ionization:	EI+
Detector:	230°C Full Scan (50-1000 amu)

Figure 2: **N-EtFOSE-M; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 2:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% H_2O / 70% MeOH
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

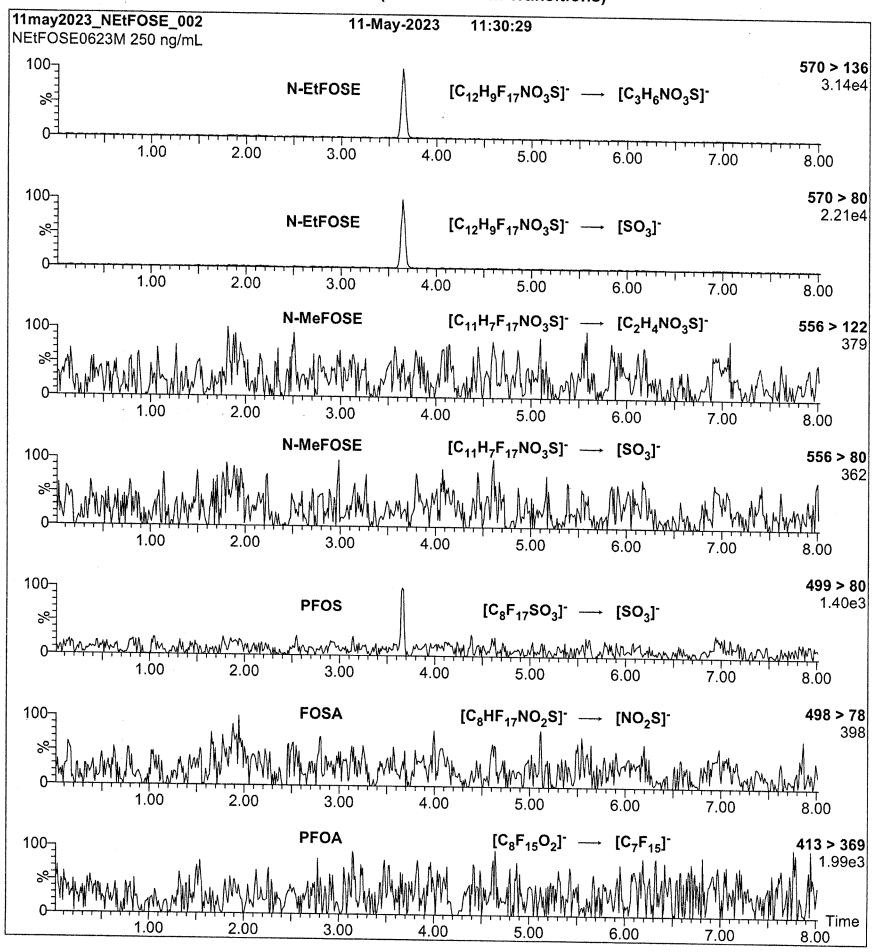
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **N-EtFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (N-EtFOSE-M)

Mobile phase: Same as Figure 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.44e-3
Collision Energy (eV) = 32

Reagent

NFDHA_00001

WELLINGTON LABORATORIES

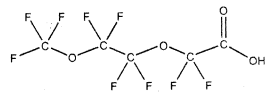
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 3,6-OPFHpA
COMPOUND: Perfluoro-3,6-dioxaheptanoic acid

LOT NUMBER: 36OPFHpA0522

STRUCTURE:

CAS #: 151772-58-6



MOLECULAR FORMULA: $C_5HF_9O_4$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 296.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 06/08/2022
EXPIRY DATE: (mm/dd/yyyy) 06/08/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/27/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

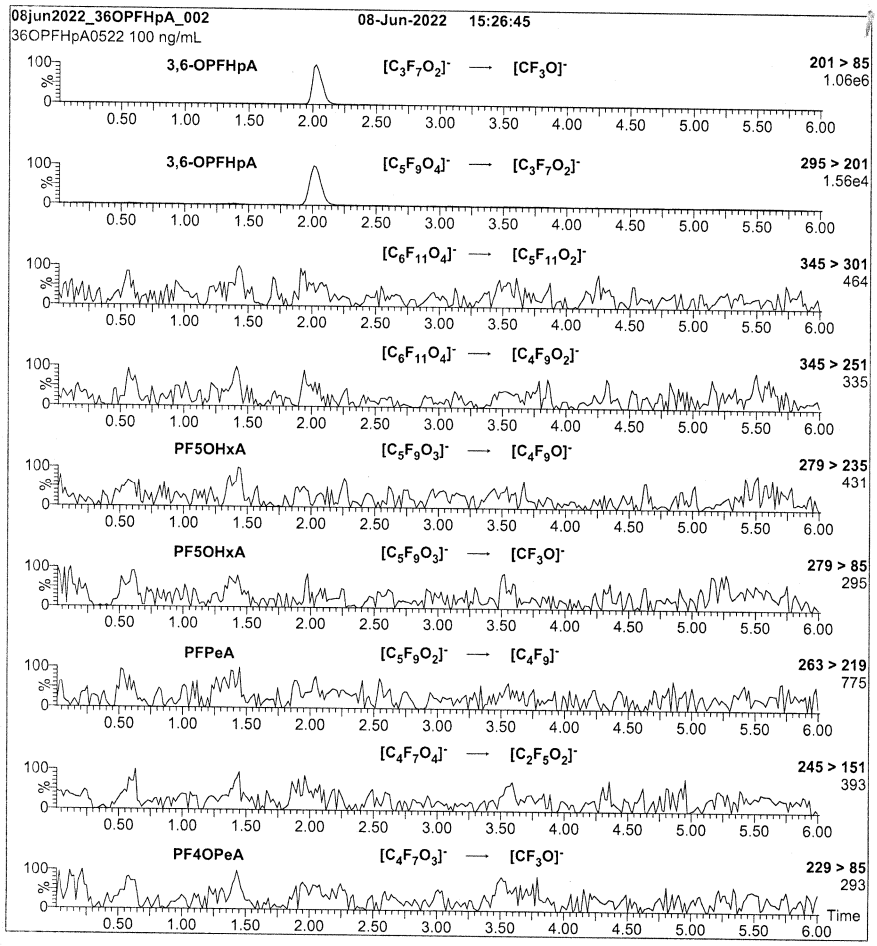
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **3,6-OPFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (3,6-OPFHpA)

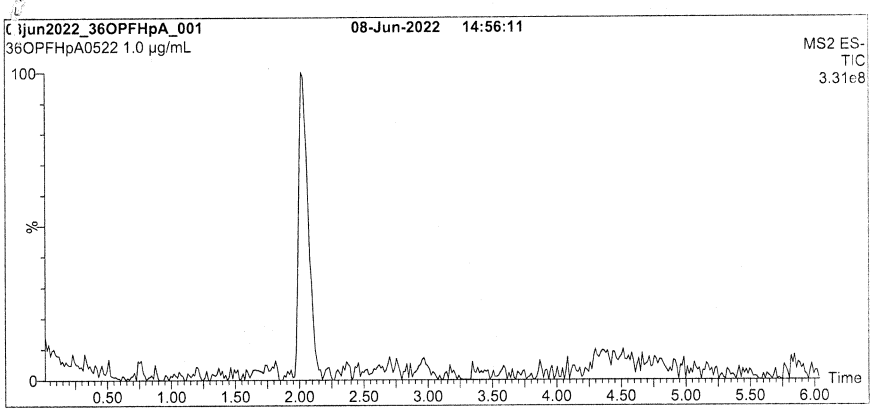
Mobile phase: Same as Figure 1

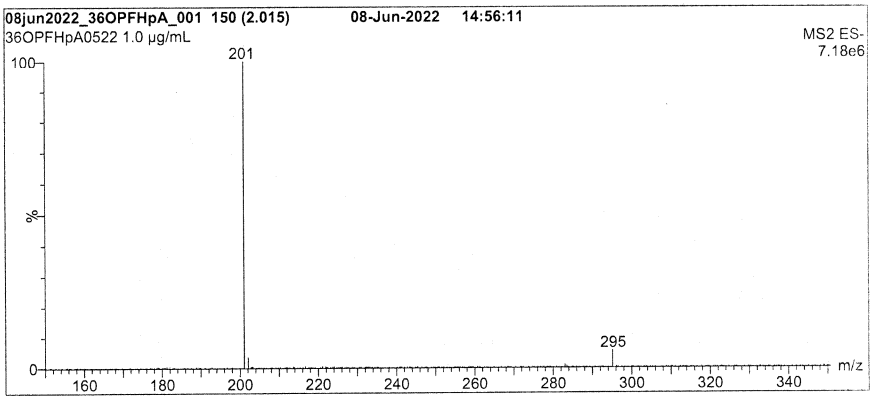
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.14e-3
Collision Energy (eV) = 10

Figure 1: **3,6-OPFHpA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 38.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

NMeFOSAA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

N-Methylperfluorooctanesulfonamidoacetic Acid
Isomeric Mix

PRODUCT CODE:	br-NMeFOSAA
LOT NUMBER:	brNMeFOSAA0422
CONCENTRATION:	50.0 ± 2.5 µg/mL
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	04/18/2022
LAST TESTED: (mm/dd/yyyy)	04/20/2022
EXPIRY DATE: (mm/dd/yyyy)	04/20/2027
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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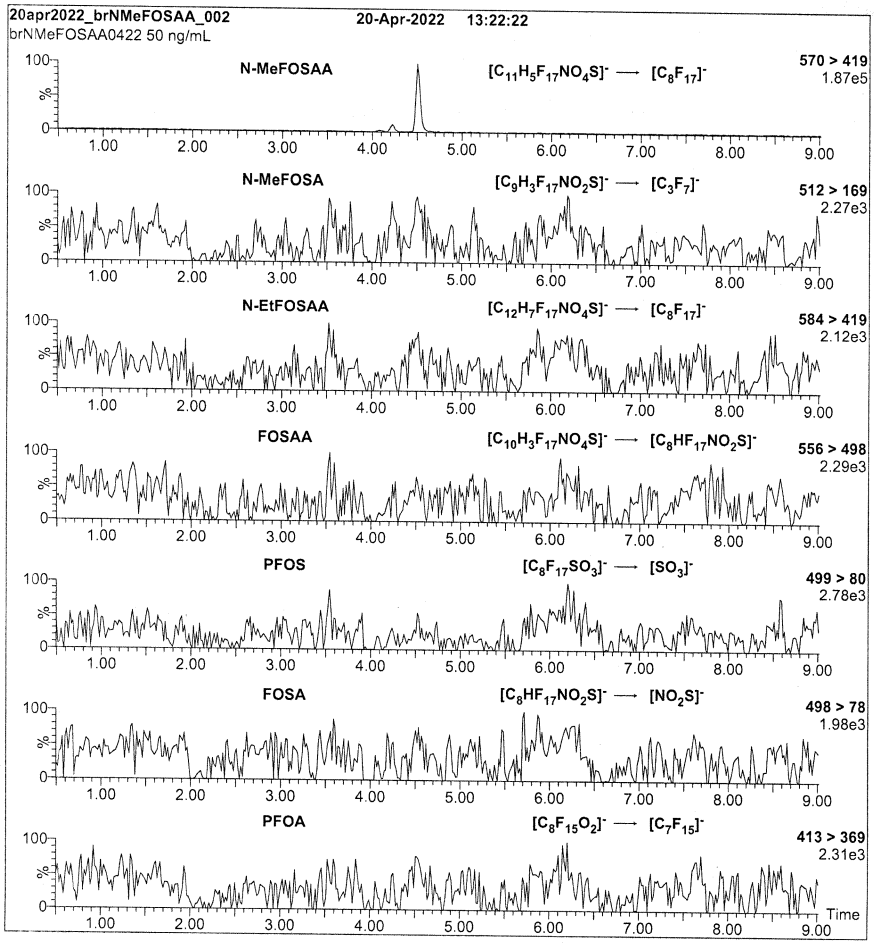
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 3: **br-NMeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-NMeFOSAA)

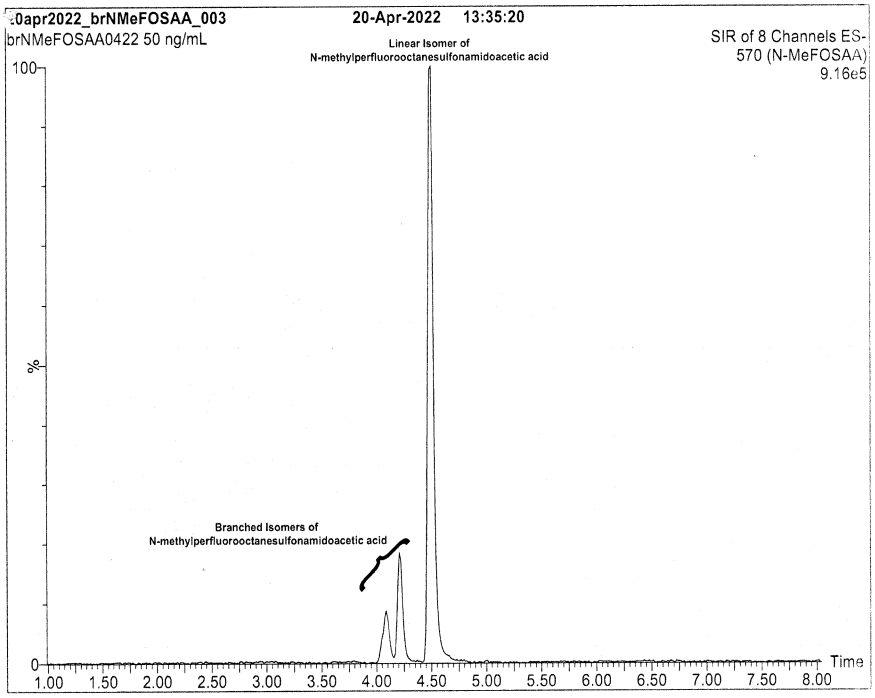
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 18

Figure 2: **br-NMeFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions over 0.75 min.
Time: 12 min

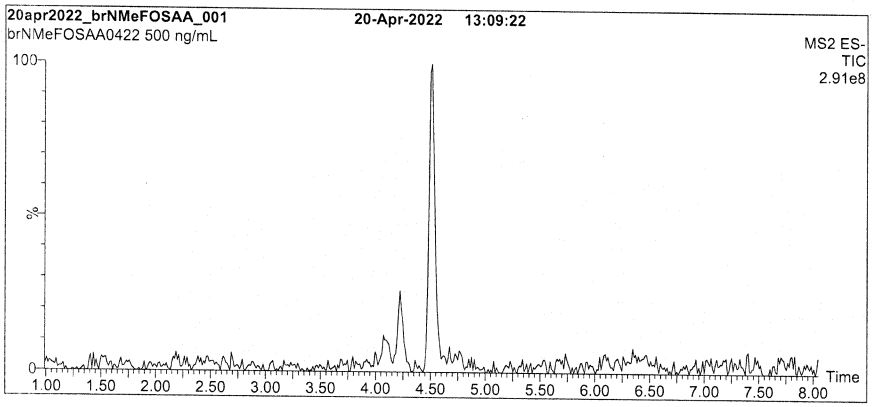
Flow: 300 µL/min

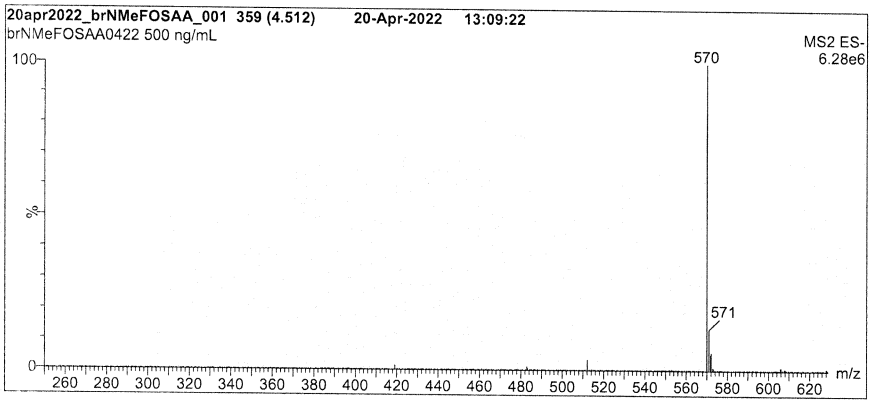
MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 1: **br-NMeFOSAA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions over 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Table A: **br-NMeFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0	76.0
2	N-methylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7	24.0
3	N-methylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CO_2H$	2.0	
4	N-methylperfluoro-5-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	6.0	
5	N-methylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CO_2H$	14.0	
6	N-methylperfluoro-5,5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	0.2	
7	Other Unidentified Isomers		1.1	

* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 05/30/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

Reagent

PFBA_00001

WELLINGTON LABORATORIES

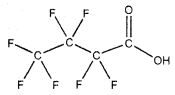
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA1022

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: $C_4HF_7O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 214.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2022
EXPIRY DATE: (mm/dd/yyyy) 10/18/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/03/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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QUALITY MANAGEMENT:

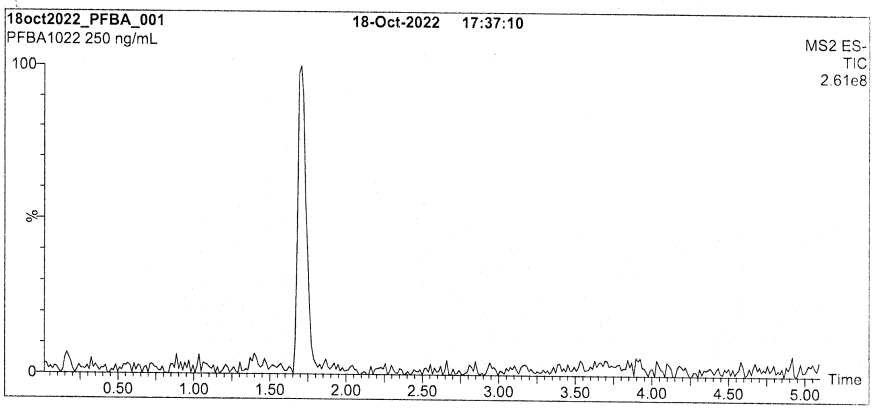
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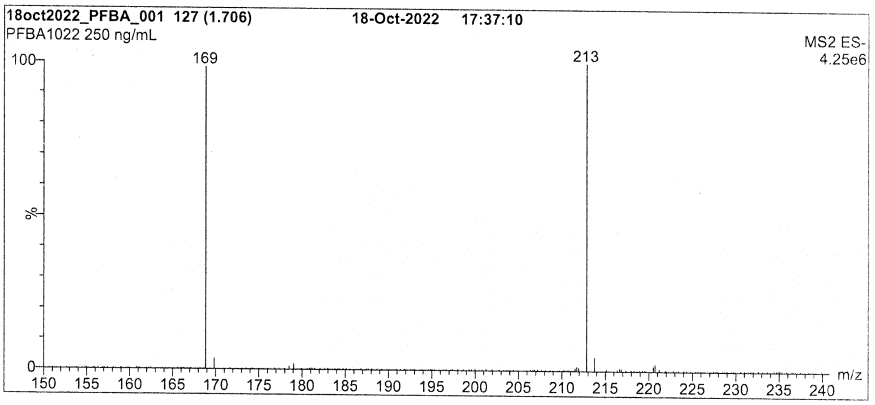
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFBA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

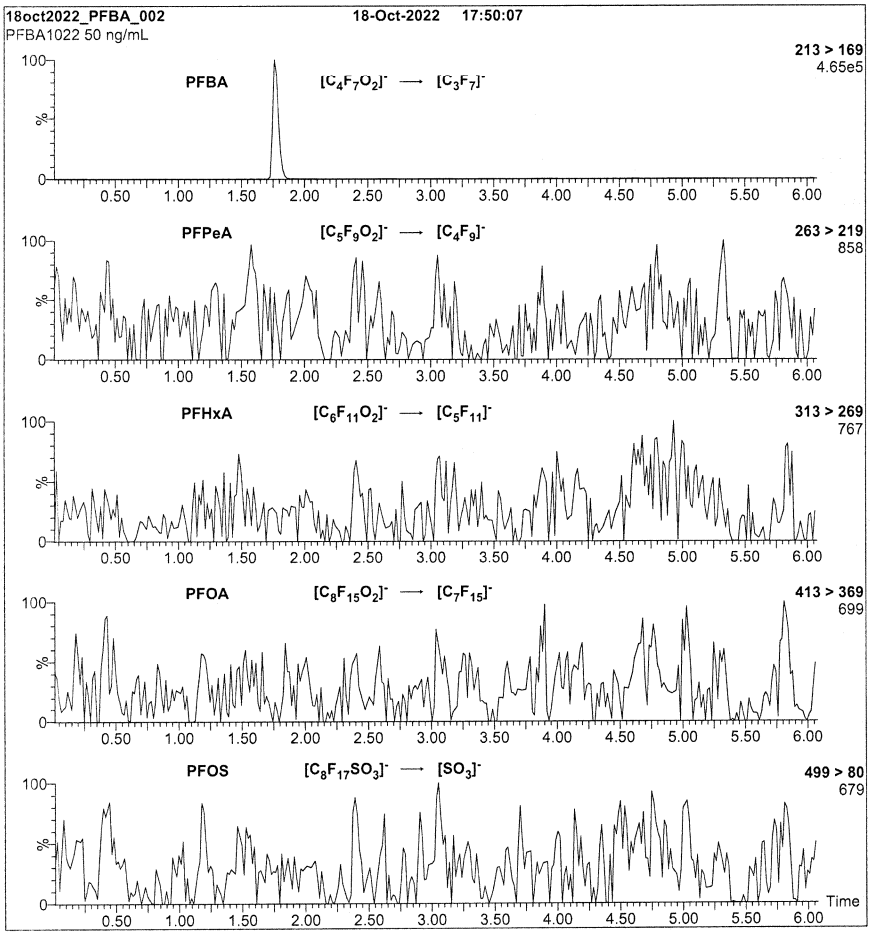
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFBA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 8

Reagent

PFBS_00001

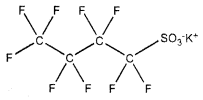
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFBS
COMPOUND: Potassium perfluoro-1-butanesulfonate
LOT NUMBER: LPFBS1022

STRUCTURE:

CAS #: 29420-49-3



MOLECULAR FORMULA:	$C_4F_9SO_3K$	**MOLECULAR WEIGHT:**	338.19
CONCENTRATION:	50.0 ± 2.5 µg/mL (K salt) 44.4 ± 2.2 µg/mL (PFBS acid) 44.2 ± 2.2 µg/mL (PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	10/04/2022		
EXPIRY DATE: (mm/dd/yyyy)	10/04/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/14/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

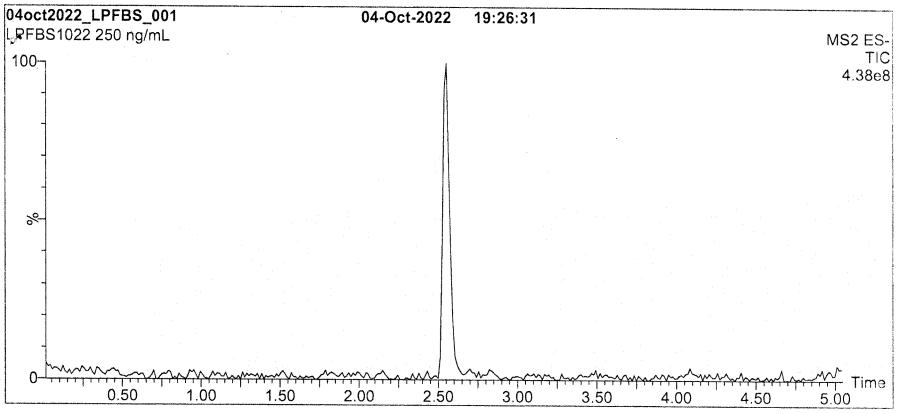
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

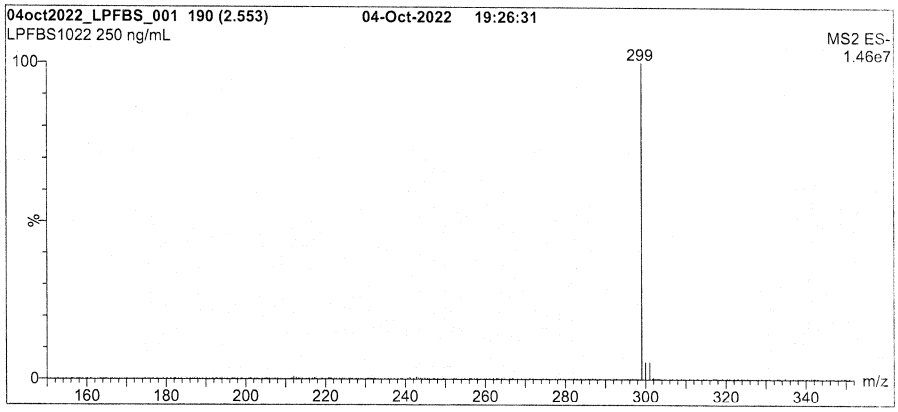
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **L-PFBS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions over 0.75 min.
Time: 12 min

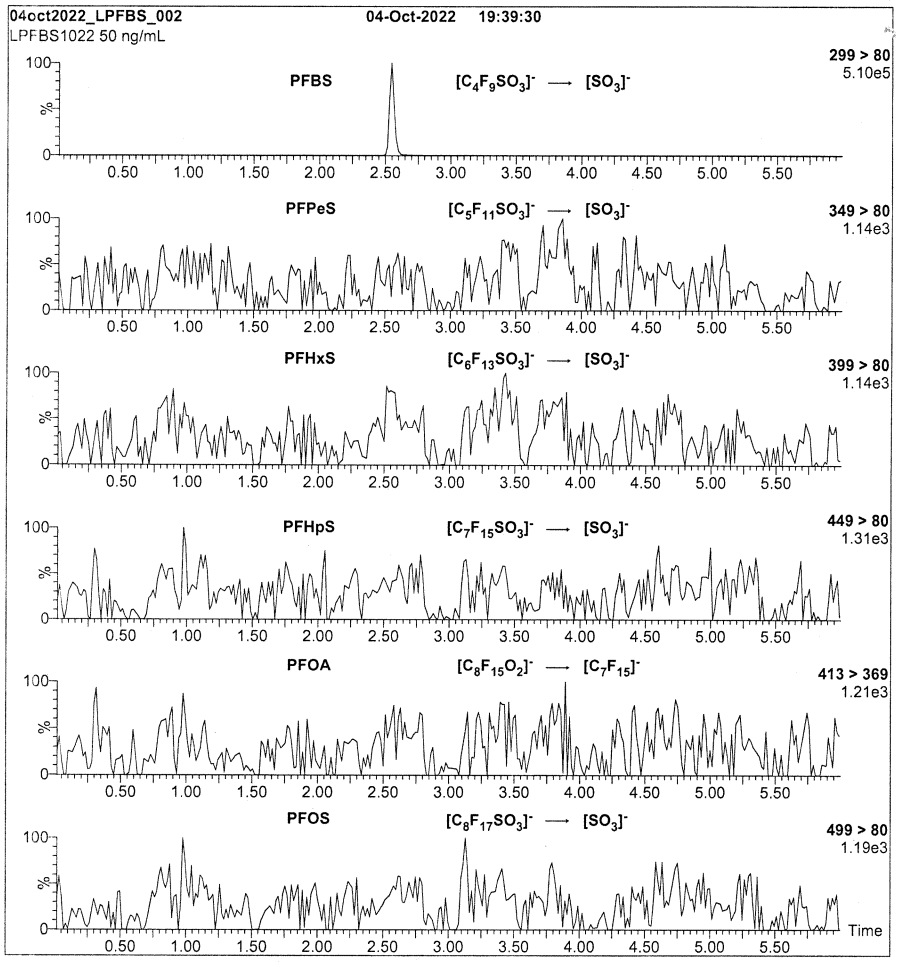
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **L-PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	On-column (L-PFBS)
Mobile phase:	Same as Figure 1
Flow:	300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 30

Reagent

PFBSA_00001

WELLINGTON LABORATORIES

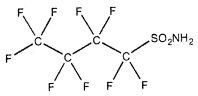
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: FBSA-I
COMPOUND: Perfluoro-1-butanesulfonamide

LOT NUMBER: FBSA0123I

CAS #: 30334-69-1

STRUCTURE:



MOLECULAR FORMULA:	$C_4H_2F_9NO_2S$	**MOLECULAR WEIGHT:**	299.11
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	02/01/2023		
EXPIRY DATE: (mm/dd/yyyy)	02/01/2028		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/02/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

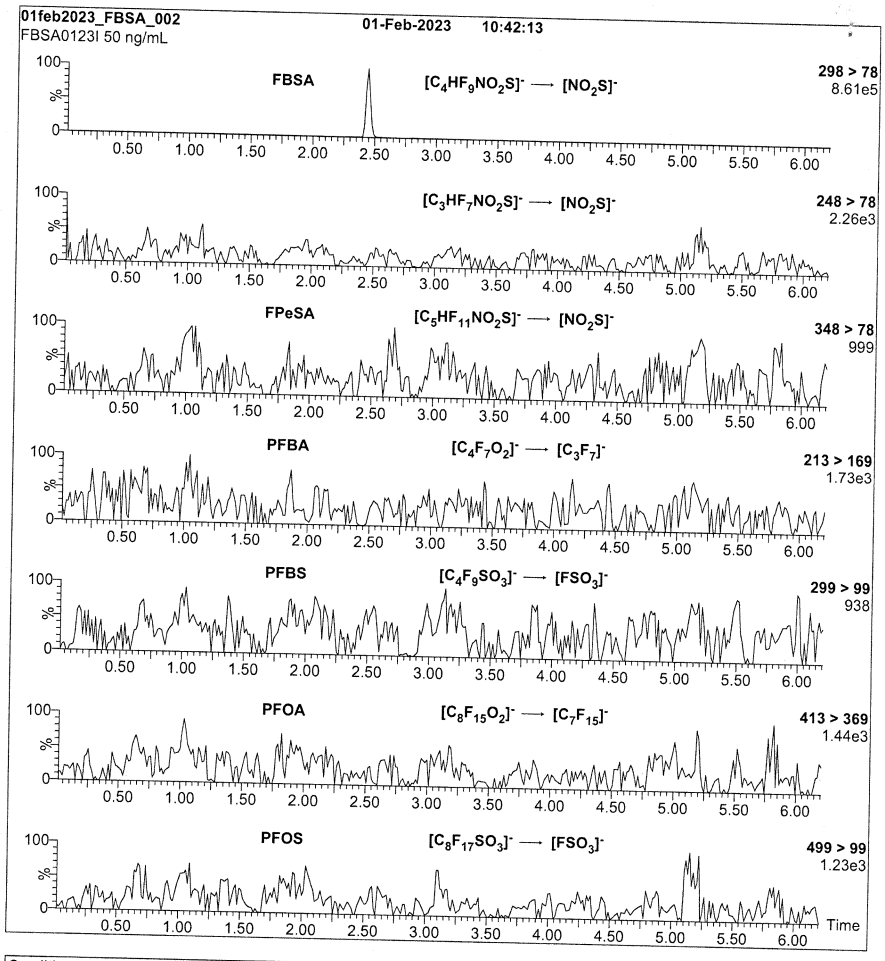
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **FBSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FBSA-I)

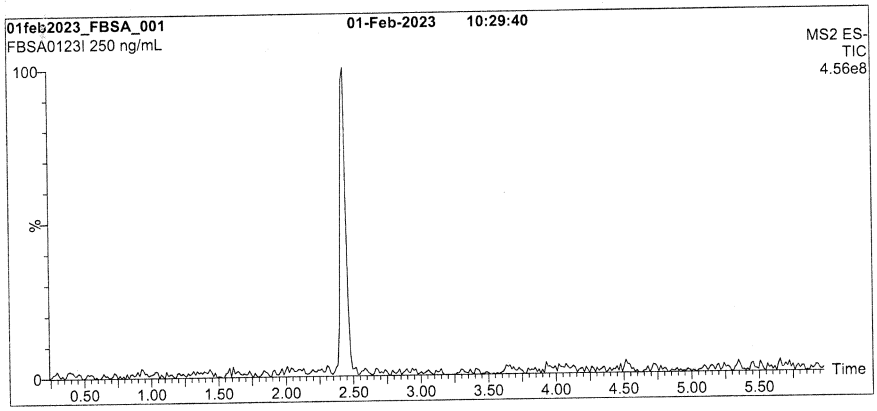
Mobile phase: Same as Figure 1

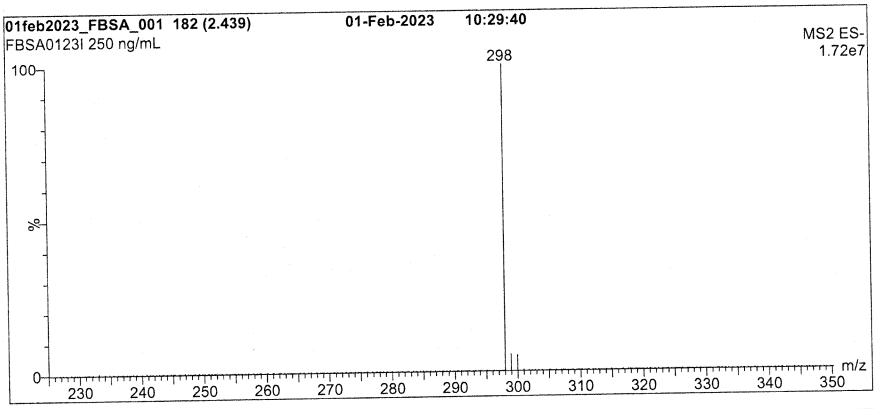
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 30

Figure 1: **FBSA-I; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

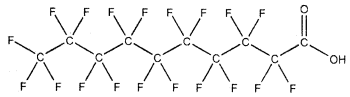
PFDA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDA
COMPOUND: Perfluoro-n-decanoic acid
LOT NUMBER: PFDA0822

STRUCTURE:
CAS #: 335-76-2



MOLECULAR FORMULA: $C_{10}HF_{19}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL
MOLECULAR WEIGHT: 514.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/22/2022
EXPIRY DATE: (mm/dd/yyyy) 08/22/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/31/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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HOMOGENEITY:

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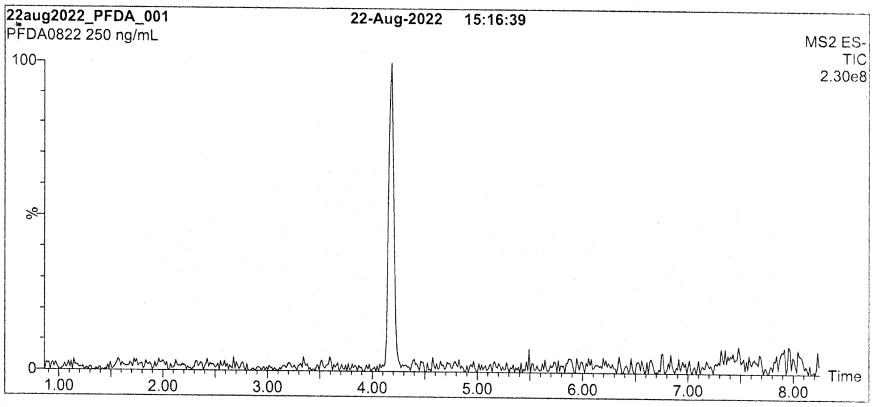
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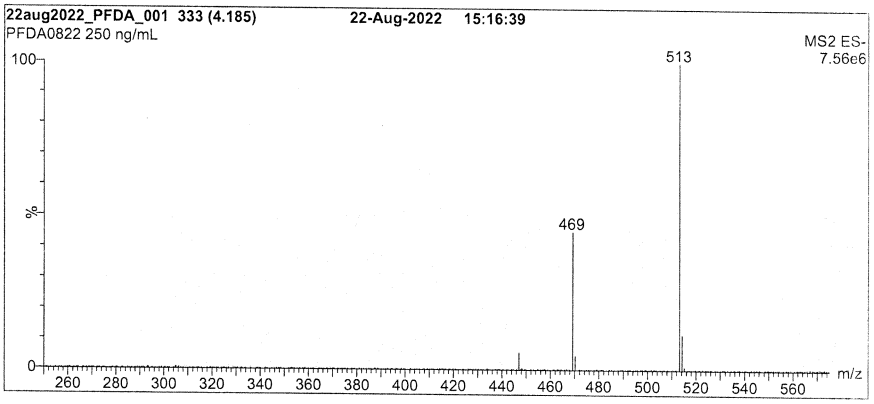
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFDA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

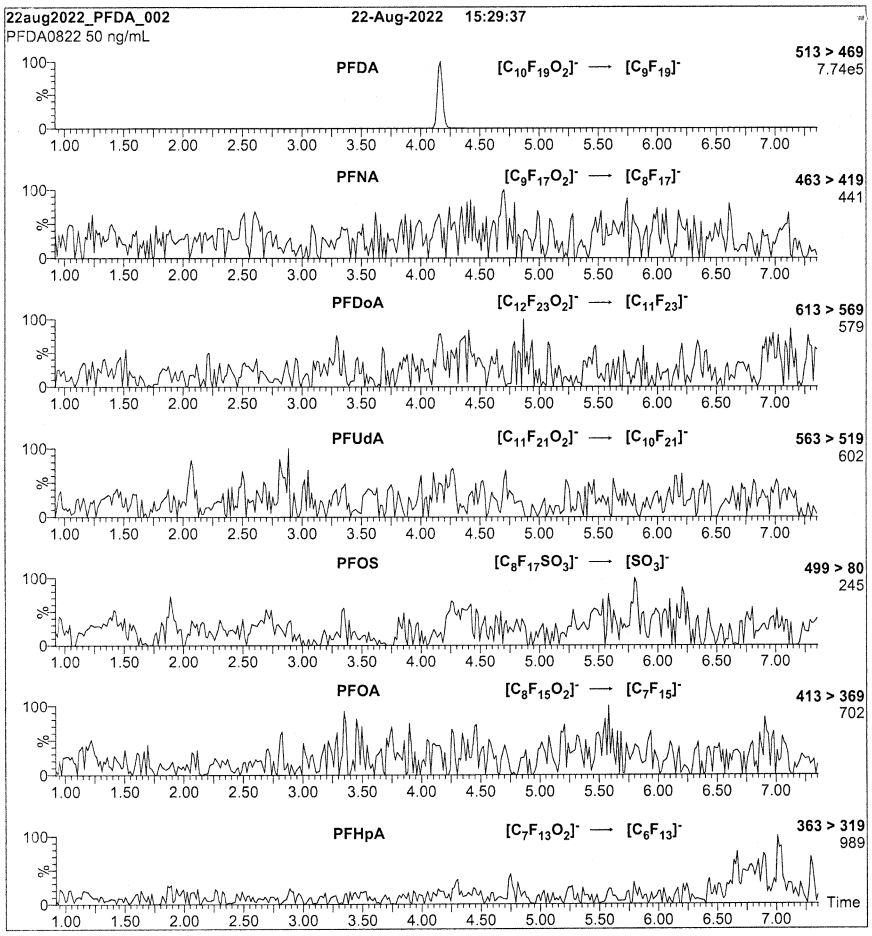
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFDA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 10

Reagent

PFDoA_00001

WELLINGTON LABORATORIES

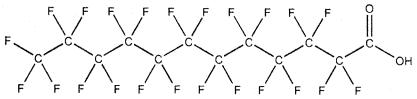
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDoA
COMPOUND: Perfluoro-n-dodecanoic acid

LOT NUMBER: PFDoA0722

STRUCTURE:

CAS #: 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 614.10
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/12/2022
EXPIRY DATE: (mm/dd/yyyy) 07/12/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ **Date:** 08/11/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

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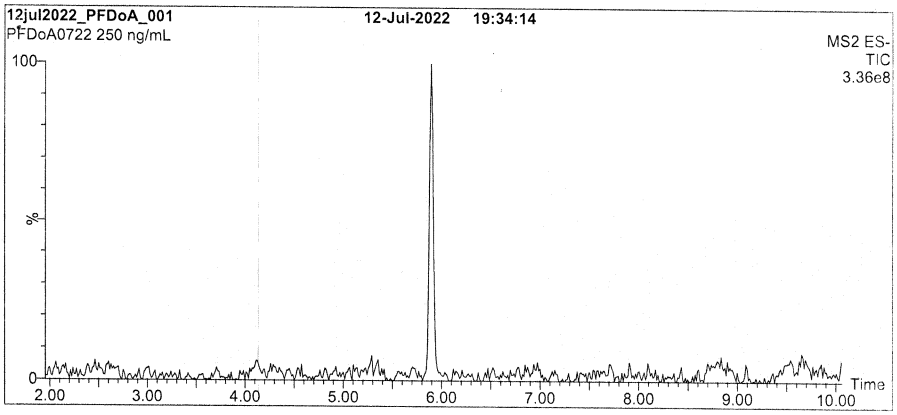
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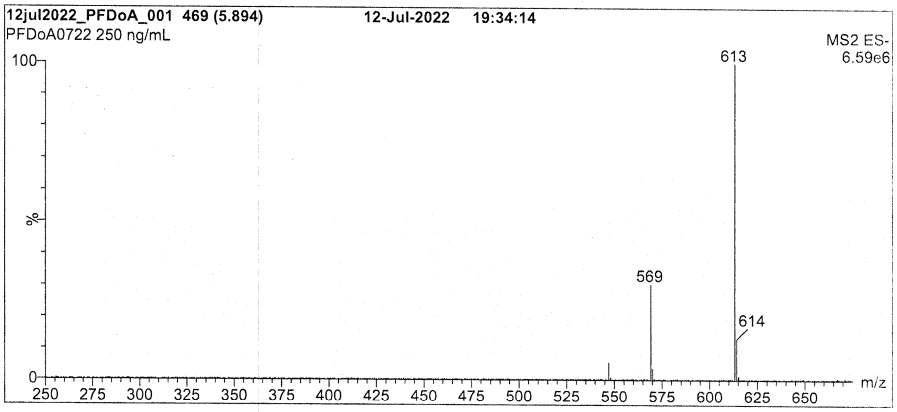
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFDoA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

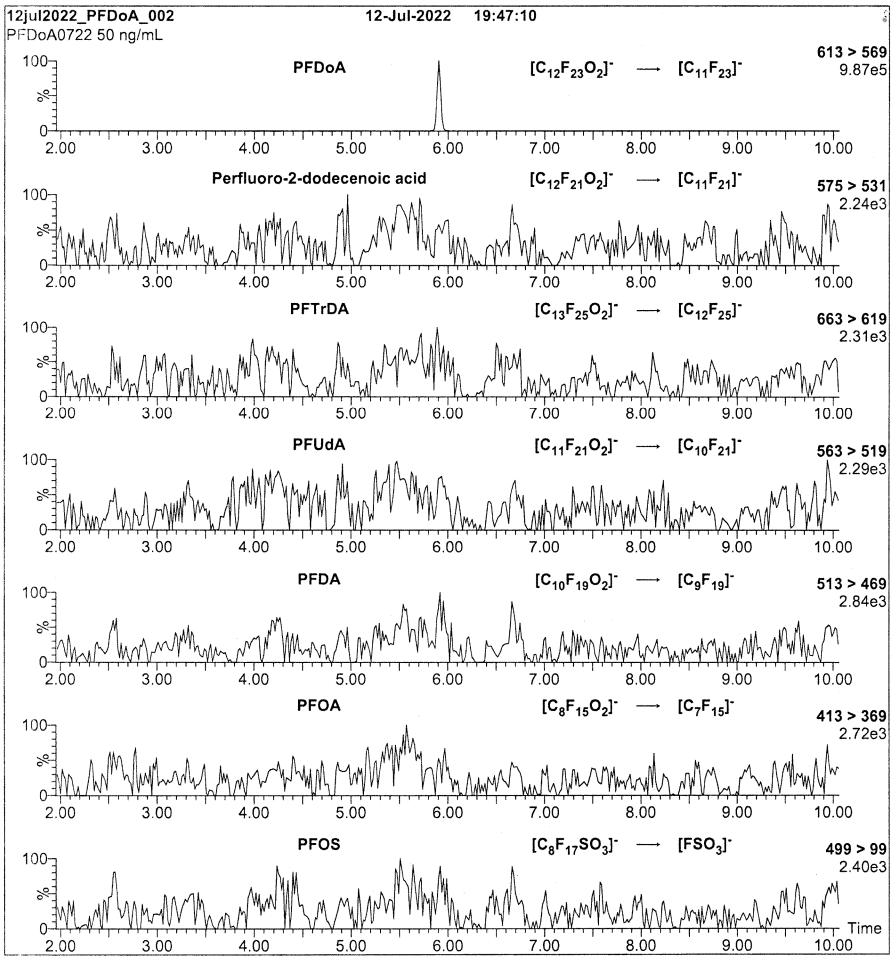
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFDoA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 12

Reagent

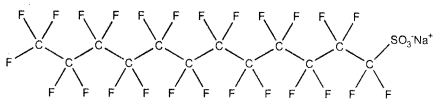
PFDoS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFDoS
COMPOUND: Sodium perfluoro-1-dodecanesulfonate
LOT NUMBER: LPFDoS1122

STRUCTURE:



CAS #: 1260224-54-1

MOLECULAR FORMULA:	$C_{12}F_{25}SO_3Na$	**MOLECULAR WEIGHT:**	722.14
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 48.5 ± 2.4 µg/mL (PFDoS acid) 48.4 ± 2.4 µg/mL (PFDoS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/21/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/21/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2 \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

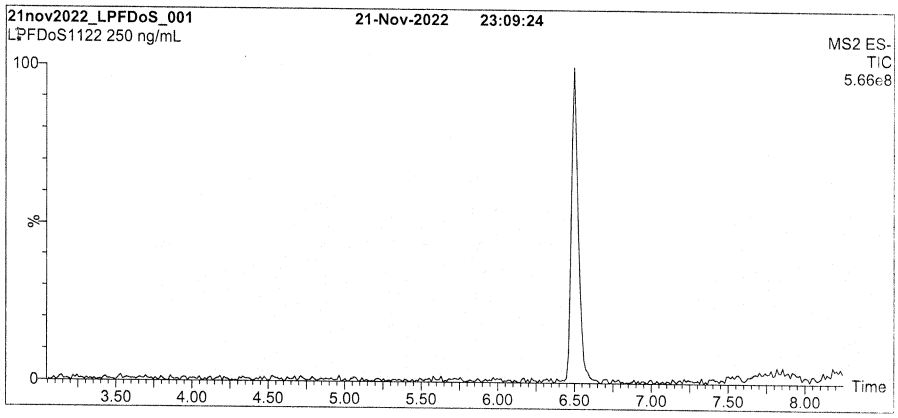
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

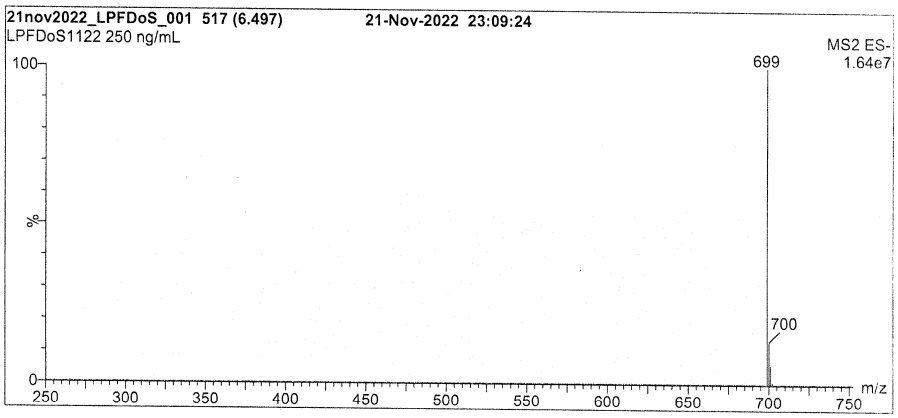
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **L-PFDoS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

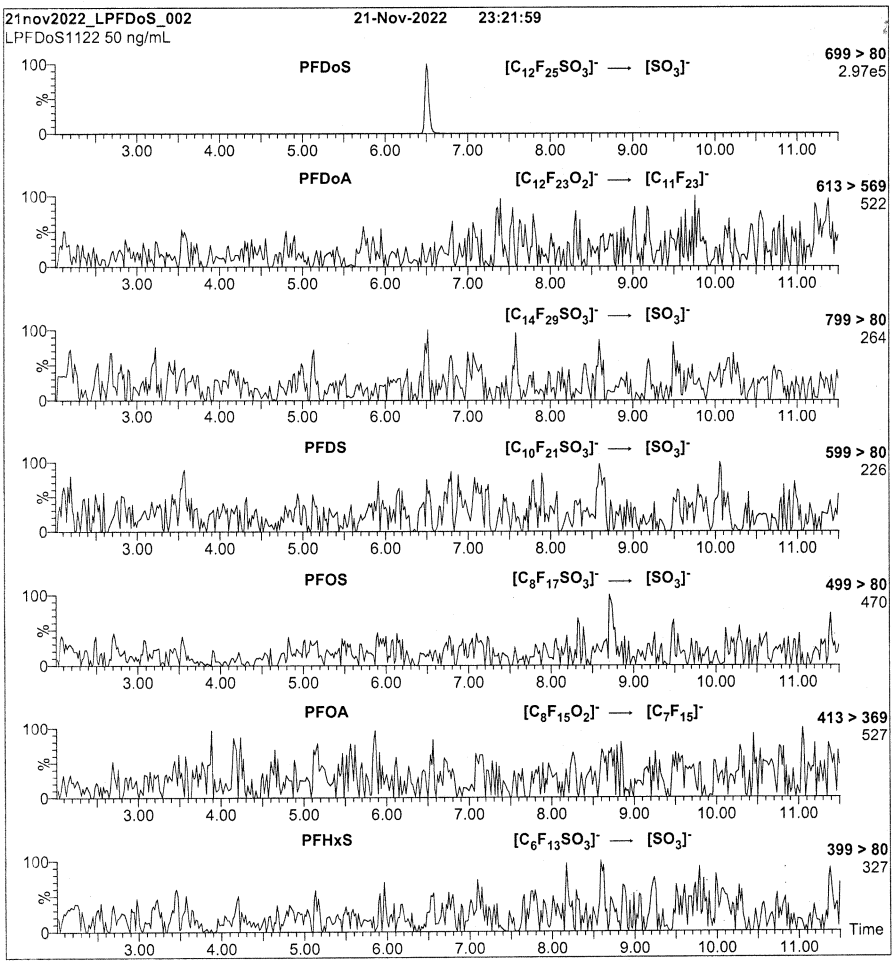
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **L-PFDoS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFDoS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.89e-3
Collision Energy (eV) = 60

Reagent

PFDS_00001

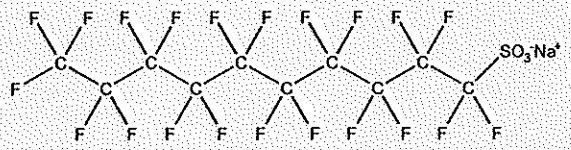
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS **LOT NUMBER:** LPFDS1122

COMPOUND: Sodium perfluoro-1-decanesulfonate

STRUCTURE: **CAS #:** 2806-15-7



MOLECULAR FORMULA:	$C_{10}F_{21}SO_3Na$	**MOLECULAR WEIGHT:**	622.13
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S):**	Methanol
	48.2 ± 2.4 µg/mL (PFDS acid)		
	48.2 ± 2.4 µg/mL (PFDS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/10/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/10/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.3% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/17/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

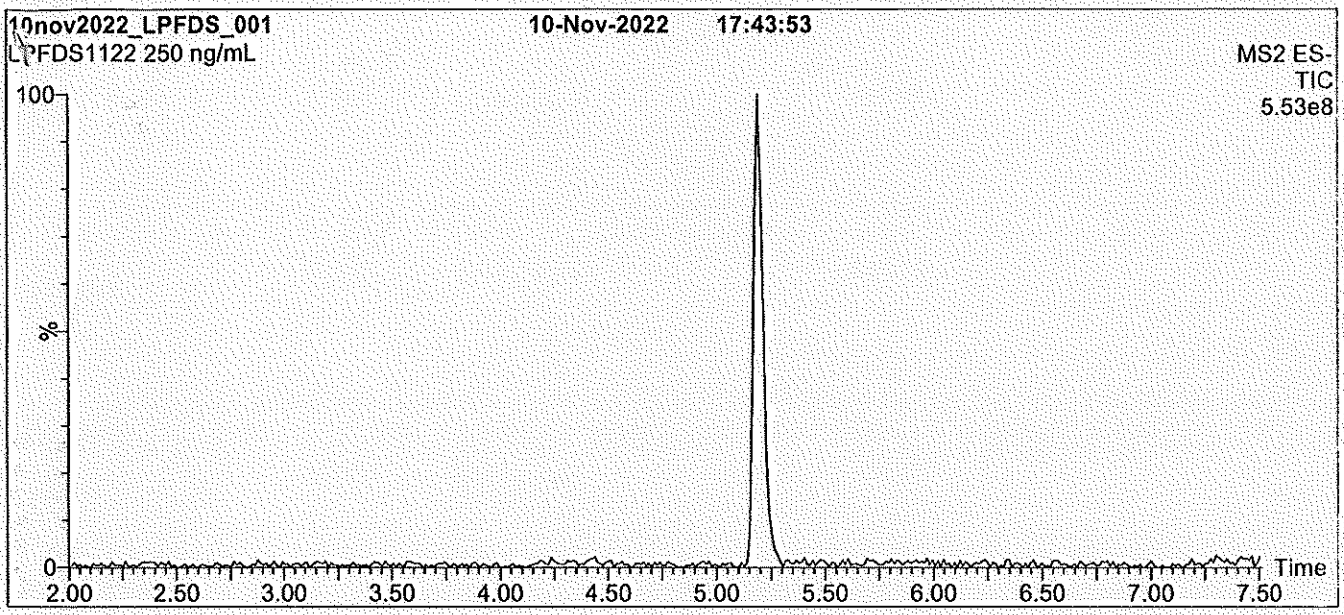
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

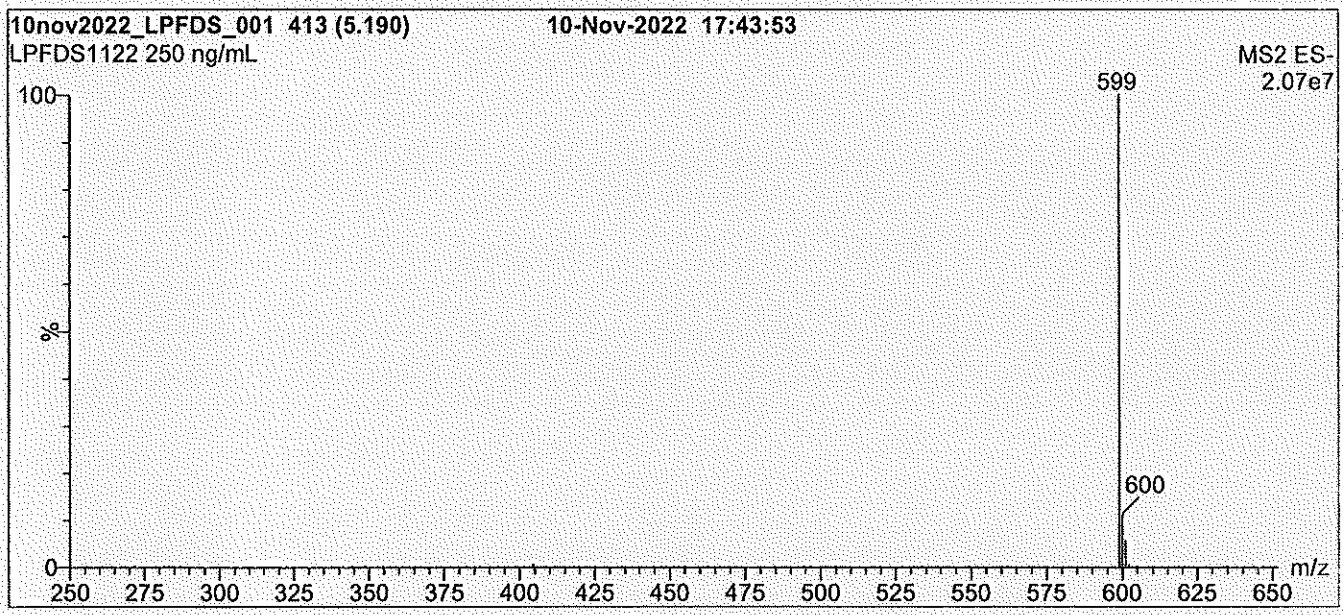
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **L-PFDS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

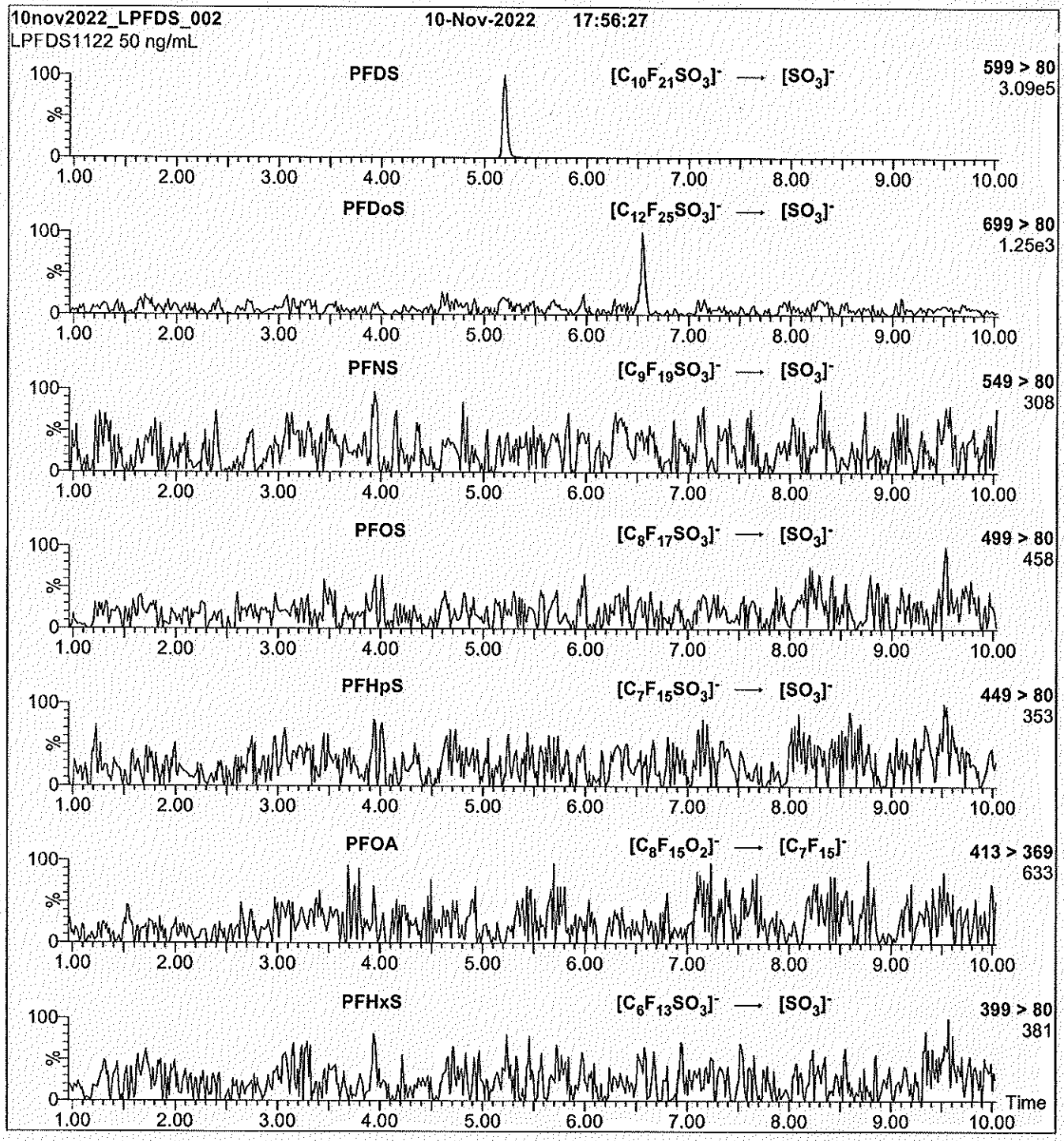
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **L-PFDS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFDS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.00e-3
Collision Energy (eV) = 56

Reagent

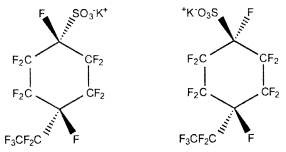
PFECHS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFECHS **LOT NUMBER:** PFECHS0223
COMPOUND: Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

STRUCTURE: **CAS #:** 335-24-0



cis-isomer *trans*-isomer

MOLECULAR FORMULA:	$C_8F_{15}SO_3K$	**MOLECULAR WEIGHT:**	500.22
CONCENTRATION:	50.0 ± 2.5 µg/mL (K salt) 46.2 ± 2.3 µg/mL (PFECHS acid) 46.1 ± 2.3 µg/mL (PFECHS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	03/14/2023		
EXPIRY DATE: (mm/dd/yyyy)	03/14/2028		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 1:1.27 (*cis*:*trans*, by ^{19}F NMR).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/16/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HANDLING:

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HOMOGENEITY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

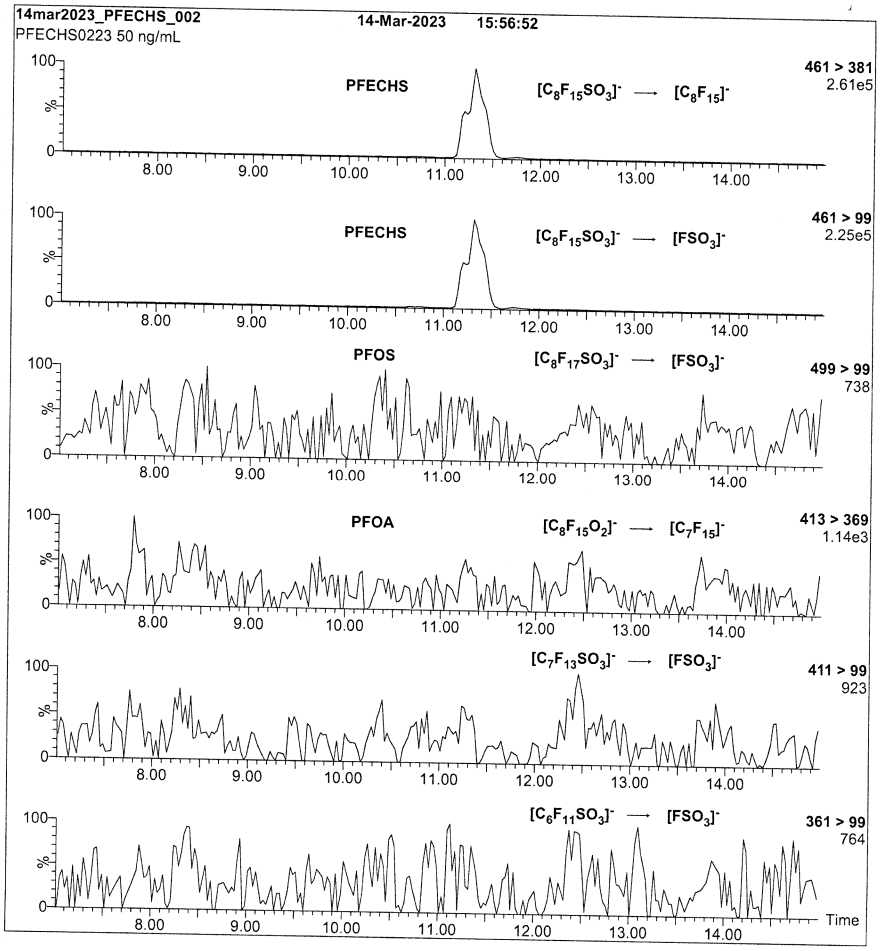
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **PFECHS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFECHS)

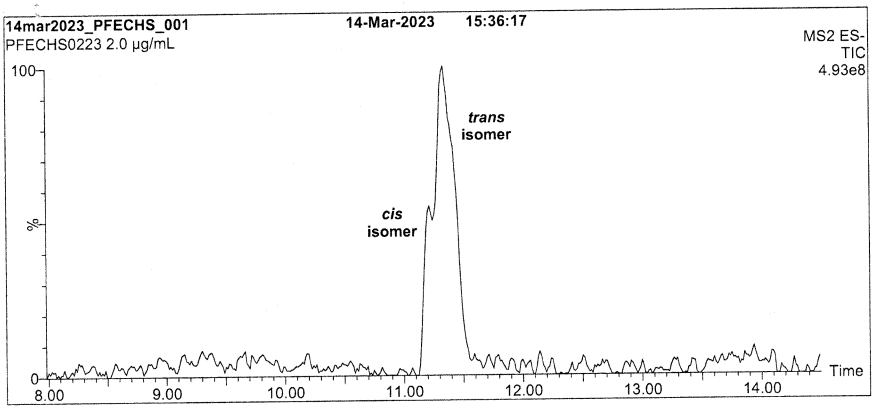
Mobile phase: Same as Figure 1

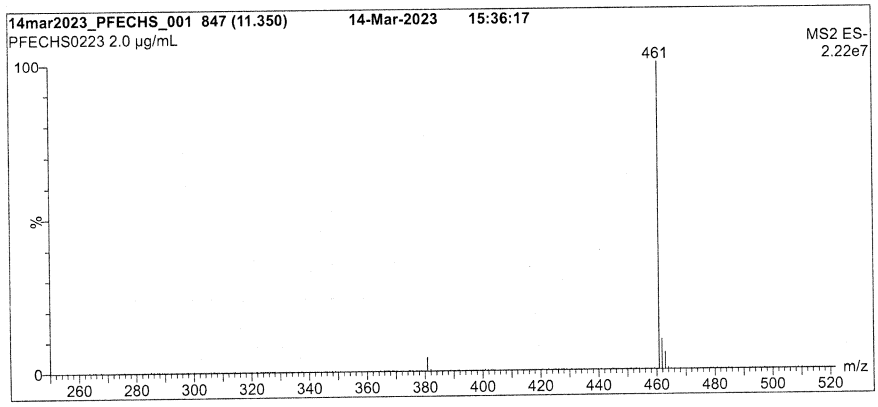
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.57e-3
Collision Energy (eV) = 24

Figure 1: **PFECHS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity CSH Fluoro-Phenyl
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 75% H_2O / 25% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 60% organic over 13 min, then ramp to 80% organic over 2 min and hold for 2 min before returning to initial conditions in 1 min.
Time: 20 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 45.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 750

Reagent

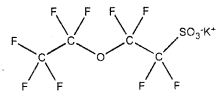
PFEESA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFEESA
LOT NUMBER: PFEESA1022
COMPOUND: Potassium perfluoro(2-ethoxyethane)sulfonate

STRUCTURE:



CAS #: 117205-07-9

MOLECULAR FORMULA:	$C_4F_9SO_4K$	**MOLECULAR WEIGHT:**	354.19
CONCENTRATION:	50.0 ± 2.5 µg/mL (K salt)	**SOLVENT(S):**	Methanol
	44.6 ± 2.2 µg/mL (PFEESA acid)		
	44.5 ± 2.2 µg/mL (PFEESA anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	01/20/2023		
EXPIRY DATE: (mm/dd/yyyy)	01/20/2028		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.2% of perfluoro-n-octanoic acid (PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/31/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c\left(y(x_1, x_2, \ldots x_n)\right) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

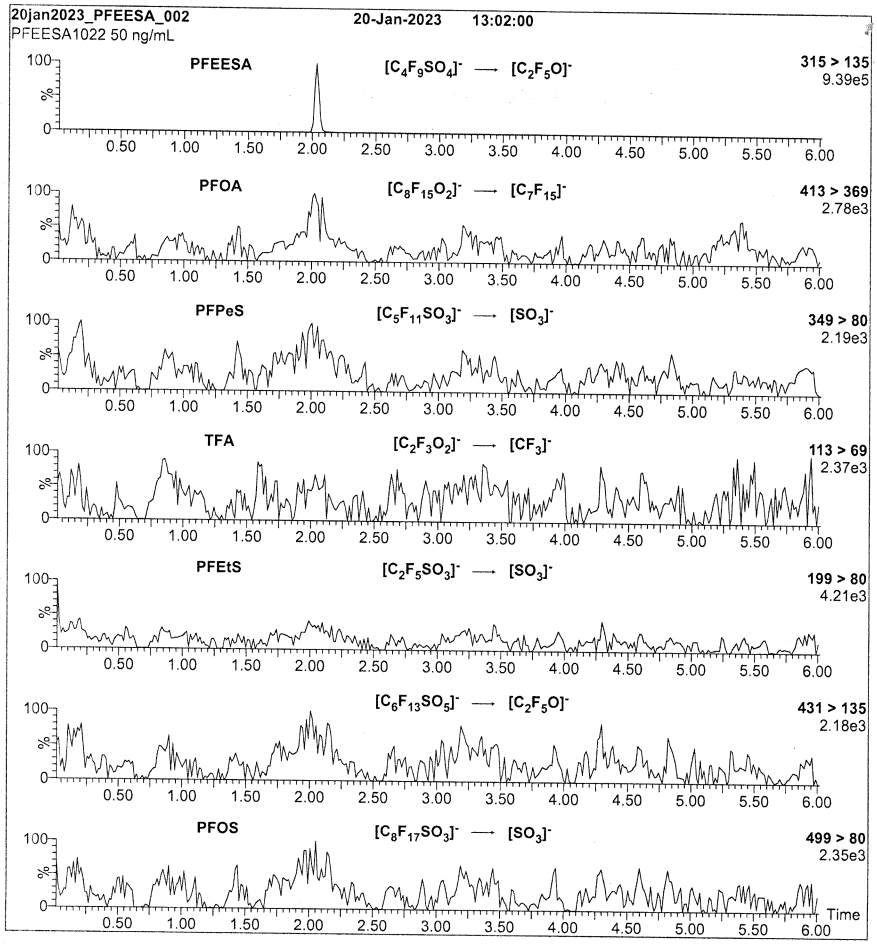
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **PFEESA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFEESA)

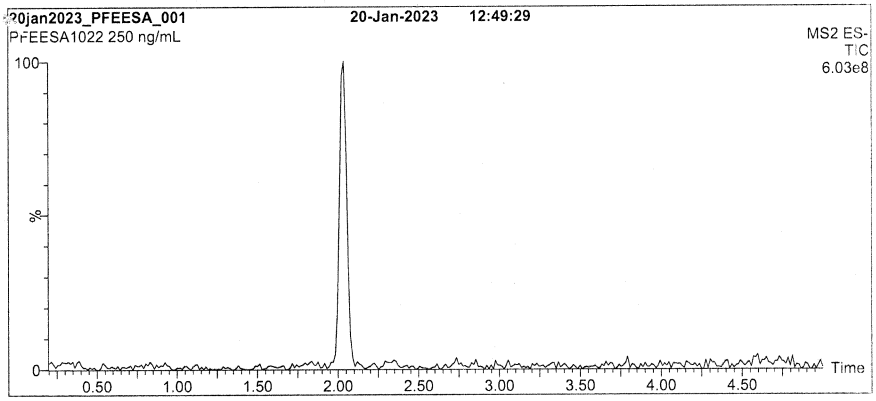
Mobile phase: Same as Figure 1

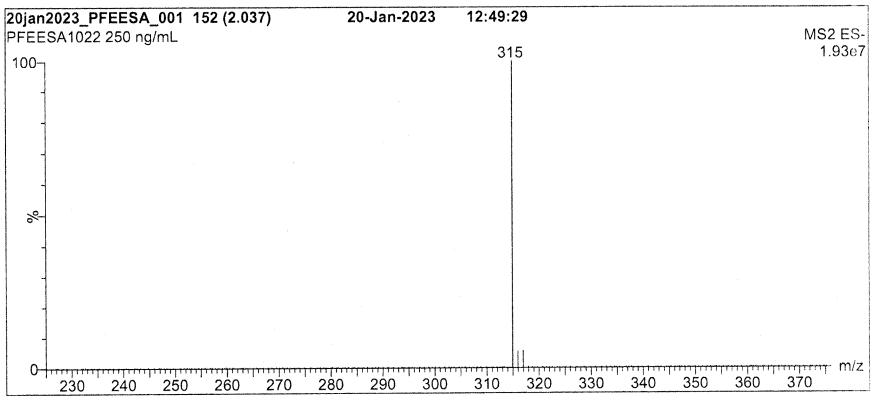
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.69e-3
Collision Energy (eV) = 22

Figure 1: **PFEESA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 38.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

PFHpA_00001

WELLINGTON LABORATORIES

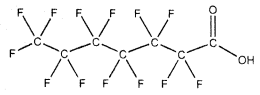
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1122

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 364.06
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/10/2022
EXPIRY DATE: (mm/dd/yyyy) 11/10/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/22/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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Revision#:9, Revised 2020-12-23

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

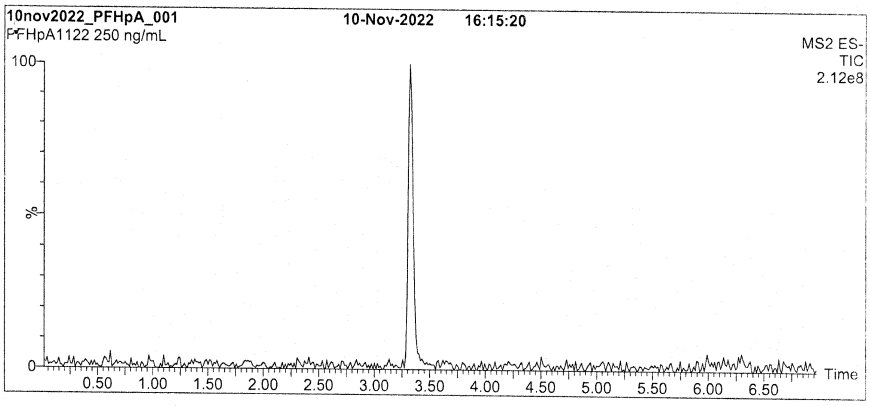
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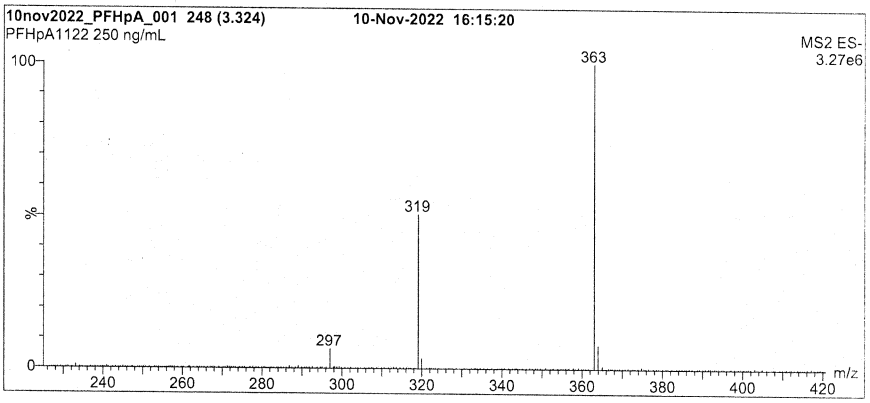
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFHpA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

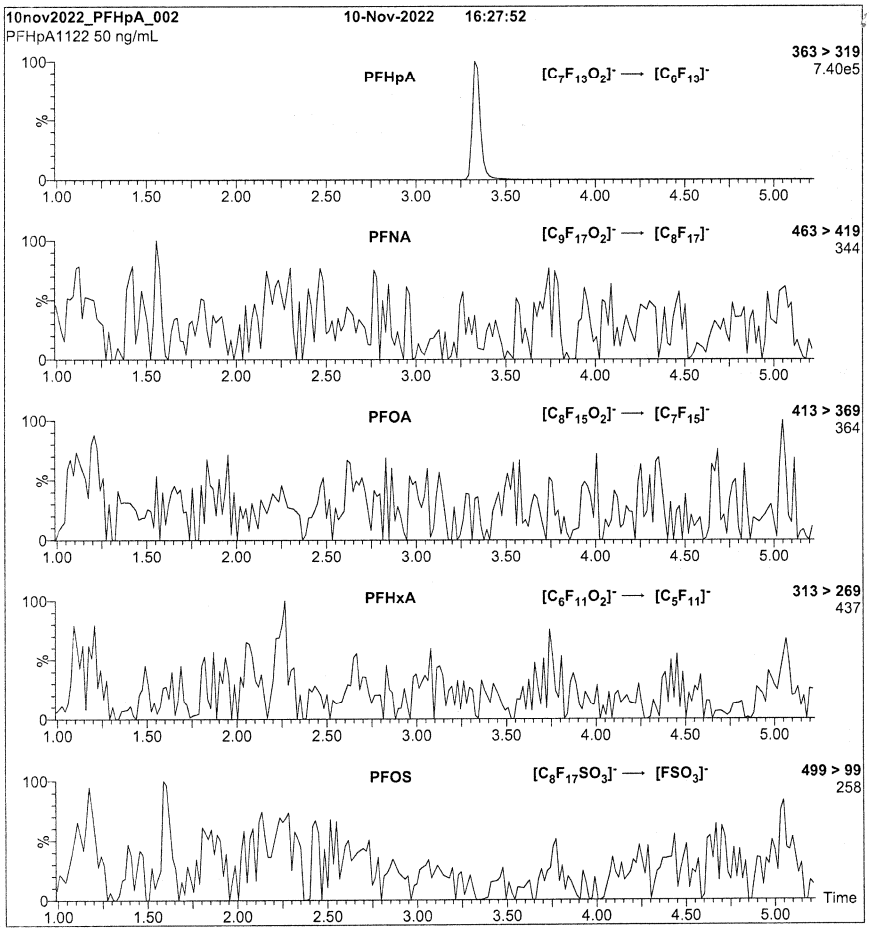
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHpA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.00e-3
Collision Energy (eV) = 8

Reagent

PFHpS_00001

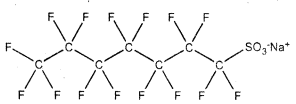
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFHpS
COMPOUND: Sodium perfluoro-1-heptanesulfonate
LOT NUMBER: LPFHpS0822

STRUCTURE:

CAS #: 21934-50-9



MOLECULAR FORMULA: $C_7F_{15}SO_3Na$
MOLECULAR WEIGHT: 472.10
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
47.7 ± 2.4 µg/mL (PFHpS acid)
47.6 ± 2.4 µg/mL (PFHpS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/22/2022
EXPIRY DATE: (mm/dd/yyyy) 08/22/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/31/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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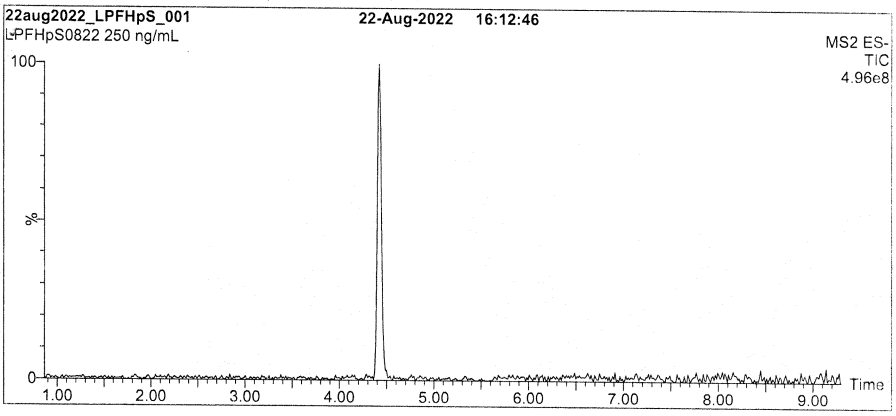
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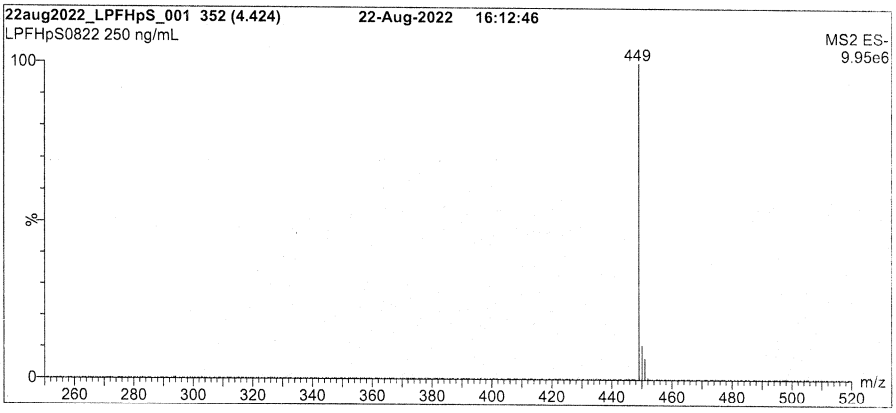
CALA Testing Accreditation No. A1226

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Figure 1: **L-PFHpS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

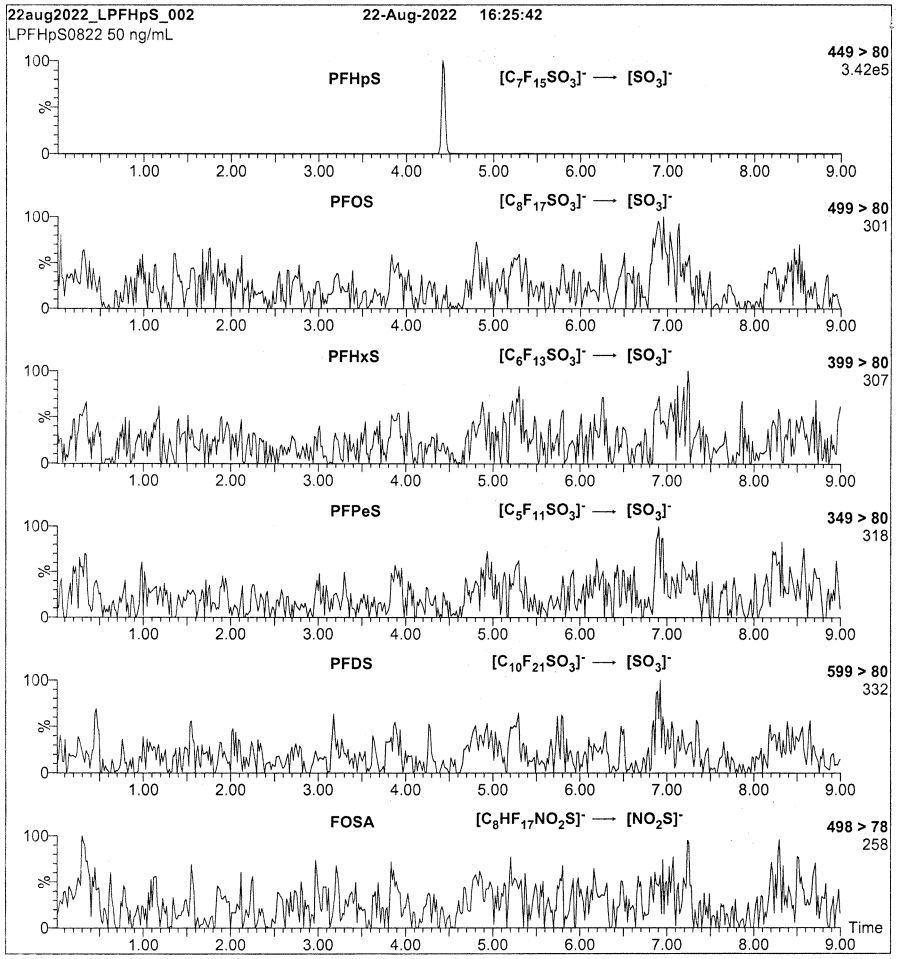
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **L-PFHpS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	On-column (L-PFHpS)	**MS Parameters:**	
Mobile phase:	Same as Figure 1	Collision Gas (mbar) = 3.24e-3 Collision Energy (eV) = 42	
Flow:	300 µL/min		

Reagent

PFHxA_00001

WELLINGTON LABORATORIES

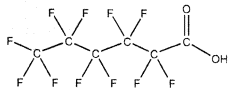
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxA
COMPOUND: Perfluoro-n-hexanoic acid

LOT NUMBER: PFHxA0922

STRUCTURE:

CAS #: 307-24-4



MOLECULAR FORMULA: $C_6HF_{11}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 314.05
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/15/2022
EXPIRY DATE: (mm/dd/yyyy) 09/15/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/30/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

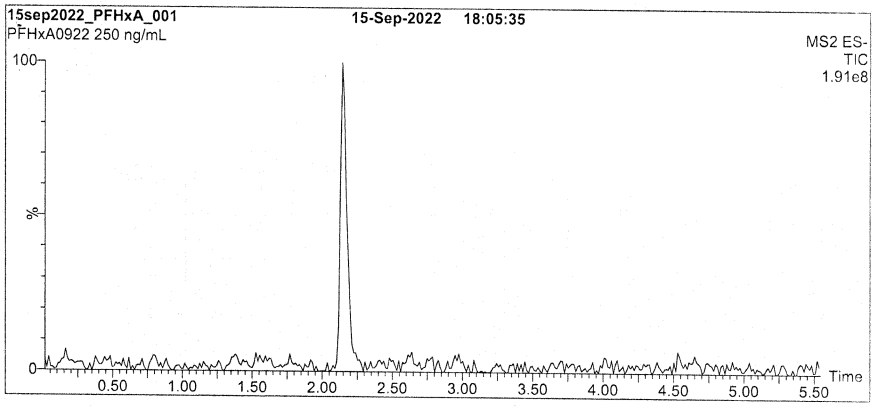
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

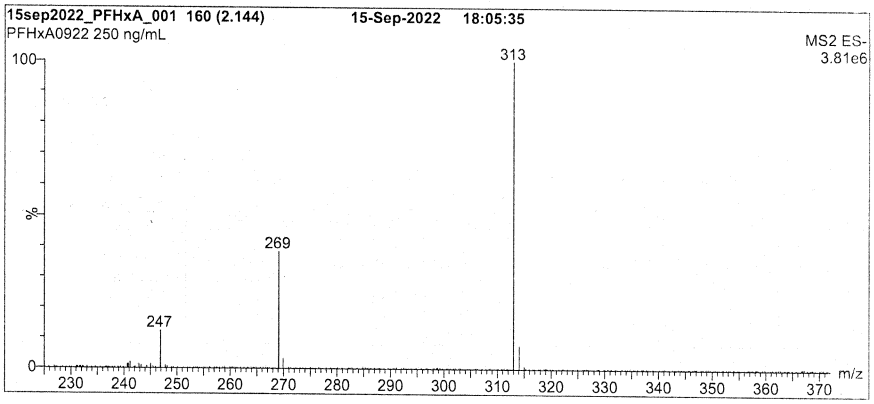
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFHxA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

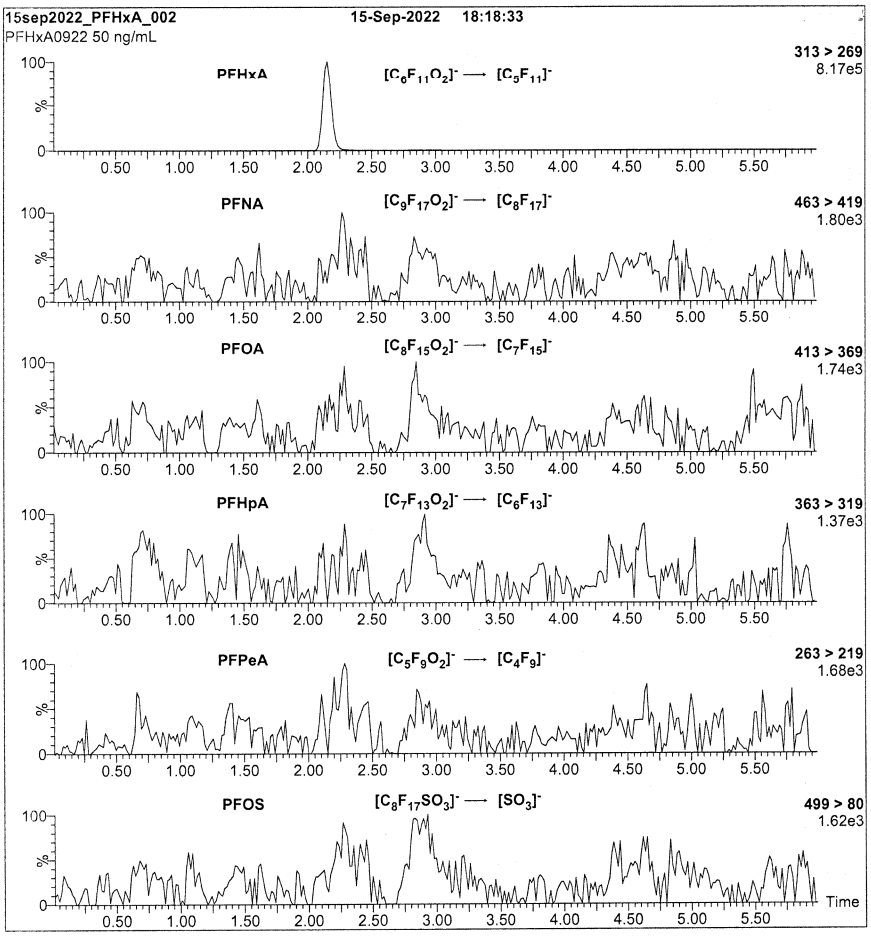
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHxA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 8

Reagent

PFHxS_00001

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0822
CONCENTRATION:	50.0 ± 2.5 µg/mL (total potassium salt) 45.6 ± 2.3 µg/mL (total PFHxS acid) 45.5 ± 2.3 µg/mL (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	08/18/2022
LAST TESTED: (mm/dd/yyyy)	08/24/2022
EXPIRY DATE: (mm/dd/yyyy)	08/24/2027
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.3% of perfluoro-n-hexanoic acid and ~0.3% of perfluoro-1-pentanesulfonate.
- CAS #: 3871-99-6 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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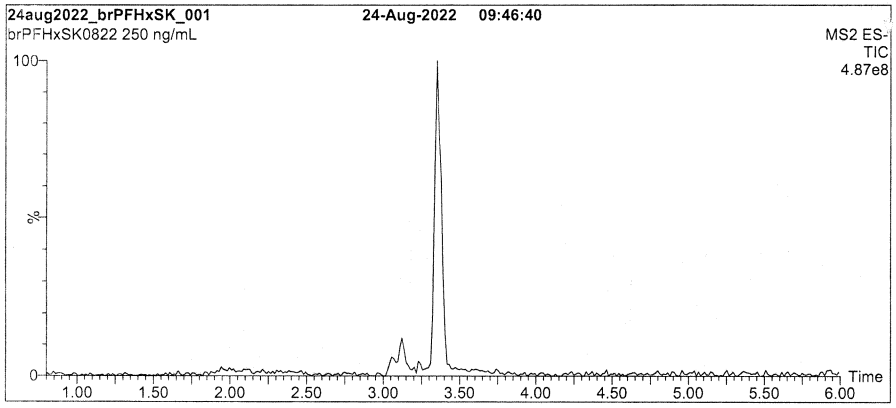
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

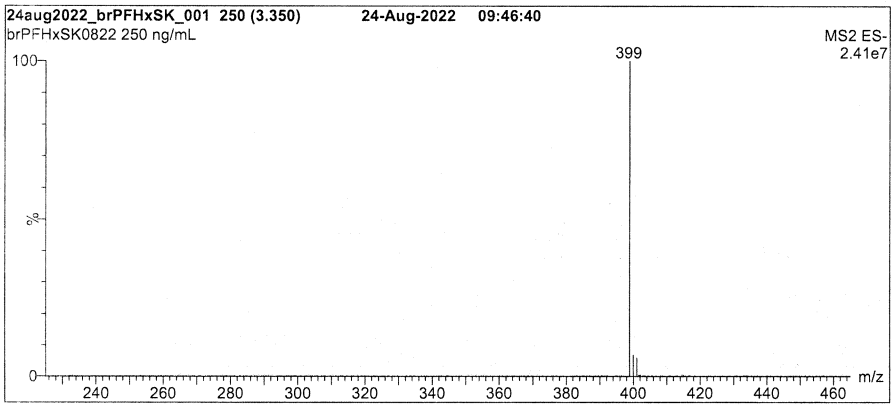
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium perfluoro-1-methyl-1-pentanesulfonate**	$CF_3CF_2CF_2CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FSO_3^-K^+$	2.9
3	Potassium perfluoro-2-methyl-1-pentanesulfonate	$CF_3CF_2CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2SO_3^-K^+$	1.4
4	Potassium perfluoro-3-methyl-1-pentanesulfonate	$CF_3CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2CF_2SO_3^-K^+$	5.0
5	Potassium perfluoro-4-methyl-1-pentanesulfonate	$CF_3\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium perfluoro-3,3-dimethyl-1-butanesulfonate	$CF_3\underset{\displaystyle CF_3}{\underset{\vert}{\overset{\displaystyle CF_3}{\overset{\vert}{C}}}}CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluoro-2-hexanesulfonate.

Certified By: _____ **Date:** 09/16/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **br-PFHxSK; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

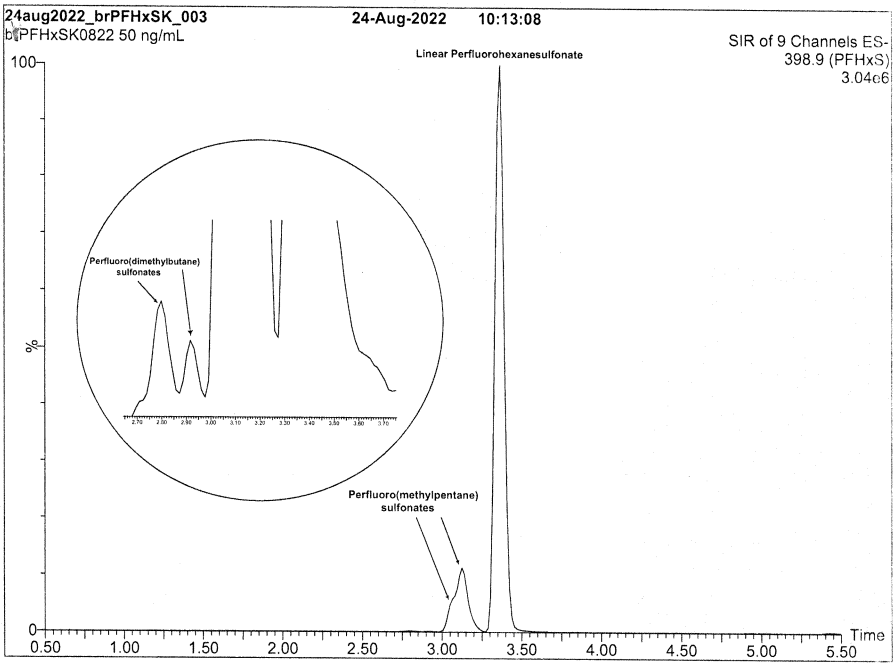
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **br-PFHxSK; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

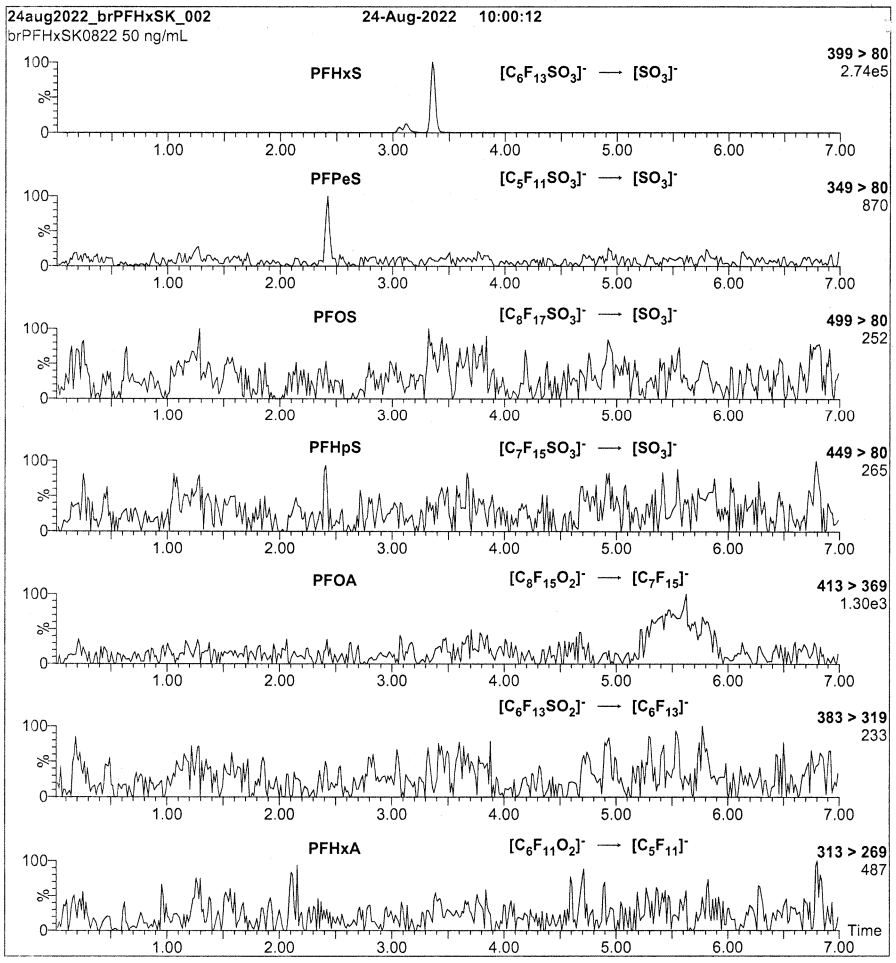
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-6)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFHxSK)

Mobile phase: Same as Figures 1 and 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.18e-3
Collision Energy (eV) = 42

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0822
CONCENTRATION:	50.0 ± 2.5 µg/mL (total potassium salt) 45.6 ± 2.3 µg/mL (total PFHxS acid) 45.5 ± 2.3 µg/mL (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	08/18/2022
LAST TESTED: (mm/dd/yyyy)	08/24/2022
EXPIRY DATE: (mm/dd/yyyy)	08/24/2027
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure, and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~0.3% of perfluoro-n-hexanoic acid and ~0.3% of perfluoro-1-pentanesulfonate.
- CAS #: 3871-99-6 (for linear isomer; potassium salt).

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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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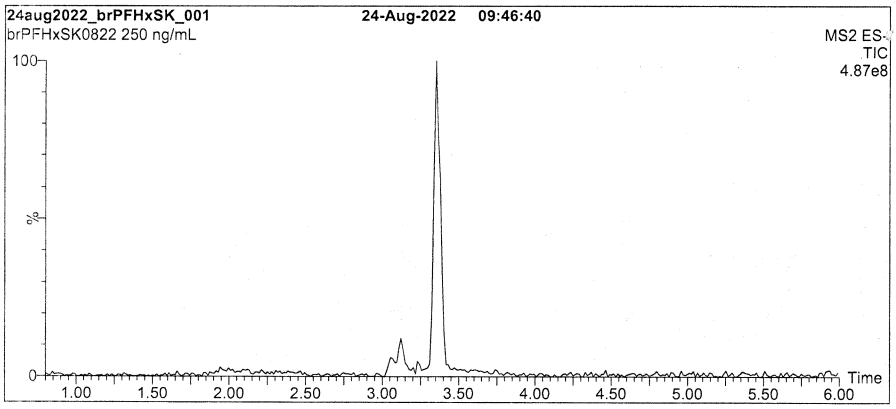
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

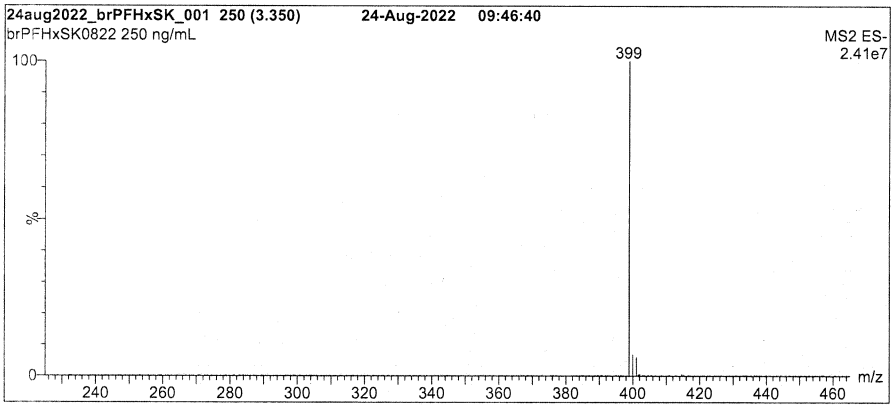
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium perfluoro-1-methyl-1-pentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium perfluoro-2-methyl-1-pentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium perfluoro-3-methyl-1-pentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0
5	Potassium perfluoro-4-methyl-1-pentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium perfluoro-3,3-dimethyl-1-butanesulfonate	$CF_3C(CF_3)_2CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluoro-2-hexanesulfonate.

Certified By: _____ **Date:** 09/16/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **br-PFHxSK; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

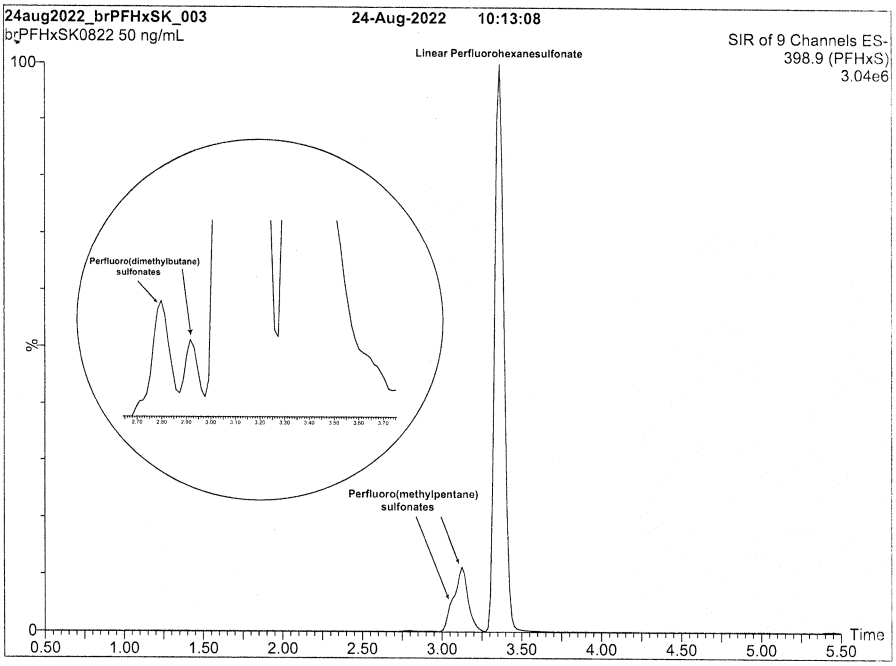
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **br-PFHxSK; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

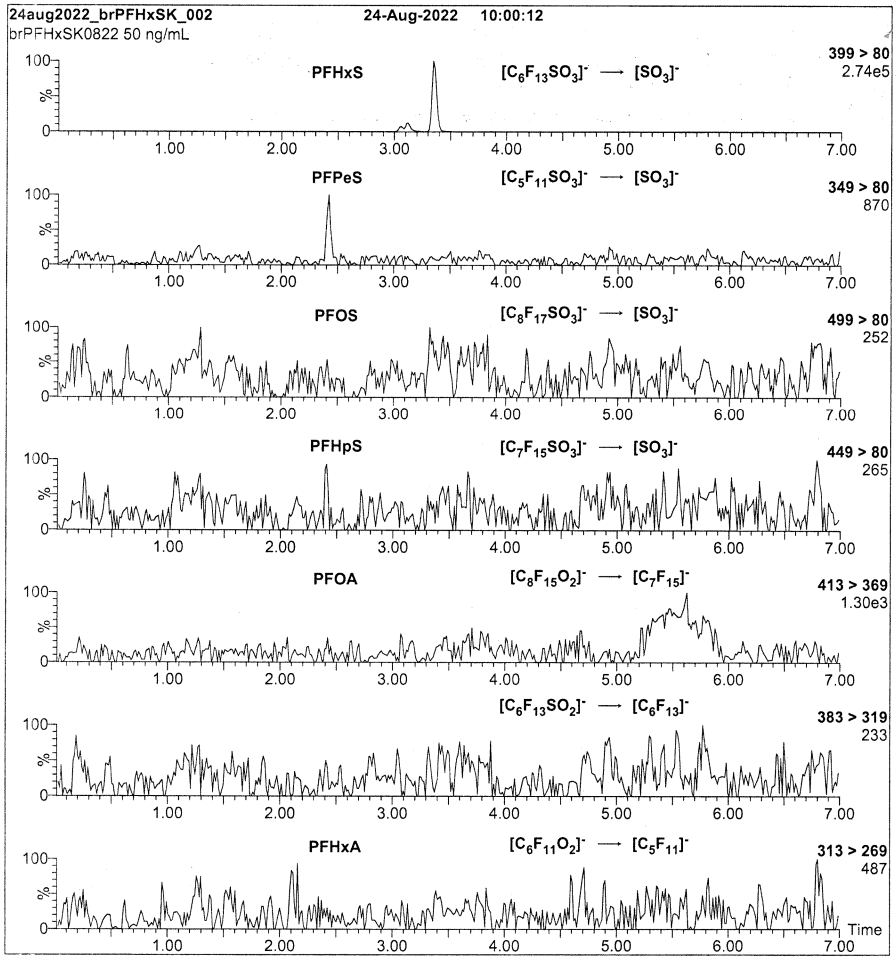
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-6)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFHxSK)

Mobile phase: Same as Figures 1 and 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.18e-3
Collision Energy (eV) = 42

Reagent

PFHxSA_00001

WELLINGTON LABORATORIES

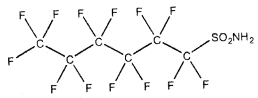
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: FHxSA-I
COMPOUND: Perfluoro-1-hexanesulfonamide

LOT NUMBER: FHxSA1122I

CAS #: 41997-13-1

STRUCTURE:



MOLECULAR FORMULA:	$C_6H_2F_{13}NO_2S$
CONCENTRATION:	50.0 ± 2.5 µg/mL
CHEMICAL PURITY:	>98%
LAST TESTED: (mm/dd/yyyy)	12/01/2022
EXPIRY DATE: (mm/dd/yyyy)	12/01/2027
RECOMMENDED STORAGE:	Refrigerate ampoule

MOLECULAR WEIGHT: 399.13
SOLVENT(S): Isopropanol

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/21/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

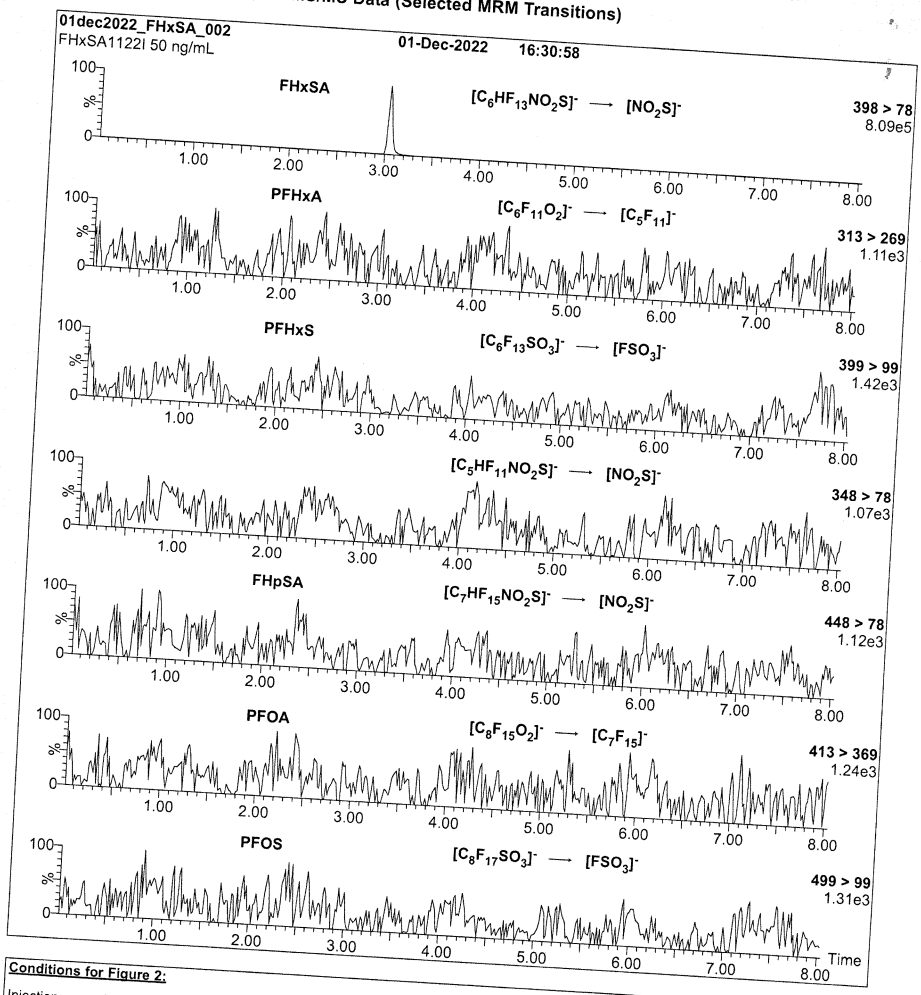
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **FHxSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FHxSA-I)

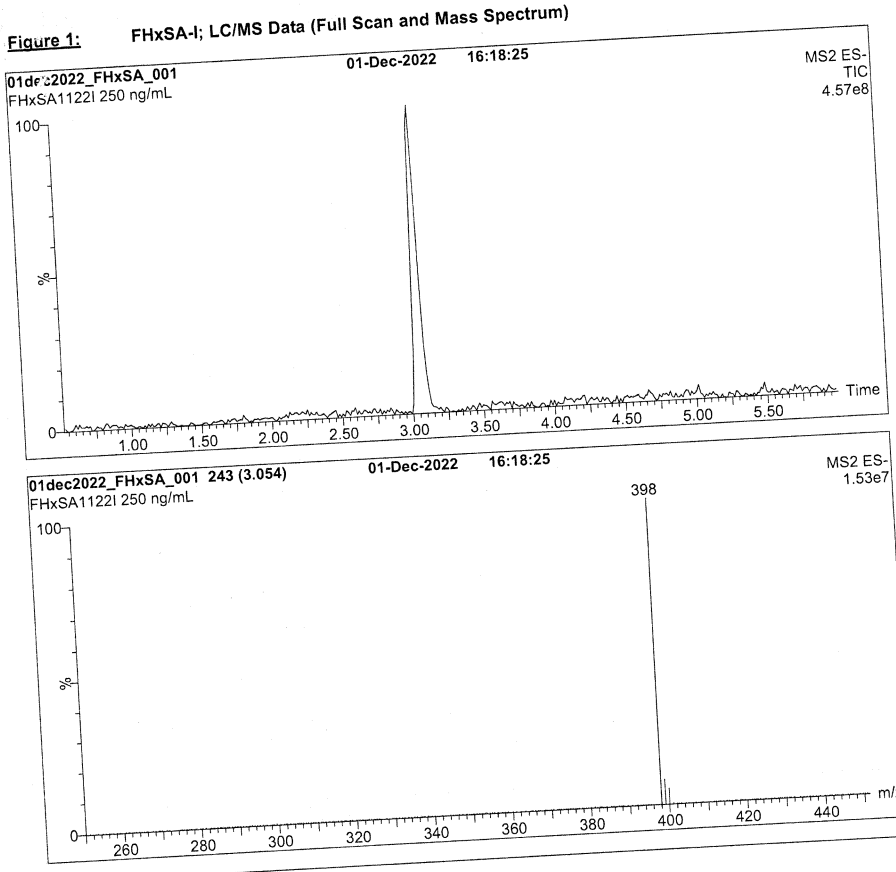
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.87e-3
Collision Energy (eV) = 28

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Figure 1: **FHxSA-I; LC/MS Data (Full Scan and Mass Spectrum)**



Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

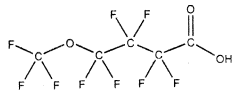
Reagent

PFMBA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PF5OHxA	**LOT NUMBER:**	PF5OHxA0722
COMPOUND:	Perfluoro-5-oxahexanoic acid		
SYNONYM:	Perfluoro-4-methoxybutanoic acid (PFMBA)		
STRUCTURE:		**CAS #:**	863090-89-5



MOLECULAR FORMULA:	$C_5HF_9O_3$	**MOLECULAR WEIGHT:**	280.05
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/02/2022		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/26/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

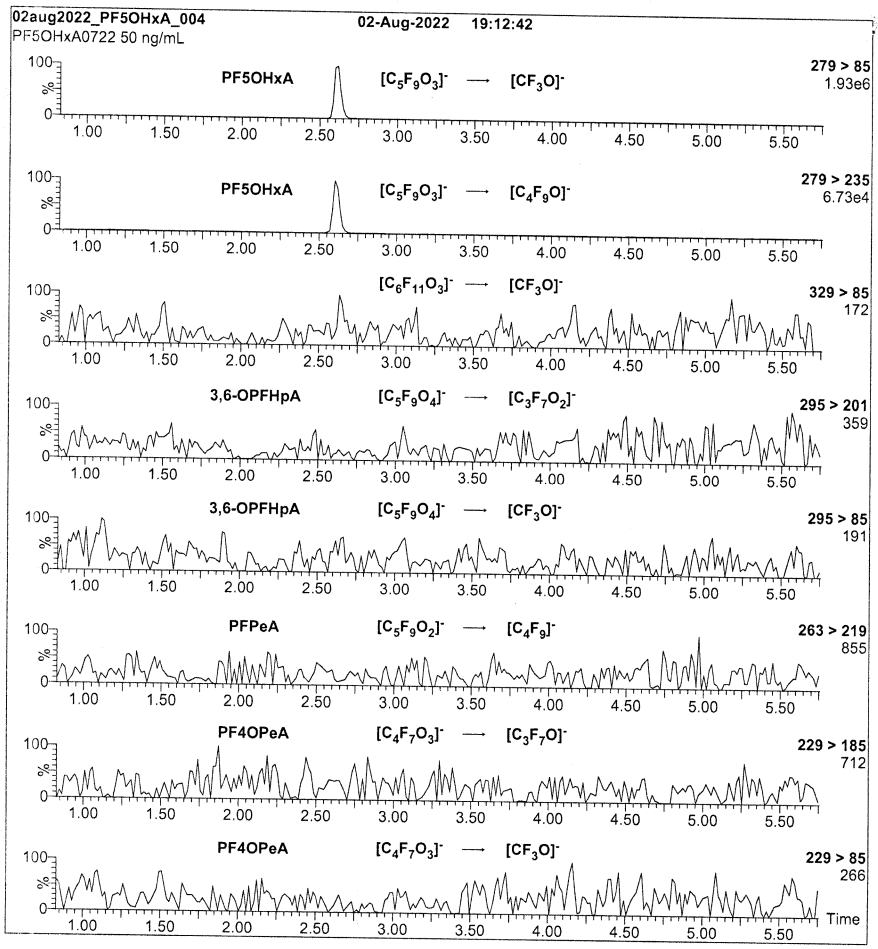
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **PF5OHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PF5OHxA)

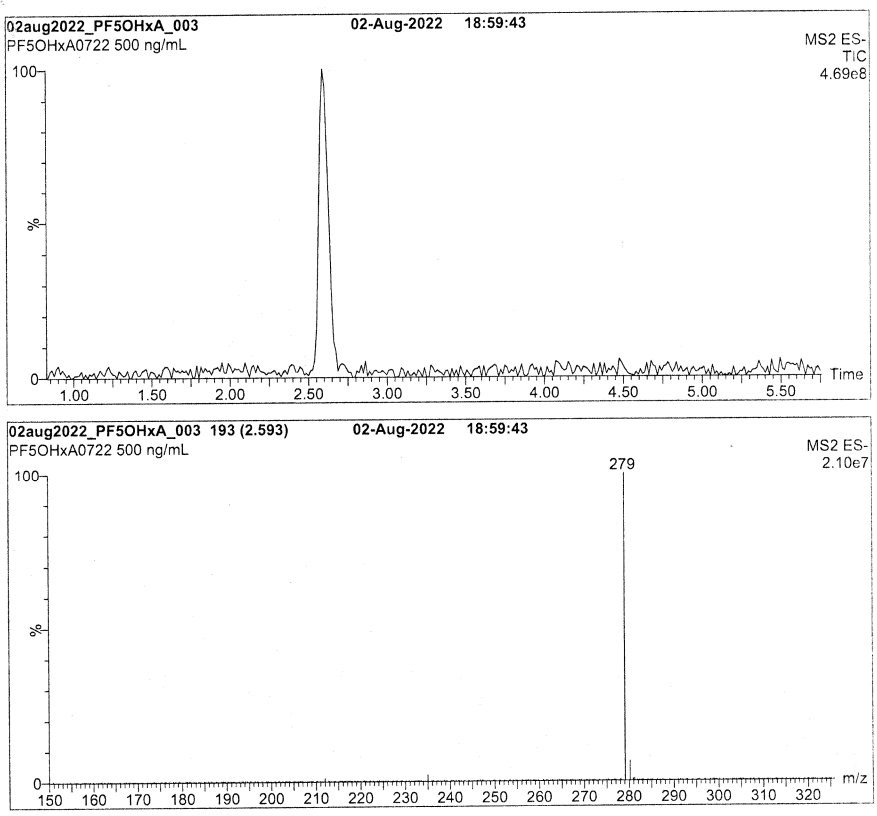
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 10

Figure 1: **PF5OHxA; LC/MS Data (Full Scan and Mass Spectrum)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 14.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

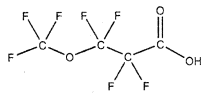
Reagent

PFMPA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PF4OPeA	**LOT NUMBER:**	PF4OPeA0722
COMPOUND:	Perfluoro-4-oxapentanoic acid		
SYNONYM:	Perfluoro-3-methoxypropanoic acid (PFMPA)		
STRUCTURE:		**CAS #:**	377-73-1



MOLECULAR FORMULA:	$C_4HF_7O_3$	**MOLECULAR WEIGHT:**	230.04
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/02/2022		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/15/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

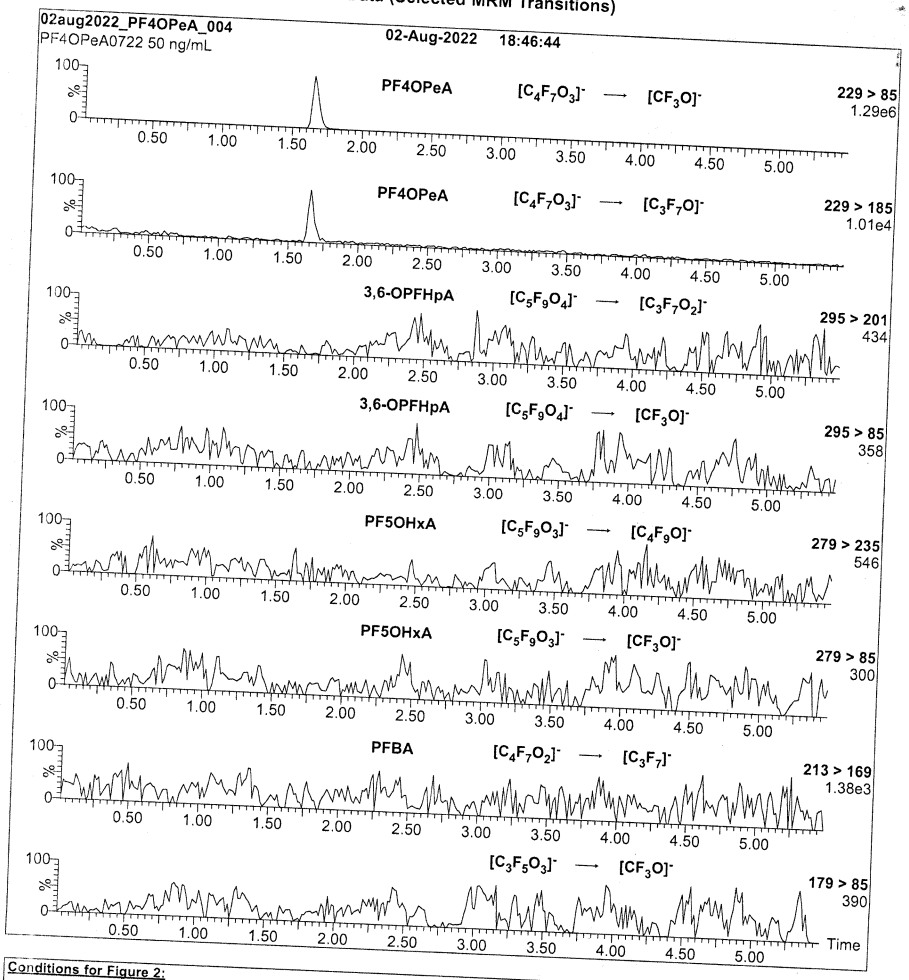
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 2: **PF4OPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PF4OPeA)

Mobile phase: Same as Figure 1

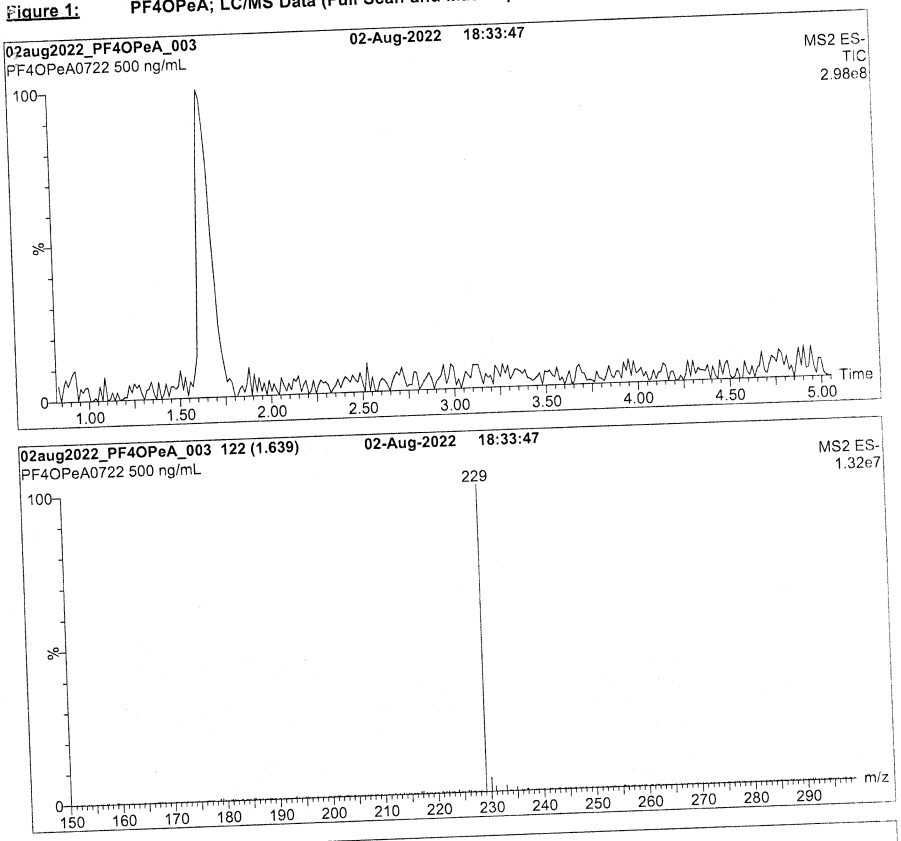
Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 10

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Figure 1: **PF4OPeA; LC/MS Data (Full Scan and Mass Spectrum)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 14.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Reagent

PFNA_00001

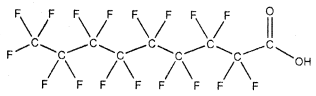
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFNA
COMPOUND: Perfluoro-n-nonanoic acid
LOT NUMBER: PFNA0722

STRUCTURE:

CAS #: 375-95-1



MOLECULAR FORMULA: $C_9HF_{17}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL
MOLECULAR WEIGHT: 464.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/12/2022
EXPIRY DATE: (mm/dd/yyyy) 07/12/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.2% of perfluoro-n-octanoic acid (PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/16/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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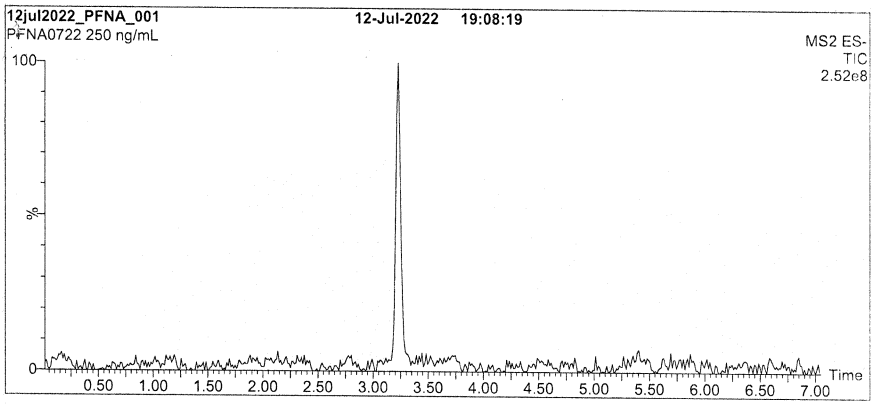
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

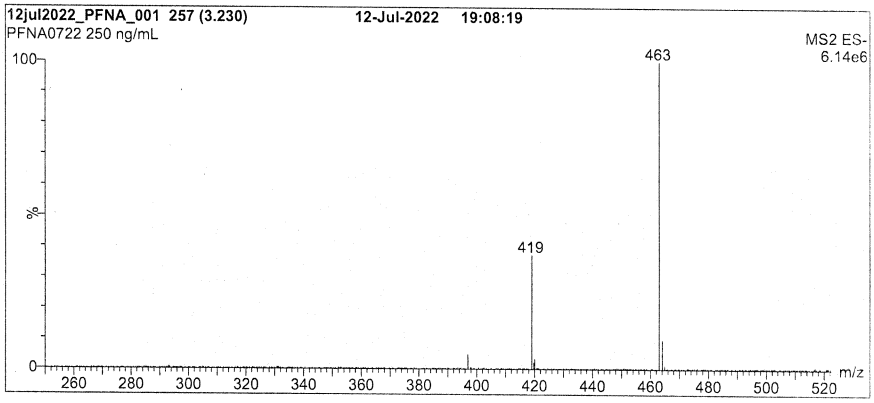
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFNA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
1 min before returning to initial conditions in 0.75 min.
Time: 12 min

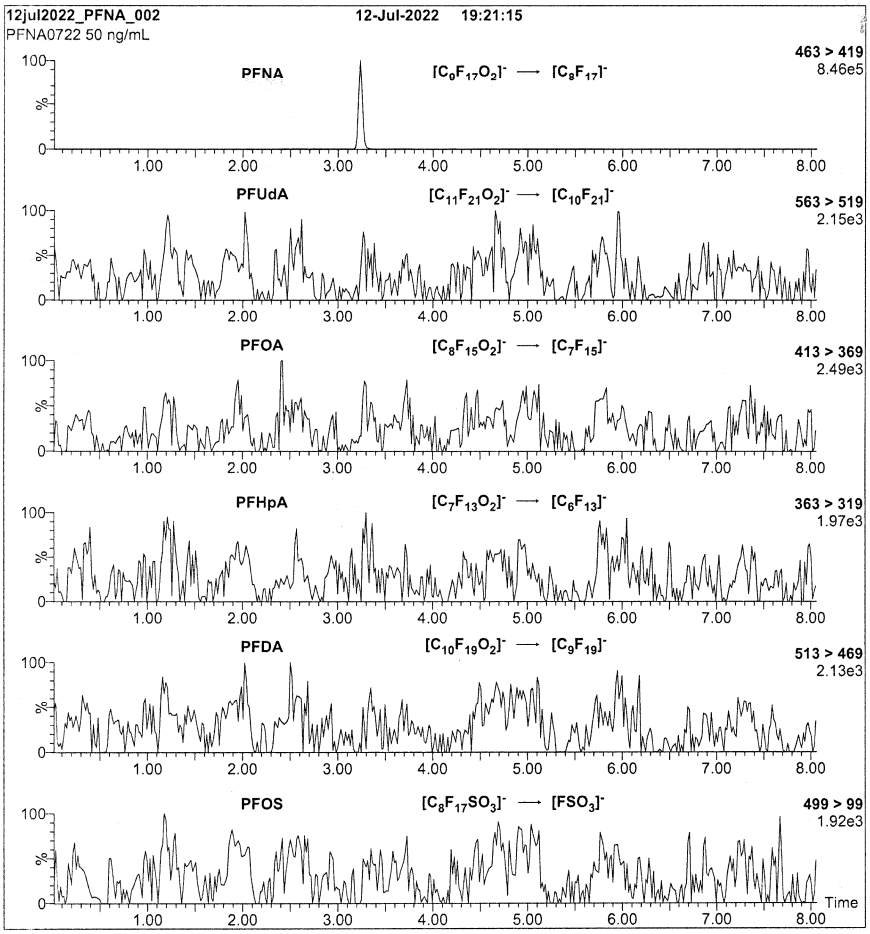
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFNA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 10

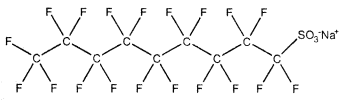
Reagent

PFNS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFNS	**LOT NUMBER:**	LPFNS1122
COMPOUND:	Sodium perfluoro-1-nonanesulfonate		
STRUCTURE:		**CAS #:**	98789-57-2



MOLECULAR FORMULA:	$C_9F_{19}SO_3Na$	**MOLECULAR WEIGHT:**	572.12
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S):**	Methanol
	48.1 ± 2.4 µg/mL (PFNS acid)		
	48.0 ± 2.4 µg/mL (PFNS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/21/2022		
EXPIRY DATE: (mm/dd/yyyy)	11/21/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: _____ **Date:** 11/25/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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HOMOGENEITY:

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UNCERTAINTY:

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

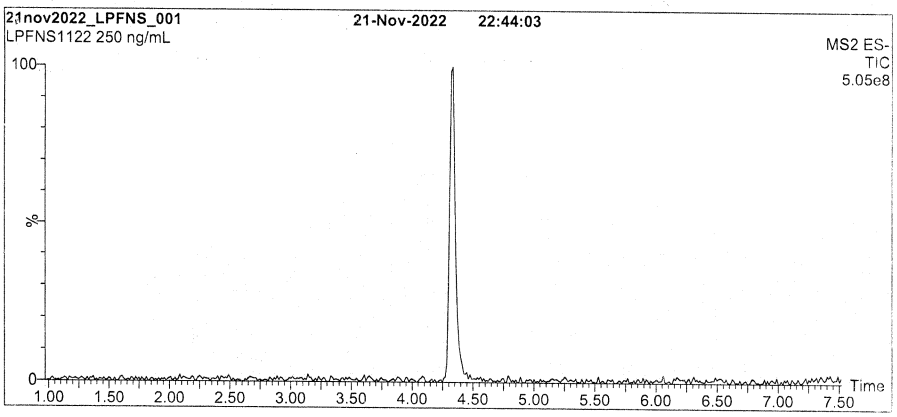
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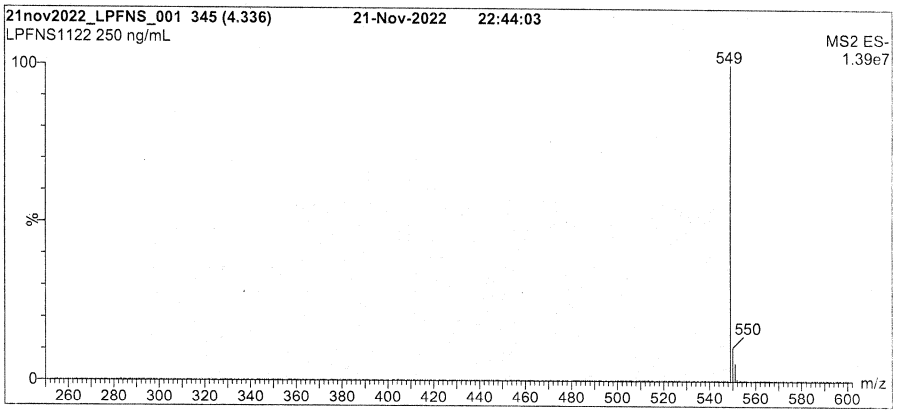
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **L-PFNS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

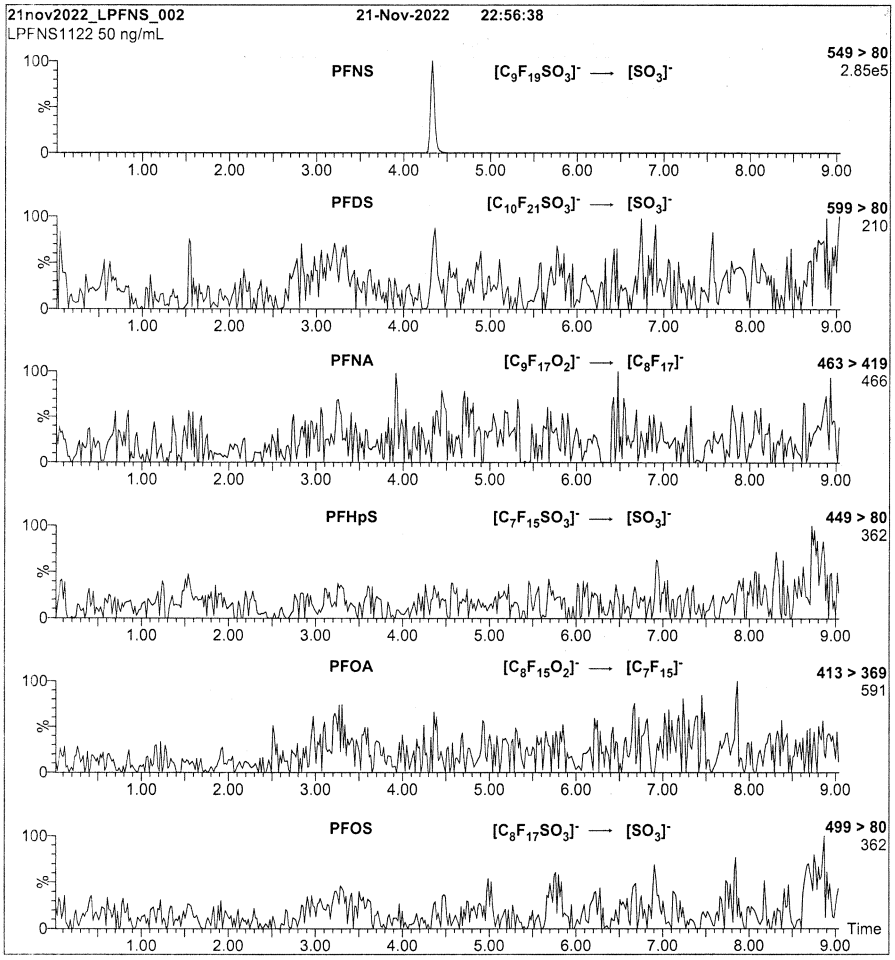
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) =1000

Figure 2: **L-PFNS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFNS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.89e-3
Collision Energy (eV) = 64

Reagent

PFOA_00001

WELLINGTON LABORATORIES

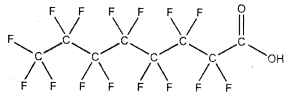
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFOA
COMPOUND: Perfluoro-n-octanoic acid

LOT NUMBER: PFOA0123

STRUCTURE:

CAS #: 335-67-1



MOLECULAR FORMULA: $C_8HF_{15}O_2$
CONCENTRATION: 50.0 ± 2.5 µg/mL

MOLECULAR WEIGHT: 414.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/30/2023
EXPIRY DATE: (mm/dd/yyyy) 01/30/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/06/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

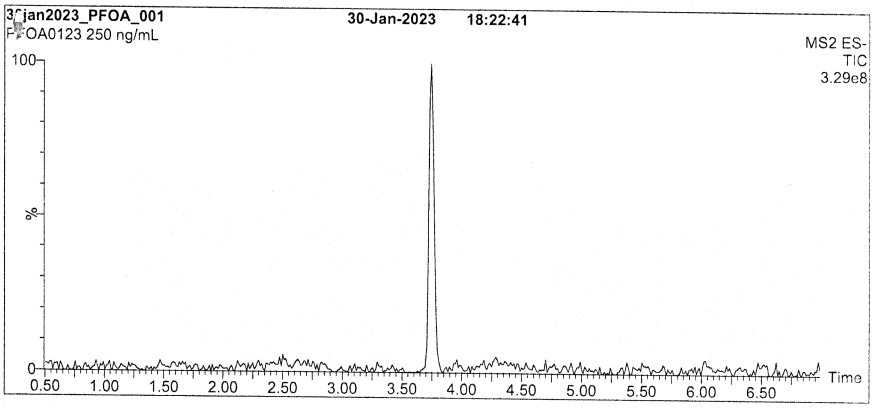
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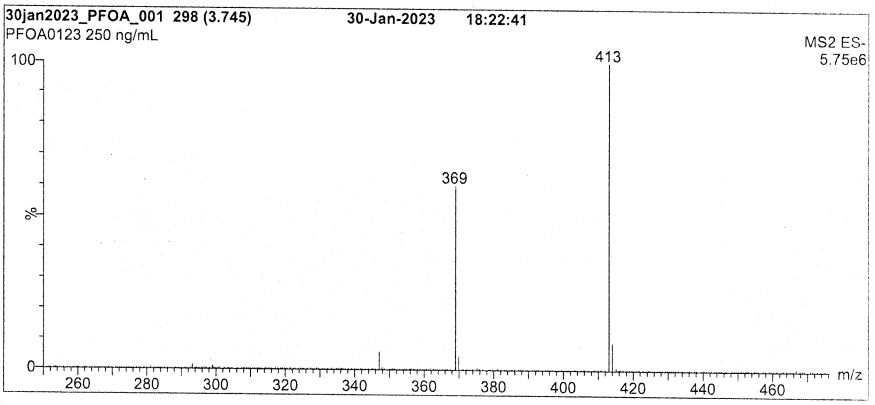
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFOA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 12 min

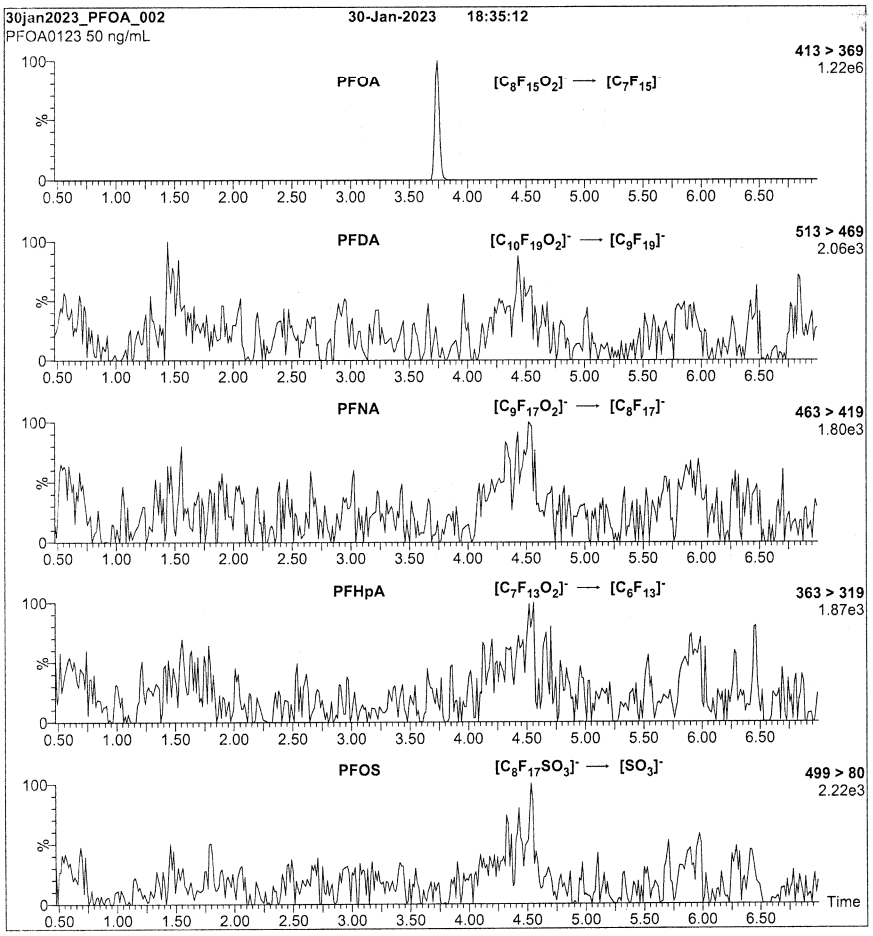
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFOA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 8

Reagent

PFOS_00001

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK0822
CONCENTRATION:	50.0 ± 2.5 µg/mL (total potassium salt)
	46.5 ± 2.3 µg/mL (total PFOS acid)
	46.4 ± 2.3 µg/mL (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	08/25/2022
LAST TESTED: (mm/dd/yyyy)	09/15/2022
EXPIRY DATE: (mm/dd/yyyy)	09/15/2027
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

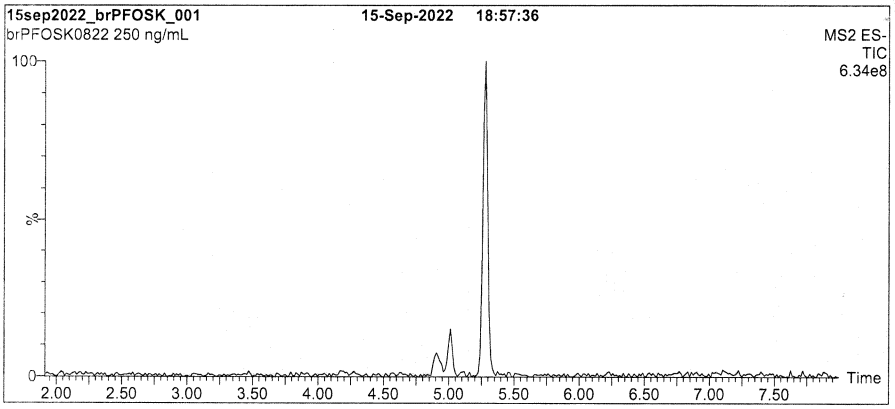
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium perfluoro-1-methyl-1-heptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CFSO_3^-K^+$ (CF$_3$ branch)	1.2
3	Potassium perfluoro-2-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CFCF_2SO_3^-K^+$ (CF$_3$ branch)	0.6
4	Potassium perfluoro-3-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CF_2CFCF_2CF_2SO_3^-K^+$ (CF$_3$ branch)	1.9
5	Potassium perfluoro-4-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CFCF_2CF_2CF_2SO_3^-K^+$ (CF$_3$ branch)	2.2
6	Potassium perfluoro-5-methyl-1-heptanesulfonate	$CF_3CF_2CFCF_2CF_2CF_2CF_2SO_3^-K^+$ (CF$_3$ branch)	4.5
7	Potassium perfluoro-6-methyl-1-heptanesulfonate	$CF_3CFCF_2CF_2CF_2CF_2CF_2SO_3^-K^+$ (CF$_3$ branch)	10.0
8	Potassium perfluoro-5,5-dimethyl-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2SO_3^-K^+$ (two CF$_3$ branches)	0.2
9	Potassium perfluoro-4,4-dimethyl-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2SO_3^-K^+$ (two CF$_3$ branches)	0.03
10	Potassium perfluoro-4,5-dimethyl-1-hexanesulfonate	$CF_3CFCFCF_2CF_2CF_2SO_3^-K^+$ (two CF$_3$ branches)	0.4
11	Potassium perfluoro-3,5-dimethyl-1-hexanesulfonate	$CF_3CFCF_2CFCF_2CF_2SO_3^-K^+$ (two CF$_3$ branches)	0.07

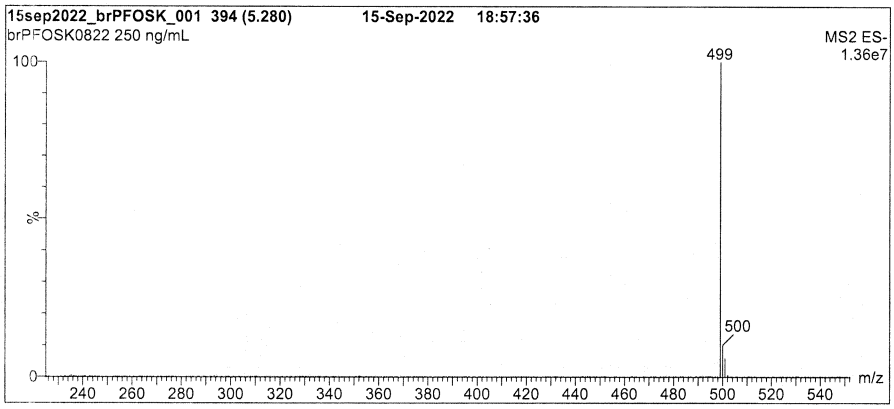
* Percent of total perfluorooctanesulfonate isomers only.
** Systematic Name: Potassium perfluoro-2-octanesulfonate.

Certified By: _____ **Date:** 10/12/2022 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **br-PFOSK; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

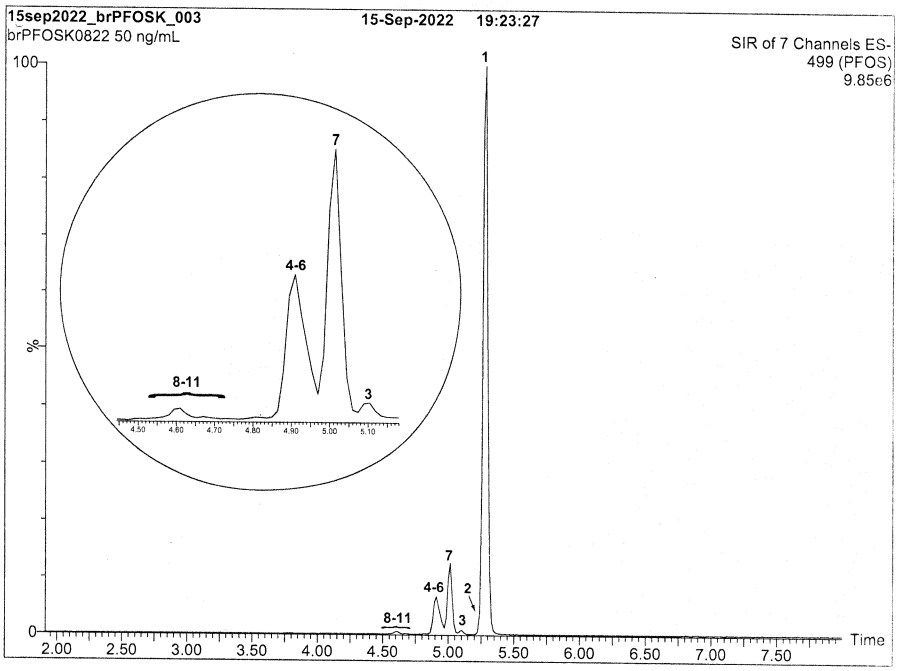
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

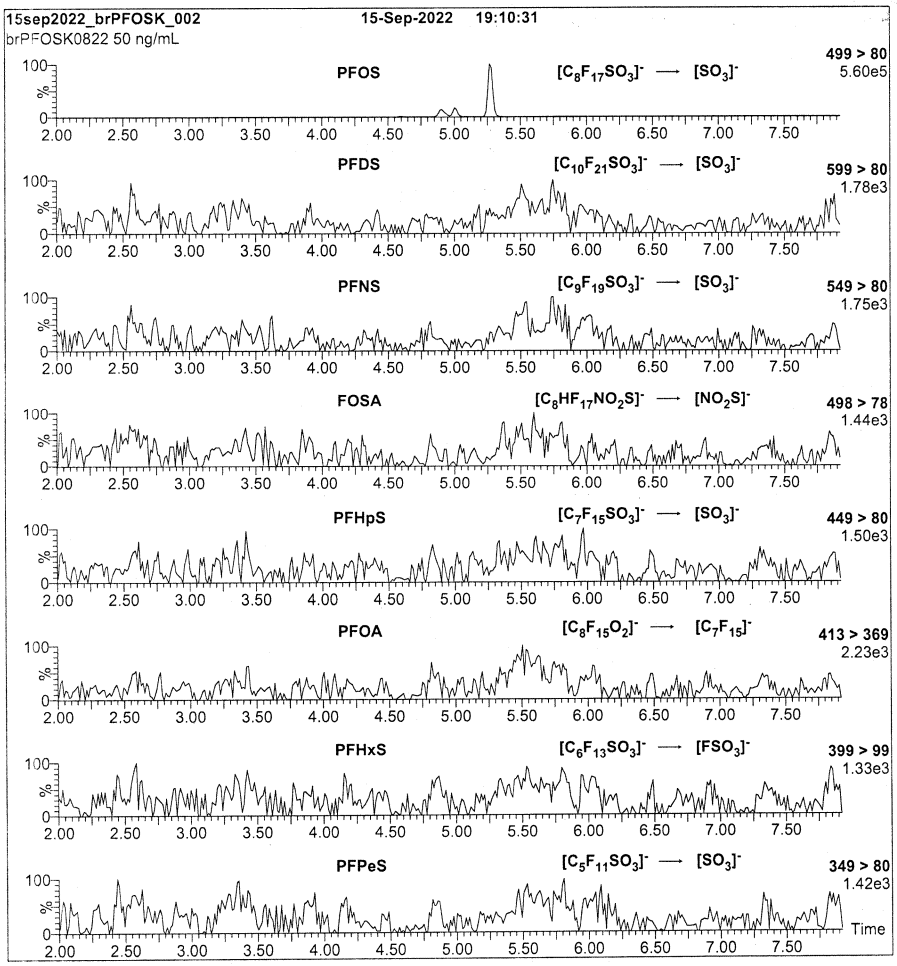
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 2.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFOSK)

Mobile phase: Same as Figure 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 64

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK0822
CONCENTRATION:	50.0 ± 2.5 µg/mL (total potassium salt)
	46.5 ± 2.3 µg/mL (total PFOS acid)
	46.4 ± 2.3 µg/mL (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	08/25/2022
LAST TESTED: (mm/dd/yyyy)	09/15/2022
EXPIRY DATE: (mm/dd/yyyy)	09/15/2027
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

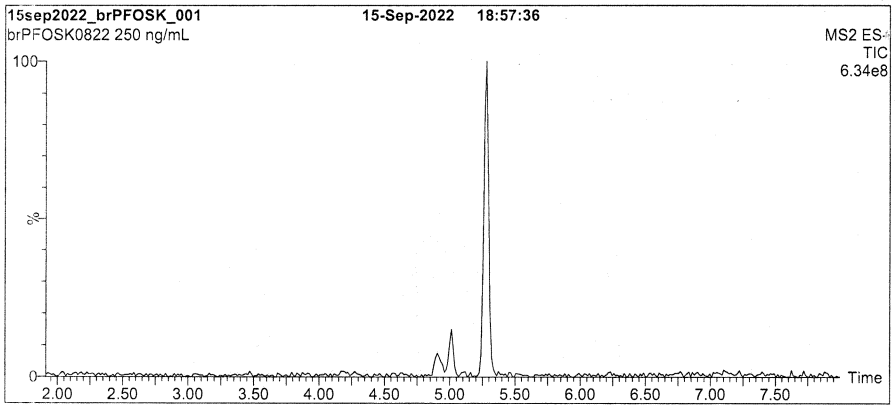
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

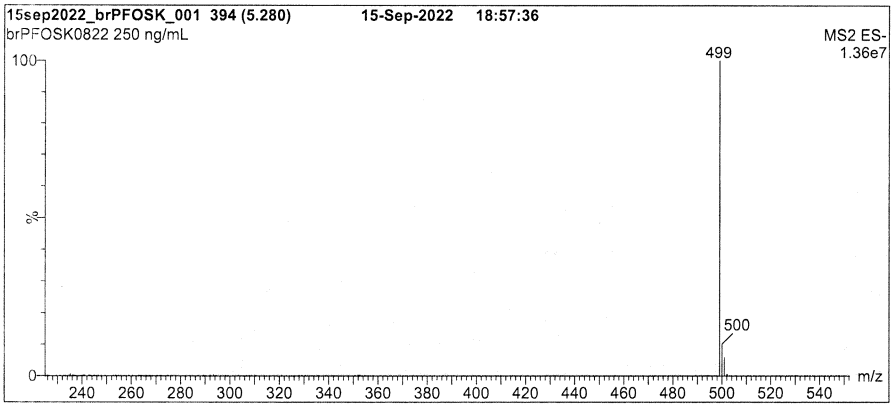
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium perfluoro-1-methyl-1-heptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CFSO_3^-K^+$ (CF3 branch)	1.2
3	Potassium perfluoro-2-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CFCF_2SO_3^-K^+$ (CF3 branch)	0.6
4	Potassium perfluoro-3-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CF_2CFCF_2CF_2SO_3^-K^+$ (CF3 branch)	1.9
5	Potassium perfluoro-4-methyl-1-heptanesulfonate	$CF_3CF_2CF_2CFCF_2CF_2CF_2SO_3^-K^+$ (CF3 branch)	2.2
6	Potassium perfluoro-5-methyl-1-heptanesulfonate	$CF_3CF_2CFCF_2CF_2CF_2CF_2SO_3^-K^+$ (CF3 branch)	4.5
7	Potassium perfluoro-6-methyl-1-heptanesulfonate	$CF_3CFCF_2CF_2CF_2CF_2CF_2SO_3^-K^+$ (CF3 branch)	10.0
8	Potassium perfluoro-5,5-dimethyl-1-hexanesulfonate	$CF_3CCF_2CF_2CF_2CF_2SO_3^-K^+$ (two CF3 branches)	0.2
9	Potassium perfluoro-4,4-dimethyl-1-hexanesulfonate	$CF_3CF_2CCF_2CF_2CF_2SO_3^-K^+$ (two CF3 branches)	0.03
10	Potassium perfluoro-4,5-dimethyl-1-hexanesulfonate	$CF_3CFCFCF_2CF_2CF_2SO_3^-K^+$ (two CF3 branches)	0.4
11	Potassium perfluoro-3,5-dimethyl-1-hexanesulfonate	$CF_3CFCF_2CFCF_2CF_2SO_3^-K^+$ (two CF3 branches)	0.07

* Percent of total perfluorooctanesulfonate isomers only.
** Systematic Name: Potassium perfluoro-2-octanesulfonate.

Certified By: _____ **Date:** 10/12/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **br-PFOSK; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

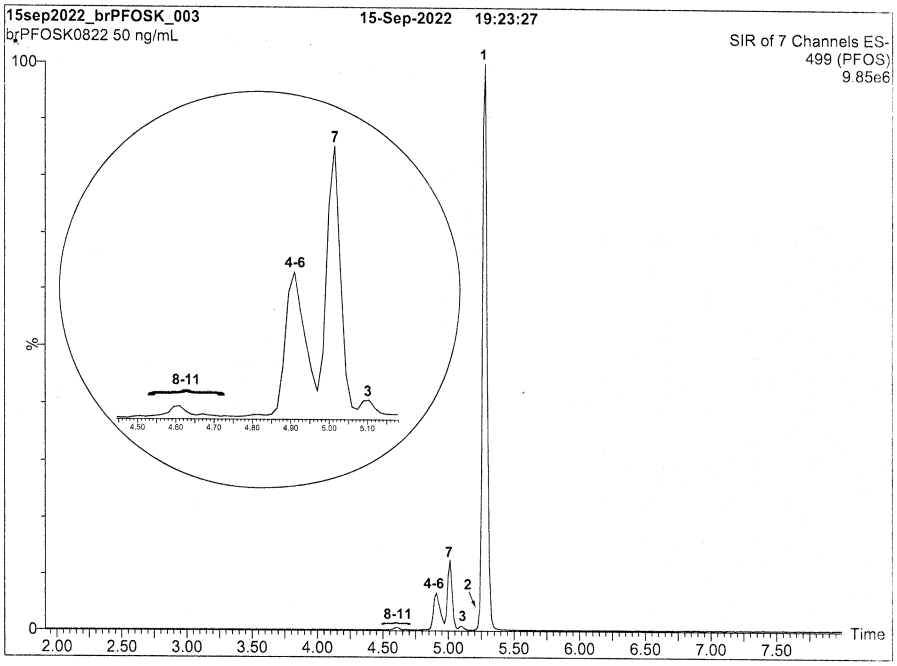
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

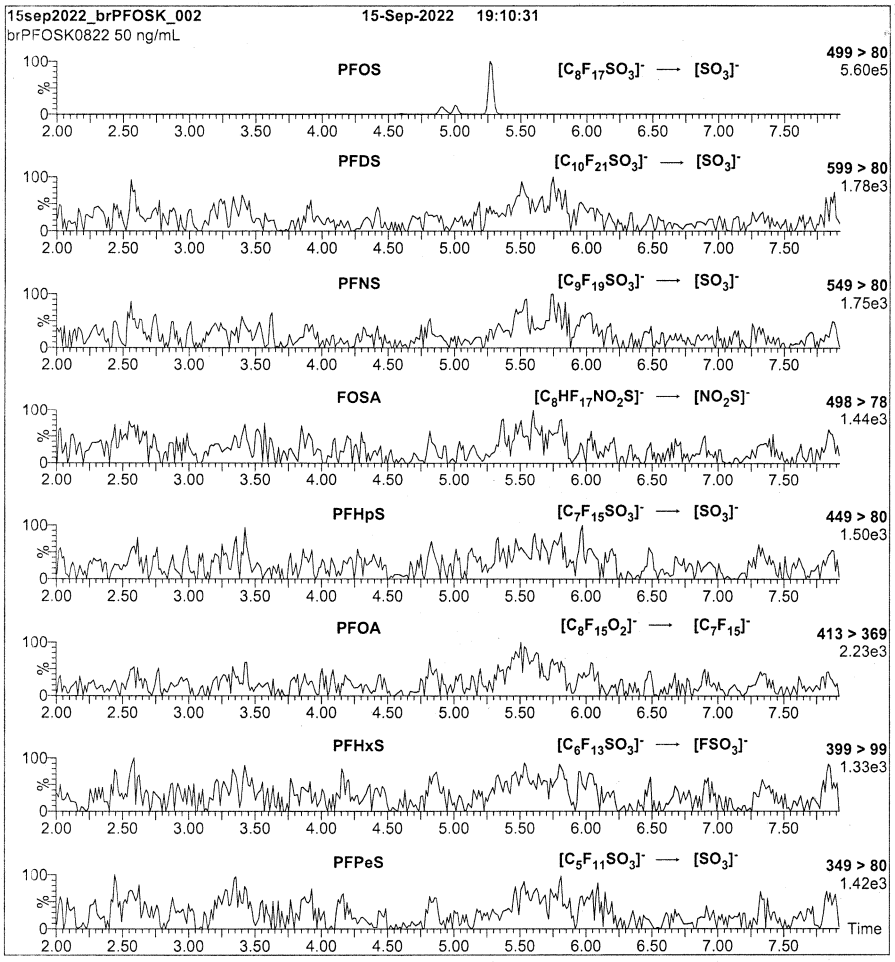
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 2.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFOSK)

Mobile phase: Same as Figure 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 64

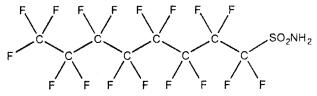
Reagent

PFOSA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FOSA-I	**LOT NUMBER:**	FOSA1222I
COMPOUND:	Perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	754-91-6



MOLECULAR FORMULA:	$C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	499.14
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	12/06/2022		
EXPIRY DATE: (mm/dd/yyyy)	12/06/2027		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/09/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

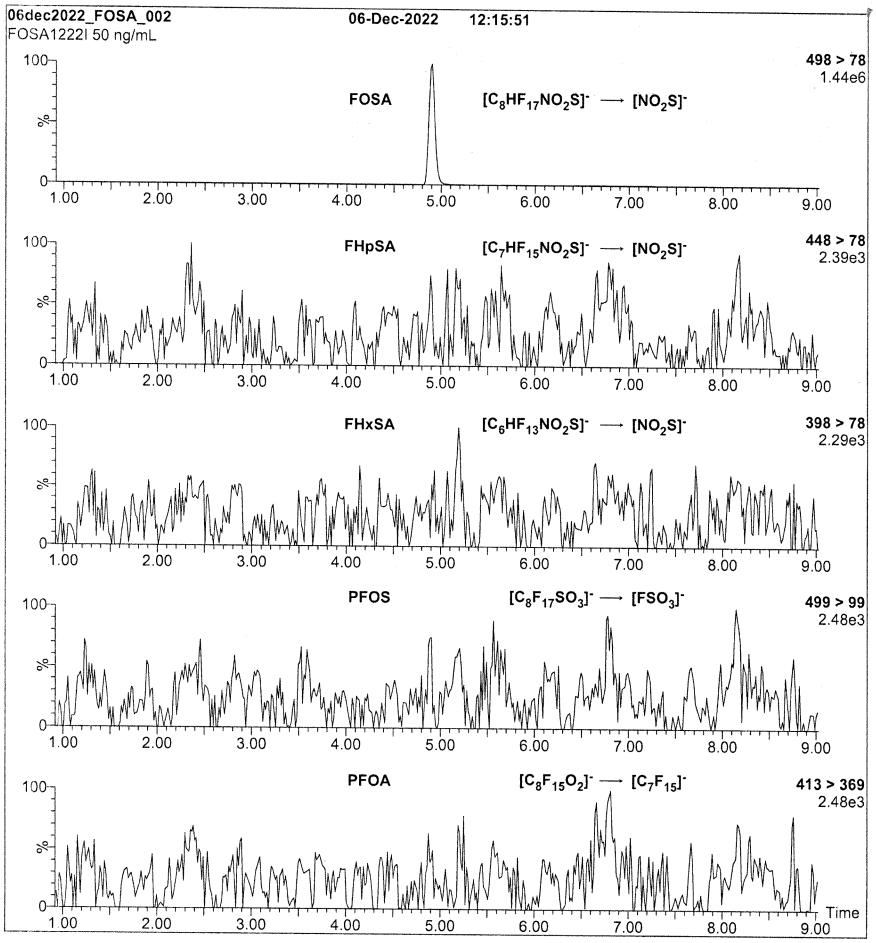
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

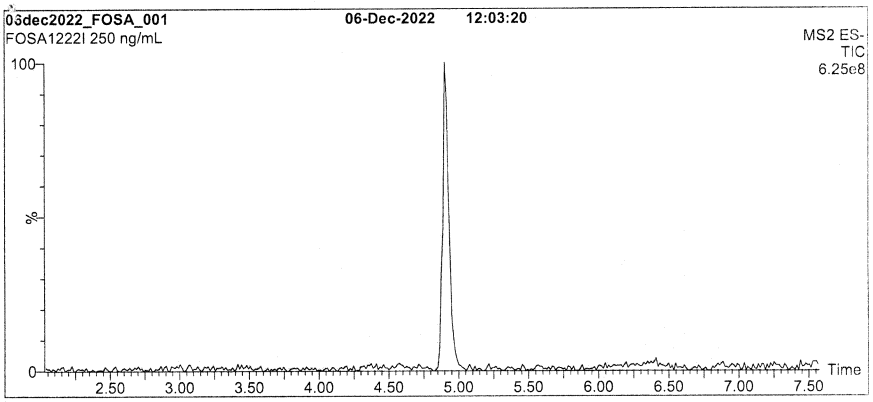
Injection: On-column (FOSA-I)

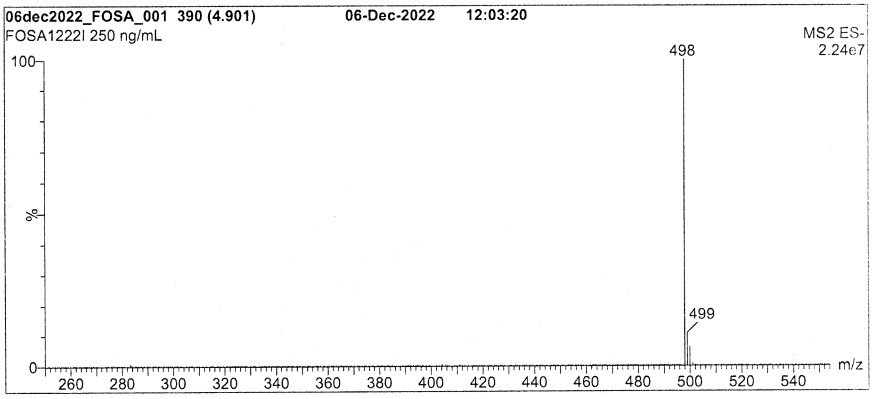
Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.87e-3
Collision Energy (eV) = 30

Figure 1: **FOSA-I; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

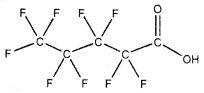
Reagent

PFPeA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFPeA	**LOT NUMBER:**	PFPeA0722
COMPOUND:	Perfluoro-n-pentanoic acid		
STRUCTURE:		**CAS #:**	2706-90-3



MOLECULAR FORMULA:	$C_5HF_9O_2$	**MOLECULAR WEIGHT:**	264.05
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/11/2022		
EXPIRY DATE: (mm/dd/yyyy)	07/11/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/14/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

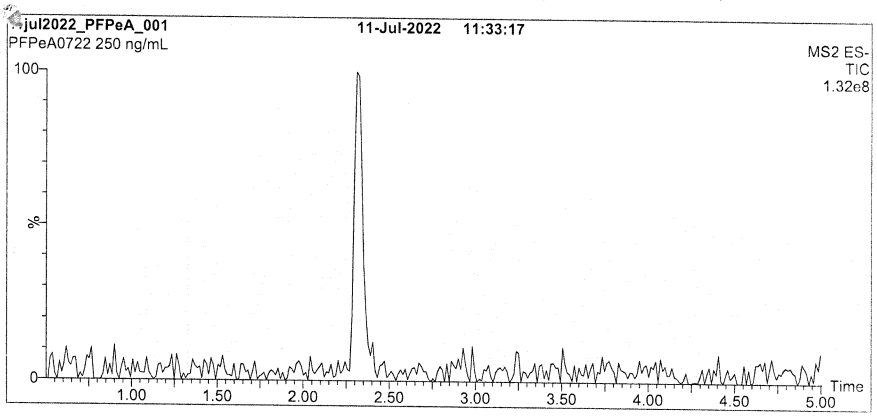
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

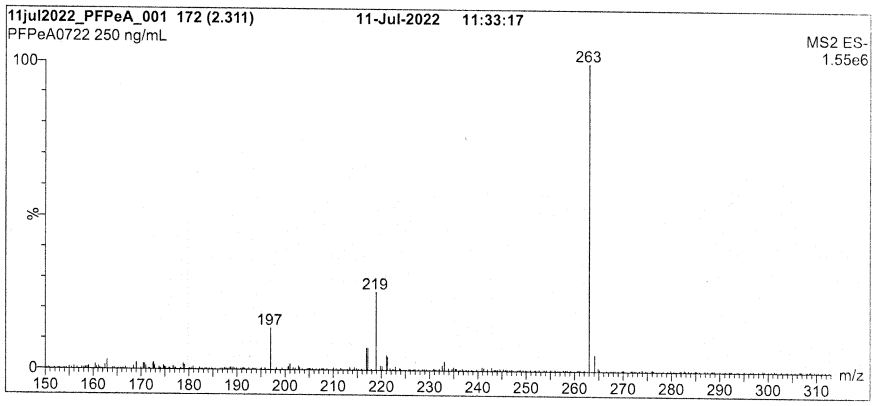
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFPeA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% H_2O / 40% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

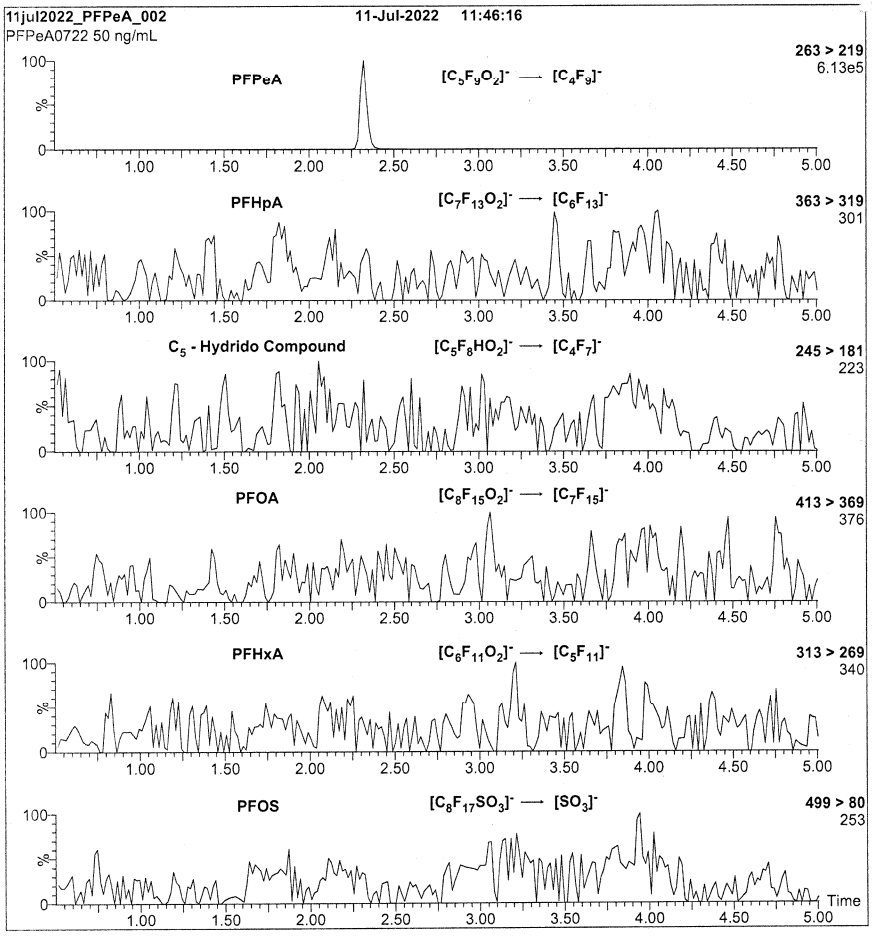
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFPeA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 8

Reagent

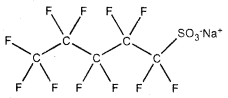
PFPeS_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFPeS
COMPOUND: Sodium perfluoro-1-pentanesulfonate
LOT NUMBER: LPFPeS0123

STRUCTURE:
CAS #: 630402-22-1



MOLECULAR FORMULA: $C_5F_{11}SO_3Na$
MOLECULAR WEIGHT: 372.09
CONCENTRATION: 50.0 ± 2.5 µg/mL (Na salt)
47.0 ± 2.3 µg/mL (PFPeS acid)
46.9 ± 2.3 µg/mL (PFPeS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/24/2023
EXPIRY DATE: (mm/dd/yyyy) 01/24/2028
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 02/07/2023 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

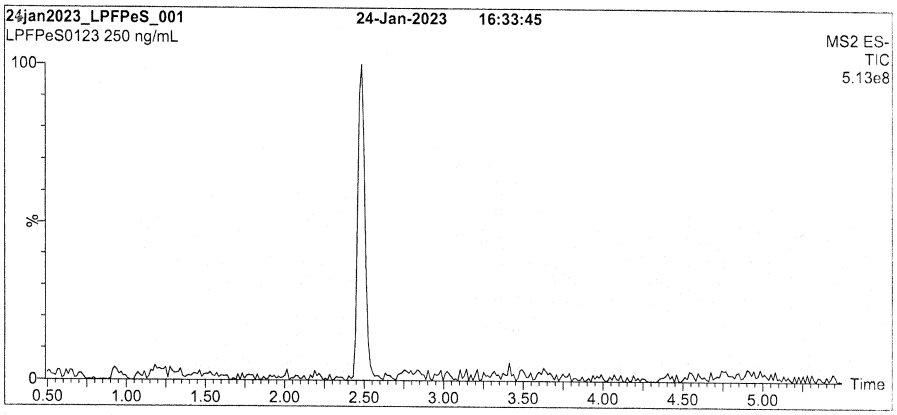
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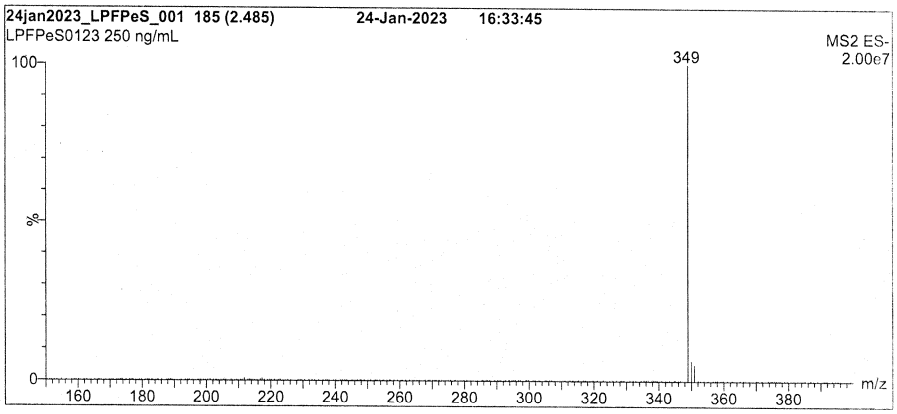
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **L-PFPeS; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions over 0.5 min.
Time: 12 min

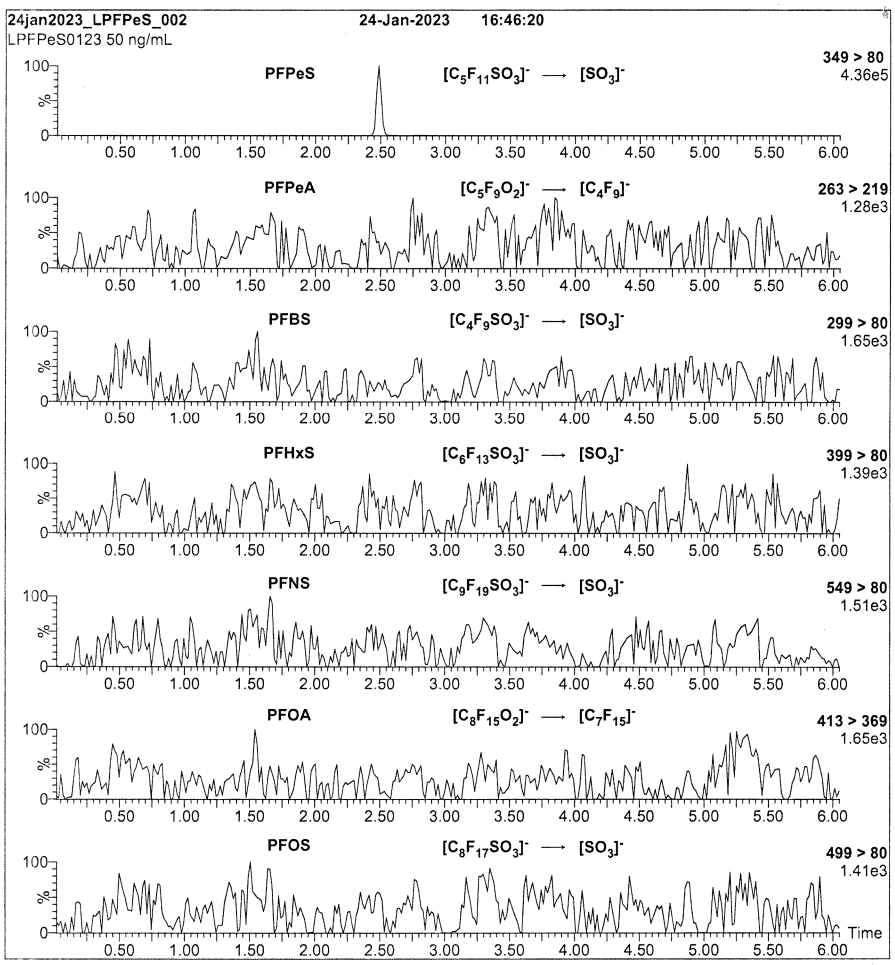
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **L-PFPeS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFPeS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.61e-3
Collision Energy (eV) = 32

Reagent

PFTeDA_00001

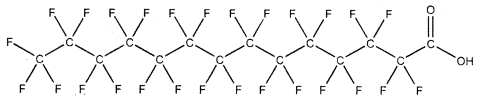
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA
COMPOUND: Perfluoro-n-tetradecanoic acid
LOT NUMBER: PFTeDA1022

STRUCTURE:

CAS #: 376-06-7



MOLECULAR FORMULA: $C_{14}HF_{27}O_2$
MOLECULAR WEIGHT: 714.11
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2022
EXPIRY DATE: (mm/dd/yyyy) 10/18/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.3% of perfluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/03/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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HOMOGENEITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

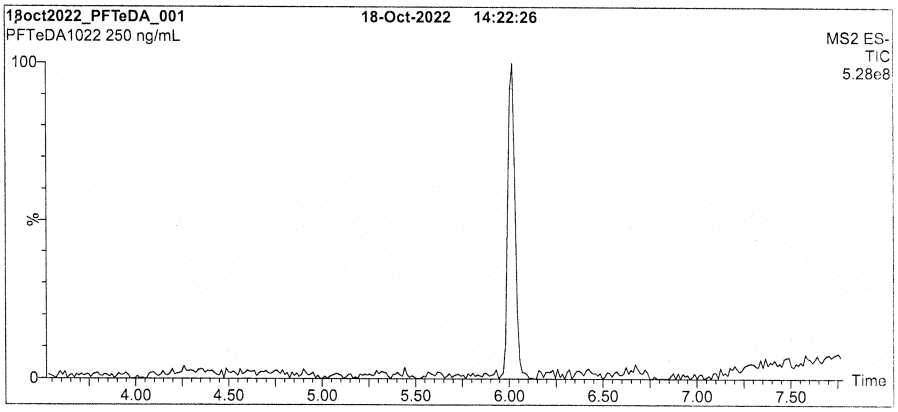
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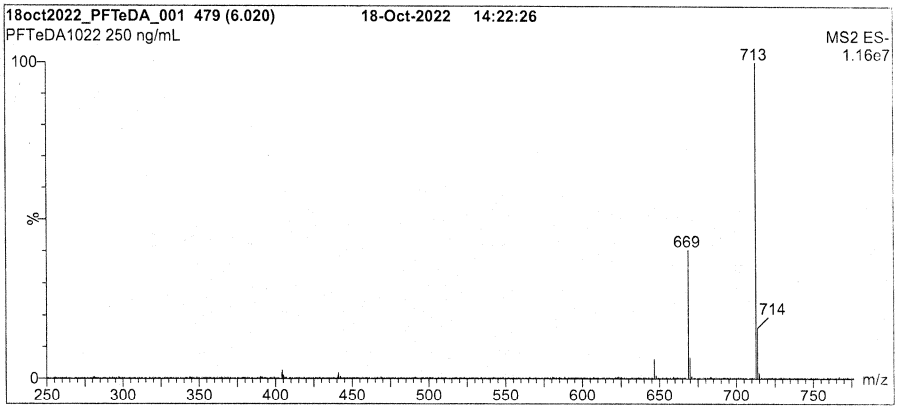
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFTeDA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

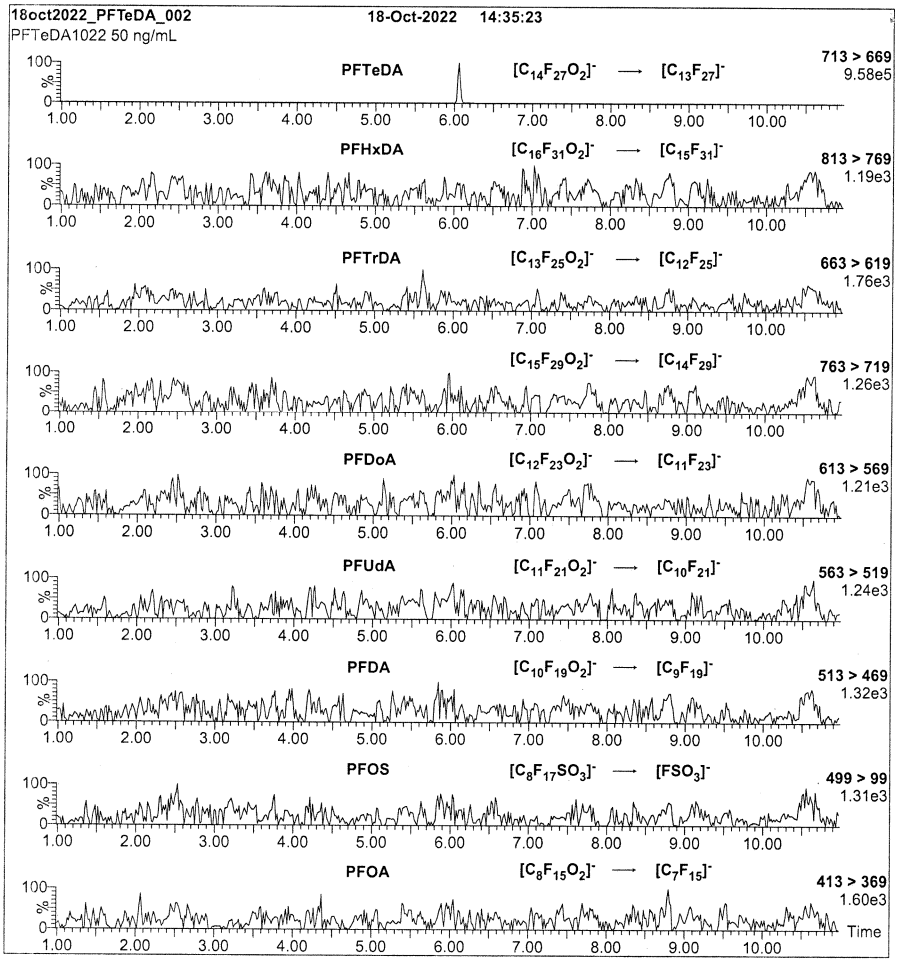
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFTeDA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 14

Reagent

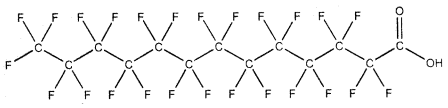
PFTrDA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFTrDA
COMPOUND: Perfluoro-n-tridecanoic acid
LOT NUMBER: PFTrDA1022

STRUCTURE:
CAS #: 72629-94-8



MOLECULAR FORMULA: $C_{13}HF_{25}O_2$
MOLECULAR WEIGHT: 664.11
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2022
EXPIRY DATE: (mm/dd/yyyy) 10/18/2027
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~0.4% of perfluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/08/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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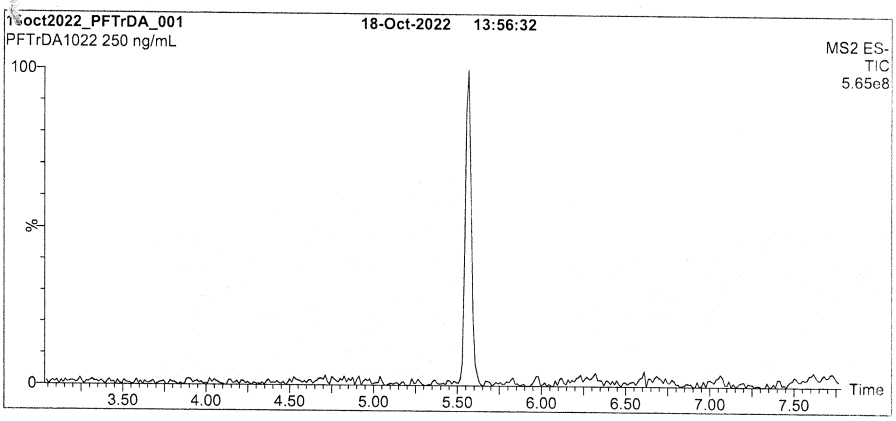
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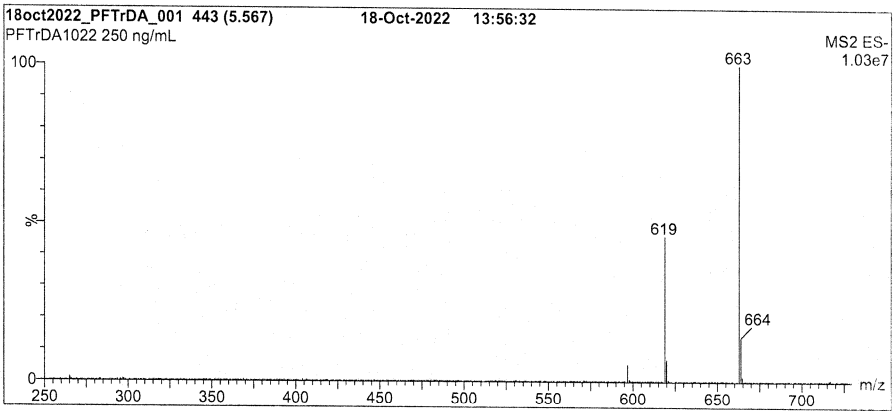
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFTrDA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.75 min.
Time: 12 min

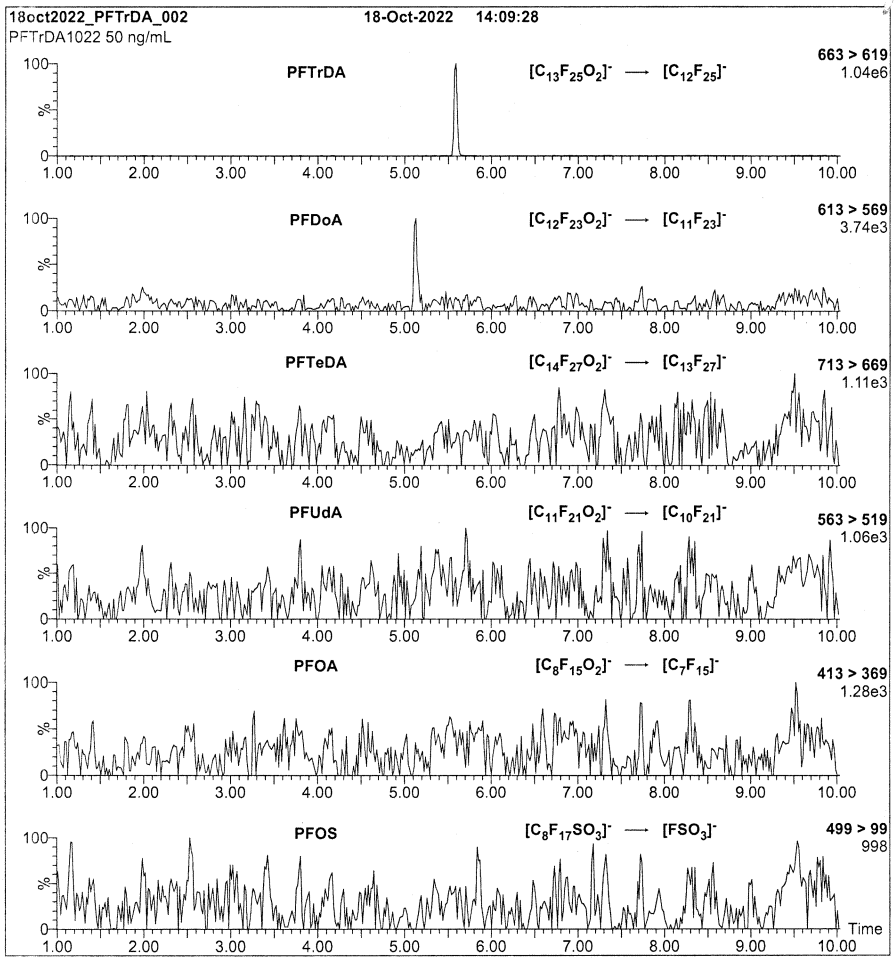
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFTrDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFTrDA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 12

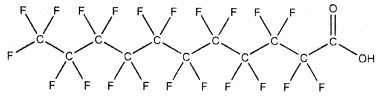
Reagent

PFUnDA_00001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFUdA	**LOT NUMBER:**	PFUdA0822
COMPOUND:	Perfluoro-n-undecanoic acid		
STRUCTURE:		**CAS #:**	2058-94-8



MOLECULAR FORMULA:	$C_{11}HF_{21}O_2$	**MOLECULAR WEIGHT:**	564.09
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/22/2022		
EXPIRY DATE: (mm/dd/yyyy)	08/22/2027		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/31/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

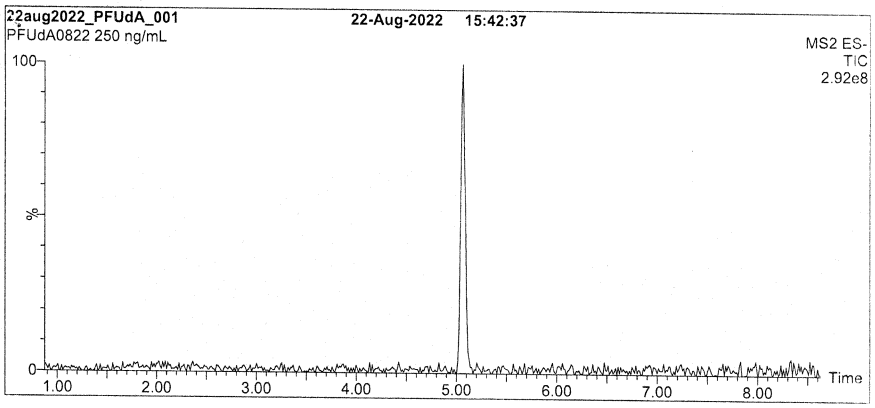
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

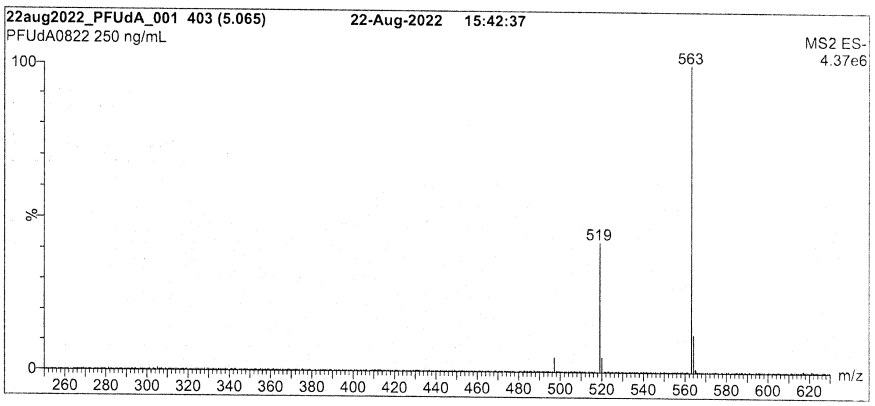
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **PFUdA; LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.75 min.
Time: 12 min

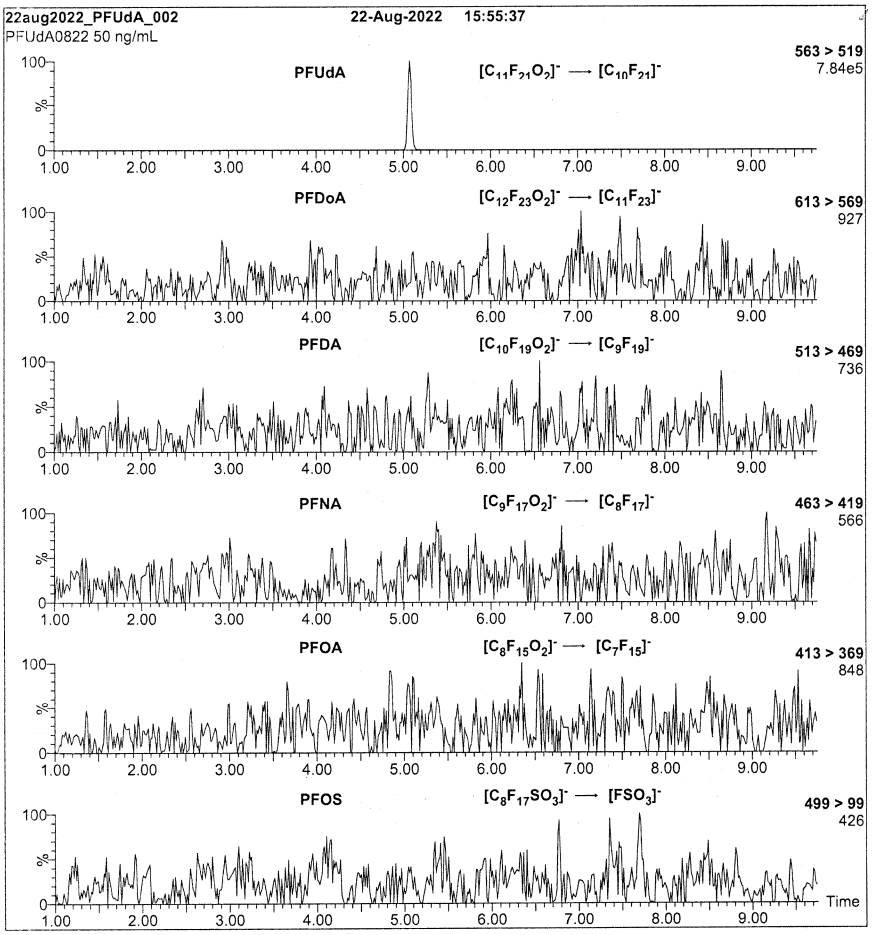
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: **PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFUdA)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.22e-3
Collision Energy (eV) = 12

1633

Per- and Polyfluoroalkyl Substances by LC/MS/MS

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	M242FTS #	13C5PHA #	C3PFBS #	HFPODA #	C4PFHA #	M262FTS #
RXMW-1_P	460-311364-1	94.9	91.4	149	75.7	112	80.8	85.0	141
RXMW-5_P	460-311364-2	98.7	99.6	142	85.5	121	84.9	97.7	149
FB_09132024_P	460-311364-3	124	109	202 *	101	132	107	110	186
	MB 240-627485/1-A	98.6	93.7	158	86.5	109	91.6	89.9	150
RXMW-5_P DU	460-311364-2 DU	104	105	155	86.5	136	87.3	104	151

	QC LIMITS
PFBA = 13C4 PFBA	10-130
PFPeA = 13C5 PFPeA	35-150
M242FTS = M2-4:2 FTS	60-200
13C5PHA = 13C5 PFHxA	55-150
C3PFBS = 13C3 PFBS	55-150
HFPODA = 13C3 HFPO-DA	25-160
C4PFHA = 13C4 PFHpA	55-150
M262FTS = M2-6:2 FTS	60-200

Column to be used to flag recovery values

FORM II 1633

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C8PFOA #	C3PFHS #	C9PFNA #	M282FTS #	d3NMFOS #	C6PFDA #	d5NEFOS #	C8PFOS #
RXMW-1_P	460-311364-1	83.3	107	106	132	105	119	113	112
RXMW-5_P	460-311364-2	88.3	111	109	142	103	107	107	115
FB_09132024_P	460-311364-3	113	130	129	178	137	141 *	144	134
	MB 240-627485/1-A	91.7	107	107	143	110	113	122	116
RXMW-5_P DU	460-311364-2 DU	91.7	118	120	150	108	116	114	120

	QC LIMITS
C8PFOA = 13C8 PFOA	60-140
C3PFHS = 13C3 PFHxS	55-150
C9PFNA = 13C9 PFNA	55-140
M282FTS = M2-8:2 FTS	50-200
d3NMFOS = d3-NMeFOSAA	45-200
C6PFDA = 13C6 PFDA	50-140
d5NEFOS = d5-NEtFOSAA	10-200
C8PFOS = 13C8 PFOS	45-140

Column to be used to flag recovery values

FORM II 1633

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	13C7PUA	#	PFDoDA	#	PFOSA	#	PFTDA	#	NMFM	#	d3NMFSA	#	NEFM	#	d5NPFSA	#
RXMW-1_P	460-311364-1	108		105		105		85.3		98.8		80.6		89.5		71.0	
RXMW-5_P	460-311364-2	101		93.5		109		78.2		102		80.0		91.9		71.3	
FB_09132024_P	460-311364-3	133		113		140	*	92.9		131		105		122		95.9	
	MB 240-627485/1-A	105		96.6		113		74.1		112		79.1		92.5		76.6	
RXMW-5_P DU	460-311364-2 DU	108		107		111		80.4		107		79.8		88.8		75.6	

	QC LIMITS
13C7PUA = 13C7 PFUnA	30-140
PFDoDA = 13C2-PFDoDA	10-150
PFOSA = 13C8 FOSA	30-130
PFTDA = 13C2 PFTeDA	10-130
NMFM = d7-N-MeFOSE-M	10-150
d3NMFSA = d3-NMePFOSA	15-130
NEFM = d9-N-EtFOSE-M	10-150
d5NPFSA = d5-NEtPFOSA	10-130

Column to be used to flag recovery values

FORM II 1633

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	M242FTS #	13C5PHA #	C3PFBS #	HFPODA #	C4PFHA #	M262FTS #
	LCS 240-627485/3-A	91.1	84.1	137	79.2	97.3	84.7	81.5	125
	LLCS 240-627485/2-A	91.4	81.5	142	77.5	103	77.2	81.6	138

	QC LIMITS
PFBA = 13C4 PFBA	10-130
PFPeA = 13C5 PFPeA	40-150
M242FTS = M2-4:2 FTS	25-200
13C5PHA = 13C5 PFHxA	40-150
C3PFBS = 13C3 PFBS	25-150
HFPODA = 13C3 HFPO-DA	25-160
C4PFHA = 13C4 PFHpA	40-150
M262FTS = M2-6:2 FTS	25-200

Column to be used to flag recovery values

FORM II 1633

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C8PFOA #	C3PFHS #	C9PFNA #	M282FTS #	d3NMFOS #	C6PFDA #	d5NEFOS #	C8PFOS #
	LCS 240-627485/3-A	83.9	101	103	126	107	107	108	106
	LLCS 240-627485/2-A	86.5	96.8	97.1	124	108	110	115	104

	QC LIMITS
C8PFOA = 13C8 PFOA	30-140
C3PFHS = 13C3 PFHxS	25-150
C9PFNA = 13C9 PFNA	30-140
M282FTS = M2-8:2 FTS	25-200
d3NMFOS = d3-NMeFOSAA	10-200
C6PFDA = 13C6 PFDA	20-140
d5NEFOS = d5-NEtFOSAA	10-200
C8PFOS = 13C8 PFOS	20-140

Column to be used to flag recovery values

FORM II 1633

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	13C7PUA #	PFDoDA #	PFOSA #	PFTDA #	NMFM #	d3NMFSA #	NEFM #	d5NPFSA #
	LCS 240-627485/3-A	96.0	93.7	98.0	72.2	97.4	75.3	86.5	69.8
	LLCS 240-627485/2-A	100	92.4	103	73.2	100	75.3	95.8	73.2

	QC LIMITS
13C7PUA = 13C7 PFUnA	20-140
PFDoDA = 13C2-PFDoDA	10-150
PFOSA = 13C8 FOSA	10-130
PFTDA = 13C2 PFTeDA	10-130
NMFM = d7-N-MeFOSE-M	10-150
d3NMFSA = d3-NMePFOSA	10-130
NEFM = d9-N-EtFOSE-M	10-150
d5NPFSA = d5-NEtPFOSA	10-130

Column to be used to flag recovery values

FORM II 1633

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj36.d

Lab ID: LCS 240-627485/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	100	107.3	107	58-148	
Perfluoropentanoic acid (PFPeA)	50.0	53.80	108	54-152	
Perfluorohexanoic acid (PFHxA)	25.0	28.65	115	55-152	
Perfluoroheptanoic acid (PFHpA)	25.0	28.18	113	54-154	
Perfluorooctanoic acid (PFOA)	25.0	29.31	117	52-161	
Perfluorononanoic acid (PFNA)	25.0	25.77	103	59-149	
Perfluorodecanoic acid (PFDA)	25.0	26.59	106	52-147	
Perfluoroundecanoic acid (PFUnA)	25.0	27.26	109	48-159	
Perfluorododecanoic acid (PFDoA)	25.0	23.56	94	64-142	
Perfluorotridecanoic acid (PFTrDA)	25.0	23.41	94	49-148	
Perfluorotetradecanoic acid (PFTeDA)	25.0	26.17	105	47-161	
Perfluorobutanesulfonic acid (PFBS)	22.1	24.73	112	62-144	
Perfluoropentanesulfonic acid (PFPeS)	23.5	27.11	116	59-151	
Perfluorohexanesulfonic acid (PFHxS)	22.8	25.63	113	57-146	
Perfluoroheptanesulfonic acid (PFHpS)	23.8	25.75	108	55-152	
Perfluorooctanesulfonic acid (PFOS)	23.2	22.89	99	58-149	
Perfluorononanesulfonic acid (PFNS)	24.0	23.47	98	52-148	
Perfluorododecanesulfonic acid (PFDoS)	24.2	17.98	74	36-145	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	93.4	95.35	102	67-146	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	94.8	103.5	109	61-151	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	95.8	100.9	105	63-152	
Perfluorooctanesulfonamide (PFOSA)	25.0	29.44	118	61-148	
N-methylperfluorooctane sulfonamide (NMeFOSA)	25.0	29.72	119	63-145	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj36.d

Lab ID: LCS 240-627485/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
N-ethylperfluorooctane sulfonamide (NEtFOSA)	25.0	30.74	123	65-139	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	27.27	109	58-144	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	25.91	104	59-146	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	250	257.2	103	71-136	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	250	277.1	111	69-137	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	100	101.3	101	63-144	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	94.2	106.4	113	68-146	
Perfluoro-4-methoxybutanoic acid (PFMBA)	50.0	50.54	101	55-148	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50.0	61.26	123	48-161	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	93.2	91.23	98	56-156	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	94.2	88.02	93	46-156	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44.5	51.10	115	56-151	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	125	115.7	93	62-129	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	625	537.8	86	63-134	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	625	598.2	96	50-138	
13C4 PFBA	100	91.08	91.1	10-130	
13C5 PFPeA	50.0	42.03	84.1	40-150	
13C5 PFHxA	25.0	19.79	79.2	40-150	
13C4 PFHpA	25.0	20.37	81.5	40-150	
13C8 PFOA	25.0	20.97	83.9	30-140	
13C9 PFNA	12.5	12.90	103	30-140	
13C6 PFDA	12.5	13.44	107	20-140	
13C7 PFUnA	12.5	11.99	96.0	20-140	
13C2 PFTeDA	12.5	9.031	72.2	10-130	
13C3 PFBS	23.3	22.63	97.3	25-150	
13C3 PFHxS	23.7	23.88	101	25-150	
13C8 PFOS	23.9	25.35	106	20-140	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj36.d

Lab ID: LCS 240-627485/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C8 FOSA	25.0	24.50	98.0	10-130	
d3-NMeFOSAA	50.0	53.71	107	10-200	
d5-NEtFOSAA	50.0	54.22	108	10-200	
M2-4:2 FTS	46.7	64.09	137	25-200	
M2-6:2 FTS	47.5	59.54	125	25-200	
M2-8:2 FTS	47.9	60.49	126	25-200	
13C3 HFPO-DA	100	84.72	84.7	25-160	
d7-N-MeFOSE-M	250	243.5	97.4	10-150	
d9-N-EtFOSE-M	250	216.2	86.5	10-150	
d5-NEtPFOSA	25.0	17.45	69.8	10-130	
d3-NMePFOSA	25.0	18.83	75.3	10-130	
Perfluorodecanesulfonic acid (PFDS)	24.1	23.20	96	51-147	
Perfluoro-3-methoxypropanoic acid (PFMPA)	50.0	50.13	100	51-145	
13C2-PFDoDA	12.5	11.71	93.7	10-150	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj35.d

Lab ID: LLCS 240-627485/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	8.00	8.073	101	44-157	
Perfluoropentanoic acid (PFPeA)	4.00	4.221	106	57-148	
Perfluorohexanoic acid (PFHxA)	2.00	2.471	124	62-149	
Perfluoroheptanoic acid (PFHpA)	2.00	2.136	107	56-150	
Perfluorooctanoic acid (PFOA)	2.00	2.189	109	57-161	
Perfluorononanoic acid (PFNA)	2.00	2.207	110	53-157	
Perfluorodecanoic acid (PFDA)	2.00	2.360	118	43-158	
Perfluoroundecanoic acid (PFUnA)	2.00	1.871 J	94	50-155	
Perfluorododecanoic acid (PFDoA)	2.00	1.914 J	96	60-141	
Perfluorotridecanoic acid (PFTrDA)	2.00	1.912 J	96	52-140	
Perfluorotetradecanoic acid (PFTeDA)	2.00	2.468	123	52-156	
Perfluorobutanesulfonic acid (PFBS)	1.77	1.837 J	104	63-145	
Perfluoropentanesulfonic acid (PFPeS)	1.88	2.062	110	58-144	
Perfluorohexanesulfonic acid (PFHxS)	1.82	2.090	115	44-158	
Perfluoroheptanesulfonic acid (PFHpS)	1.90	1.940 J	102	51-150	
Perfluorooctanesulfonic acid (PFOS)	1.86	1.874 J	101	43-162	
Perfluorononanesulfonic acid (PFNS)	1.92	1.870 J	97	46-151	
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.564 J	81	30-138	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.47	7.596 J	102	52-158	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.58	7.867 J	104	48-158	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.66	8.544	111	46-165	
Perfluorooctanesulfonamide (PFOSA)	2.00	2.346	117	47-163	
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.00	2.425	121	54-155	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj35.d

Lab ID: LLCS 240-627485/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	2.106	105	49-156	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.047	102	32-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.093	105	51-154	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.64	108	56-151	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.28 J	96	60-147	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	8.00	8.241	103	58-154	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.54	8.827	117	61-148	
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.244	106	49-154	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.446	111	47-160	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	7.46	7.366 J	99	44-167	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	7.54	7.458 J	99	36-158	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.56	3.842 J	108	56-144	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	10.0	9.412 J	94	32-161	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	50.0	41.83 J	84	39-156	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50.0	47.94 J	96	36-149	
13C4 PFBA	100	91.42	91.4	10-130	
13C5 PFPeA	50.0	40.74	81.5	40-150	
13C5 PFHxA	25.0	19.37	77.5	40-150	
13C4 PFHpA	25.0	20.40	81.6	40-150	
13C8 PFOA	25.0	21.62	86.5	30-140	
13C9 PFNA	12.5	12.13	97.1	30-140	
13C6 PFDA	12.5	13.81	110	20-140	
13C7 PFUnA	12.5	12.53	100	20-140	
13C2 PFTeDA	12.5	9.150	73.2	10-130	
13C3 PFBS	23.3	24.01	103	25-150	
13C3 PFHxS	23.7	22.90	96.8	25-150	
13C8 PFOS	23.9	24.86	104	20-140	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2024_09_18solidwatinj35.d

Lab ID: LLCS 240-627485/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
13C8 FOSA	25.0	25.72	103	10-130	
d3-NMeFOSAA	50.0	54.09	108	10-200	
d5-NEtFOSAA	50.0	57.72	115	10-200	
M2-4:2 FTS	46.7	66.45	142	25-200	
M2-6:2 FTS	47.5	65.45	138	25-200	
M2-8:2 FTS	47.9	59.23	124	25-200	
13C3 HFPO-DA	100	77.21	77.2	25-160	
d7-N-MeFOSE-M	250	250.8	100	10-150	
d9-N-EtFOSE-M	250	239.6	95.8	10-150	
d5-NEtPFOSA	25.0	18.31	73.2	10-130	
d3-NMePFOSA	25.0	18.82	75.3	10-130	
Perfluorodecanesulfonic acid (PFDS)	1.93	1.962 J	102	50-144	
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.969 J	99	48-150	
13C2-PFDoDA	12.5	11.55	92.4	10-150	

Column to be used to flag recovery and RPD values

FORM III 1633

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab File ID: 2024_09_18solidwatinj34.d Lab Sample ID: MB 240-627485/1-A

Matrix: Water Date Extracted: 09/18/2024 10:06

Instrument ID: LCMS04 Date Analyzed: 09/18/2024 23:52

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LLCS 240-627485/2-A	2024_09_18solidwatinj35.d	09/19/2024 00:06
	LCS 240-627485/3-A	2024_09_18solidwatinj36.d	09/19/2024 00:19
RXMW-1_P	460-311364-1	2024_09_18solidwatinj37.d	09/19/2024 00:33
RXMW-5_P	460-311364-2	2024_09_18solidwatinj38.d	09/19/2024 00:47
FB_09132024_P	460-311364-3	2024_09_18solidwatinj39.d	09/19/2024 01:00
RXMW-5_P DU	460-311364-2 DU	2024_09_18solidwatinj50.d	09/19/2024 03:30

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Calibration Start Date: 09/10/2024 17:12

GC Column: ID: () Calibration End Date: 09/10/2024 18:34

Calibration ID: 75783

		13C3PFBA		PFHxA		PFOA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		2033637	3.58	1206340	4.75	236968	5.65
UPPER LIMIT		4067274	3.98	2412680	5.15	473936	6.05
LOWER LIMIT		610091	3.18	361902	4.35	71090	5.25
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 240-626514/8		2413804	3.57	1366609	4.75	281665	5.65
ICV 240-626514/9		2374121	3.57	1486971	4.76	241159	5.65

13C3PFBA = 13C3-PFBA
PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA

Area Limit = 30%-200% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Calibration Start Date: 09/10/2024 17:12

GC Column: ID: () Calibration End Date: 09/10/2024 18:34

Calibration ID: 75783

		PFHxS		PFNA		PFDA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1587266	5.88	851724	6.08	685890	6.52
UPPER LIMIT		3174532	6.28	1703448	6.48	1371780	6.92
LOWER LIMIT		476180	5.48	255517	5.68	205767	6.12
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 240-626514/8		1853110	5.88	1075532	6.09	809189	6.52
ICV 240-626514/9		1690125	5.88	1018574	6.09	801193	6.52

PFHxS = 18O2 PFHxS
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA

Area Limit = 30%-200% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Calibration Start Date: 09/10/2024 17:12

GC Column: ID: () Calibration End Date: 09/10/2024 18:34

Calibration ID: 75783

		PFOS					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1402951	6.79				
UPPER LIMIT		2805902	7.19				
LOWER LIMIT		420885	6.39				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 240-626514/8		1629593	6.79				
ICV 240-626514/9		1575282	6.79				

PFOS = 13C4 PFOS

Area Limit = 30%-200% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-1_P | Lab Sample ID: 460-311364-1

Matrix: Water | Lab File ID: 2024_09_18solidwatinj37.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:05

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 159.9(mL) | Date Analyzed: 09/19/2024 00:33

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	11.3		6.25	1.67
2706-90-3	Perfluoropentanoic acid (PFPeA)	7.35		3.13	0.78
307-24-4	Perfluorohexanoic acid (PFHxA)	11.4		1.56	0.39
375-85-9	Perfluoroheptanoic acid (PFHpA)	10.5		1.56	0.39
335-67-1	Perfluorooctanoic acid (PFOA)	377		1.56	0.39
375-95-1	Perfluorononanoic acid (PFNA)	4.78		1.56	0.39
335-76-2	Perfluorodecanoic acid (PFDA)	1.56	U	1.56	0.39
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.56	U	1.56	0.39
307-55-1	Perfluorododecanoic acid (PFDoA)	1.56	U	1.56	0.39
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.56	U	1.56	0.39
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.56	U	1.56	0.39
375-73-5	Perfluorobutanesulfonic acid (PFBS)	6.61		1.56	0.39
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.56	U	1.56	0.39
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	7.67		1.56	0.40
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.81	J	1.56	0.39
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	15.6		1.56	0.39
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.56	U	1.56	0.39
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.56	U	1.56	0.39
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.25	U	6.25	1.56
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.25	U	6.25	1.56
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.25	U	6.25	1.56
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.56	U	1.56	0.39
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.56	U	1.56	0.39
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.56	U	1.56	0.39
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.56	U	1.56	0.48

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-1_P | Lab Sample ID: 460-311364-1

Matrix: Water | Lab File ID: 2024_09_18solidwatinj37.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:05

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 159.9(mL) | Date Analyzed: 09/19/2024 00:33

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.56	U	1.56	0.41
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	15.6	U	15.6	3.91
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	15.6	U	15.6	3.91
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.01	J	6.25	1.56
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.25	U	6.25	1.56
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.13	U	3.13	0.78
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.13	U	3.13	0.95
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.25	U	6.25	1.56
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.25	U	6.25	1.56
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.13	U	3.13	0.78
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	7.82	U	7.82	1.95
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	39.1	U	39.1	9.77
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	39.1	U	39.1	11.6
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.56	U	1.56	0.39
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.13	U	3.13	0.78

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-1_P | Lab Sample ID: 460-311364-1

Matrix: Water | Lab File ID: 2024_09_18solidwatinj37.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:05

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 159.9(mL) | Date Analyzed: 09/19/2024 00:33

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	94.9		10-130
2283397-79-3	13C5 PFPeA	91.4		35-150
2328024-54-8	13C5 PFHxA	75.7		55-150
2328024-55-9	13C4 PFHpA	85.0		55-150
1350614-84-4	13C8 PFOA	83.3		60-140
2283397-80-6	13C9 PFNA	106		55-140
2328024-56-0	13C6 PFDA	119		50-140
STL02580	13C7 PFUnA	108		30-140
STL02116	13C2 PFTeDA	85.3		10-130
2708218-83-9	13C3 PFBS	112		55-150
2708218-85-1	13C3 PFHxS	107		55-150
2265893-05-6	13C8 PFOS	112		45-140
STL01056	13C8 FOSA	105		30-130
1400690-70-1	d3-NMeFOSAA	105		45-200
1265205-97-7	d5-NEtFOSAA	113		10-200
STL02395	M2-4:2 FTS	149		60-200
STL02279	M2-6:2 FTS	141		60-200
STL02280	M2-8:2 FTS	132		50-200
STL02255	13C3 HFPO-DA	80.8		25-160
STL02277	d7-N-MeFOSE-M	98.8		10-150
STL02278	d9-N-EtFOSE-M	89.5		10-150
STL02704	d5-NEtPFOSA	71.0		10-130
STL02705	d3-NMePFOSA	80.6		15-130
STL02703	13C2-PFDoDA	105		10-150

Report Date: 19-Sep-2024 11:40:47 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj37.d
Lims ID: 460-311364-C-1-A
Client ID: RXMW-1_P
Sample Type: Client
Inject. Date: 19-Sep-2024 00:33:35 ALS Bottle#: 33 Worklist Smp#: 37
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 460-311364-C-1-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-037
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 11:40:45 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 11:40:45
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.568	3.551	0.017		1719214	1.25			451	
* 2 13C2 PFHxA										
315.10 > 270.00	4.740	4.729	0.011		1438892	0.6250			2310	
* 3 13C4 PFOA										
417.10 > 172.00	5.648	5.628	0.020		254832	0.6250			1445	
* 4 18O2 PFHxS										
403.00 > 83.90	5.862	5.852	0.010		1362137	0.5913			3446	
* 5 13C5 PFNA										
468.00 > 423.00	6.072	6.061	0.011		871854	0.3125			1098	
* 6 13C2 PFDA										
515.10 > 470.10	6.517	6.498	0.019		610888	0.3125			1169	
* 7 13C4 PFOS										
502.80 > 79.90	6.788	6.761	0.027		1173749	0.5975	Target=4.00		856	
502.80 > 98.90	6.788	6.761	0.027		301821		3.89(2.00-6.00)		862	
D 8 13C4 PFBA										
216.80 > 171.90	3.560	3.551	0.009	0.998	3702911	2.37		94.9	10223	
D 9 13C5 PFPeA										
268.30 > 223.00	4.221	4.209	0.012	0.890	2065089	1.14		91.4	2077	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.540	4.529	0.011	0.775	1343302	1.74	Target=0.29	149	60.1	
329.10 > 309.00	4.540	4.529	0.011	0.775	3774951		0.36(0.14-0.43)	149	1132	
D 11 13C5 PFHxA										
318.00 > 273.00	4.740	4.729	0.011	1.000	1531204	0.4733	Target=40.21	75.7	1214	
318.00 > 120.30	4.729	4.729	0.0	0.998	40242		38.05(20.11-60.32)	75.7	259	
D 12 13C3 PFBS										
302.10 > 79.90	4.868	4.856	0.012	0.830	1596520	0.6482	Target=3.28	112	140	
302.10 > 98.90	4.868	4.856	0.012	0.830	501070		3.19(1.64-4.92)	112	1695	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.933	4.922	0.011	1.041	1881535	2.02	Target=1.86	80.8	5635	
286.90 > 184.90	4.933	4.922	0.011	1.041	1023764		1.84(0.93-2.78)	80.8	994	
D 14 13C4 PFHpA										
367.10 > 322.00	5.204	5.193	0.011	1.098	1795593	0.5315		85.0	2922	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.426	5.416	0.010	0.926	1476825	1.67	Target=0.38	141	256	
429.10 > 409.00	5.426	5.416	0.010	0.926	3632110		0.41(0.19-0.57)	141	5183	
D 16 13C8 PFOA										
421.10 > 376.00	5.638	5.628	0.010	0.998	1674277	0.5206		83.3	4123	
D 17 13C3 PFHxS										
402.10 > 79.90	5.872	5.852	0.020	1.002	1523815	0.6301	Target=3.25	107	471	
402.10 > 98.80	5.862	5.852	0.010	1.000	461816		3.30(1.63-4.88)	107	1409	
D 18 13C9 PFNA										
472.10 > 427.00	6.072	6.061	0.011	1.000	722991	0.3304		106	1075	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.277	6.258	0.019	1.071	956912	1.58	Target=0.33	132	693	
529.10 > 509.00	6.267	6.258	0.009	1.069	2374578		0.40(0.16-0.49)	132	5382	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.448	6.437	0.011	0.950	1197895	1.32		105	2598	
D 21 13C6 PFDA										
519.10 > 474.10	6.508	6.498	0.010	0.999	701324	0.3728		119	1443	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.653	6.634	0.019	0.980	1265163	1.41		113	2178	
D 23 13C8 PFOS										
507.10 > 79.90	6.788	6.761	0.027	1.000	1356489	0.6702	Target=4.26	112	193	
507.10 > 98.90	6.788	6.761	0.027	1.000	347781		3.90(2.13-6.39)	112	672	
D 24 13C7 PFUnA										
570.00 > 525.10	6.956	6.932	0.024	1.067	623906	0.3370		108	1206	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.391	7.361	0.030	1.134	574976	0.3290		105	1070	
D 26 13C8 FOSA										
506.10 > 77.80	7.710	7.720	-0.010	1.136	1431896	0.6592		105	2856	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.223	8.179	0.044	1.262	266360	0.2666		85.3	614	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.607	8.607	0.0	1.268	1987766	6.17		98.8	580	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.731	-0.010	1.285	215749	0.5036		80.6	778	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.849	8.859	-0.010	1.304	2211404	5.59		89.5	689	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.947	8.956	-0.009	1.318	191481	0.4435		71.0	122	
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.568	3.559	0.009	1.002	507595	0.3607			3.1	M
35 Perfluoropentanoic acid										
263.00 > 219.00	4.221	4.219	0.002	1.000	594732	0.2350			10.4	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorohexanoic acid										
313.00 > 269.00	4.740	4.739	0.001	1.000	708814	0.3640	Target=14.20		10.0	
313.00 > 118.90	4.740	4.739	0.001	1.000	48465		14.63(7.10-21.30)		56.1	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.868	4.856	0.012	1.000	564050	0.2114	Target=3.31		38.1	
298.70 > 98.80	4.868	4.856	0.012	1.000	151973		3.71(1.66-4.97)		265	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.944	4.932	0.012	1.002	79691	0.0961	Target=1.99		295	
284.90 > 184.90	4.933	4.932	0.001	1.000	42557		1.87(1.00-2.99)		37.7	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.204	5.204	0.0	1.000	1041004	0.3353	Target=3.56		13.5	
363.10 > 169.00	5.204	5.204	0.0	1.000	274212		3.80(1.78-5.34)		203	
52 Perfluorooctanoic acid										
413.00 > 369.00	5.648	5.638	0.010	1.002	15508638	12.1	Target=1.93		459	
413.00 > 169.00	5.648	5.638	0.010	1.002	5982728		2.59(0.96-2.89)		3862	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.872	5.862	0.010	1.000	539622	0.2452	Target=3.17		252	M
398.70 > 98.90	5.872	5.862	0.010	1.000	154252		3.50(1.59-4.76)		338	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.081	6.061	0.020	1.002	268066	0.1530	Target=4.77		14.4	M
463.00 > 169.00	6.081	6.061	0.020	1.002	45062		5.95(2.39-7.16)		132	M
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.333	6.314	0.019	0.933	68480	0.0257	Target=3.87		7.9	
449.00 > 98.80	6.333	6.314	0.019	0.933	22276		3.07(1.93-5.80)		21.2	
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.624	6.770	-0.146	0.976	1428111	0.5000	Target=4.80		137	M
498.90 > 98.80	6.788	6.770	0.018	1.000	204536		6.98(2.40-7.20)		308	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

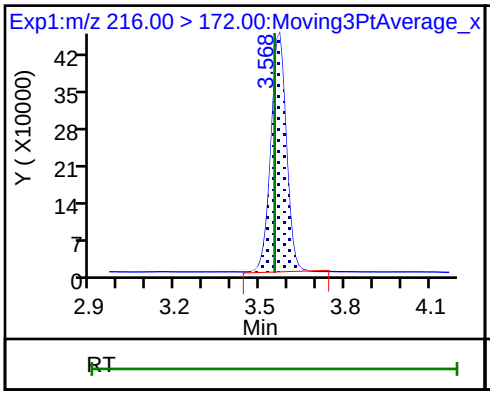
PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 11:40:47 Chrom Revision: 2.3 26-Aug-2024 17:14:48

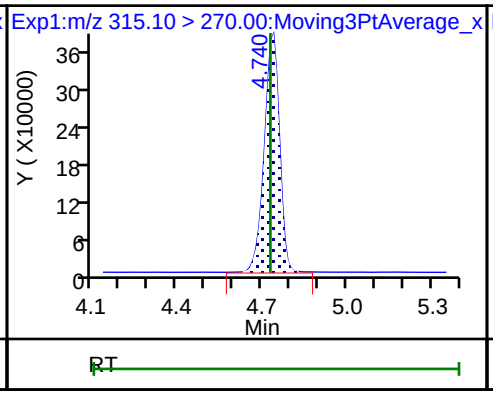
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj37.d
Injection Date: 19-Sep-2024 00:33:35 Instrument ID: LCMS04
Lims ID: 460-311364-C-1-A Lab Sample ID: 240-311364-1
Client ID: RXMW-1_P
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 37
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

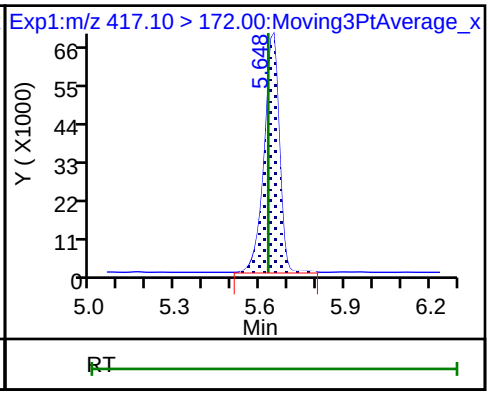
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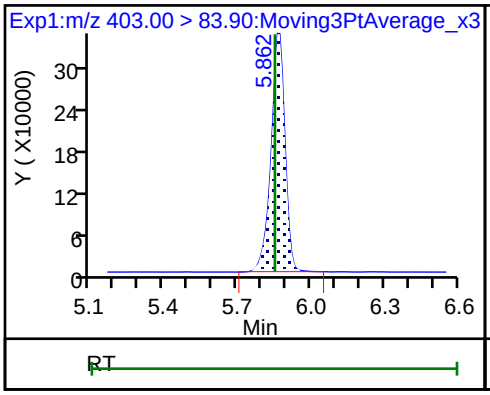
* 2 13C2 PFHxA



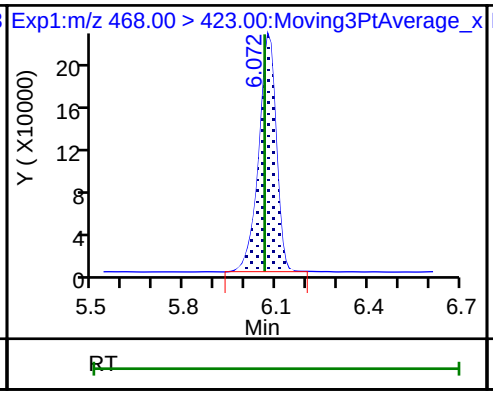
* 3 13C4 PFOA



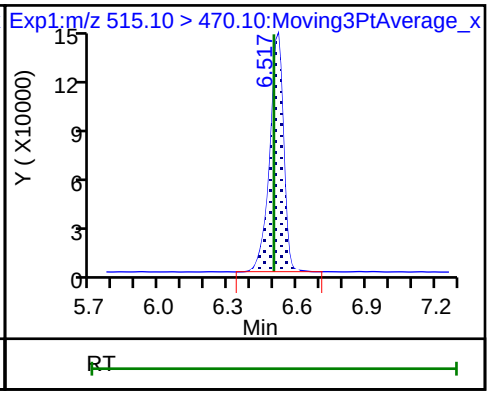
* 4 18O2 PFHxS



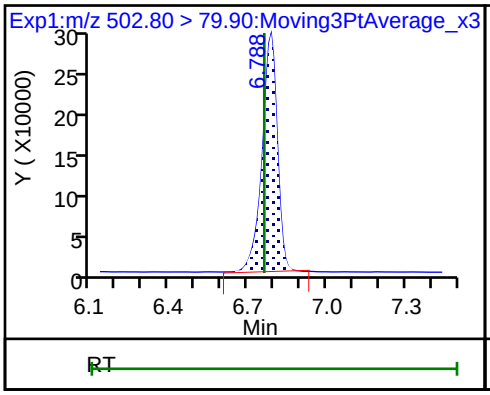
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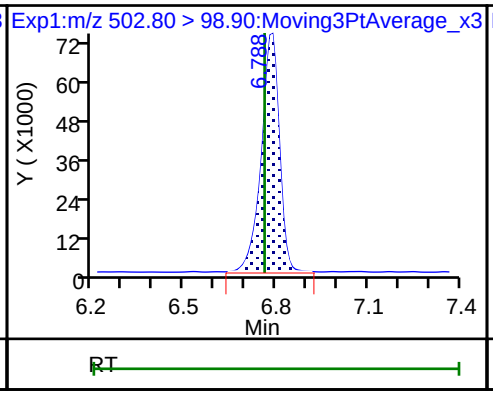
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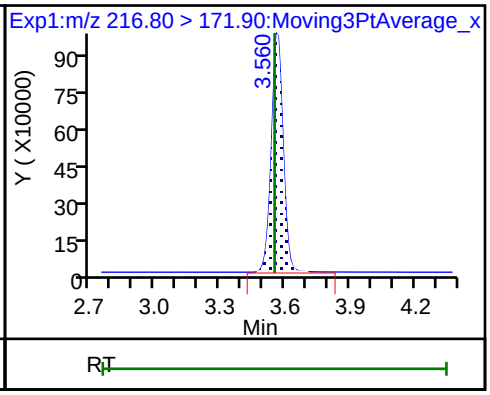
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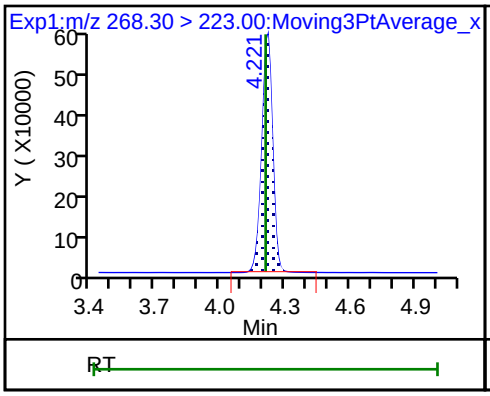
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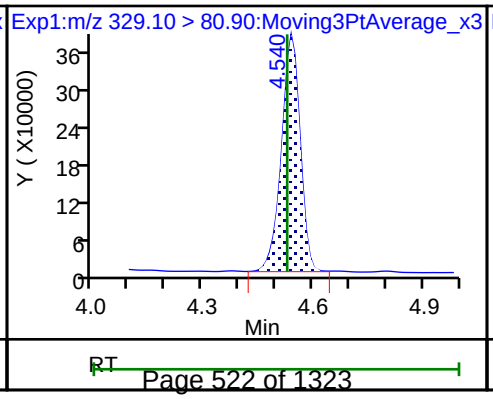
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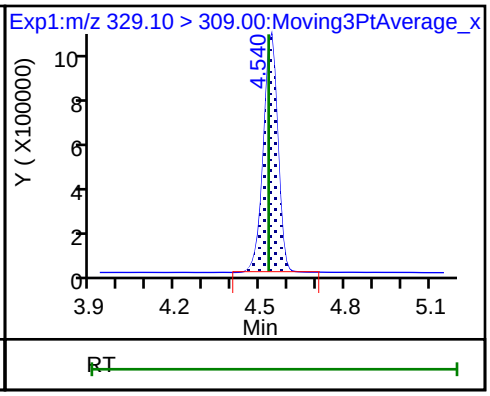
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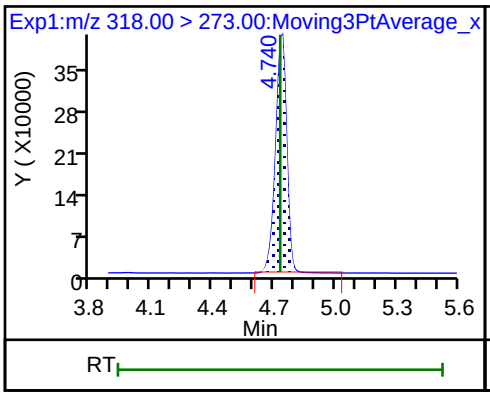
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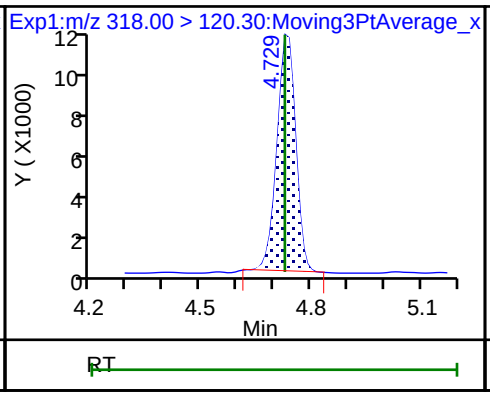
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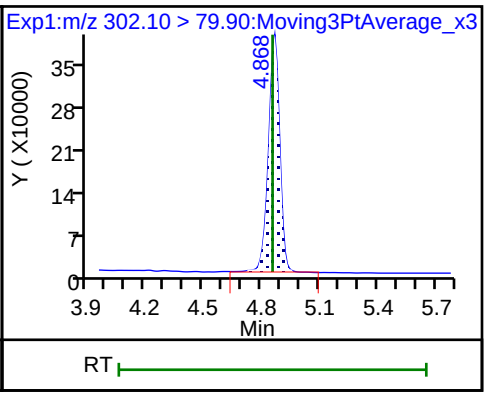
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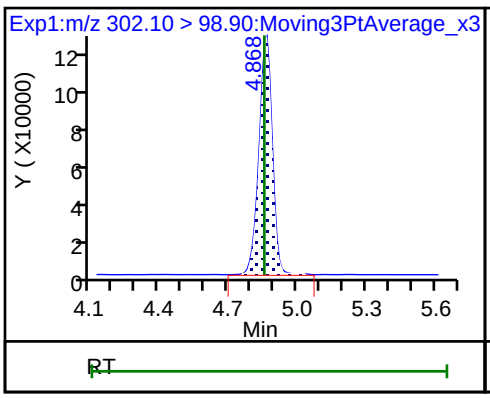
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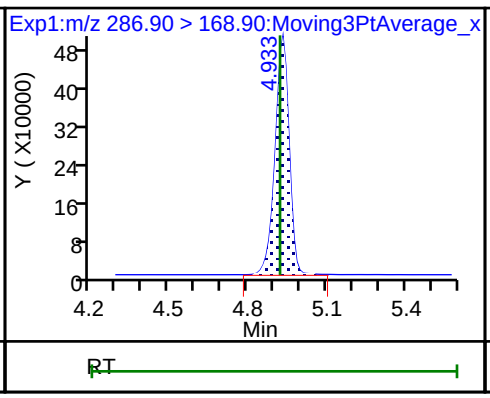
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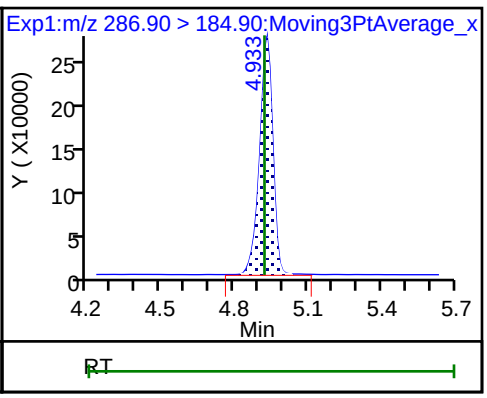
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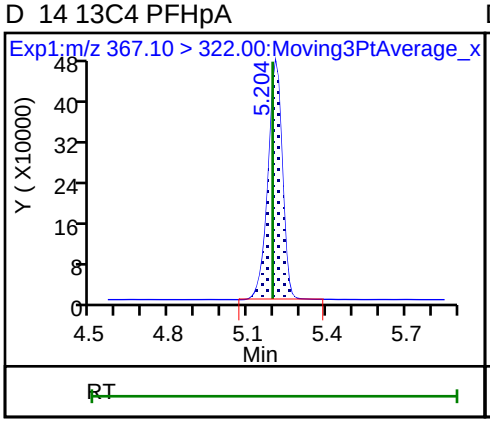
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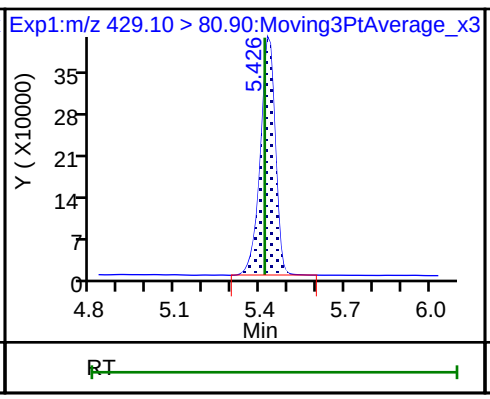
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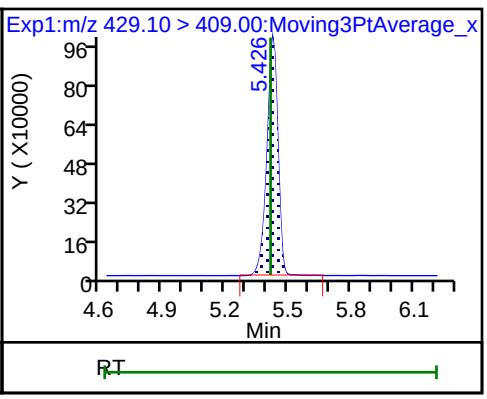
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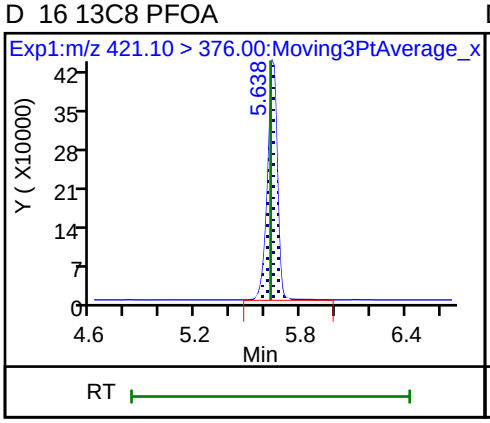
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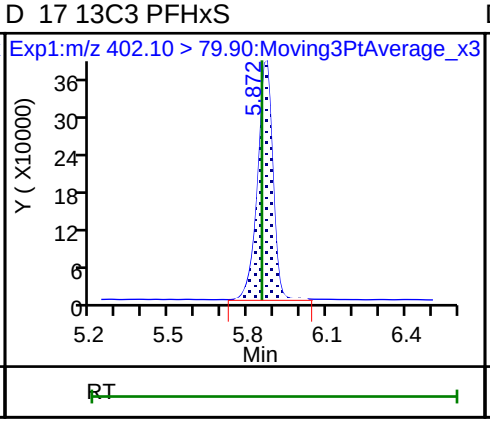
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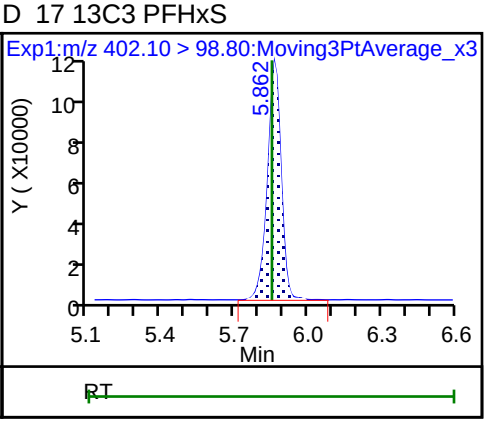
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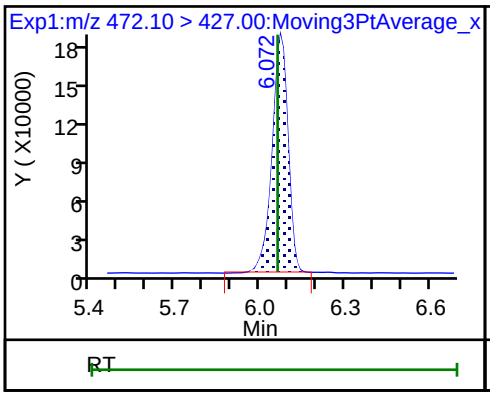
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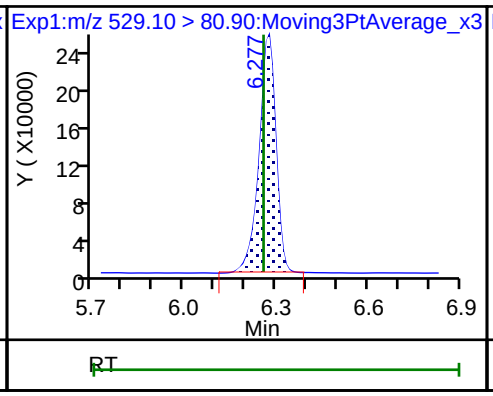
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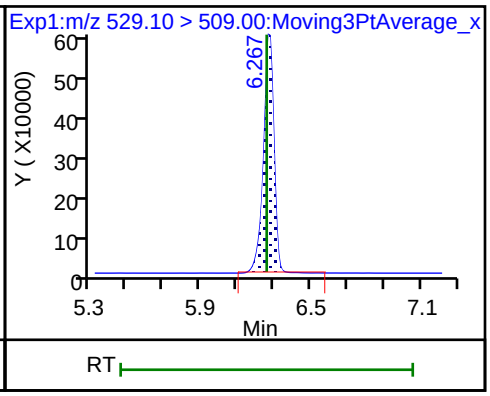
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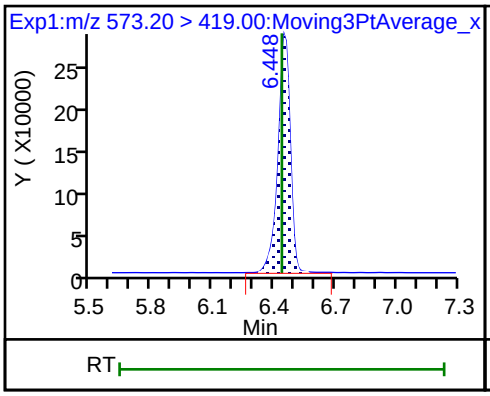
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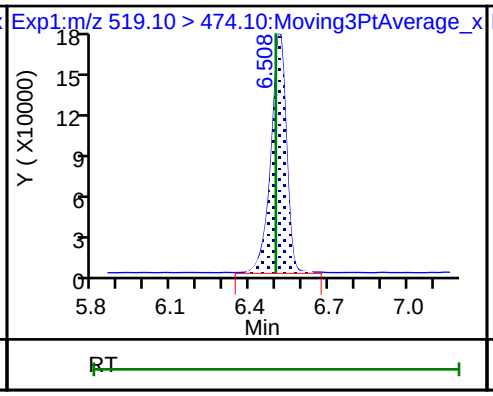
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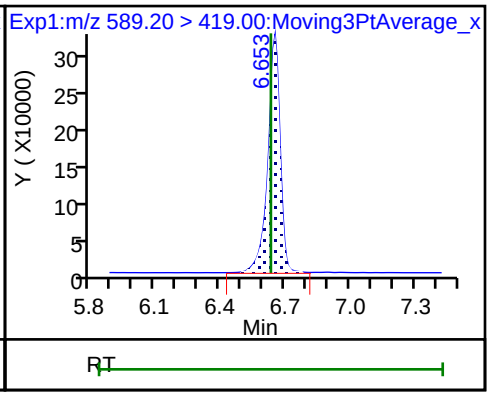
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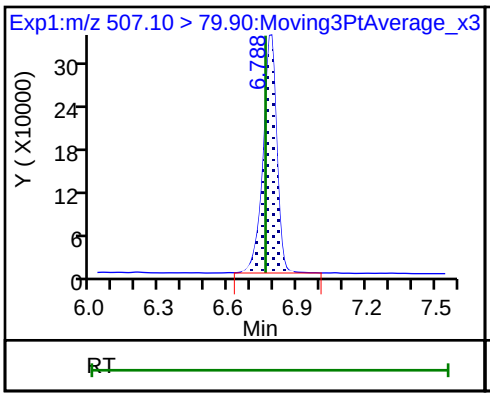
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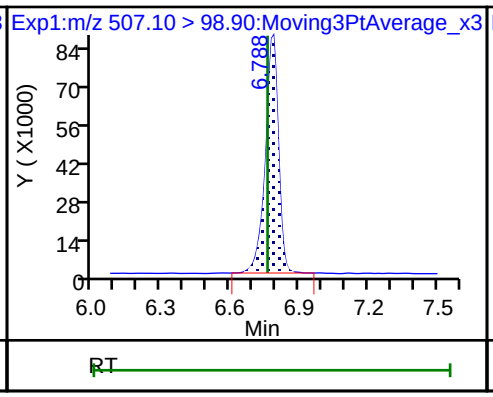
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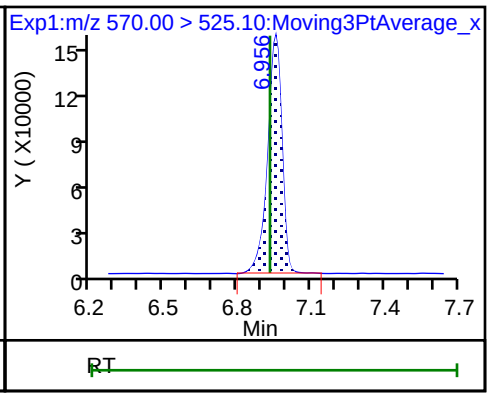
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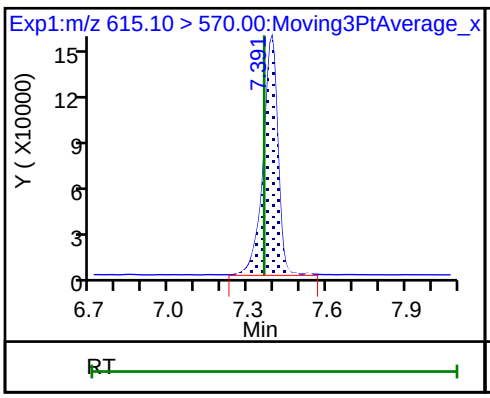
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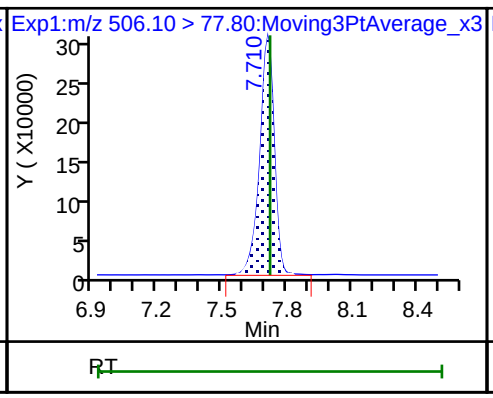
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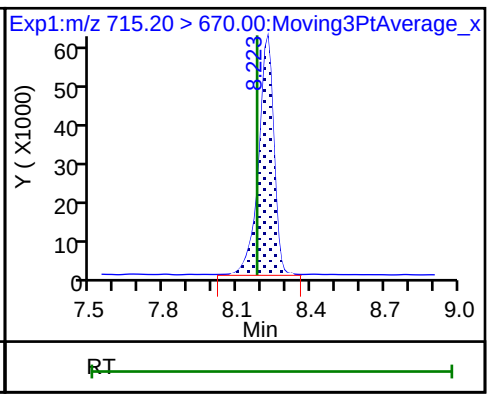
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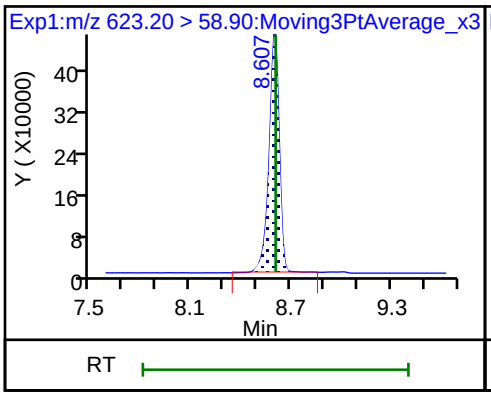
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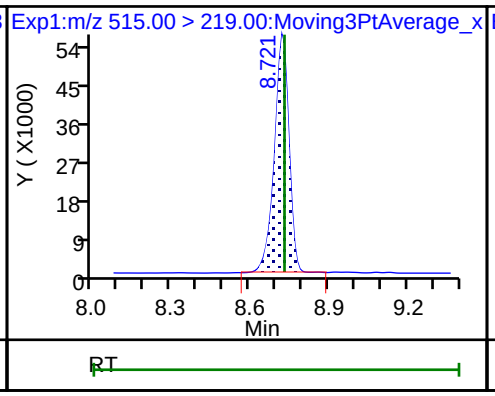
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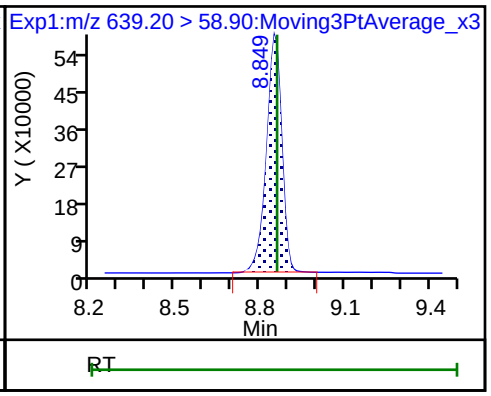
D 28 d7-N-MeFOSE-M



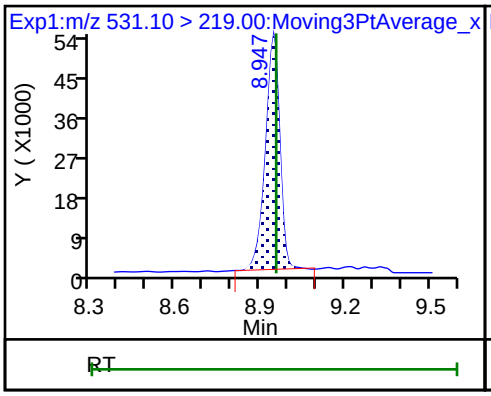
D 29 d3-NMePFOSA



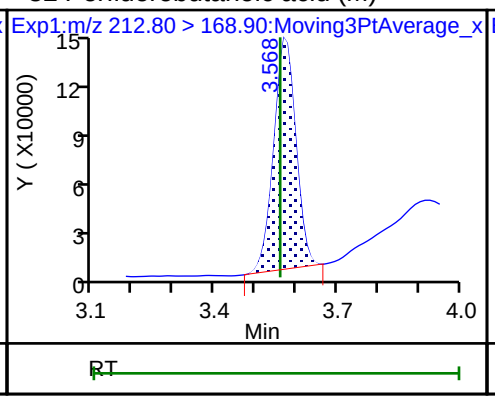
D 30 d9-N-EtFOSE-M



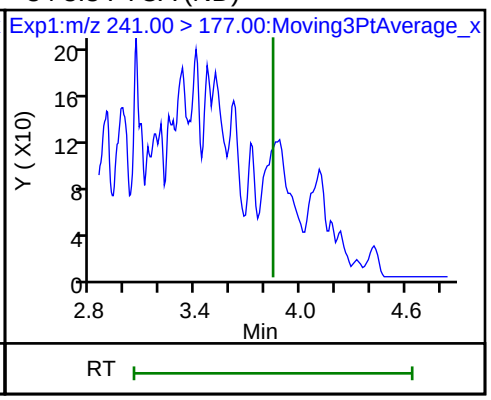
D 31 d5-NEtPFOSA



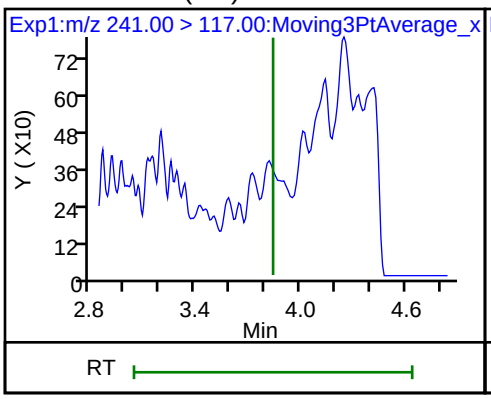
32 Perfluorobutanoic acid (M)



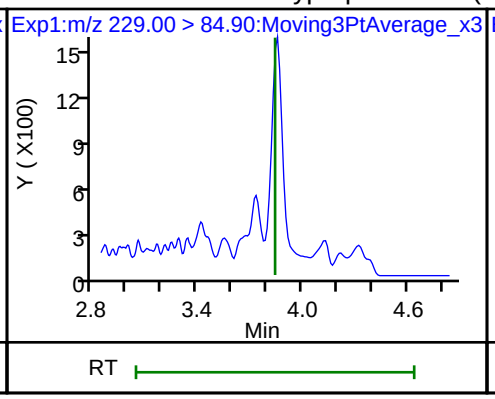
34 3:3 FTCA (ND)



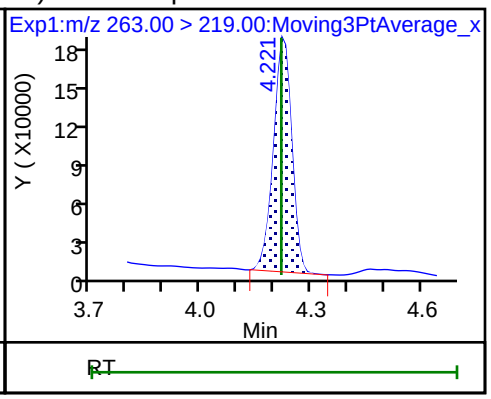
34 3:3 FTCA (ND)



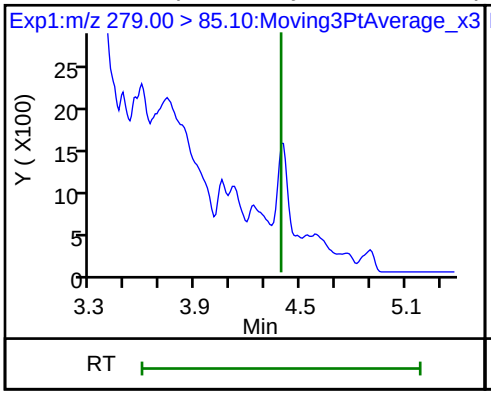
33 Perfluoro-3-methoxypropanoic aci (ND)



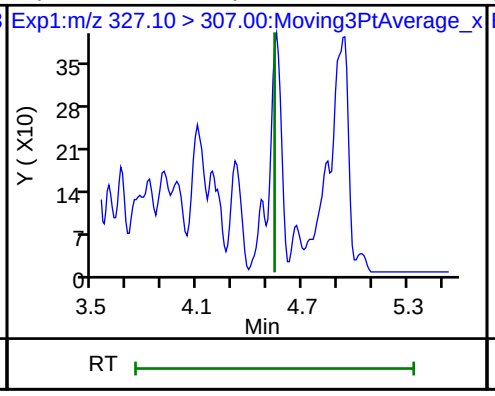
35 Perfluoropentanoic acid



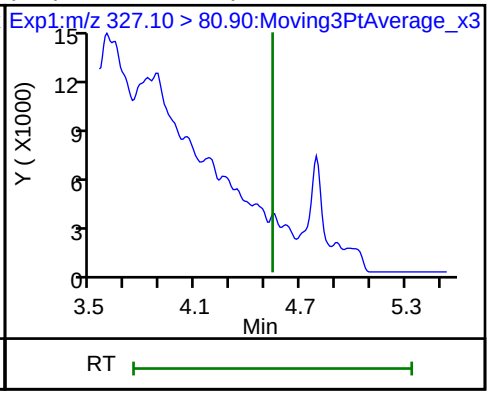
36 Perfluoro(4-methoxybutanoic acid (ND)



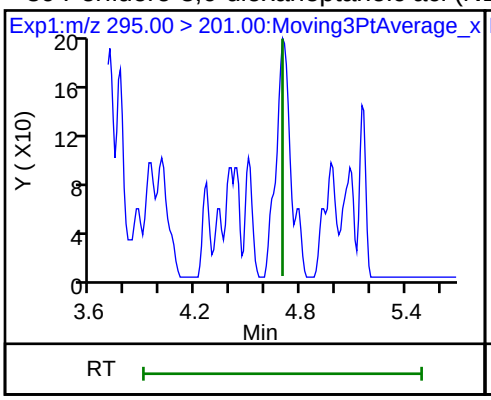
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



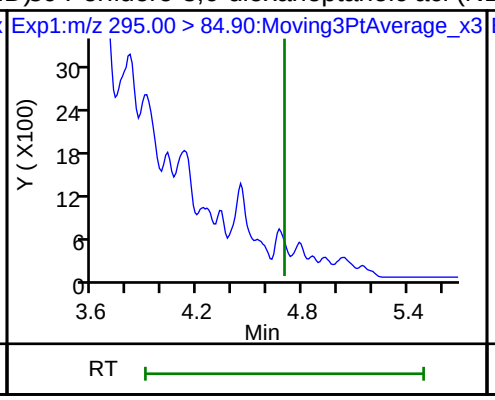
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



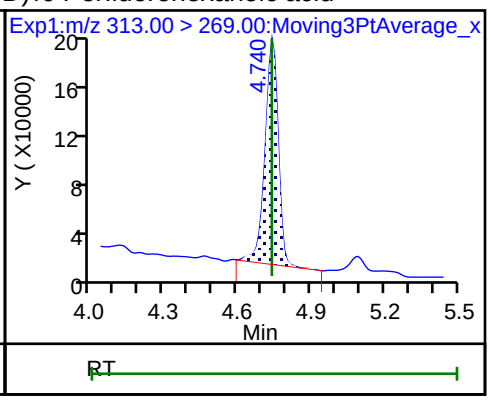
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



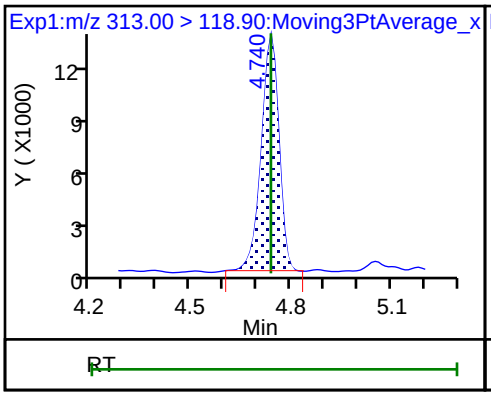
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



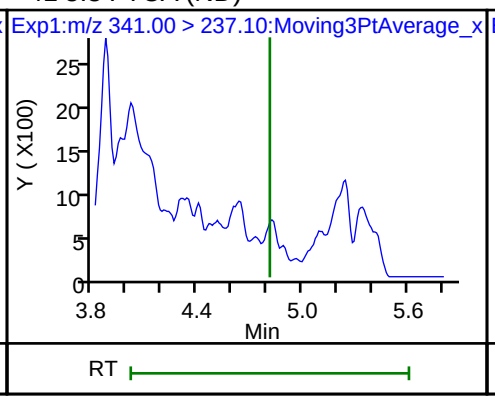
40 Perfluorohexanoic acid



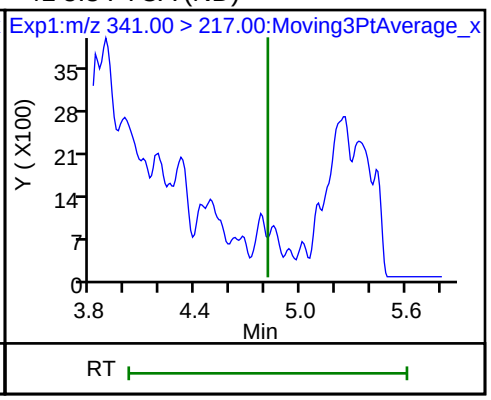
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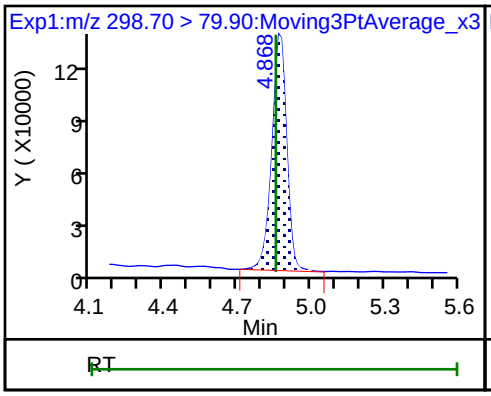
41 5:3 FTCA (ND)



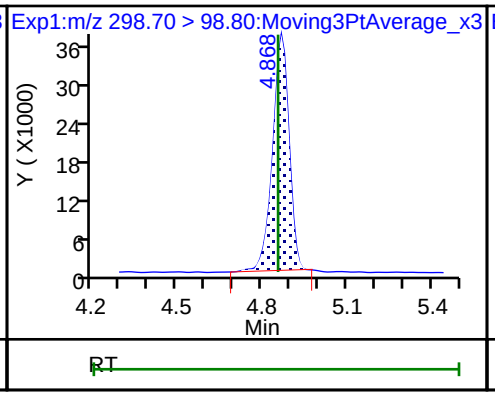
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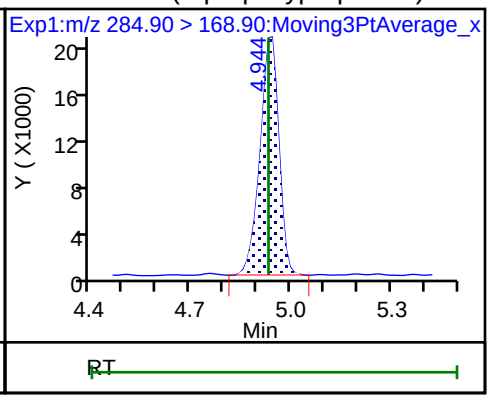
42 Perfluorobutanesulfonic acid



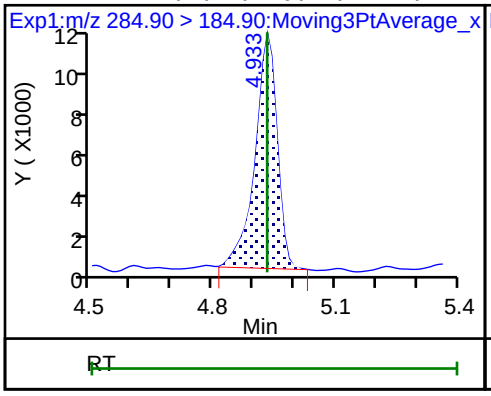
42 Perfluorobutanesulfonic acid



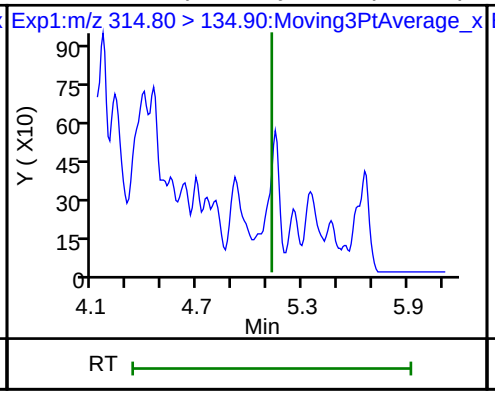
43 Perfluoro(2-propoxypropanoic) ac



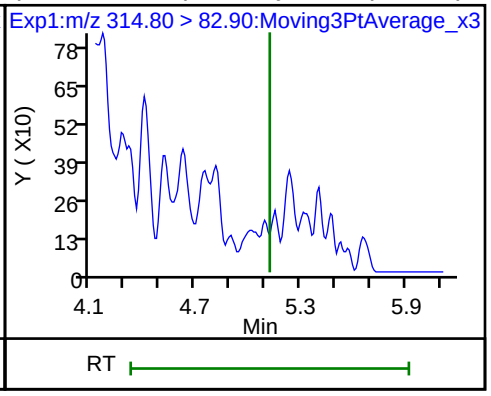
43 Perfluoro(2-propoxypropanoic) ac



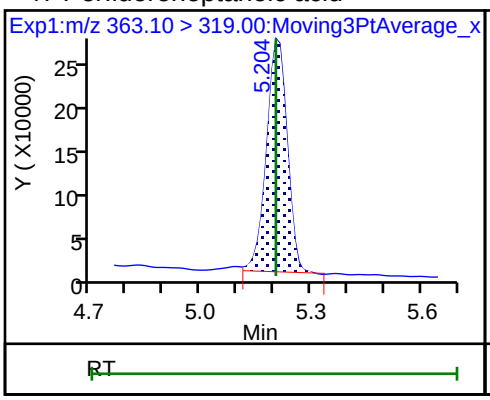
46 Perfluoro (2-ethoxyethane) sulfo (ND)



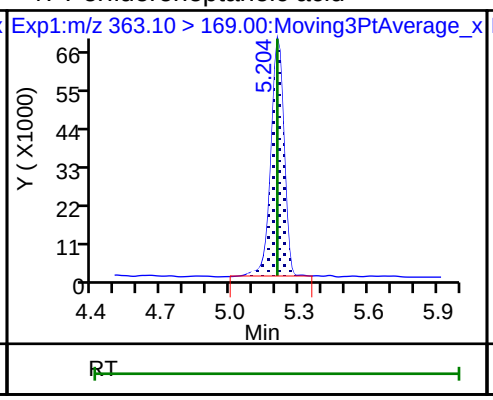
46 Perfluoro (2-ethoxyethane) sulfo (ND)



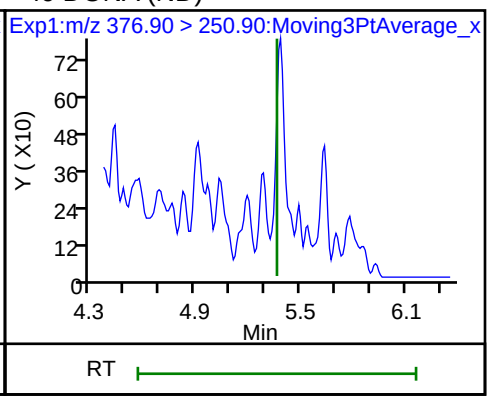
47 Perfluoroheptanoic acid



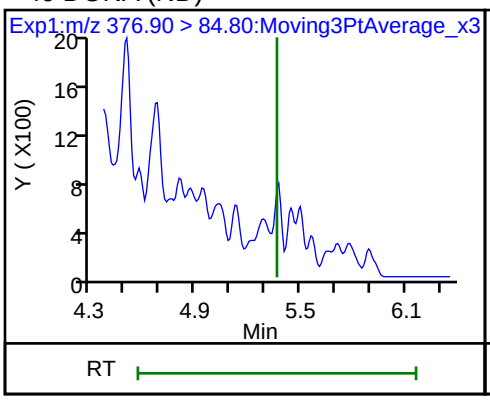
47 Perfluoroheptanoic acid



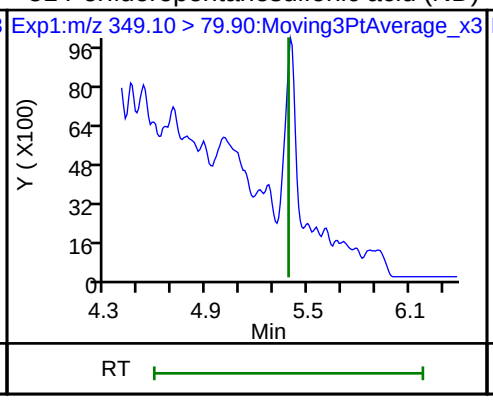
49 DONA (ND)



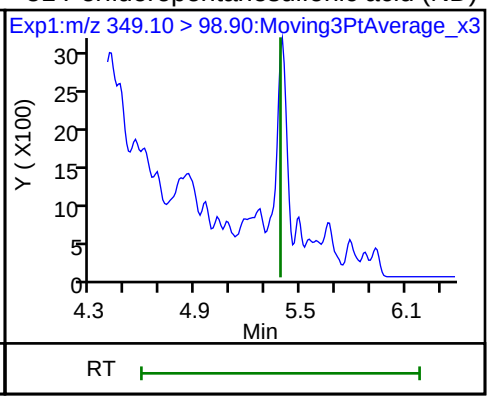
49 DONA (ND)



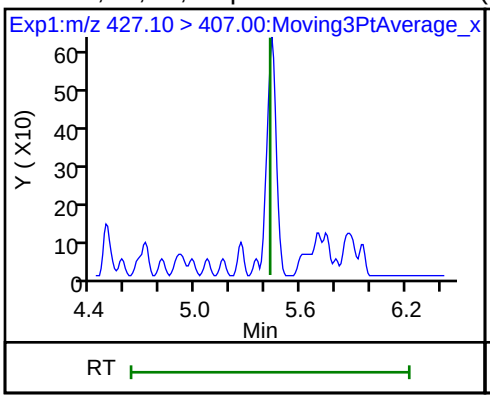
51 Perfluoropentanesulfonic acid (ND)



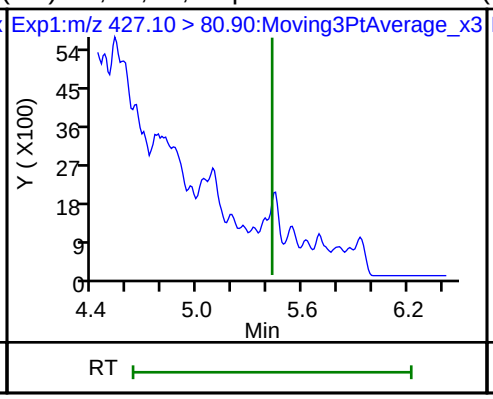
51 Perfluoropentanesulfonic acid (ND)



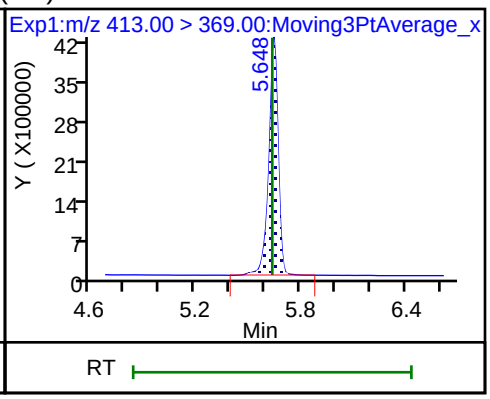
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



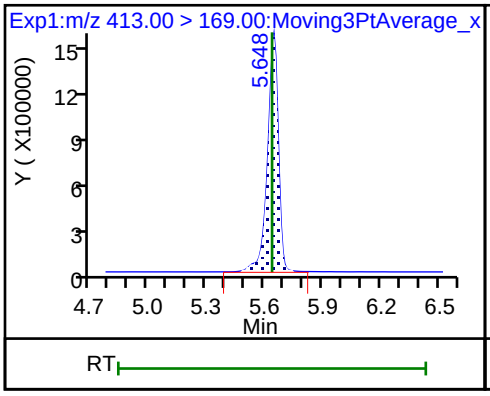
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



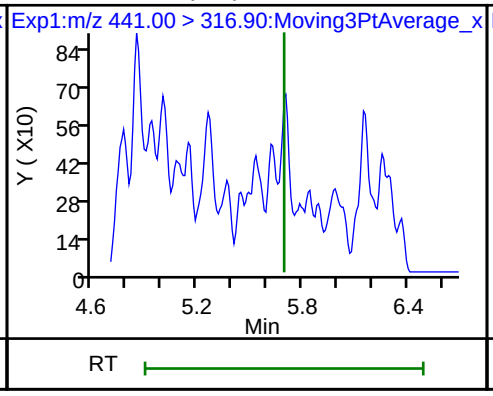
52 Perfluorooctanoic acid



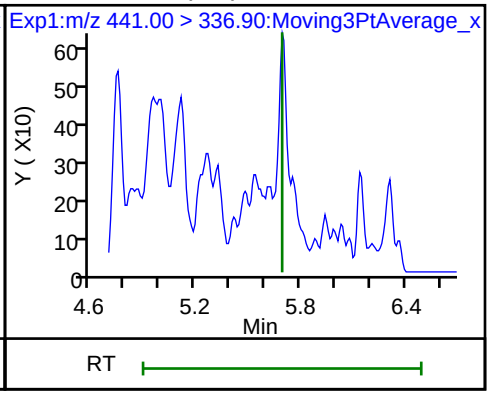
52 Perfluorooctanoic acid



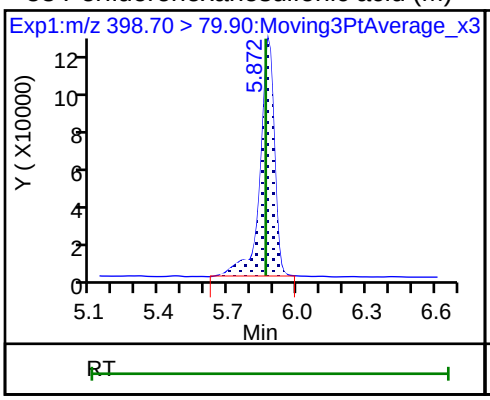
54 7:3 FTCA (ND)



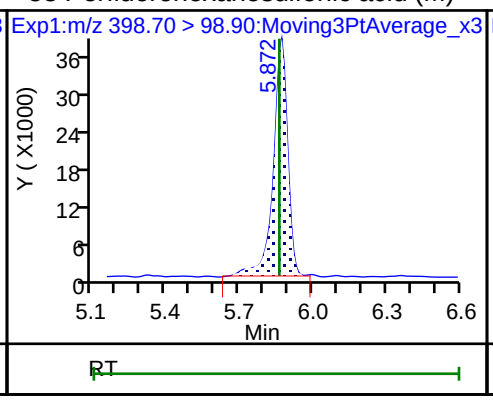
54 7:3 FTCA (ND)



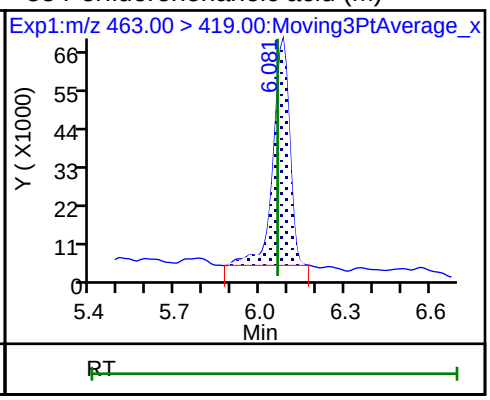
53 Perfluorohexanesulfonic acid (M)



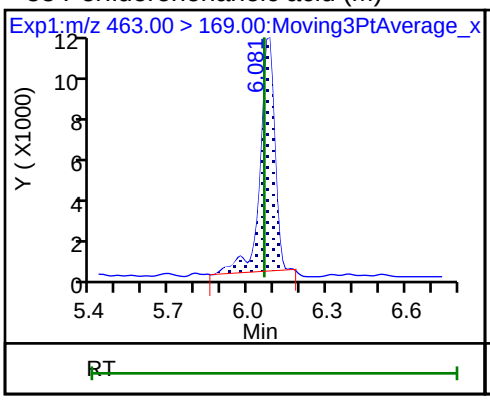
53 Perfluorohexanesulfonic acid (M)



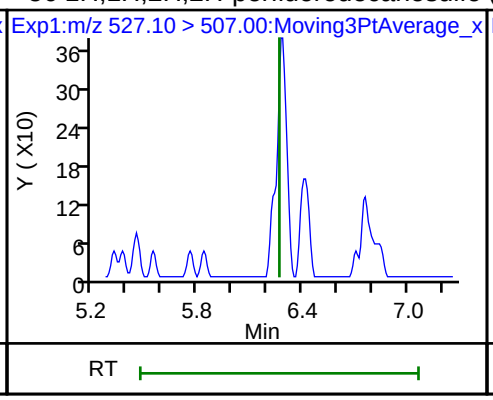
55 Perfluorononanoic acid (M)



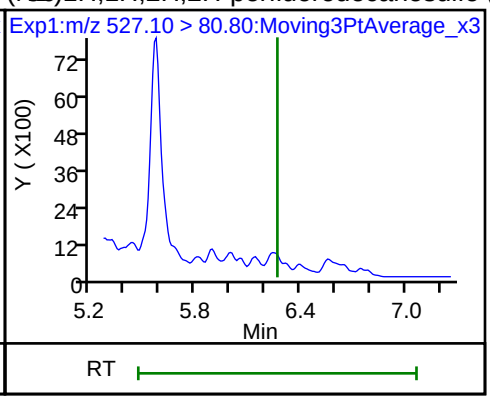
55 Perfluorononanoic acid (M)



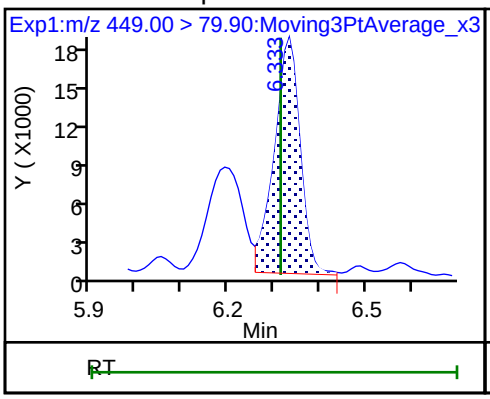
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



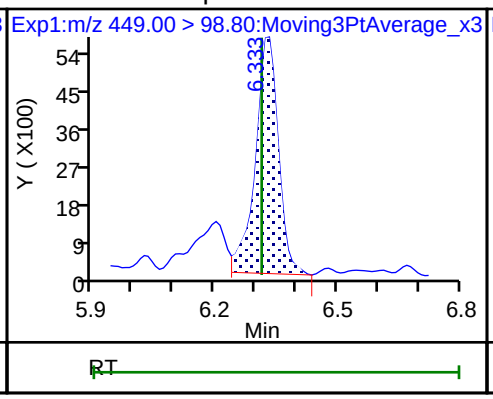
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



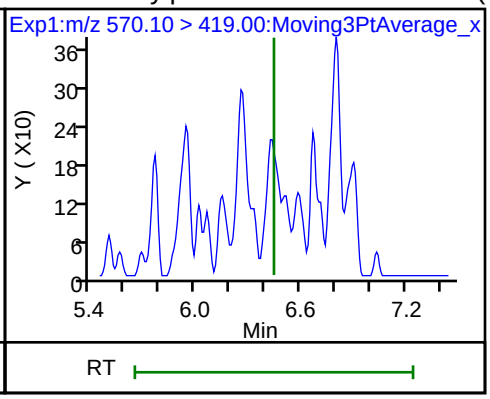
58 Perfluoroheptanesulfonic acid



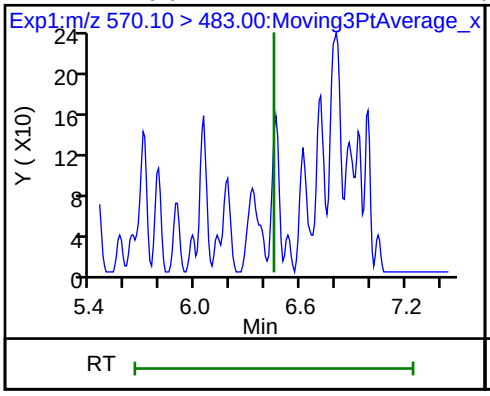
58 Perfluoroheptanesulfonic acid



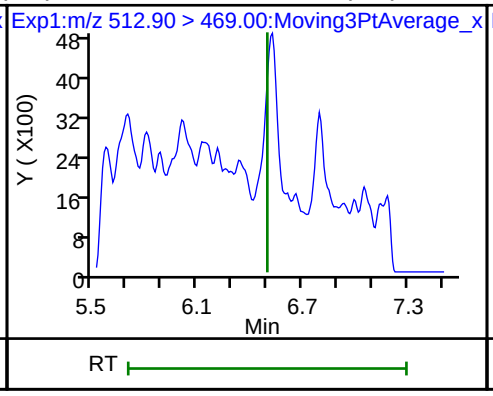
59 N-methylperfluorooctanesulfonami (ND)



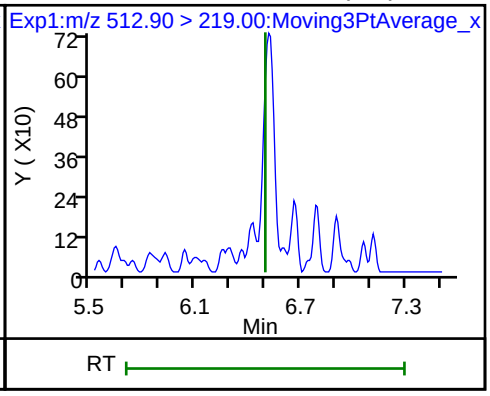
59 N-methylperfluorooctanesulfonami (ND)



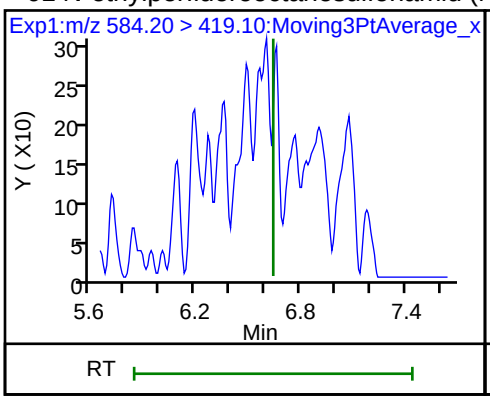
60 Perfluorodecanoic acid (ND)



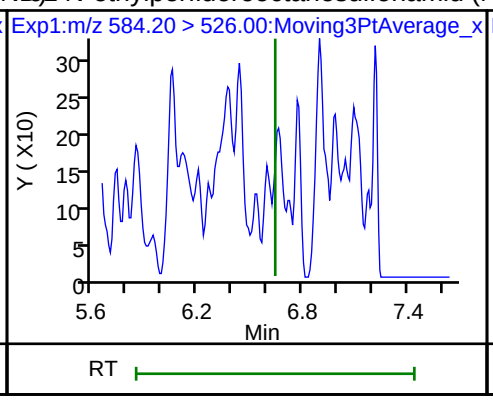
60 Perfluorodecanoic acid (ND)



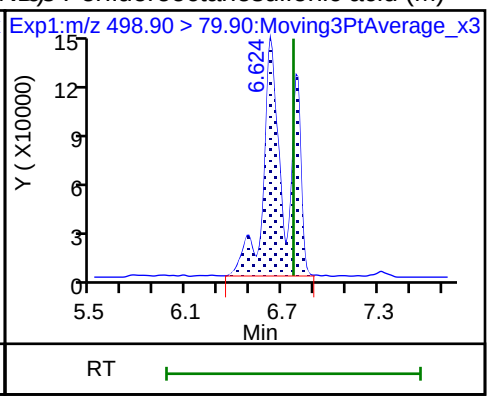
61 N-ethylperfluorooctanesulfonamid (ND)



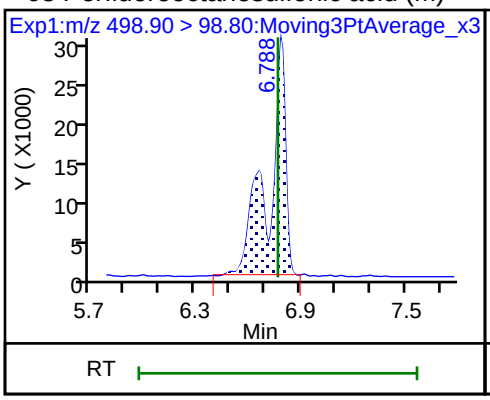
61 N-ethylperfluorooctanesulfonamid (ND)



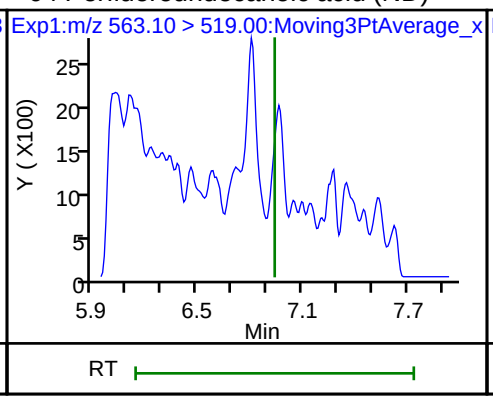
63 Perfluorooctanesulfonic acid (M)



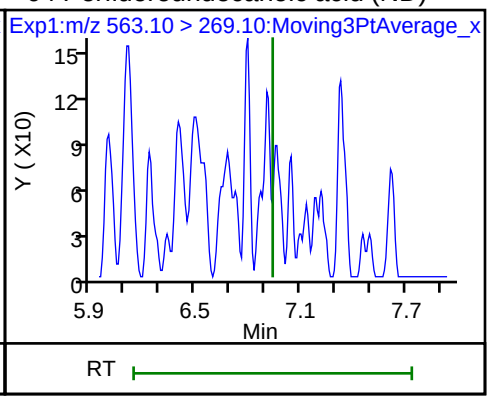
63 Perfluorooctanesulfonic acid (M)



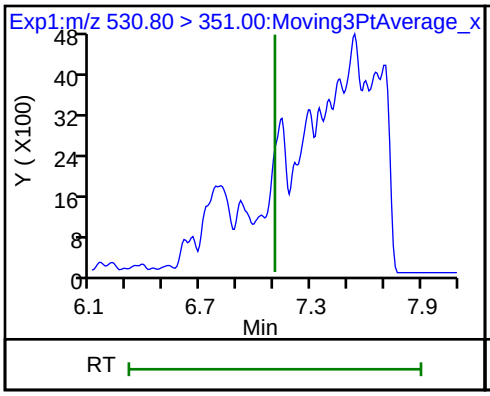
64 Perfluoroundecanoic acid (ND)



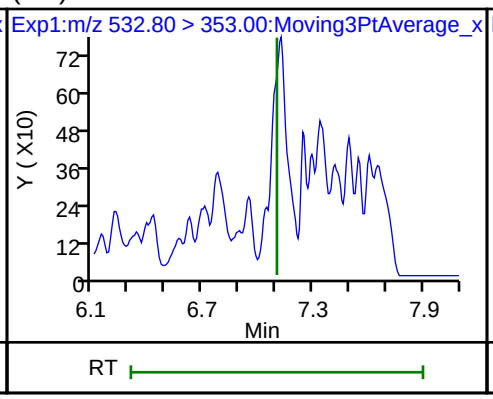
64 Perfluoroundecanoic acid (ND)



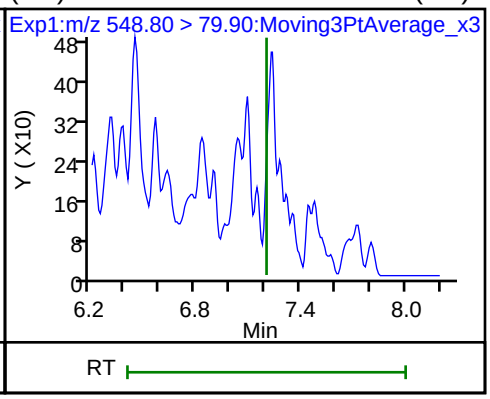
65 9-Chlorohexadecafluoro-3-oxanona (ND)



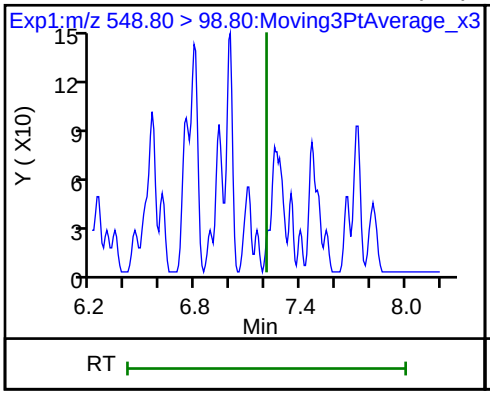
65 9-Chlorohexadecafluoro-3-oxanona (ND)



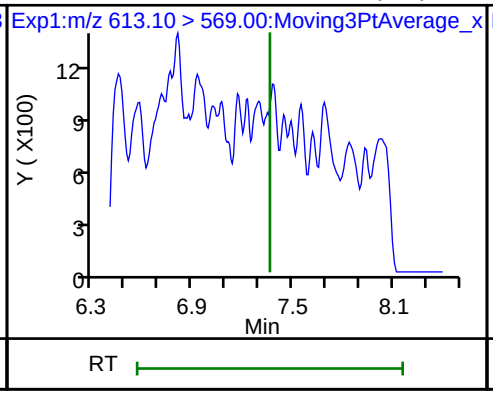
66 Perfluorononanesulfonic acid (ND)



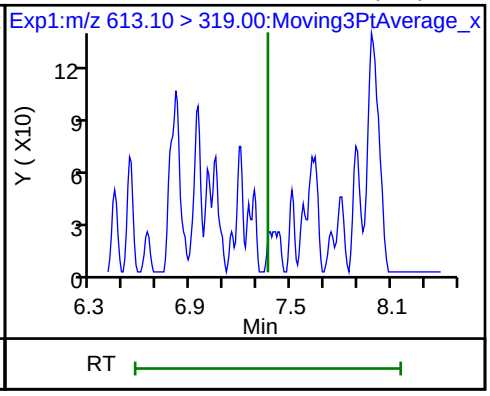
66 Perfluorononanesulfonic acid (ND)



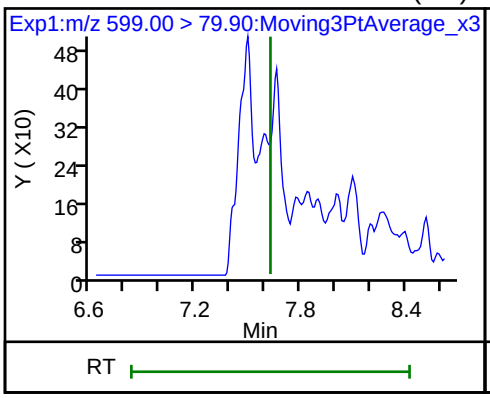
67 Perfluorododecanoic acid (ND)



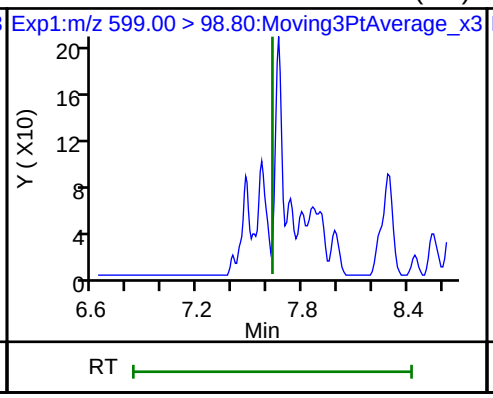
67 Perfluorododecanoic acid (ND)



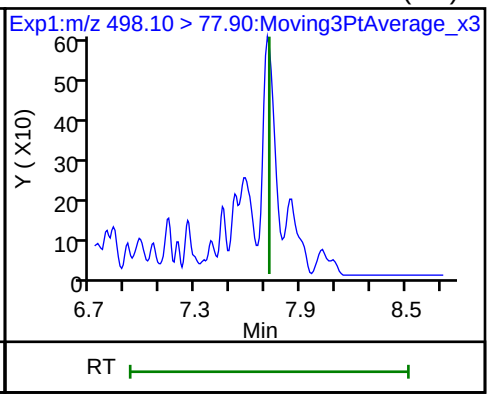
68 Perfluorodecanesulfonic acid (ND)



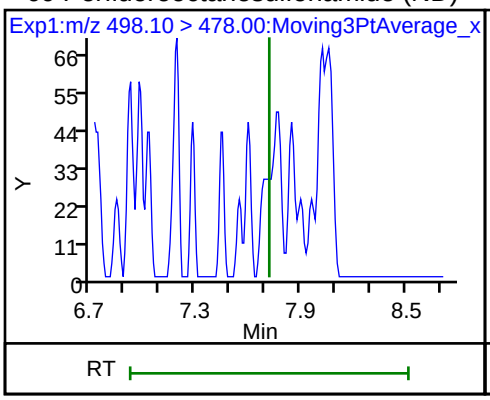
68 Perfluorodecanesulfonic acid (ND)



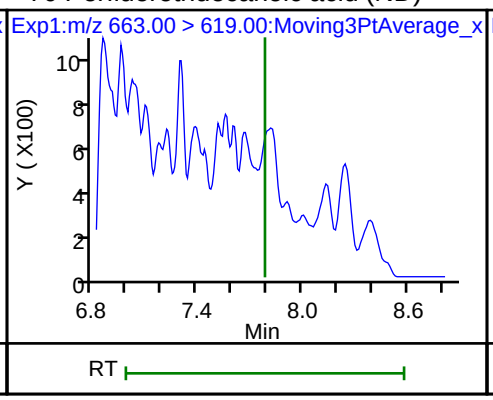
69 Perfluorooctanesulfonamide (ND)



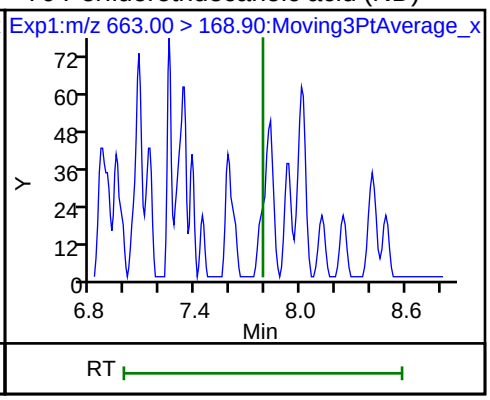
69 Perfluorooctanesulfonamide (ND)



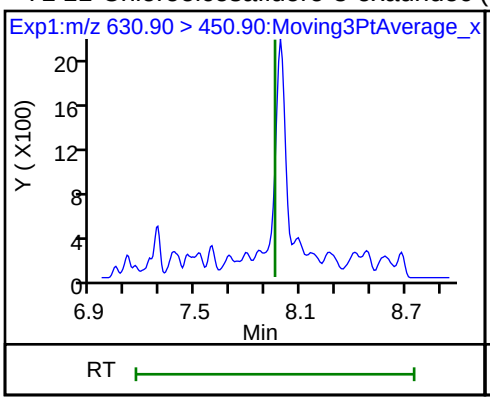
70 Perfluorotridecanoic acid (ND)



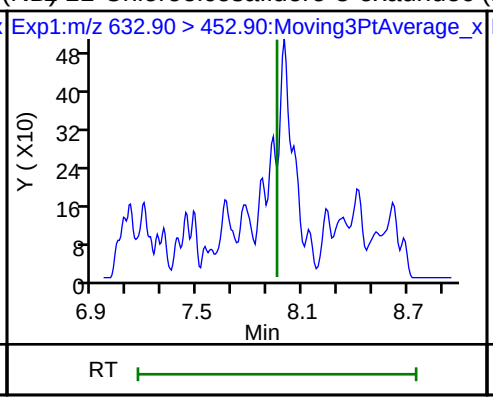
70 Perfluorotridecanoic acid (ND)



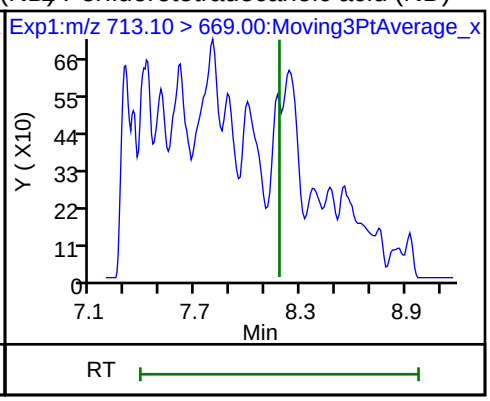
71 11-Chloroeicosafluoro-3-oxaundec (ND)



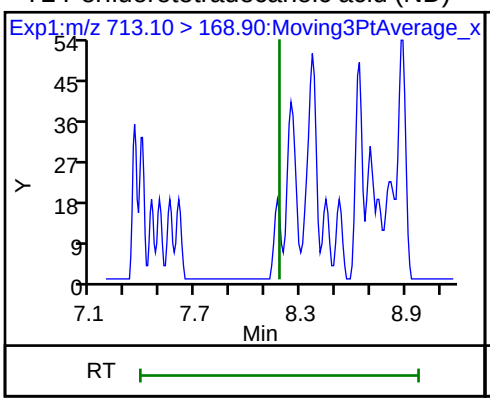
71 11-Chloroeicosafluoro-3-oxaundec (ND)



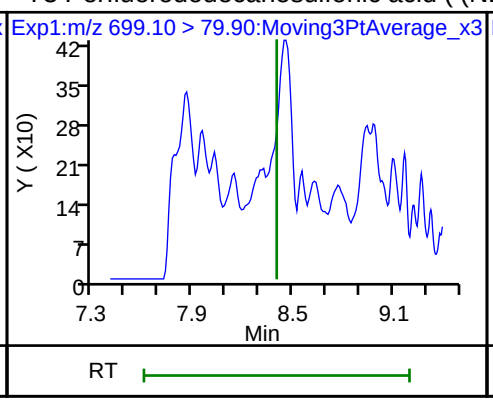
72 Perfluorotetradecanoic acid (ND)



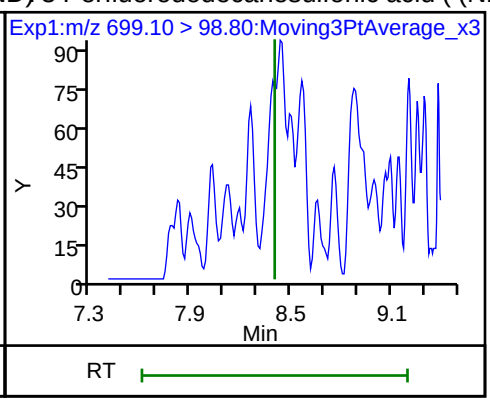
72 Perfluorotetradecanoic acid (ND)



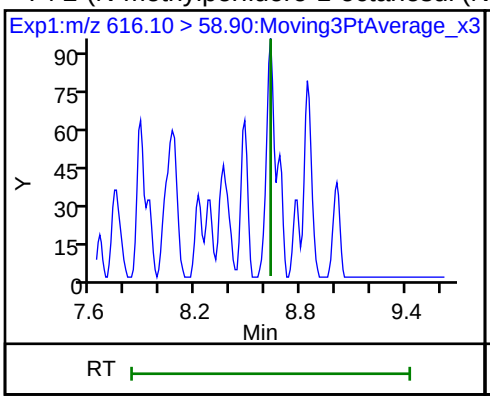
73 Perfluorododecanesulfonic acid ((ND)



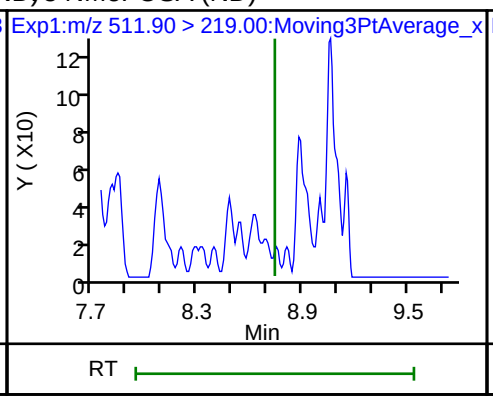
73 Perfluorododecanesulfonic acid ((ND)



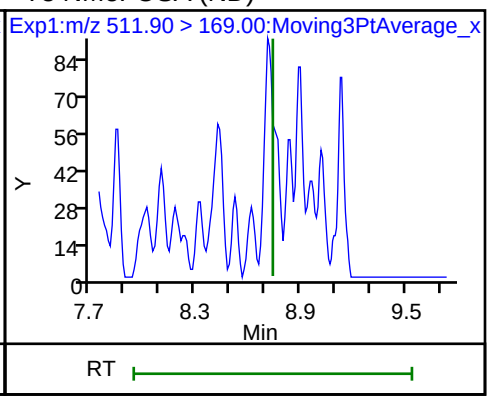
74 2-(N-methylperfluoro-1-octanesul (ND)



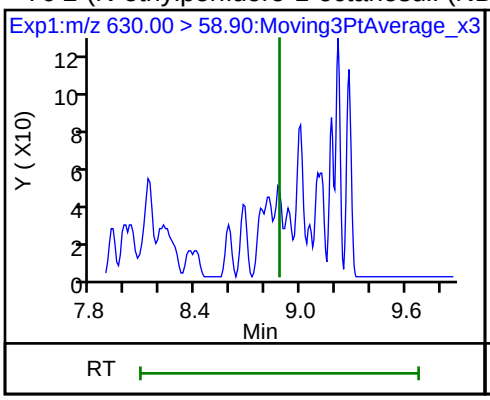
75 NMeFOSA (ND)



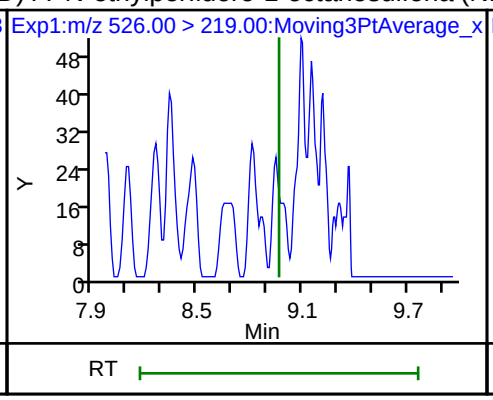
75 NMeFOSA (ND)



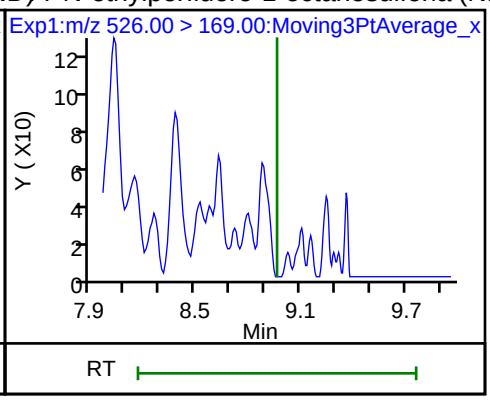
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



Eurofins Cleveland

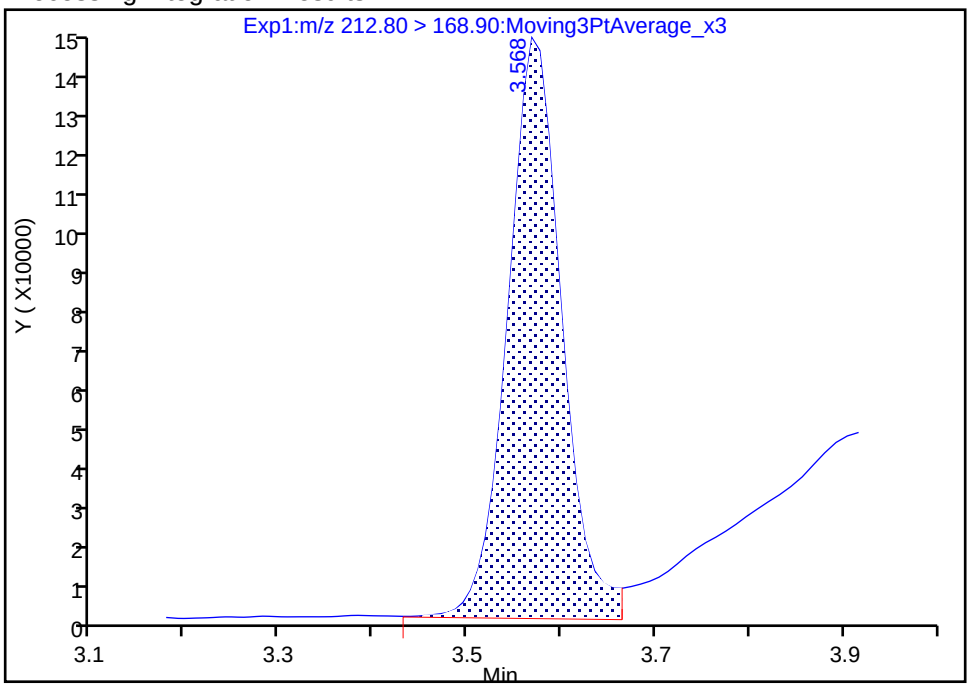
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Injection Date:	19-Sep-2024 00:33:35	Instrument ID:	LCMS04		
Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

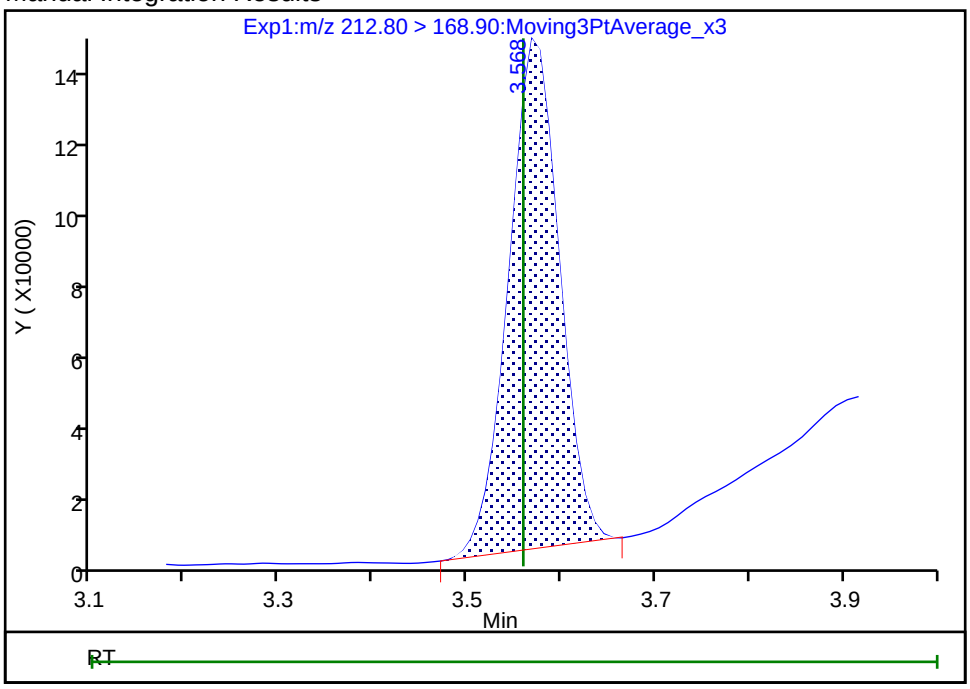
Processing Integration Results

RT: 3.57
Area: 559988
Amount: 0.397944
Amount Units: ng/ml



Manual Integration Results

RT: 3.57
Area: 507595
Amount: 0.360712
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:39:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

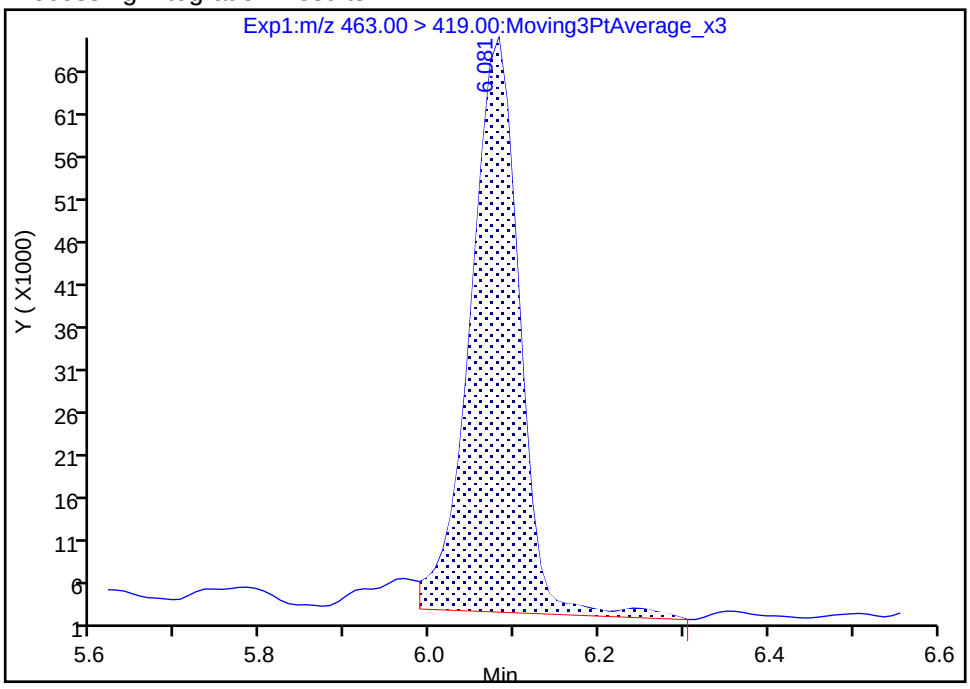
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Injection Date:	19-Sep-2024 00:33:35	Instrument ID:	LCMS04		
Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

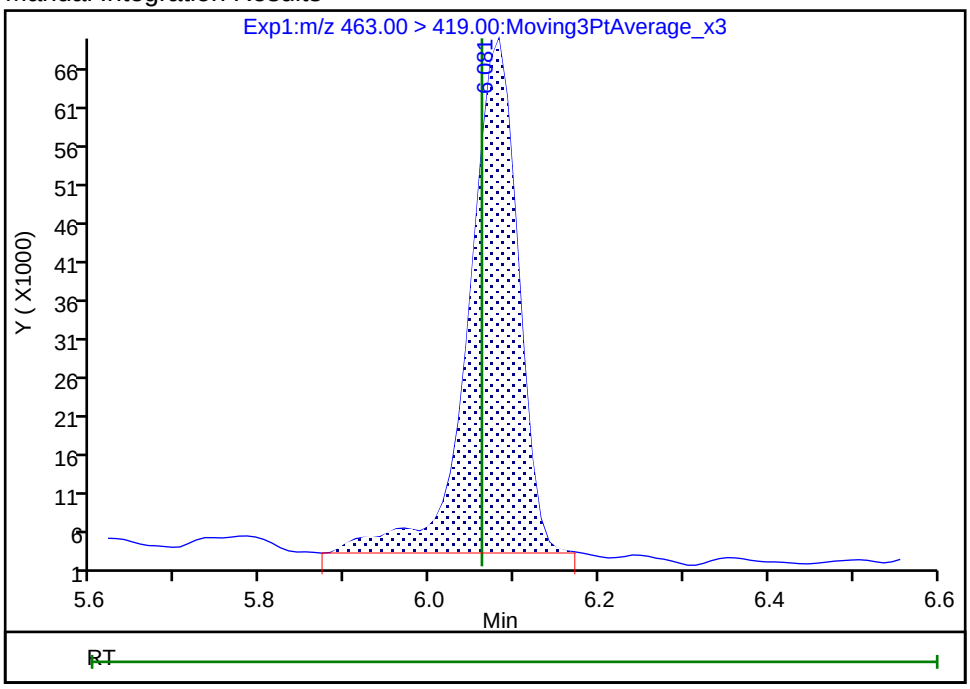
Processing Integration Results

RT: 6.08
Area: 271870
Amount: 0.155126
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 268066
Amount: 0.152956
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:40:00 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

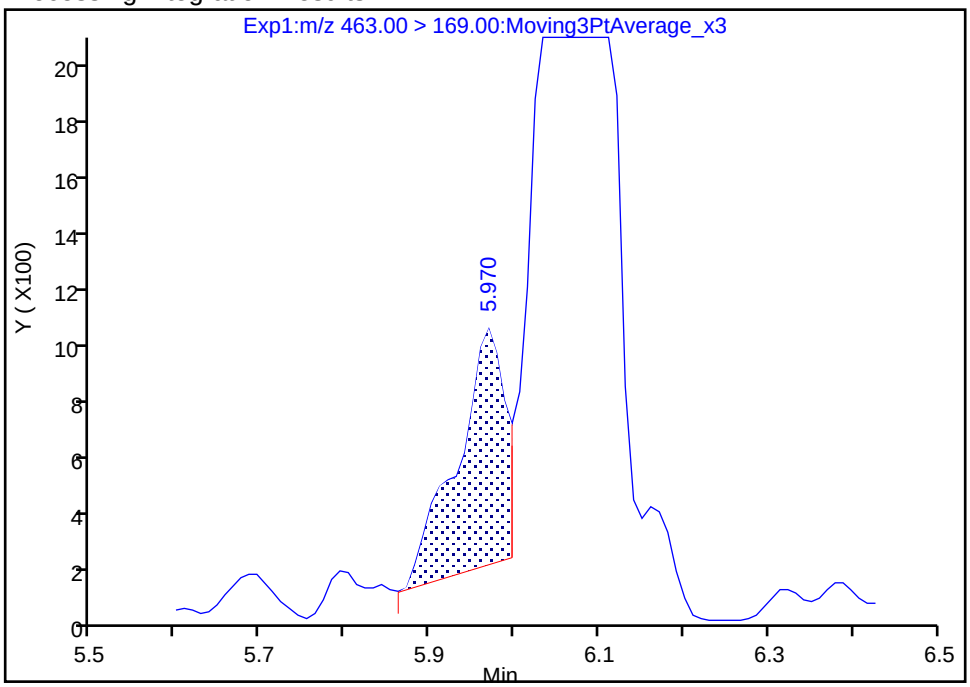
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Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

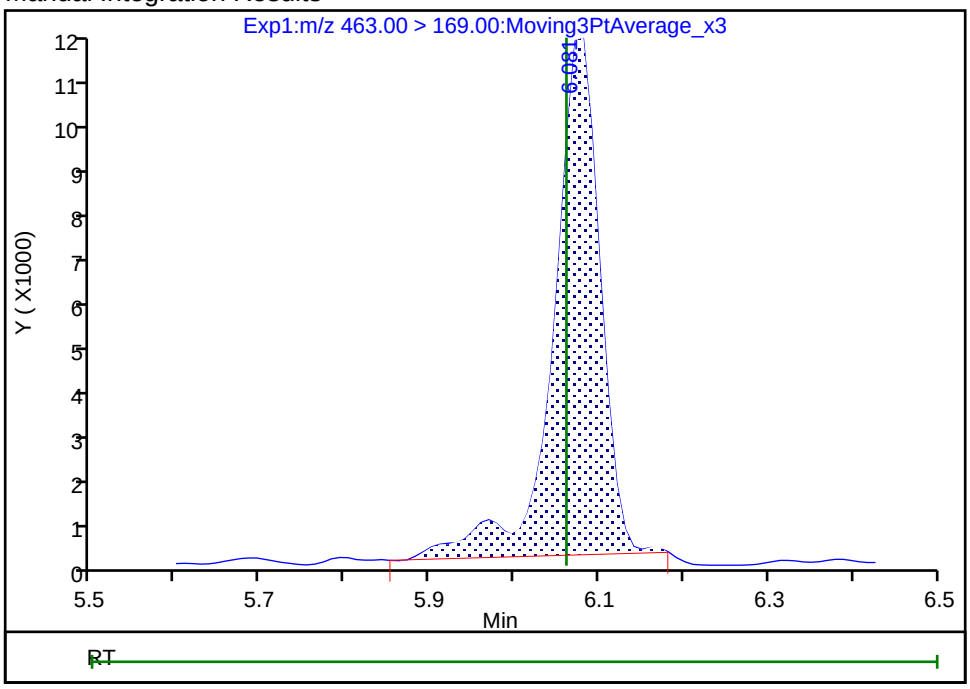
Processing Integration Results

RT: 5.97
Area: 3229
Amount: 0.155126
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 45062
Amount: 0.152956
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:40:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

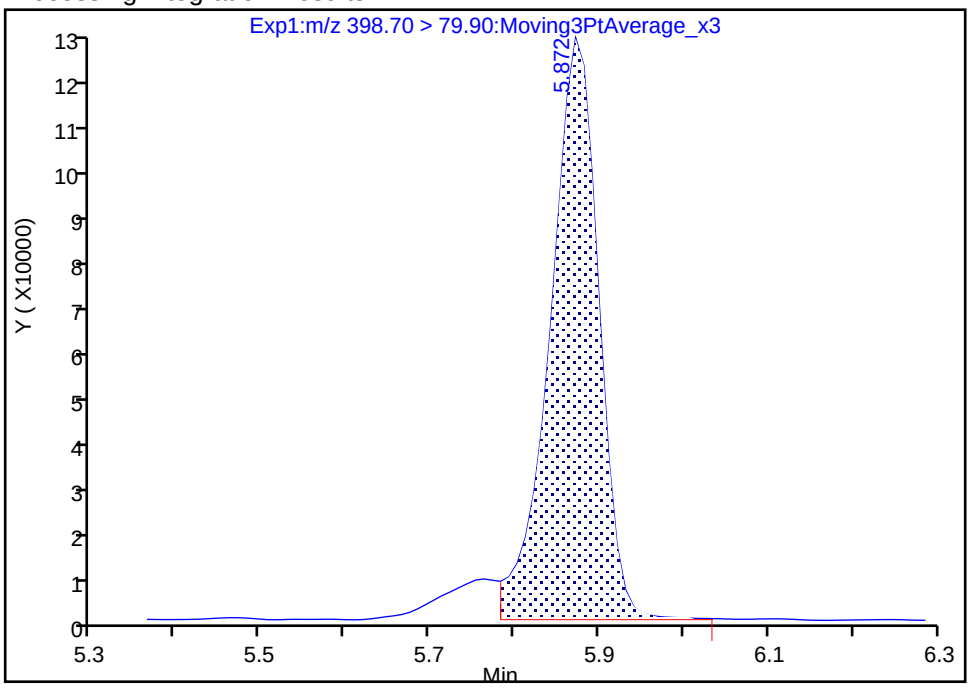
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Injection Date:	19-Sep-2024 00:33:35	Instrument ID:	LCMS04		
Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

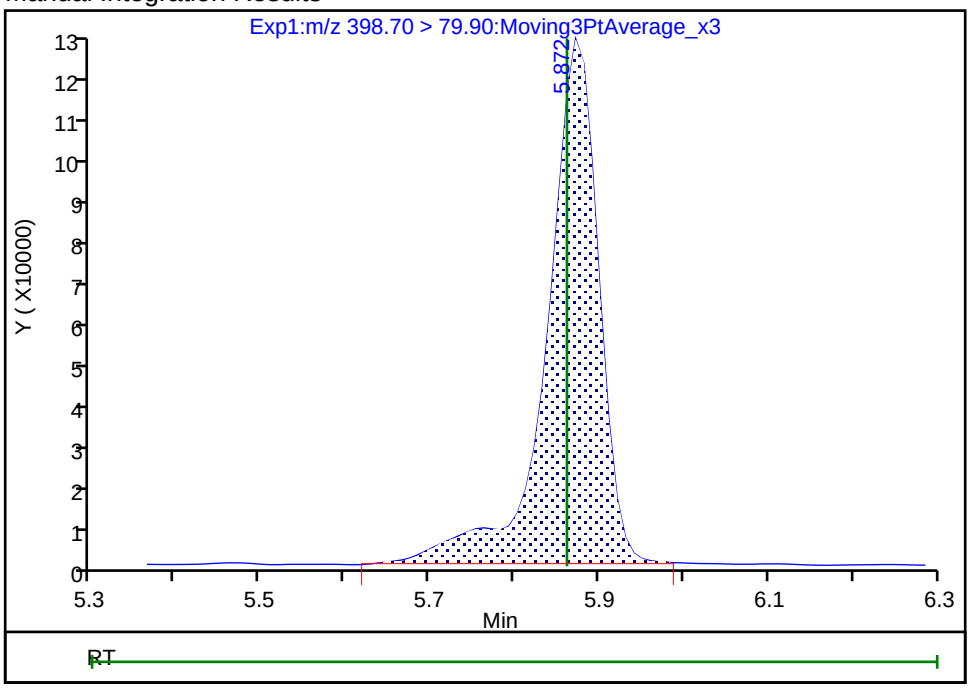
Processing Integration Results

RT: 5.87
Area: 501857
Amount: 0.228069
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 539622
Amount: 0.245232
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:39:46 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

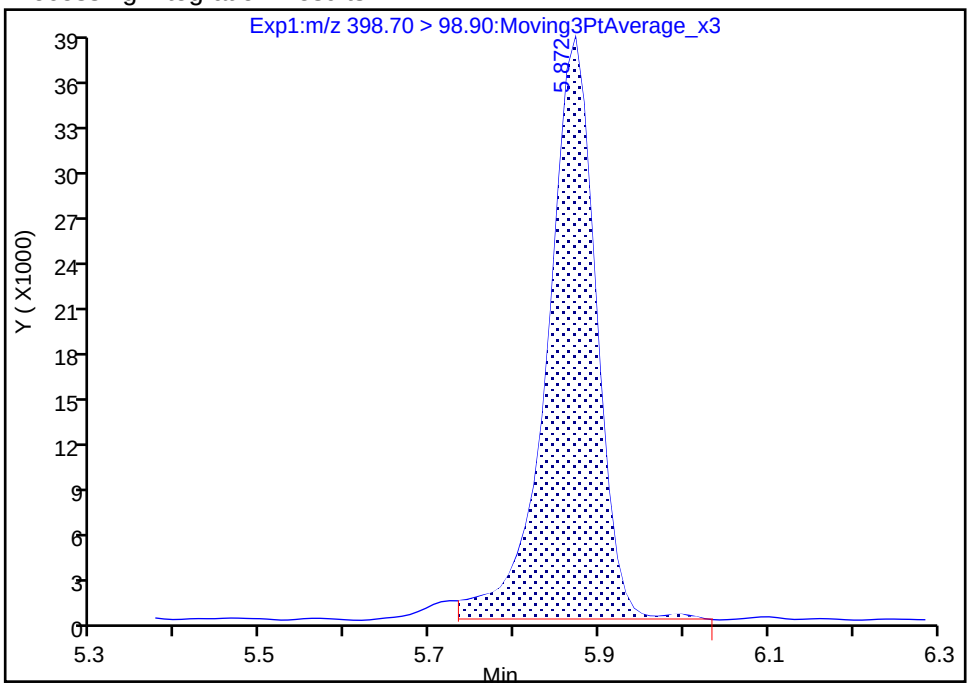
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Injection Date:	19-Sep-2024 00:33:35	Instrument ID:	LCMS04		
Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

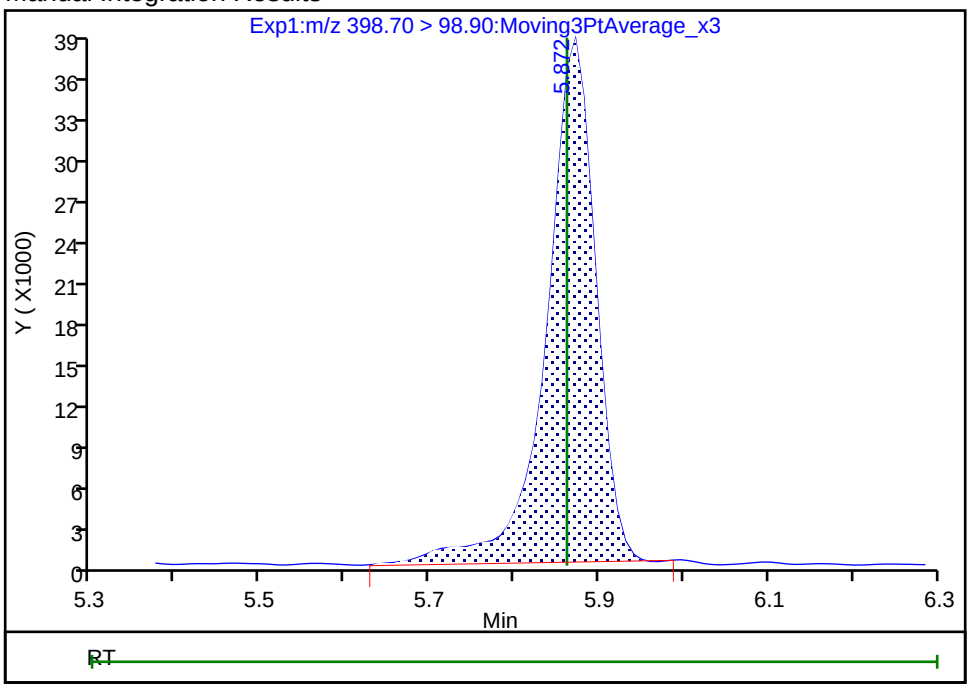
Processing Integration Results

RT: 5.87
Area: 154693
Amount: 0.228069
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 154252
Amount: 0.245232
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:39:51 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

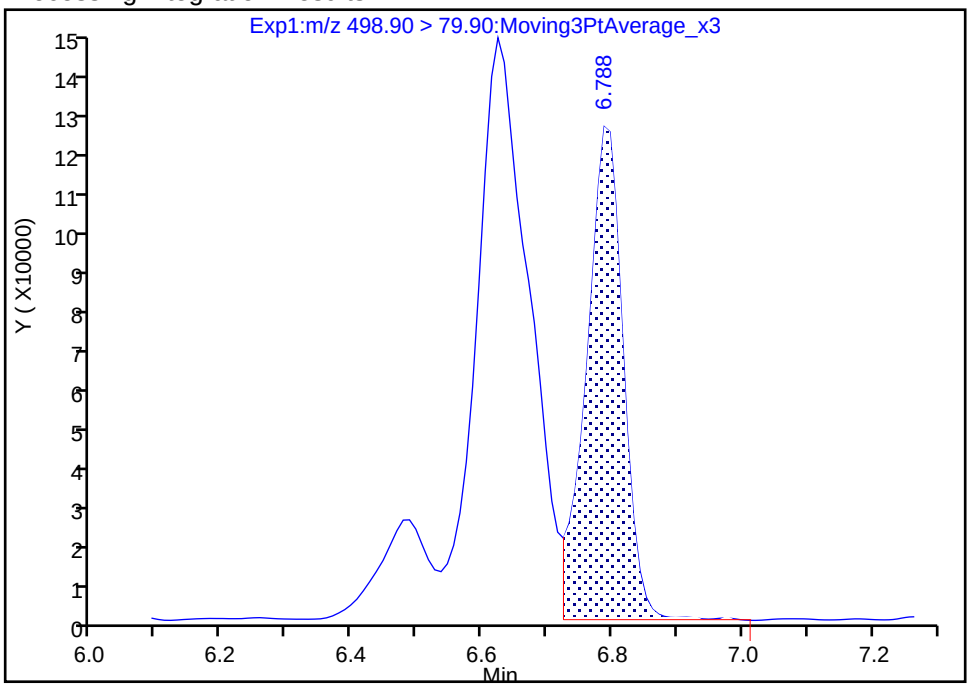
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Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

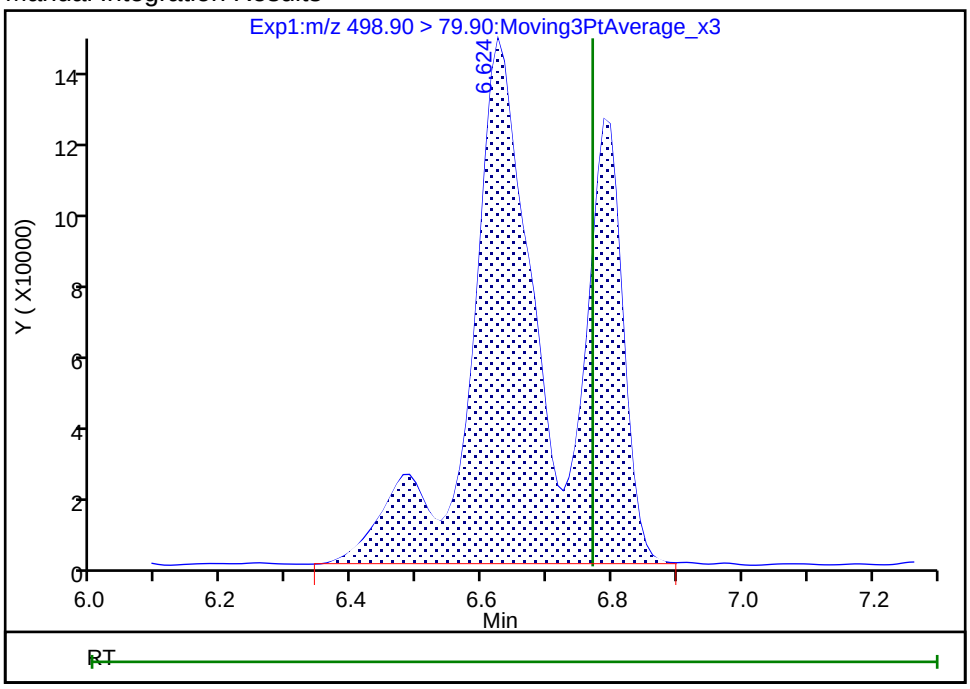
Processing Integration Results

RT: 6.79
Area: 488629
Amount: 0.171087
Amount Units: ng/ml



Manual Integration Results

RT: 6.62
Area: 1428111
Amount: 0.500034
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:40:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

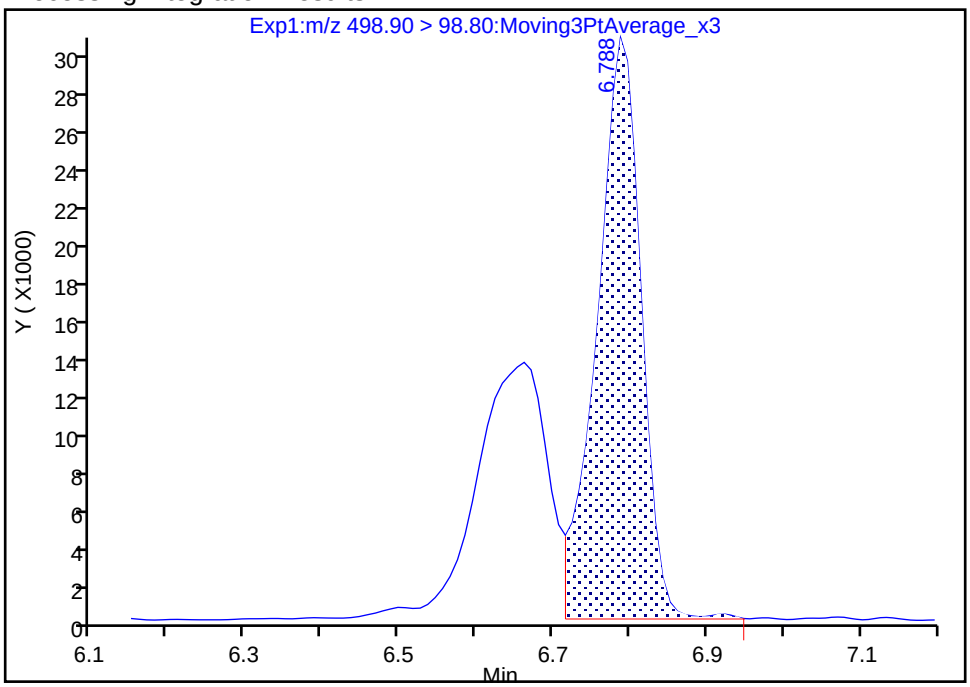
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Injection Date:	19-Sep-2024 00:33:35	Instrument ID:	LCMS04		
Lims ID:	460-311364-C-1-A	Lab Sample ID:	240-311364-1		
Client ID:	RXMW-1_P				
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

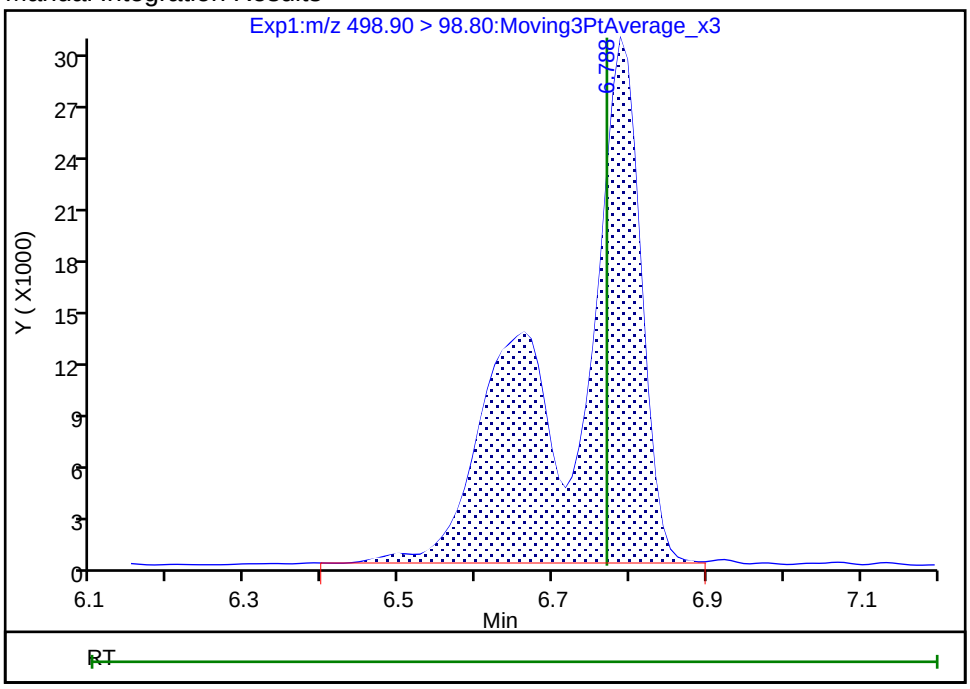
Processing Integration Results

RT: 6.79
Area: 121019
Amount: 0.171087
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 204536
Amount: 0.500034
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:40:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P | Lab Sample ID: 460-311364-2

Matrix: Water | Lab File ID: 2024_09_18solidwatinj38.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 160.3(mL) | Date Analyzed: 09/19/2024 00:47

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	2.66	J	6.24	1.66
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.65	J	3.12	0.78
307-24-4	Perfluorohexanoic acid (PFHxA)	2.43		1.56	0.39
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.93		1.56	0.39
335-67-1	Perfluorooctanoic acid (PFOA)	27.9		1.56	0.39
375-95-1	Perfluorononanoic acid (PFNA)	2.33		1.56	0.39
335-76-2	Perfluorodecanoic acid (PFDA)	1.56	U	1.56	0.39
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.56	U	1.56	0.39
307-55-1	Perfluorododecanoic acid (PFDoA)	1.56	U	1.56	0.39
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.56	U	1.56	0.39
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.56	U	1.56	0.39
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.56		1.56	0.39
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.56	U	1.56	0.39
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	3.09		1.56	0.40
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.33		1.56	0.39
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	32.9		1.56	0.39
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.56	U	1.56	0.39
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.56	U	1.56	0.39
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.24	U	6.24	1.56
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.24	U	6.24	1.56
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.24	U	6.24	1.56
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.56	U	1.56	0.39
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.56	U	1.56	0.39
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.56	U	1.56	0.39
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.56	U	1.56	0.48

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P | Lab Sample ID: 460-311364-2

Matrix: Water | Lab File ID: 2024_09_18solidwatinj38.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 160.3(mL) | Date Analyzed: 09/19/2024 00:47

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.56	U	1.56	0.41
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	15.6	U	15.6	3.90
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	15.6	U	15.6	3.90
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.24	U	6.24	1.56
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.24	U	6.24	1.56
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.12	U	3.12	0.78
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.12	U	3.12	0.95
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.24	U	6.24	1.56
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.24	U	6.24	1.56
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.12	U	3.12	0.78
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	7.80	U	7.80	1.95
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	39.0	U	39.0	9.75
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	39.0	U	39.0	11.6
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.56	U	1.56	0.39
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.12	U	3.12	0.78

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P | Lab Sample ID: 460-311364-2

Matrix: Water | Lab File ID: 2024_09_18solidwatinj38.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 160.3(mL) | Date Analyzed: 09/19/2024 00:47

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	98.7		10-130
2283397-79-3	13C5 PFPeA	99.6		35-150
2328024-54-8	13C5 PFHxA	85.5		55-150
2328024-55-9	13C4 PFHpA	97.7		55-150
1350614-84-4	13C8 PFOA	88.3		60-140
2283397-80-6	13C9 PFNA	109		55-140
2328024-56-0	13C6 PFDA	107		50-140
STL02580	13C7 PFUnA	101		30-140
STL02116	13C2 PFTeDA	78.2		10-130
2708218-83-9	13C3 PFBS	121		55-150
2708218-85-1	13C3 PFHxS	111		55-150
2265893-05-6	13C8 PFOS	115		45-140
STL01056	13C8 FOSA	109		30-130
1400690-70-1	d3-NMeFOSAA	103		45-200
1265205-97-7	d5-NEtFOSAA	107		10-200
STL02395	M2-4:2 FTS	142		60-200
STL02279	M2-6:2 FTS	149		60-200
STL02280	M2-8:2 FTS	142		50-200
STL02255	13C3 HFPO-DA	84.9		25-160
STL02277	d7-N-MeFOSE-M	102		10-150
STL02278	d9-N-EtFOSE-M	91.9		10-150
STL02704	d5-NEtPFOSA	71.3		10-130
STL02705	d3-NMePFOSA	80.0		15-130
STL02703	13C2-PFDoDA	93.5		10-150

Report Date: 19-Sep-2024 11:43:22 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d
Lims ID: 460-311364-B-2-A
Client ID: RXMW-5_P
Sample Type: Client
Inject. Date: 19-Sep-2024 00:47:11 ALS Bottle#: 34 Worklist Smp#: 38
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 460-311364-B-2-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-038
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 11:43:20 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 11:43:20
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.565	3.551	0.014		1595034	1.25			278	
* 2 13C2 PFHxA										
315.10 > 270.00	4.734	4.729	0.005		1275483	0.6250			707	
* 3 13C4 PFOA										
417.10 > 172.00	5.642	5.628	0.014		245010	0.6250			999	
* 4 18O2 PFHxS										
403.00 > 83.90	5.868	5.852	0.016		1312982	0.5913			2606	
* 5 13C5 PFNA										
468.00 > 423.00	6.076	6.061	0.015		866105	0.3125			1275	
* 6 13C2 PFDA										
515.10 > 470.10	6.511	6.498	0.013		639353	0.3125			1502	
* 7 13C4 PFOS										
502.80 > 79.90	6.782	6.761	0.021		1151283	0.5975	Target=4.00		546	
502.80 > 98.90	6.782	6.761	0.021		280765		4.10(2.00-6.00)		1074	
D 8 13C4 PFBA										
216.80 > 171.90	3.565	3.551	0.014	1.000	3571973	2.47		98.7	9813	
D 9 13C5 PFPeA										
268.30 > 223.00	4.216	4.209	0.007	0.891	1994811	1.25		99.6	389	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.535	4.529	0.006	0.773	1234373	1.66	Target=0.29	142	22.0	
329.10 > 309.00	4.535	4.529	0.006	0.773	3419169		0.36(0.14-0.43)	142	942	
D 11 13C5 PFHxA										
318.00 > 273.00	4.734	4.729	0.005	1.000	1533019	0.5346	Target=40.21	85.5	512	
318.00 > 120.30	4.734	4.729	0.005	1.000	38719		39.59(20.11-60.32)	85.5	128	
D 12 13C3 PFBS										
302.10 > 79.90	4.860	4.856	0.004	0.828	1664817	0.7013	Target=3.28	121	24.1	
302.10 > 98.90	4.860	4.856	0.004	0.828	485069		3.43(1.64-4.92)	121	598	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.925	4.922	0.003	1.041	1752936	2.12	Target=1.86	84.9	6085	
286.90 > 184.90	4.925	4.922	0.003	1.041	935376		1.87(0.93-2.78)	84.9	285	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.193	0.014	1.100	1829580	0.6109		97.7	2222	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.430	5.416	0.014	0.925	1504211	1.77	Target=0.38	149	165	
429.10 > 409.00	5.430	5.416	0.014	0.925	3352919		0.45(0.19-0.57)	149	4443	
D 16 13C8 PFOA										
421.10 > 376.00	5.642	5.628	0.014	1.000	1706283	0.5518		88.3	2956	
D 17 13C3 PFHxS										
402.10 > 79.90	5.868	5.852	0.016	1.000	1529089	0.6560	Target=3.25	111	145	
402.10 > 98.80	5.868	5.852	0.016	1.000	438968		3.48(1.63-4.88)	111	795	
D 18 13C9 PFNA										
472.10 > 427.00	6.076	6.061	0.015	1.000	738561	0.3398		109	1130	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.270	6.258	0.012	1.069	993468	1.70	Target=0.33	142	788	
529.10 > 509.00	6.270	6.258	0.012	1.069	2424649		0.41(0.16-0.49)	142	3970	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.451	6.437	0.014	0.951	1146378	1.29		103	2741	
D 21 13C6 PFDA										
519.10 > 474.10	6.511	6.498	0.013	1.000	661026	0.3357		107	1313	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.647	6.634	0.013	0.980	1177676	1.34		107	2239	
D 23 13C8 PFOS										M
507.10 > 79.90	6.782	6.761	0.021	1.000	1365194	0.6877	Target=4.26	115	187	M
507.10 > 98.90	6.782	6.761	0.021	1.000	334851		4.08(2.13-6.39)	115	564	
D 24 13C7 PFUnA										
570.00 > 525.10	6.959	6.932	0.027	1.069	612815	0.3163		101	1328	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.387	7.361	0.026	1.135	534379	0.2922		93.5	1004	
D 26 13C8 FOSA										
506.10 > 77.80	7.703	7.720	-0.017	1.136	1454082	0.6825		109	2829	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.215	8.179	0.036	1.262	255468	0.2444		78.2	548	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.599	8.607	-0.008	1.268	2022241	6.40		102	580	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.723	8.731	-0.008	1.286	210044	0.4999		80.0	744	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.851	8.859	-0.008	1.305	2227389	5.75		91.9	751	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.956	-0.007	1.320	188605	0.4453		71.3	109	
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.574	3.559	0.015	1.002	115914	0.0854			0.8	M
35 Perfluoropentanoic acid										M
263.00 > 219.00	4.226	4.219	0.007	1.002	129477	0.0530			0.5	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorohexanoic acid										M
313.00 > 269.00	4.734	4.739	-0.005	1.000	151917	0.0779	Target=14.20		0.8	M
313.00 > 118.90	4.744	4.739	0.005	1.002	8902		17.07(7.10-21.30)		4.0	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.871	4.856	0.015	1.002	317226	0.1140	Target=3.31		3.7	
298.70 > 98.80	4.871	4.856	0.015	1.002	87654		3.62(1.66-4.97)		54.0	
47 Perfluoroheptanoic acid										M
363.10 > 319.00	5.207	5.204	0.003	1.000	195473	0.0618	Target=3.56		2.0	M
363.10 > 169.00	5.207	5.204	0.003	1.000	53064		3.68(1.78-5.34)		31.8	
51 Perfluoropentanesulfonic acid										7M
349.10 > 79.90	5.389	5.385	0.004	0.918	19822	0.007462	Target=3.08		0.3	7M
349.10 > 98.90	5.400	5.385	0.015	0.920	7370		2.69(1.54-4.63)		1.1	
LOD = 0.0117										
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.642	5.638	0.004	1.000	1171538	0.8946	Target=1.93		29.0	M
413.00 > 169.00	5.642	5.638	0.004	1.000	475896		2.46(0.96-2.89)		439	M
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.862	0.016	1.002	218921	0.0991	Target=3.17		26.5	M
398.70 > 98.90	5.868	5.862	0.006	1.000	56565		3.87(1.59-4.76)		120	
55 Perfluorononanoic acid										M
463.00 > 419.00	6.076	6.061	0.015	1.000	133816	0.0747	Target=4.77		6.3	
463.00 > 169.00	6.076	6.061	0.015	1.000	23350		5.73(2.39-7.16)		61.0	M
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.326	6.314	0.012	0.933	200074	0.0747	Target=3.87		10.5	
449.00 > 98.80	6.326	6.314	0.012	0.933	53344		3.75(1.93-5.80)		42.9	
63 Perfluorooctanesulfonic acid										RM
498.90 > 79.90	6.627	6.770	-0.143	0.977	3028641	1.05	Target=4.80		206	RM
498.90 > 98.80	6.791	6.770	0.021	1.001	407407		7.43(2.40-7.20)		439	M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 11:43:22 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d

Injection Date: 19-Sep-2024 00:47:11 Instrument ID: LCMS04

Lims ID: 460-311364-B-2-A Lab Sample ID: 240-311364-2

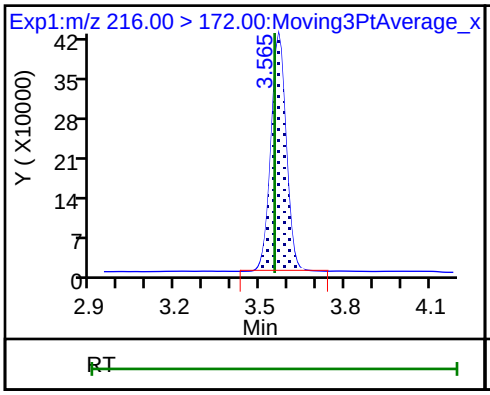
Client ID: RXMW-5_P

Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 38

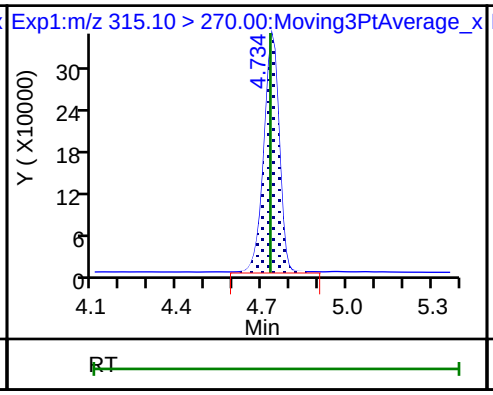
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

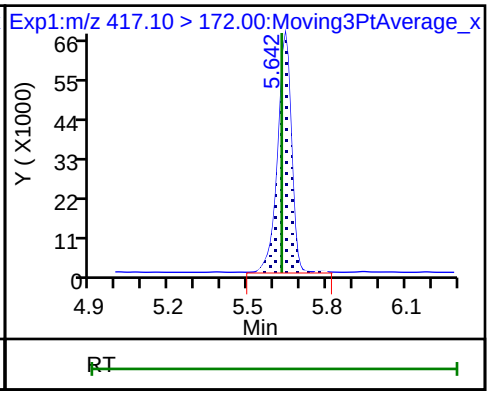
* 1 13C3-PFBA



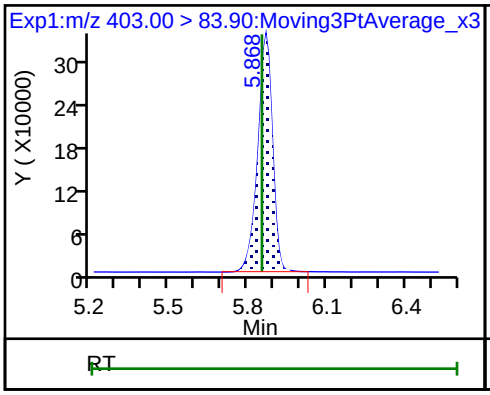
* 2 13C2 PFHxA



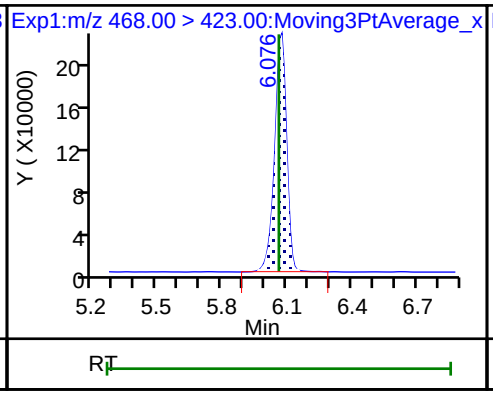
* 3 13C4 PFOA



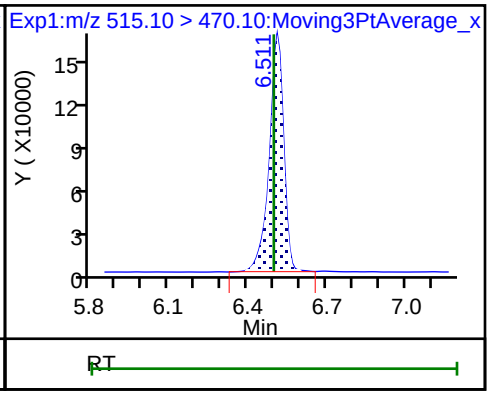
* 4 18O2 PFHxS



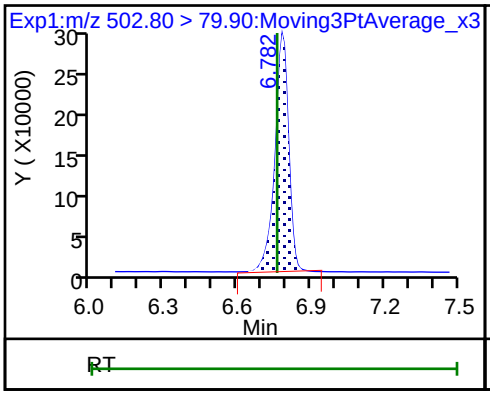
* 5 13C5 PFNA



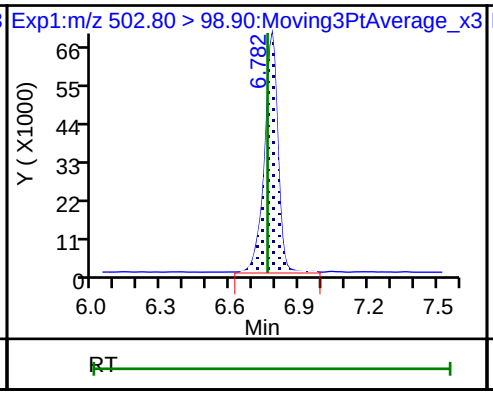
* 6 13C2 PFDA



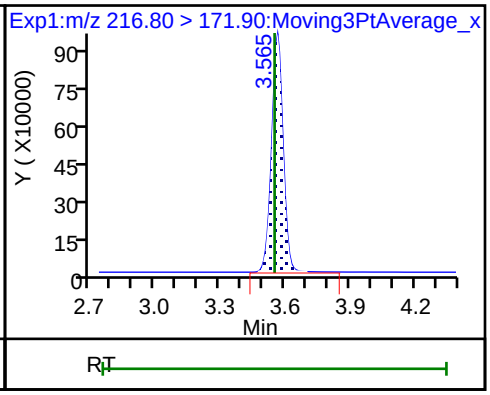
* 7 13C4 PFOS



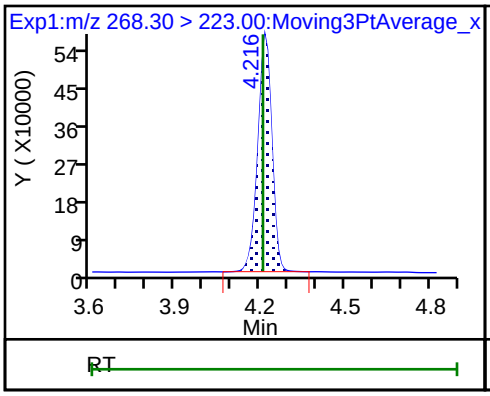
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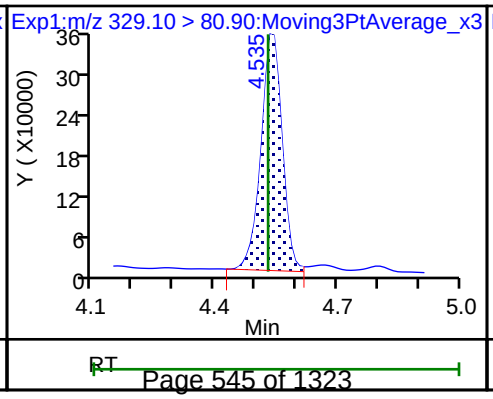
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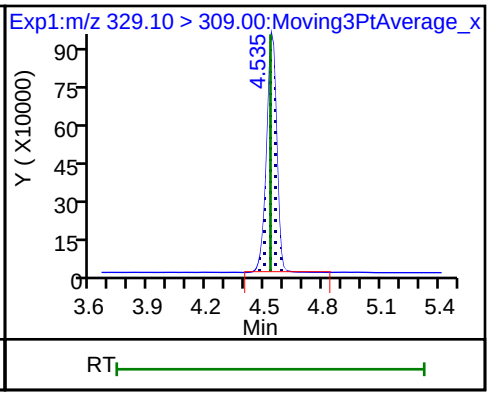
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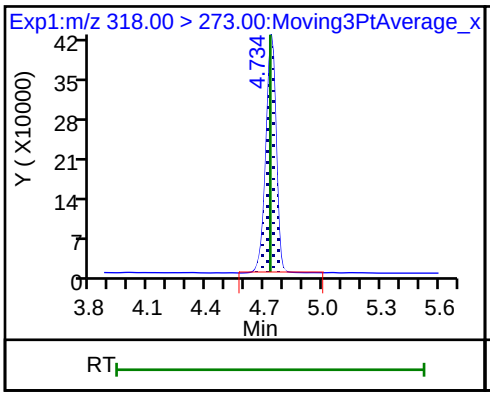
D 10 M2-4:2 FTS



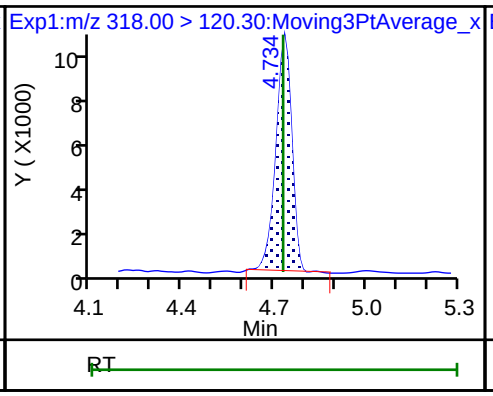
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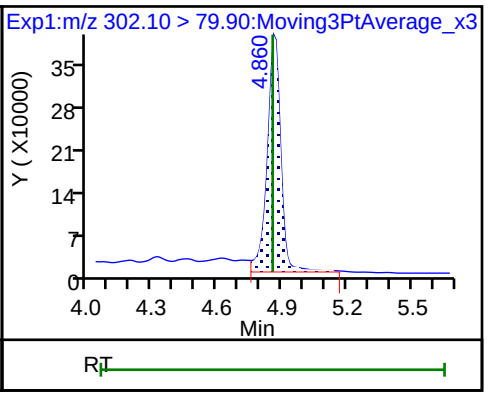
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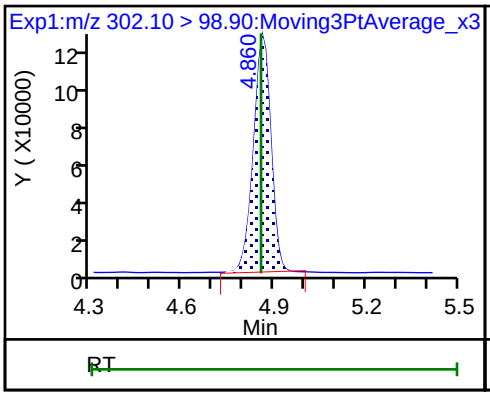
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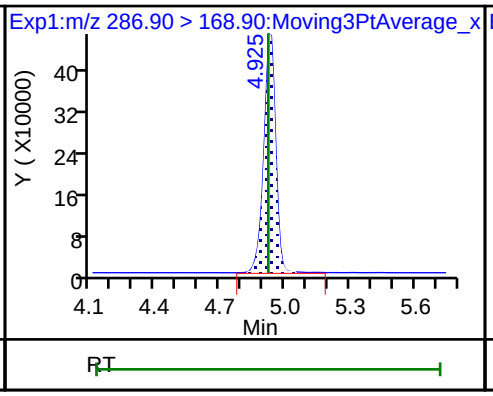
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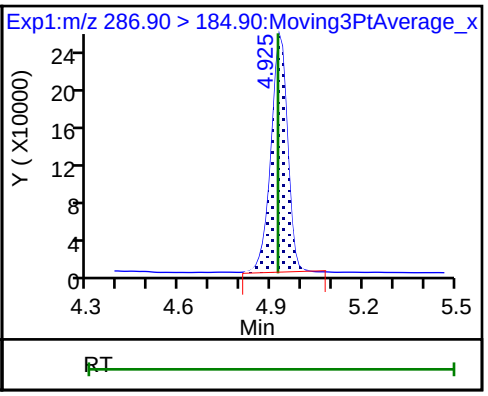
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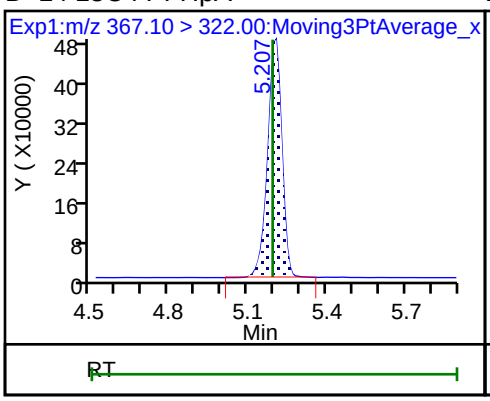
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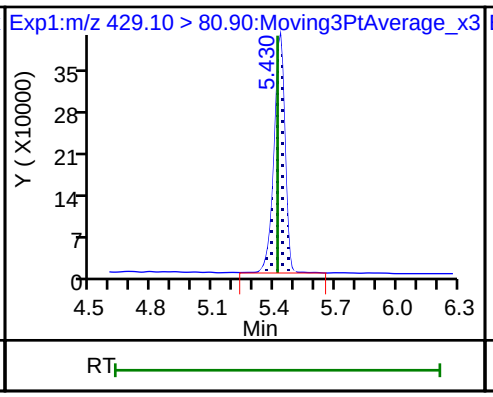
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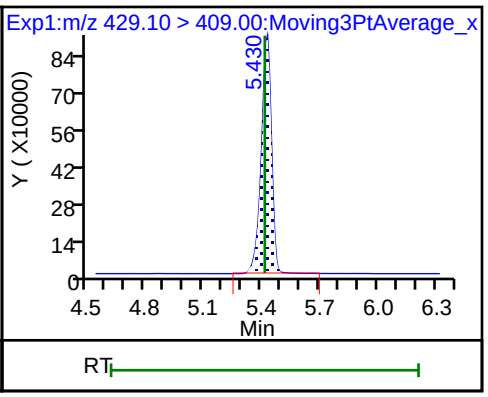
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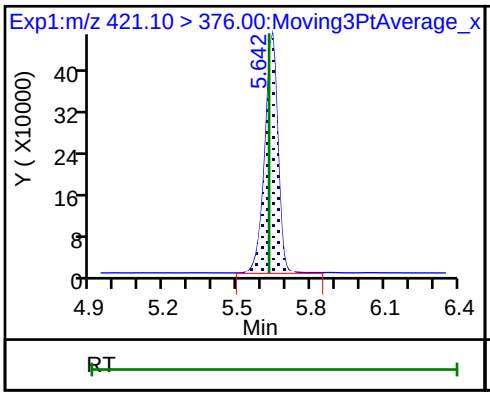
D 15 M2-6:2 FTS



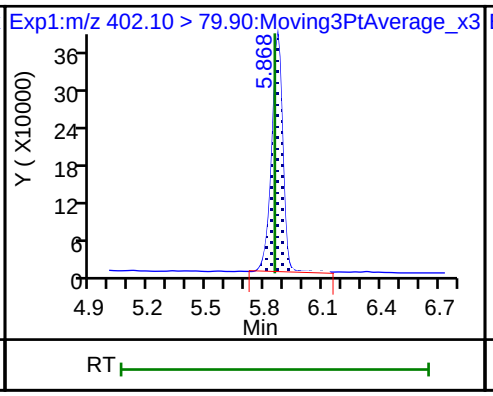
D 15 M2-6:2 FTS



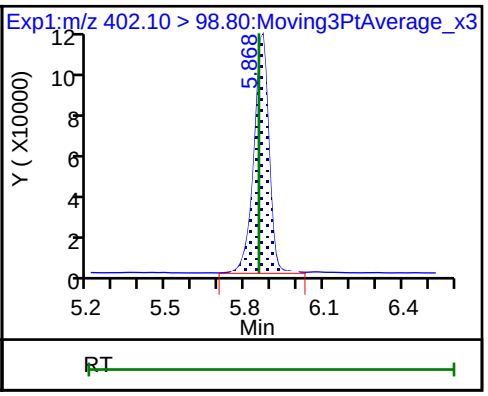
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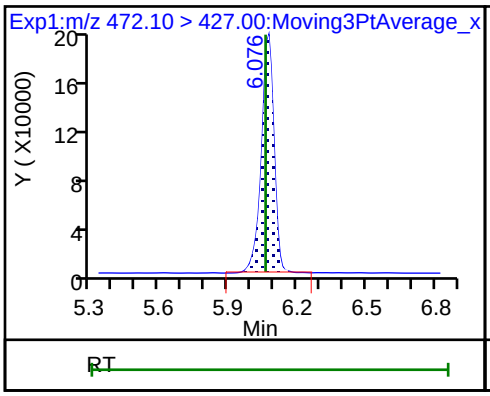
D 17 13C3 PFHxS



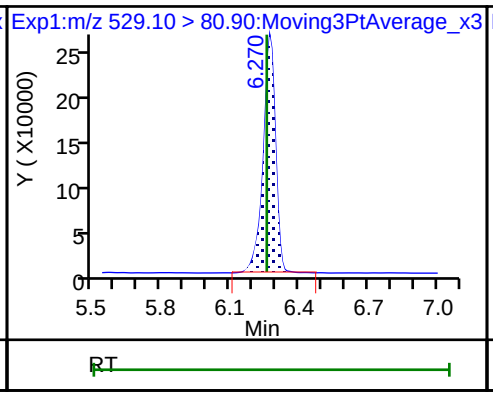
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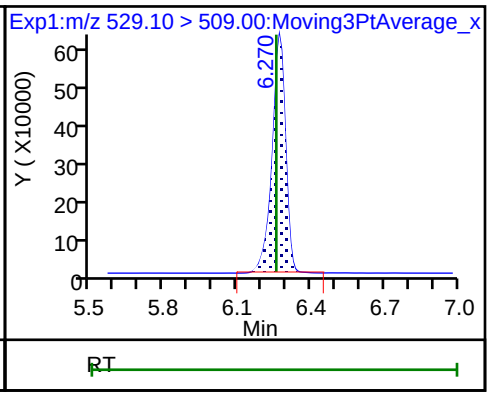
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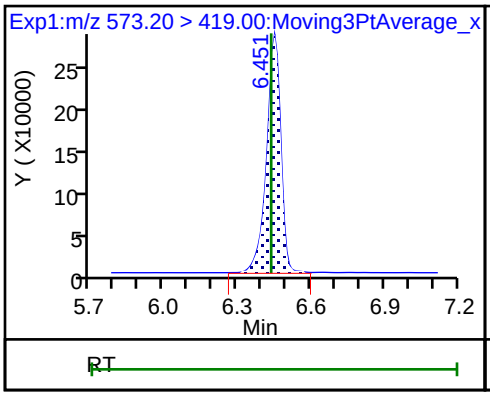
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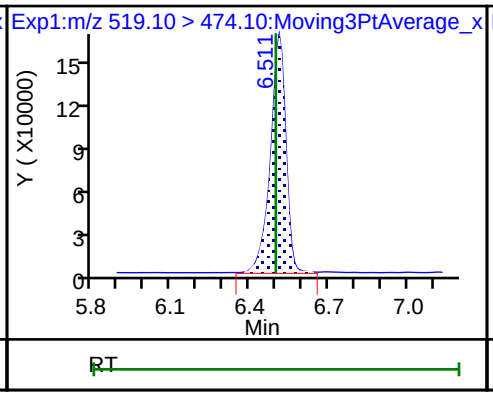
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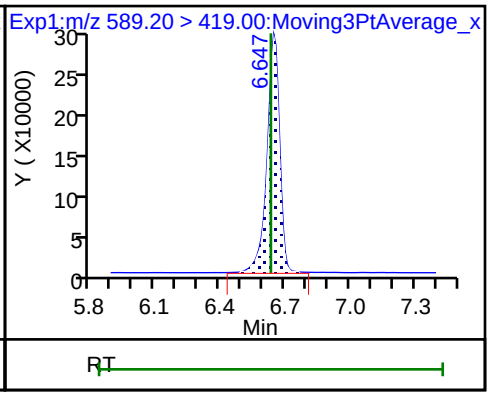
D 20 d3-NMeFOSAA



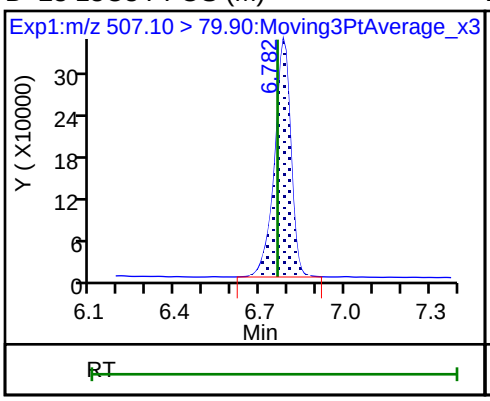
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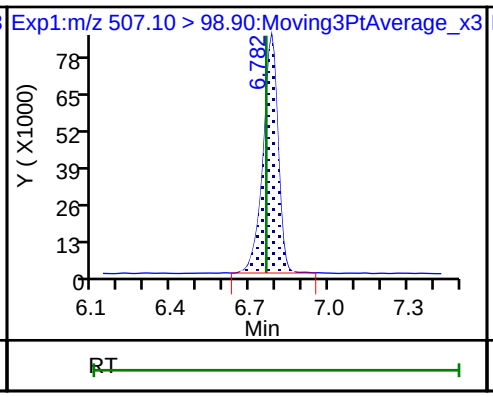
D 22 d5-NEtFOSAA



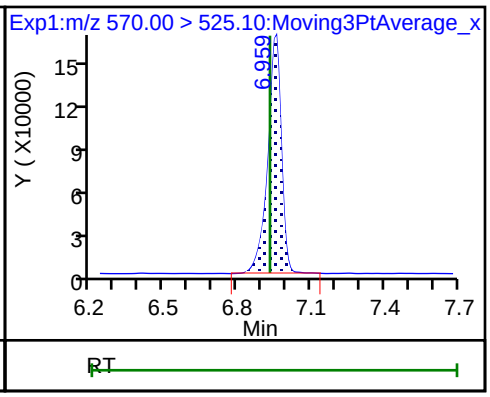
D 23 13C8 PFOS (M)



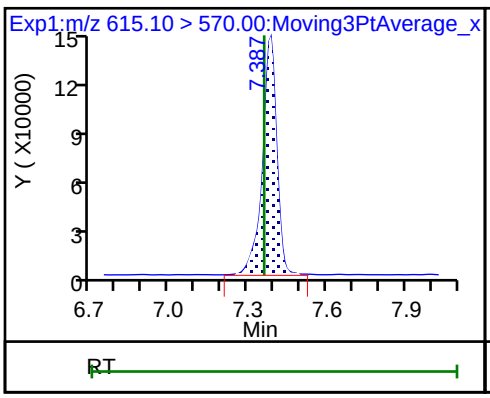
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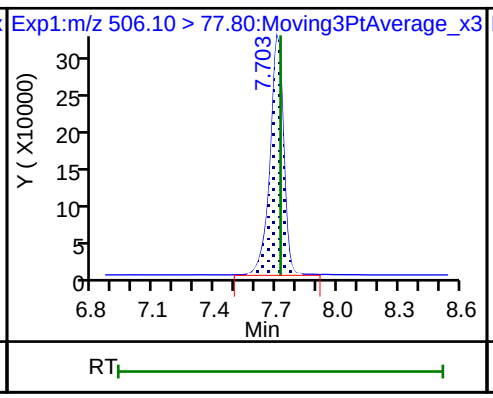
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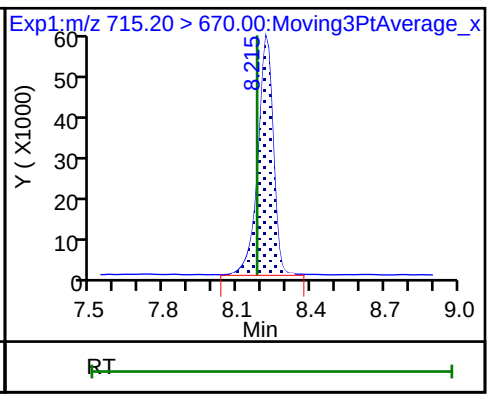
D 25 13C2-PFDoDA



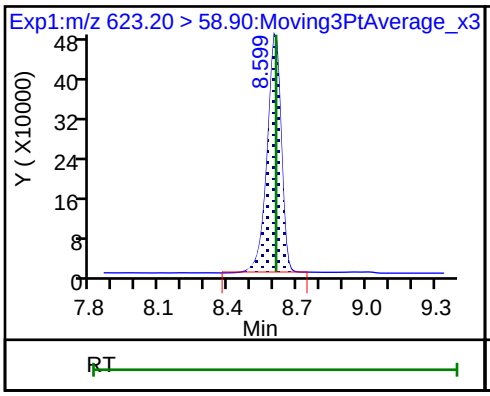
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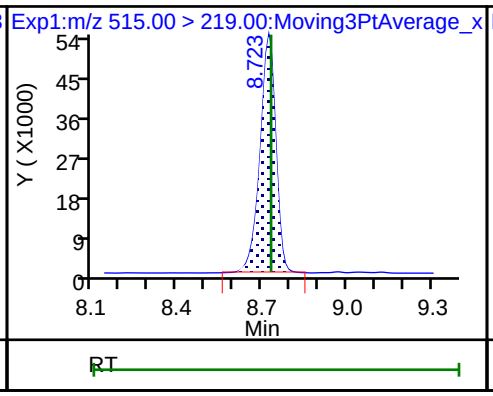
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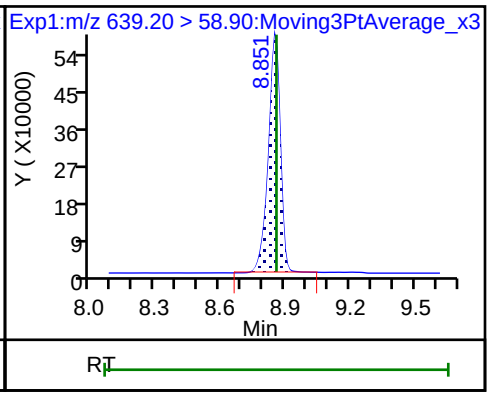
D 28 d7-N-MeFOSE-M



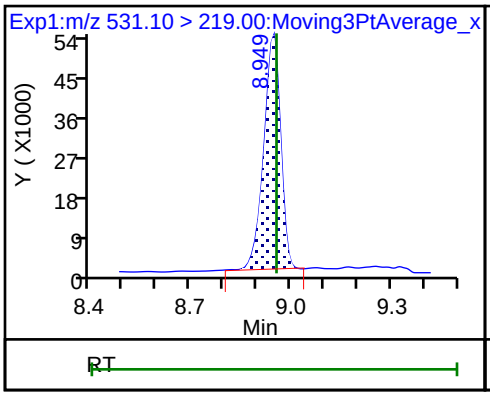
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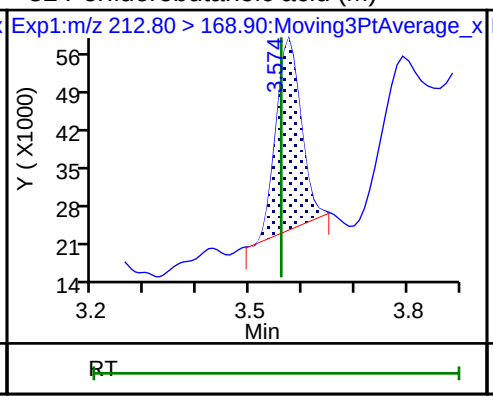
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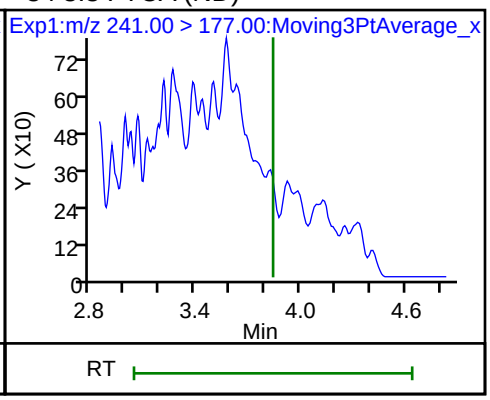
D 31 d5-NEtPFOSA



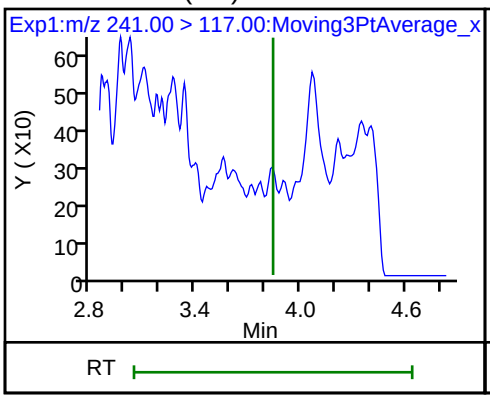
32 Perfluorobutanoic acid (M)



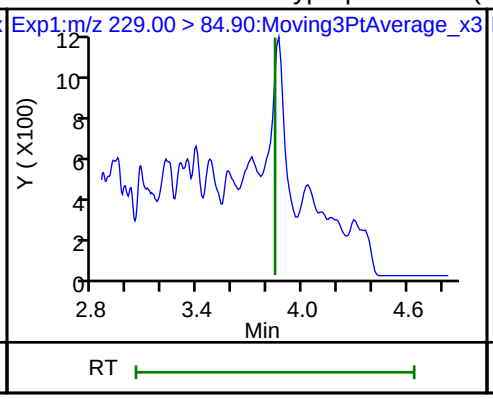
34 3:3 FTCA (ND)



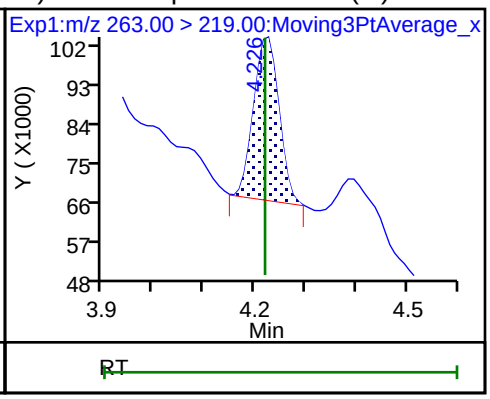
34 3:3 FTCA (ND)



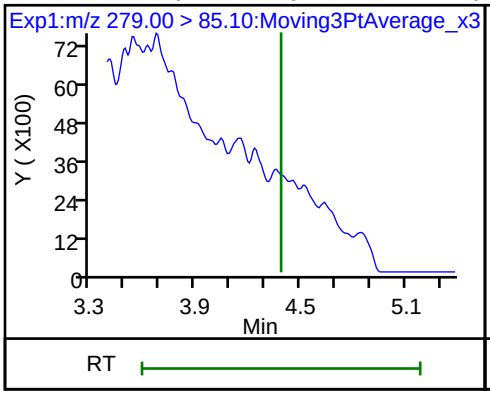
33 Perfluoro-3-methoxypropanoic aci (ND)



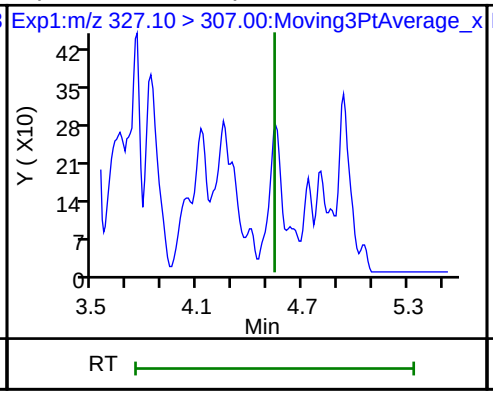
35 Perfluoropentanoic acid (M)



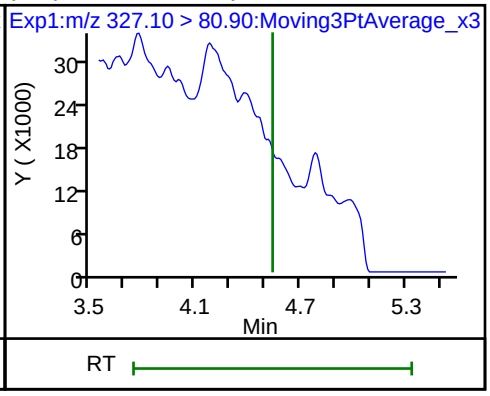
36 Perfluoro(4-methoxybutanoic acid (ND)



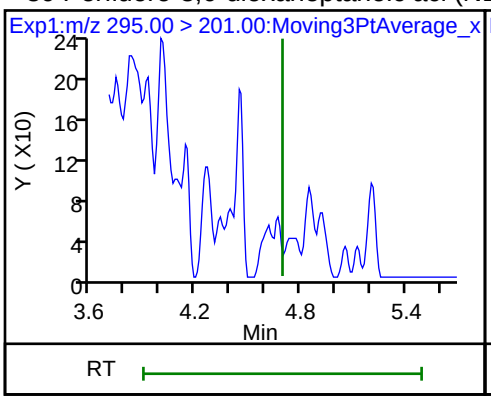
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



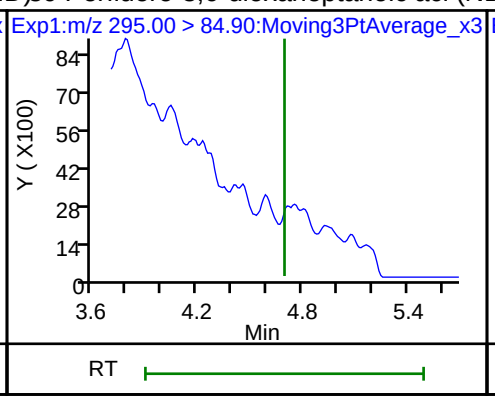
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



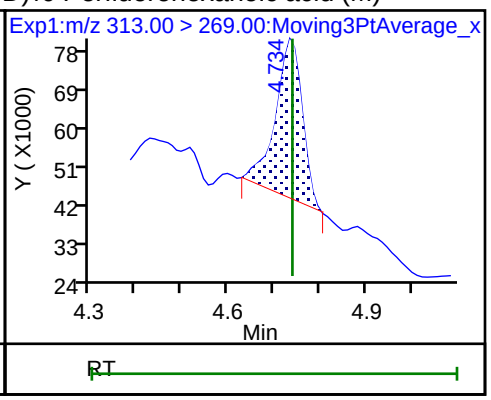
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



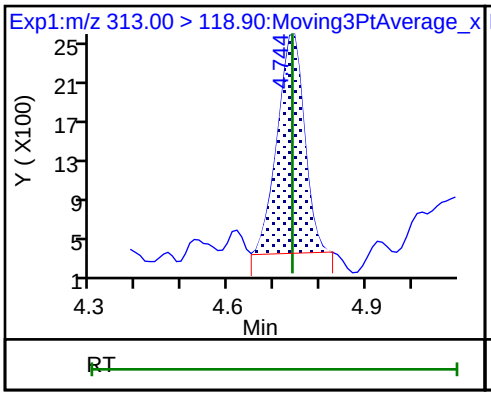
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



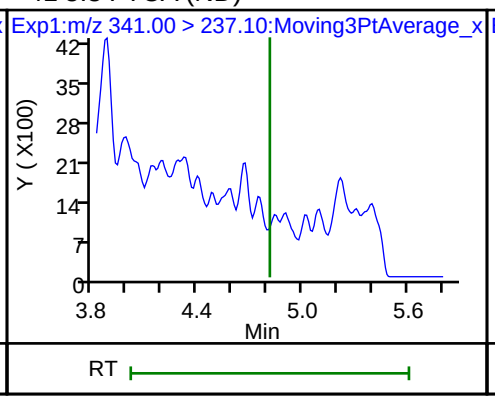
40 Perfluorohexanoic acid (M)



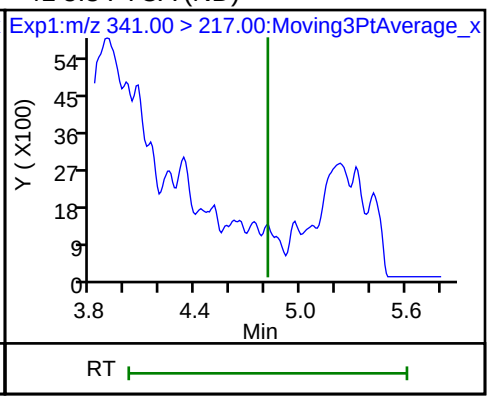
40 Perfluorohexanoic acid



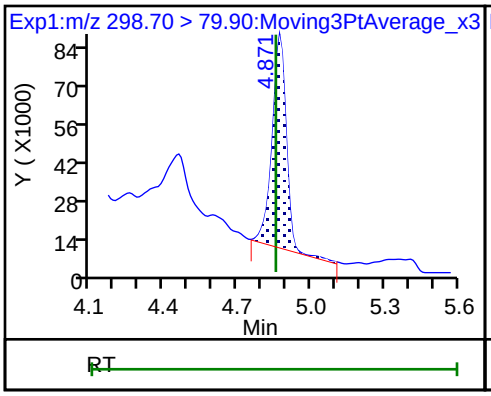
41 5:3 FTCA (ND)



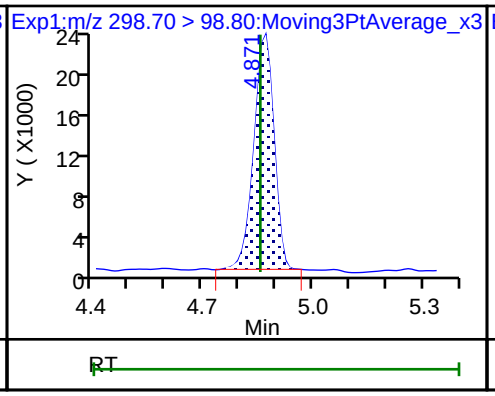
41 5:3 FTCA (ND)



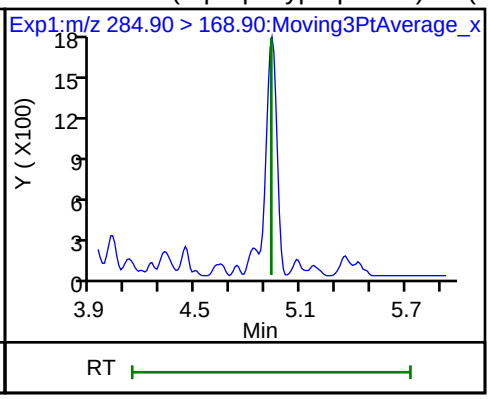
42 Perfluorobutanesulfonic acid



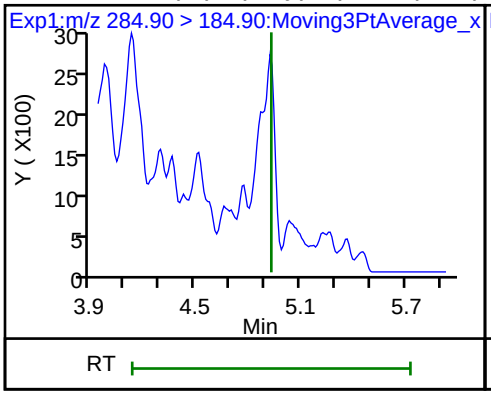
42 Perfluorobutanesulfonic acid



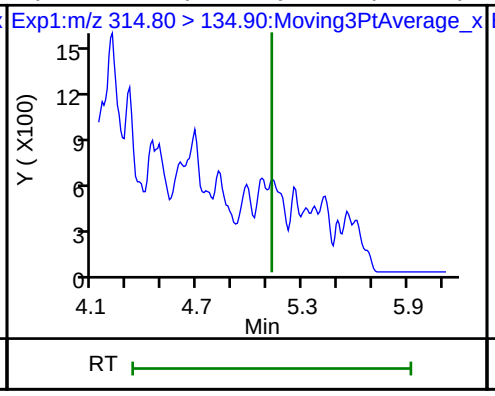
43 Perfluoro(2-propoxypropanoic) ac (ND)



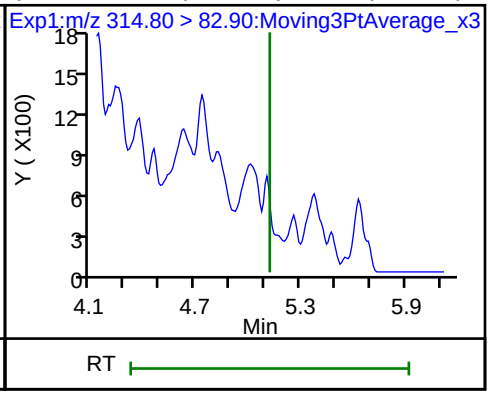
43 Perfluoro(2-propoxypropanoic) ac (ND)



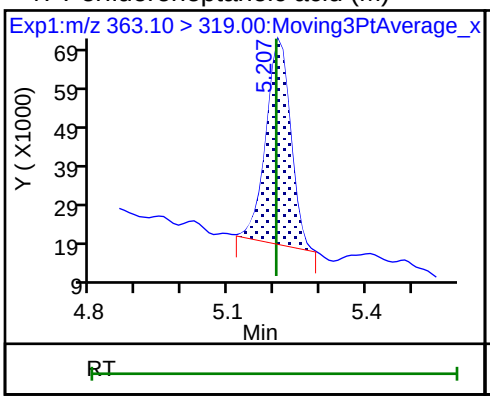
46 Perfluoro (2-ethoxyethane) sulfo (ND)



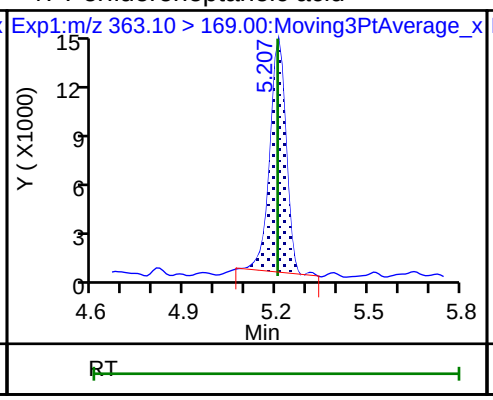
46 Perfluoro (2-ethoxyethane) sulfo (ND)



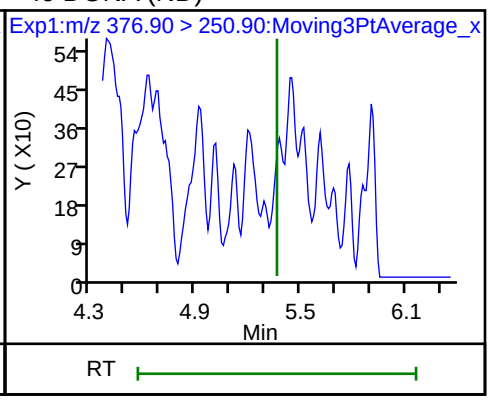
47 Perfluoroheptanoic acid (M)



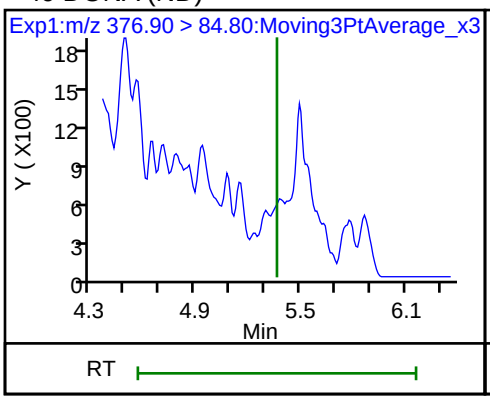
47 Perfluoroheptanoic acid



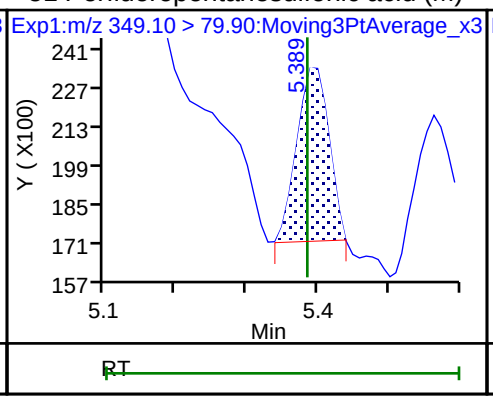
49 DONA (ND)



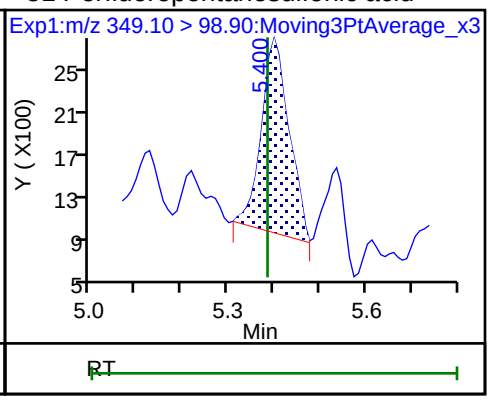
49 DONA (ND)



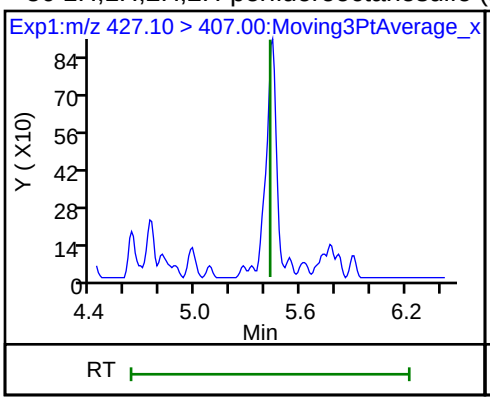
51 Perfluoropentanesulfonic acid (M)



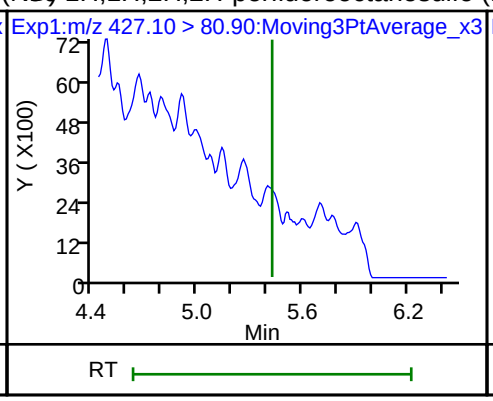
51 Perfluoropentanesulfonic acid



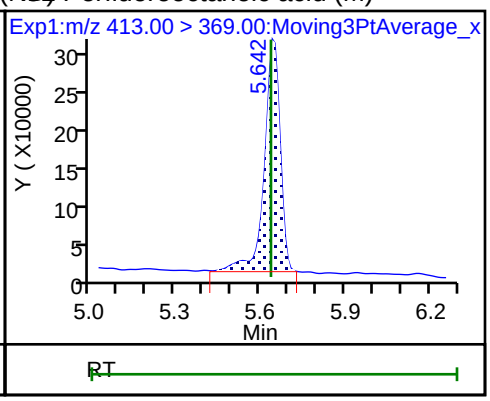
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



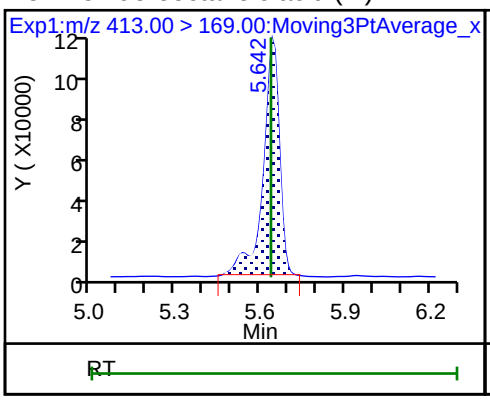
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



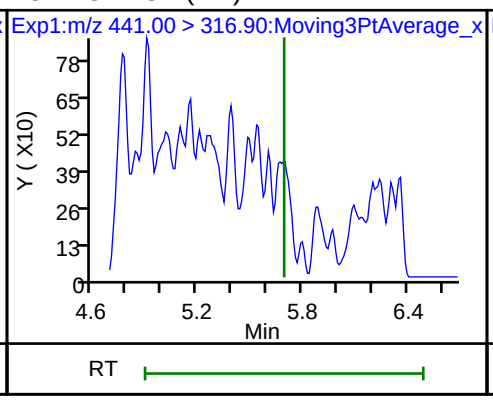
52 Perfluorooctanoic acid (M)



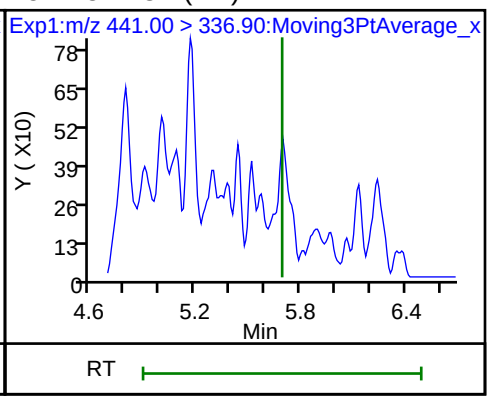
52 Perfluorooctanoic acid (M)



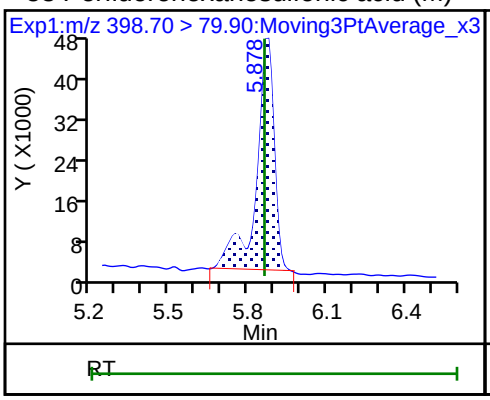
54 7:3 FTCA (ND)



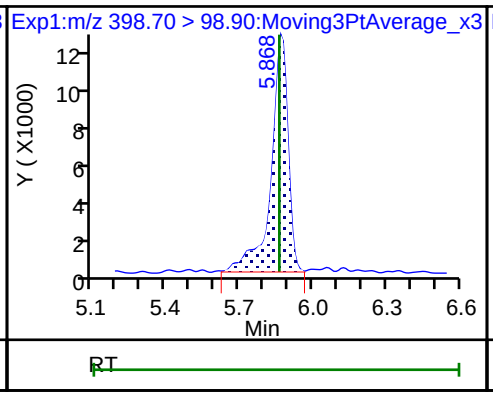
54 7:3 FTCA (ND)



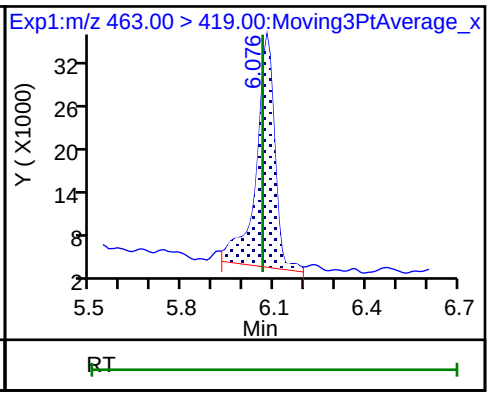
53 Perfluorohexanesulfonic acid (M)



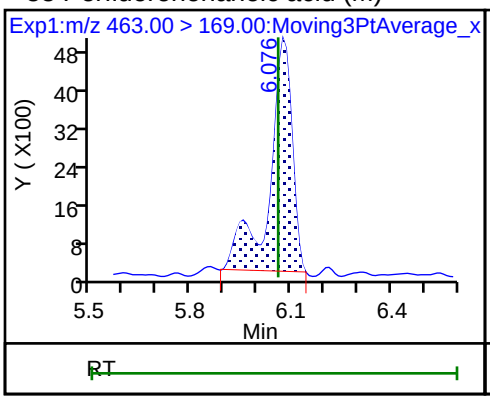
53 Perfluorohexanesulfonic acid



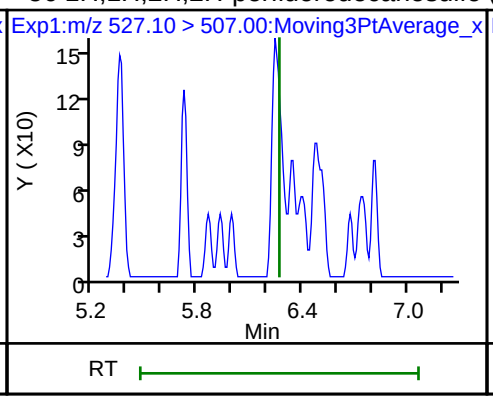
55 Perfluorononanoic acid



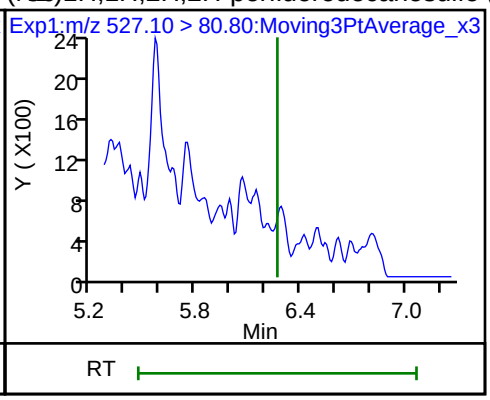
55 Perfluorononanoic acid (M)



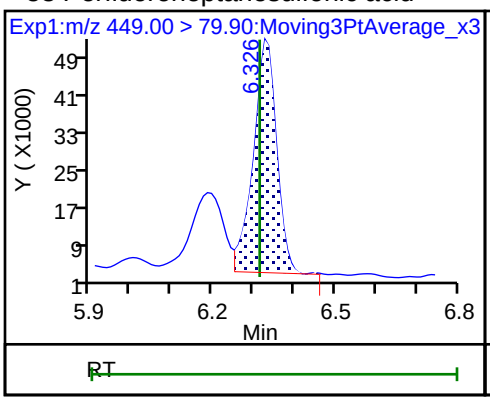
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



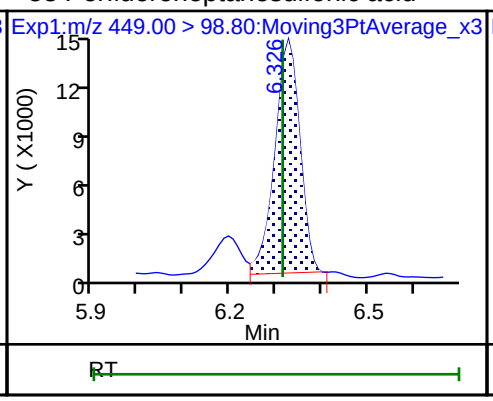
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



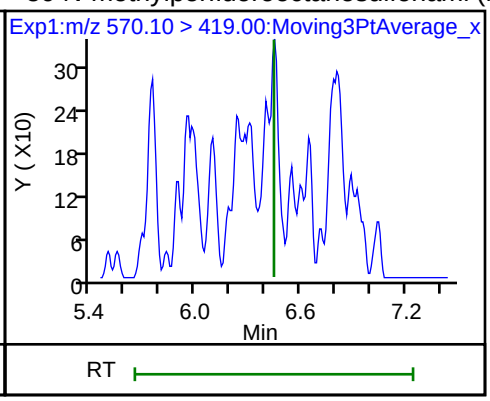
58 Perfluoroheptanesulfonic acid



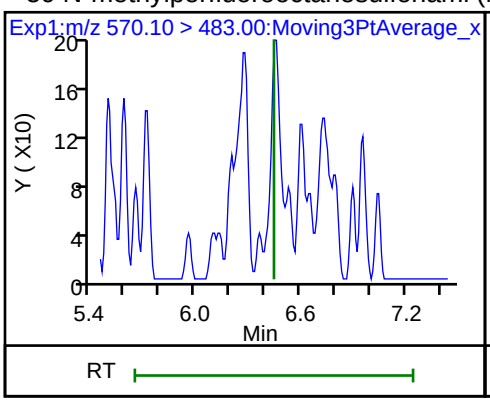
58 Perfluoroheptanesulfonic acid



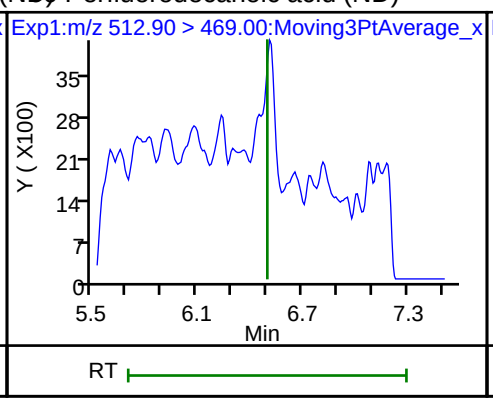
59 N-methylperfluorooctanesulfonami (ND)



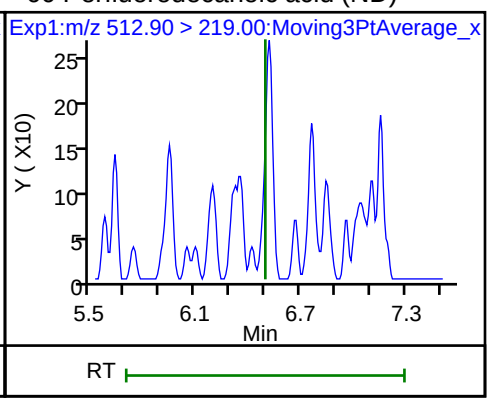
59 N-methylperfluorooctanesulfonami (ND)



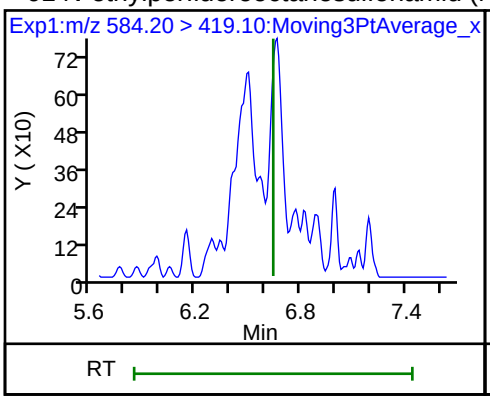
60 Perfluorodecanoic acid (ND)



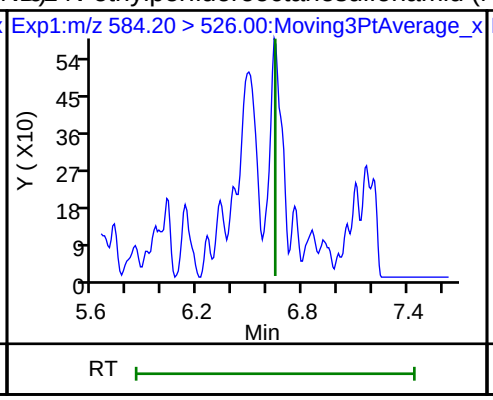
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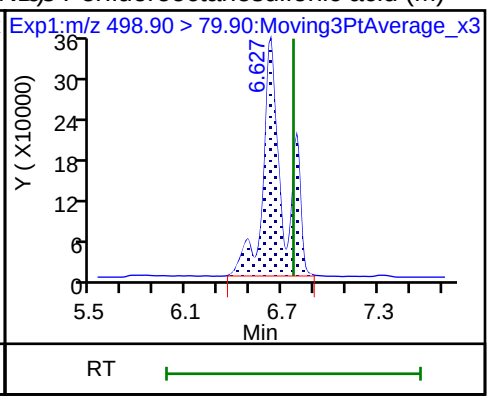
61 N-ethylperfluorooctanesulfonamid (ND)



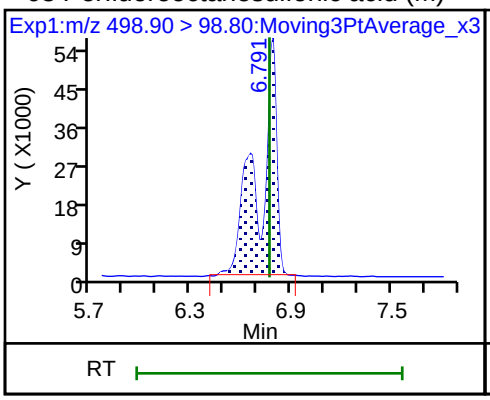
61 N-ethylperfluorooctanesulfonamid (ND)



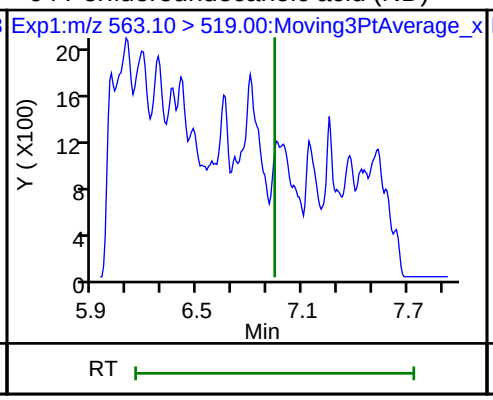
63 Perfluorooctanesulfonic acid (M)



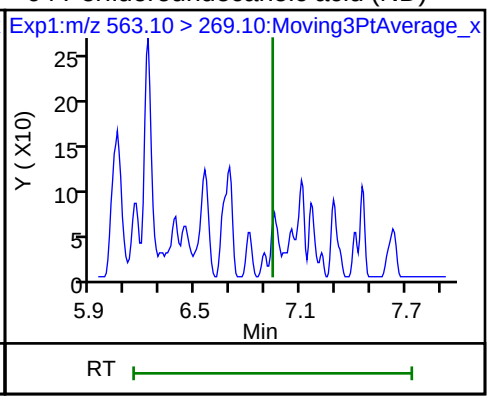
63 Perfluorooctanesulfonic acid (M)



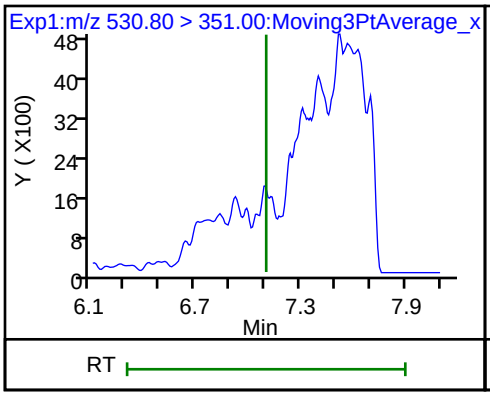
64 Perfluoroundecanoic acid (ND)



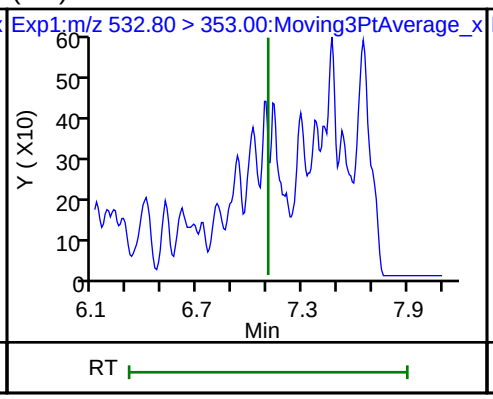
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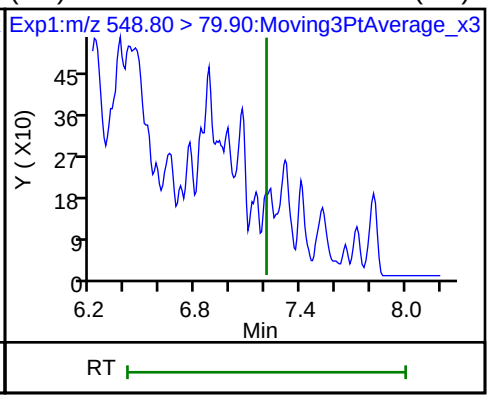
65 9-Chlorohexadecafluoro-3-oxanona (ND)



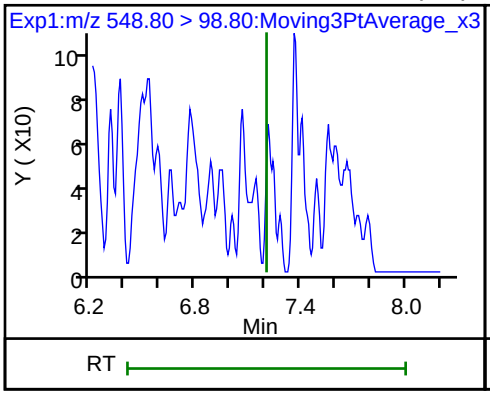
65 9-Chlorohexadecafluoro-3-oxanona (ND)



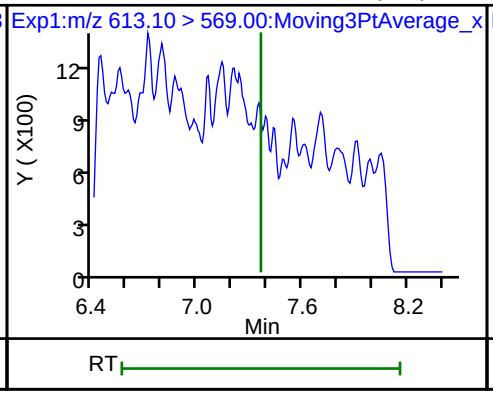
66 Perfluorononanesulfonic acid (ND)



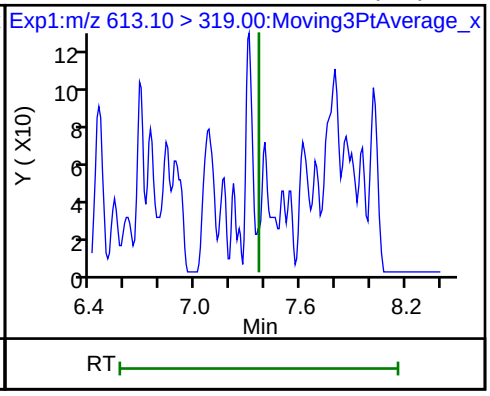
66 Perfluorononanesulfonic acid (ND)



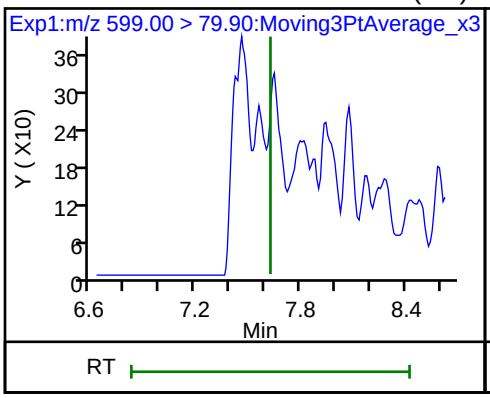
67 Perfluorododecanoic acid (ND)



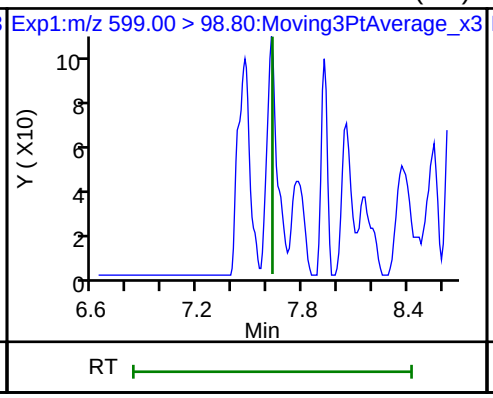
67 Perfluorododecanoic acid (ND)



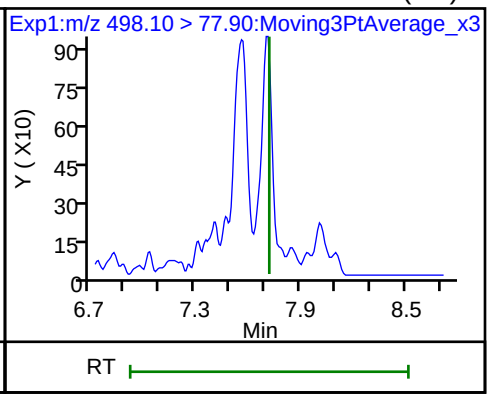
68 Perfluorodecanesulfonic acid (ND)



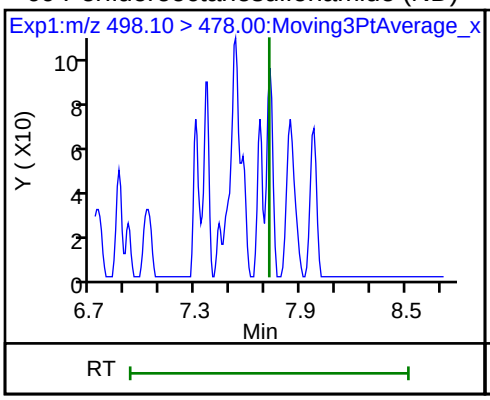
68 Perfluorodecanesulfonic acid (ND)



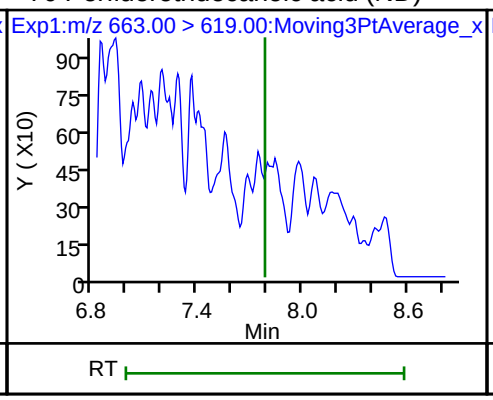
69 Perfluorooctanesulfonamide (ND)



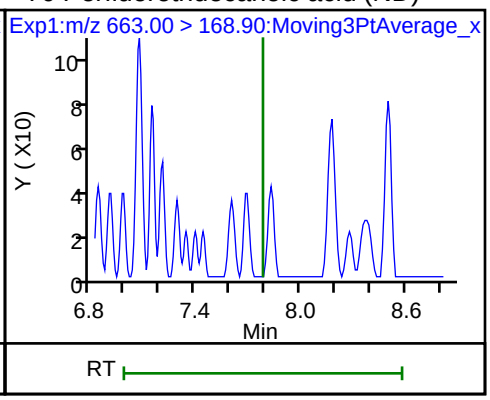
69 Perfluorooctanesulfonamide (ND)



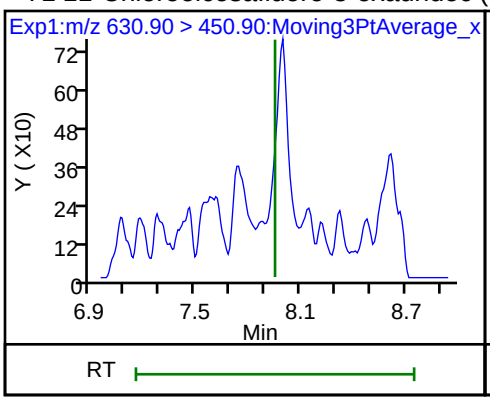
70 Perfluorotridecanoic acid (ND)



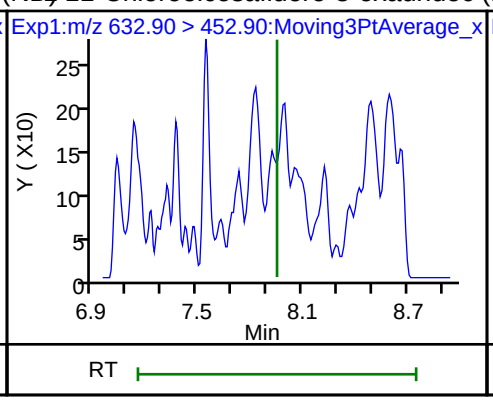
70 Perfluorotridecanoic acid (ND)



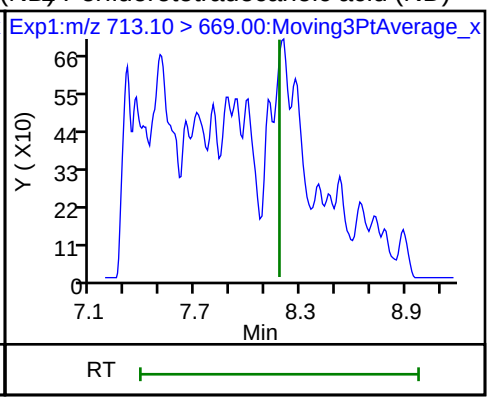
71 11-Chloroeicosafluoro-3-oxaundec (ND)



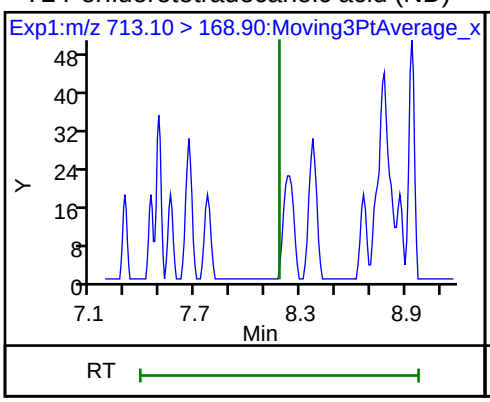
71 11-Chloroeicosafluoro-3-oxaundec (ND)



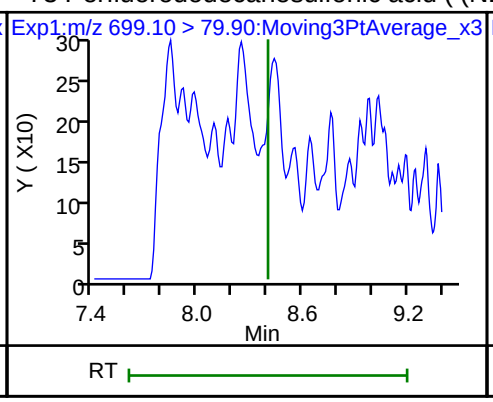
72 Perfluorotetradecanoic acid (ND)



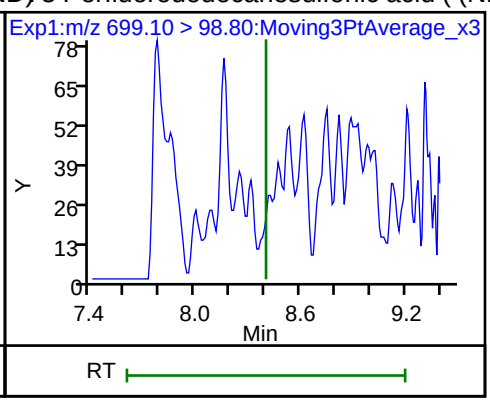
72 Perfluorotetradecanoic acid (ND)



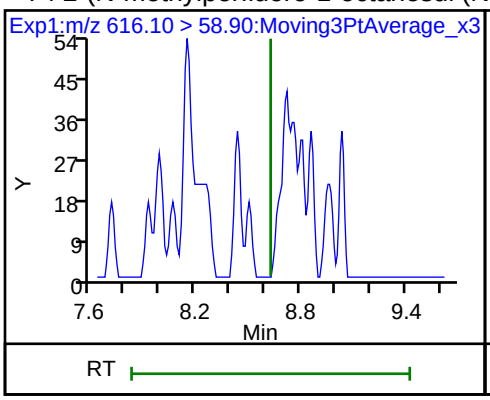
73 Perfluorododecanesulfonic acid ((ND)



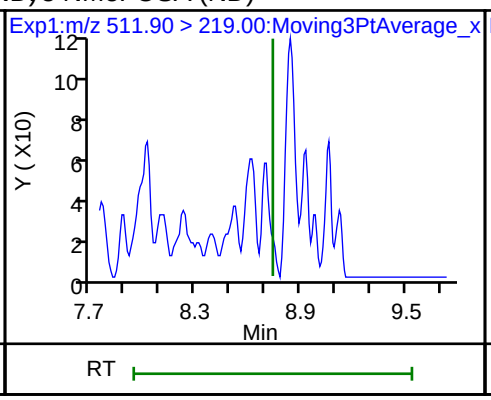
73 Perfluorododecanesulfonic acid ((ND)



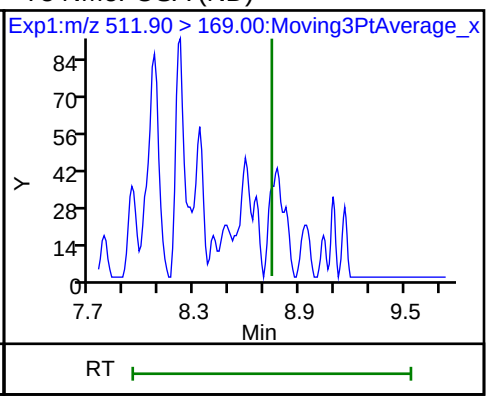
74 2-(N-methylperfluoro-1-octanesul (ND)



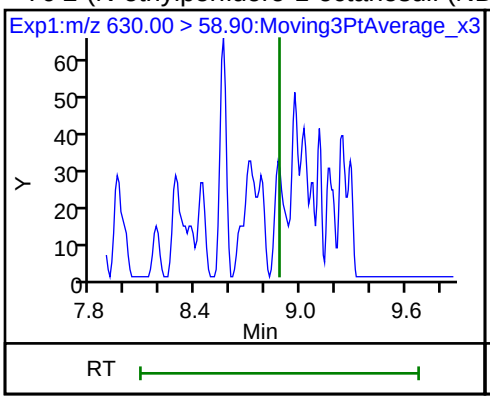
75 NMeFOSA (ND)



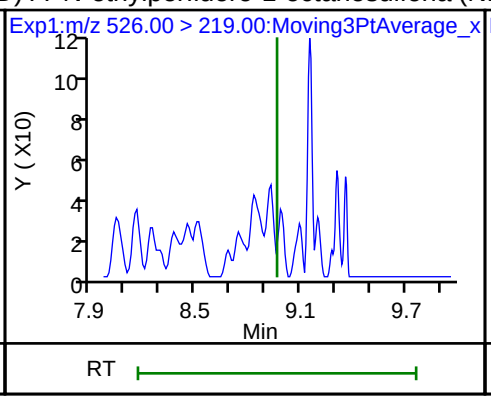
75 NMeFOSA (ND)



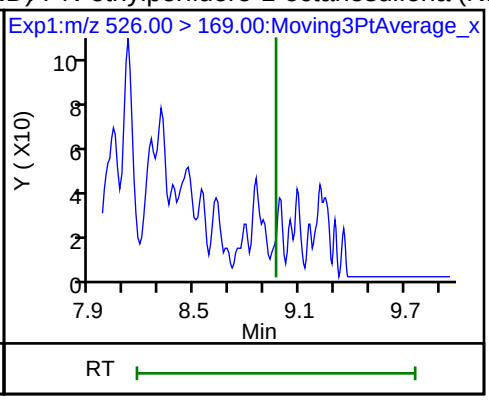
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



Eurofins Cleveland

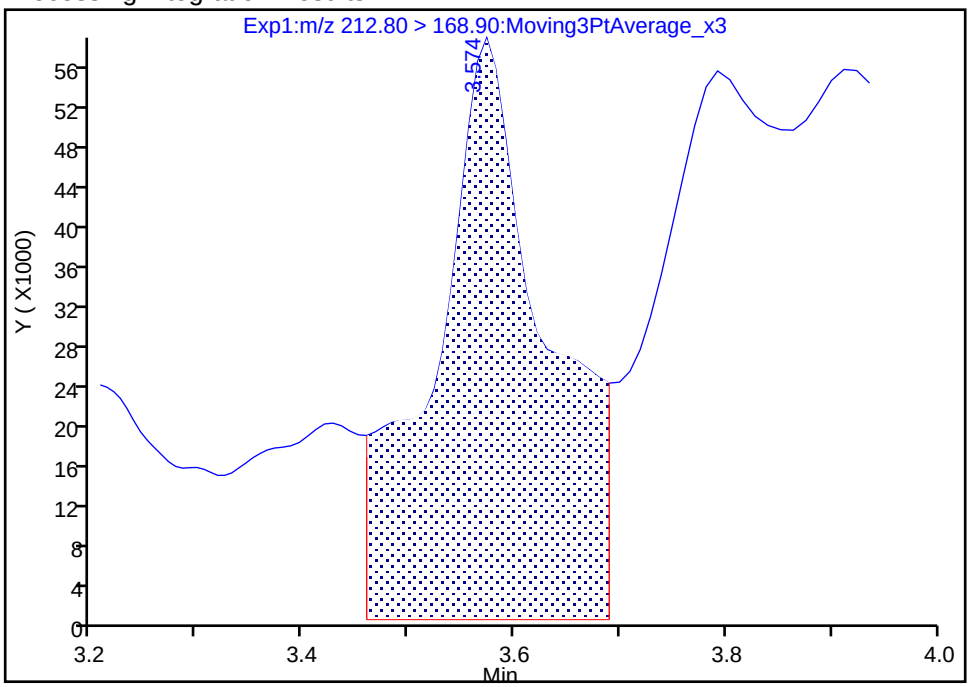
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

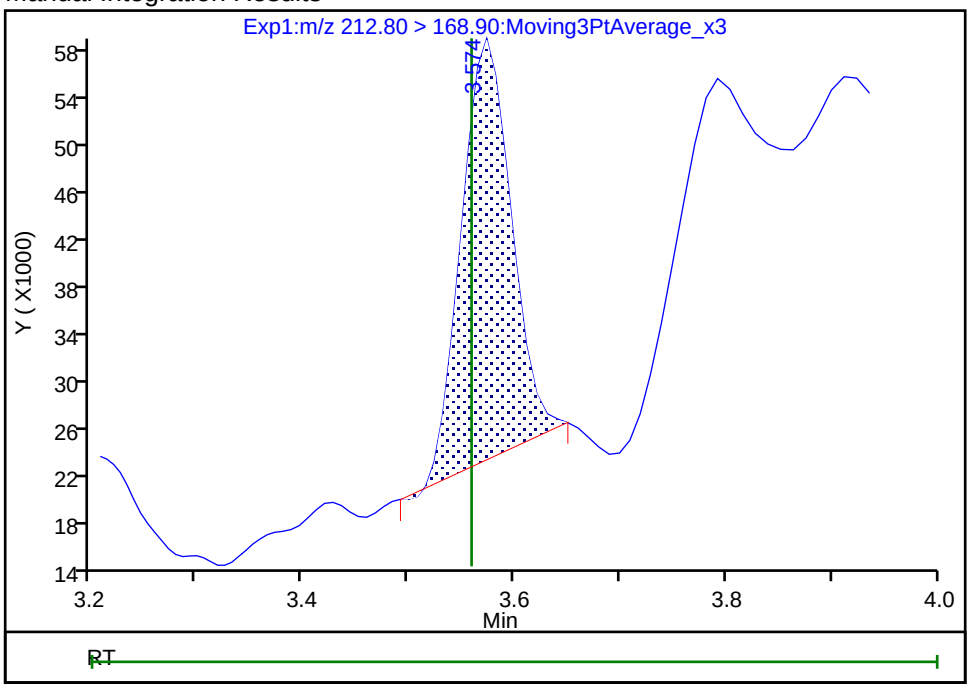
Processing Integration Results

RT: 3.57
Area: 435776
Amount: 0.321027
Amount Units: ng/ml



Manual Integration Results

RT: 3.57
Area: 115914
Amount: 0.085392
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:41:28 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

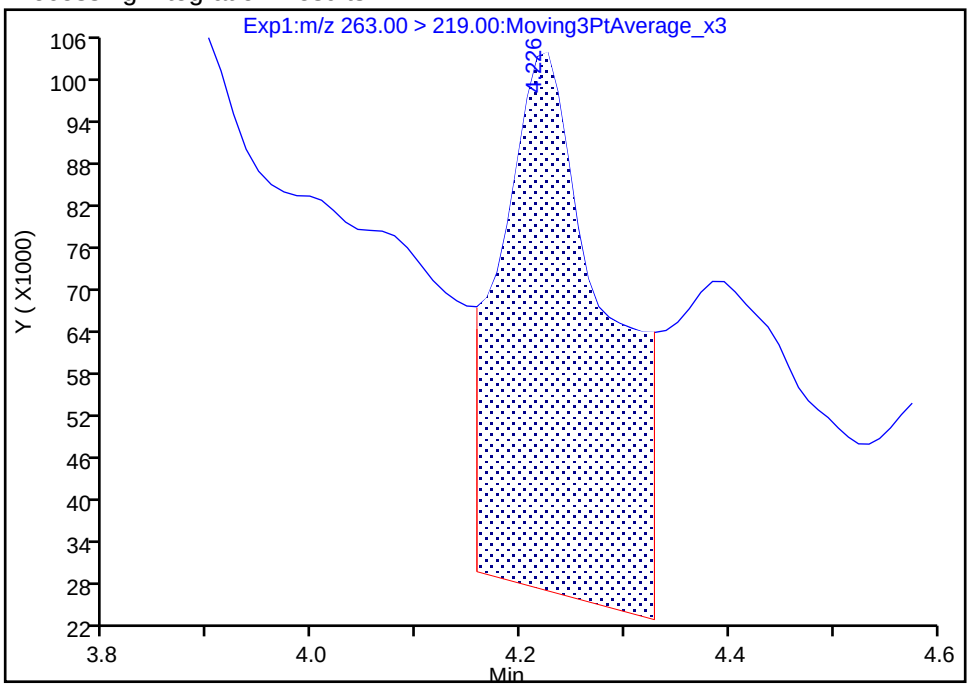
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

35 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

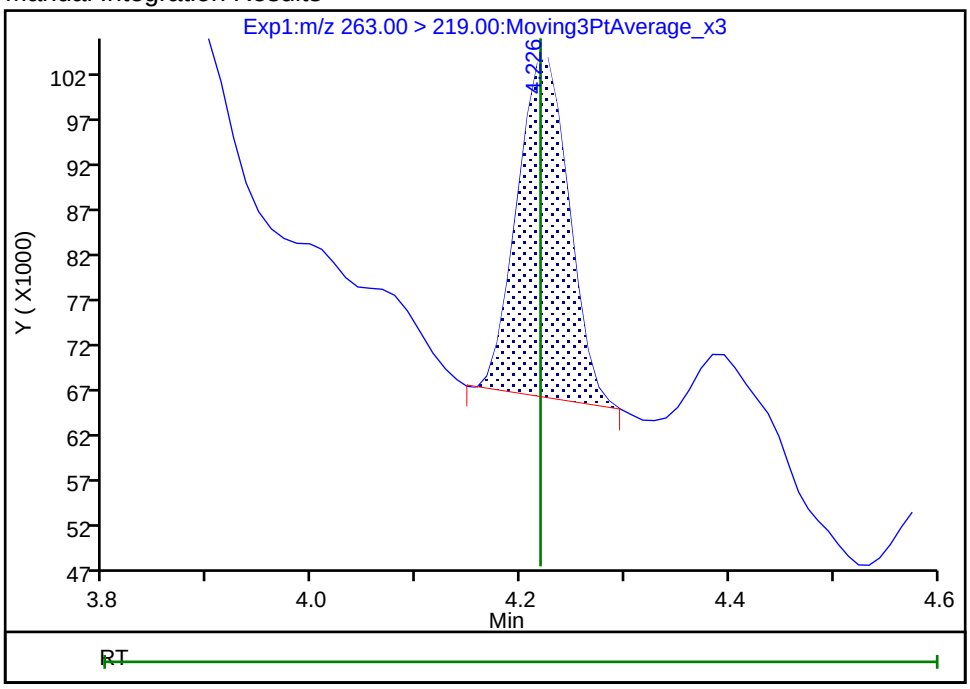
Processing Integration Results

RT: 4.23
Area: 535611
Amount: 0.219050
Amount Units: ng/ml



Manual Integration Results

RT: 4.23
Area: 129477
Amount: 0.052952
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:41:38 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

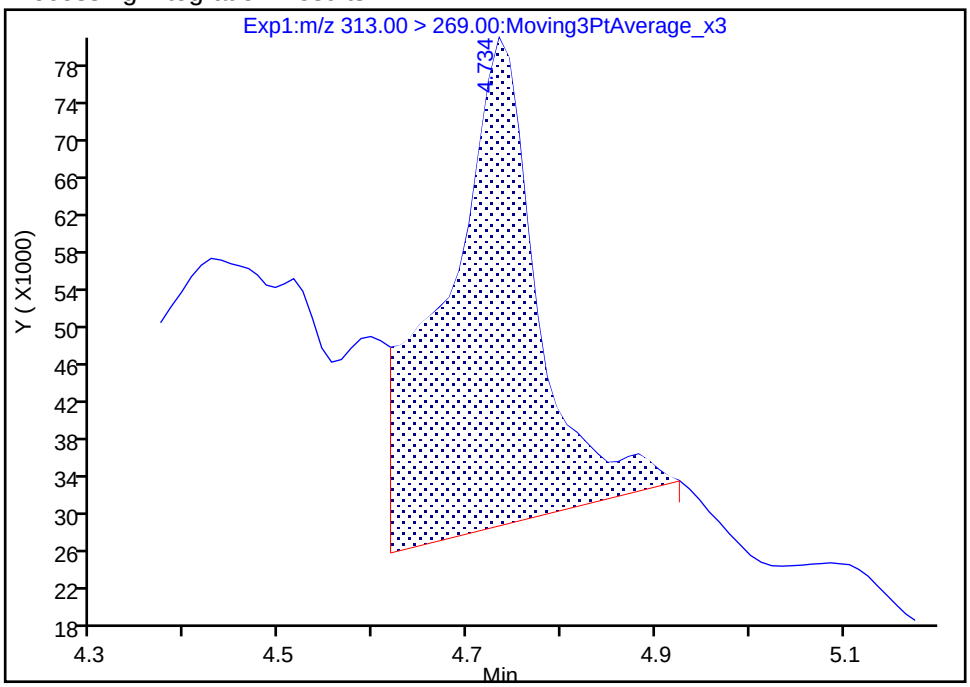
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

40 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

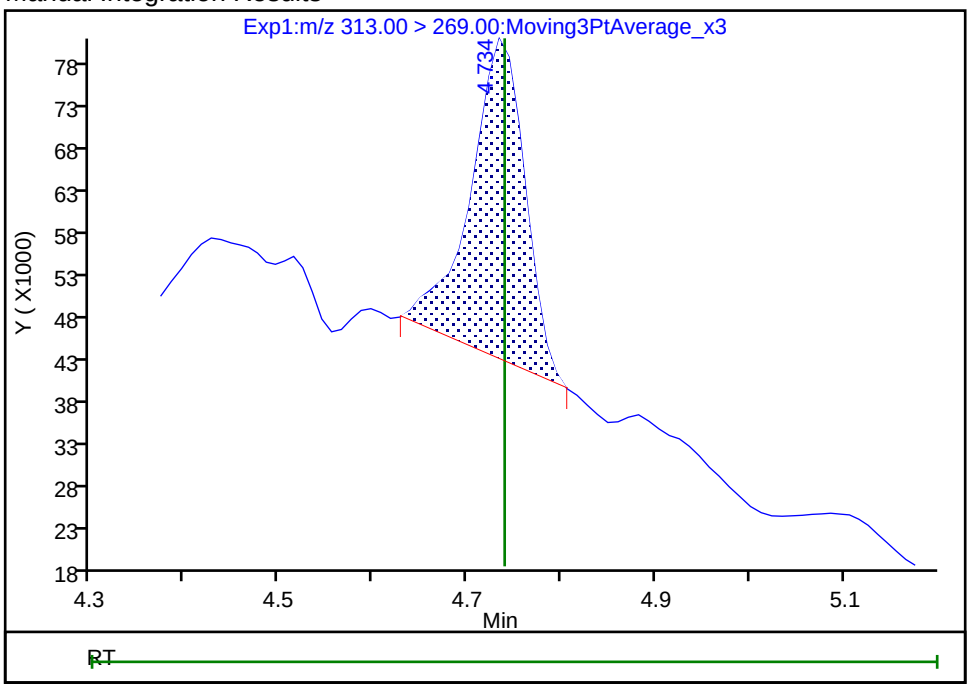
Processing Integration Results

RT: 4.73
Area: 355347
Amount: 0.182265
Amount Units: ng/ml



Manual Integration Results

RT: 4.73
Area: 151917
Amount: 0.077921
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:41:48 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

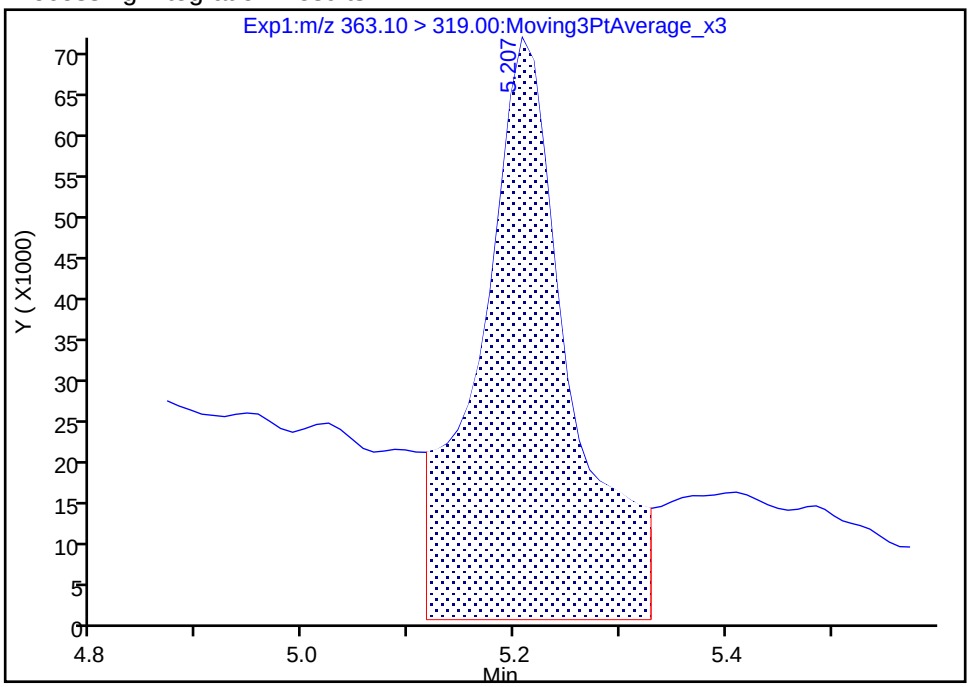
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

47 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

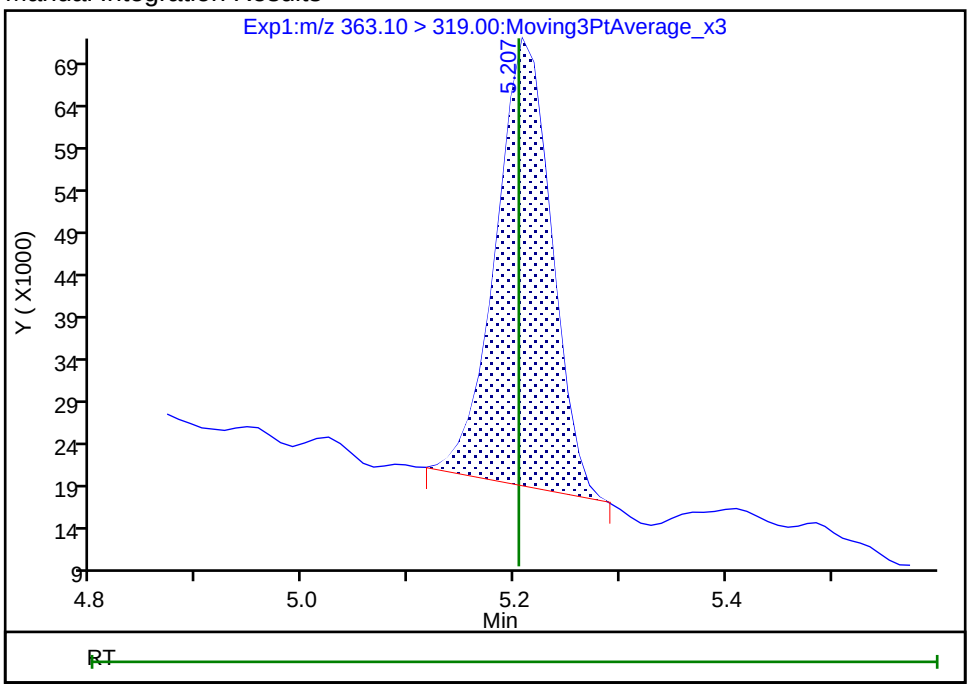
Processing Integration Results

RT: 5.21
Area: 422854
Amount: 0.133667
Amount Units: ng/ml



Manual Integration Results

RT: 5.21
Area: 195473
Amount: 0.061790
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:03 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

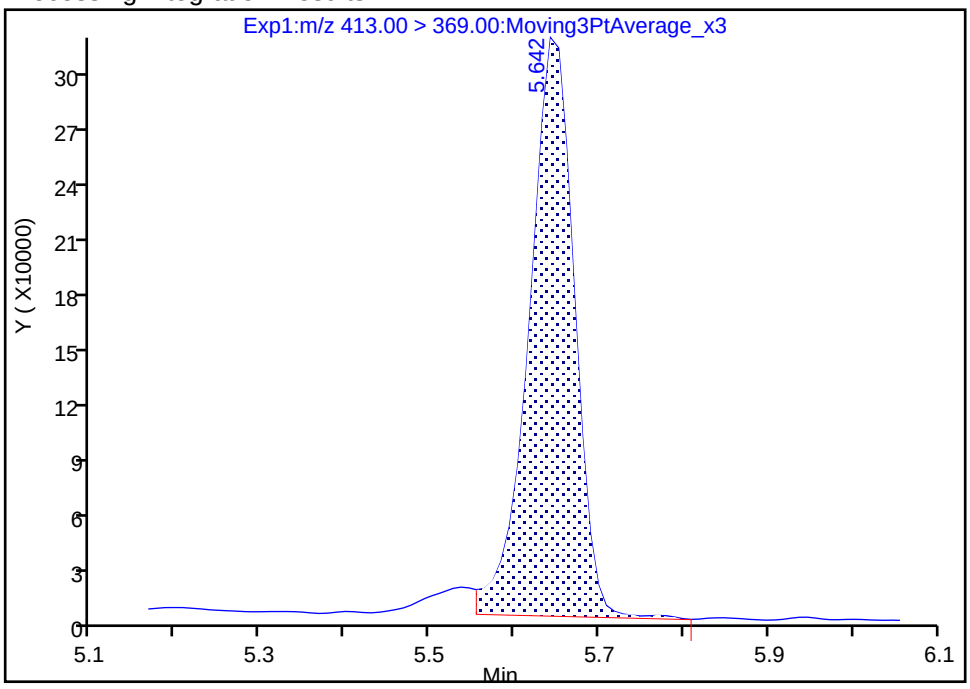
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

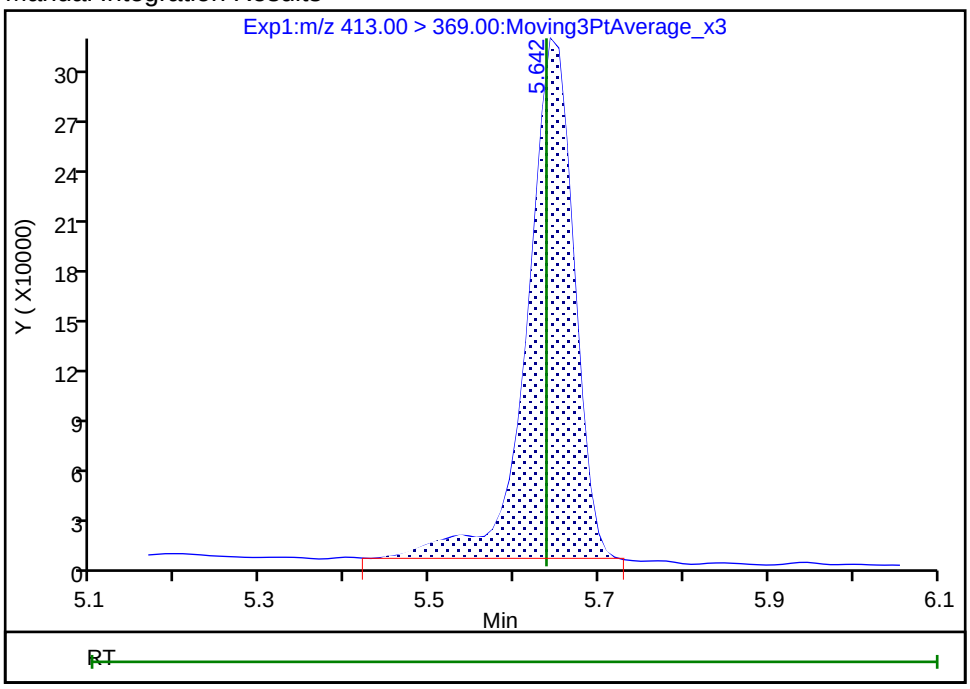
Processing Integration Results

RT: 5.64
Area: 1141763
Amount: 0.871830
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 1171538
Amount: 0.894566
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

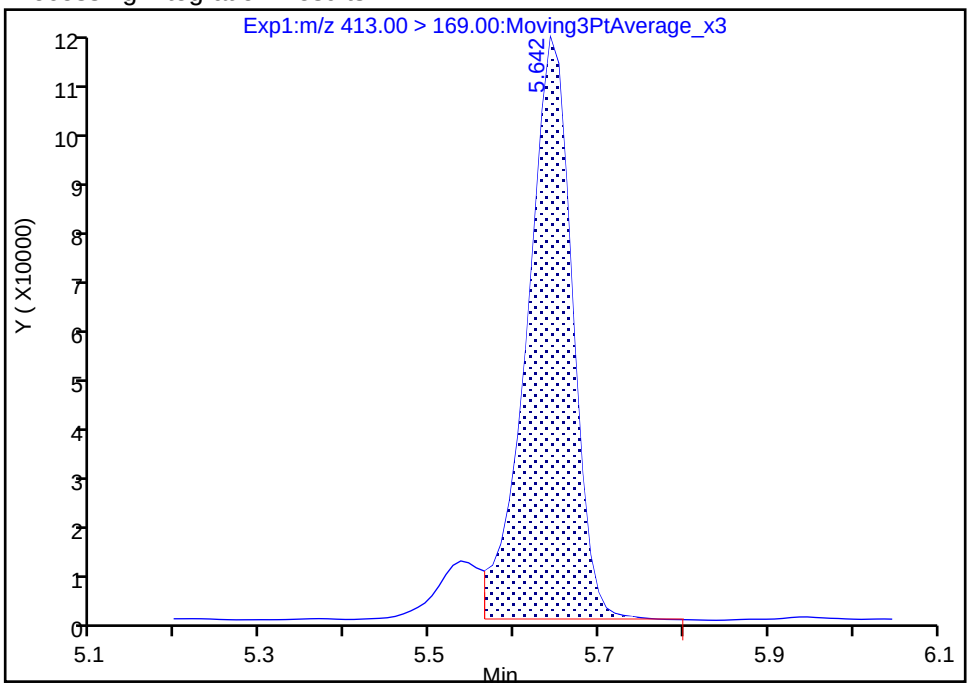
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

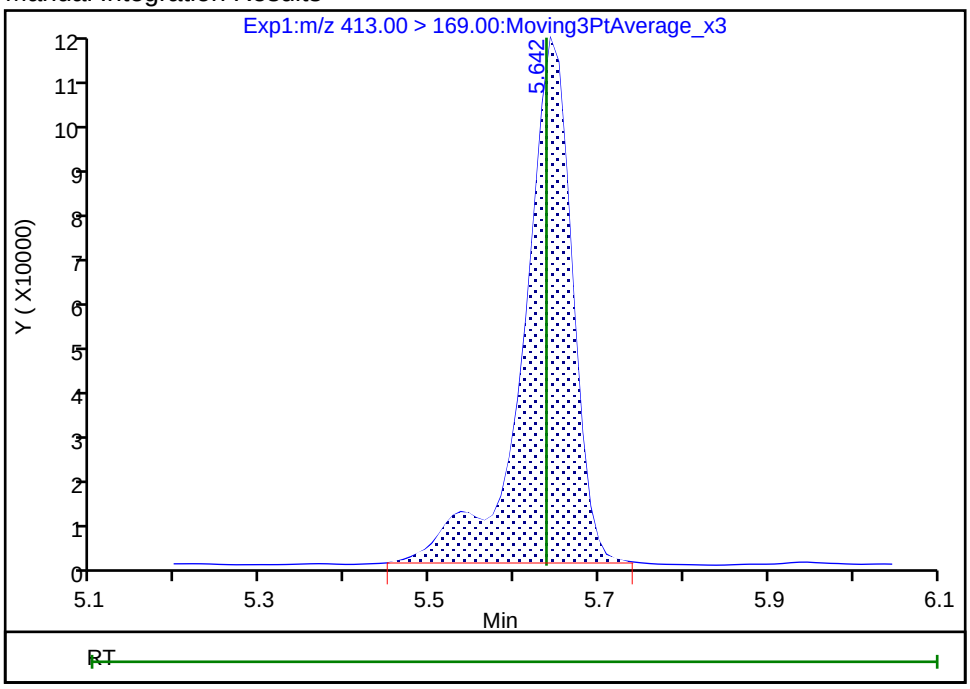
Processing Integration Results

RT: 5.64
Area: 441816
Amount: 0.871830
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 475896
Amount: 0.894566
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:27 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

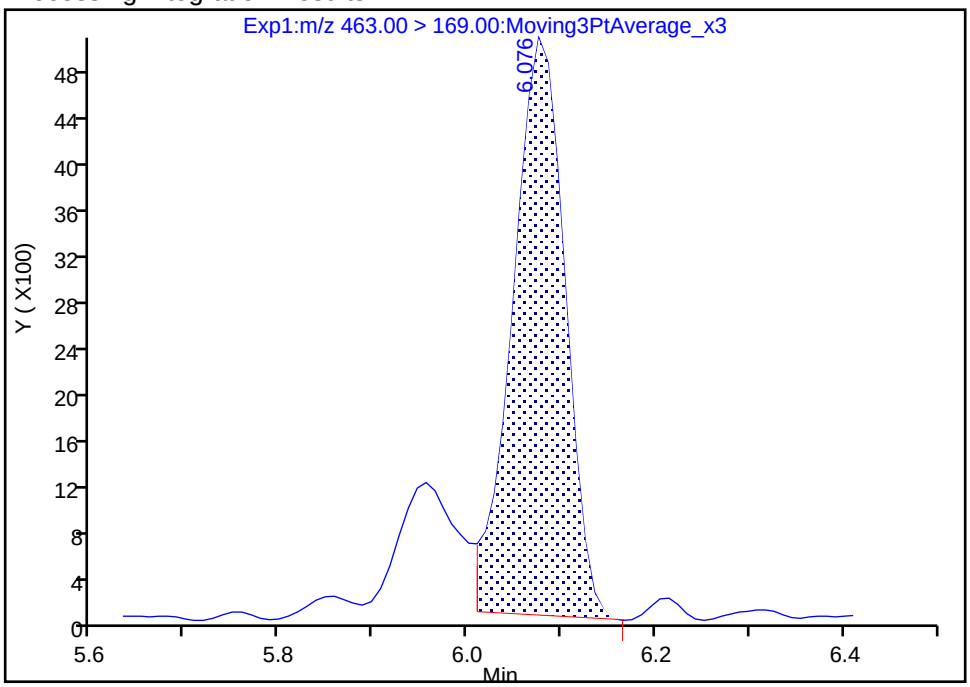
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

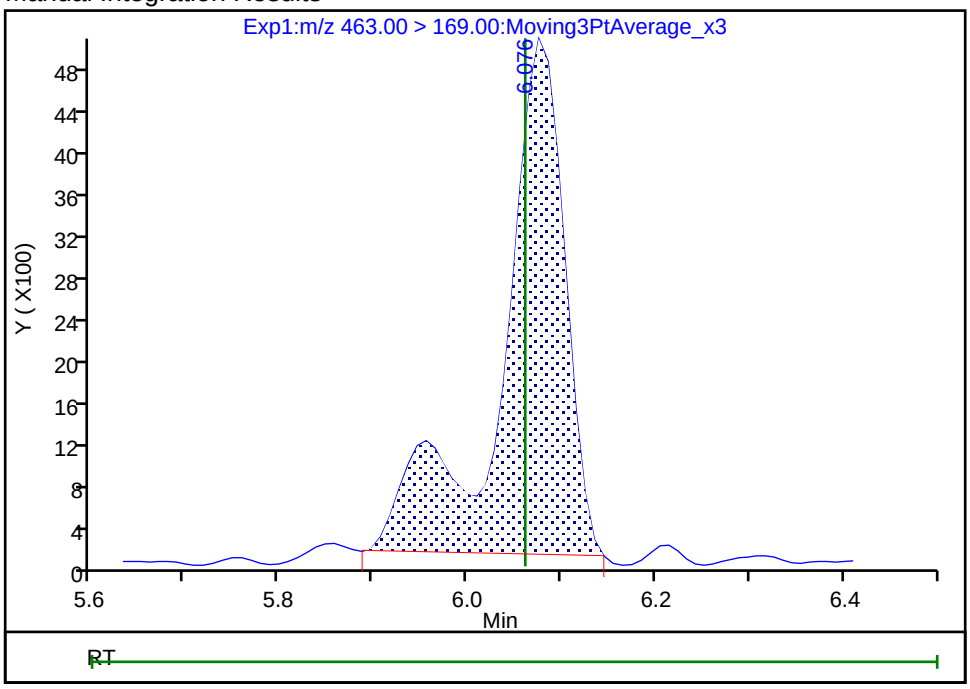
Processing Integration Results

RT: 6.08
Area: 19329
Amount: 0.074744
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 23350
Amount: 0.074744
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:43 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

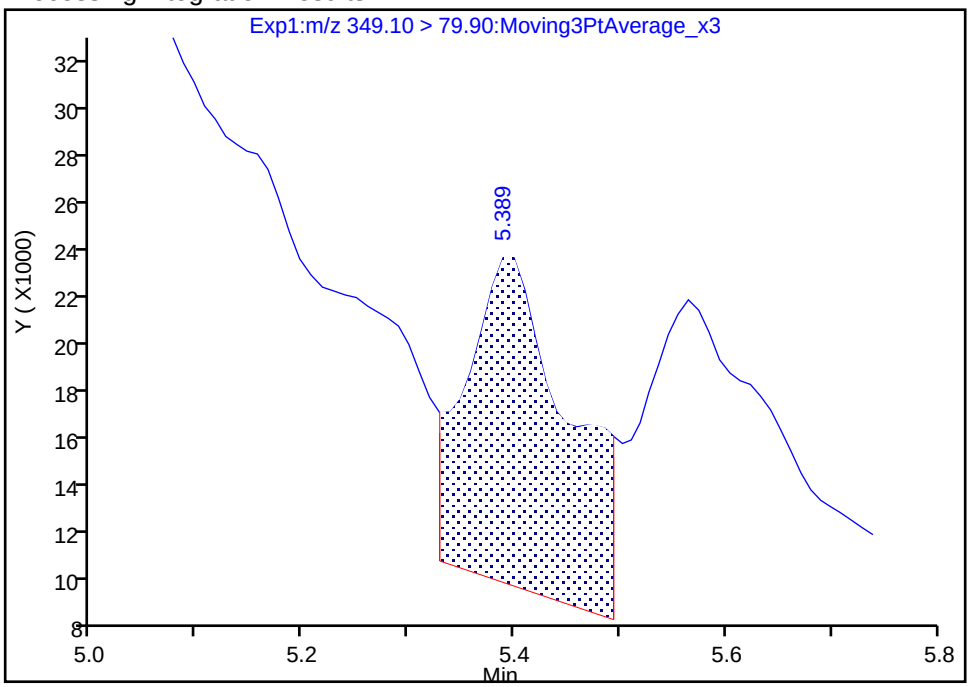
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

51 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 1

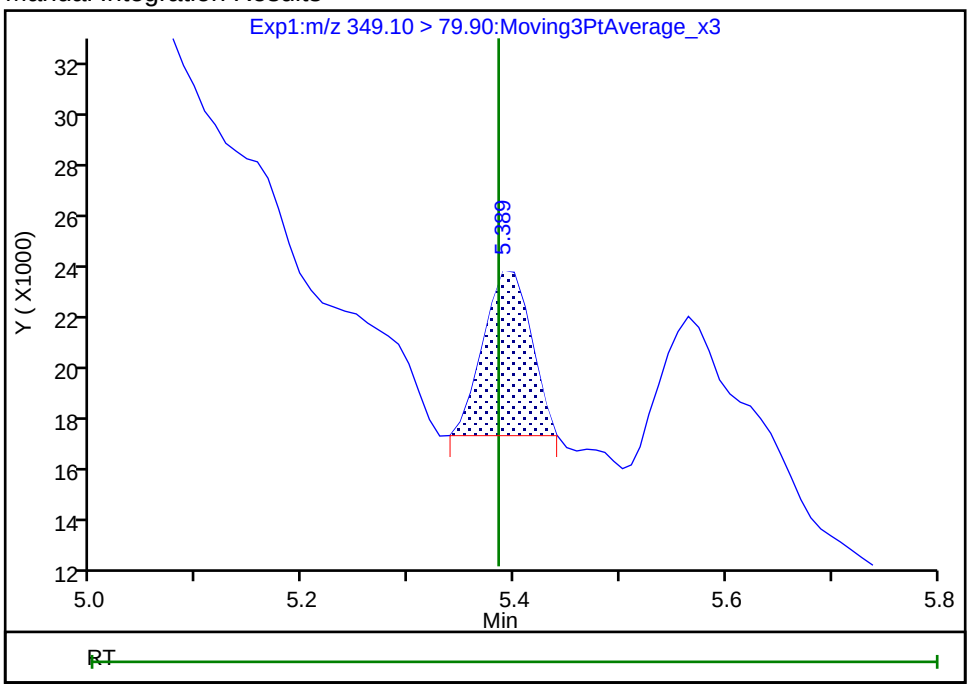
Processing Integration Results

RT: 5.39
Area: 90184
Amount: 0.033951
Amount Units: ng/ml



Manual Integration Results

RT: 5.39
Area: 19822
Amount: 0.007462
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:11 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

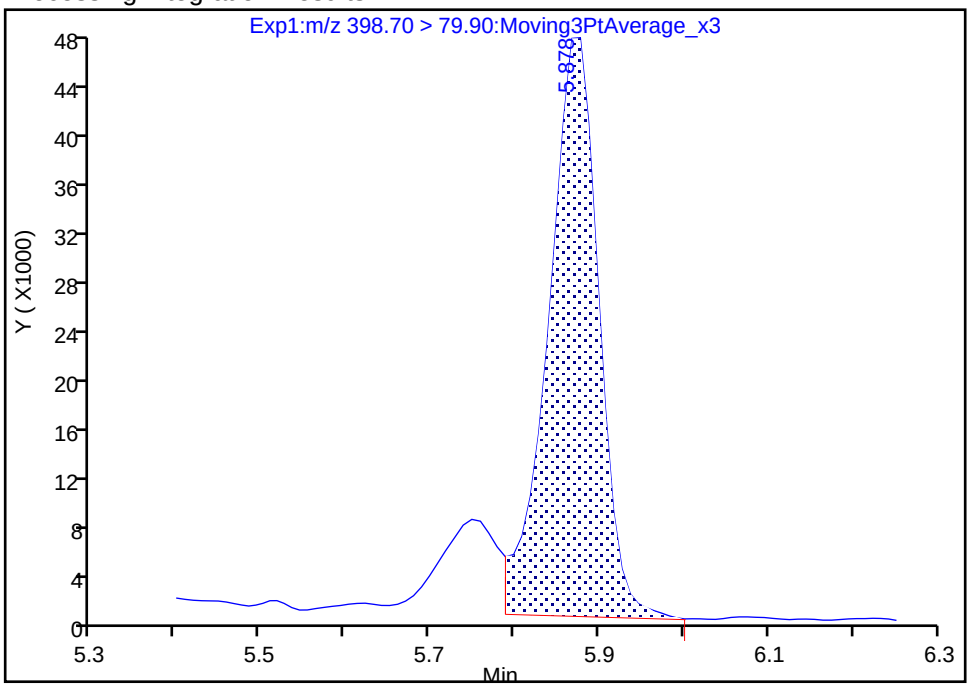
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

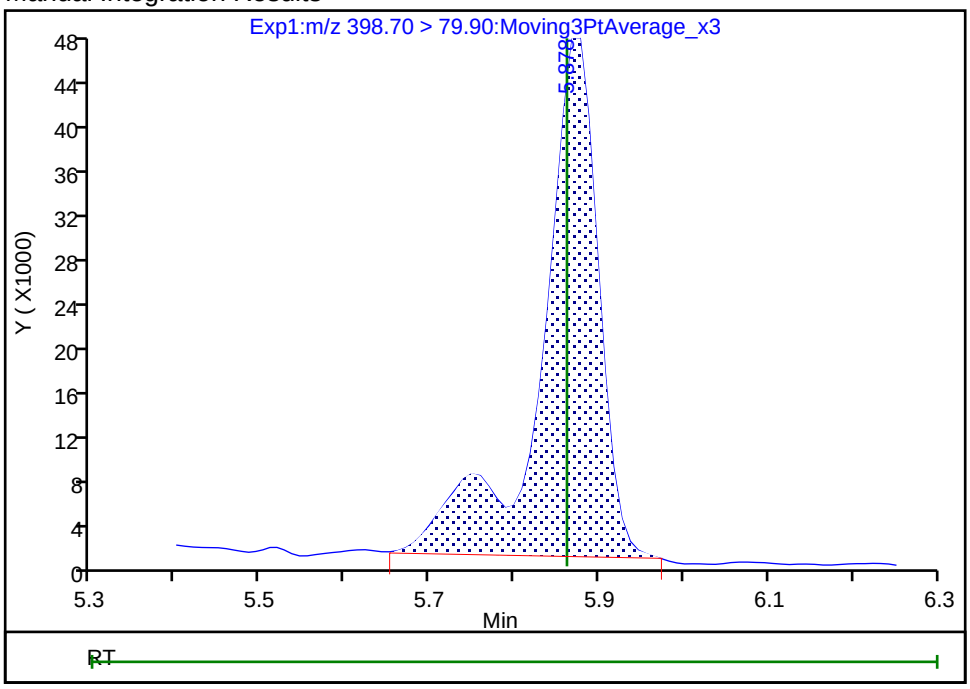
Processing Integration Results

RT: 5.88
Area: 192033
Amount: 0.086969
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 218921
Amount: 0.099146
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:36 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

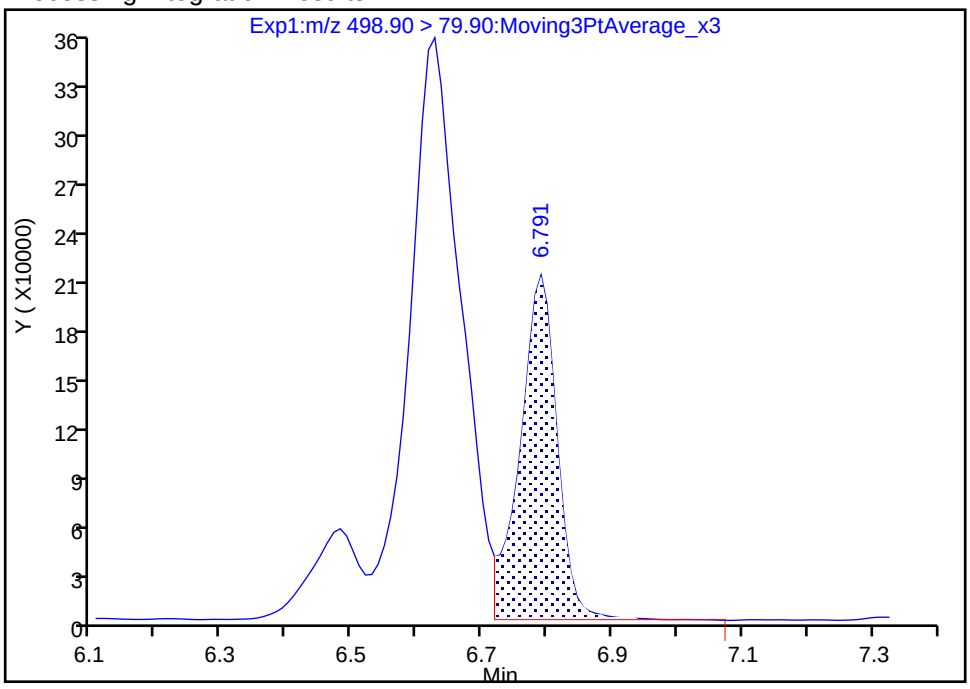
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

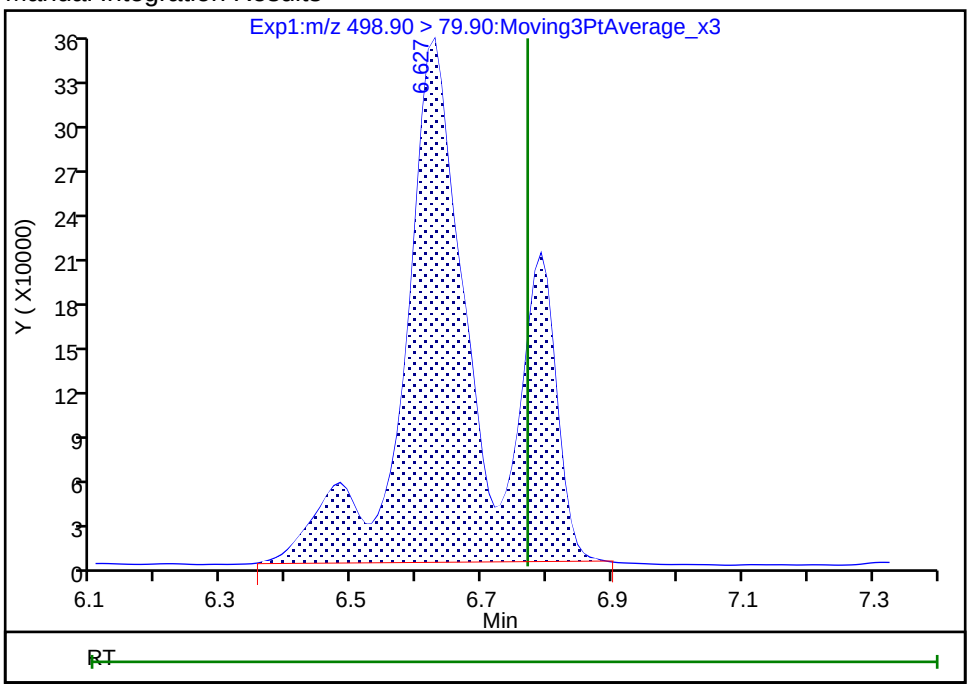
Processing Integration Results

RT: 6.79
Area: 842679
Amount: 0.293171
Amount Units: ng/ml



Manual Integration Results

RT: 6.63
Area: 3028641
Amount: 1.053676
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:42:55 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

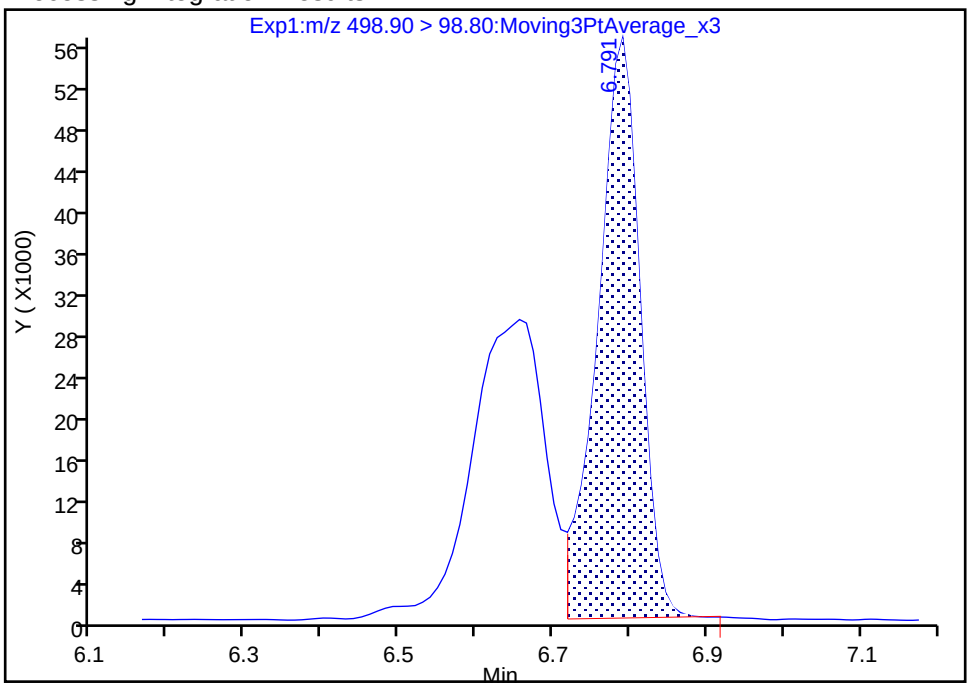
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj38.d				
Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

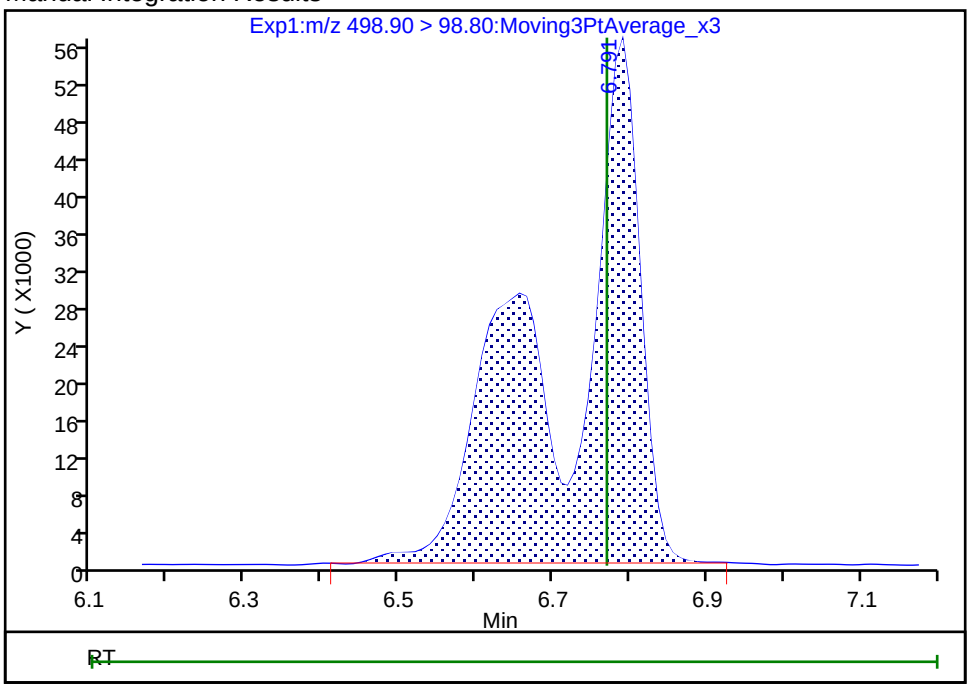
Processing Integration Results

RT: 6.79
Area: 215268
Amount: 0.293171
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 407407
Amount: 1.053676
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:43:01 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

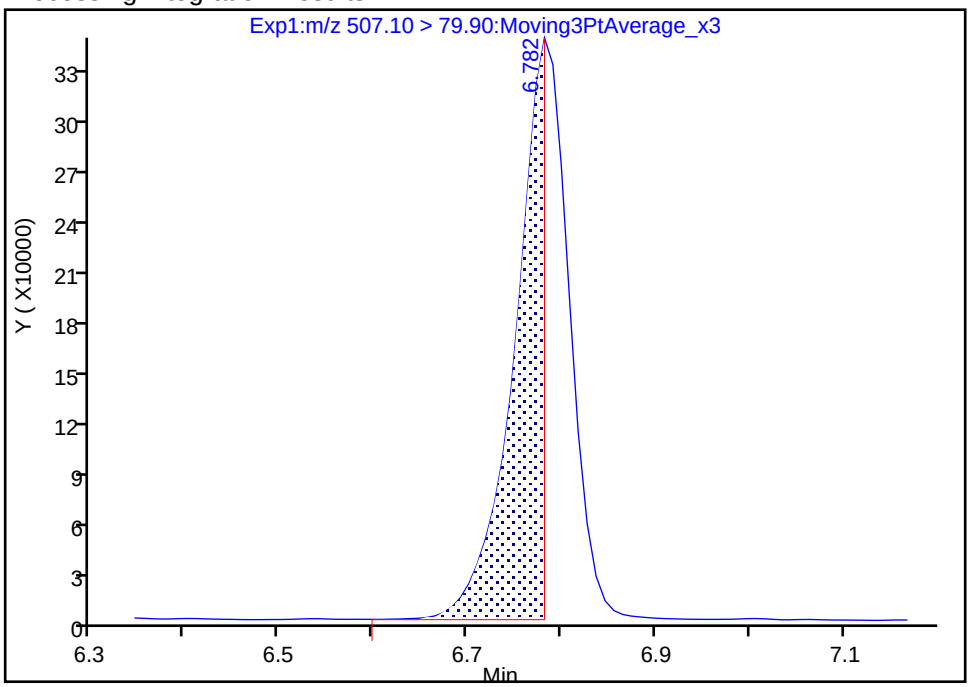
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Injection Date:	19-Sep-2024 00:47:11	Instrument ID:	LCMS04		
Lims ID:	460-311364-B-2-A	Lab Sample ID:	240-311364-2		
Client ID:	RXMW-5_P				
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

D 23 13C8 PFOS, CAS: STL01054

Signal: 1

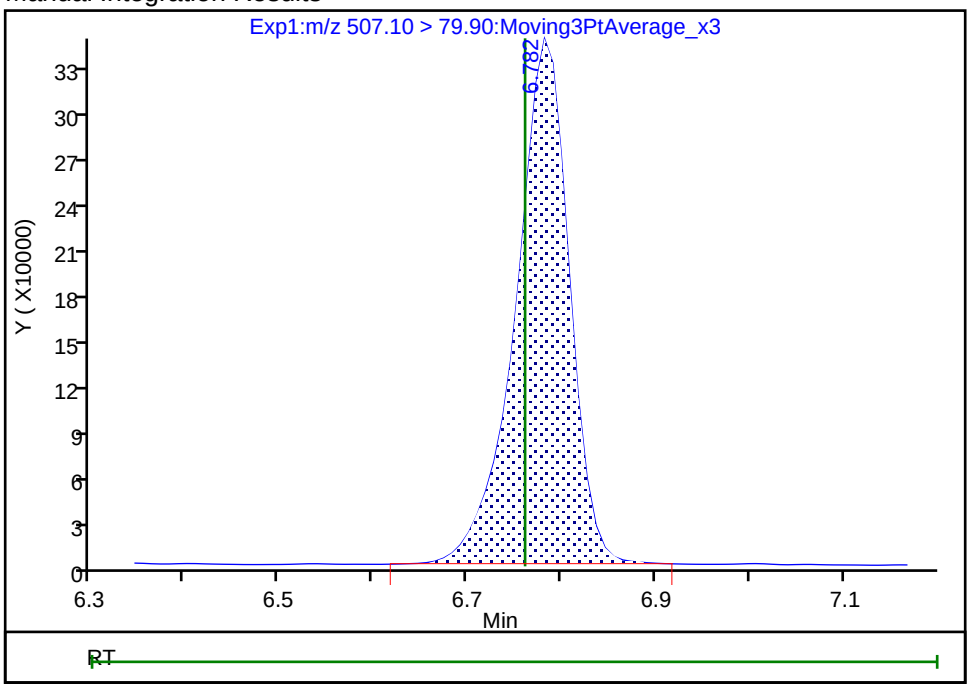
Processing Integration Results

RT: 6.78
Area: 732959
Amount: 0.369216
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 1365194
Amount: 0.687695
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:41:18 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: FB_09132024_P | Lab Sample ID: 460-311364-3

Matrix: Water | Lab File ID: 2024_09_18solidwatinj39.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:20

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 148.1(mL) | Date Analyzed: 09/19/2024 01:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	6.75	U	6.75	1.80
2706-90-3	Perfluoropentanoic acid (PFPeA)	3.38	U	3.38	0.84
307-24-4	Perfluorohexanoic acid (PFHxA)	1.69	U	1.69	0.42
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.69	U	1.69	0.42
335-67-1	Perfluorooctanoic acid (PFOA)	1.69	U	1.69	0.42
375-95-1	Perfluorononanoic acid (PFNA)	1.69	U	1.69	0.42
335-76-2	Perfluorodecanoic acid (PFDA)	1.69	U	1.69	0.42
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.69	U	1.69	0.42
307-55-1	Perfluorododecanoic acid (PFDoA)	1.69	U	1.69	0.42
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.69	U	1.69	0.42
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.69	U	1.69	0.42
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.69	U	1.69	0.42
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.69	U	1.69	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.69	U	1.69	0.44
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	1.69	U	1.69	0.42
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.69	U	1.69	0.42
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.69	U	1.69	0.42
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.69	U	1.69	0.42
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.75	U	6.75	1.69
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.75	U	6.75	1.69
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.75	U	6.75	1.69
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.69	U	1.69	0.42
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.69	U	1.69	0.42
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.69	U	1.69	0.42
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.69	U	1.69	0.52

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: FB_09132024_P | Lab Sample ID: 460-311364-3

Matrix: Water | Lab File ID: 2024_09_18solidwatinj39.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:20

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 148.1(mL) | Date Analyzed: 09/19/2024 01:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.69	U	1.69	0.44
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	16.9	U	16.9	4.22
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	16.9	U	16.9	4.22
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.75	U	6.75	1.69
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.75	U	6.75	1.69
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.38	U	3.38	0.84
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.38	U	3.38	1.03
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.75	U	6.75	1.69
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.75	U	6.75	1.69
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.38	U	3.38	0.84
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.44	U	8.44	2.11
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	42.2	U	42.2	10.6
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	42.2	U	42.2	12.6
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.69	U	1.69	0.42
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.38	U	3.38	0.84

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: FB_09132024_P | Lab Sample ID: 460-311364-3

Matrix: Water | Lab File ID: 2024_09_18solidwatinj39.d

Analysis Method: 1633 | Date Collected: 09/13/2024 12:20

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 148.1(mL) | Date Analyzed: 09/19/2024 01:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	124		10-130
2283397-79-3	13C5 PFPeA	109		35-150
2328024-54-8	13C5 PFHxA	101		55-150
2328024-55-9	13C4 PFHpA	110		55-150
1350614-84-4	13C8 PFOA	113		60-140
2283397-80-6	13C9 PFNA	129		55-140
2328024-56-0	13C6 PFDA	141	*	50-140
STL02580	13C7 PFUnA	133		30-140
STL02116	13C2 PFTeDA	92.9		10-130
2708218-83-9	13C3 PFBS	132		55-150
2708218-85-1	13C3 PFHxS	130		55-150
2265893-05-6	13C8 PFOS	134		45-140
STL01056	13C8 FOSA	140	*	30-130
1400690-70-1	d3-NMeFOSAA	137		45-200
1265205-97-7	d5-NEtFOSAA	144		10-200
STL02395	M2-4:2 FTS	202	*	60-200
STL02279	M2-6:2 FTS	186		60-200
STL02280	M2-8:2 FTS	178		50-200
STL02255	13C3 HFPO-DA	107		25-160
STL02277	d7-N-MeFOSE-M	131		10-150
STL02278	d9-N-EtFOSE-M	122		10-150
STL02704	d5-NEtPFOSA	95.9		10-130
STL02705	d3-NMePFOSA	105		15-130
STL02703	13C2-PFDoDA	113		10-150

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj39.d
Lims ID: 460-311364-A-3-A
Client ID: FB_09132024_P
Sample Type: Client
Inject. Date: 19-Sep-2024 01:00:47 ALS Bottle#: 35 Worklist Smp#: 39
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 460-311364-A-3-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-039
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 11:44:15 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 11:44:15
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.565	3.551	0.014		1493096	1.25			593	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.729	0.004		1162238	0.6250			4616	
* 3 13C4 PFOA										
417.10 > 172.00	5.643	5.628	0.015		207928	0.6250			2673	
* 4 18O2 PFHxS										
403.00 > 83.90	5.868	5.852	0.016		1104174	0.5913			1740	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.061	0.016		679786	0.3125			1007	
* 6 13C2 PFDA										
515.10 > 470.10	6.512	6.498	0.014		538633	0.3125			1190	
* 7 13C4 PFOS										
502.80 > 79.90	6.783	6.761	0.022		981844	0.5975	Target=4.00		1810	
502.80 > 98.90	6.783	6.761	0.022		240223		4.09(2.00-6.00)		830	
D 8 13C4 PFBA										
216.80 > 171.90	3.565	3.551	0.014	1.000	4202752	3.10		124	12041	
D 9 13C5 PFPeA										
268.30 > 223.00	4.216	4.209	0.007	0.891	1993812	1.37		109	4321	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.534	4.529	0.005	0.773	1476781	2.36	Target=0.29	202	4321	
329.10 > 309.00	4.534	4.529	0.005	0.773	3978618		0.37(0.14-0.43)	202	1100	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.729	0.004	1.000	1656251	0.6339	Target=40.21	101	2700	
318.00 > 120.30	4.733	4.729	0.004	1.000	43510		38.07(20.11-60.32)	101	568	
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.856	0.015	0.830	1537353	0.7700	Target=3.28	132	2590	
302.10 > 98.90	4.860	4.856	0.004	0.828	461776		3.33(1.64-4.92)	132	1914	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.922	0.014	1.043	2017311	2.68	Target=1.86	107	6462	
286.90 > 184.90	4.925	4.922	0.003	1.041	1113978		1.81(0.93-2.78)	107	2468	
D 14 13C4 PFHpA										
367.10 > 322.00	5.197	5.193	0.004	1.098	1878865	0.6885		110	4361	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.430	5.416	0.014	0.925	1583868	2.21	Target=0.38	186	4760	
429.10 > 409.00	5.430	5.416	0.014	0.925	3597788		0.44(0.19-0.57)	186	4517	
D 16 13C8 PFOA										
421.10 > 376.00	5.643	5.628	0.015	1.000	1848575	0.7044		113	2396	
D 17 13C3 PFHxS										
402.10 > 79.90	5.868	5.852	0.016	1.000	1508595	0.7696	Target=3.25	130	2748	
402.10 > 98.80	5.868	5.852	0.016	1.000	448869		3.36(1.63-4.88)	130	1349	
D 18 13C9 PFNA										
472.10 > 427.00	6.077	6.061	0.016	1.000	687377	0.4029		129	1661	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.271	6.258	0.013	1.069	1045393	2.13	Target=0.33	178	2235	
529.10 > 509.00	6.271	6.258	0.013	1.069	2692799		0.39(0.16-0.49)	178	5227	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.452	6.437	0.015	0.951	1299990	1.71		137	2845	
D 21 13C6 PFDA										
519.10 > 474.10	6.512	6.498	0.014	1.000	731497	0.4410		141	1628	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.648	6.634	0.014	0.980	1344394	1.80		144	2904	
D 23 13C8 PFOS										
507.10 > 79.90	6.783	6.761	0.022	1.000	1359501	0.8030	Target=4.26	134	2148	
507.10 > 98.90	6.783	6.761	0.022	1.000	334433		4.07(2.13-6.39)	134	694	
D 24 13C7 PFUnA										
570.00 > 525.10	6.959	6.932	0.027	1.069	680269	0.4167		133	1150	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.388	7.361	0.027	1.135	543457	0.3527		113	912	
D 26 13C8 FOSA										
506.10 > 77.80	7.705	7.720	-0.015	1.136	1592043	0.8762		140	3050	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.216	8.179	0.037	1.262	255722	0.2903		92.9	612	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.600	8.607	-0.007	1.268	2212099	8.21		131	747	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.724	8.731	-0.007	1.286	234755	0.6551		105	721	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.859	-0.006	1.305	2517630	7.61		122	893	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.942	8.956	-0.014	1.318	216509	0.5994		95.9	140	
53 Perfluorohexanesulfonic acid										7M
398.70 > 79.90	5.878	5.862	0.016	1.002	4950	0.002272	Target=3.17		24.3	7M
LOD = 0.0114										

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 11:44:16 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj39.d

Injection Date: 19-Sep-2024 01:00:47 Instrument ID: LCMS04

Lims ID: 460-311364-A-3-A Lab Sample ID: 240-311364-3

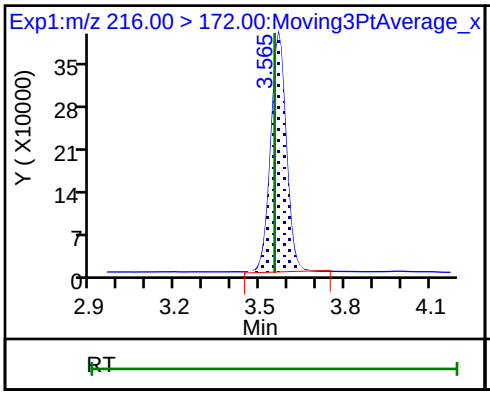
Client ID: FB_09132024_P

Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 39

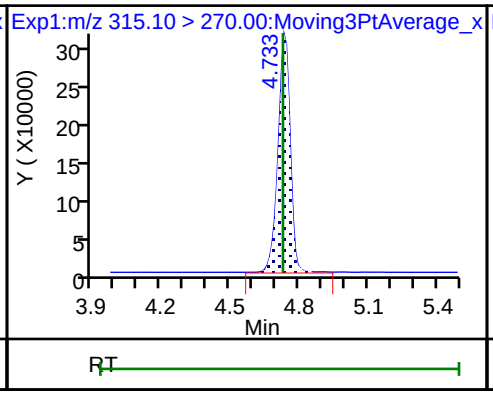
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

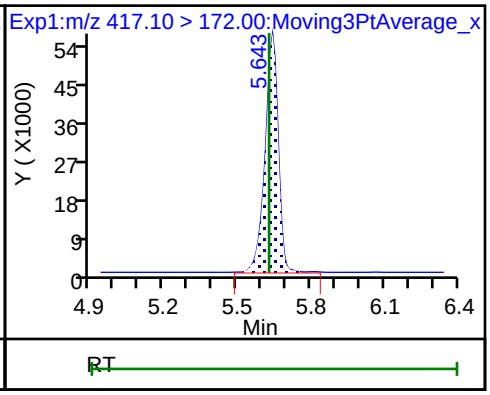
* 1 13C3-PFBA



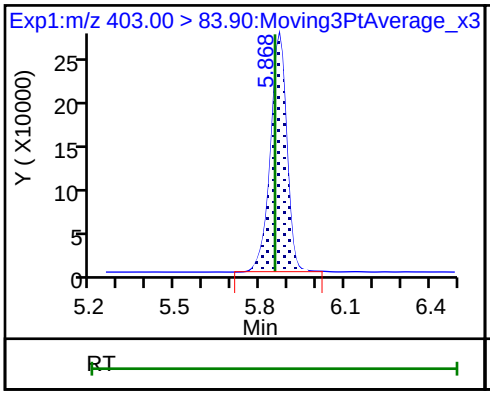
* 2 13C2 PFHxA



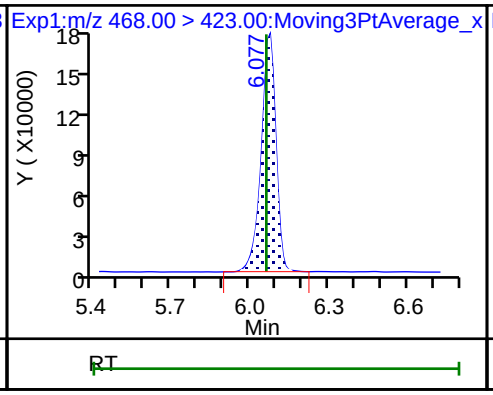
* 3 13C4 PFOA



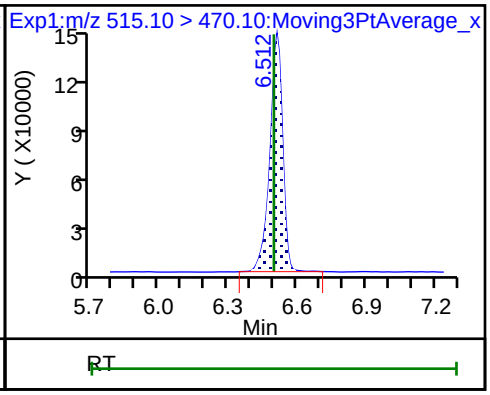
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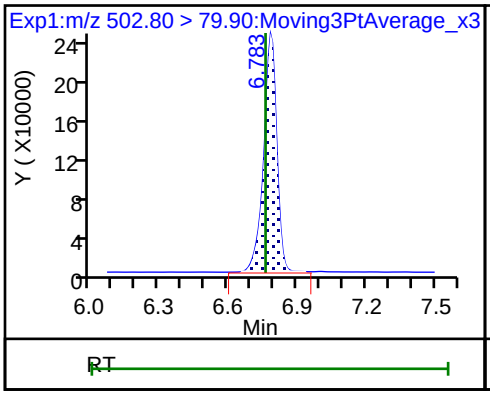
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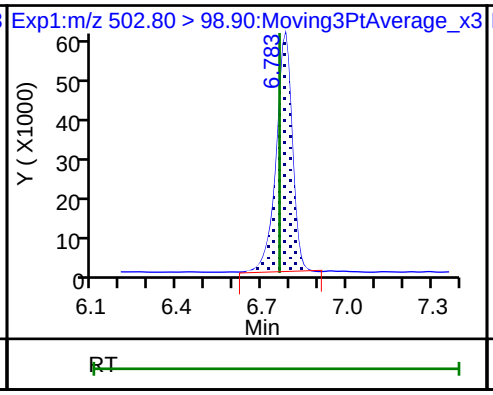
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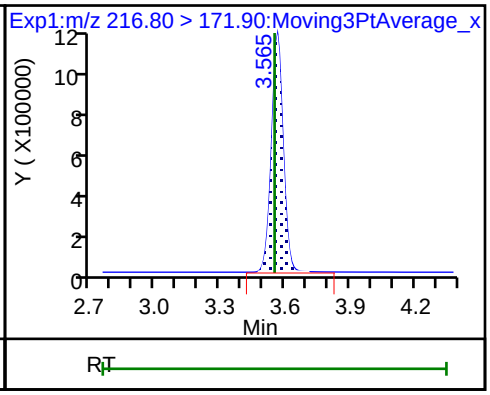
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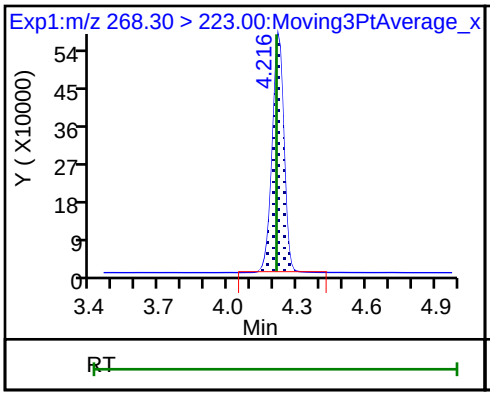
* 7 13C4 PFOS



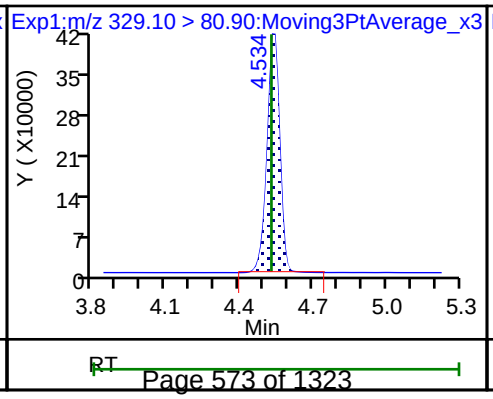
D 8 13C4 PFBA



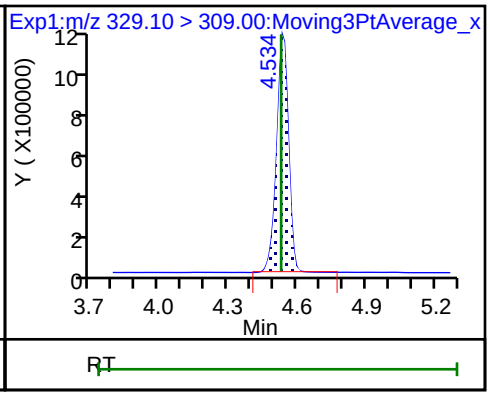
D 9 13C5 PFPeA



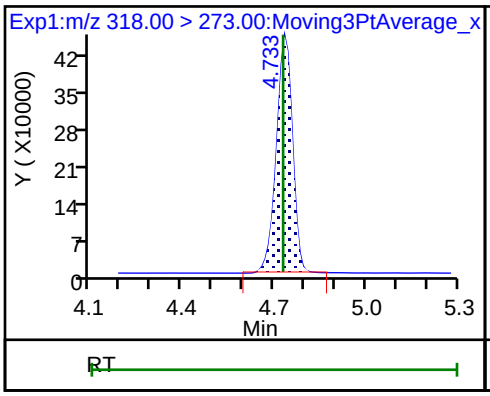
D 10 M2-4:2 FTS



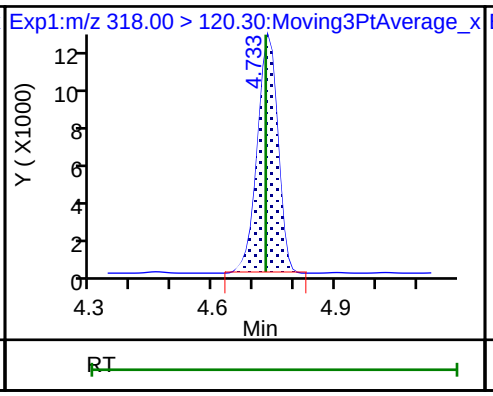
D 10 M2-4:2 FTS



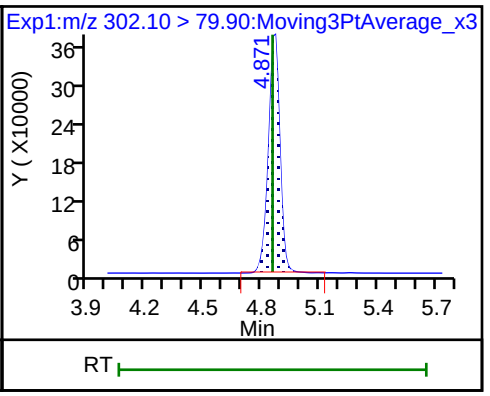
D 11 13C5 PFHxA



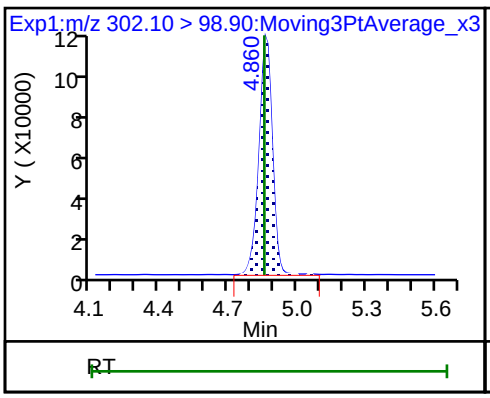
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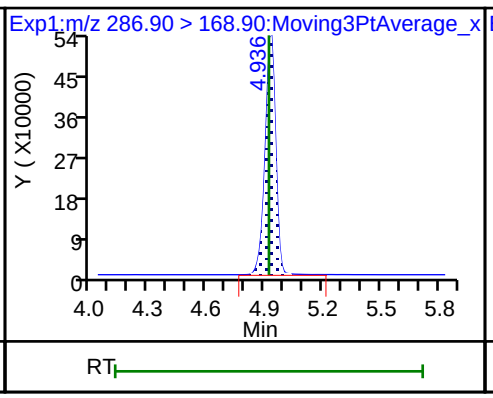
D 12 13C3 PFBS



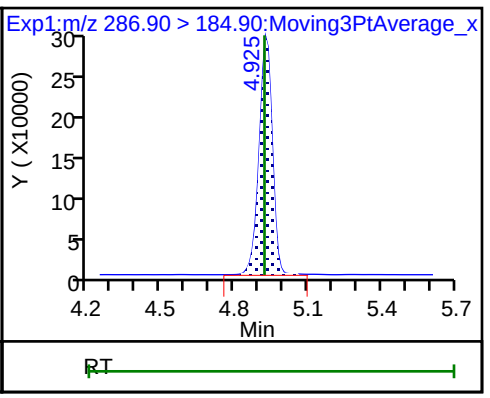
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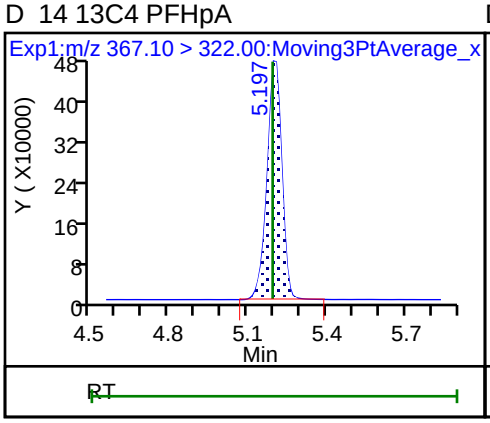
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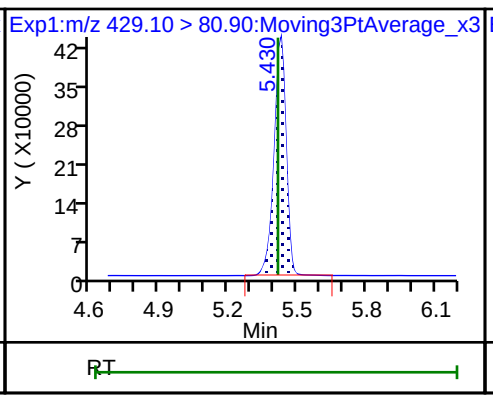
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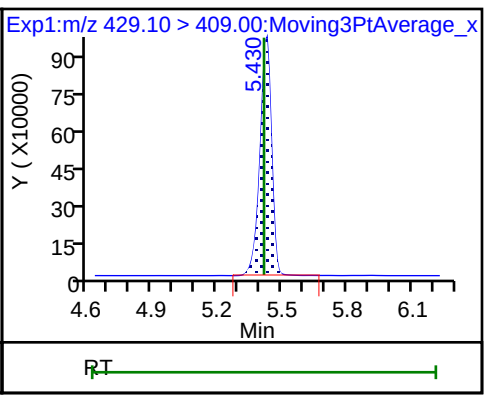
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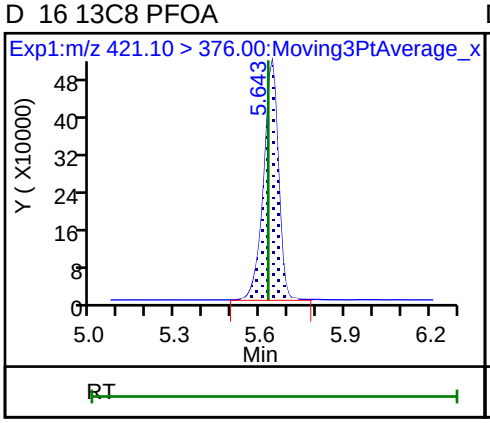
D 15 M2-6:2 FTS



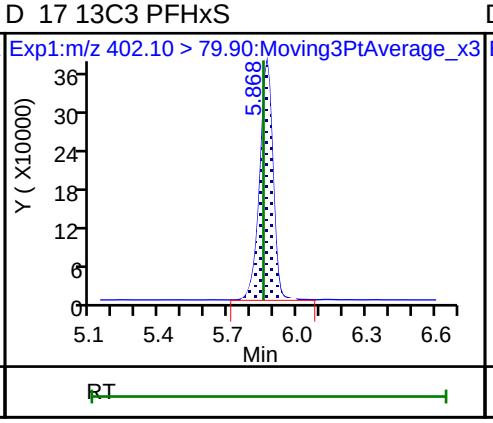
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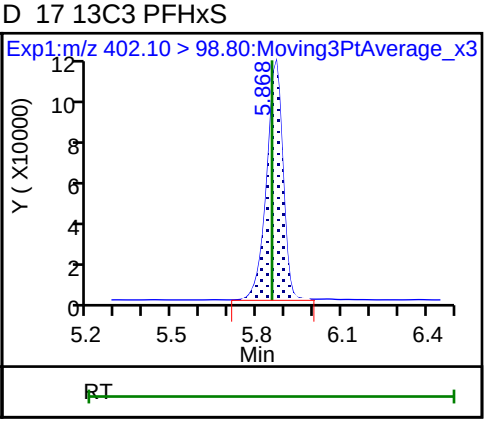
D 16 13C8 PFOA



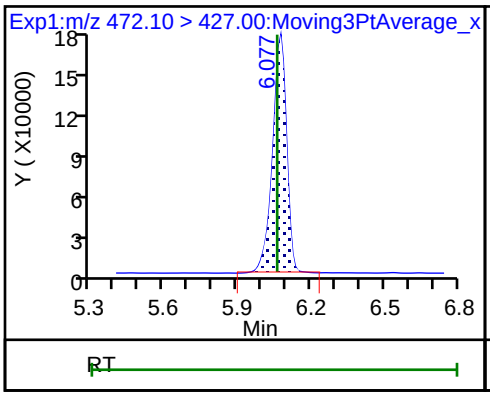
D 17 13C3 PFHxS



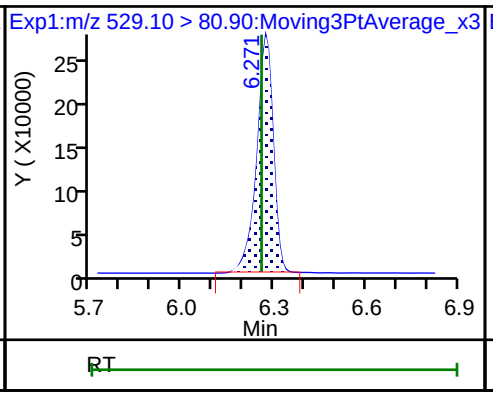
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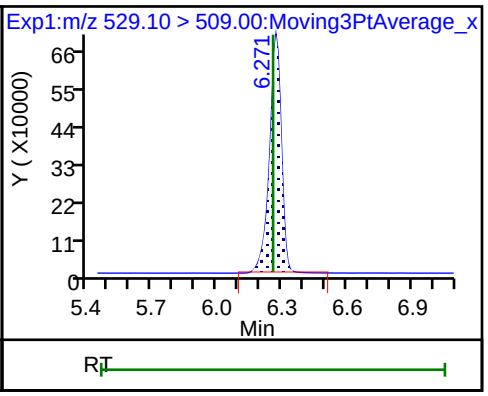
D 18 13C9 PFNA



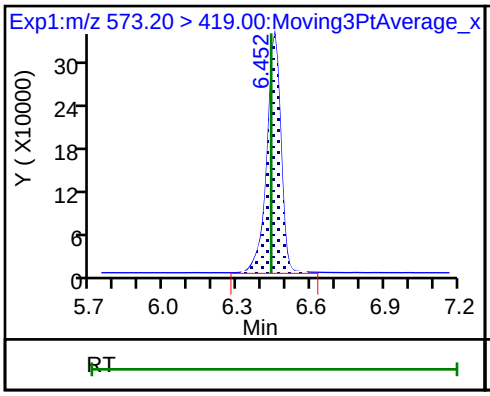
D 19 M2-8:2 FTS



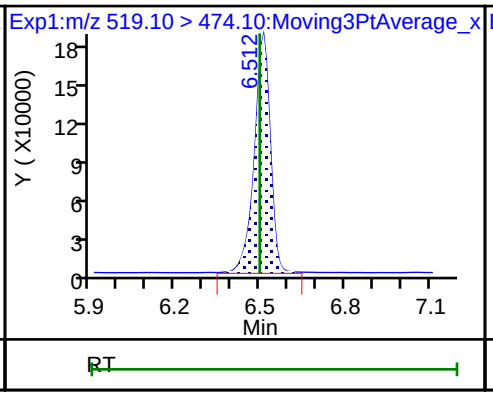
D 19 M2-8:2 FTS



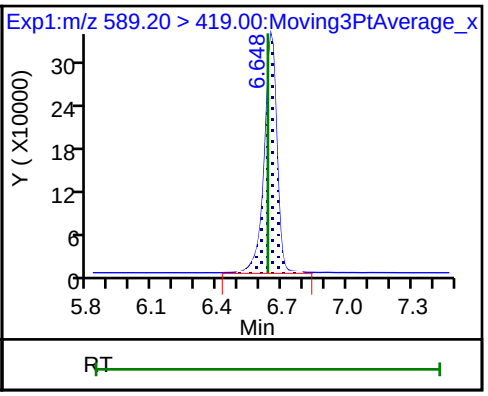
D 20 d3-NMeFOSAA



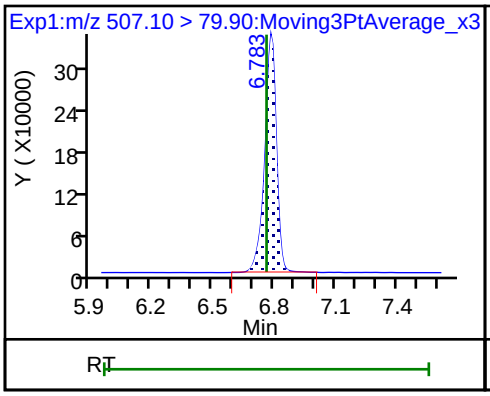
D 21 13C6 PFDA



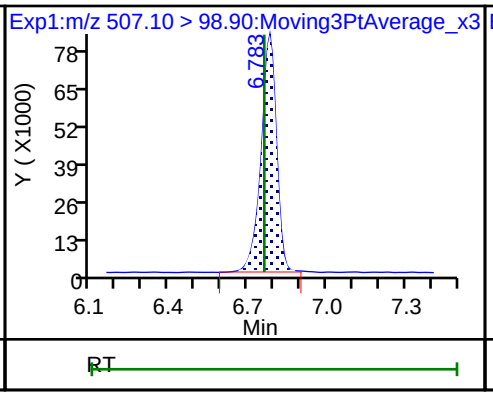
D 22 d5-NEtFOSAA



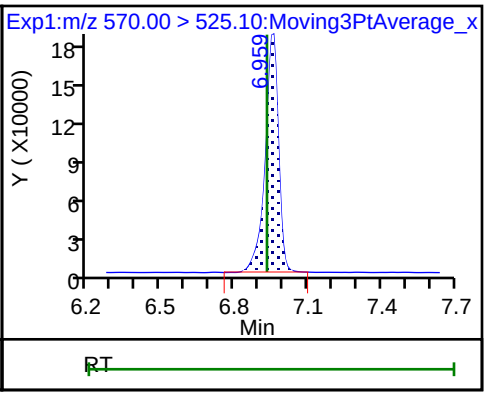
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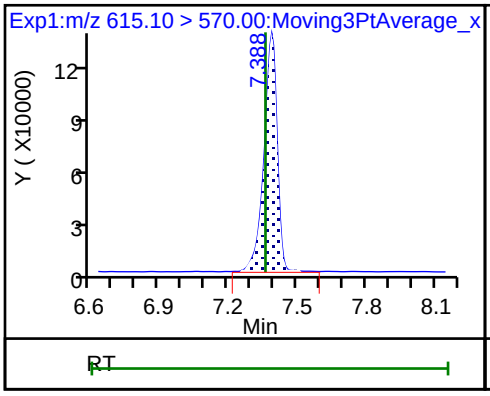
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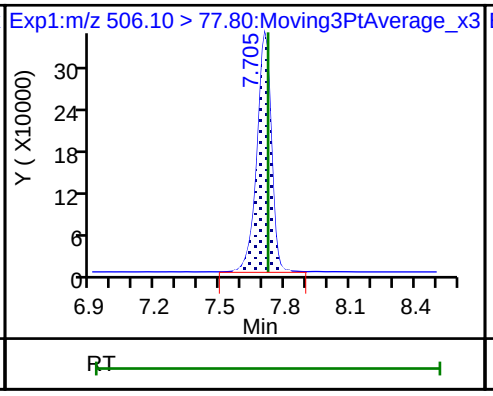
D 24 13C7 PFUnA



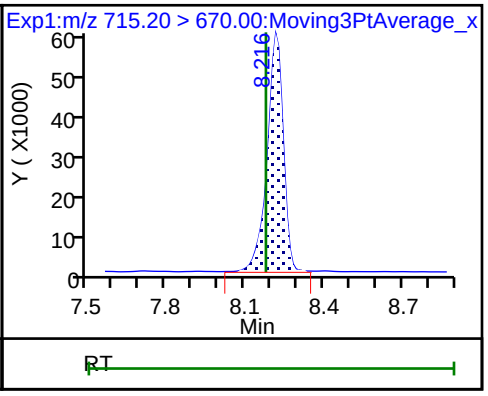
D 25 13C2-PFDoDA



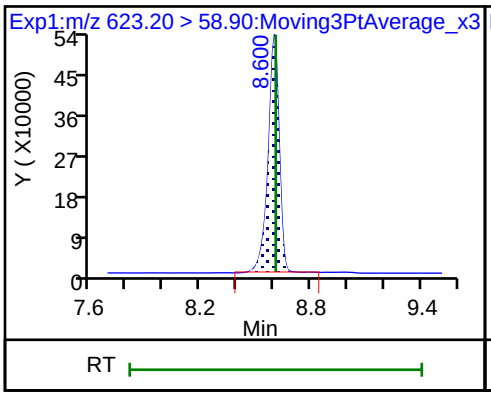
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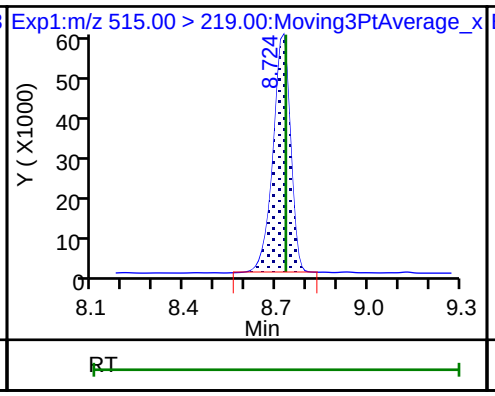
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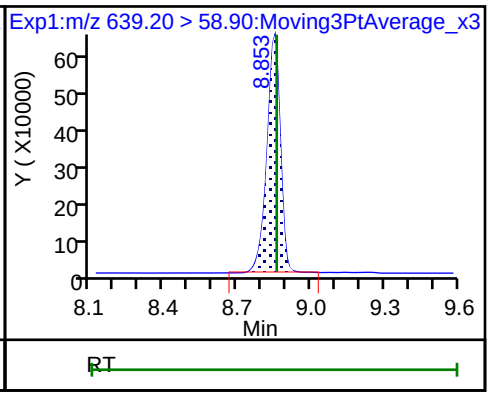
D 28 d7-N-MeFOSE-M



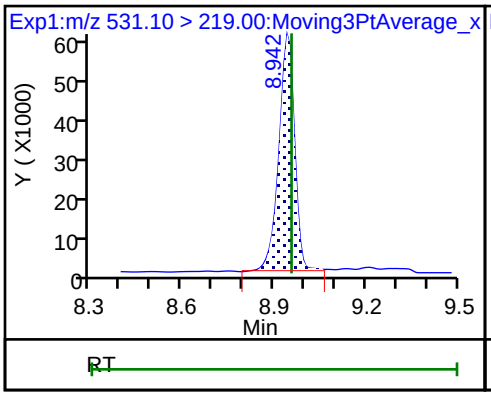
D 29 d3-NMePFOSA



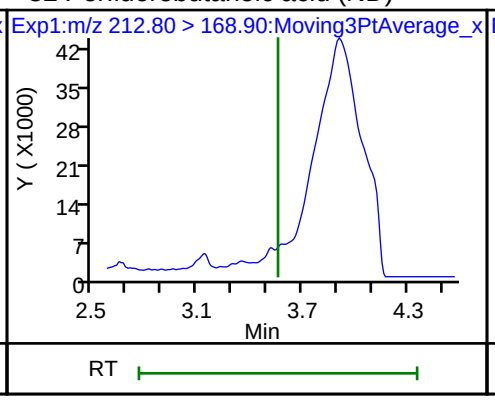
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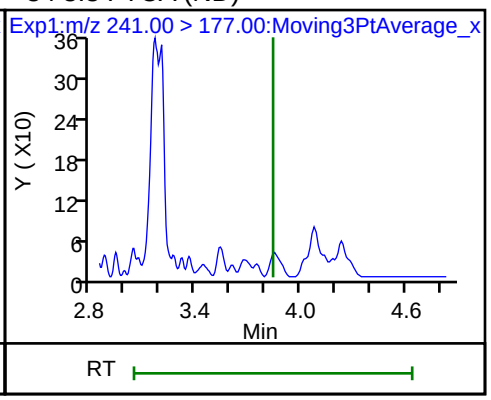
D 31 d5-NEtPFOSA



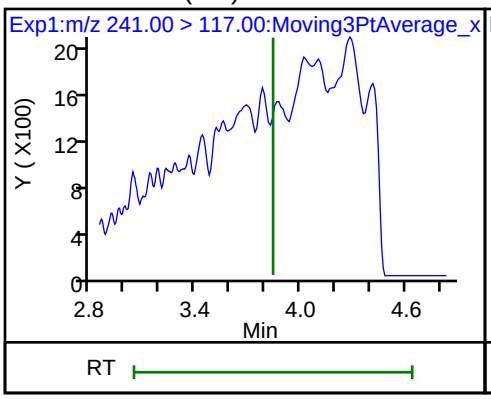
32 Perfluorobutanoic acid (ND)



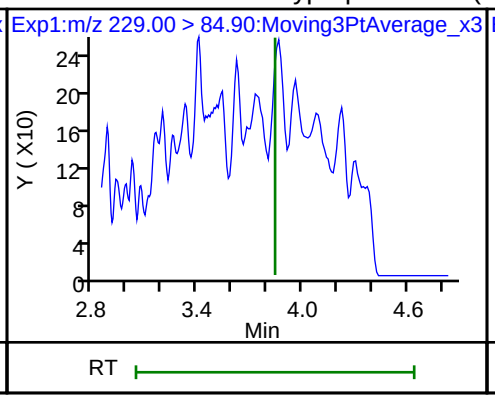
34 3:3 FTCA (ND)



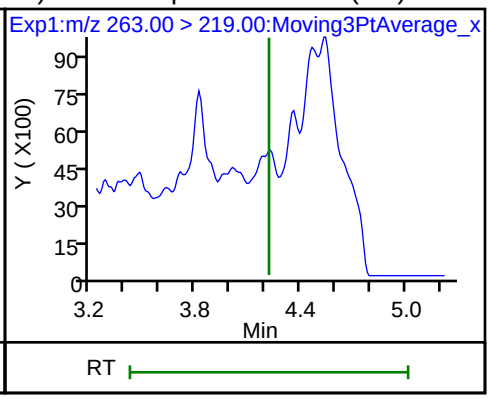
34 3:3 FTCA (ND)



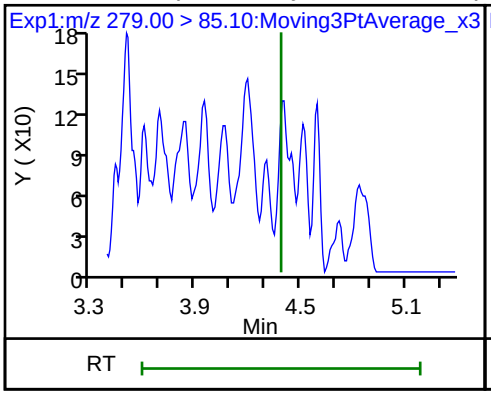
33 Perfluoro-3-methoxypropanoic aci (ND)



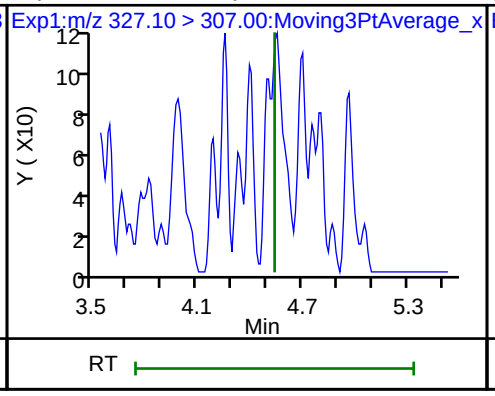
35 Perfluoropentanoic acid (ND)



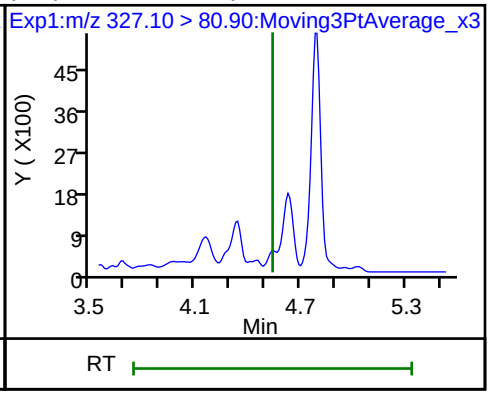
36 Perfluoro(4-methoxybutanoic acid (ND)



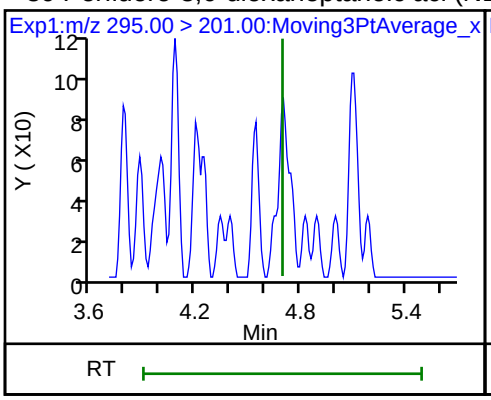
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



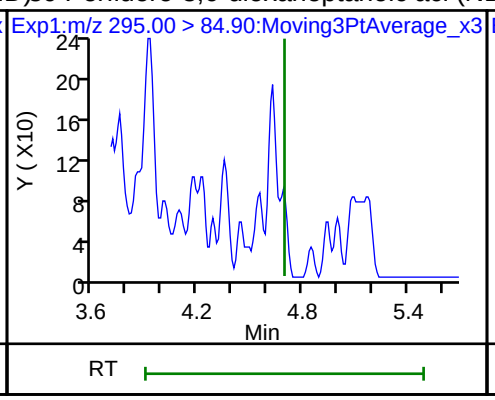
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



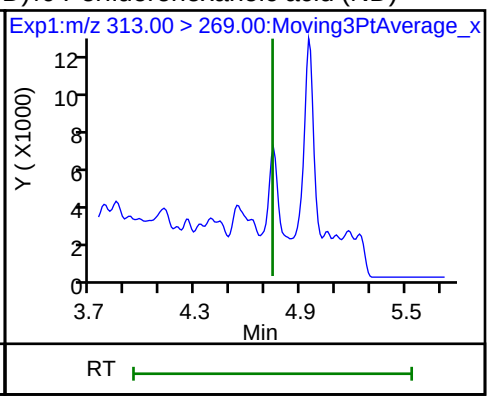
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



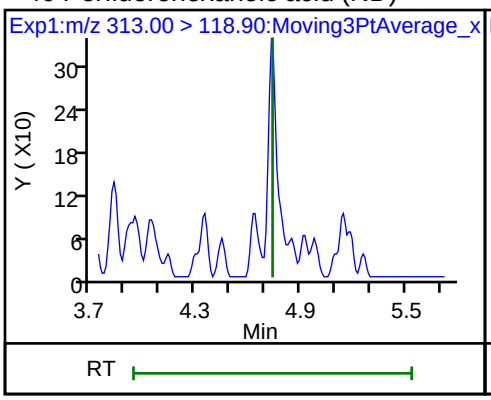
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



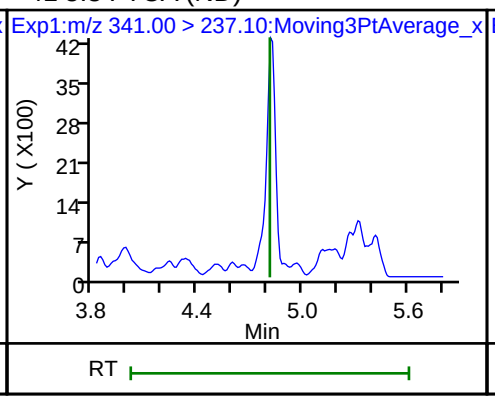
40 Perfluorohexanoic acid (ND)



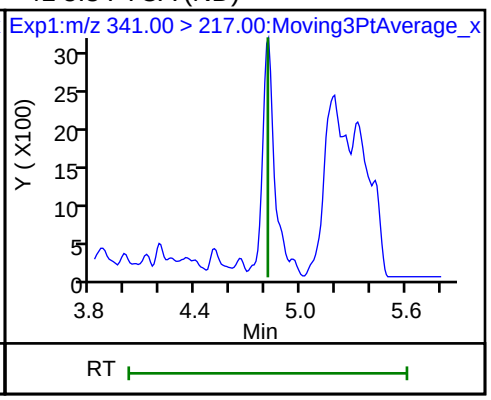
40 Perfluorohexanoic acid (ND)



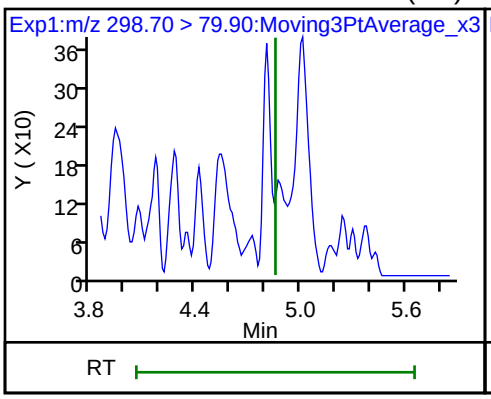
41 5:3 FTCA (ND)



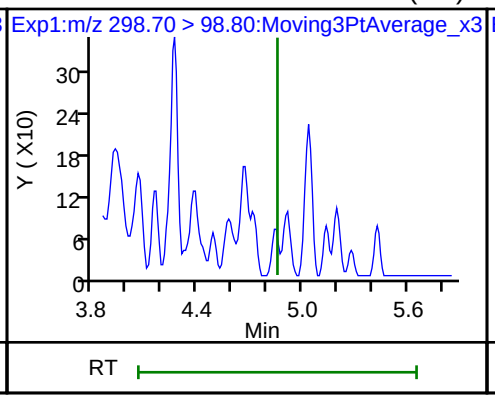
41 5:3 FTCA (ND)



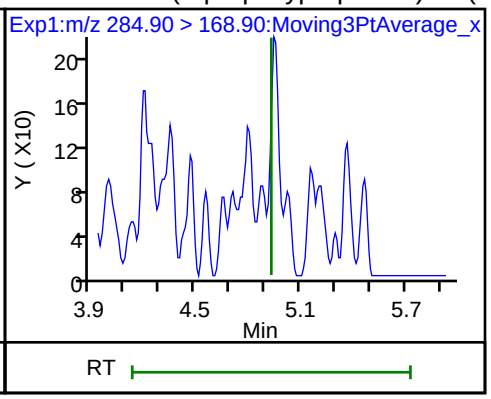
42 Perfluorobutanesulfonic acid (ND)



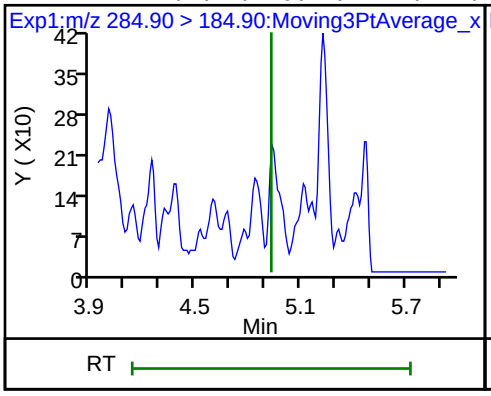
42 Perfluorobutanesulfonic acid (ND)



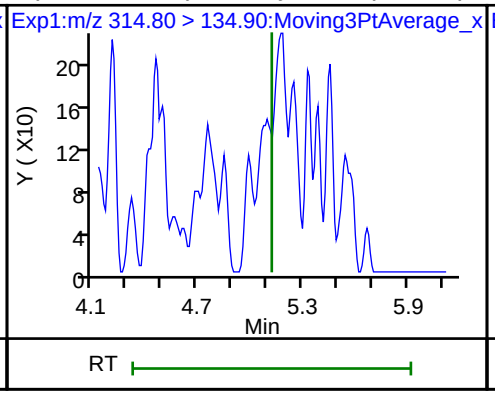
43 Perfluoro(2-propoxypropanoic) ac (ND)



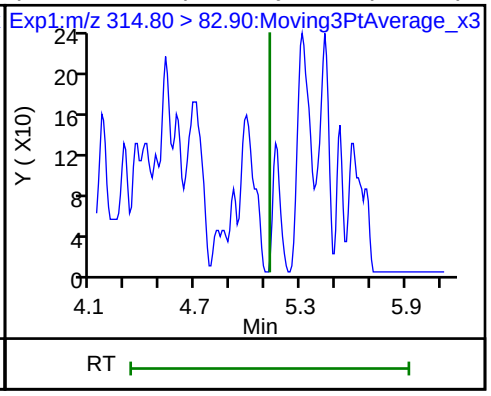
43 Perfluoro(2-propoxypropanoic) ac (ND)



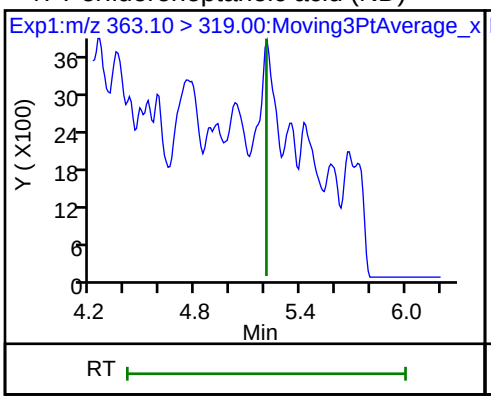
46 Perfluoro (2-ethoxyethane) sulfo (ND)



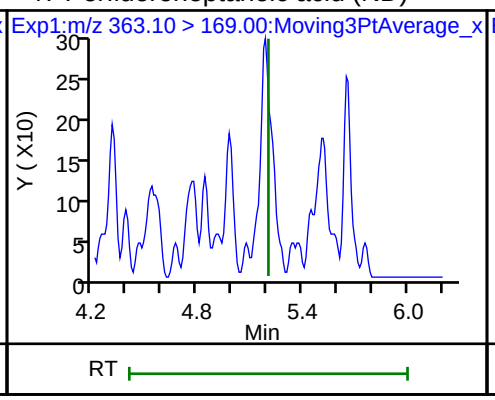
46 Perfluoro (2-ethoxyethane) sulfo (ND)



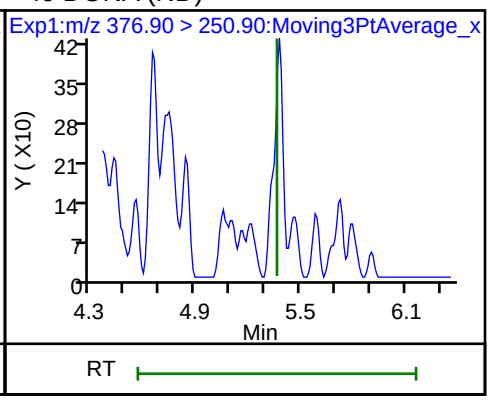
47 Perfluoroheptanoic acid (ND)



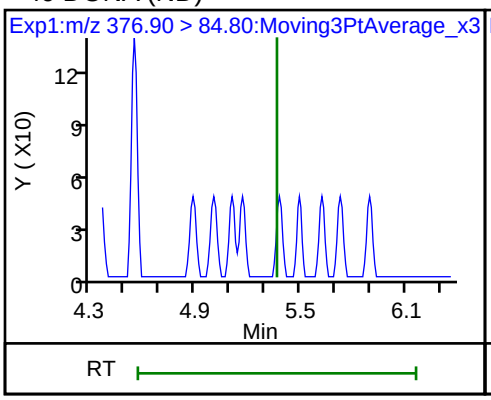
47 Perfluoroheptanoic acid (ND)



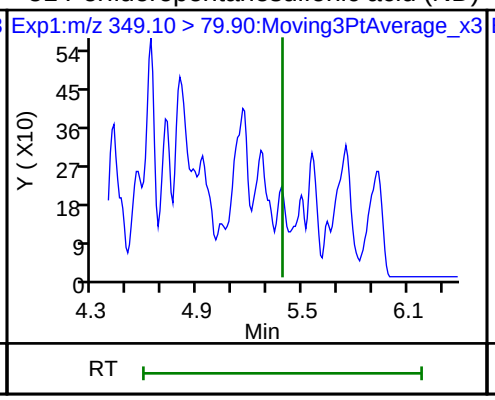
49 DONA (ND)



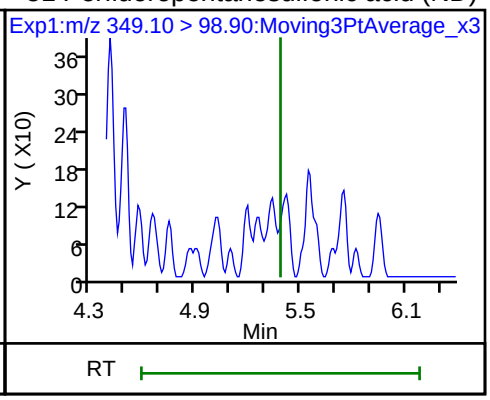
49 DONA (ND)



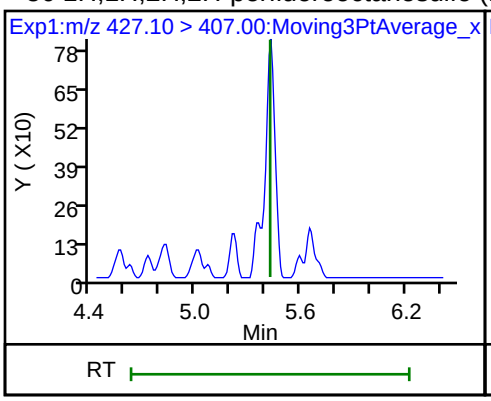
51 Perfluoropentanesulfonic acid (ND)



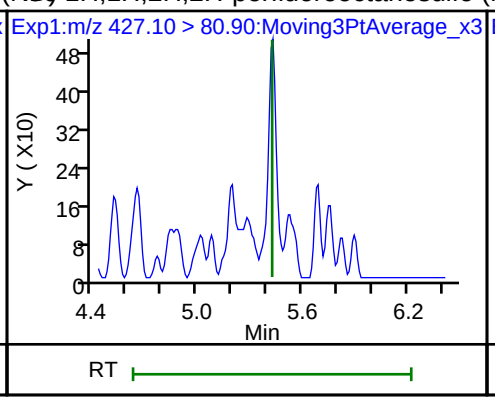
51 Perfluoropentanesulfonic acid (ND)



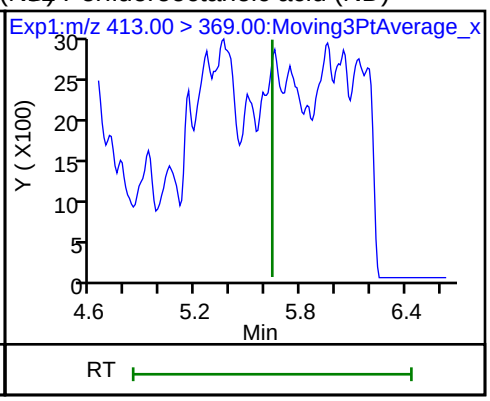
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



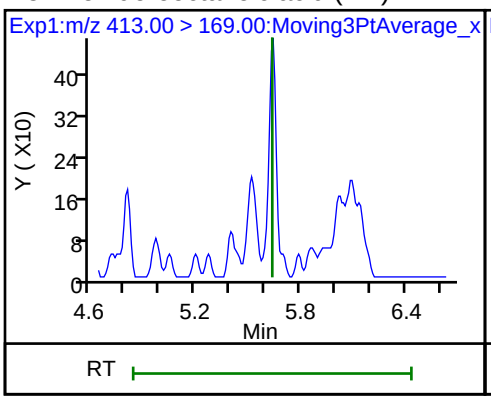
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



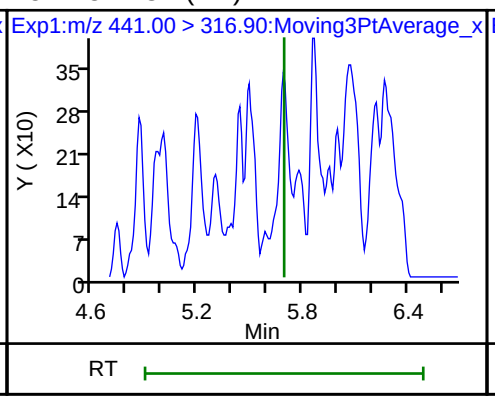
52 Perfluorooctanoic acid (ND)



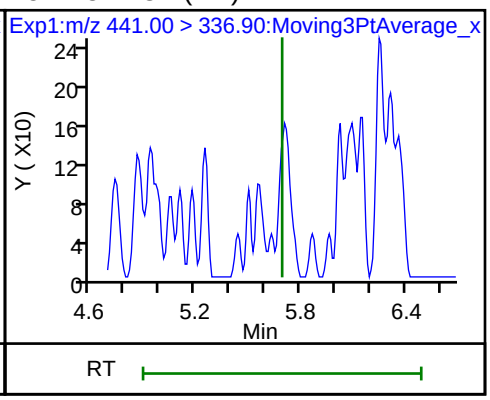
52 Perfluorooctanoic acid (ND)



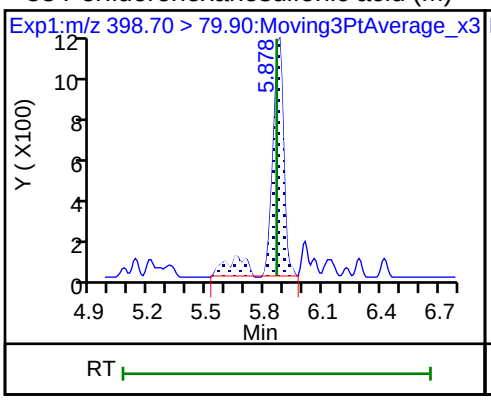
54 7:3 FTCA (ND)



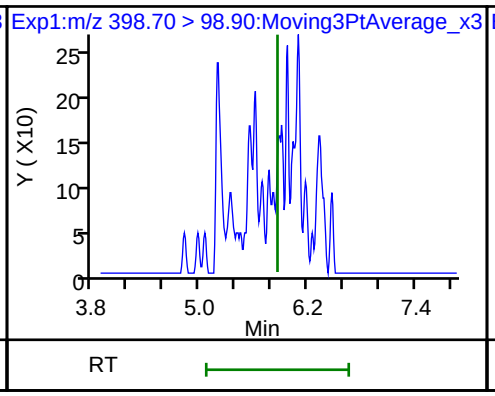
54 7:3 FTCA (ND)



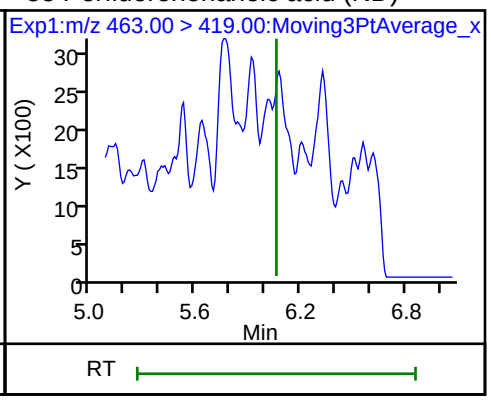
53 Perfluorohexanesulfonic acid (M)



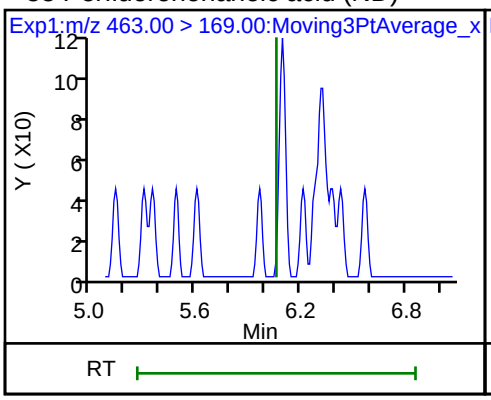
53 Perfluorohexanesulfonic acid



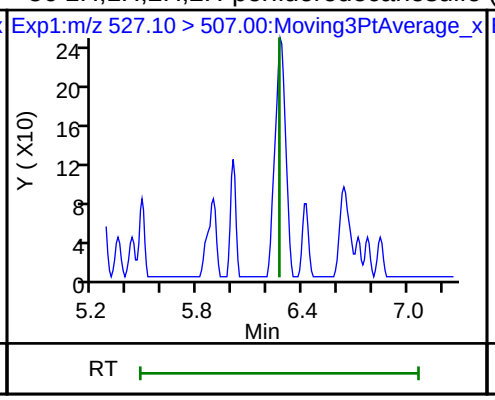
55 Perfluorononanoic acid (ND)



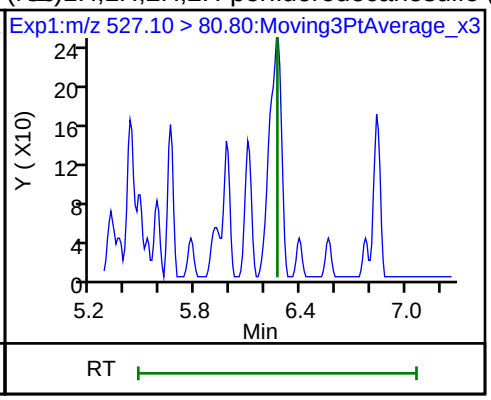
55 Perfluorononanoic acid (ND)



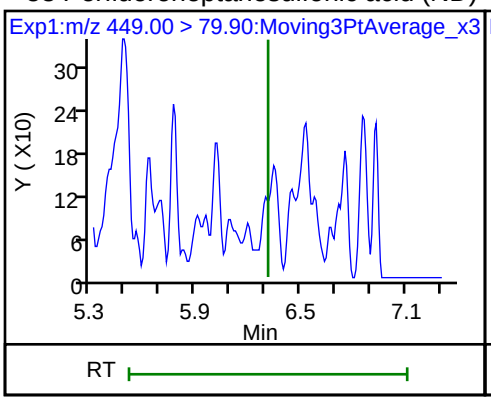
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



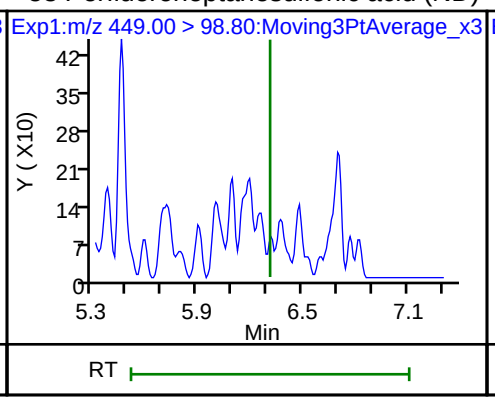
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



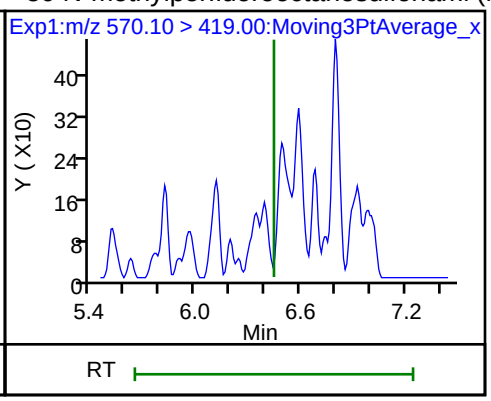
58 Perfluoroheptanesulfonic acid (ND)



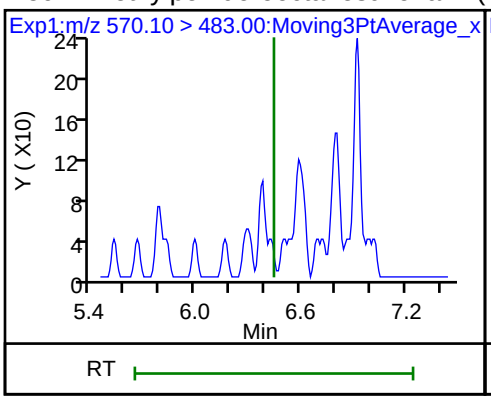
58 Perfluoroheptanesulfonic acid (ND)



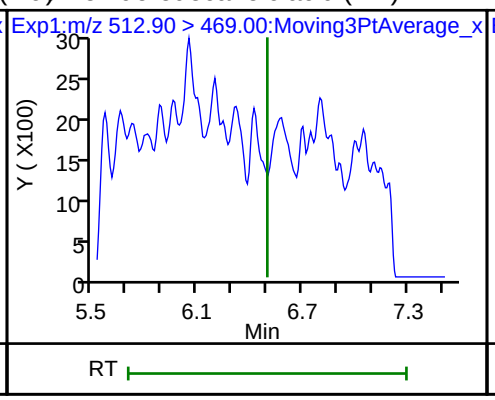
59 N-methylperfluorooctanesulfonami (ND)



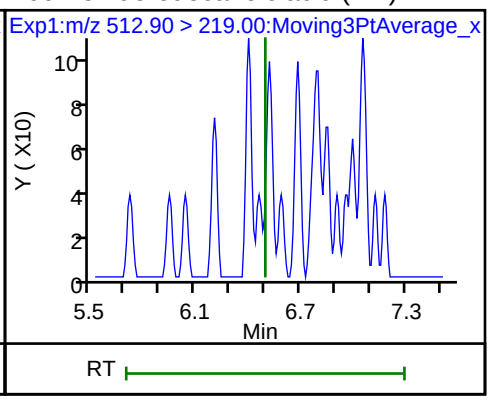
59 N-methylperfluorooctanesulfonami (ND)



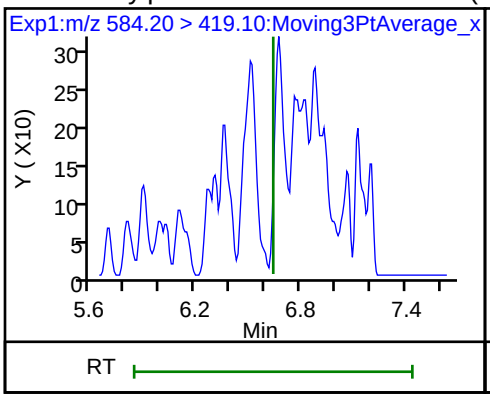
60 Perfluorodecanoic acid (ND)



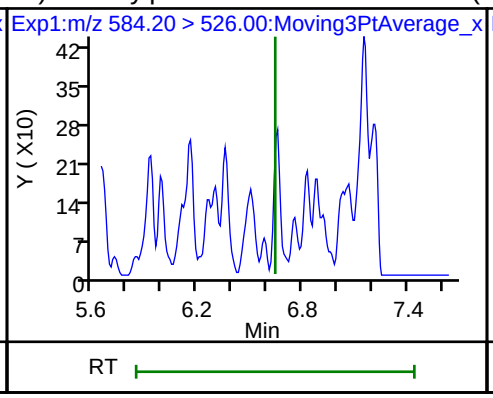
60 Perfluorodecanoic acid (ND)



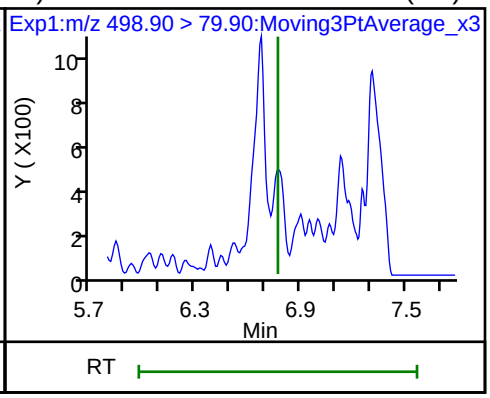
61 N-ethylperfluorooctanesulfonamid (ND)



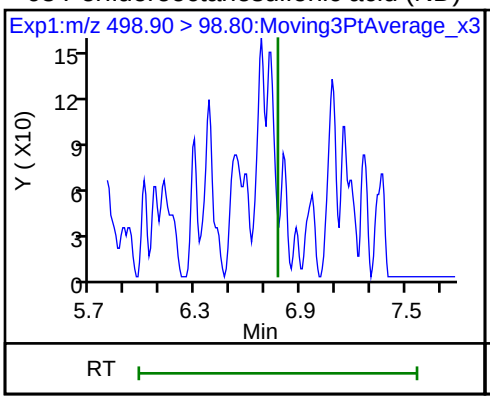
61 N-ethylperfluorooctanesulfonamid (ND)



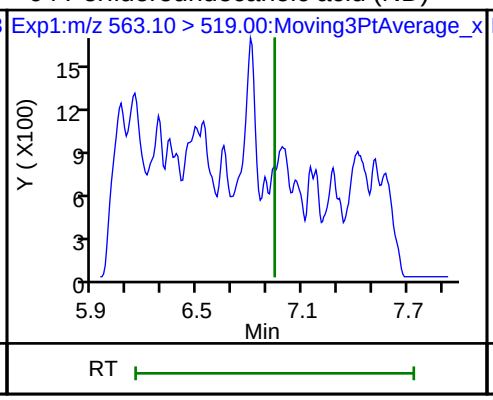
63 Perfluorooctanesulfonic acid (ND)



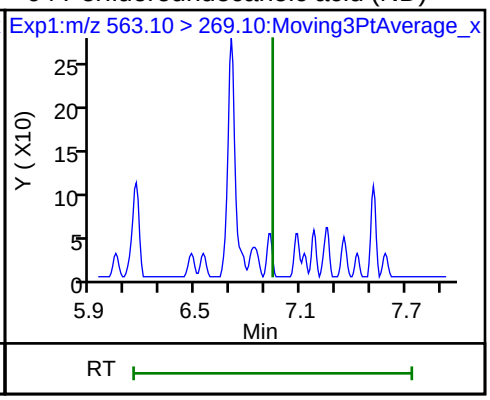
63 Perfluorooctanesulfonic acid (ND)



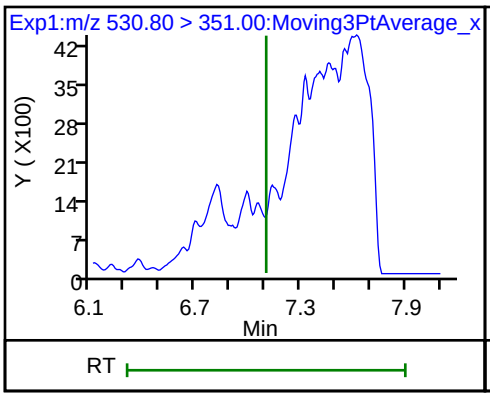
64 Perfluoroundecanoic acid (ND)



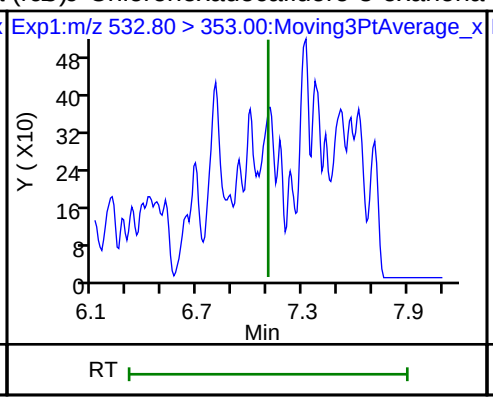
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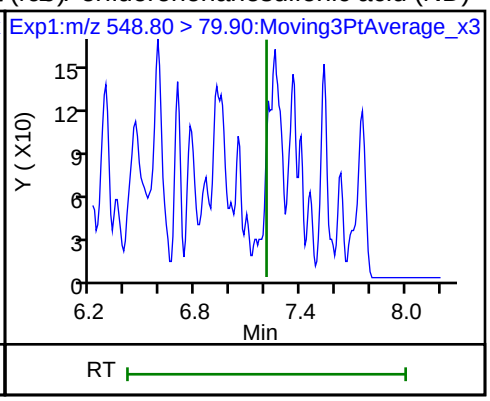
65 9-Chlorohexadecafluoro-3-oxanona (ND)



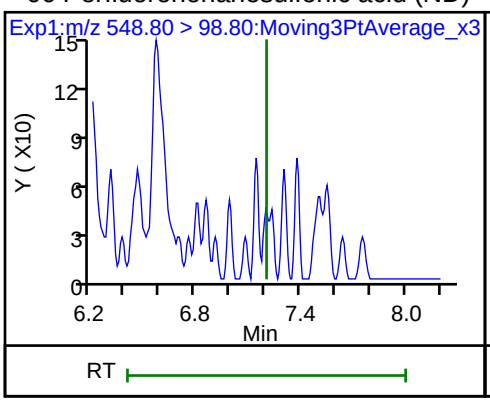
65 9-Chlorohexadecafluoro-3-oxanona (ND)



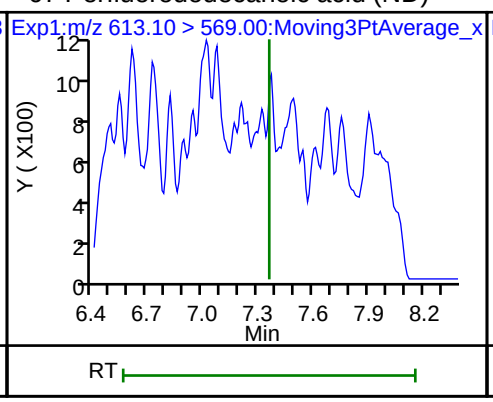
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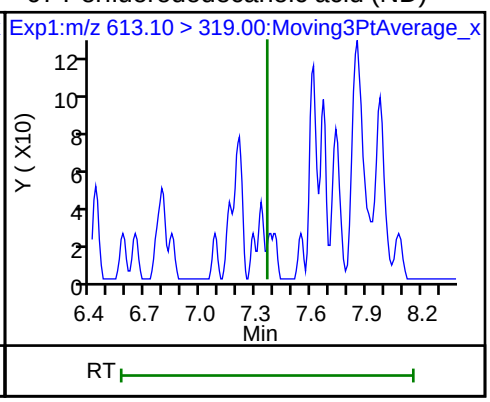
66 Perfluorononanesulfonic acid (ND)



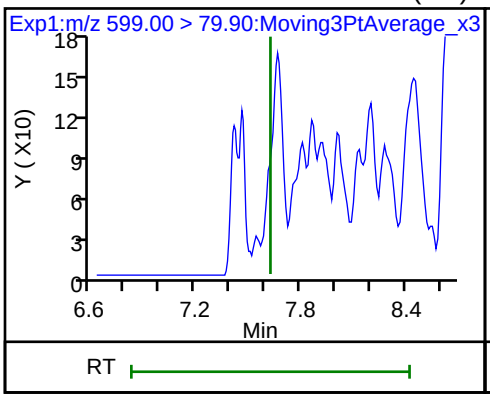
67 Perfluorododecanoic acid (ND)



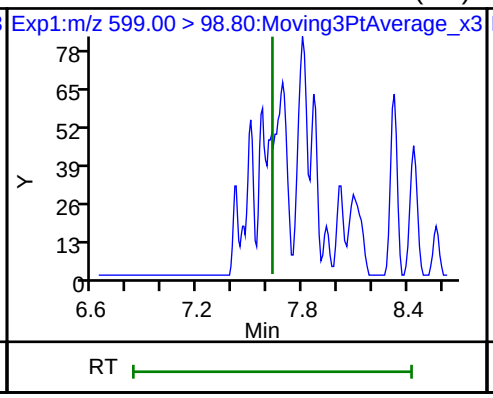
67 Perfluorododecanoic acid (ND)



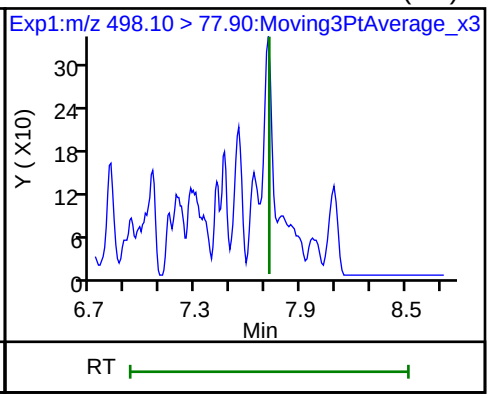
68 Perfluorodecanesulfonic acid (ND)



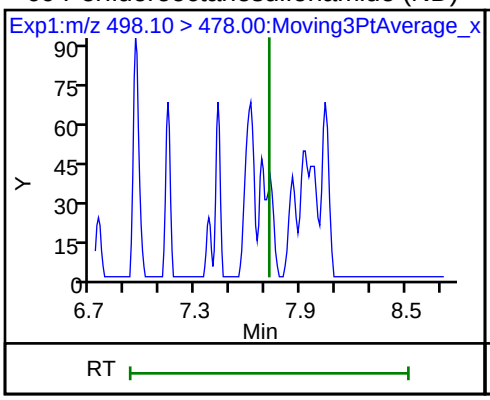
68 Perfluorodecanesulfonic acid (ND)



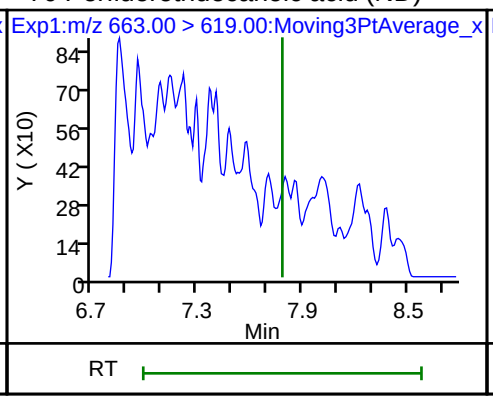
69 Perfluorooctanesulfonamide (ND)



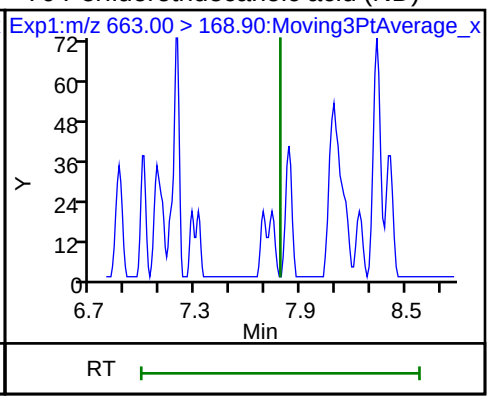
69 Perfluorooctanesulfonamide (ND)



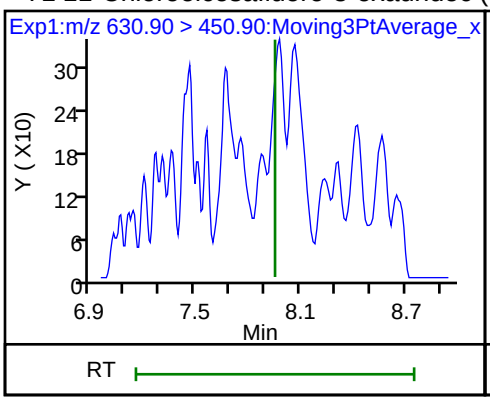
70 Perfluorotridecanoic acid (ND)



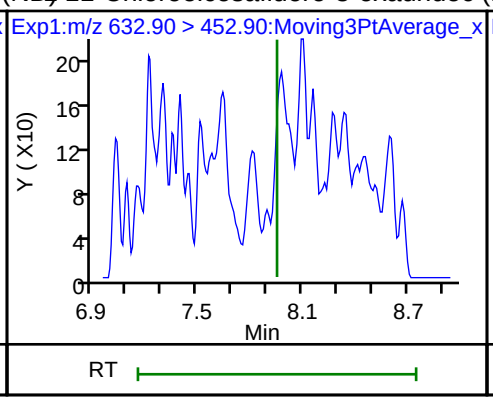
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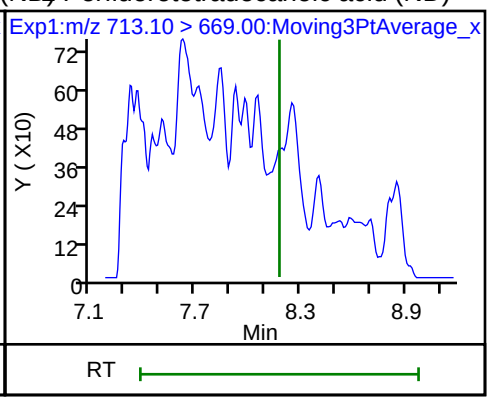
71 11-Chloroeicosafluoro-3-oxaundec (ND)



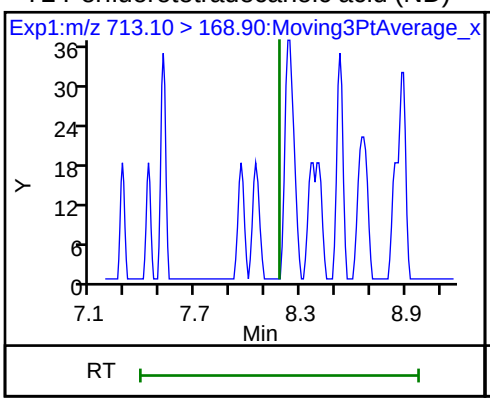
71 11-Chloroeicosafluoro-3-oxaundec (ND)



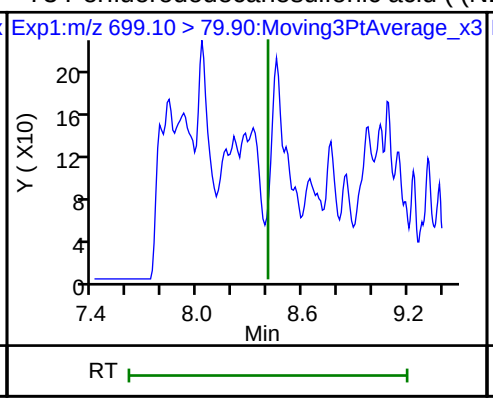
72 Perfluorotetradecanoic acid (ND)



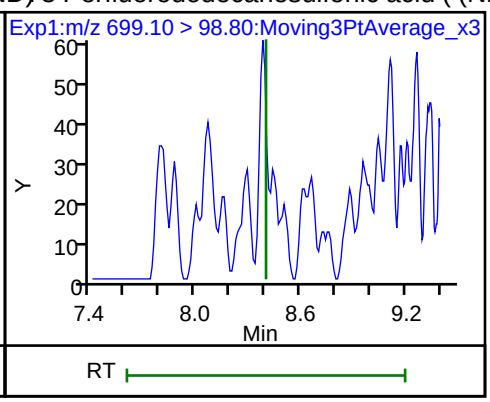
72 Perfluorotetradecanoic acid (ND)



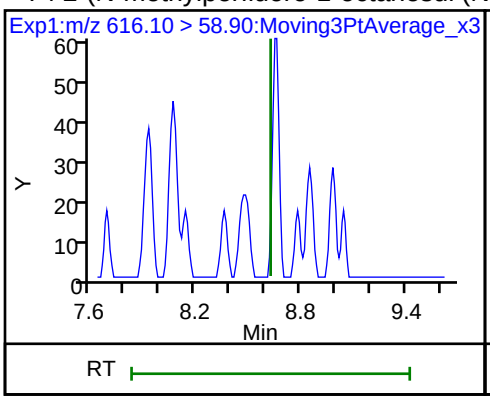
73 Perfluorododecanesulfonic acid ((ND)



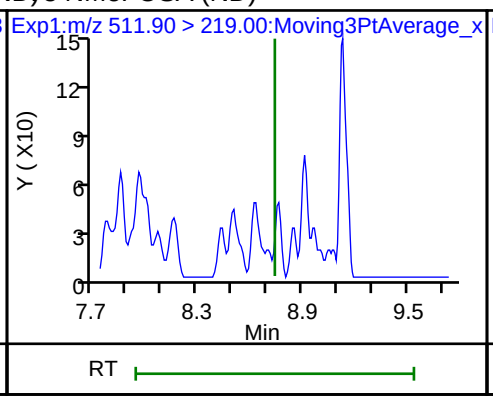
73 Perfluorododecanesulfonic acid ((ND)



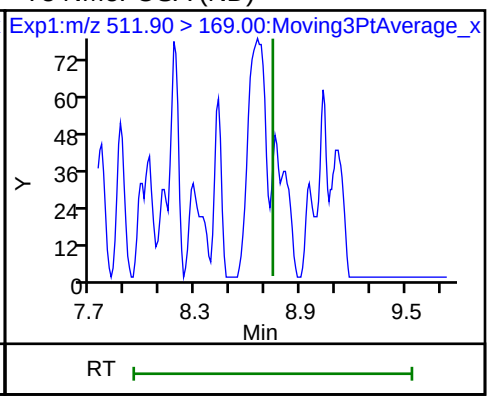
74 2-(N-methylperfluoro-1-octanesul (ND)



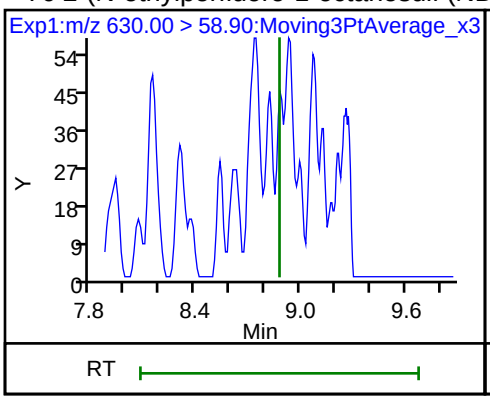
75 NMeFOSA (ND)



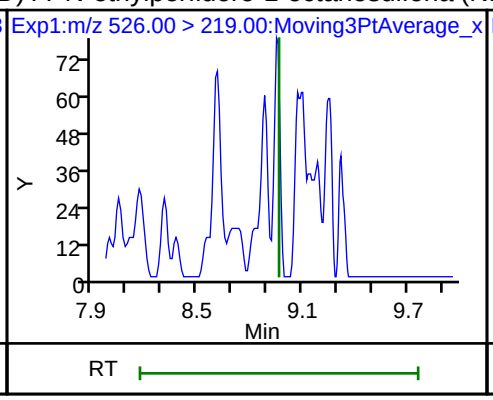
75 NMeFOSA (ND)



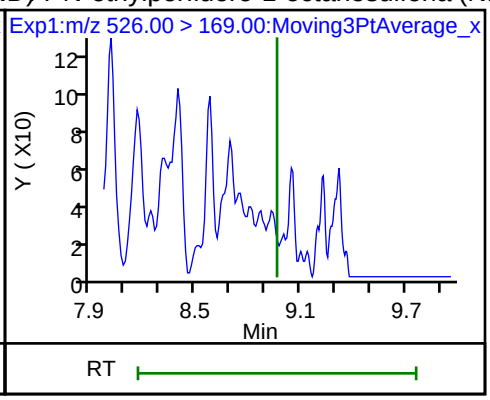
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

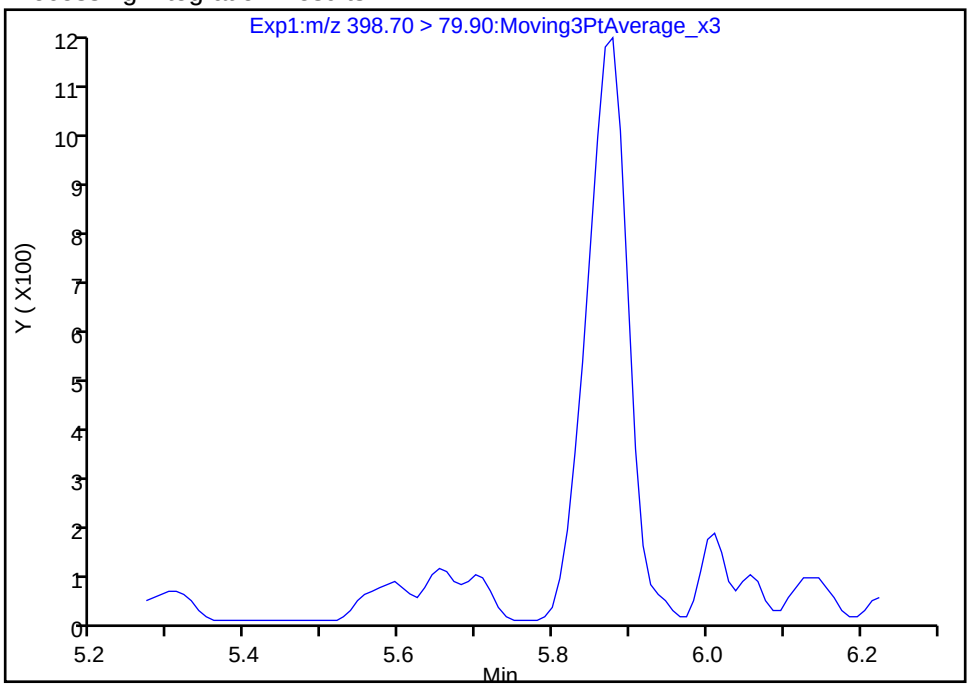
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj39.d				
Injection Date:	19-Sep-2024 01:00:47	Instrument ID:	LCMS04		
Lims ID:	460-311364-A-3-A	Lab Sample ID:	240-311364-3		
Client ID:	FB_09132024_P				
Operator ID:	CANPFAS4	ALS Bottle#:	35	Worklist Smp#:	39
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

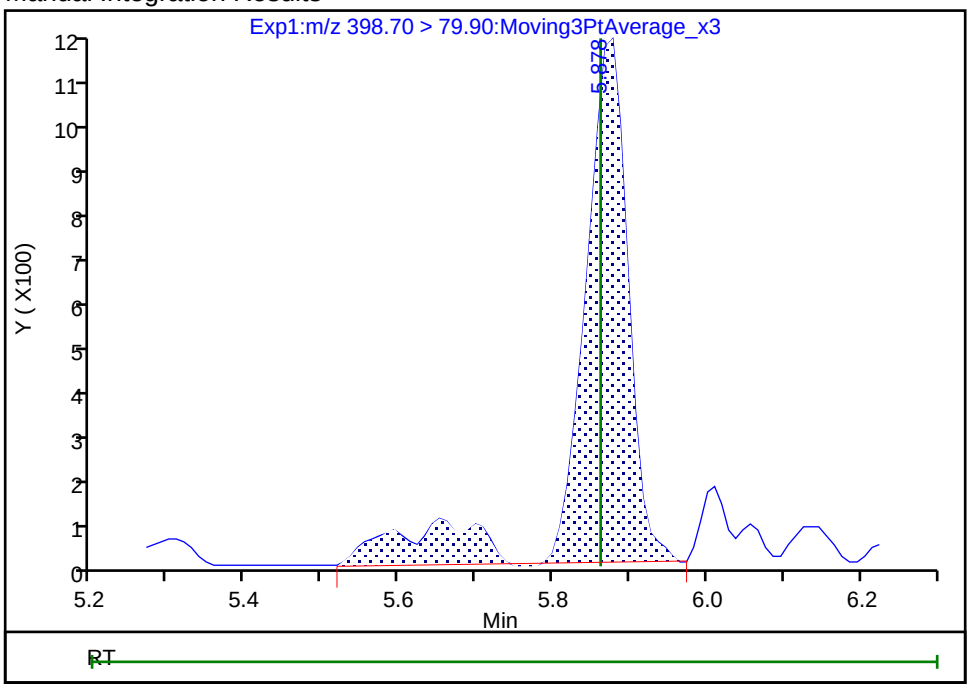
Processing Integration Results

Not Detected
Expected RT: 5.86



Manual Integration Results

RT: 5.88
Area: 4950
Amount: 0.002272
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:43:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-626514/1	2024_09_10ICALinj01.d
Level 2	IC 240-626514/2	2024_09_10ICALinj02.d
Level 3	IC 240-626514/3	2024_09_10ICALinj03.d
Level 4	IC 240-626514/4	2024_09_10ICALinj04.d
Level 5	ICISAV 240-626514/5	2024_09_10ICALinj05.d
Level 6	IC 240-626514/6	2024_09_10ICALinj06.d
Level 7	IC 240-626514/7	2024_09_10ICALinj07.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorobutanoic acid (PFBA)	1.0151 1.0670	0.9399 0.8133	0.9671	0.9321	0.9160	AveID		0.9501				8.4		20.0			
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.0622 0.0686	0.0600 0.0574	0.0573	0.0592	0.0576	AveID		0.0603				6.8		20.0			
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.4246 1.5848	1.3387 1.2305	1.3708	1.3612	1.3043	AveID		1.3736				8.1		20.0			
Perfluoropentanoic acid (PFPeA)	1.6550 1.7192	1.5428 1.2980	1.5122	1.5130	1.4851	AveID		1.5322				8.8		20.0			
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.4701 1.6818	1.3719 1.3416	1.4378	1.4476	1.3987	AveID		1.4499				7.7		20.0			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	3.2099 3.1205	2.9423 +++++	2.8013	2.9344	2.9190	AveID		2.9879				5.0		20.0			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.0995 0.0922	0.0980 0.0734	0.0913	0.0670	0.0933	AveID		0.0878				14.2		20.0			
FBSA	0.6985 0.7364	0.6685 0.5953	0.6799	0.6986	0.7121	AveID		0.6842				6.6		20.0			
Perfluorohexanoic acid (PFHxA)	0.8523 0.8767	0.7631 0.7494	0.7938	0.7744	0.7541	AveID		0.7948				6.3		20.0			
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.1517 0.1641	0.1444 0.1033	0.1472	0.1417	0.1386	AveID		0.1416				13.3		20.0			
Perfluorobutanesulfonic acid (PFBS)	1.0259 1.0446	0.9371 0.8888	0.9676	0.9680	0.9668	AveID		0.9713				5.4		20.0			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.1863 1.2073	0.9785 0.9450	1.1641	1.1163	1.1133	AveID		1.1015				9.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.1487 3.2708	3.0115 2.1659	3.1422	2.9093	2.8320	AveID		2.9258				12.6		20.0			
Perfluoroheptanoic acid (PFHpA)	1.1433 1.1971	1.0187 0.9708	1.1198	1.1398	0.9751	AveID		1.0807				8.4		20.0			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	5.4854 6.0440	5.4320 3.9545	5.5963	5.3172	5.6185	AveID		5.3497				12.3		20.0			
Perfluoropentanesulfonic acid (PFPeS)	1.1461 1.1547	1.0241 0.8449	1.0060	1.0087	1.0056	AveID		1.0271				10.1		20.0			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.3809 2.4815	2.3477 +++++	2.5011	2.4150	2.1564	AveID		2.3804				5.2		20.0			
Perfluorooctanoic acid (PFOA)	0.4659 0.5251	0.4873 0.4600	0.4649	0.4886	0.4661	AveID		0.4797				4.8		20.0			
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.1478 0.1516	0.1384 0.1031	0.1454	0.1307	0.1297	AveID		0.1352				12.2		20.0			
Perfluorohexanesulfonic acid (PFHxS)	0.9271 0.9585	0.8273 0.7801	0.8498	0.8093	0.8245	AveID		0.8538				7.6		20.0			
Perfluorononanoic acid (PFNA)	0.7528 0.8322	0.8483 0.6096	0.7952	0.7440	0.7205	AveID		0.7575				10.6		20.0			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.4609 2.6484	2.5016 +++++	2.4345	2.4999	2.3983	AveID		2.4906				3.5		20.0			
PFECHS	1.9426 1.8402	1.6988 1.2065	1.7385	1.7145	1.6958	AveID		1.6910				13.7		20.0			
FHxSA	1.1178 1.0919	1.0177 0.7764	1.0255	0.9906	1.0141	AveID		1.0049				11.0		20.0			
Perfluoroheptanesulfonic acid (PFHpS)	1.2694 1.2938	1.1783 1.0032	1.2095	1.1298	1.1175	AveID		1.1716				8.5		20.0			
N-methylperfluorooctanesulfonamido acetic acid (NMeFOSAA)	1.1573 1.1695	1.0377 0.9460	1.1855	1.1602	1.0567	AveID		1.1018				8.2		20.0			
Perfluorodecanoic acid (PFDA)	0.7826 0.8066	0.8596 0.7441	0.7937	0.8297	0.7412	AveID		0.7939				5.4		20.0			
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.8902 0.9040	0.8328 0.7594	0.8167	0.8413	0.7981	AveID		0.8346				6.0		20.0			
Perfluorooctanesulfonic acid (PFOS)	1.3154 1.3830	1.2703 1.1151	1.3080	1.2206	1.1936	AveID		1.2580				7.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluoroundecanoic acid (PFUnA)	0.9835 1.0782	0.8101 0.7880	0.9530	0.8592	0.8400	AveId		0.9017				11.8		20.0			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	5.0555 5.3740	4.7453 3.3431	4.9458	4.9322	4.8784	AveId		4.7535				13.7		20.0			
Perfluorononanesulfonic acid (PFNS)	1.0252 1.0526	0.9479 0.8485	0.9279	0.9438	0.9232	AveId		0.9527				7.1		20.0			
Perfluorododecanoic acid (PFDoA)	1.1186 1.0554	0.9751 0.8171	0.9717	0.9870	1.0054	AveId		0.9900				9.4		20.0			
Perfluorodecanesulfonic acid (PFDS)	1.1660 1.2026	1.0286 0.9537	1.1231	1.0507	1.0216	AveId		1.0780				8.2		20.0			
Perfluorooctanesulfonamide (PFOSA)	0.9839 1.0373	0.8754 0.8682	0.9513	0.9416	0.9203	AveId		0.9397				6.3		20.0			
Perfluorotridecanoic acid (PFTrDA)	1.2378 1.3509	1.3200 0.9866	1.2783	1.1256	1.1875	AveId		1.2124				10.4		20.0			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	4.9694 5.0169	4.6218 3.2608	4.7863	4.7390	4.8991	AveId		4.6133				13.3		20.0			
Perfluorotetradecanoic acid (PFTeDA)	1.2218 1.4775	1.3421 1.0033	1.2579	1.3068	1.1644	AveId		1.2534				11.9		20.0			
Perfluorododecanesulfonic acid (PFDoS)	0.9653 1.0381	0.8776 0.8367	0.9004	0.8771	0.8941	AveId		0.9128				7.4		20.0			
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.1609 0.1670	0.1400 0.1317	0.1413	0.1474	0.1475	AveId		0.1480				8.3		20.0			
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.9877 1.1162	0.9602 0.8637	0.9860	0.9609	0.9426	AveId		0.9739				7.7		20.0			
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.1587 0.1473	0.1356 0.1177	0.1255	0.1284	0.1321	AveId		0.1350				10.3		20.0			
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.9999 1.1363	0.9378 0.9132	1.0122	0.9762	0.9288	AveId		0.9863				7.7		20.0			
13C4 PFBA	1.0334 0.9424	1.1033 1.3121	1.2037	1.1056	1.2443	Ave		1.1350				11.2		20.0			
13C5 PFPeA	0.7270 0.6271	0.7409 0.8294	0.8622	0.7785	0.9286	Ave		0.7848				12.6		20.0			
M2-4:2 FTS	0.3323 0.2604	0.3448 +++++	0.3859	0.3315	0.3539	Ave		0.3348				12.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C5 PFHxA	1.2899 1.1311	1.3167 1.5183	1.4891	1.4097	1.6813	Ave		1.4052				12.7		20.0			
13C3 PFBS	1.0124 0.9206	1.0481 1.2002	1.1363	1.0200	1.1458	Ave		1.0691				9.0		20.0			
13C3 HFPO-DA	0.3931 0.3283	0.3985 0.4129	0.4398	0.4040	0.4547	Ave		0.4045				10.0		20.0			
13C4 PFHpA	1.3573 1.2447	1.4053 1.5621	1.5669	1.4030	1.7328	Ave		1.4674				11.1		20.0			
M2-6:2 FTS	0.3900 0.2983	0.3934 +++++	0.4104	0.3742	0.4338	Ave		0.3833				12.1		20.0			
13C8 PFOA	7.3281 6.3036	7.6691 8.5209	9.4084	7.6466	8.3404	Ave		7.8881				12.5		20.0			
13C3 PFHxS	0.9613 0.8715	1.0197 1.2163	1.1211	1.0218	1.1362	Ave		1.0497				11.1		20.0			
13C9 PFNA	0.7809 0.6187	0.7521 0.9845	0.7905	0.7221	0.8411	Ave		0.7843				14.3		20.0			
M2-8:2 FTS	0.2662 0.2031	0.2623 +++++	0.2966	0.2621	0.2853	Ave		0.2626				12.3		20.0			
d3-NMeFOSAA	0.4315 0.3939	0.4434 0.5387	0.4761	0.4332	0.5229	Ave		0.4628				11.3		20.0			
13C6 PFDA	0.8468 0.8321	0.9263 1.1501	1.0108	0.8692	1.1016	Ave		0.9624				13.2		20.0			
d5-NEtFOSAA	0.4173 0.3883	0.4340 0.5178	0.4901	0.4335	0.5076	Ave		0.4555				10.9		20.0			
13C8 PFOS	0.9344 0.8616	0.9629 1.2172	1.0890	0.9882	1.1587	Ave		1.0303				12.5		20.0			
13C7 PFUnA	0.8458 0.7176	0.9960 1.0676	0.9394	0.9688	1.0945	Ave		0.9471				13.8		20.0			
13C2-PFDoDA	0.7969 0.7647	0.8532 1.0434	0.9267	0.8681	1.0043	Ave		0.8939				11.6		20.0			
13C8 FOSA	1.0050 0.9219	1.0705 1.2999	1.1745	1.0379	1.2306	Ave		1.1058				12.1		20.0			
13C2 PFTeDA	0.4657 0.3843	0.4891 0.6732	0.5358	0.4739	0.5550	Ave		0.5110				17.7		20.0			
d7-N-MeFOSE-M	0.1459 0.1359	0.1556 0.1971	0.1764	0.1547	0.1814	Ave		0.1639				13.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
d3-NMePFOSA	0.1946 0.1785	0.2098 0.2692	0.2320	0.2058	0.2365	Ave		0.2181				13.9		20.0			
d9-N-EtFOSE-M	0.1707 0.1718	0.1867 0.2325	0.2338	0.1900	0.2230	Ave		0.2012				13.8		20.0			
d5-NEtPFOSA	0.2003 0.1743	0.2101 0.2655	0.2284	0.2125	0.2477	Ave		0.2198				13.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

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

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1 | Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 | Calibration End Date: 09/10/2024 18:34 | Calibration ID: 75783

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-626514/1	2024_09_10ICALinj01.d
Level 2	IC 240-626514/2	2024_09_10ICALinj02.d
Level 3	IC 240-626514/3	2024_09_10ICALinj03.d
Level 4	IC 240-626514/4	2024_09_10ICALinj04.d
Level 5	ICISAV 240-626514/5	2024_09_10ICALinj05.d
Level 6	IC 240-626514/6	2024_09_10ICALinj06.d
Level 7	IC 240-626514/7	2024_09_10ICALinj07.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		AveID	413174 20811580	857853 98878732	2224644	4103912	8572860	0.200 12.5	0.500 62.5	1.25	2.50	5.00
3-Perfluoropropylpropanoic acid (3:3 FTCA)		AveID	25480 1349635	55460 7284750	137625	264173	560616	0.250 15.6	0.625 78.1	1.56	3.13	6.25
Perfluoro-3-methoxypropanoic acid (PFMPA)		AveID	233392 12463407	495284 62441118	1318025	2428543	5080402	0.100 6.25	0.250 31.3	0.625	1.25	2.50
Perfluoropentanoic acid (PFPeA)		AveID	271146 13520420	570799 65867025	1453983	2699376	5784699	0.100 6.25	0.250 31.3	0.625	1.25	2.50
Perfluoro-4-methoxybutanoic acid (PFMBA)		AveID	240847 13225762	507539 68079032	1382420	2582753	5448270	0.100 6.25	0.250 31.3	0.625	1.25	2.50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)		AveID	623145 25848741	1273913 +++++	3164928	5994074	11993149	0.187 11.7	0.467 +++++	1.17	2.34	4.67
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)		AveID	28909 1308236	64434 6822470	151634	216619	658072	0.100 6.25	0.250 31.3	0.625	1.25	2.50
FBSA		AveID	442369 23089356	941821 116947522	2421264	4701473	10141035	0.200 12.5	0.500 62.5	1.25	2.50	5.00
Perfluorohexanoic acid (PFHxA)		AveID	123871 6217363	250866 34811212	659134	1251046	2659307	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
3-Perfluoropentylpropanoic acid (5:3 FTCA)		AveID	551246 29094741	1186674 119965624	3056172	5720785	12215083	1.25 78.1	3.13 391	7.81	15.6	31.3
Perfluorobutanesulfonic acid (PFBS)		AveID	143591 7238246	291771 38589252	761555	1439668	3042929	0.0442 2.76	0.111 13.8	0.276	0.553	1.11
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)		AveID	210198 9939514	389426 47743564	1141844	2067102	4246803	0.200 12.5	0.500 62.5	1.25	2.50	5.00

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)		AveID	814558 41290615	1762247 179077380	4644195	8365537	17775679	0.0890 5.56	0.223 27.8	0.556	1.11	2.23
Perfluoroheptanoic acid (PFHpA)		AveID	174852 9342519	357428 46396790	978450	1832556	3543732	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)		AveID	915561 46874243	2036497 188204090	5170750	9275385	20190112	0.188 11.8	0.471 58.9	1.18	2.36	4.71
Perfluoropentanesulfonic acid (PFPeS)		AveID	161623 8036102	329182 39445402	828908	1594515	3329884	0.0469 2.93	0.117 14.7	0.293	0.586	1.17
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)		AveID	550641 23899121	1177045 +++++	3050204	5651681	11020337	0.190 11.9	0.474 +++++	1.19	2.37	4.74
Perfluorooctanoic acid (PFOA)		AveID	72281 4138631	178214 25684345	427873	849440	1714597	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
3-Perfluoroheptylpropanoic acid (7:3 FTCA)		AveID	536924 26885930	1137088 119698866	3017755	5280353	11433102	1.25 78.1	3.13 391	7.81	15.6	31.3
Perfluorohexanesulfonic acid (PFHxS)		AveID	126840 6471601	257991 35333086	679323	1241147	2648909	0.0455 2.84	0.114 14.2	0.284	0.569	1.14
Perfluorononanoic acid (PFNA)		AveID	92078 4708733	209884 25156100	485979	909538	1910879	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)		AveID	392595 17546984	844983 +++++	2168343	4141874	8147231	0.192 12.0	0.479 +++++	1.20	2.40	4.79
PFECHS		AveID	538562 25178087	1073558 110733829	2816101	5328332	11039918	0.0922 5.76	0.231 28.8	0.576	1.15	2.31
FHxSA		AveID	672192 32406193	1395019 154585513	3603490	6677624	14321134	0.200 12.5	0.500 62.5	1.25	2.50	5.00
Perfluoroheptanesulfonic acid (PFHpS)		AveID	158647 7870303	321912 41248903	842143	1536379	3291108	0.0476 2.98	0.119 14.9	0.298	0.595	1.19
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	70161 3416179	137140 18080483	379101	726576	1475062	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
Perfluorodecanoic acid (PFDA)		AveID	88340 4739278	214444 29153681	509851	956205	1988940	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		AveID	52194 2603603	107728 13951983	268804	527168	1081501	0.0500 3.13	0.125 15.6	0.313	0.625	1.25

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

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1 | Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 | Calibration End Date: 09/10/2024 18:34 | Calibration ID: 75783

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorooctanesulfonic acid (PFOS)		AveID	160249 8200902	338296 44696558	887760	1618123	3426419	0.0464 2.90	0.116 14.5	0.290	0.580	1.16
Perfluoroundecanoic acid (PFUnA)		AveID	110876 5463118	217309 28661233	568881	1103626	2239509	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid		AveID	834860 41235234	1760178 157417338	4521225	8512366	17344313	0.186 11.7	0.466 58.3	1.17	2.33	4.66
Perfluorononanesulfonic acid (PFNS)		AveID	129199 6456986	261152 35181145	651502	1294300	2741646	0.0480 3.00	0.120 15.0	0.300	0.600	1.20
Perfluorododecanoic acid (PFDoA)		AveID	118826 5699069	224035 29041699	572261	1136089	2459615	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
Perfluorodecanesulfonic acid (PFDS)		AveID	147559 7407397	284563 39709957	791799	1446860	3046397	0.0482 3.01	0.121 15.1	0.301	0.603	1.21
Perfluorooctanesulfonamide (PFOSA)		AveID	138933 7092638	279292 40044834	750406	1412671	3023798	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
Perfluorotridecanoic acid (PFTrDA)		AveID	104165 5480277	238567 28846799	594021	1001550	2255234	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid		AveID	829438 38908057	1732750 155188110	4422285	8266841	17604952	0.188 11.8	0.471 58.9	1.18	2.36	4.71
Perfluorotetradecanoic acid (PFTeDA)		AveID	75846 4009428	176767 23009165	428299	821201	1574234	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
Perfluorododecanesulfonic acid (PFDoS)		AveID	122666 6420708	243793 34981116	637485	1212792	2677413	0.0484 3.03	0.121 15.1	0.303	0.605	1.21
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)		AveID	32983 1683423	64919 9208741	167401	329618	714474	0.500 31.3	1.25 156	3.13	6.25	12.5
N-methylperfluorooctane sulfonamide (NMeFOSA)		AveID	27005 1477817	60035 8251102	153619	285843	595238	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)		AveID	38074 1875843	75433 9713191	197119	352612	786305	0.500 31.3	1.25 156	3.13	6.25	12.5
N-ethylperfluorooctane sulfonamide (NEtFOSA)		AveID	28133 1468819	58722 8601448	155252	299787	614211	0.0500 3.13	0.125 15.6	0.313	0.625	1.25
13C4 PFBA	13C3PFBA	Ave	5088055 3900808	4563594 4863257	4600618	4402976	4679461	2.50 2.50	2.50 2.50	2.50	2.50	2.50
13C5 PFPeA	PFHxA	Ave	2047884	1849822	1923029	1784173	1947559	1.25	1.25	1.25	1.25	1.25

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

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1 | Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 | Calibration End Date: 09/10/2024 18:34 | Calibration ID: 75783

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1572834	2029785				1.25	1.25			
M2-4:2 FTS	PFHxS	Ave	1213338 828359	1082419 +++++	1129810	1021345	1027151	1.17 1.17	1.17 +++++	1.17	1.17	1.17
13C5 PFHxA	PFHxA	Ave	1816714 1418415	1643728 1857971	1660671	1615415	1763152	0.625 0.625	0.625 0.625	0.625	0.625	0.625
13C3 PFBS	PFHxS	Ave	1840624 1457945	1637869 1827128	1656033	1564595	1655536	0.581 0.581	0.581 0.581	0.581	0.581	0.581
13C3 HFPO-DA	PFHxA	Ave	2214826 1646590	1989967 2020886	1961686	1851815	1907384	2.50 2.50	2.50 2.50	2.50	2.50	2.50
13C4 PFHpA	PFHxA	Ave	1911673 1560836	1754335 1911597	1747486	1607756	1817163	0.625 0.625	0.625 0.625	0.625	0.625	0.625
M2-6:2 FTS	PFHxS	Ave	1448535 965108	1256071 +++++	1222116	1172565	1280353	1.19 1.19	1.19 +++++	1.19	1.19	1.19
13C8 PFOA	PFOA	Ave	1939090 1576389	1828665 2233580	1840625	1738544	1839135	0.625 0.625	0.625 0.625	0.625	0.625	0.625
13C3 PFHxS	PFHxS	Ave	1777824 1403826	1620956 1883477	1661989	1594321	1669872	0.591 0.591	0.591 0.591	0.591	0.591	0.591
13C9 PFNA	PFNA	Ave	764480 565828	618553 825316	611120	611214	663051	0.313 0.313	0.313 0.313	0.313	0.313	0.313
M2-8:2 FTS	PFHxS	Ave	997090 662557	844452 +++++	890678	828393	849267	1.20 1.20	1.20 +++++	1.20	1.20	1.20
d3-NMeFOSAA	PFOS	Ave	1515586 1168426	1321629 1529044	1279074	1252522	1395914	1.25 1.25	1.25 1.25	1.25	1.25	1.25
13C6 PFDA	PFDA	Ave	705486 587530	623649 783597	642375	576241	670866	0.313 0.313	0.313 0.313	0.313	0.313	0.313
d5-NEtFOSAA	PFOS	Ave	1465874 1152029	1293541 1469731	1316588	1253212	1355154	1.25 1.25	1.25 1.25	1.25	1.25	1.25
13C8 PFOS	PFOS	Ave	1568798 1221723	1371737 1651633	1398374	1365622	1478665	0.598 0.598	0.598 0.598	0.598	0.598	0.598
13C7 PFUnA	PFDA	Ave	704631 506698	670600 727401	596945	642273	666537	0.313 0.313	0.313 0.313	0.313	0.313	0.313
13C2-PFDoDA	PFDA	Ave	663892 539982	574398 710877	588907	575554	611610	0.313 0.313	0.313 0.313	0.313	0.313	0.313
13C8 FOSA	PFOS	Ave	1765085 1367477	1595296 1844902	1577585	1500309	1642793	0.625 0.625	0.625 0.625	0.625	0.625	0.625
13C2 PFTeDA	PFDA	Ave	387986 271362	329275 458692	340479	314200	337999	0.313 0.313	0.313 0.313	0.313	0.313	0.313
d7-N-MeFOSE-M	PFOS	Ave	2562188 2015962	2319228 2797829	2369620	2236135	2422015	6.25 6.25	6.25 6.25	6.25	6.25	6.25
d3-NMePFOSA	PFOS	Ave	341783 264806	312618 382110	311594	297482	315746	0.625 0.625	0.625 0.625	0.625	0.625	0.625

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

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
d9-N-EtFOSE-M	PFOS	Ave	2998242 2547576	2782009 3300504	3140982	2746016	2976245	6.25 6.25	6.25 6.25	6.25	6.25	6.25
d5-NEtPFOSA	PFOS	Ave	351688 258526	313092 376775	306776	307110	330637	0.625 0.625	0.625 0.625	0.625	0.625	0.625

Curve Type Legend:
Ave = Average ISTD
AveID = Average isotope dilution

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1 | Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 | Calibration End Date: 09/10/2024 18:34 | Calibration ID: 75783

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-626514/1	2024_09_10ICALinj01.d
Level 2	IC 240-626514/2	2024_09_10ICALinj02.d
Level 3	IC 240-626514/3	2024_09_10ICALinj03.d
Level 4	IC 240-626514/4	2024_09_10ICALinj04.d
Level 5	ICISAV 240-626514/5	2024_09_10ICALinj05.d
Level 6	IC 240-626514/6	2024_09_10ICALinj06.d
Level 7	IC 240-626514/7	2024_09_10ICALinj07.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Perfluorobutanoic acid (PFBA)	6.8 -14.4	-1.1	1.8	-1.9	-3.6	12.3	30 30	30	30	30	30	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.1 -4.8	-0.6	-5.1	-1.8	-4.6	13.8	30 30	30	30	30	30	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.7 -10.4	-2.5	-0.2	-0.9	-5.0	15.4	30 30	30	30	30	30	30
Perfluoropentanoic acid (PFPeA)	8.0 -15.3	0.7	-1.3	-1.3	-3.1	12.2	30 30	30	30	30	30	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.4 -7.5	-5.4	-0.8	-0.2	-3.5	16.0	30 30	30	30	30	30	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.4 +++++	-1.5	-6.2	-1.8	-2.3	4.4	30	30	30	30	30	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	13.2 -16.4	11.6	4.0	-23.7	6.2	5.0	30 30	30	30	30	30	30
FBSA	2.1 -13.0	-2.3	-0.6	2.1	4.1	7.6	30 30	30	30	30	30	30
Perfluorohexanoic acid (PFHxA)	7.2 -5.7	-4.0	-0.1	-2.6	-5.1	10.3	30 30	30	30	30	30	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.2 -27.0	2.0	4.0	0.1	-2.1	15.9	30 30	30	30	30	30	30
Perfluorobutanesulfonic acid (PFBS)	5.6 -8.5	-3.5	-0.4	-0.3	-0.5	7.6	30 30	30	30	30	30	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	7.7 -14.2	-11.2	5.7	1.3	1.1	9.6	30 30	30	30	30	30	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	7.6 -26.0	2.9	7.4	-0.6	-3.2	11.8	30 30	30	30	30	30	30
Perfluoroheptanoic acid (PFHpA)	5.8 -10.2	-5.7	3.6	5.5	-9.8	10.8	30 30	30	30	30	30	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.5 -26.1	1.5	4.6	-0.6	5.0	13.0	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Cleveland Job No.: 460-311364-1 Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 Calibration End Date: 09/10/2024 18:34 Calibration ID: 75783

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Perfluoropentanesulfonic acid (PFPeS)	11.6 -17.7	-0.3	-2.1	-1.8	-2.1	12.4	30 30	30	30	30	30	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.0 +++++	-1.4	5.1	1.5	-9.4	4.2	30	30	30	30	30	30
Perfluorooctanoic acid (PFOA)	-2.9 -4.1	1.6	-3.1	1.9	-2.8	9.5	30 30	30	30	30	30	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	9.3 -23.8	2.3	7.5	-3.3	-4.1	12.1	30 30	30	30	30	30	30
Perfluorohexanesulfonic acid (PFHxS)	8.6 -8.6	-3.1	-0.5	-5.2	-3.4	12.3	30 30	30	30	30	30	30
Perfluorononanoic acid (PFNA)	-0.6 -19.5	12.0	5.0	-1.8	-4.9	9.9	30 30	30	30	30	30	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	-1.2 +++++	0.4	-2.3	0.4	-3.7	6.3	30	30	30	30	30	30
PFECHS	14.9 -28.7	0.5	2.8	1.4	0.3	8.8	30 30	30	30	30	30	30
FHxSA	11.2 -22.7	1.3	2.1	-1.4	0.9	8.7	30 30	30	30	30	30	30
Perfluoroheptanesulfonic acid (PFHpS)	8.3 -14.4	0.6	3.2	-3.6	-4.6	10.4	30 30	30	30	30	30	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5.0 -14.1	-5.8	7.6	5.3	-4.1	6.1	30 30	30	30	30	30	30
Perfluorodecanoic acid (PFDA)	-1.4 -6.3	8.3	0.0	4.5	-6.6	1.6	30 30	30	30	30	30	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.7 -9.0	-0.2	-2.2	0.8	-4.4	8.3	30 30	30	30	30	30	30
Perfluorooctanesulfonic acid (PFOS)	4.6 -11.4	1.0	4.0	-3.0	-5.1	9.9	30 30	30	30	30	30	30
Perfluoroundecanoic acid (PFUnA)	9.1 -12.6	-10.2	5.7	-4.7	-6.8	19.6	30 30	30	30	30	30	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.4 -29.7	-0.2	4.0	3.8	2.6	13.1	30 30	30	30	30	30	30
Perfluorononanesulfonic acid (PFNS)	7.6 -10.9	-0.5	-2.6	-0.9	-3.1	10.5	30 30	30	30	30	30	30
Perfluorododecanoic acid (PFDoA)	13.0 -17.5	-1.5	-1.8	-0.3	1.5	6.6	30 30	30	30	30	30	30
Perfluorodecanesulfonic acid (PFDS)	8.2 -11.5	-4.6	4.2	-2.5	-5.2	11.6	30 30	30	30	30	30	30
Perfluorooctanesulfonamide (PFOSA)	4.7 -7.6	-6.8	1.2	0.2	-2.1	10.4	30 30	30	30	30	30	30
Perfluorotridecanoic acid (PFTrDA)	2.1 -18.6	8.9	5.4	-7.2	-2.1	11.4	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1 | Analy Batch No.: 626514

SDG No.:

Instrument ID: LCMS04 | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2024 17:12 | Calibration End Date: 09/10/2024 18:34 | Calibration ID: 75783

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	7.7 -29.3	0.2	3.7	2.7	6.2	8.7	30 30	30	30	30	30	30
Perfluorotetradecanoic acid (PFTeDA)	-2.5 -20.0	7.1	0.4	4.3	-7.1	17.9	30 30	30	30	30	30	30
Perfluorododecanesulfonic acid (PFDoS)	5.8 -8.3	-3.9	-1.3	-3.9	-2.0	13.7	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.8 -11.0	-5.4	-4.5	-0.4	-0.3	12.9	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.4 -11.3	-1.4	1.2	-1.3	-3.2	14.6	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	17.5 -12.8	0.4	-7.1	-4.9	-2.2	9.0	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.4 -7.4	-4.9	2.6	-1.0	-5.8	15.2	30 30	30	30	30	30	30

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Lims ID: IC CAL 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Sep-2024 17:12:47 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 1
Misc. Info.: Plate: 2 Rack: 1 240-0146069-001
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:01:06 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:18:18
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.574	3.573	0.001		2461871	1.25			953	
* 2 13C2 PFHxA										
315.10 > 270.00	4.744	4.744	0.0		1408460	0.6250			6187	
* 3 13C4 PFOA										
417.10 > 172.00	5.643	5.653	-0.010		264612	0.6250			1279	
* 4 18O2 PFHxS										
403.00 > 83.90	5.869	5.878	-0.009		1849331	0.5913			4945	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.077	0.0		978947	0.3125			1943	
* 6 13C2 PFDA										
515.10 > 470.10	6.512	6.522	-0.010		833071	0.3125			3119	
* 7 13C4 PFOS										
502.80 > 79.90	6.783	6.792	-0.009		1678952	0.5975	Target=4.00		3826	
502.80 > 98.90	6.774	6.792	-0.018		415149		4.04(2.00-6.01)		1884	
D 8 13C4 PFBA										
216.80 > 171.90	3.574	3.573	0.001	1.000	5088055	2.28		91.0	27728	
D 9 13C5 PFPeA										
268.30 > 223.00	4.226	4.225	0.001	0.891	2047884	1.16		92.6	6322	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.545	4.555	-0.010	0.774	1213338	1.16	Target=0.31	99.2	4890	
329.10 > 309.00	4.545	4.555	-0.010	0.774	3375562		0.36(0.16-0.47)	99.2	1034	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.744	0.0	1.000	1816714	0.5737	Target=39.15	91.8	6313	
318.00 > 120.30	4.744	4.744	0.0	1.000	46263		39.27(19.57-58.72)	91.8	529	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.871	0.0	0.830	1840624	0.5505	Target=3.27	94.7	4510	
302.10 > 98.90	4.871	4.871	0.0	0.830	542008		3.40(1.63-4.90)	94.7	2468	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.936	0.0	1.040	2214826	2.43	Target=1.96	97.2	7283	
286.90 > 184.90	4.936	4.936	0.0	1.040	1114455		1.99(0.98-2.94)	97.2	2164	
D 14 13C4 PFHpA										
367.10 > 322.00	5.208	5.219	-0.011	1.098	1911673	0.5781		92.5	5389	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.431	5.441	-0.010	0.925	1448535	1.21	Target=0.40	102	3076	
429.10 > 409.00	5.431	5.441	-0.010	0.925	3153780		0.46(0.20-0.59)	102	4734	
D 16 13C8 PFOA										
421.10 > 376.00	5.643	5.653	-0.010	1.000	1939090	0.5806		92.9	5657	
D 17 13C3 PFHxS										
402.10 > 79.90	5.869	5.878	-0.009	1.000	1777824	0.5415	Target=3.38	91.6	4795	
402.10 > 98.80	5.869	5.878	-0.009	1.000	539769		3.29(1.69-5.07)	91.6	1996	
D 18 13C9 PFNA										
472.10 > 427.00	6.077	6.087	-0.010	1.000	764480	0.3112		99.6	2389	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.272	6.281	-0.009	1.069	997090	1.21	Target=0.34	101	3017	
529.10 > 509.00	6.272	6.281	-0.009	1.069	2672878		0.37(0.17-0.51)	101	6140	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.452	6.462	-0.010	0.951	1515586	1.17		93.2	5446	
D 21 13C6 PFDA										
519.10 > 474.10	6.512	6.522	-0.010	1.000	705486	0.2750		88.0	1766	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.648	6.657	-0.009	0.980	1465874	1.15		91.6	2594	
D 23 13C8 PFOS										
507.10 > 79.90	6.783	6.792	-0.009	1.000	1568798	0.5419	Target=4.08	90.7	2528	
507.10 > 98.90	6.774	6.792	-0.018	0.999	382074		4.11(2.04-6.12)	90.7	1083	
D 24 13C7 PFUnA										
570.00 > 525.10	6.944	6.960	-0.016	1.066	704631	0.2791		89.3	1813	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.373	7.388	-0.015	1.132	663892	0.2786		89.2	1814	
D 26 13C8 FOSA										
506.10 > 77.80	7.726	7.726	0.0	1.139	1765085	0.5681		90.9	5718	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.194	8.217	-0.023	1.258	387986	0.2848		91.1	1170	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.600	0.011	1.270	2562188	5.56		89.0	1011	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.734	8.724	0.010	1.288	341783	0.5578		89.2	1320	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.863	8.853	0.009	1.307	2998242	5.30		84.8	1113	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.950	8.950	0.0	1.320	351688	0.5694		91.1	192	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.582	3.576	0.006	1.002	413174	0.2137		107	4.7	M
34 3:3 FTCA										M
241.00 > 177.00	3.864	3.866	-0.002	0.914	25480	0.2578	Target=1.04	103	358	
241.00 > 117.00	3.852	3.866	-0.014	0.911	26086		0.98(0.52-1.56)	103	6.3	M
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.864	3.866	-0.002	0.914	233392	0.1037		104	248	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.235	4.229	0.006	1.002	271146	0.1080		108	33.1	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.406	4.410	-0.004	1.043	240847	0.1014		101	954	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.555	4.550	0.005	1.002	623145	0.2007	Target=1.37	107	4183	
327.10 > 80.90	4.555	4.550	0.005	1.002	431337		1.44(0.68-2.05)	107	415	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.702	4.707	-0.005	0.991	28909	0.1132	Target=1.54	113	266	
295.00 > 84.90	4.702	4.707	-0.005	0.991	19975		1.45(0.77-2.31)	113	82.5	
48 FBSA										
297.90 > 78.00	4.744	4.740	0.004	0.974	442369	0.2042		102	1500	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.755	4.750	0.005	1.002	123871	0.0536	Target=14.09	107	20.9	
313.00 > 118.90	4.744	4.750	-0.006	1.000	9280		13.35(7.04-21.13)	107	61.5	
41 5:3 FTCA										
341.00 > 237.10	4.827	4.834	-0.007	1.018	551246	1.34	Target=1.54	107	1145	
341.00 > 217.00	4.827	4.834	-0.007	1.018	378883		1.45(0.77-2.31)	107	388	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.871	4.878	-0.007	1.000	143591	0.0467	Target=3.32	106	421	
298.70 > 98.80	4.871	4.878	-0.007	1.000	49471		2.90(1.66-4.97)	106	174	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.947	4.943	0.004	1.002	210198	0.2154	Target=1.98	108	772	
284.90 > 184.90	4.936	4.943	-0.007	1.000	103893		2.02(0.99-2.97)	108	248	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.137	5.144	-0.007	1.083	814558	0.0958	Target=12.50	108	2530	
314.80 > 82.90	5.137	5.144	-0.007	1.083	67582		12.05(6.25-18.75)	108	175	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.219	5.215	0.004	1.002	174852	0.0529	Target=3.89	106	25.1	
363.10 > 169.00	5.219	5.215	0.004	1.002	40377		4.33(1.95-5.84)	106	133	
49 DONA										
376.90 > 250.90	5.380	5.385	-0.005	1.090	915561	0.1932	Target=1.56	103	2417	
376.90 > 84.80	5.380	5.385	-0.005	1.090	572087		1.60(0.78-2.34)	103	2859	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.400	5.406	-0.006	0.920	161623	0.0523	Target=3.17	112	240	
349.10 > 98.90	5.400	5.406	-0.006	0.920	48809		3.31(1.58-4.75)	112	164	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.441	5.445	-0.004	1.002	550641	0.1896	Target=1.44	100	2773	
427.10 > 80.90	5.441	5.445	-0.004	1.002	391248		1.41(0.72-2.15)	100	1467	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.653	5.657	-0.004	1.002	72281	0.0486	Target=2.01	97.1	8.0	M
413.00 > 169.00	5.643	5.657	-0.014	1.000	40290		1.79(1.00-3.01)	97.1	114	M
54 7:3 FTCA										
441.00 > 316.90	5.709	5.713	-0.004	1.203	536924	1.37	Target=1.06	109	985	
441.00 > 336.90	5.709	5.713	-0.004	1.203	492765		1.09(0.53-1.58)	109	2609	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.882	-0.004	1.002	126840	0.0494	Target=3.33	109	412	M
398.70 > 98.90	5.869	5.882	-0.013	1.000	37762		3.36(1.66-4.99)	109	131	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.077	6.091	-0.014	1.000	92078	0.0497	Target=4.97	99.4	12.1	M
463.00 > 169.00	6.077	6.091	-0.014	1.000	19755		4.66(2.49-7.46)	99.4	83.8	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.281	6.286	-0.005	1.001	392595	0.1893	Target=1.32	98.8	2069	
527.10 > 80.80	6.281	6.286	-0.005	1.001	306710		1.28(0.66-1.98)	98.8	1256	
57 PFECHS										
461.00 > 381.00	6.281	6.286	-0.005	1.070	538562	0.1059	Target=1.88	115	97.6	
461.00 > 99.00	6.281	6.286	-0.005	1.070	271941		1.98(0.94-2.81)	115	687	
62 FHxSA										
397.90 > 78.00	6.309	6.305	0.004	1.075	672192	0.2225		111	2297	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.328	6.342	-0.014	0.933	158647	0.0516	Target=3.89	108	316	
449.00 > 98.80	6.328	6.342	-0.014	0.933	40718		3.90(1.95-5.84)	108	112	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.462	6.469	-0.007	1.002	70161	0.0525	Target=1.69	105	296	M
570.10 > 483.00	6.462	6.469	-0.007	1.002	39906		1.76(0.85-2.54)	105	206	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.512	6.527	-0.015	1.000	88340	0.0493	Target=4.63	98.6	11.5	
512.90 > 219.00	6.512	6.527	-0.015	1.000	19324		4.57(2.32-6.95)	98.6	78.5	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.666	6.672	-0.006	1.003	52194	0.0533	Target=1.55	107	173	M
584.20 > 526.00	6.657	6.672	-0.015	1.001	30235		1.73(0.78-2.33)	107	73.3	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.783	6.788	-0.005	1.000	160249	0.0485	Target=4.64	105	94.3	M
498.90 > 98.80	6.783	6.788	-0.005	1.000	35529		4.51(2.32-6.96)	105	160	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.952	6.965	-0.013	1.001	110876	0.0545	Target=6.10	109	35.3	
563.10 > 269.10	6.944	6.965	-0.021	1.000	16864		6.57(3.05-9.15)	109	167	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.122	7.127	-0.005	1.443	834860	0.1982	Target=3.09	106	274	
532.80 > 353.00	7.114	7.127	-0.013	1.441	274661		3.04(1.54-4.63)	106	444	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.222	7.226	-0.004	1.065	129199	0.0516	Target=4.11	108	601	
548.80 > 98.80	7.222	7.226	-0.004	1.065	29794		4.34(2.06-6.17)	108	192	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.373	7.384	-0.011	1.000	118826	0.0565	Target=18.06	113	44.8	
613.10 > 319.00	7.380	7.384	-0.004	1.001	5667		20.97(9.03-27.08)	113	89.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.642	7.655	-0.013	1.127	147559	0.0521	Target=4.27	108	491	
599.00 > 98.80	7.632	7.655	-0.023	1.125	34123		4.32(2.14-6.41)	108	432	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.736	7.732	0.004	1.001	138933	0.0524	Target=46.53	105	318	M
498.10 > 478.00	7.736	7.732	0.004	1.001	3398		40.89(23.26-69.79)	105	15.1	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.789	7.807	-0.018	0.951	104165	0.0510	Target=6.29	102	40.3	
663.00 > 168.90	7.789	7.807	-0.018	0.951	16888		6.17(3.14-9.43)	102	182	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.959	7.975	-0.016	1.612	829438	0.2029	Target=3.20	108	1472	
632.90 > 452.90	7.959	7.975	-0.016	1.612	254876		3.25(1.60-4.79)	108	716	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.194	8.213	-0.019	1.000	75846	0.0487	Target=7.27	97.5	43.4	
713.10 > 168.90	8.194	8.213	-0.019	1.000	11938		6.35(3.64-10.91)	97.5	181	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.417	8.424	-0.007	1.241	122666	0.0512	Target=4.58	106	251	
699.10 > 98.80	8.406	8.424	-0.018	1.239	25064		4.89(2.29-6.87)	106	196	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.629	0.003	1.002	32983	0.5438		109	284	M
75 NMeFOSA										M
511.90 > 219.00	8.744	8.741	0.003	1.001	27005	0.0507	Target=0.71	101	184	M
511.90 > 169.00	8.734	8.741	-0.007	1.000	39027		0.69(0.35-1.06)	101	188	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.882	8.880	0.002	1.002	38074	0.5877		118	375	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.959	8.957	0.002	1.001	28133	0.0507	Target=0.70	101	179	M
526.00 > 169.00	8.959	8.957	0.002	1.001	41445		0.68(0.35-1.05)	101	246	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

CAL 1_00019 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:01:09 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d

Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04

Lims ID: IC CAL 1

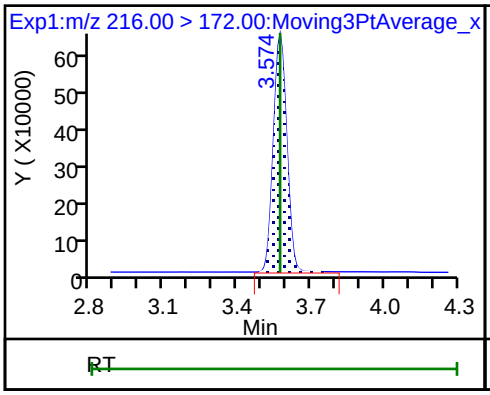
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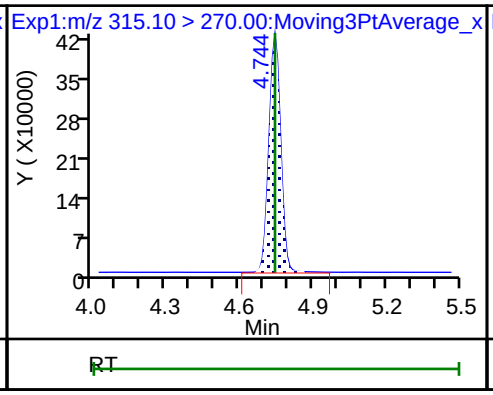
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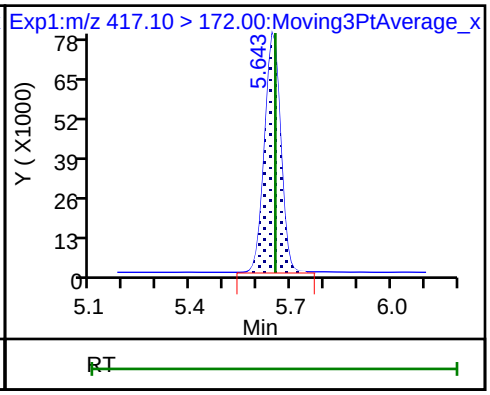
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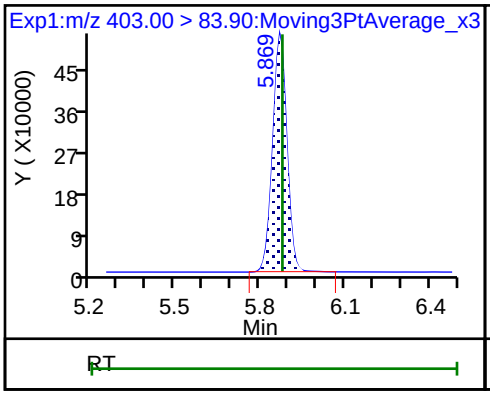
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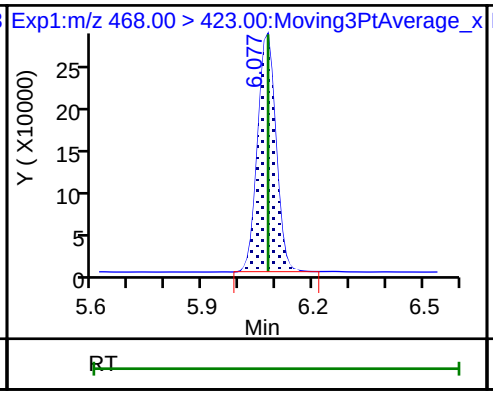
* 3 13C4 PFOA



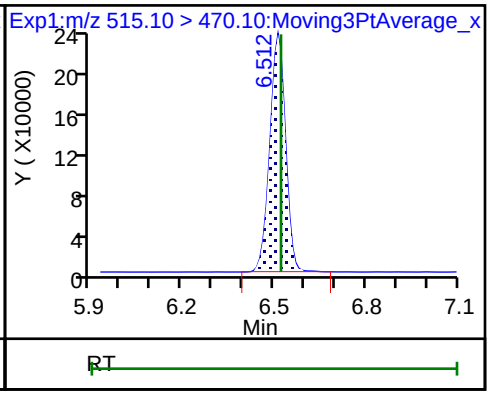
* 4 18O2 PFHxS



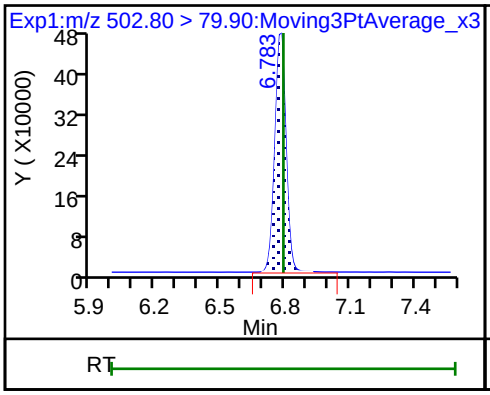
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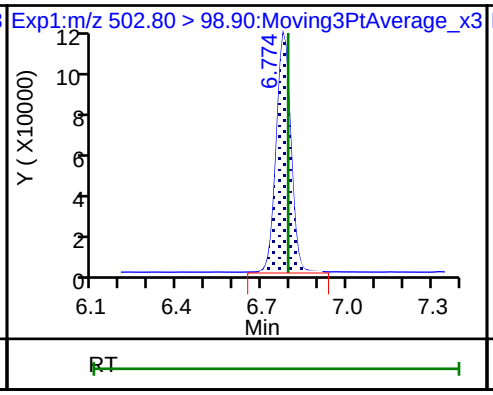
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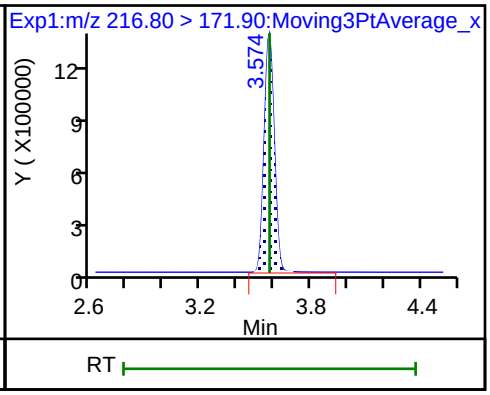
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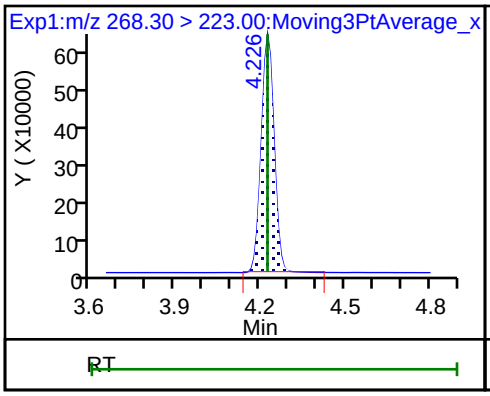
* 7 13C4 PFOS



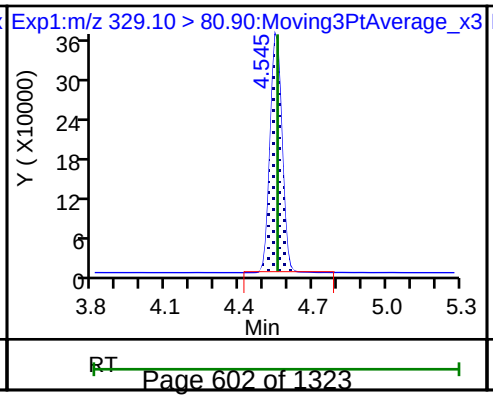
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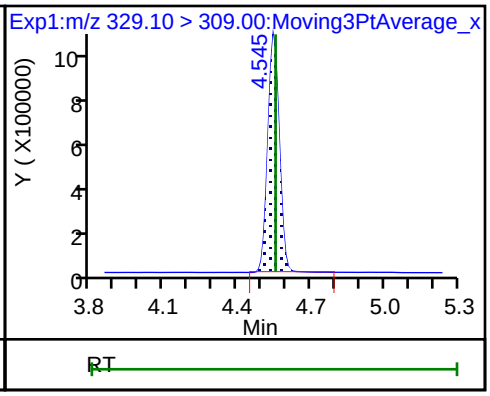
D 9 13C5 PFPeA



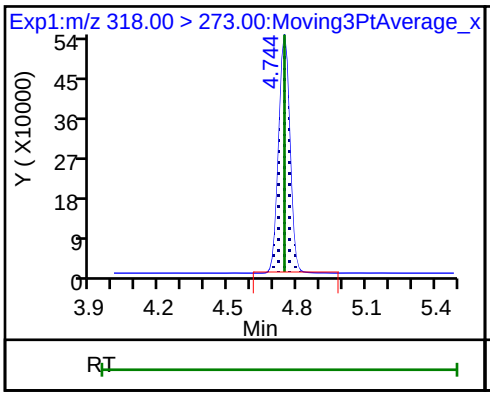
D 10 M2-4:2 FTS



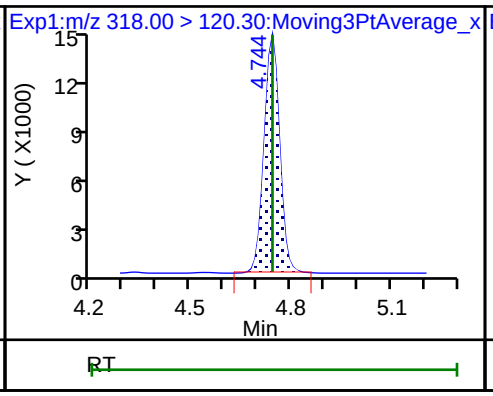
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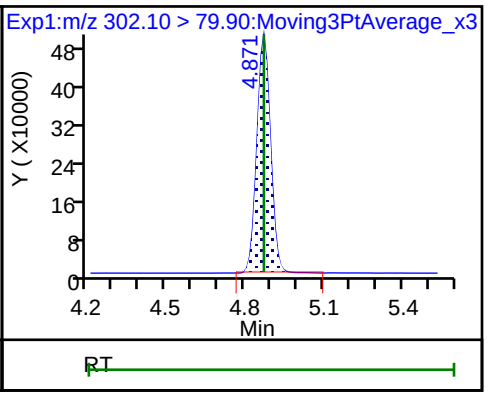
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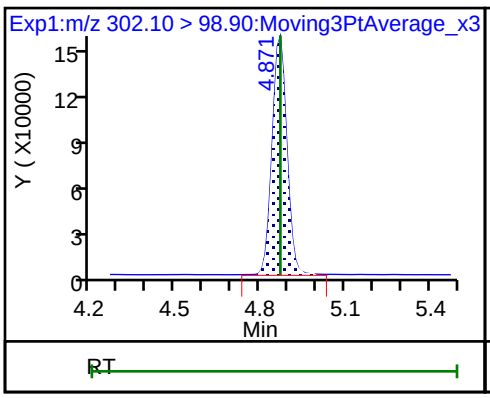
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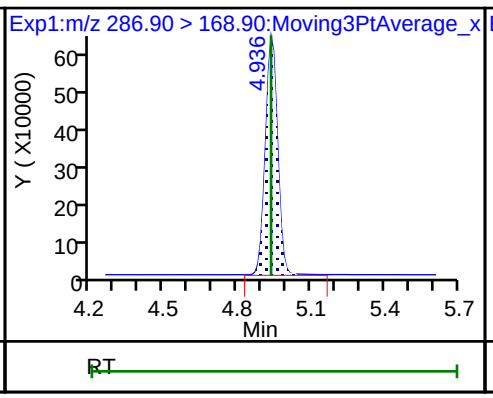
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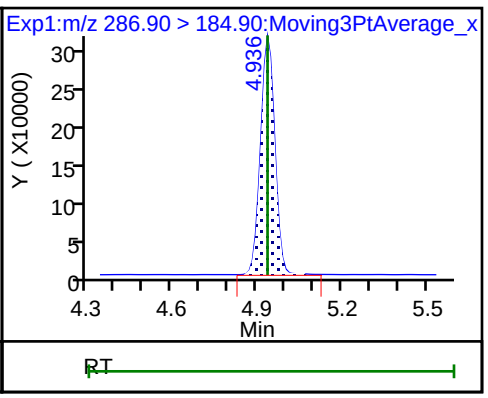
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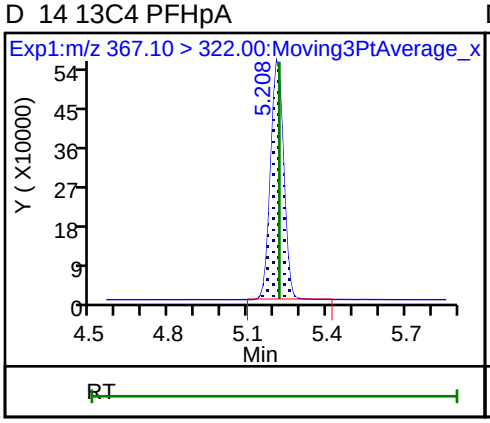
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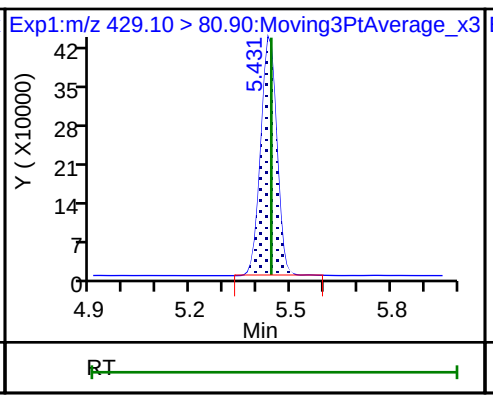
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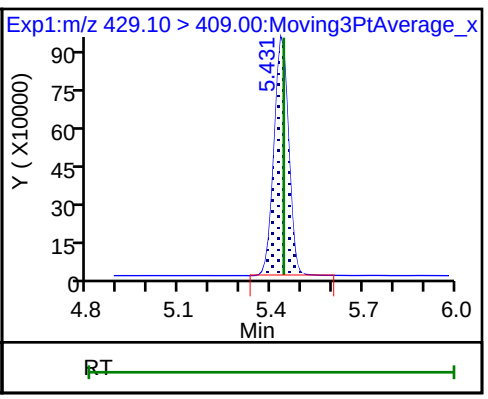
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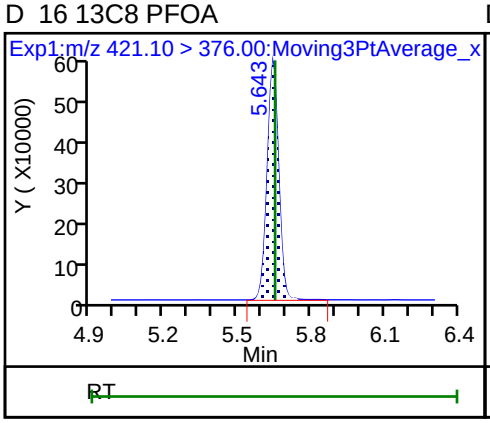
D 15 M2-6:2 FTS



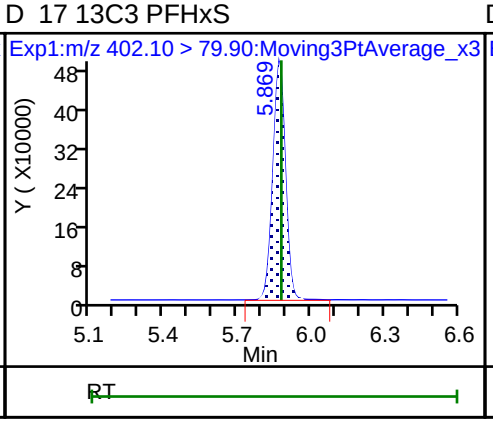
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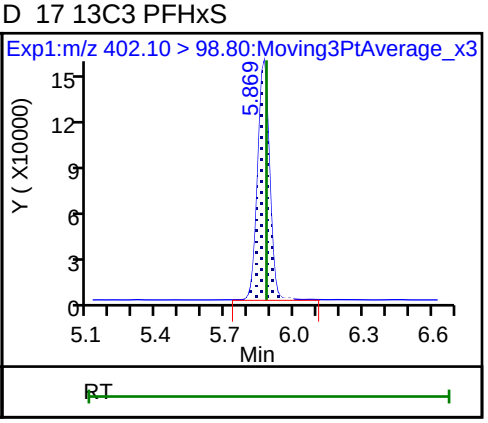
D 16 13C8 PFOA



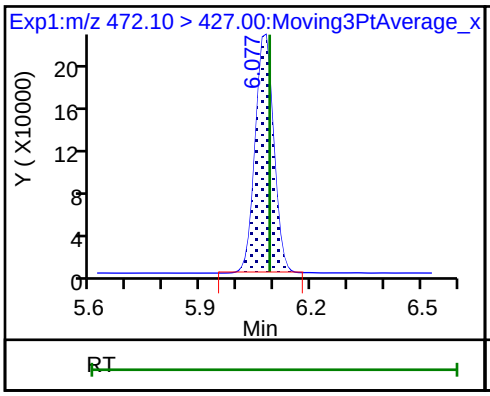
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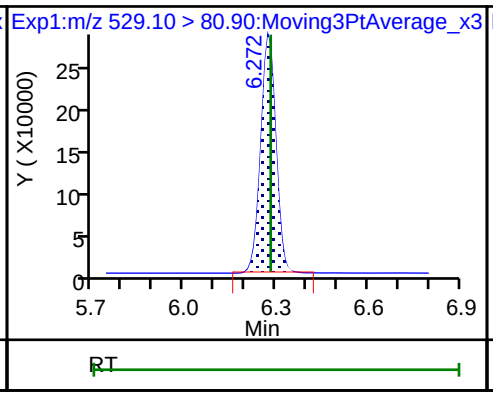
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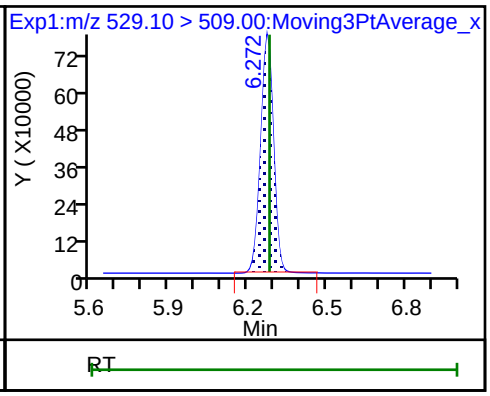
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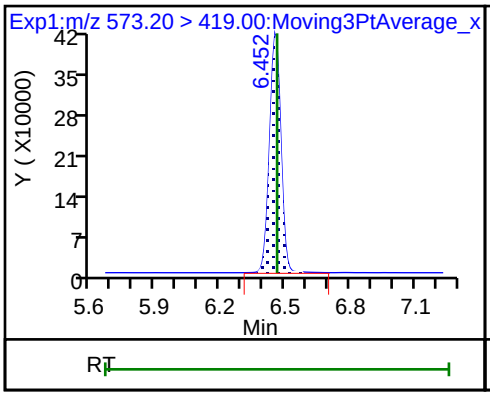
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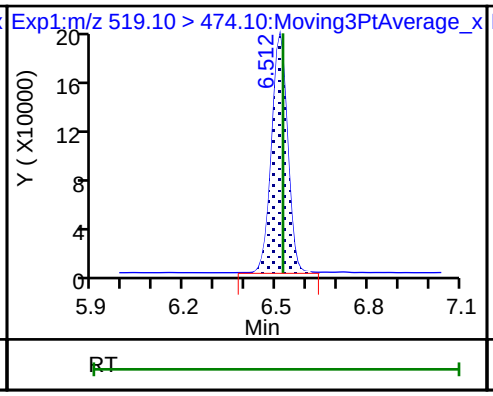
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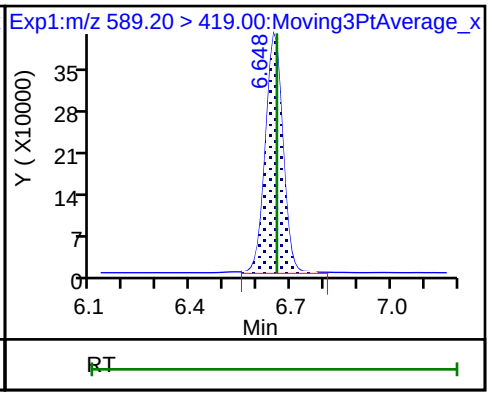
D 20 d3-NMeFOSAA



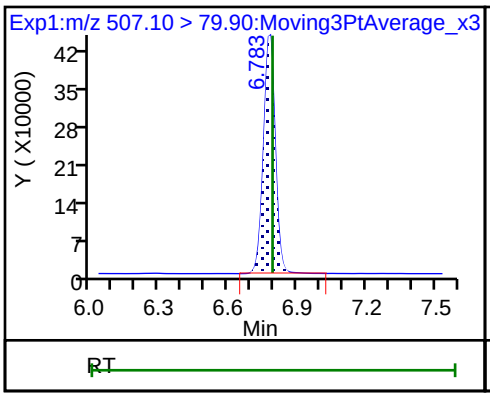
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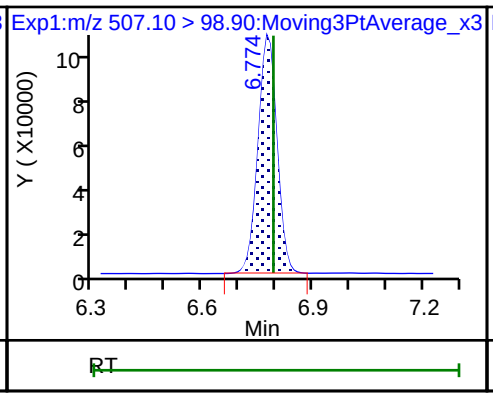
D 22 d5-NEtFOSAA



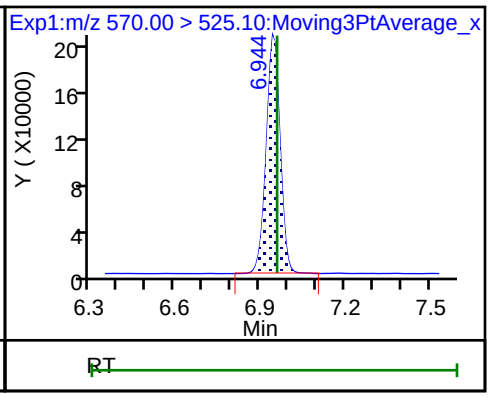
D 23 13C8 PFOS



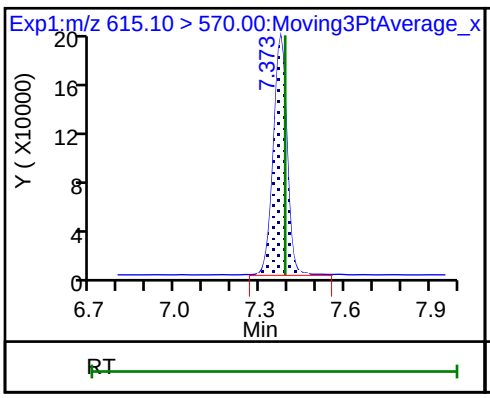
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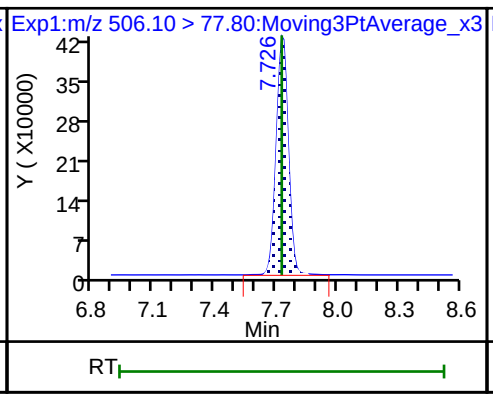
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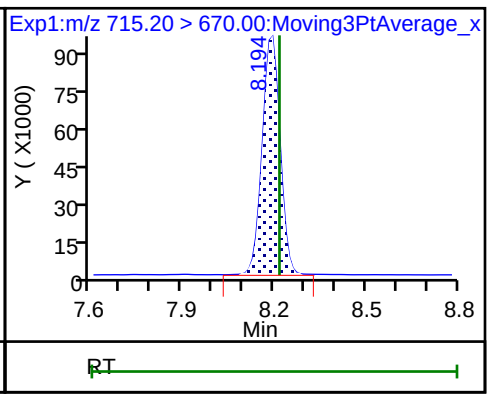
D 25 13C2-PFDoDA



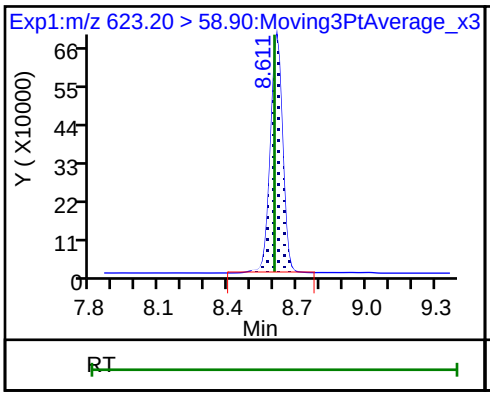
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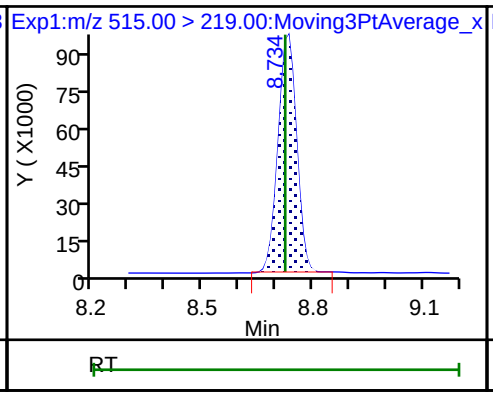
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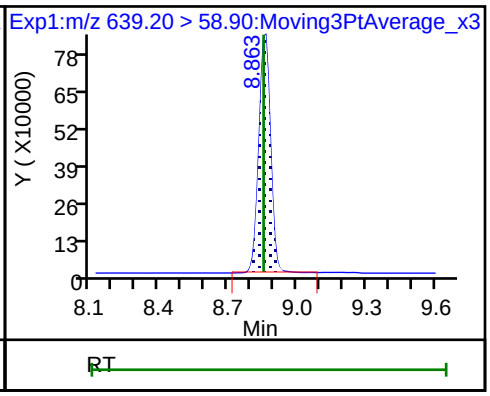
D 28 d7-N-MeFOSE-M



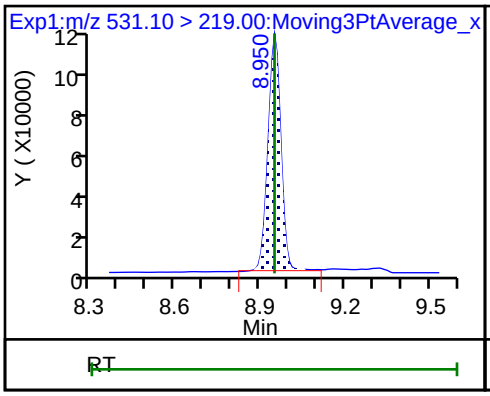
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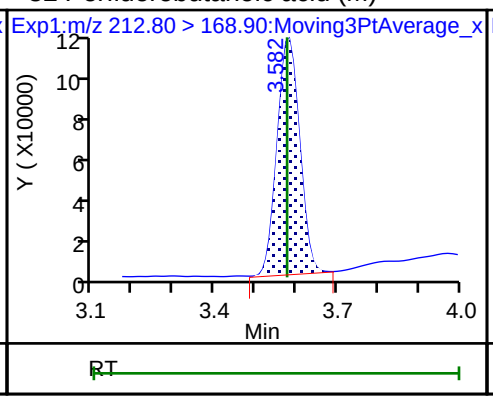
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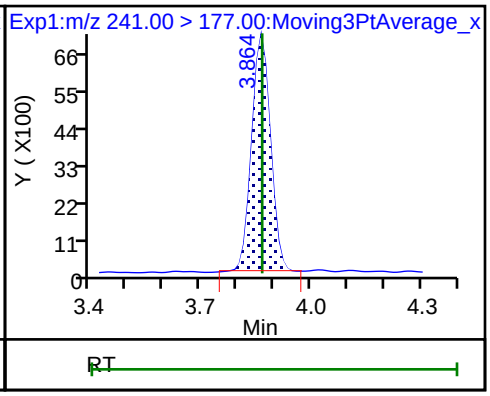
D 31 d5-NEtPFOSA



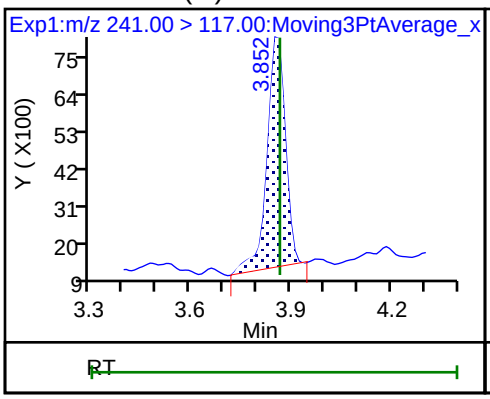
32 Perfluorobutanoic acid (M)



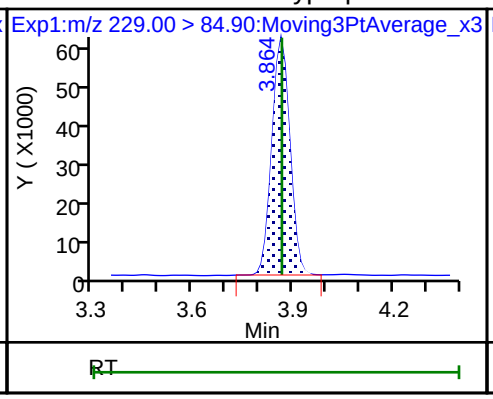
34 3:3 FTCA



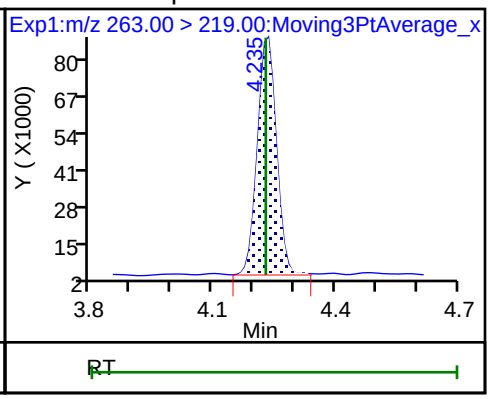
34 3:3 FTCA (M)



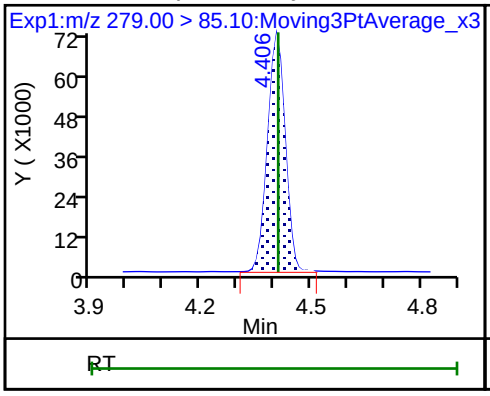
33 Perfluoro-3-methoxypropanoic aci



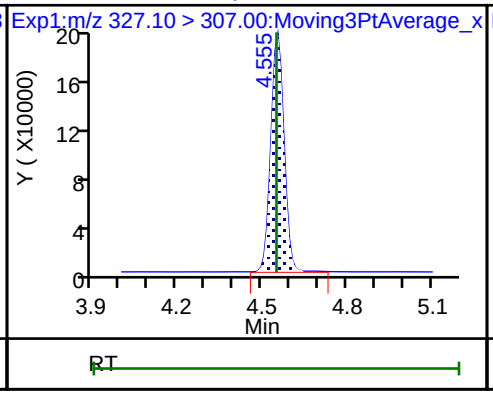
35 Perfluoropentanoic acid



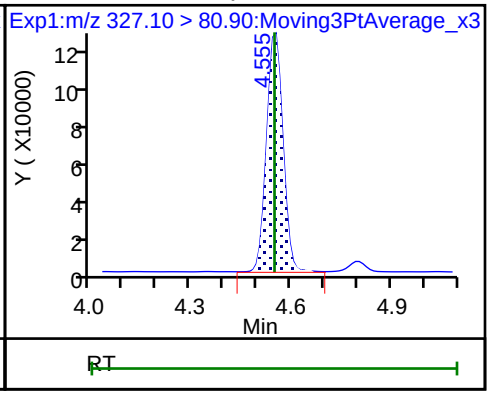
36 Perfluoro(4-methoxybutanoic acid



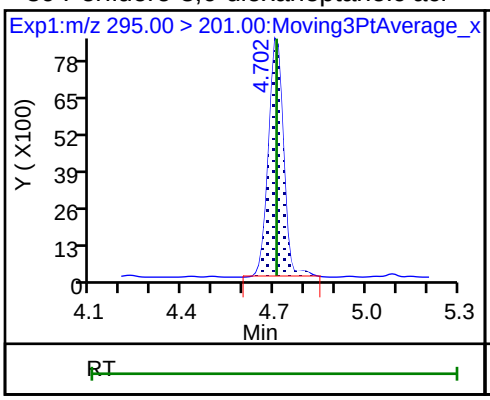
38 1H,1H,2H,2H-perfluorohexanesulfo



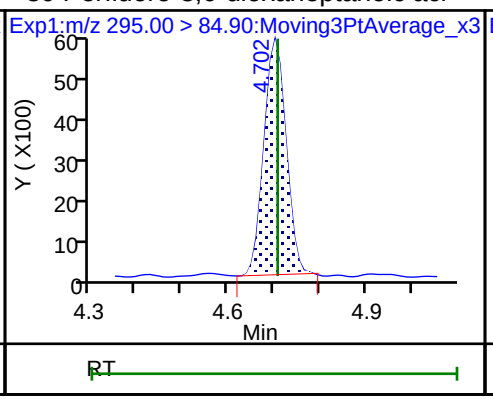
38 1H,1H,2H,2H-perfluorohexanesulfo



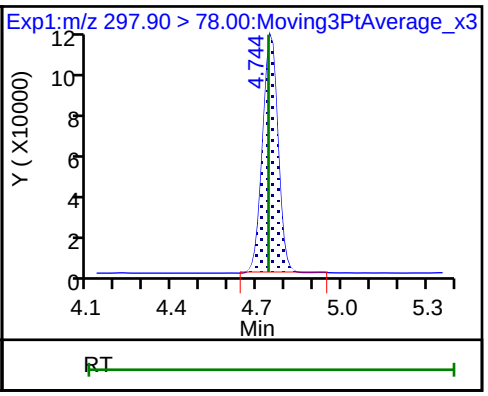
39 Perfluoro-3,6-dioxaheptanoic aci



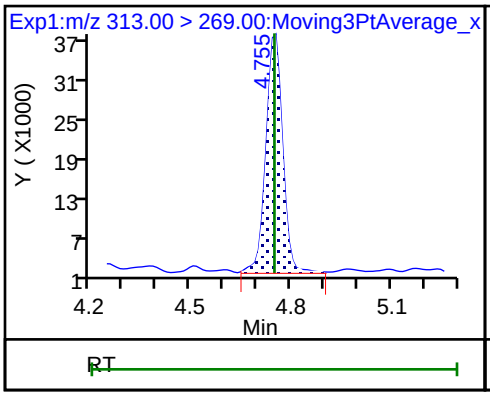
39 Perfluoro-3,6-dioxaheptanoic aci



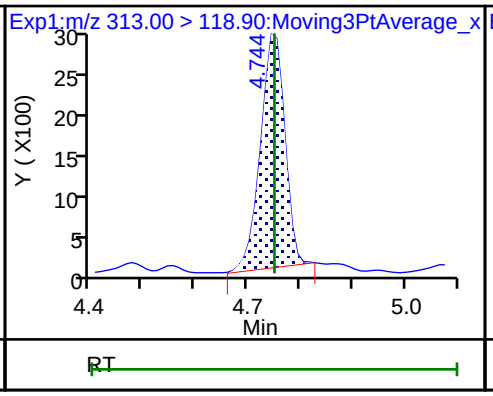
48 FBSA



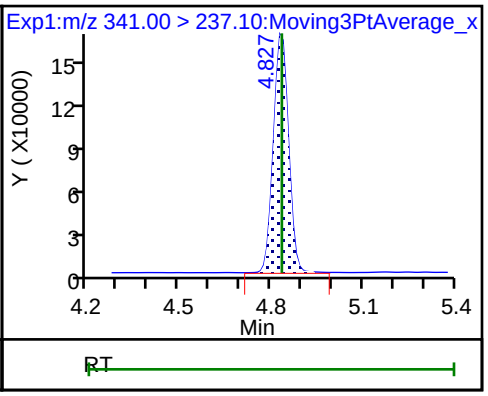
40 Perfluorohexanoic acid



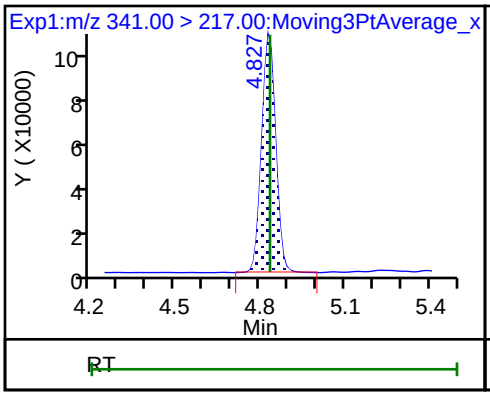
40 Perfluorohexanoic acid



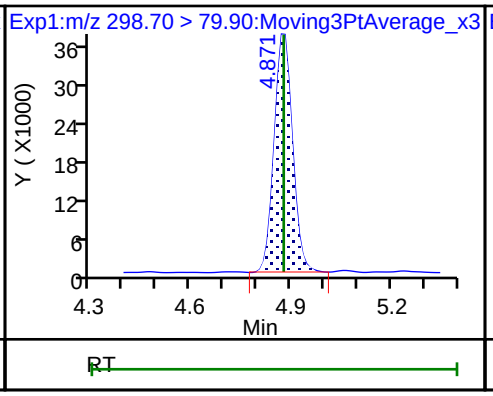
41 5:3 FTCA



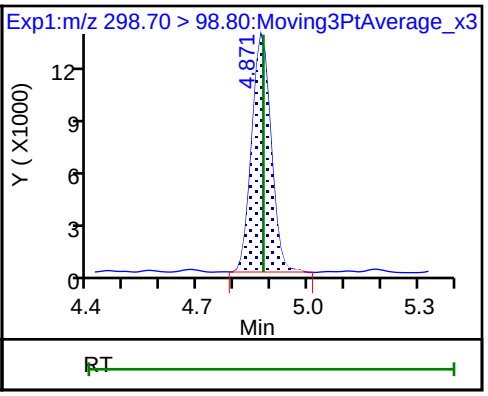
41 5:3 FTCA



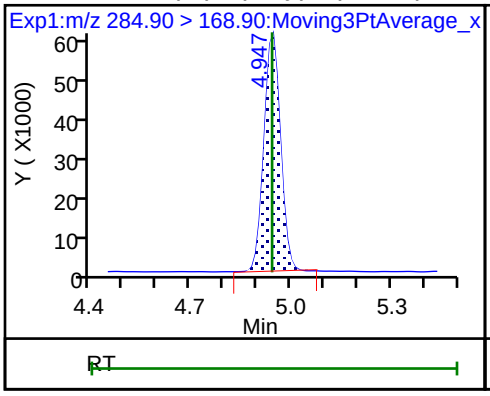
42 Perfluorobutanesulfonic acid



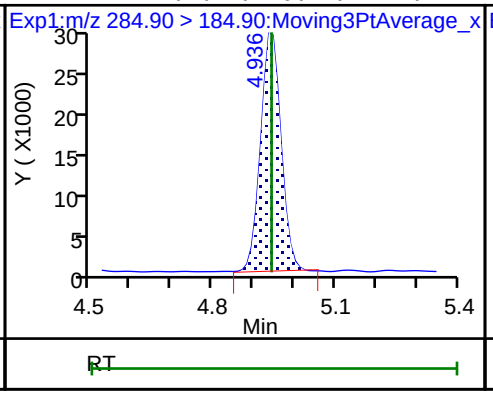
42 Perfluorobutanesulfonic acid



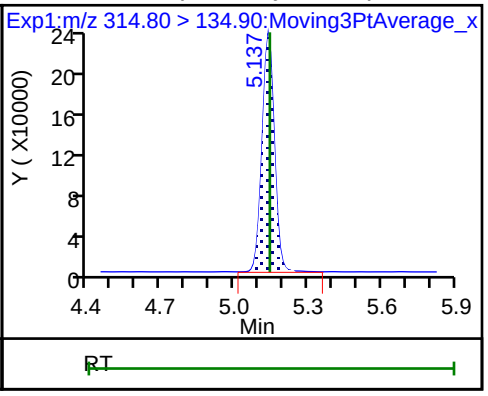
43 Perfluoro(2-propoxypropanoic) ac



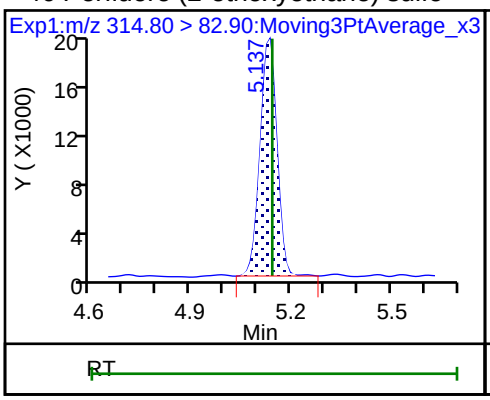
43 Perfluoro(2-propoxypropanoic) ac



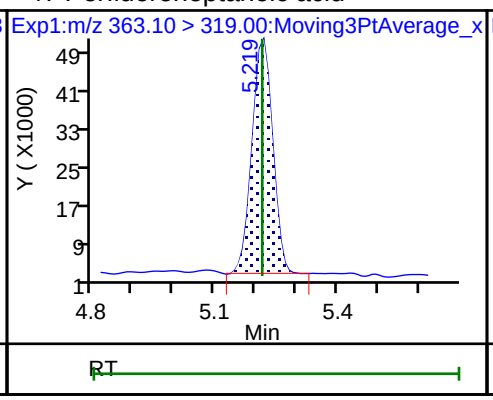
46 Perfluoro (2-ethoxyethane) sulfo



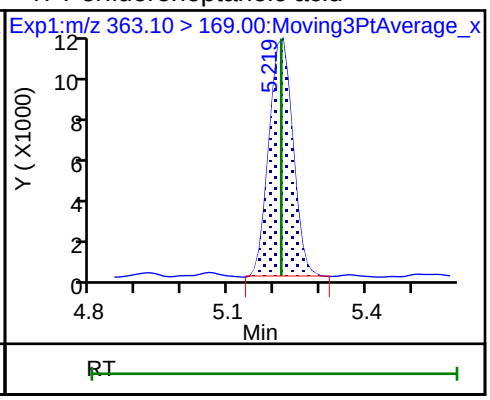
46 Perfluoro (2-ethoxyethane) sulfo



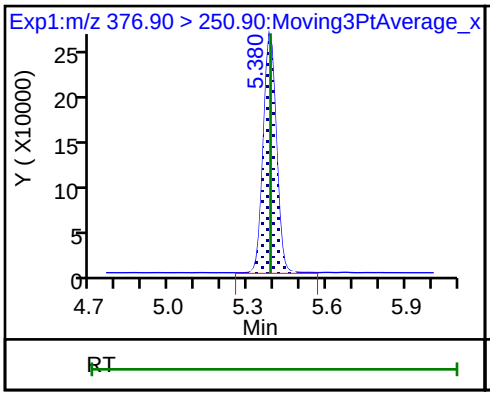
47 Perfluoroheptanoic acid



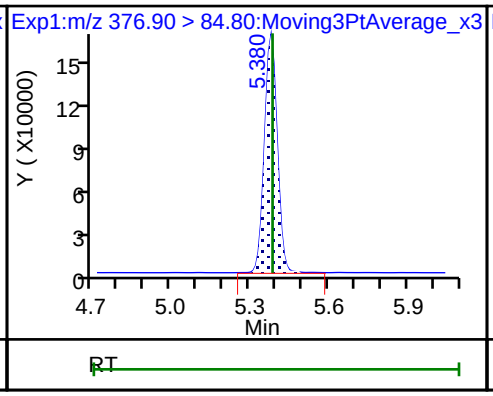
47 Perfluoroheptanoic acid



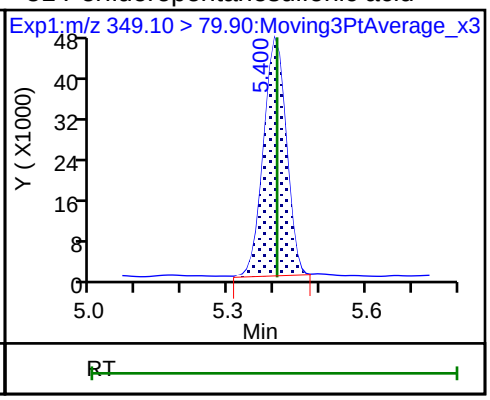
49 DONA



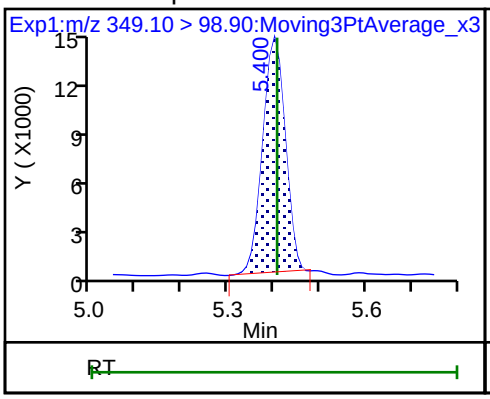
49 DONA



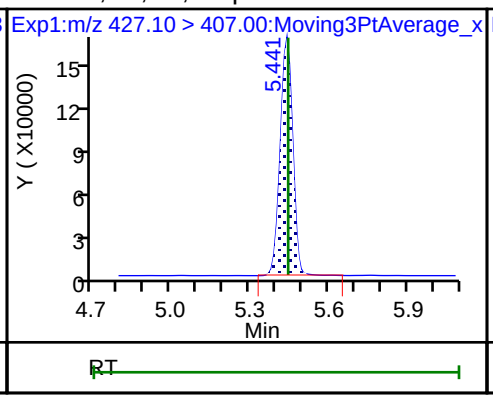
51 Perfluoropentanesulfonic acid



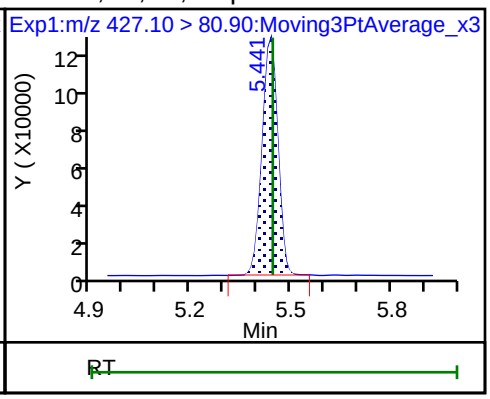
51 Perfluoropentanesulfonic acid



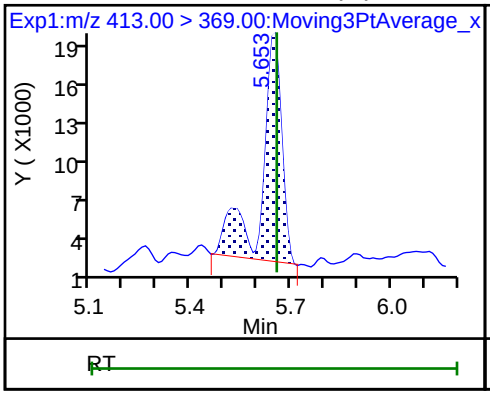
50 1H,1H,2H,2H-perfluorooctanesulfo



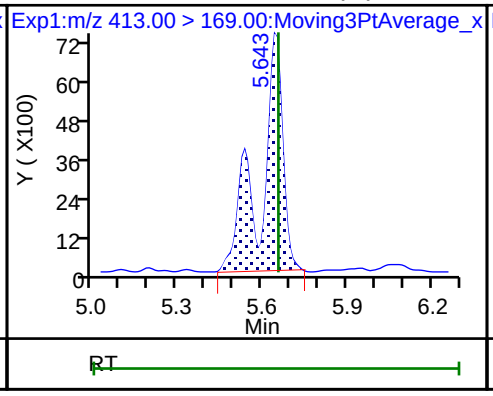
50 1H,1H,2H,2H-perfluorooctanesulfo



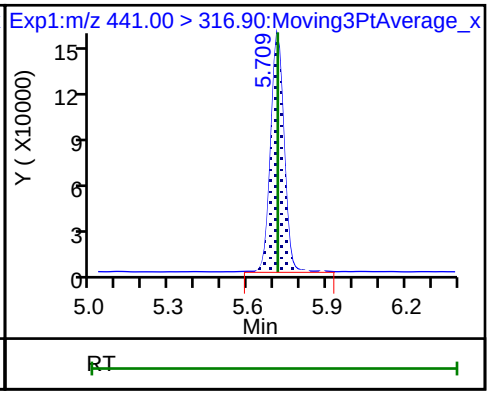
52 Perfluorooctanoic acid (M)



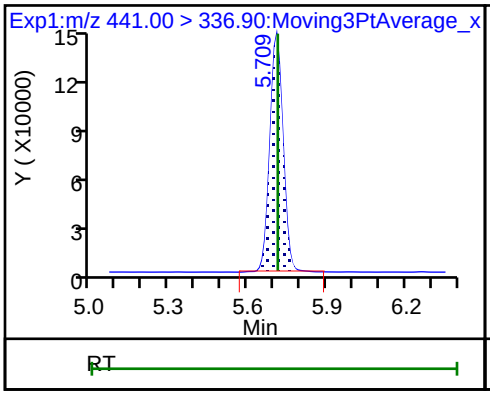
52 Perfluorooctanoic acid (M)



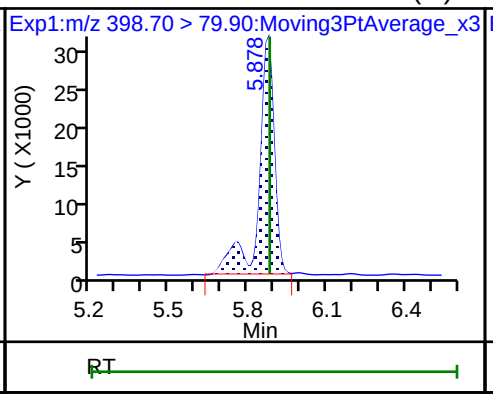
54 7:3 FTCA



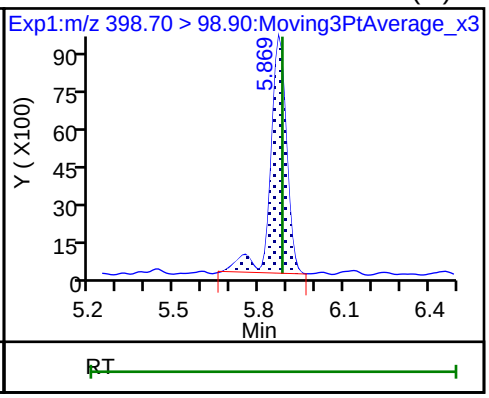
54 7:3 FTCA



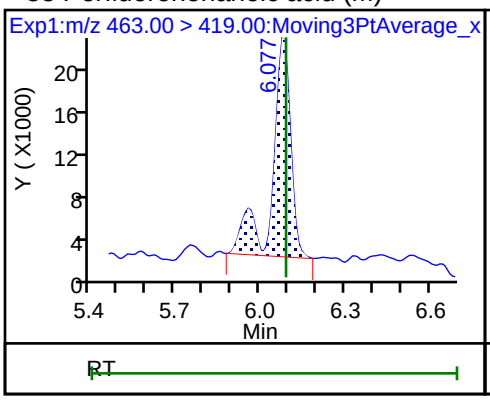
53 Perfluorohexanesulfonic acid (M)



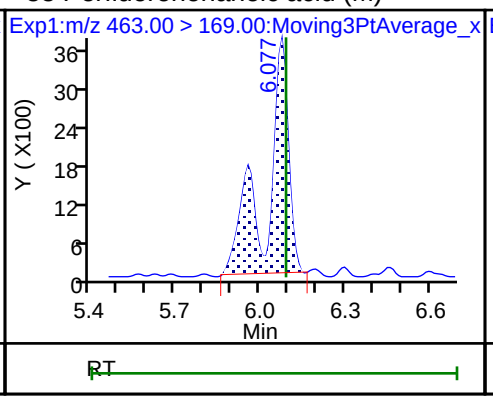
53 Perfluorohexanesulfonic acid (M)



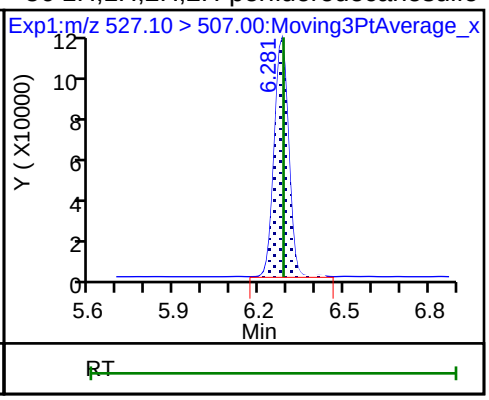
55 Perfluorononanoic acid (M)



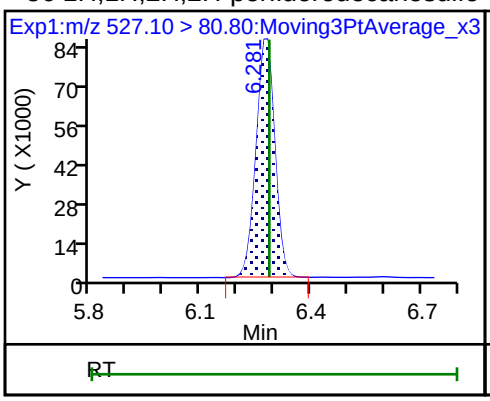
55 Perfluorononanoic acid (M)



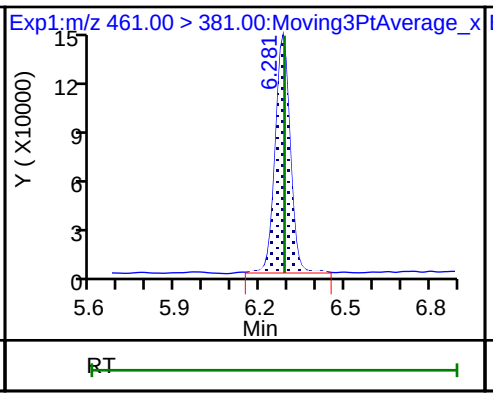
56 1H,1H,2H,2H-perfluorodecanesulfo



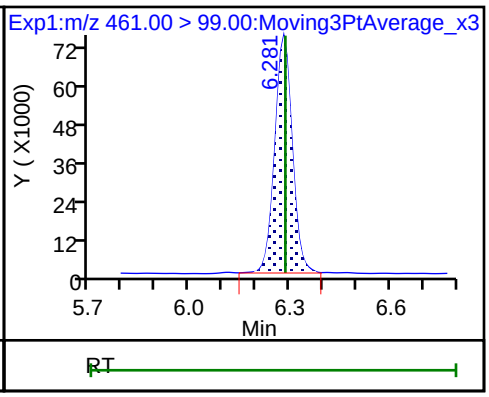
56 1H,1H,2H,2H-perfluorodecanesulfo



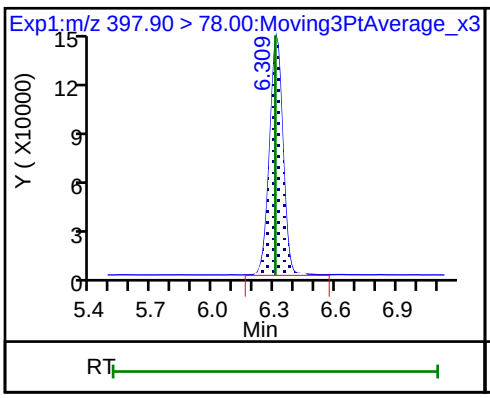
57 PFECHS



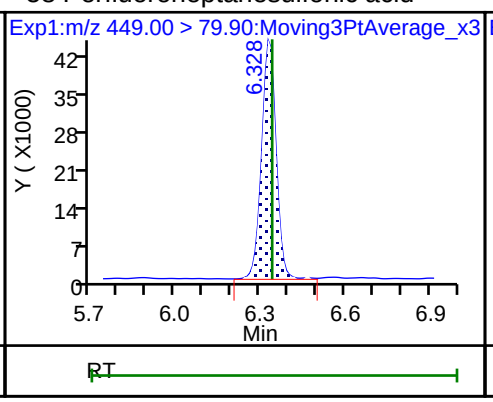
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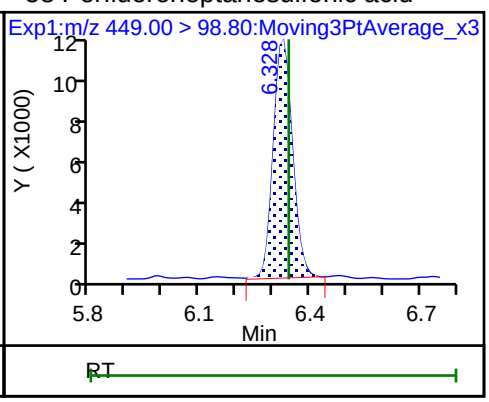
62 FHxSA



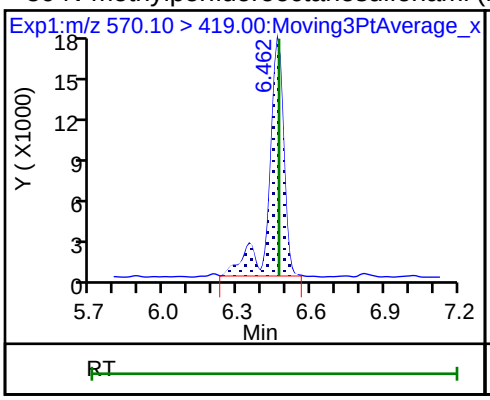
58 Perfluoroheptanesulfonic acid



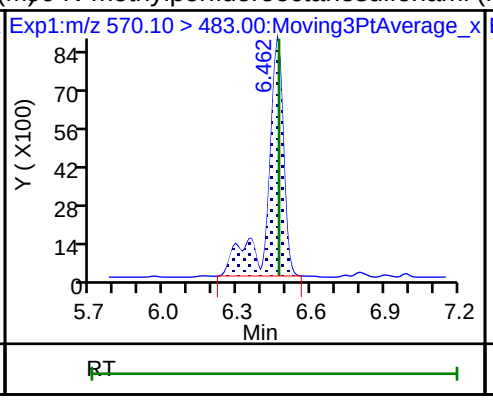
58 Perfluoroheptanesulfonic acid



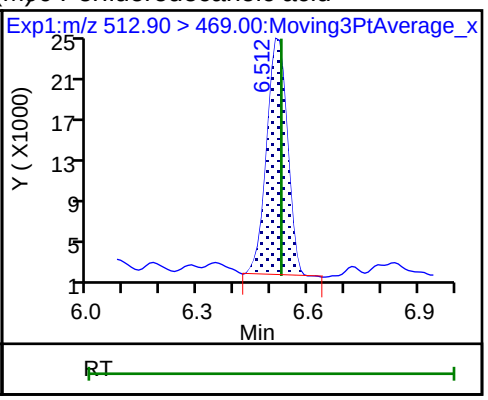
59 N-methylperfluorooctanesulfonami (M)



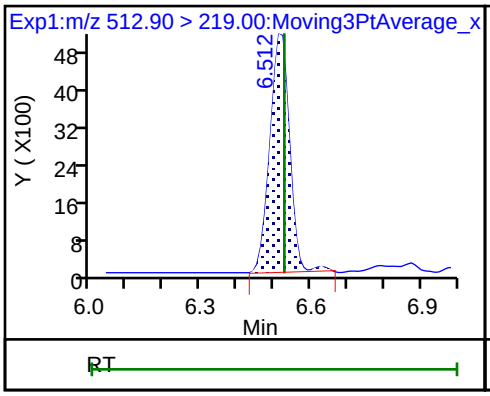
59 N-methylperfluorooctanesulfonami (M)



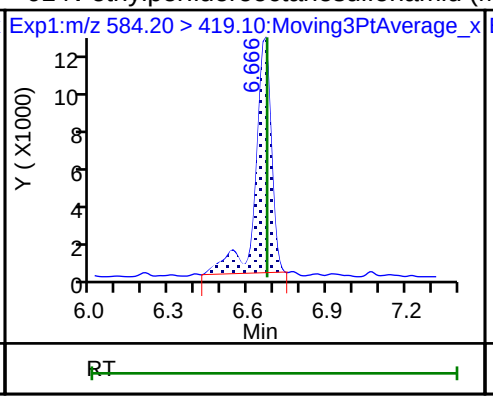
60 Perfluorodecanoic acid



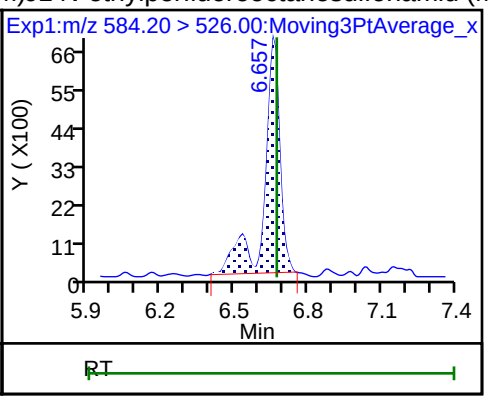
60 Perfluorodecanoic acid



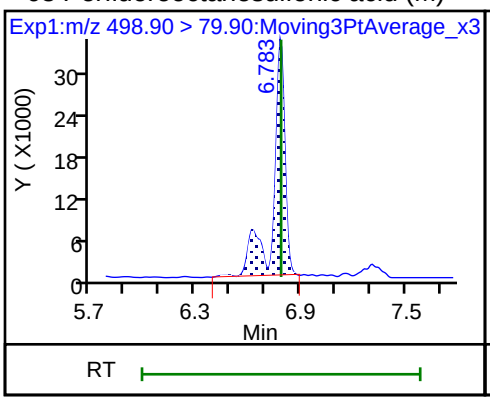
61 N-ethylperfluorooctanesulfonamid (M)



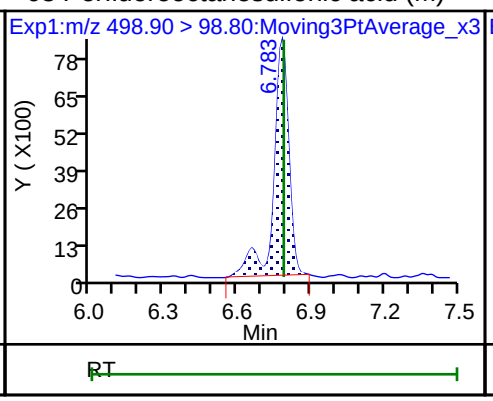
61 N-ethylperfluorooctanesulfonamid (M)



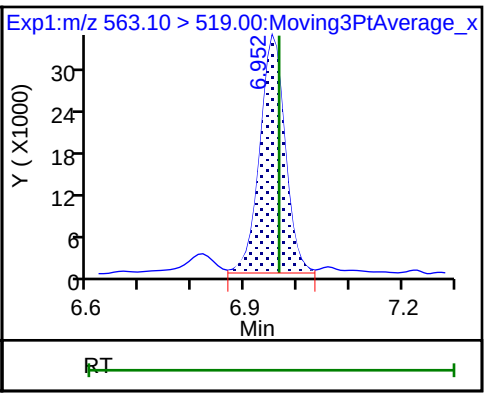
63 Perfluorooctanesulfonic acid (M)



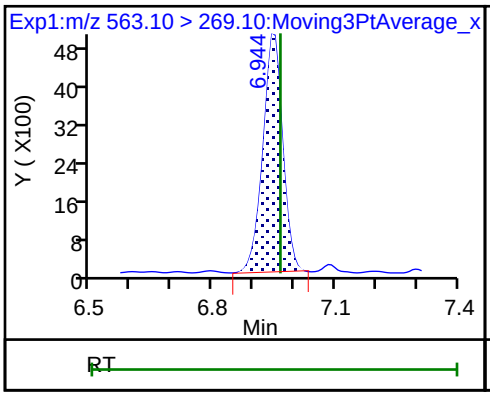
63 Perfluorooctanesulfonic acid (M)



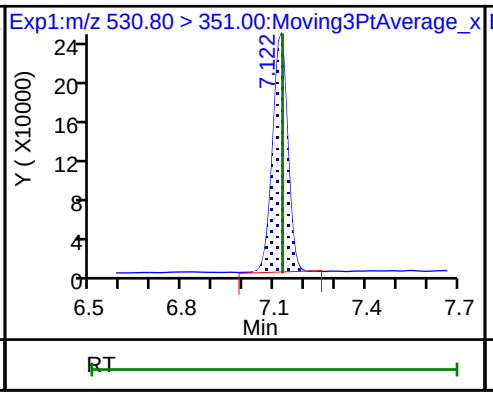
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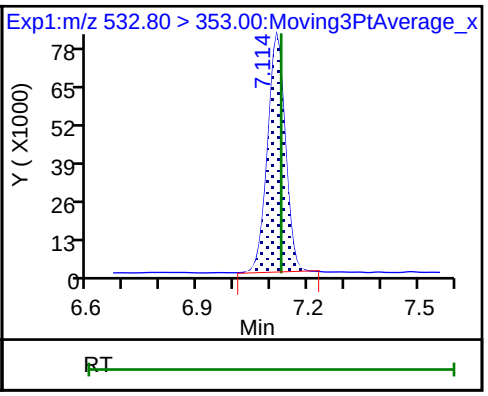
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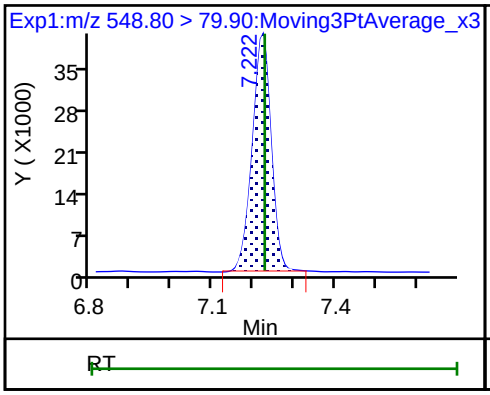
65 9-Chlorohexadecafluoro-3-oxanona



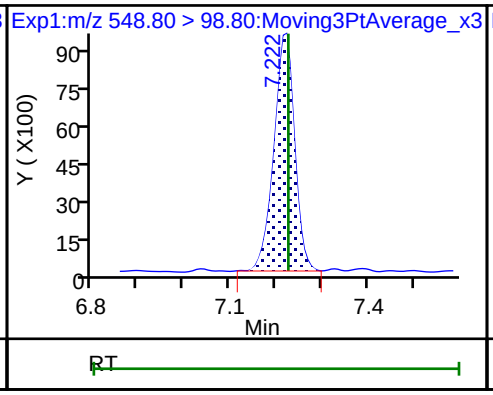
65 9-Chlorohexadecafluoro-3-oxanona



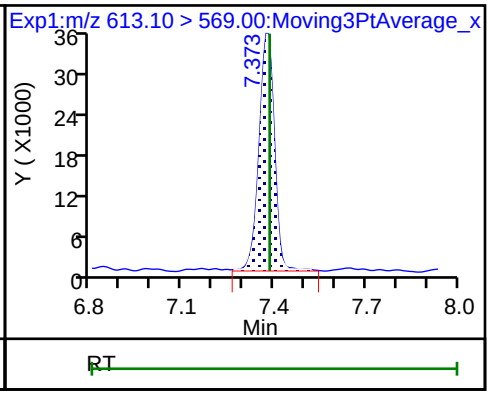
66 Perfluorononanesulfonic acid



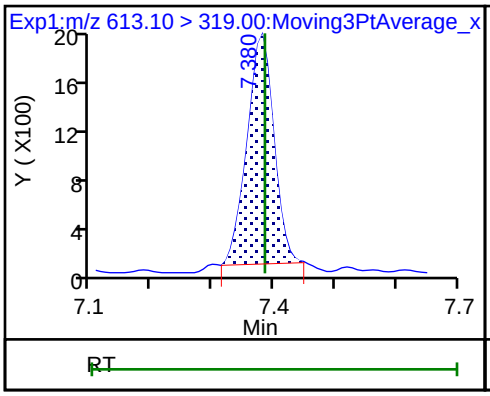
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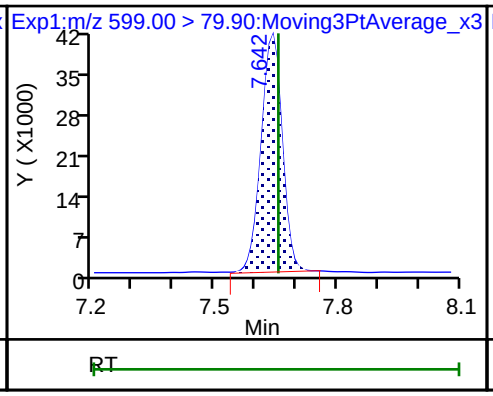
67 Perfluorododecanoic acid



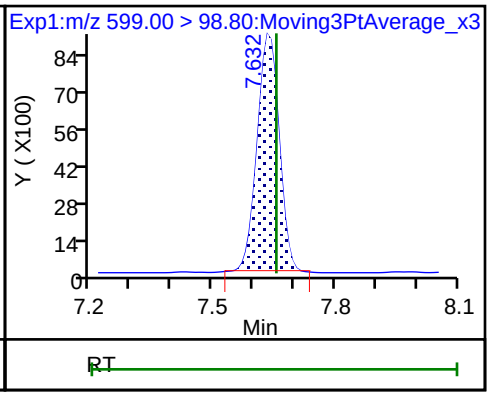
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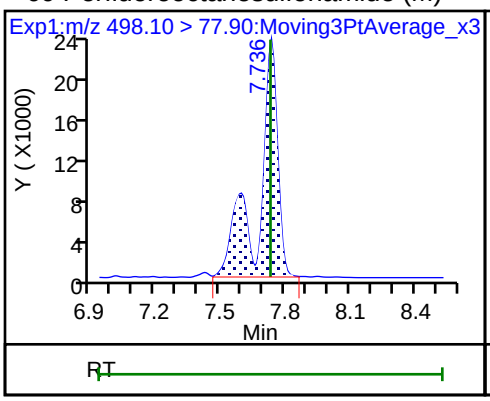
68 Perfluorodecanesulfonic acid



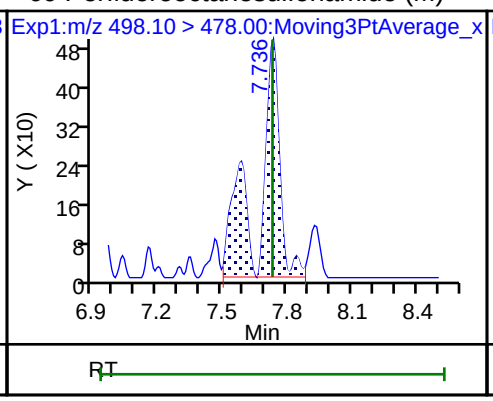
68 Perfluorodecanesulfonic acid



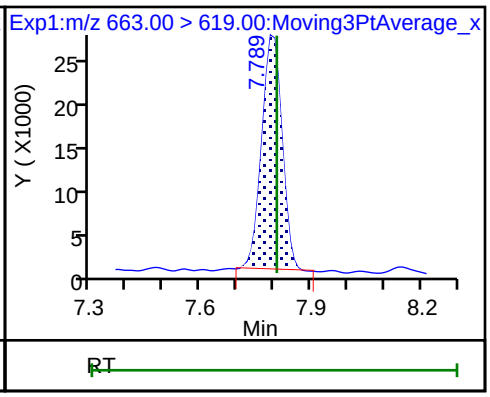
69 Perfluorooctanesulfonamide (M)



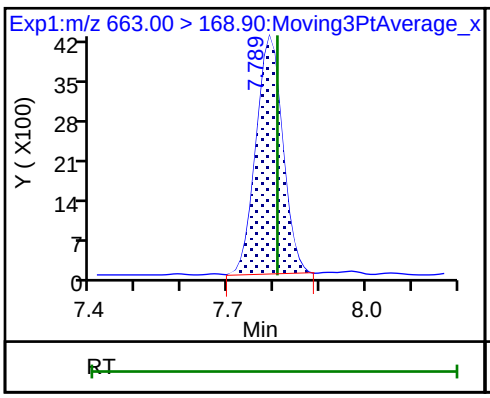
69 Perfluorooctanesulfonamide (M)



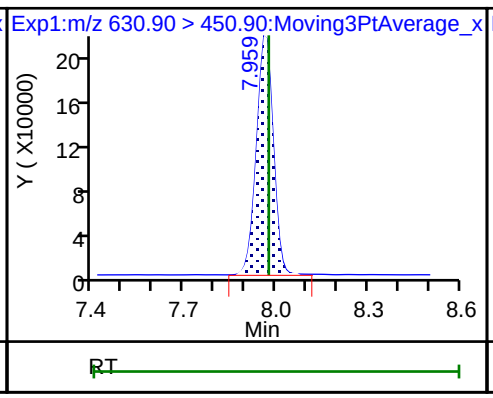
70 Perfluorotridecanoic acid



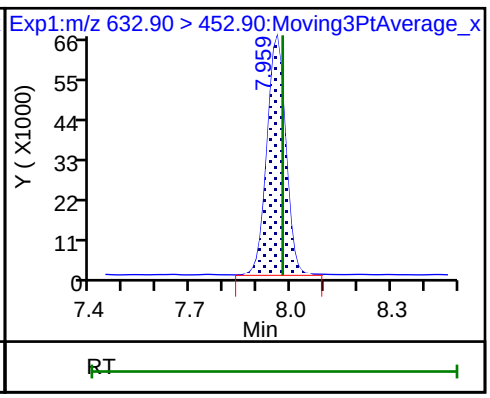
70 Perfluorotridecanoic acid



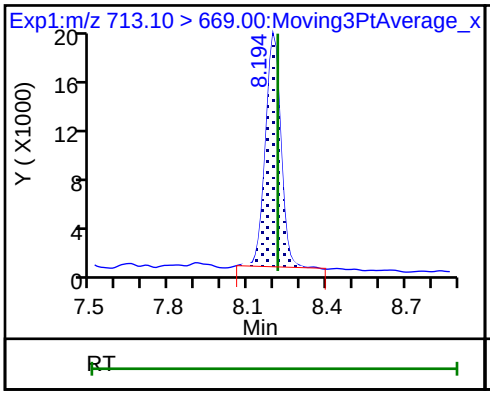
71 11-Chloroeicosafluoro-3-oxaundec



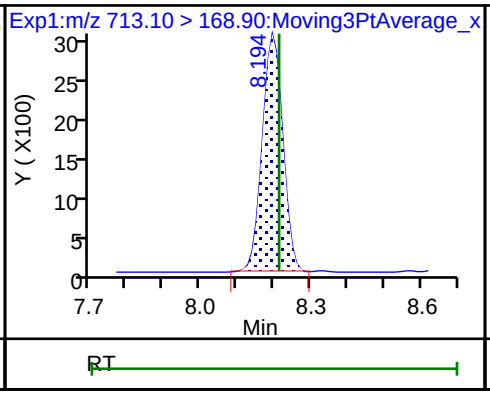
71 11-Chloroeicosafluoro-3-oxaundec



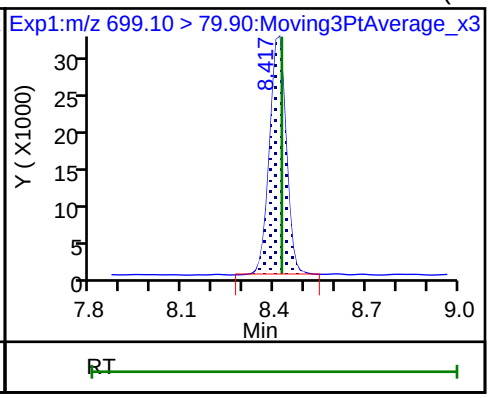
72 Perfluorotetradecanoic acid



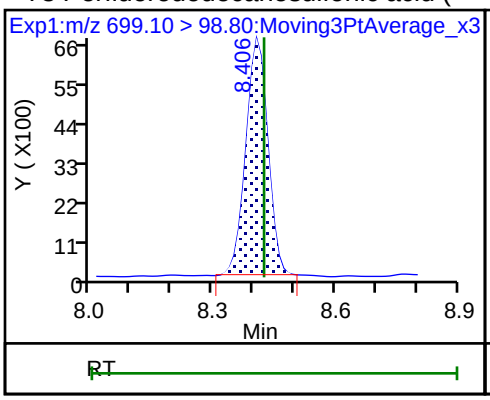
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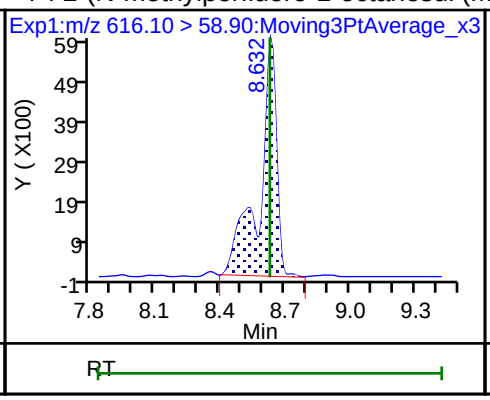
73 Perfluorododecanesulfonic acid (



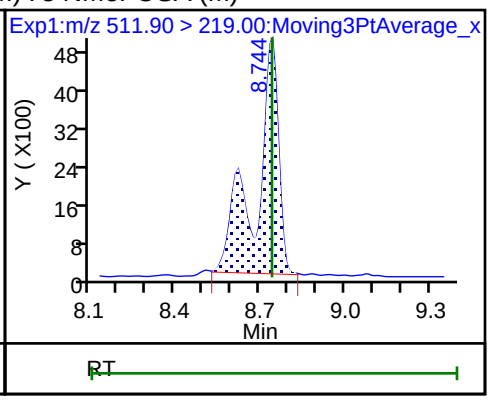
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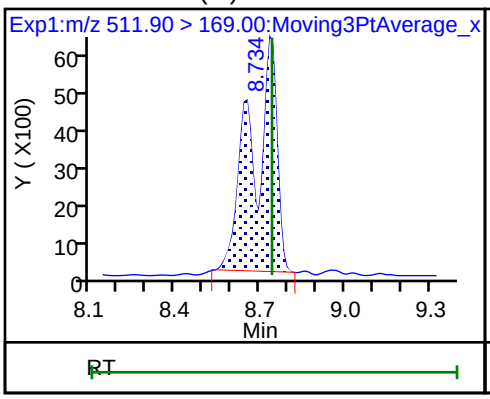
74 2-(N-methylperfluoro-1-octanesul (M)



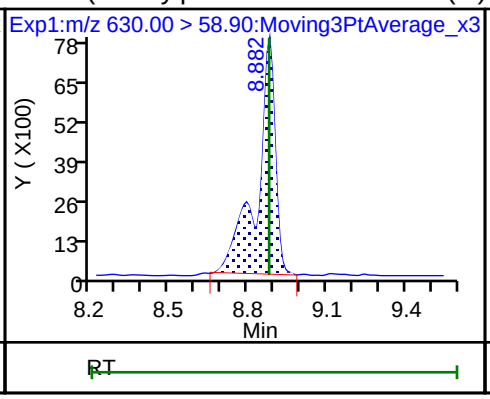
75 NMeFOSA (M)



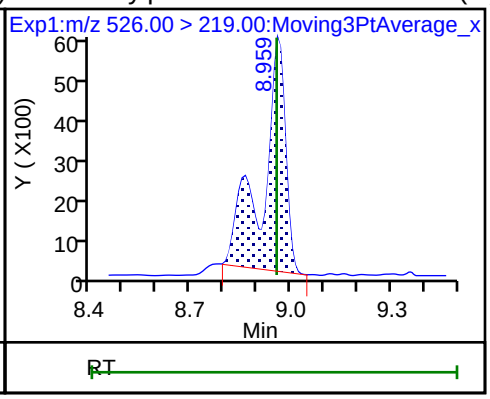
75 NMeFOSA (M)



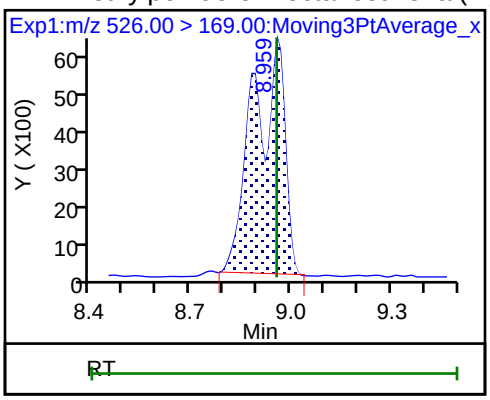
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

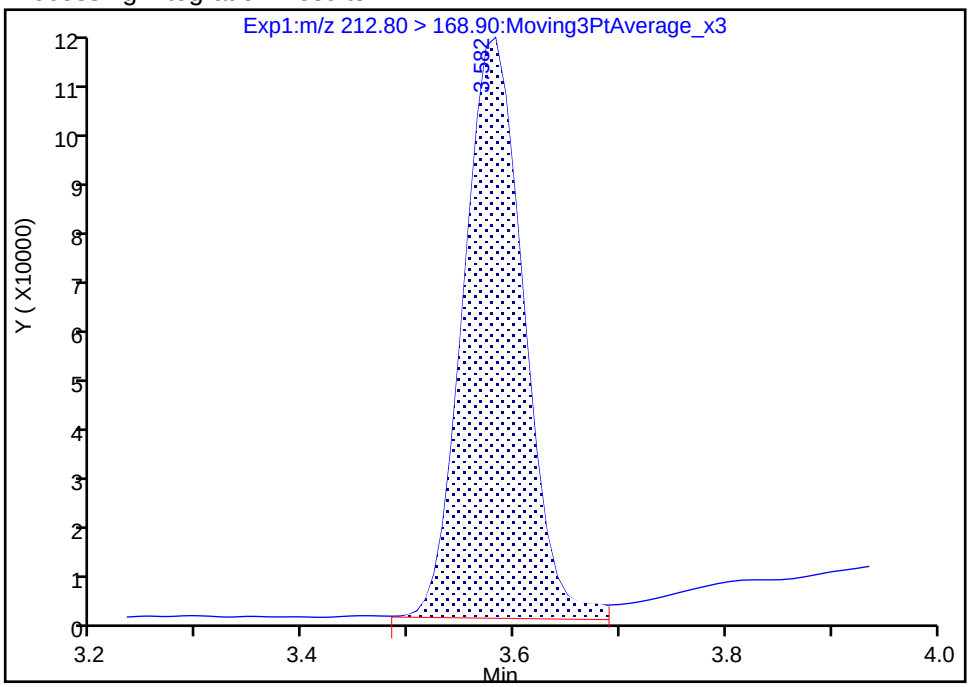
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

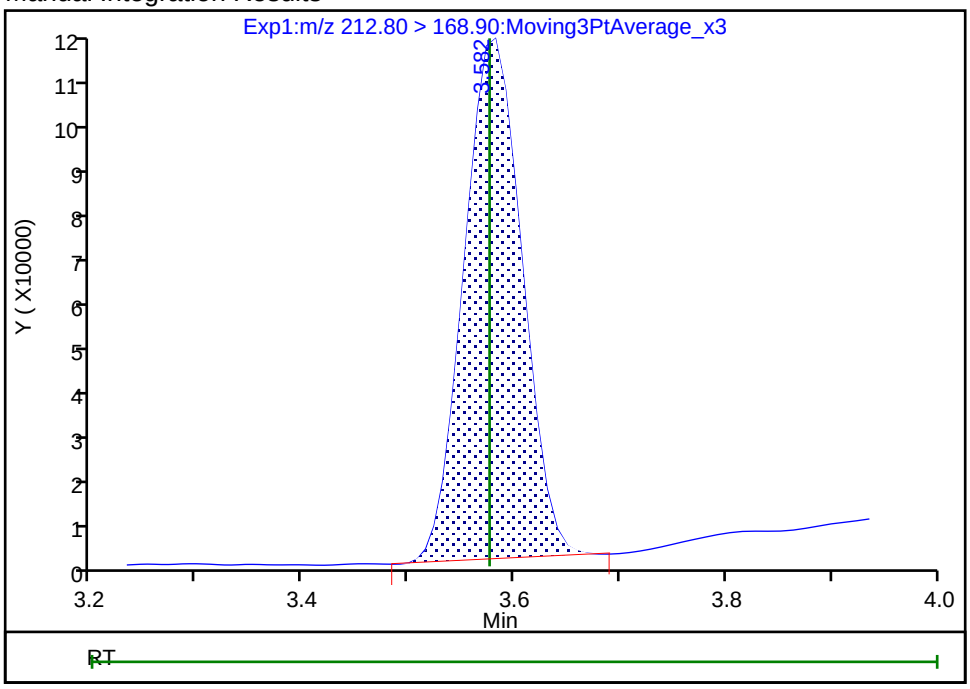
Processing Integration Results

RT: 3.58
Area: 433079
Amount: 0.220388
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 413174
Amount: 0.213682
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:12:51 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

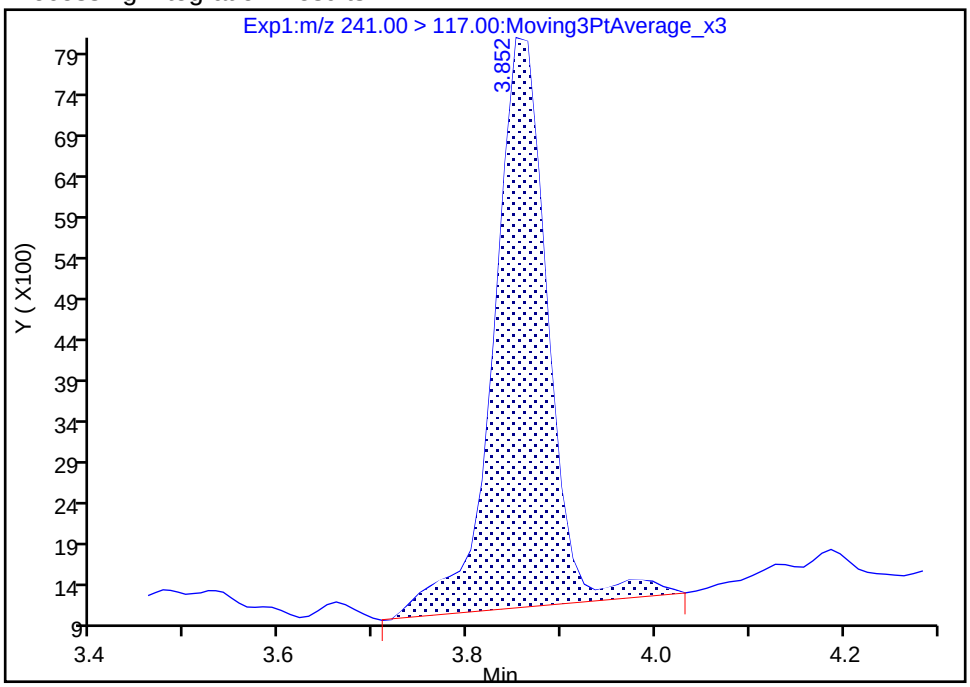
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

34 3:3 FTCA, CAS: 356-02-5

Signal: 2

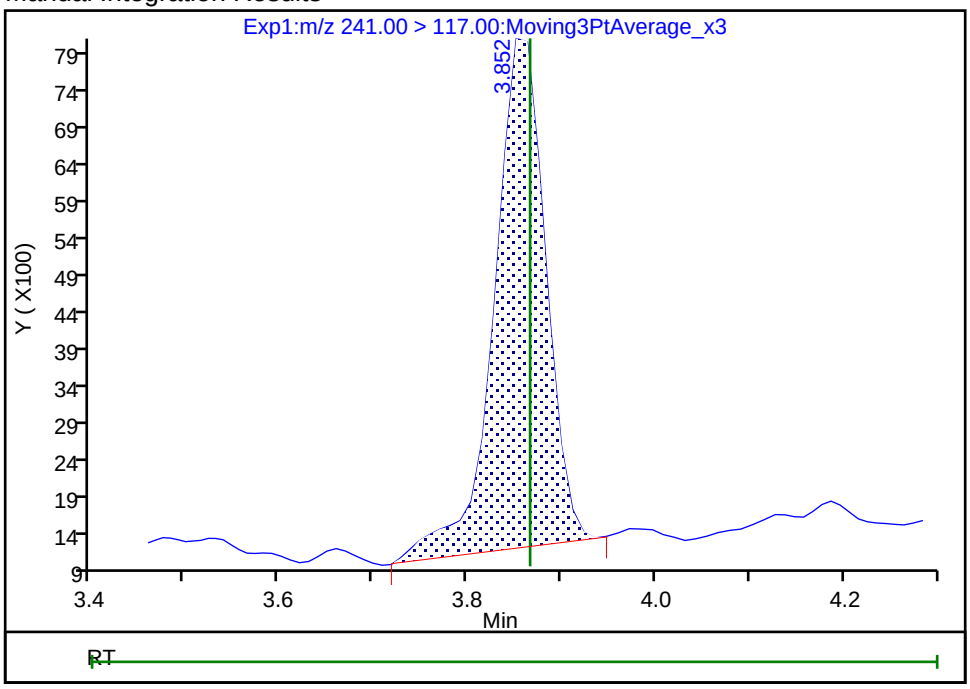
Processing Integration Results

RT: 3.85
Area: 27780
Amount: 0.257803
Amount Units: ng/ml



Manual Integration Results

RT: 3.85
Area: 26086
Amount: 0.257803
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:13:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

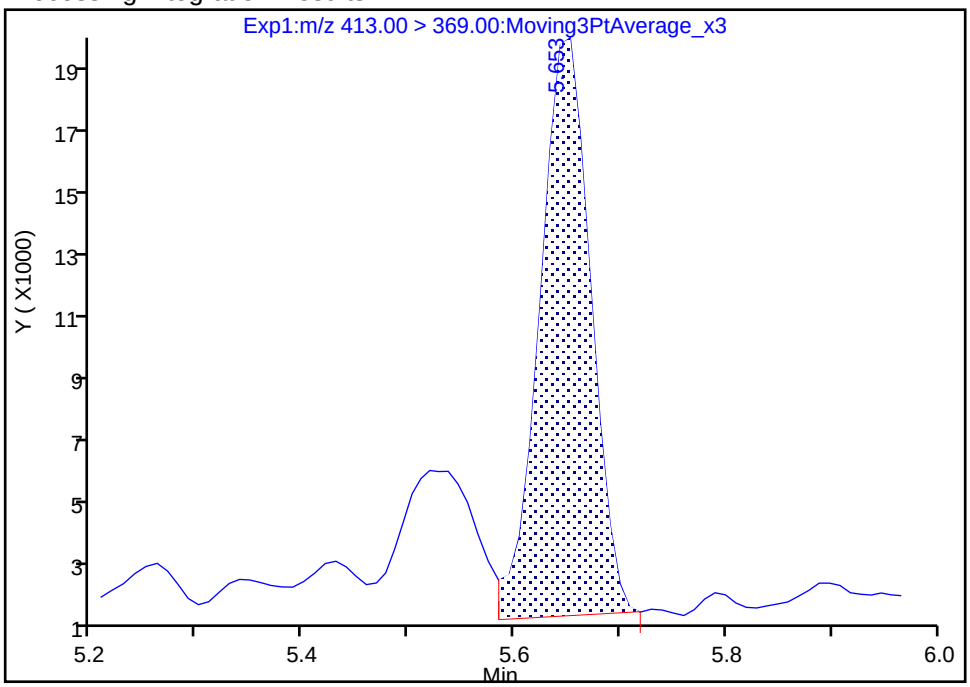
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

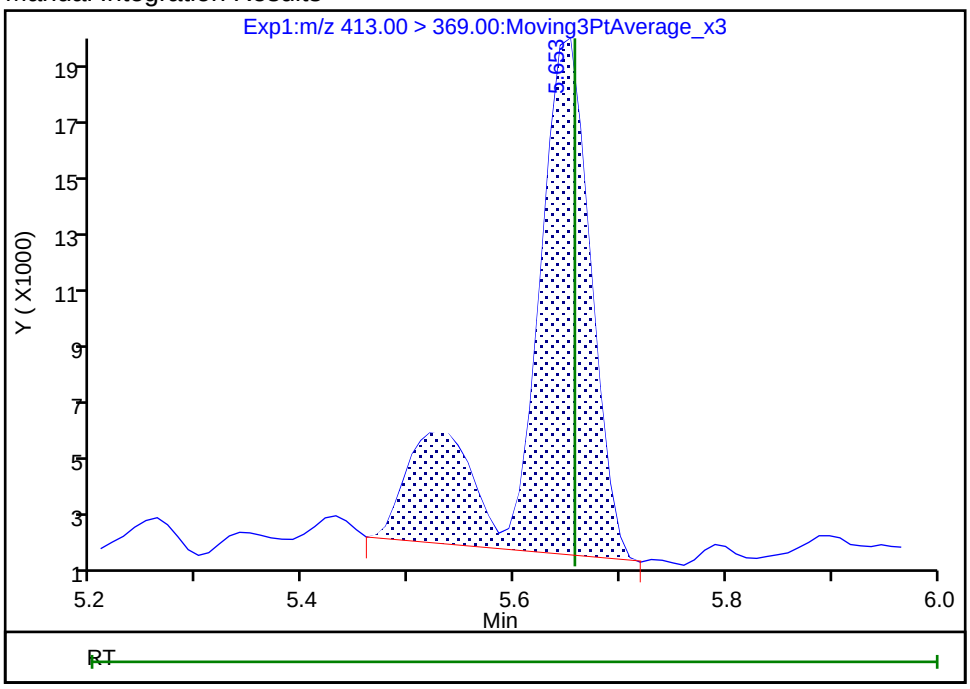
Processing Integration Results

RT: 5.65
Area: 58914
Amount: 0.047371
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 72281
Amount: 0.048566
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:13:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

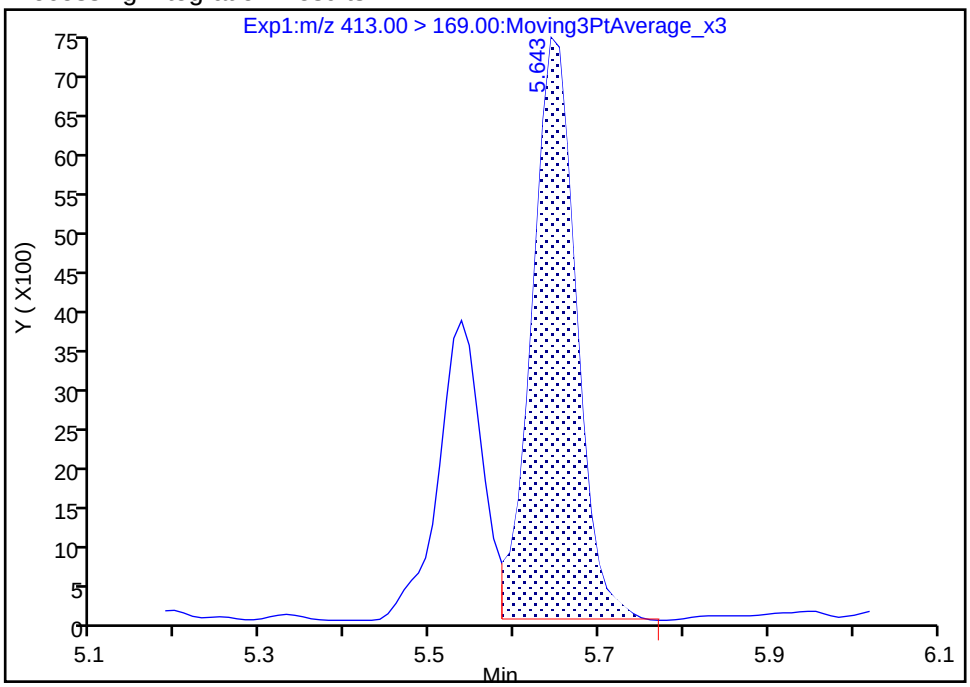
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

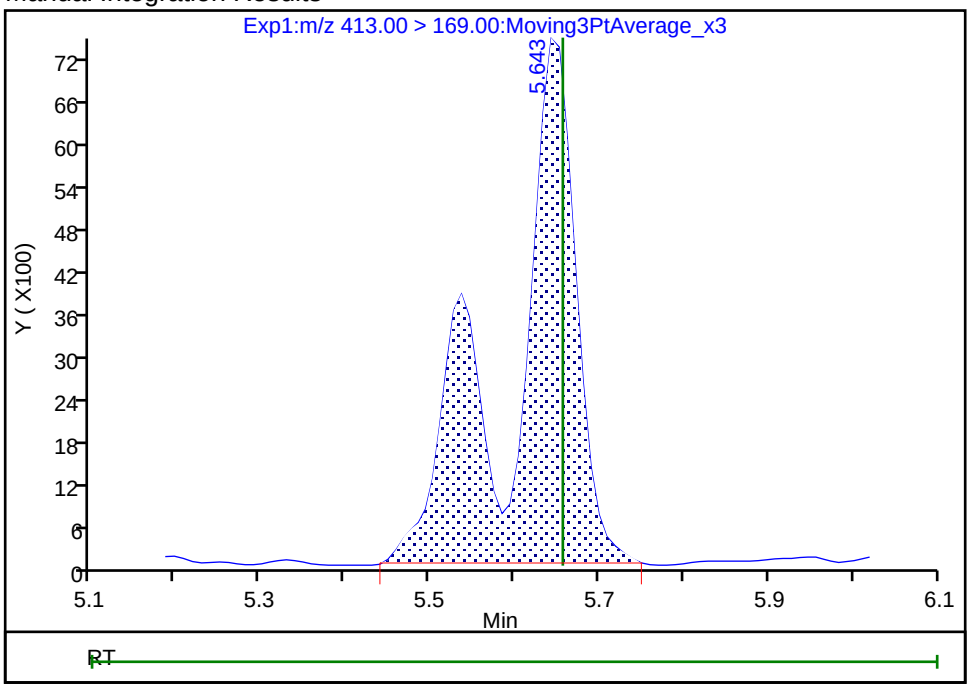
Processing Integration Results

RT: 5.64
Area: 27044
Amount: 0.047371
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 40290
Amount: 0.048566
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:13:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

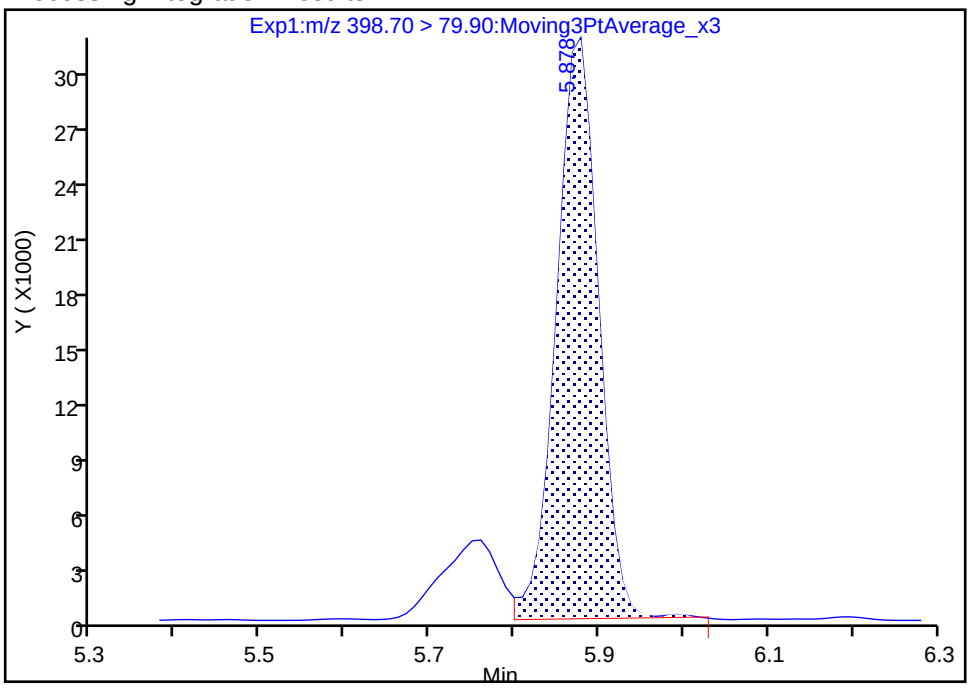
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

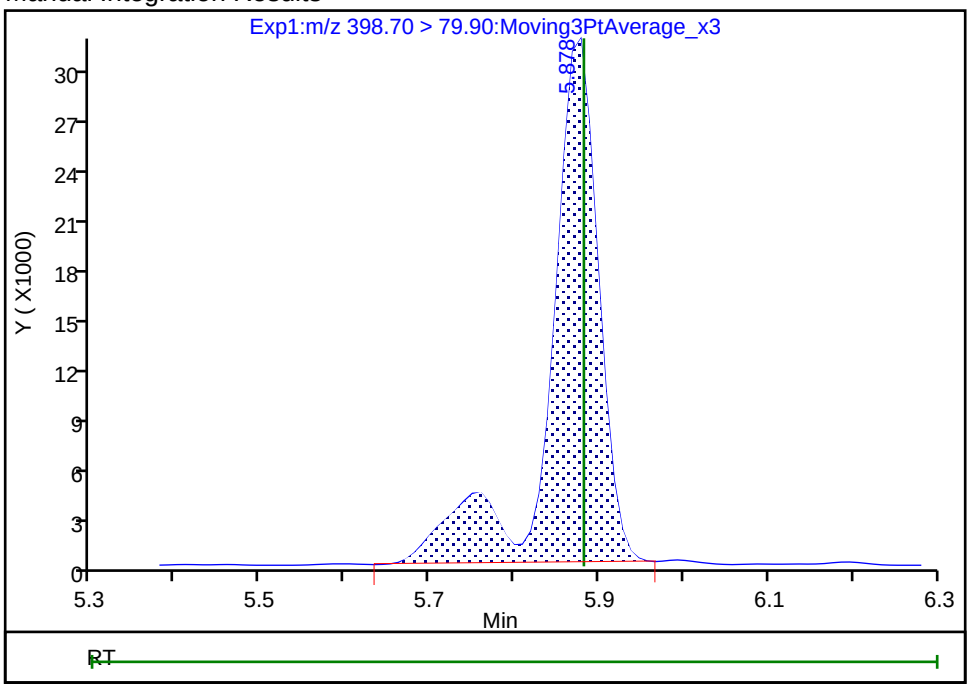
Processing Integration Results

RT: 5.88
Area: 108624
Amount: 0.049032
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 126840
Amount: 0.049407
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:13:59 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

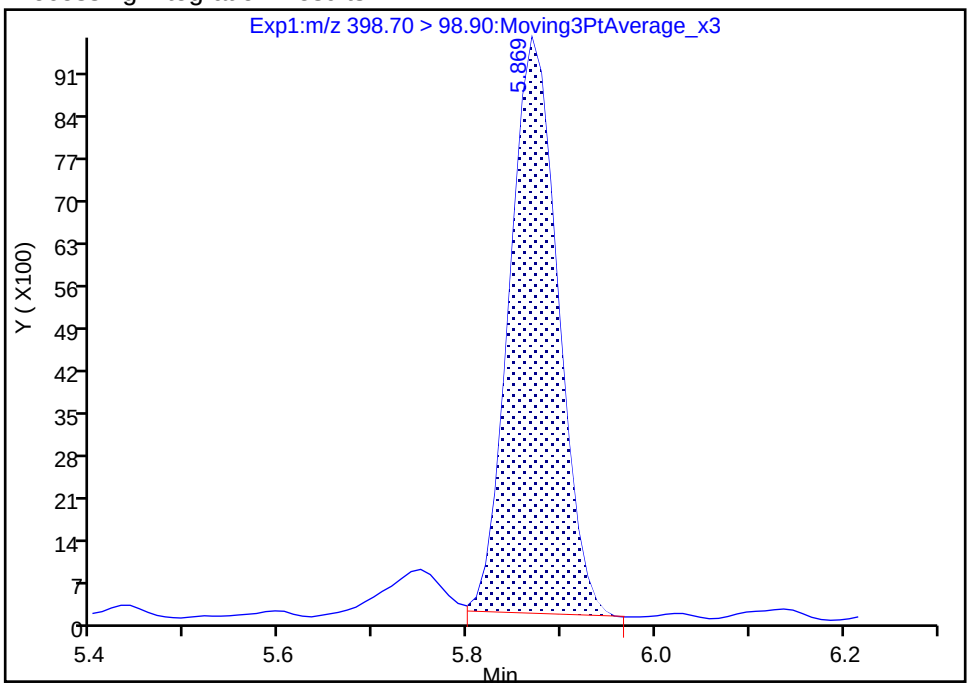
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

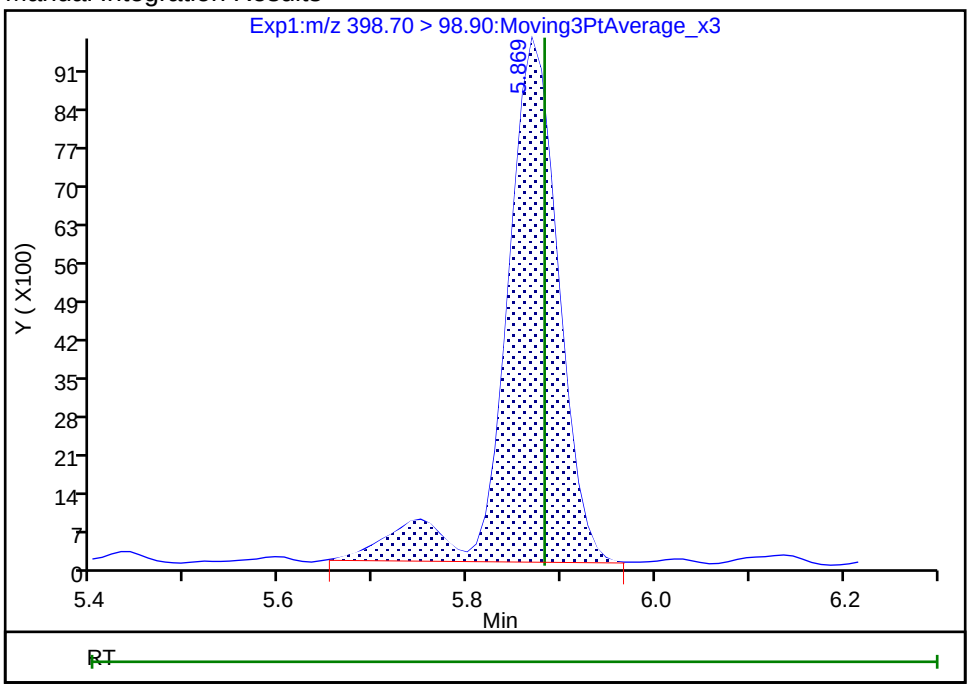
Processing Integration Results

RT: 5.87
Area: 34180
Amount: 0.049032
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 37762
Amount: 0.049407
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:14:08 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

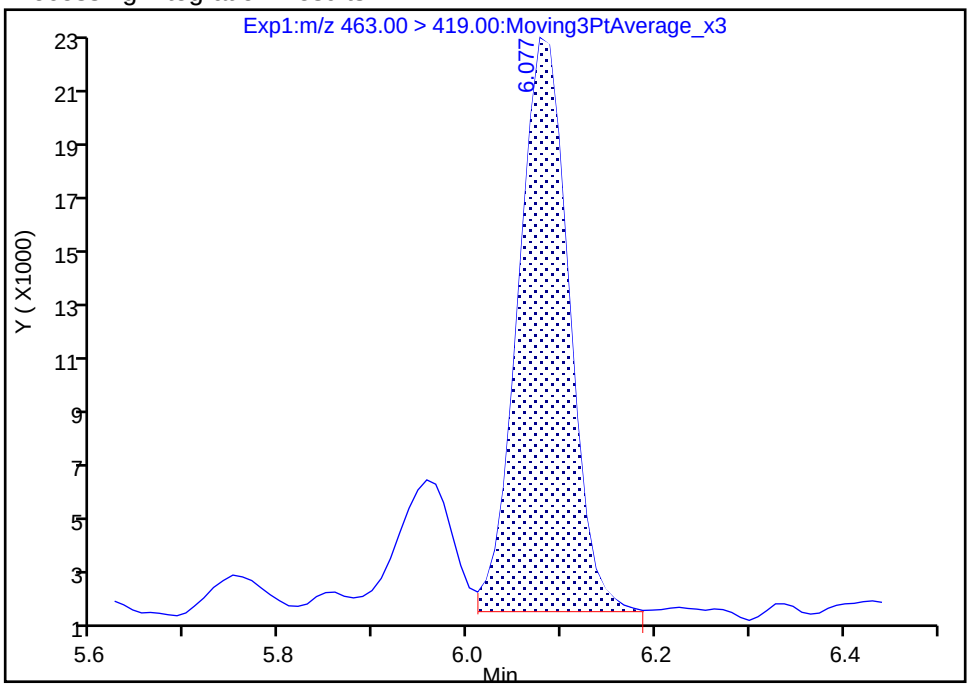
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

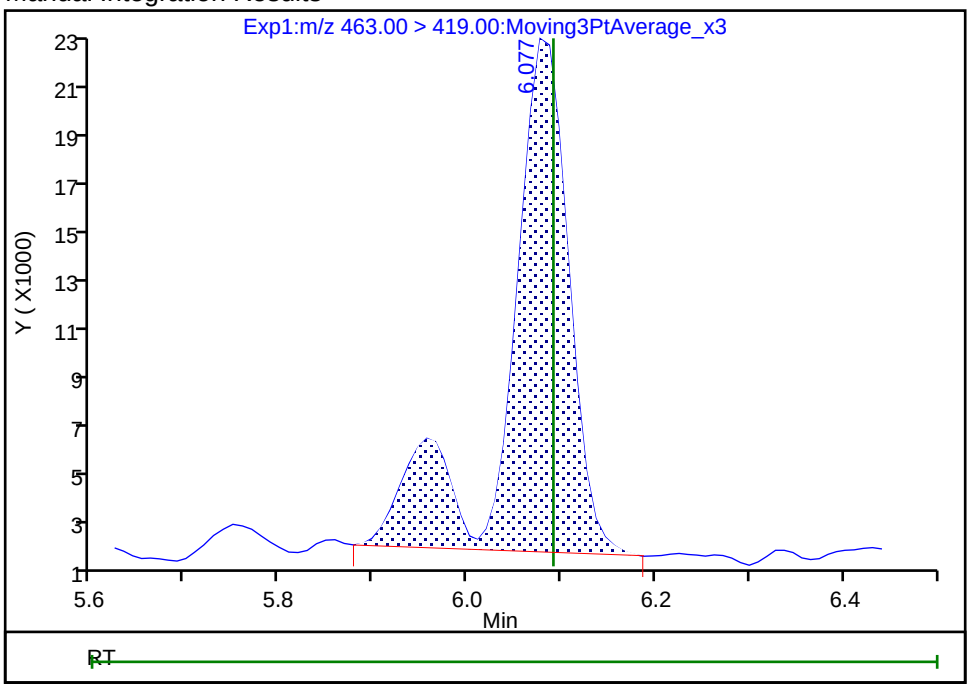
Processing Integration Results

RT: 6.08
Area: 77489
Amount: 0.049035
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 92078
Amount: 0.049688
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:14:19 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

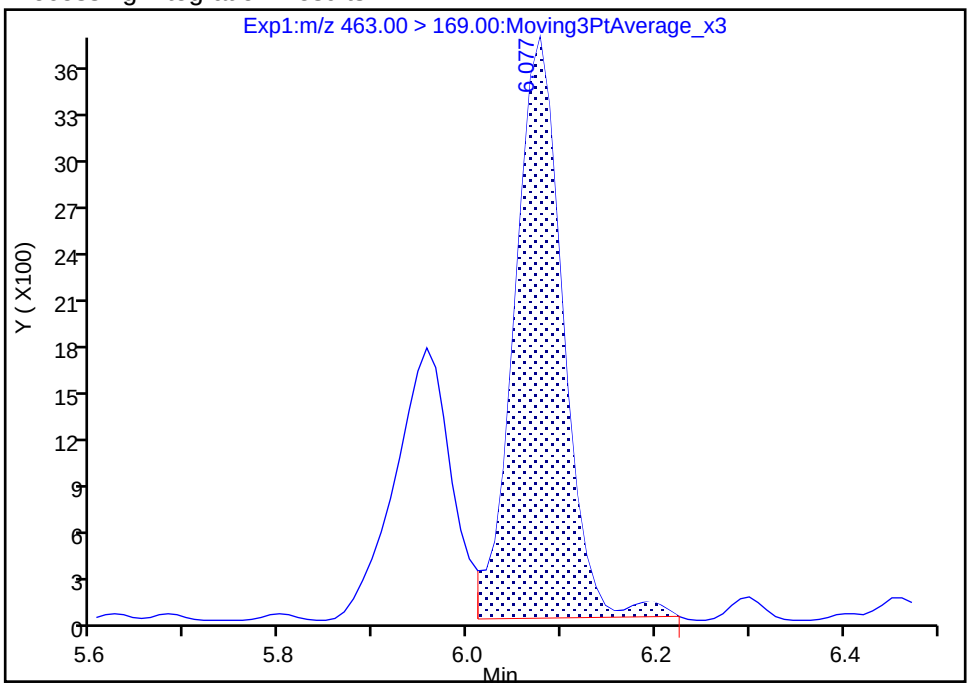
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

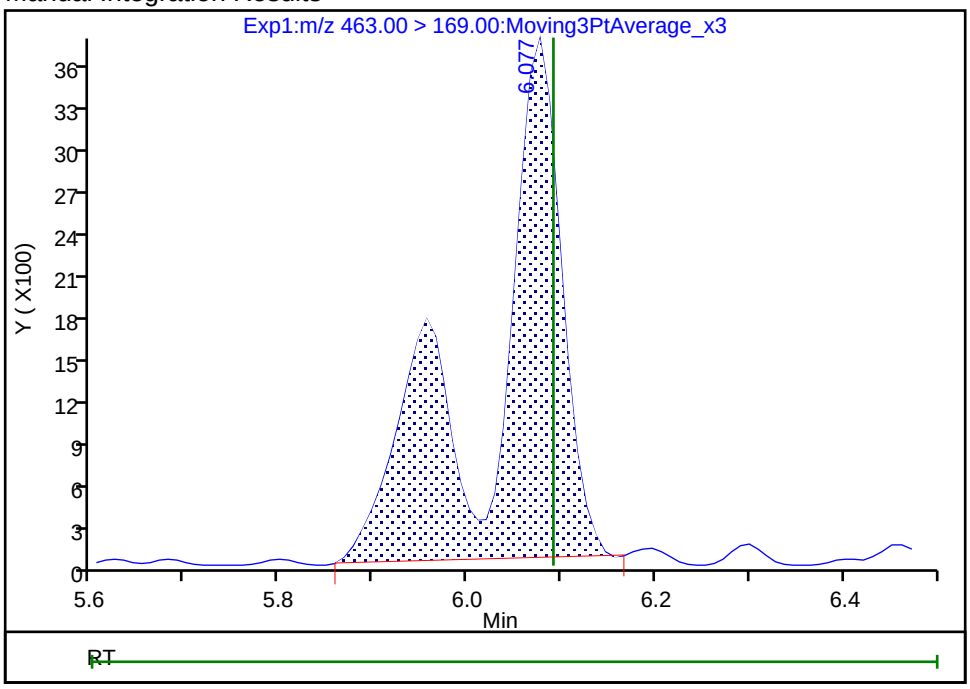
Processing Integration Results

RT: 6.08
Area: 13314
Amount: 0.049035
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 19755
Amount: 0.049688
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:14:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

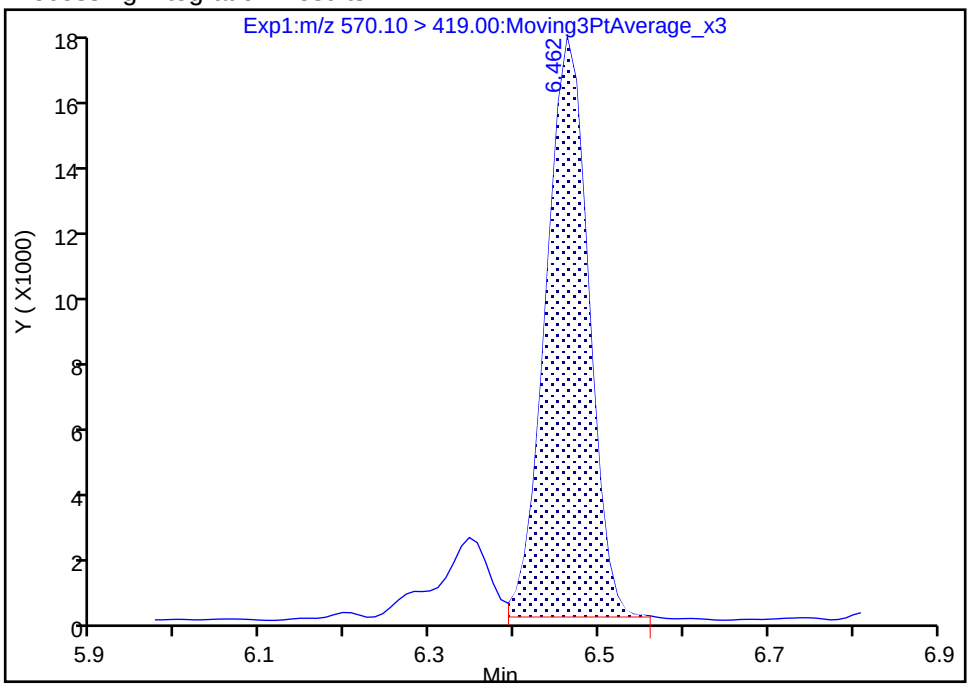
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

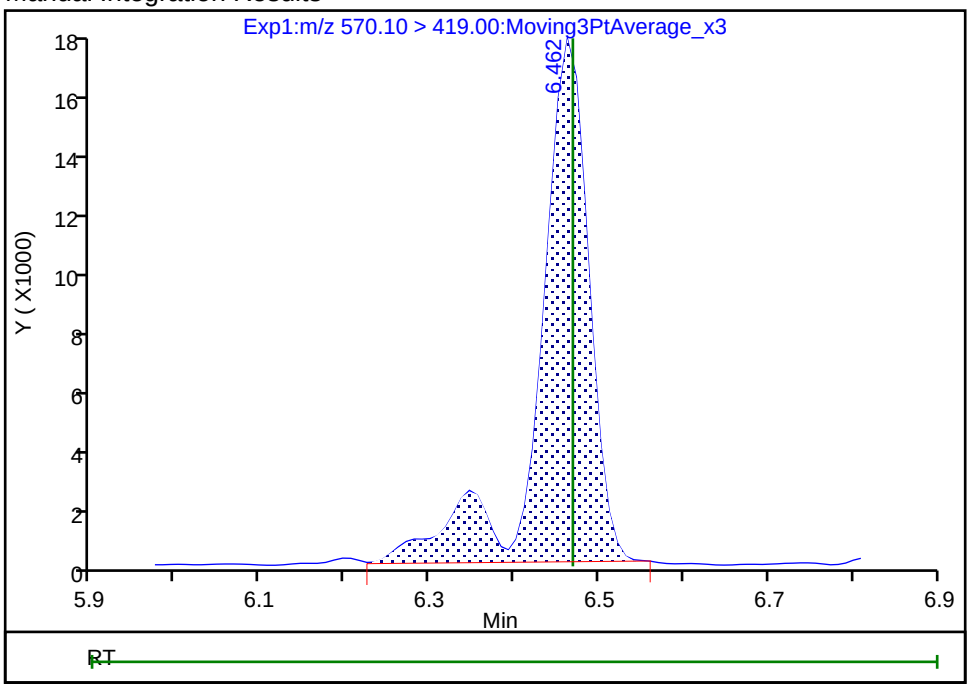
Processing Integration Results

RT: 6.46
Area: 60361
Amount: 0.050490
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 70161
Amount: 0.052518
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:14:50 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

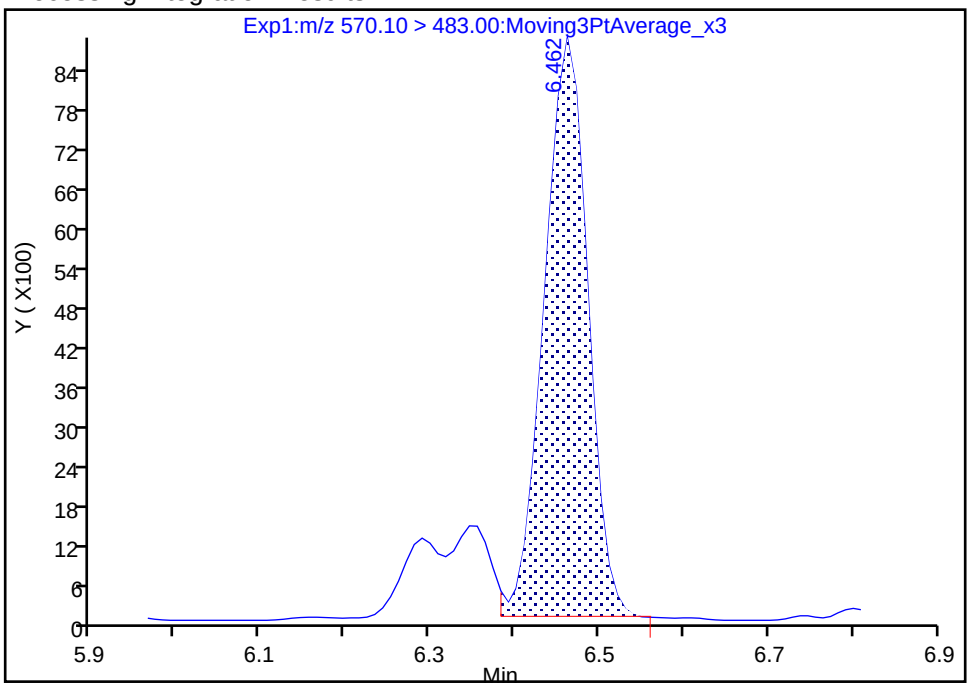
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

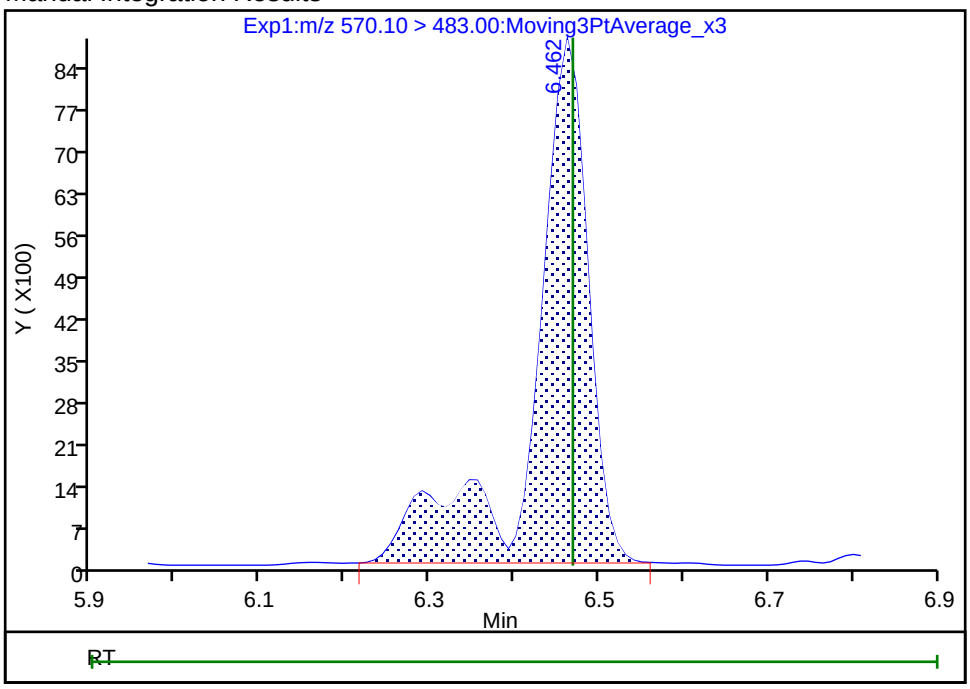
Processing Integration Results

RT: 6.46
Area: 31800
Amount: 0.050490
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 39906
Amount: 0.052518
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:15:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

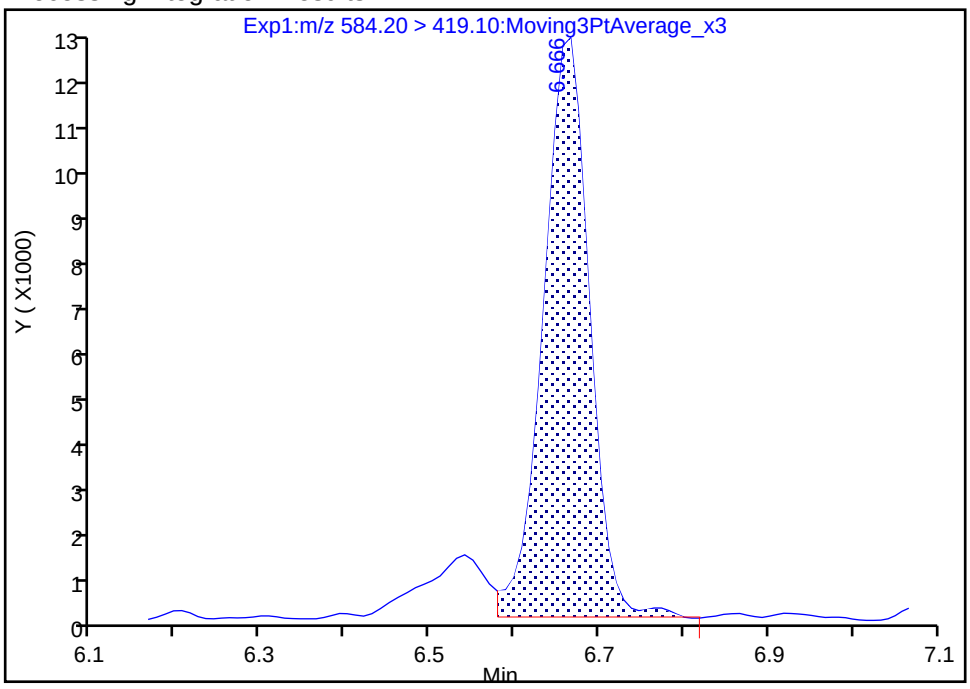
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

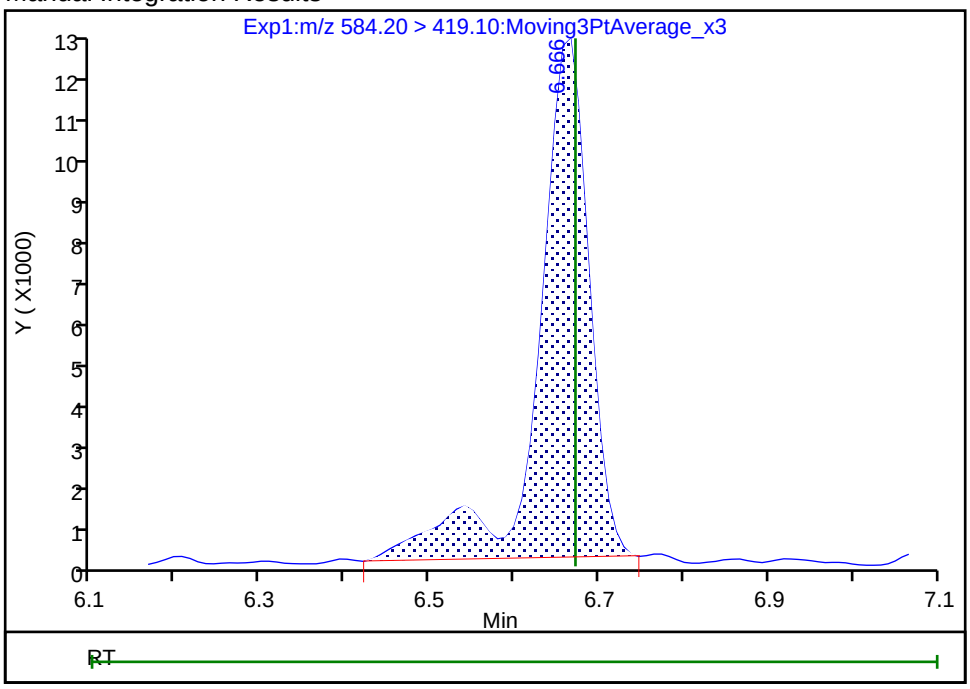
Processing Integration Results

RT: 6.67
Area: 47576
Amount: 0.054305
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 52194
Amount: 0.053326
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:15:14 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

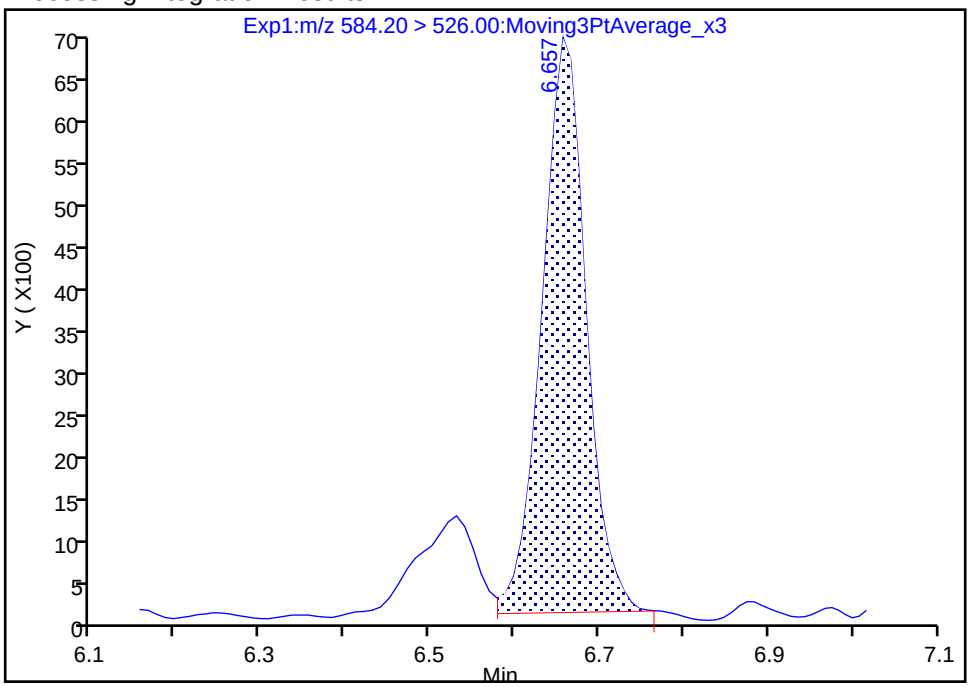
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

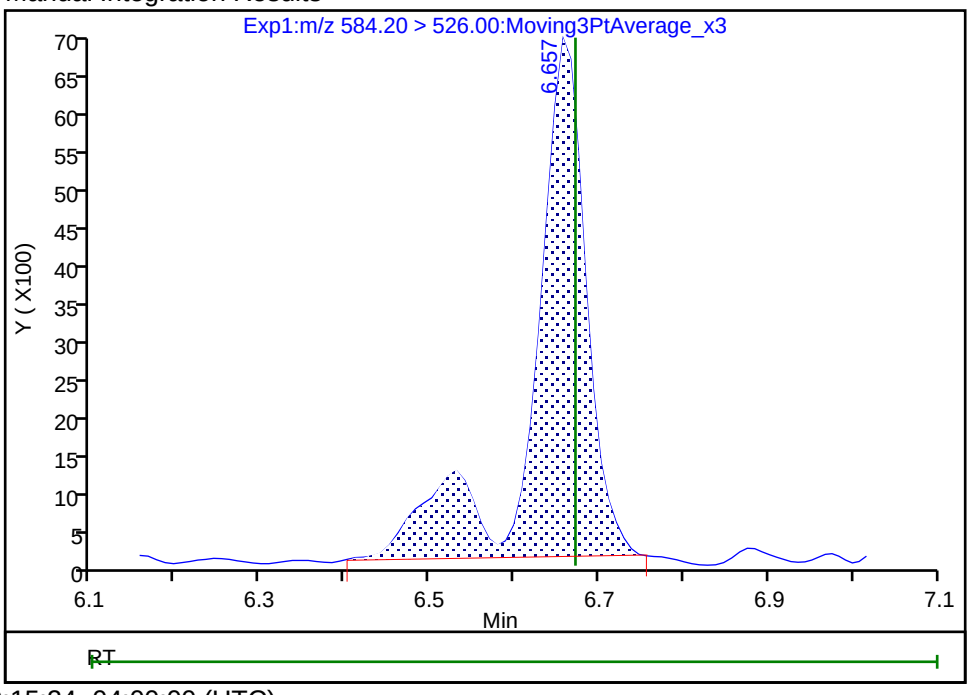
Processing Integration Results

RT: 6.66
Area: 24909
Amount: 0.054305
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 30235
Amount: 0.053326
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:15:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

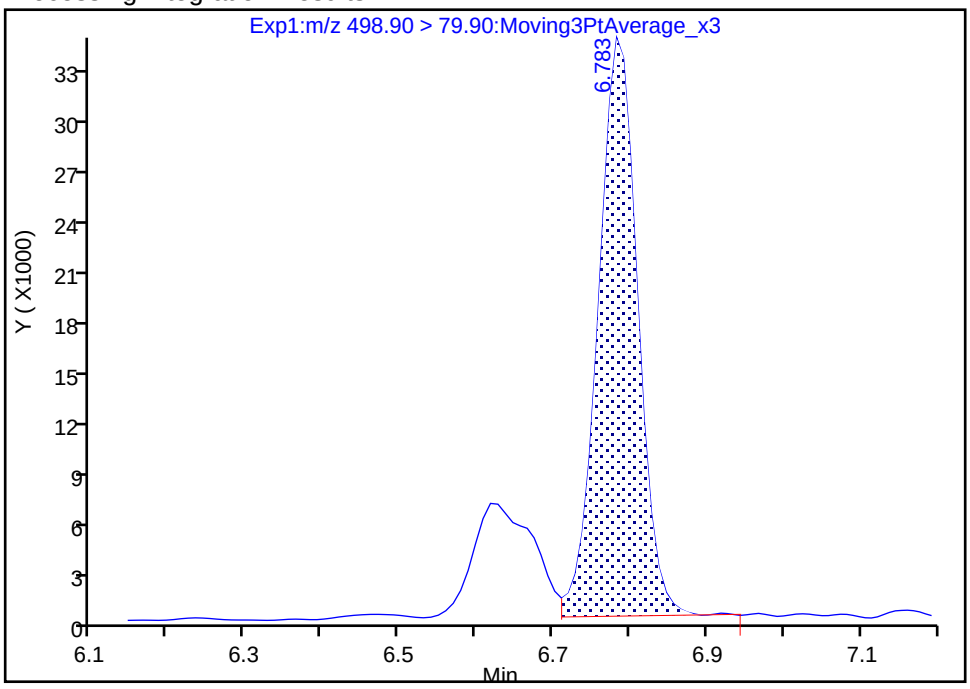
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

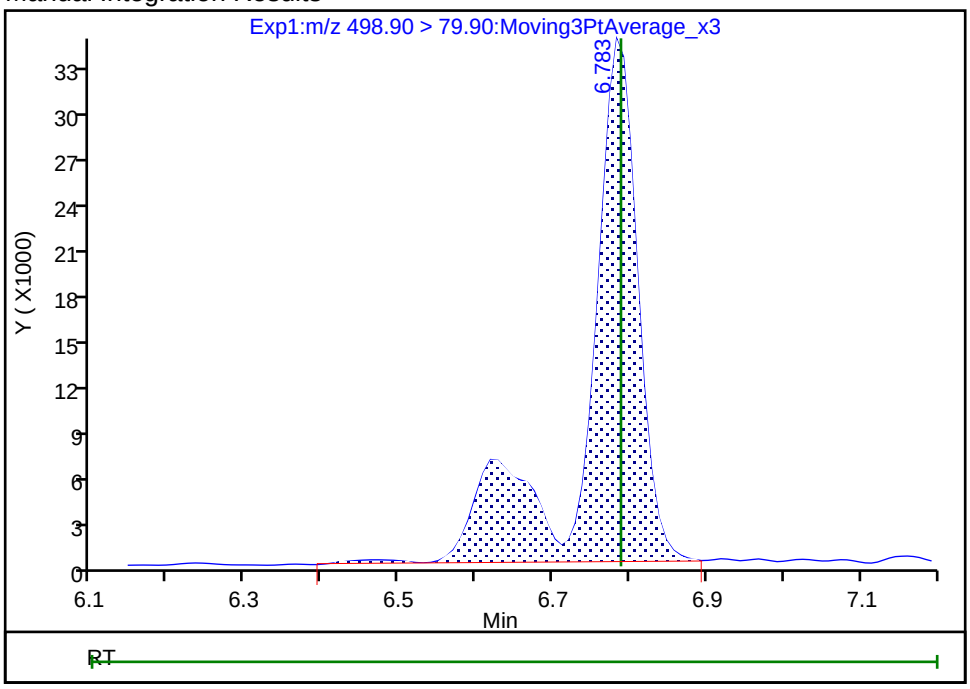
Processing Integration Results

RT: 6.78
Area: 122270
Amount: 0.046727
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 160249
Amount: 0.048516
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:15:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

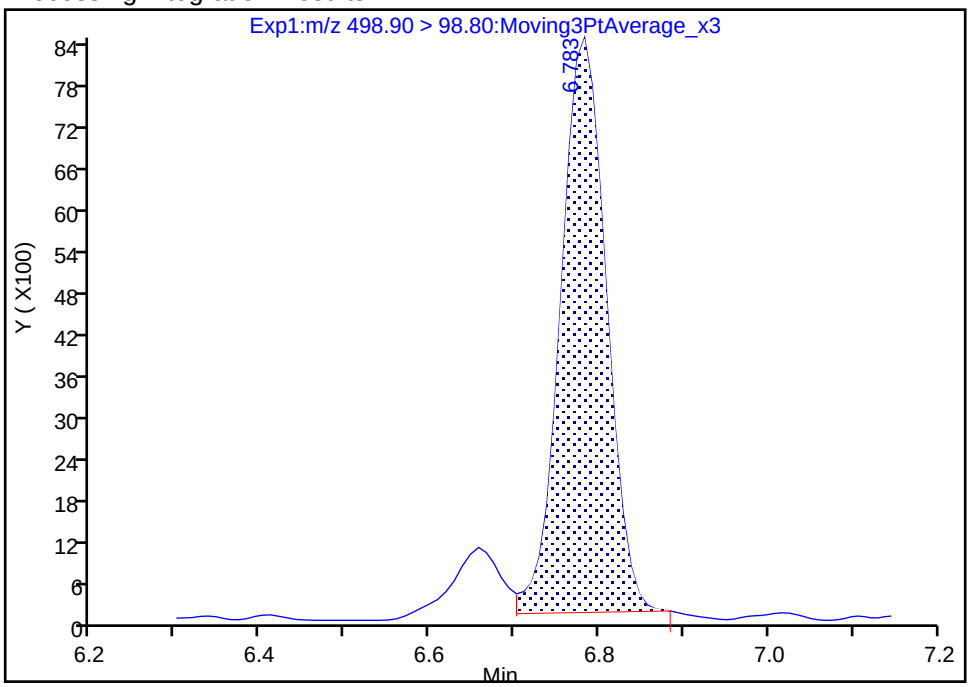
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

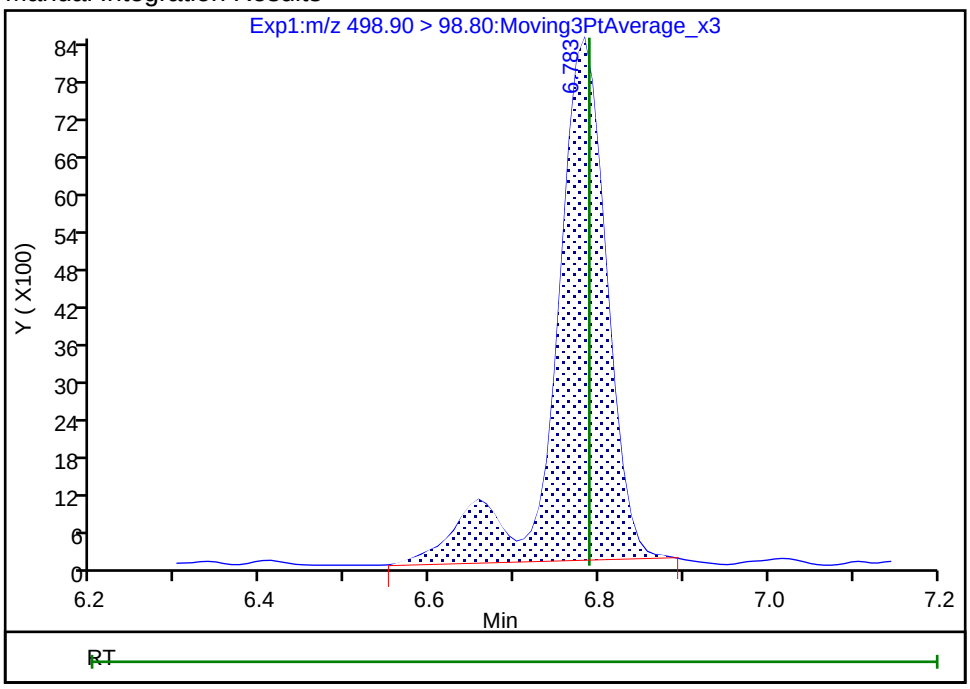
Processing Integration Results

RT: 6.78
Area: 31087
Amount: 0.046727
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 35529
Amount: 0.048516
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:15:46 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

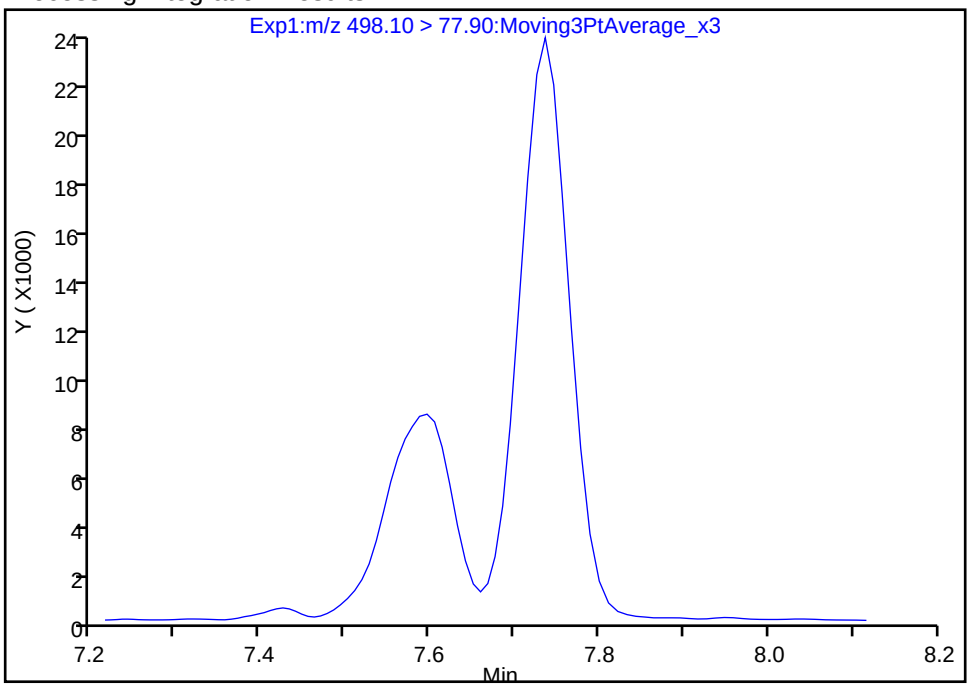
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

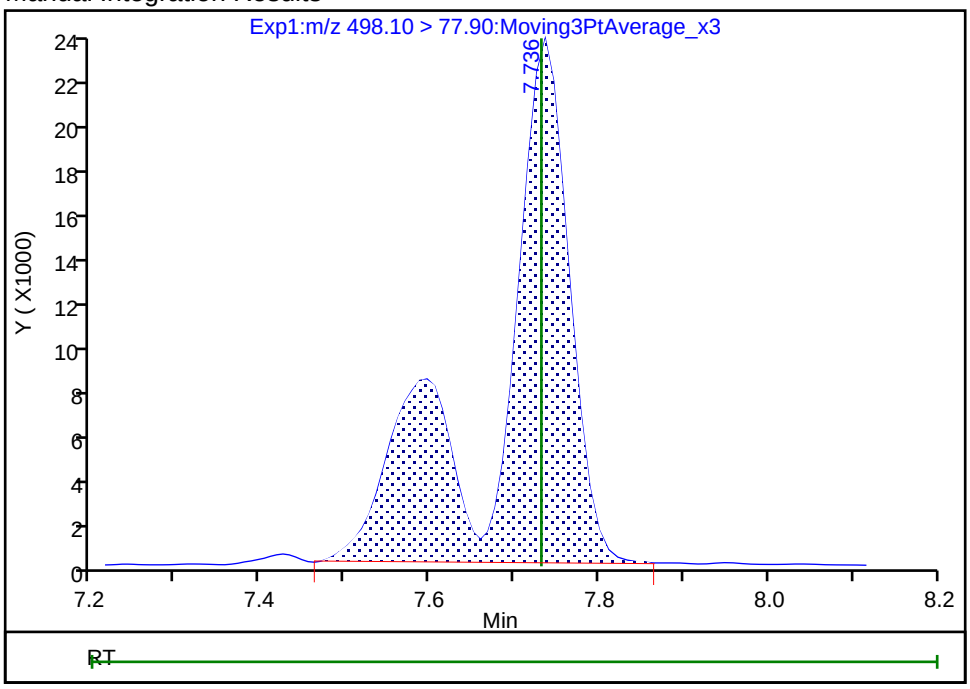
Not Detected
Expected RT: 7.73

Processing Integration Results



Manual Integration Results

RT: 7.74
Area: 138933
Amount: 0.052350
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:16:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

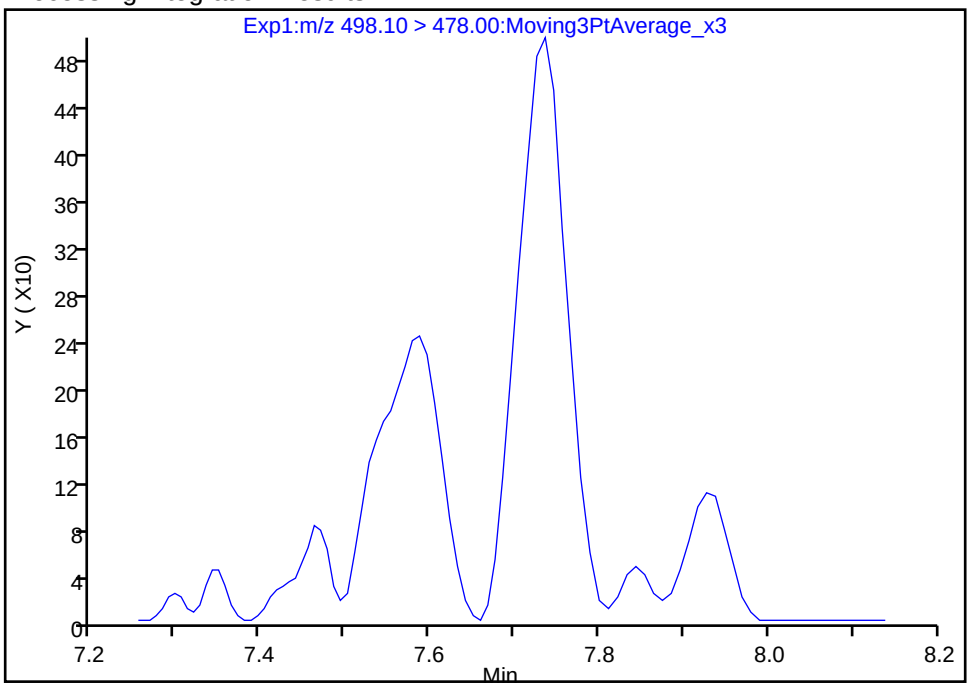
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

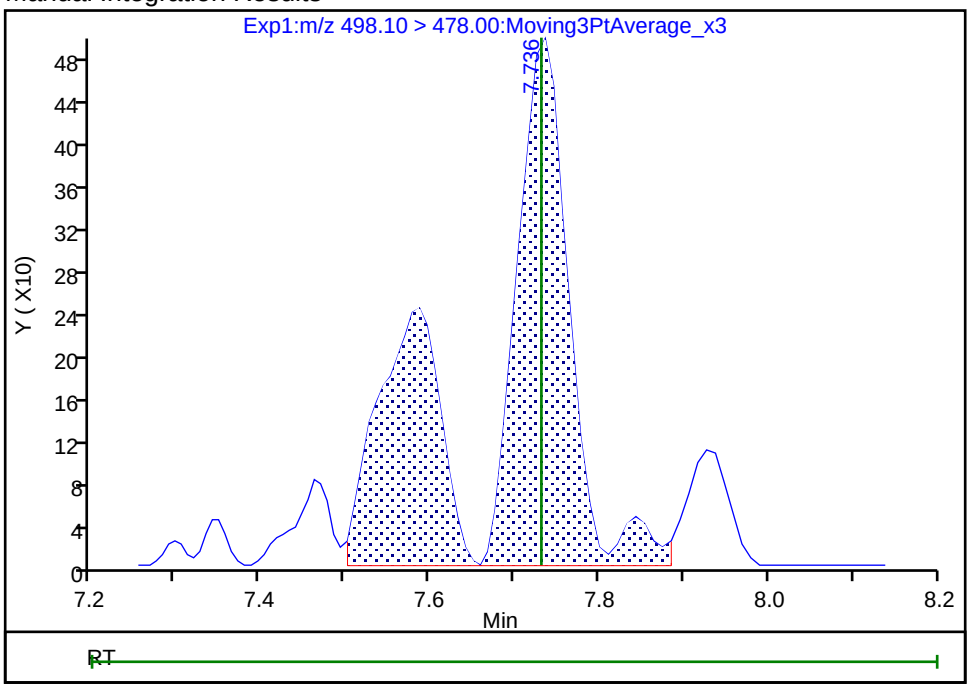
Not Detected
Expected RT: 7.73

Processing Integration Results



Manual Integration Results

RT: 7.74
Area: 3398
Amount: 0.052350
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:16:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

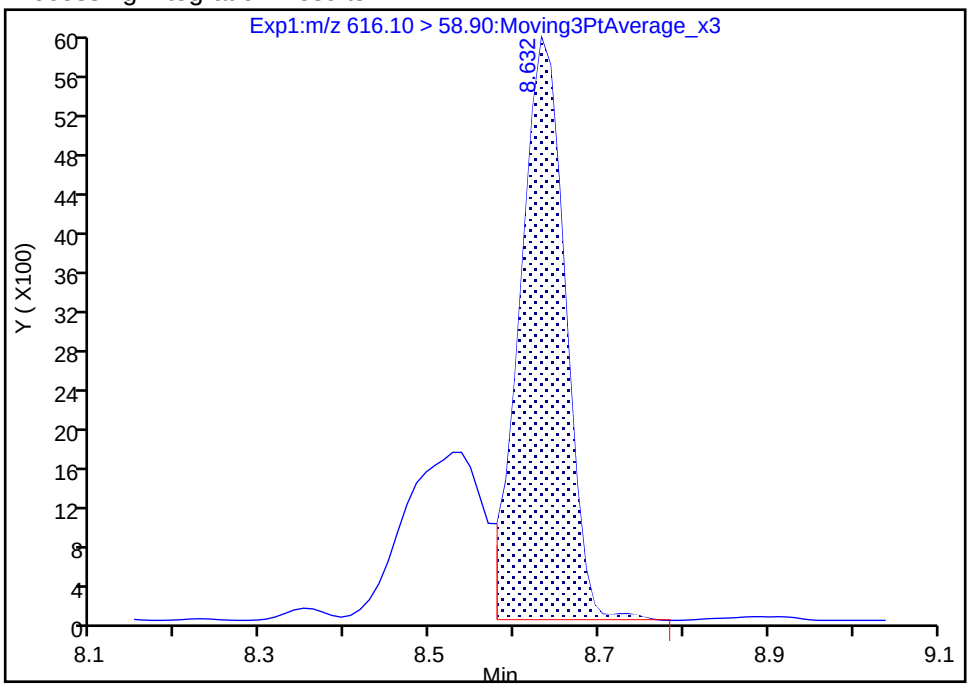
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

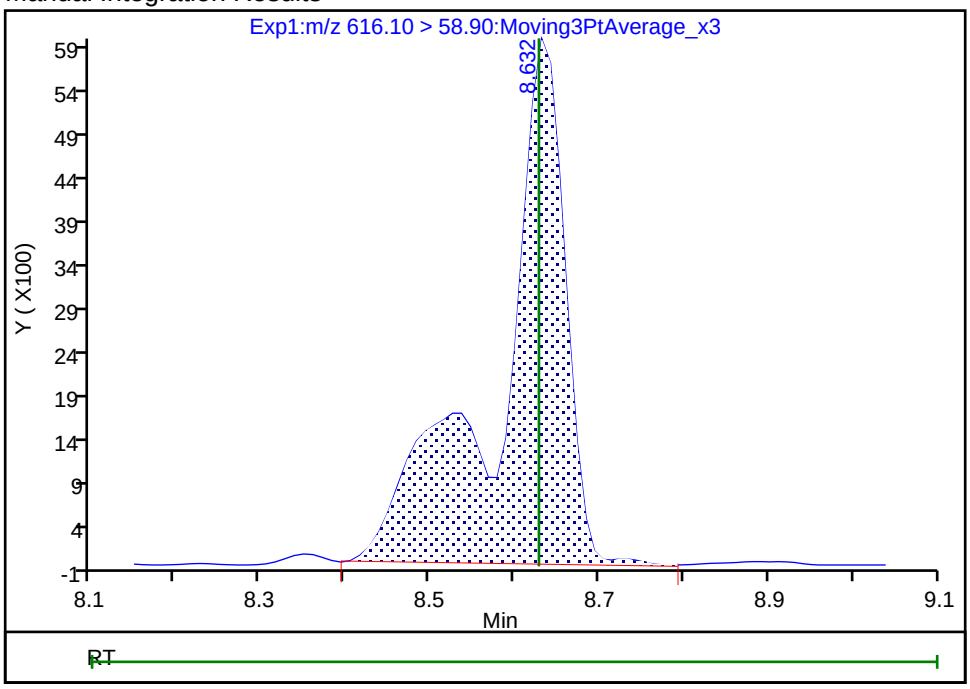
Processing Integration Results

RT: 8.63
Area: 21984
Amount: 0.483019
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 32983
Amount: 0.543767
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:17:13 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

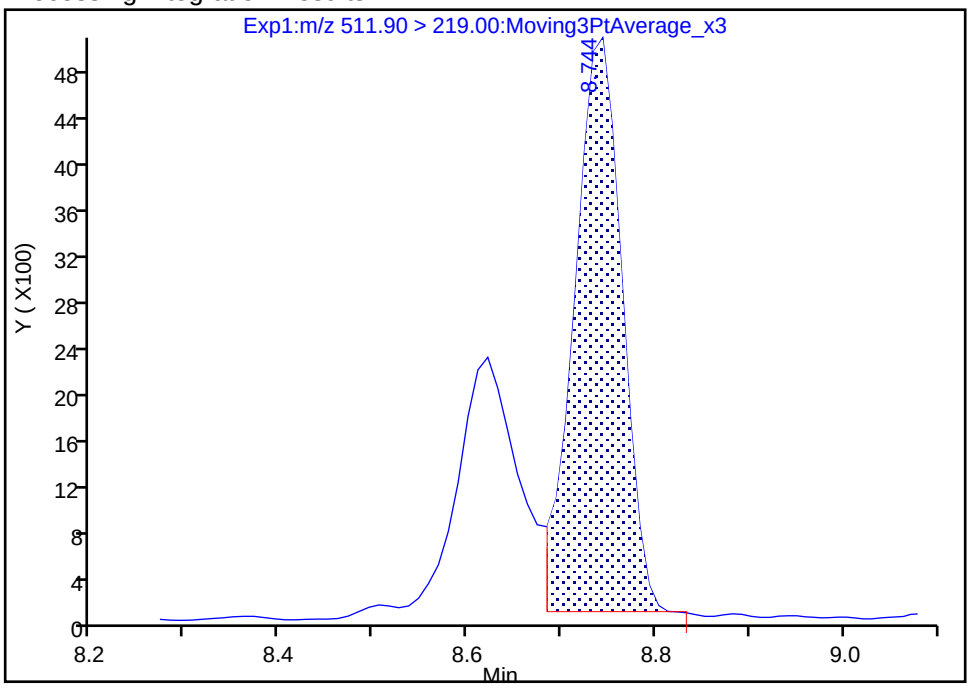
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

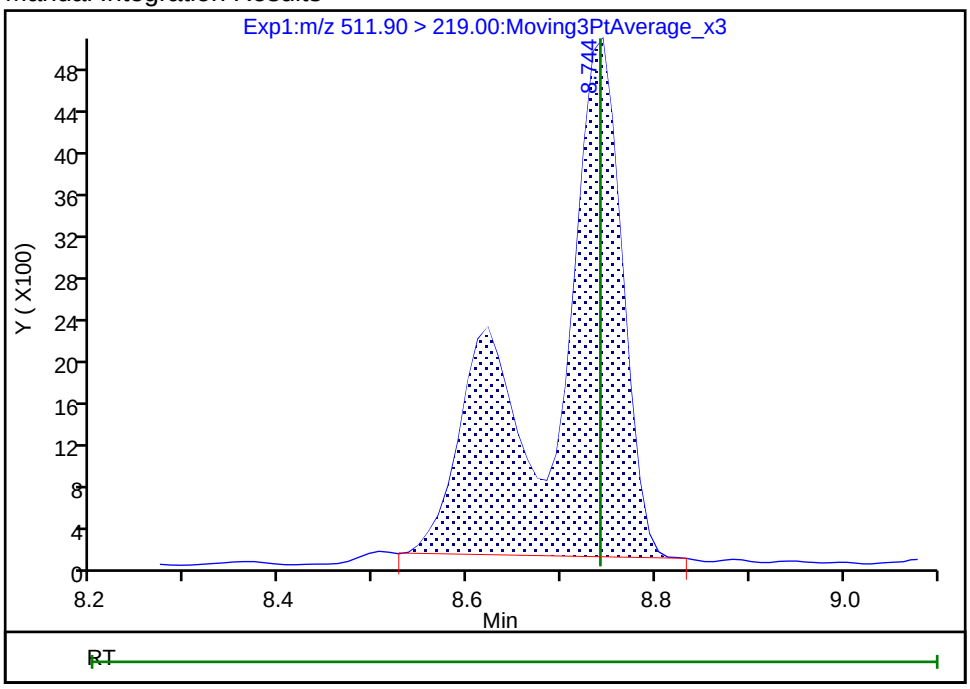
Processing Integration Results

RT: 8.74
Area: 17482
Amount: 0.046287
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 27005
Amount: 0.050707
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:17:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

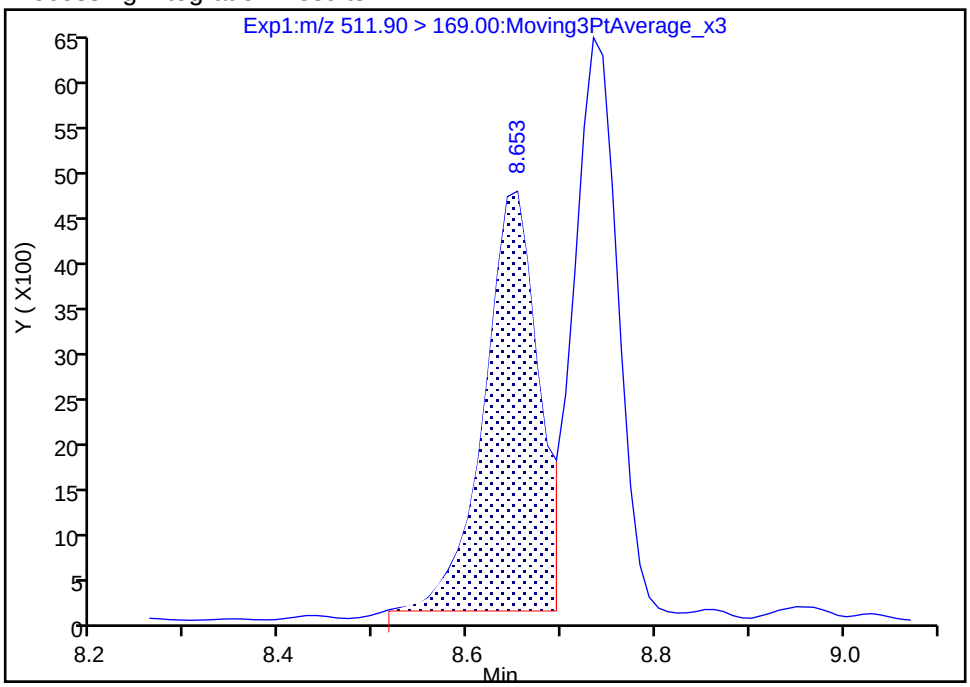
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

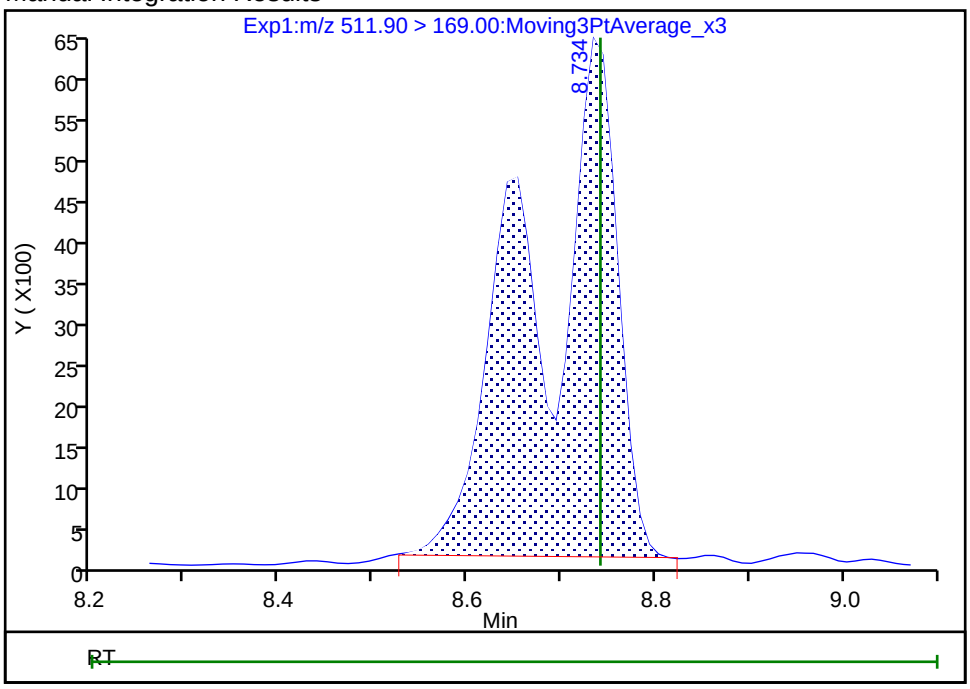
Processing Integration Results

RT: 8.65
Area: 18505
Amount: 0.046287
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 39027
Amount: 0.050707
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:17:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

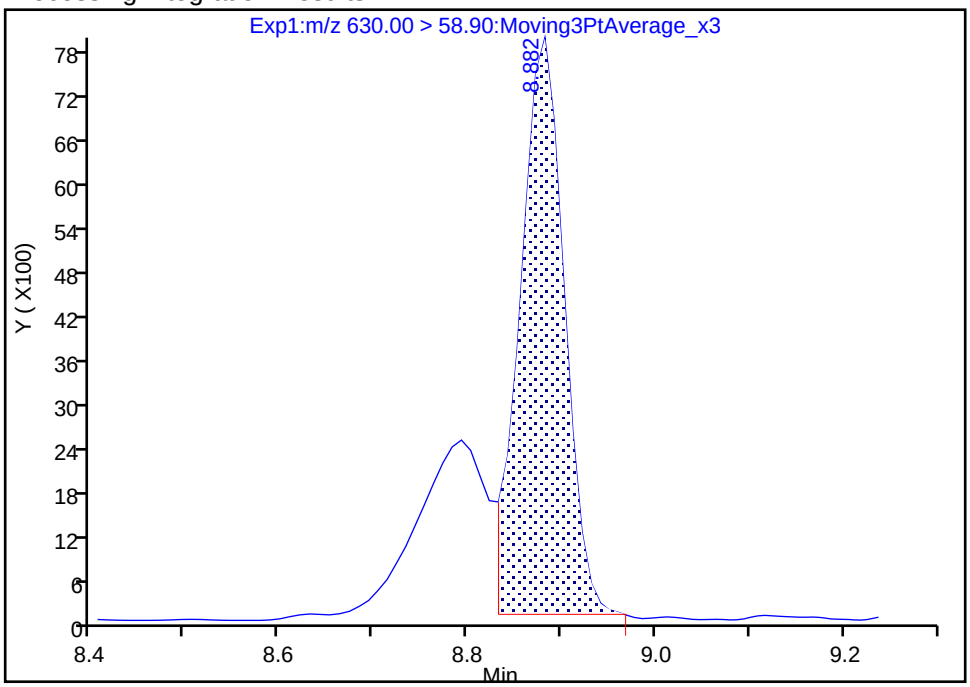
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

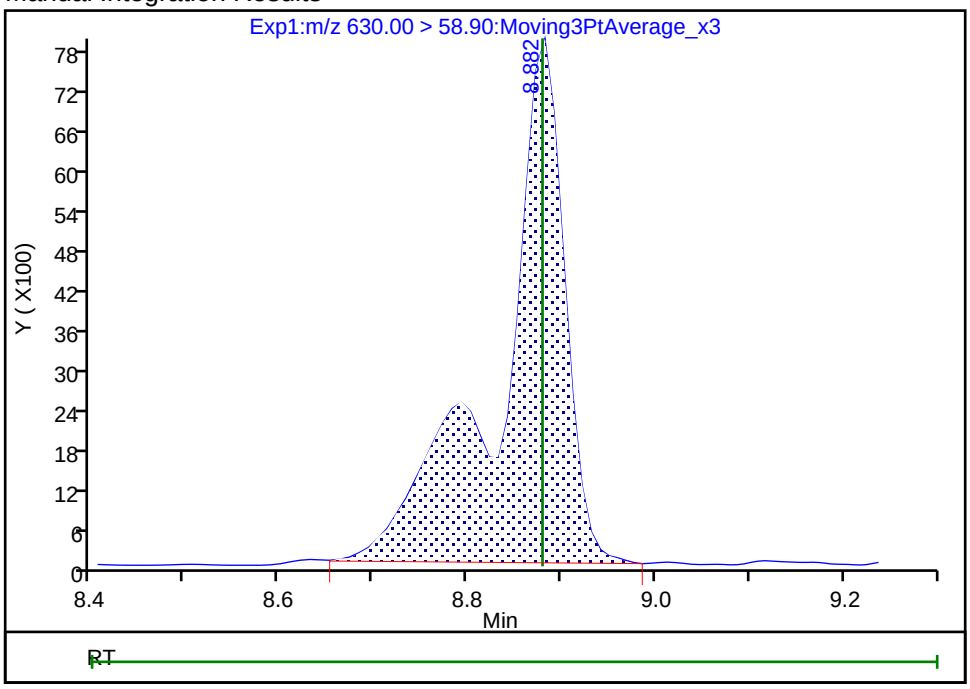
Processing Integration Results

RT: 8.88
Area: 25457
Amount: 0.530917
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 38074
Amount: 0.587714
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:17:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

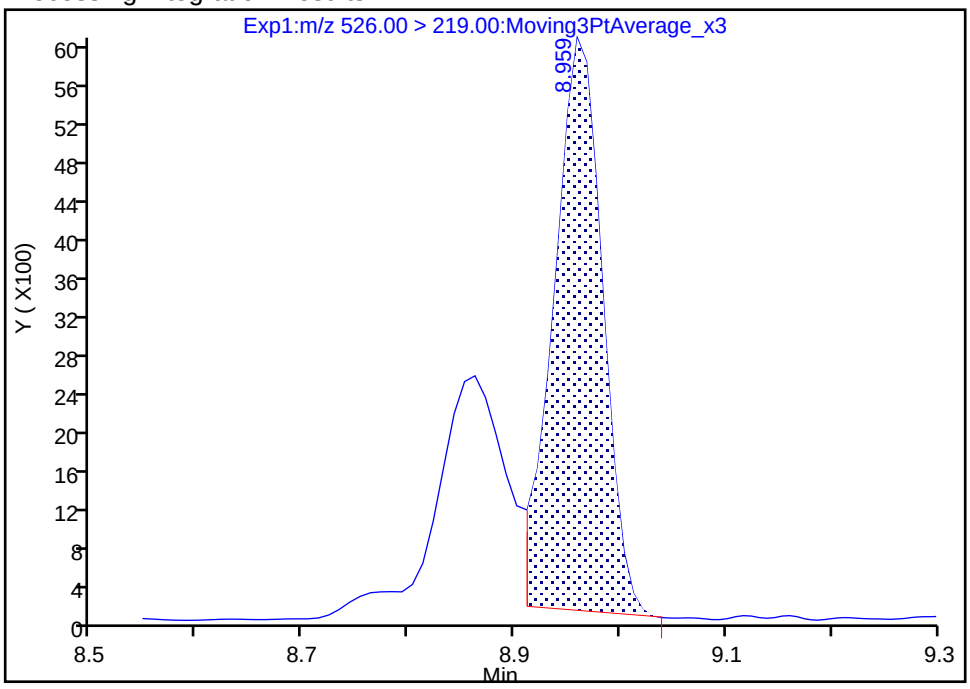
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d				
Injection Date:	10-Sep-2024 17:12:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	28	Worklist Smp#:	1
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

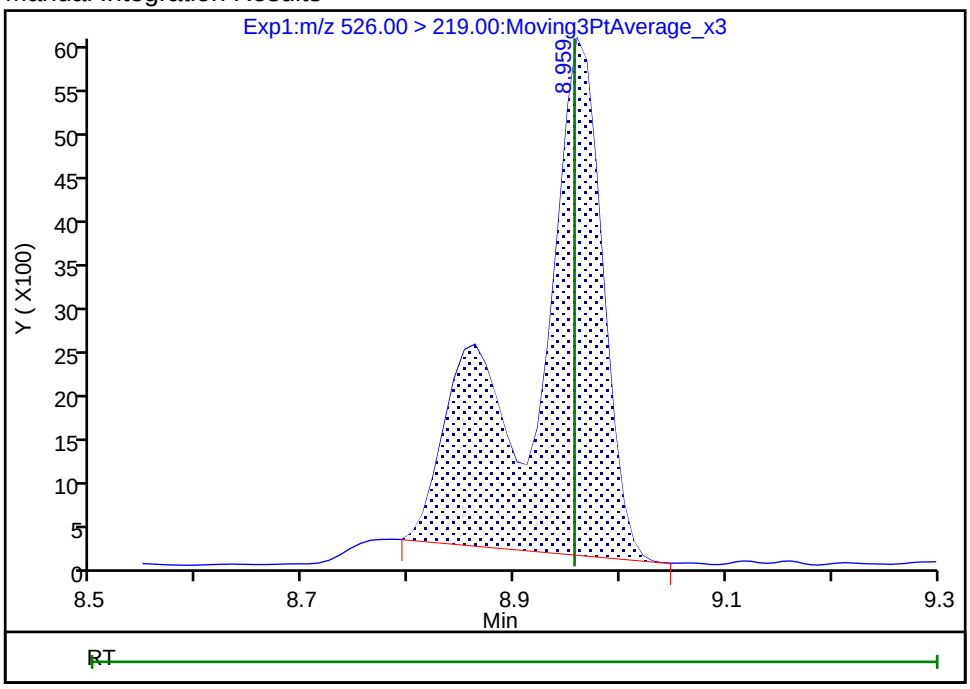
Processing Integration Results

RT: 8.96
Area: 18979
Amount: 0.046803
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 28133
Amount: 0.050689
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:17:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

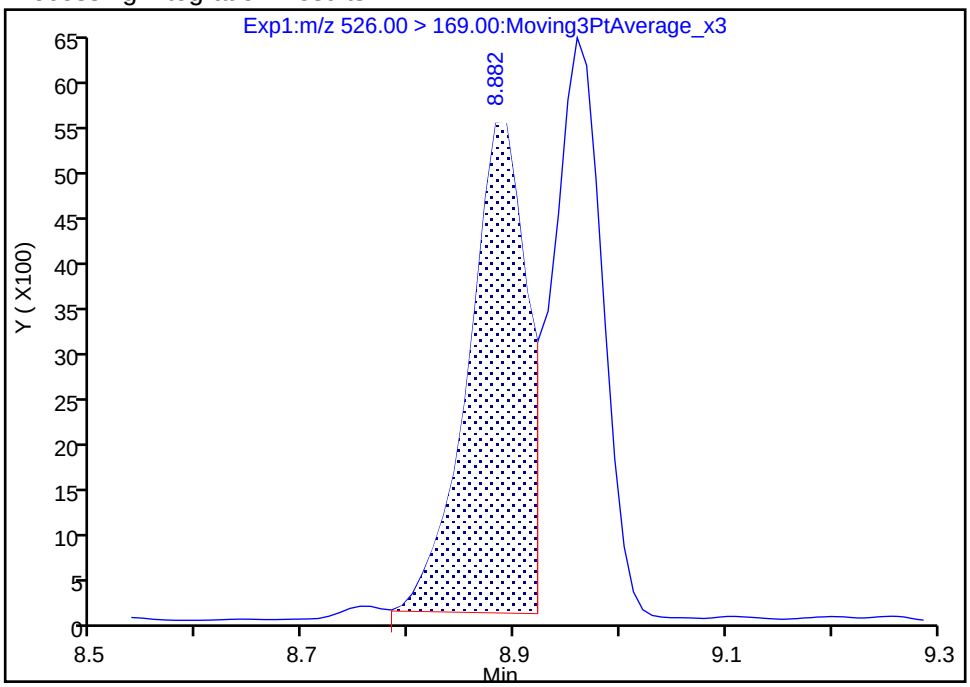
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj01.d
Injection Date: 10-Sep-2024 17:12:47 Instrument ID: LCMS04
Lims ID: IC CAL 1
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 28 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

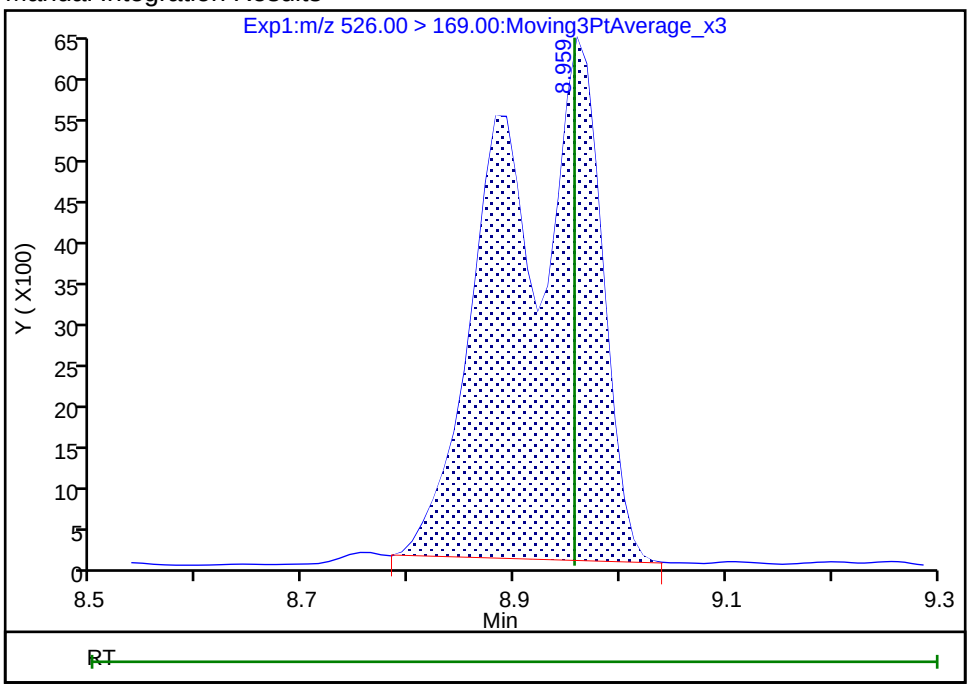
Processing Integration Results

RT: 8.88
Area: 20602
Amount: 0.046803
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 41445
Amount: 0.050689
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:18:03 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Lims ID: IC CAL 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Sep-2024 17:26:23 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 2
Misc. Info.: Plate: 2 Rack: 1 240-0146069-002
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:01:23 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:24:09
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.582	3.573	0.009		2068065	1.25			781	
* 2 13C2 PFHxA										
315.10 > 270.00	4.755	4.744	0.011		1248375	0.6250			5898	
* 3 13C4 PFOA										
417.10 > 172.00	5.652	5.653	-0.001		238447	0.6250			1465	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.878	0.0		1589575	0.5913			3028	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.077	0.0		822418	0.3125			1330	
* 6 13C2 PFDA										
515.10 > 470.10	6.521	6.522	-0.001		673263	0.3125			1641	
* 7 13C4 PFOS										
502.80 > 79.90	6.783	6.792	-0.009		1424619	0.5975	Target=4.00		3024	
502.80 > 98.90	6.783	6.792	-0.009		359043		3.97(2.00-6.01)		1587	
D 8 13C4 PFBA										
216.80 > 171.90	3.574	3.573	0.001	0.998	4563594	2.43		97.2	17775	
D 9 13C5 PFPeA										
268.30 > 223.00	4.236	4.225	0.011	0.891	1849822	1.18		94.4	6859	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.555	4.555	0.0	0.775	1082419	1.20	Target=0.31	103	3746	
329.10 > 309.00	4.555	4.555	0.0	0.775	3140174		0.34(0.16-0.47)	103	1004	
D 11 13C5 PFHxA										
318.00 > 273.00	4.755	4.744	0.011	1.000	1643728	0.5857	Target=39.15	93.7	6405	
318.00 > 120.30	4.755	4.744	0.011	1.000	43273		37.99(19.57-58.72)	93.7	623	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.882	4.871	0.011	0.831	1637869	0.5699	Target=3.27	98.0	4105	
302.10 > 98.90	4.871	4.871	0.0	0.829	506097		3.24(1.63-4.90)	98.0	2223	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.947	4.936	0.011	1.040	1989967	2.46	Target=1.96	98.5	8500	
286.90 > 184.90	4.947	4.936	0.011	1.040	1024265		1.94(0.98-2.94)	98.5	2110	
D 14 13C4 PFHpA										
367.10 > 322.00	5.218	5.219	-0.001	1.098	1754335	0.5985		95.8	4332	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.440	5.441	-0.001	0.925	1256071	1.22	Target=0.40	103	2719	
429.10 > 409.00	5.440	5.441	-0.001	0.925	2801047		0.45(0.20-0.59)	103	5128	
D 16 13C8 PFOA										
421.10 > 376.00	5.652	5.653	-0.001	1.000	1828665	0.6076		97.2	4686	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.878	0.0	1.000	1620956	0.5744	Target=3.38	97.1	3406	
402.10 > 98.80	5.868	5.878	-0.010	0.998	492476		3.29(1.69-5.07)	97.1	2031	
D 18 13C9 PFNA										
472.10 > 427.00	6.087	6.087	0.0	1.002	618553	0.2997		95.9	2419	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.281	6.281	0.0	1.069	844452	1.20	Target=0.34	99.9	3077	
529.10 > 509.00	6.281	6.281	0.0	1.069	2292015		0.37(0.17-0.51)	99.9	6666	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.462	6.462	0.0	0.953	1321629	1.20		95.8	4155	
D 21 13C6 PFDA										
519.10 > 474.10	6.521	6.522	-0.001	1.000	623649	0.3008		96.2	1754	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.657	6.657	0.0	0.982	1293541	1.19		95.3	2778	
D 23 13C8 PFOS										
507.10 > 79.90	6.783	6.792	-0.009	1.000	1371737	0.5584	Target=4.08	93.5	1712	
507.10 > 98.90	6.783	6.792	-0.009	1.000	354043		3.87(2.04-6.12)	93.5	993	
D 24 13C7 PFUnA										
570.00 > 525.10	6.952	6.960	-0.008	1.066	670600	0.3287		105	1737	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.380	7.388	-0.008	1.132	574398	0.2983		95.4	1278	
D 26 13C8 FOSA										
506.10 > 77.80	7.736	7.726	0.010	1.141	1595296	0.6051		96.8	6041	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.194	8.217	-0.023	1.257	329275	0.2991		95.7	943	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.600	0.011	1.270	2319228	5.94		95.0	822	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.734	8.724	0.010	1.288	312618	0.6013		96.2	1607	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.863	8.853	0.010	1.307	2782009	5.80		92.8	1184	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.950	0.001	1.320	313092	0.5974		95.6	191	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.582	3.576	0.006	1.002	857853	0.4946		98.9	9.7	M
34 3:3 FTCA										
241.00 > 177.00	3.864	3.866	-0.002	0.912	55460	0.6212	Target=1.04	99.4	893	
241.00 > 117.00	3.864	3.866	-0.002	0.912	53091		1.04(0.52-1.56)	99.4	13.2	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.864	3.866	-0.002	0.912	495284	0.2437		97.5	507	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.236	4.229	0.007	1.000	570799	0.2517		101	68.5	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.417	4.410	0.007	1.043	507539	0.2365		94.6	1622	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.555	4.550	0.005	1.000	1273913	0.4599	Target=1.37	98.5	6600	
327.10 > 80.90	4.555	4.550	0.005	1.000	938596		1.36(0.68-2.05)	98.5	918	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.712	4.707	0.005	0.991	64434	0.2790	Target=1.54	112	578	
295.00 > 84.90	4.702	4.707	-0.005	0.989	37382		1.72(0.77-2.31)	112	158	
48 FBSA										
297.90 > 78.00	4.755	4.740	0.015	0.974	941821	0.4885		97.7	2833	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.755	4.750	0.005	1.000	250866	0.1200	Target=14.09	96.0	43.8	
313.00 > 118.90	4.755	4.750	0.005	1.000	16740		14.99(7.04-21.13)	96.0	122	
41 5:3 FTCA										
341.00 > 237.10	4.838	4.834	0.004	1.018	1186674	3.19	Target=1.54	102	1996	
341.00 > 217.00	4.838	4.834	0.004	1.018	740450		1.60(0.77-2.31)	102	671	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.882	4.878	0.004	1.000	291771	0.1066	Target=3.32	96.5	777	
298.70 > 98.80	4.882	4.878	0.004	1.000	85588		3.41(1.66-4.97)	96.5	369	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.957	4.943	0.014	1.002	389426	0.4441	Target=1.98	88.8	1165	
284.90 > 184.90	4.947	4.943	0.004	1.000	227685		1.71(0.99-2.97)	88.8	499	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.147	5.144	0.003	1.082	1762247	0.2290	Target=12.50	103	3340	
314.80 > 82.90	5.137	5.144	-0.007	1.080	134771		13.08(6.25-18.75)	103	266	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.229	5.215	0.014	1.002	357428	0.1178	Target=3.89	94.3	50.7	
363.10 > 169.00	5.218	5.215	0.003	1.000	104196		3.43(1.95-5.84)	94.3	383	
49 DONA										
376.90 > 250.90	5.389	5.385	0.004	1.089	2036497	0.4782	Target=1.56	102	4539	
376.90 > 84.80	5.389	5.385	0.004	1.089	1261760		1.61(0.78-2.34)	102	4445	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.410	5.406	0.004	0.920	329182	0.1169	Target=3.17	99.7	453	
349.10 > 98.90	5.410	5.406	0.004	0.920	99816		3.30(1.58-4.75)	99.7	407	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.449	5.445	0.004	1.002	1177045	0.4675	Target=1.44	98.6	6366	
427.10 > 80.90	5.440	5.445	-0.005	1.000	806846		1.46(0.72-2.15)	98.6	2947	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.662	5.657	0.005	1.002	178214	0.1270	Target=2.01	102	18.1	M
413.00 > 169.00	5.652	5.657	-0.005	1.000	80092		2.23(1.00-3.01)	102	174	M
54 7:3 FTCA										
441.00 > 316.90	5.718	5.713	0.005	1.203	1137088	3.20	Target=1.06	102	1640	
441.00 > 336.90	5.708	5.713	-0.005	1.201	1065696		1.07(0.53-1.58)	102	3018	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.882	-0.004	1.000	257991	0.1102	Target=3.33	96.9	760	M
398.70 > 98.90	5.878	5.882	-0.004	1.000	81105		3.18(1.66-4.99)	96.9	202	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.087	6.091	-0.004	1.000	209884	0.1400	Target=4.97	112	30.2	M
463.00 > 169.00	6.087	6.091	-0.004	1.000	36301		5.78(2.49-7.46)	112	143	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.281	6.286	-0.005	1.000	844983	0.4811	Target=1.32	100	2181	
527.10 > 80.80	6.281	6.286	-0.005	1.000	661165		1.28(0.66-1.98)	100	2269	
57 PFECHS										
461.00 > 381.00	6.290	6.286	0.004	1.070	1073558	0.2316	Target=1.88	100	196	
461.00 > 99.00	6.290	6.286	0.004	1.070	567632		1.89(0.94-2.81)	100	1072	
62 FHxSA										
397.90 > 78.00	6.309	6.305	0.004	1.073	1395019	0.5064		101	2970	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.337	6.342	-0.005	0.934	321912	0.1197	Target=3.89	101	704	
449.00 > 98.80	6.337	6.342	-0.005	0.934	81517		3.95(1.95-5.84)	101	250	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.473	6.469	0.004	1.002	137140	0.1177	Target=1.69	94.2	340	M
570.10 > 483.00	6.462	6.469	-0.007	1.000	85379		1.61(0.85-2.54)	94.2	325	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.521	6.527	-0.006	1.000	214444	0.1353	Target=4.63	108	29.9	
512.90 > 219.00	6.521	6.527	-0.006	1.000	45927		4.67(2.32-6.95)	108	237	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.666	6.672	-0.006	1.001	107728	0.1247	Target=1.55	99.8	393	M
584.20 > 526.00	6.666	6.672	-0.006	1.001	72456		1.49(0.78-2.33)	99.8	163	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.792	6.788	0.004	1.001	338296	0.1171	Target=4.64	101	249	M
498.90 > 98.80	6.792	6.788	0.004	1.001	76291		4.43(2.32-6.96)	101	371	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.960	6.965	-0.005	1.001	217309	0.1123	Target=6.10	89.8	67.3	
563.10 > 269.10	6.960	6.965	-0.005	1.001	35036		6.20(3.05-9.15)	89.8	282	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.130	7.127	0.003	1.441	1760178	0.4652	Target=3.09	99.8	549	
532.80 > 353.00	7.122	7.127	-0.005	1.440	528710		3.33(1.54-4.63)	99.8	778	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.229	7.226	0.003	1.066	261152	0.1194	Target=4.11	99.5	1036	
548.80 > 98.80	7.229	7.226	0.003	1.066	63549		4.11(2.06-6.17)	99.5	505	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.388	7.384	0.004	1.001	224035	0.1231	Target=18.06	98.5	86.4	
613.10 > 319.00	7.380	7.384	-0.004	1.000	13376		16.75(9.03-27.08)	98.5	220	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.651	7.655	-0.004	1.128	284563	0.1150	Target=4.27	95.4	747	
599.00 > 98.80	7.642	7.655	-0.013	1.127	69913		4.07(2.14-6.41)	95.4	577	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.736	7.732	0.004	1.000	279292	0.1164	Target=46.53	93.2	515	M
498.10 > 478.00	7.736	7.732	0.004	1.000	6522		42.82(23.26-69.79)	93.2	66.5	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.800	7.807	-0.007	0.952	238567	0.1361	Target=6.29	109	82.6	
663.00 > 168.90	7.800	7.807	-0.007	0.952	37997		6.28(3.14-9.43)	109	368	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.969	7.975	-0.006	1.611	1732750	0.4719	Target=3.20	100	2937	
632.90 > 452.90	7.969	7.975	-0.006	1.611	512939		3.38(1.60-4.79)	100	1444	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.206	8.213	-0.007	1.001	176767	0.1338	Target=7.27	107	97.6	
713.10 > 168.90	8.206	8.213	-0.007	1.001	25689		6.88(3.64-10.91)	107	564	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.417	8.424	-0.007	1.241	243793	0.1163	Target=4.58	96.1	457	
699.10 > 98.80	8.417	8.424	-0.007	1.241	56606		4.31(2.29-6.87)	96.1	434	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.629	0.003	1.002	64919	1.18		94.6	448	M
75 NMeFOSA										M
511.90 > 219.00	8.744	8.741	0.003	1.001	60035	0.1232	Target=0.71	98.6	295	M
511.90 > 169.00	8.734	8.741	-0.007	1.000	86144		0.70(0.35-1.06)	98.6	420	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.882	8.880	0.002	1.002	75433	1.25		100	460	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.959	8.957	0.002	1.001	58722	0.1188	Target=0.70	95.1	260	M
526.00 > 169.00	8.959	8.957	0.002	1.001	86686		0.68(0.35-1.05)	95.1	375	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

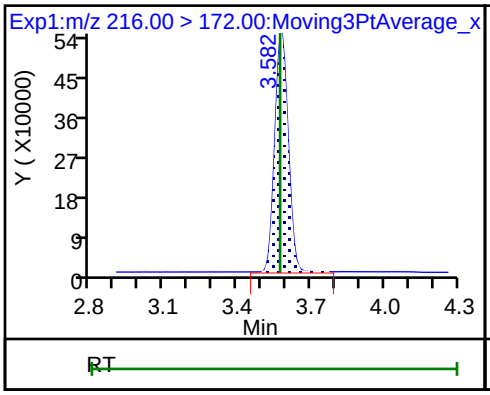
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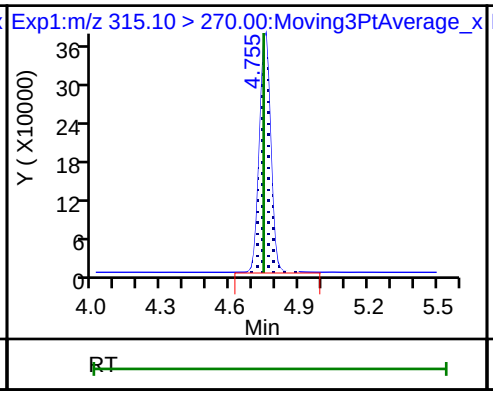
Eurofins Cleveland

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Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

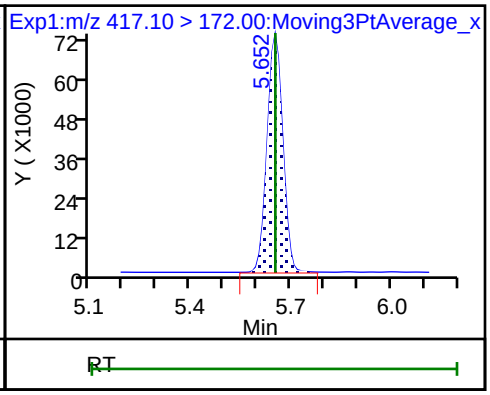
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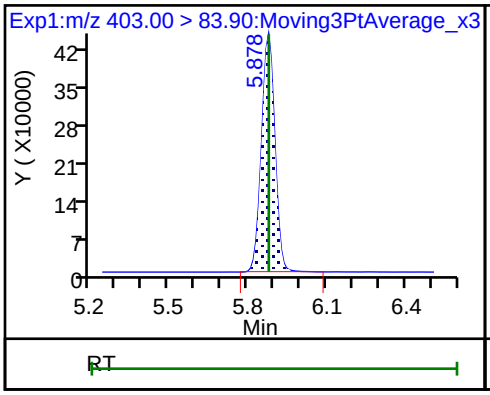
* 2 13C2 PFHxA



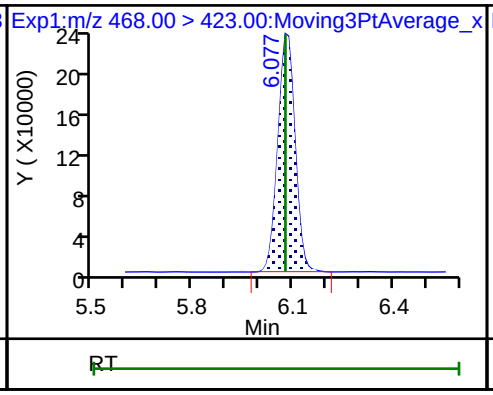
* 3 13C4 PFOA



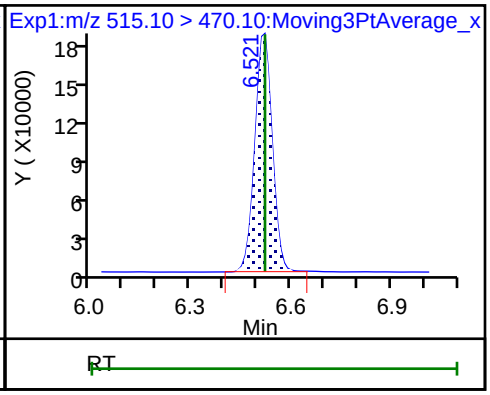
* 4 18O2 PFHxS



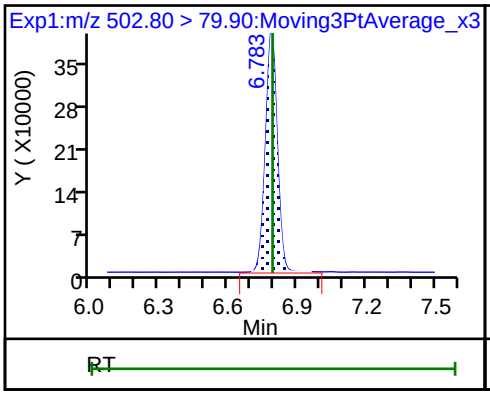
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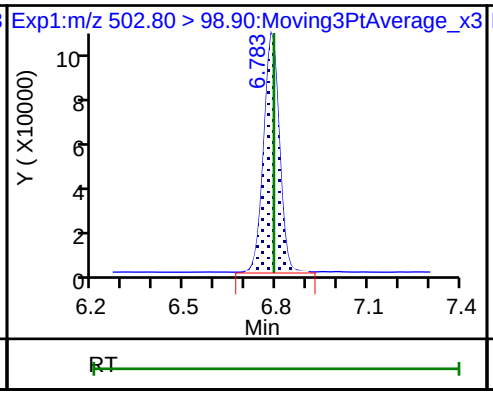
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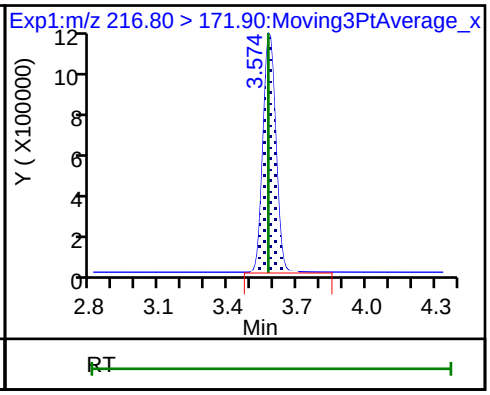
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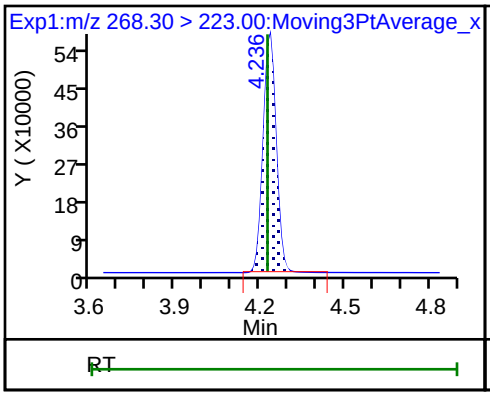
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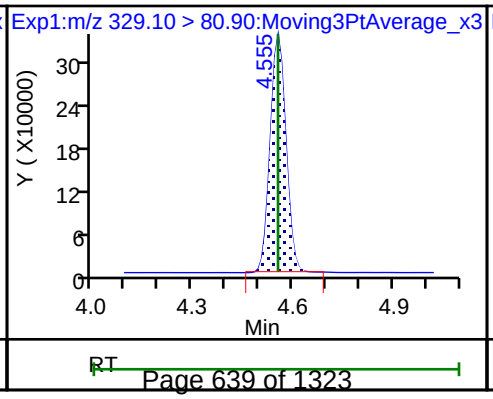
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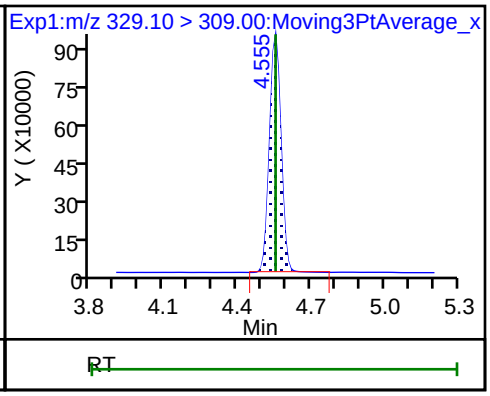
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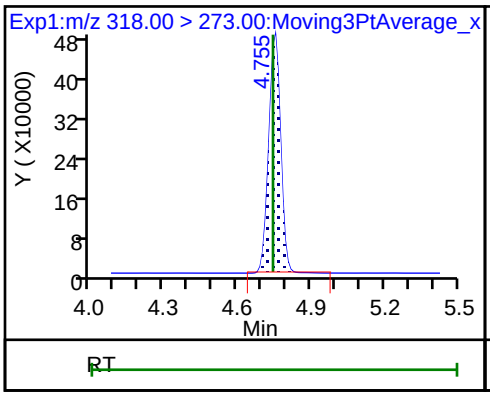
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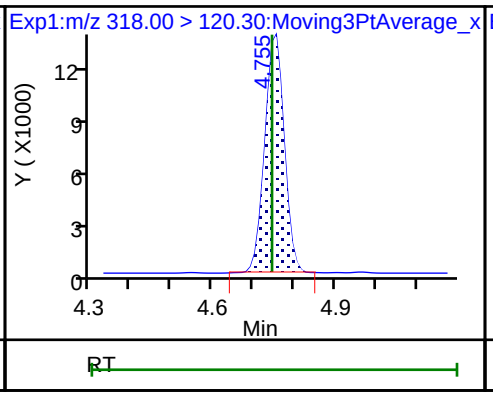
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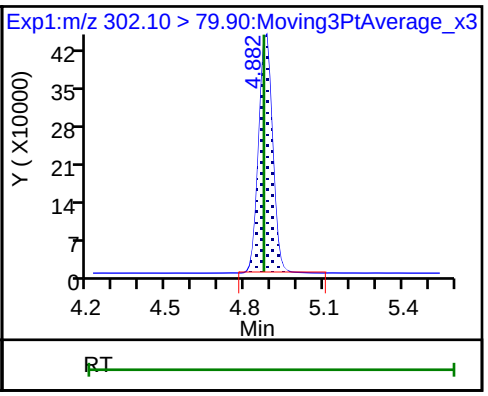
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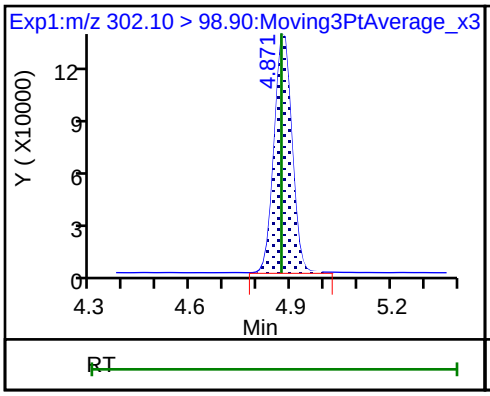
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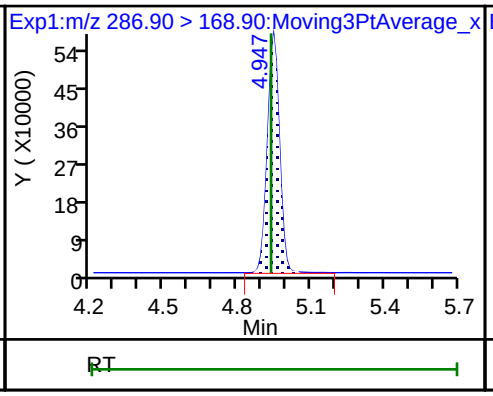
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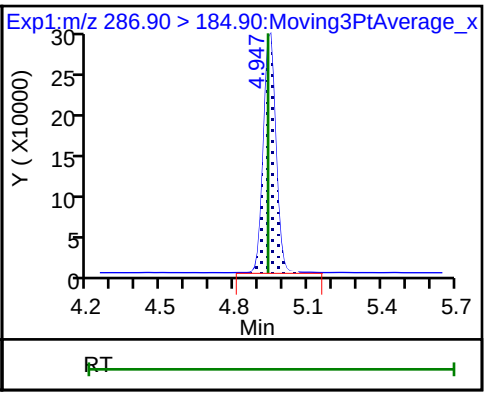
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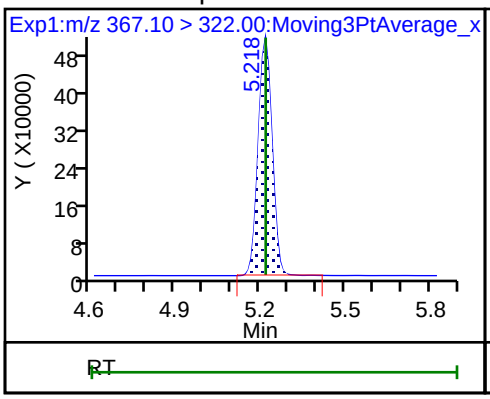
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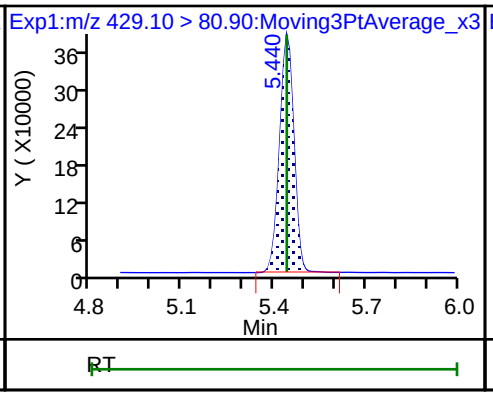
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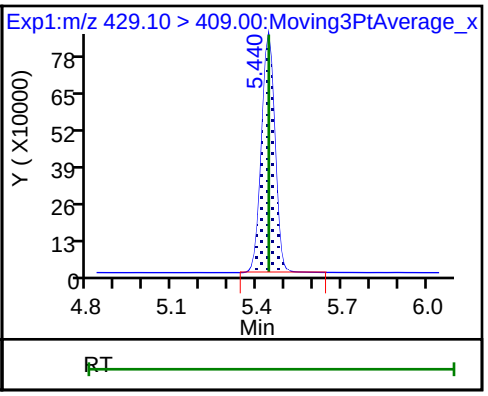
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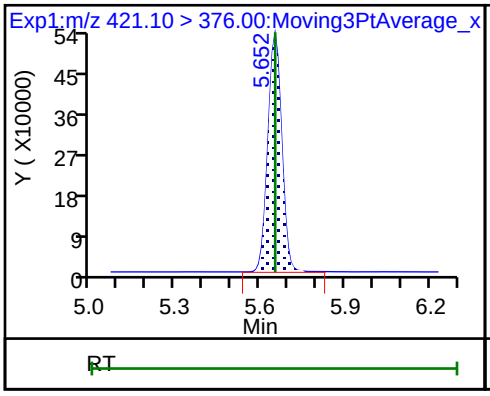
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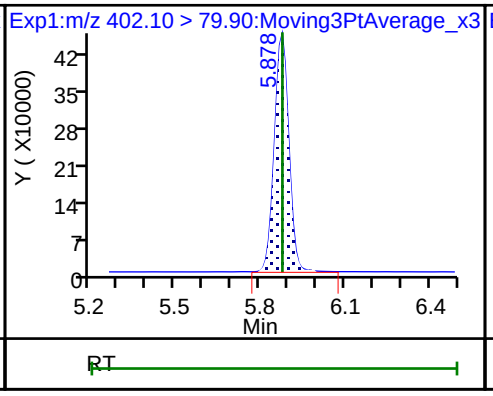
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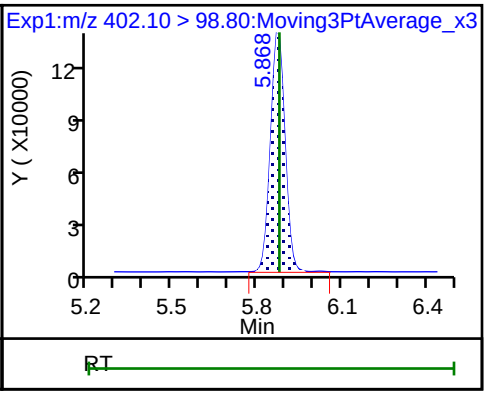
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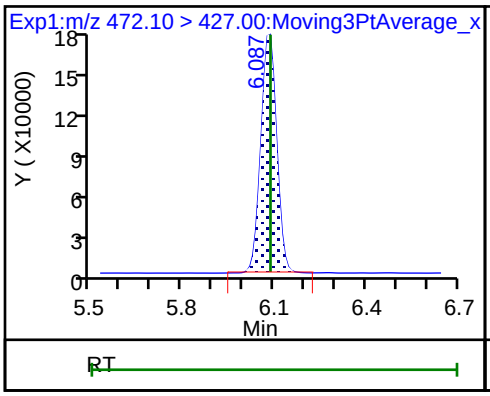
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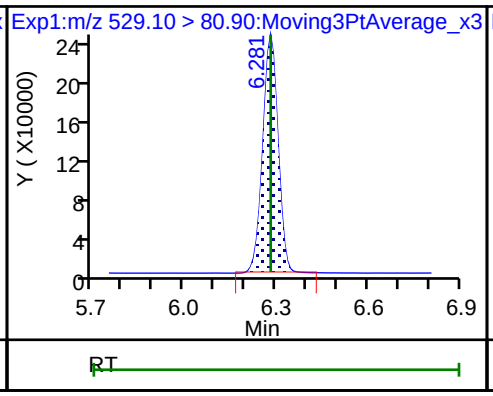
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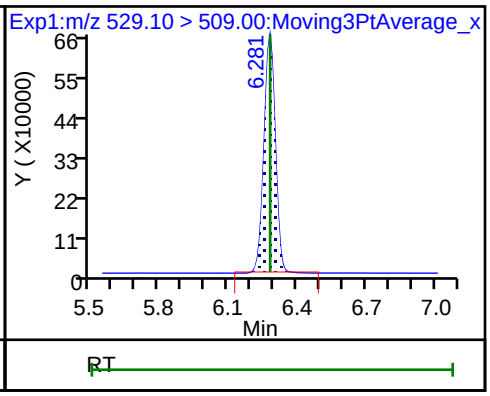
D 18 13C9 PFNA



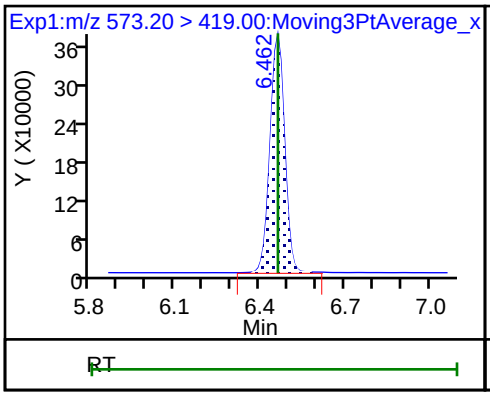
D 19 M2-8:2 FTS



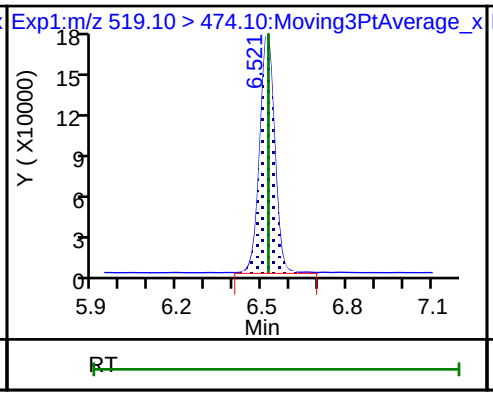
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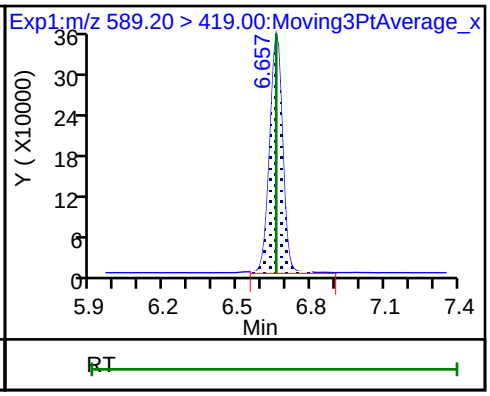
D 20 d3-NMeFOSAA



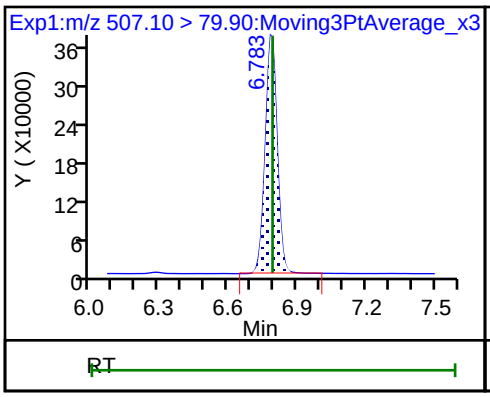
D 21 13C6 PFDA



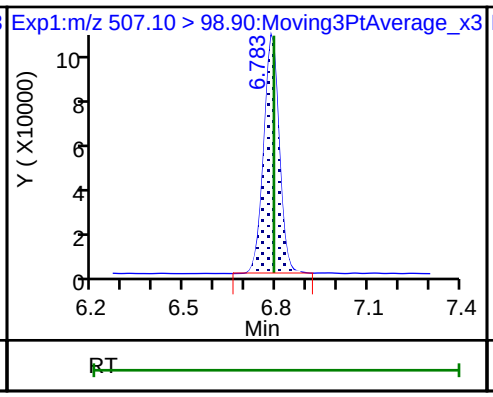
D 22 d5-NEtFOSAA



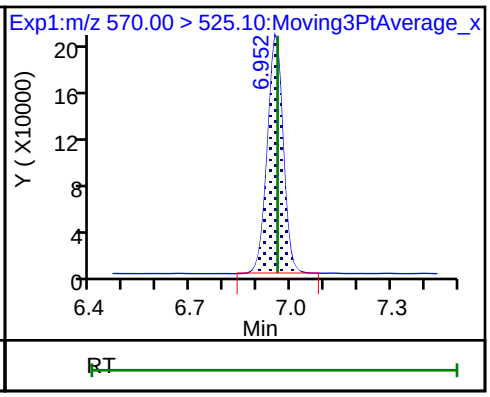
D 23 13C8 PFOS



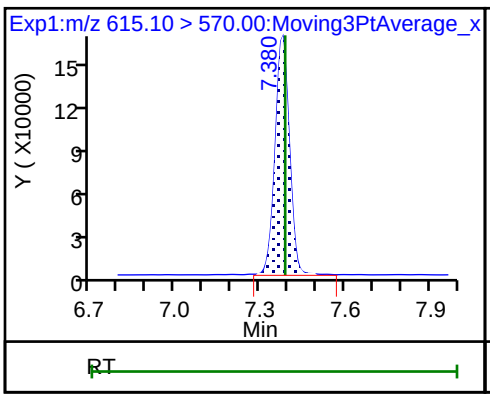
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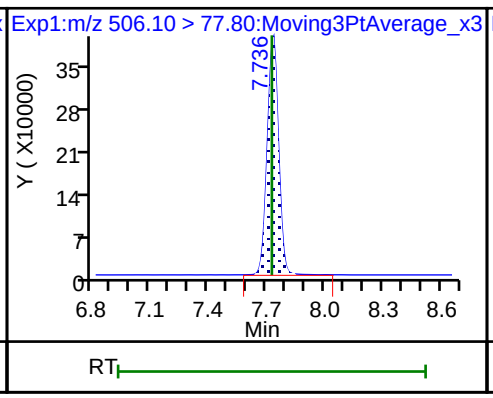
D 24 13C7 PFUnA



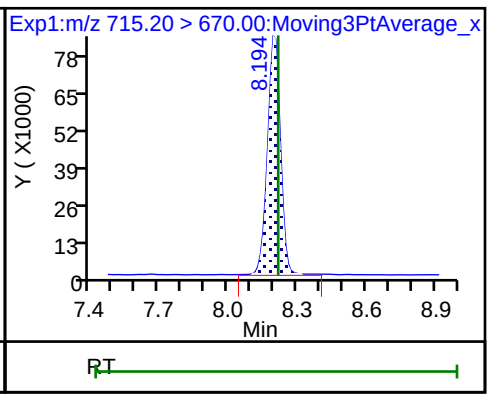
D 25 13C2-PFDoDA



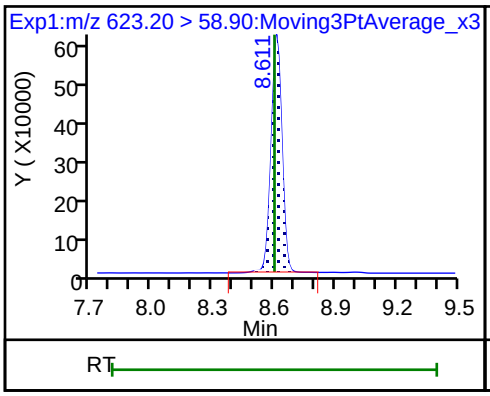
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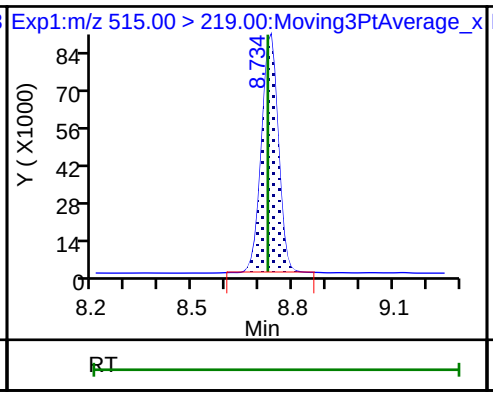
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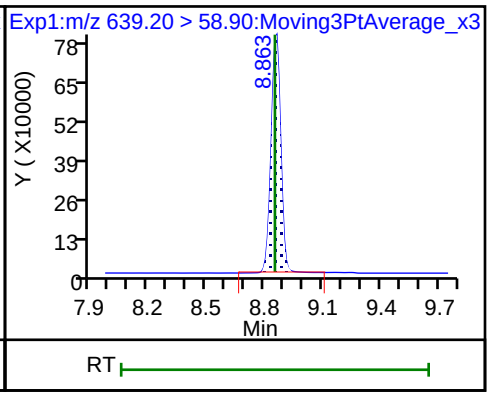
D 28 d7-N-MeFOSE-M



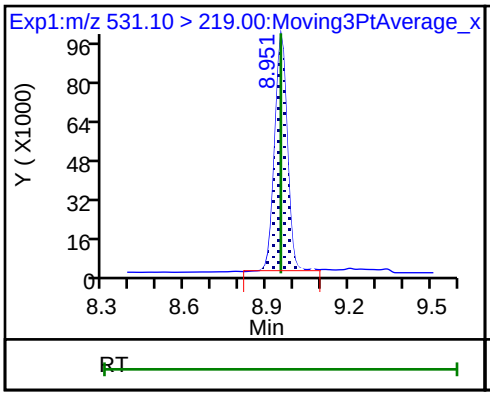
D 29 d3-NMePFOSA



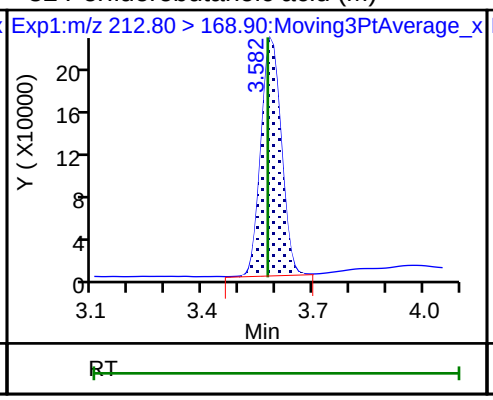
D 30 d9-N-EtFOSE-M



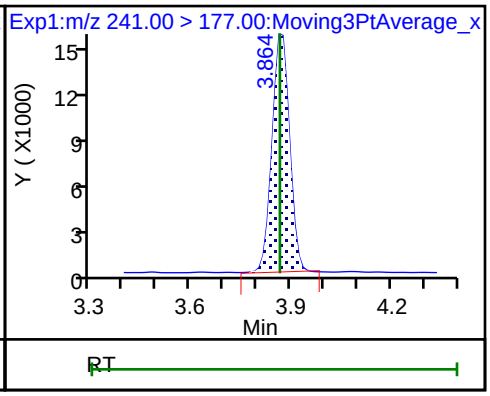
D 31 d5-NEtPFOSA



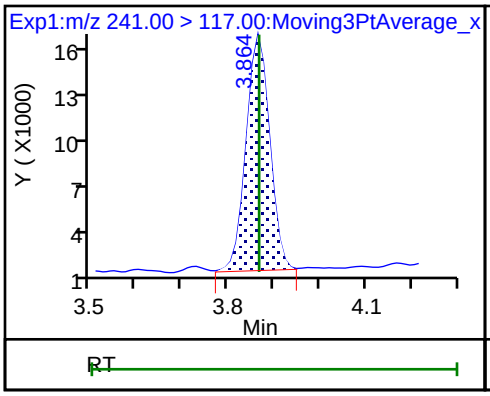
32 Perfluorobutanoic acid (M)



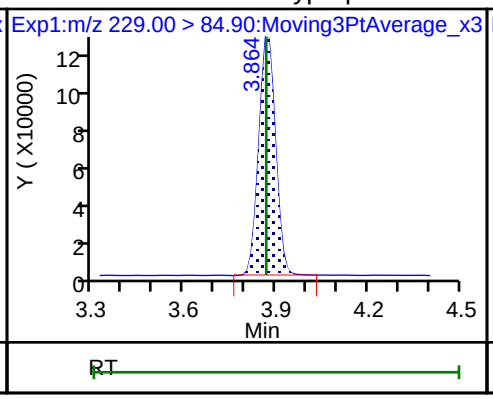
34 3:3 FTCA



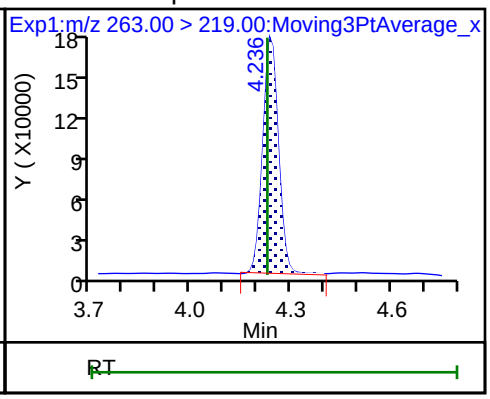
34 3:3 FTCA



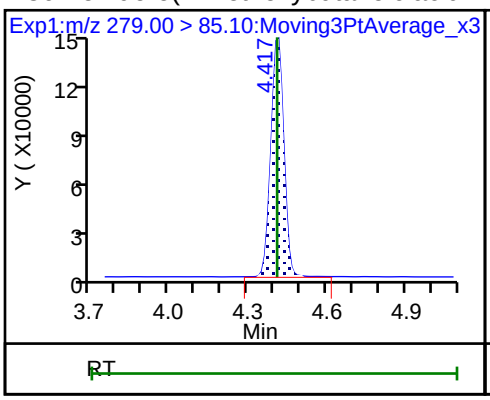
33 Perfluoro-3-methoxypropanoic aci



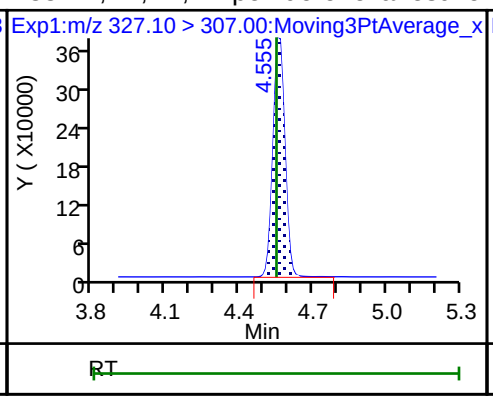
35 Perfluoropentanoic acid



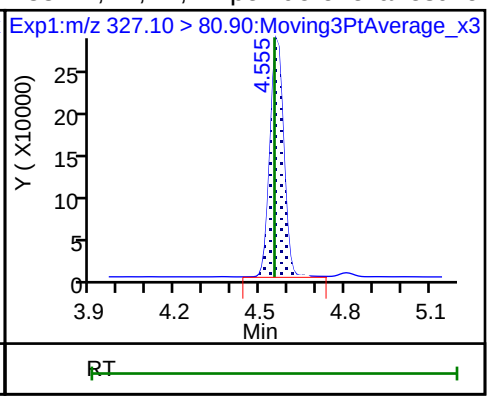
36 Perfluoro(4-methoxybutanoic acid



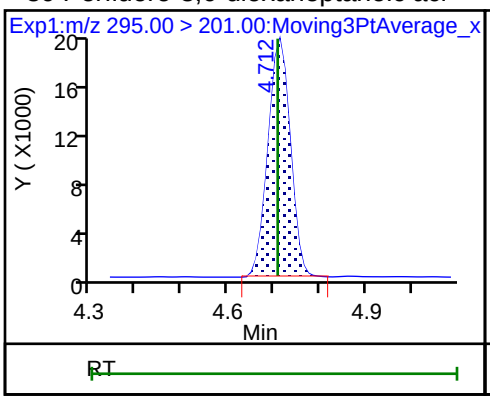
38 1H,1H,2H,2H-perfluorohexanesulfo



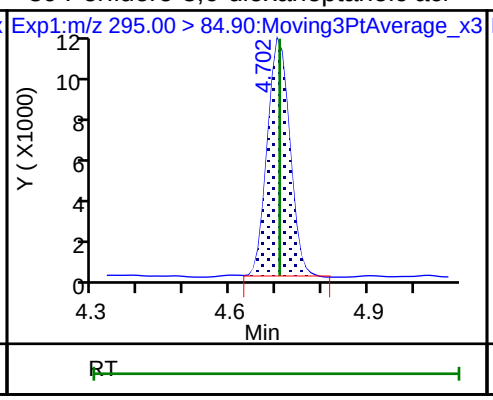
38 1H,1H,2H,2H-perfluorohexanesulfo



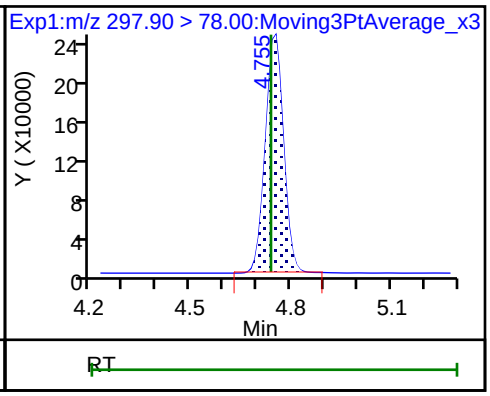
39 Perfluoro-3,6-dioxaheptanoic aci



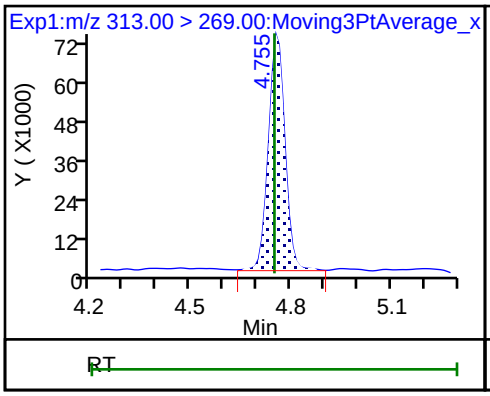
39 Perfluoro-3,6-dioxaheptanoic aci



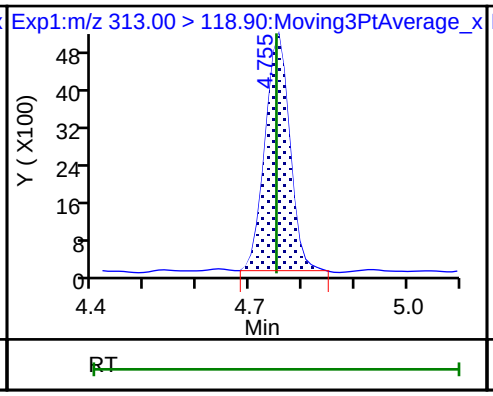
48 FBSA



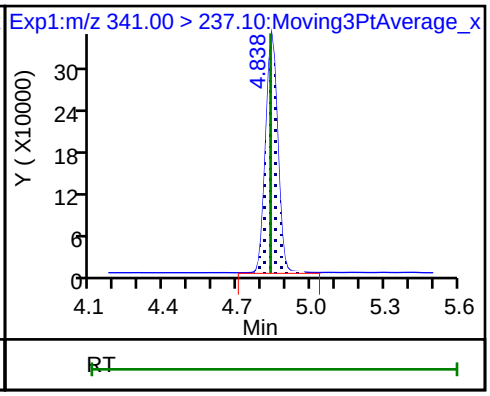
40 Perfluorohexanoic acid



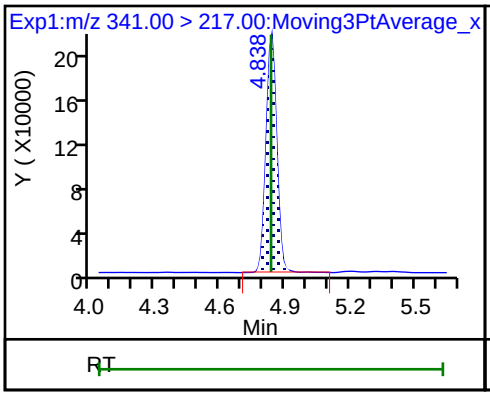
40 Perfluorohexanoic acid



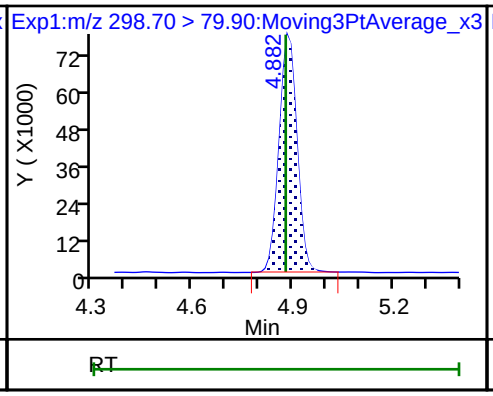
41 5:3 FTCA



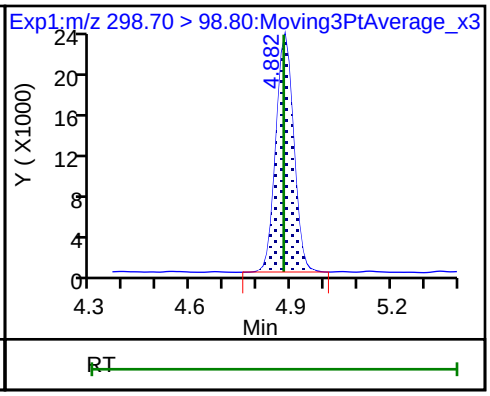
41 5:3 FTCA



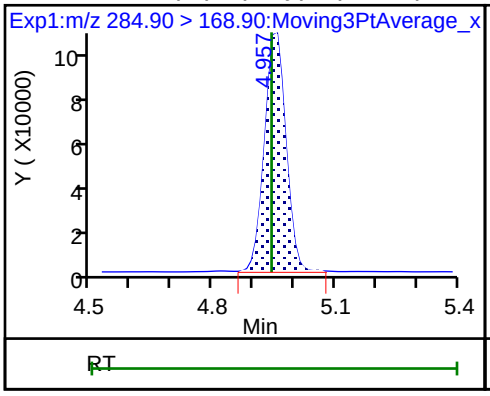
42 Perfluorobutanesulfonic acid



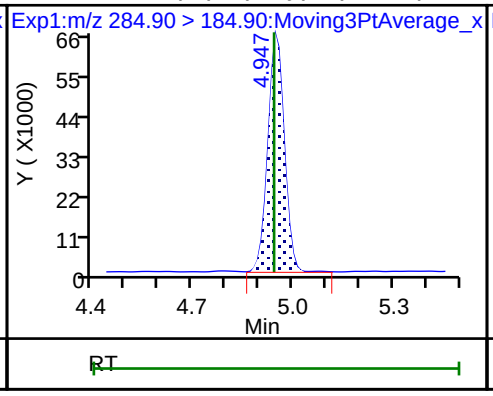
42 Perfluorobutanesulfonic acid



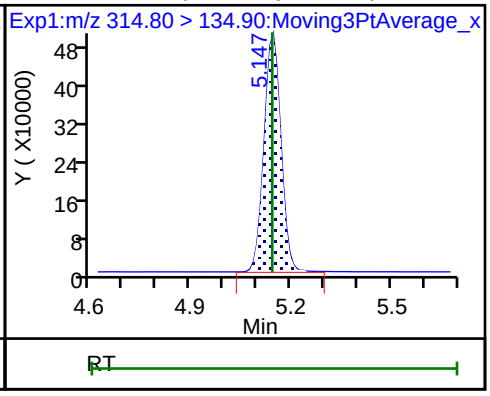
43 Perfluoro(2-propoxypropanoic) ac



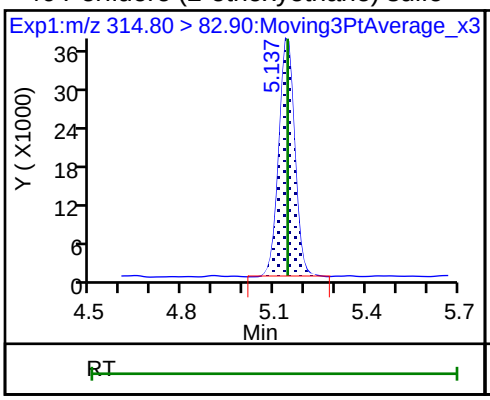
43 Perfluoro(2-propoxypropanoic) ac



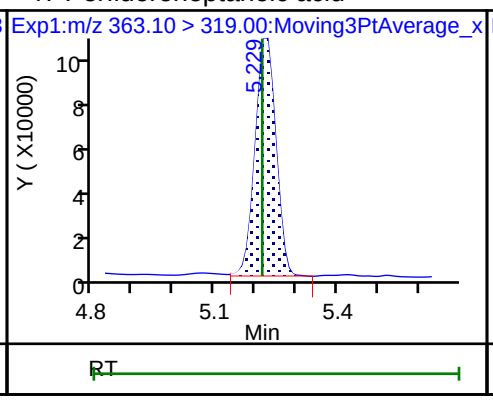
46 Perfluoro (2-ethoxyethane) sulfo



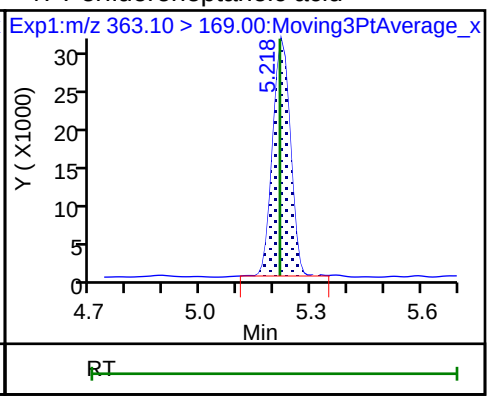
46 Perfluoro (2-ethoxyethane) sulfo



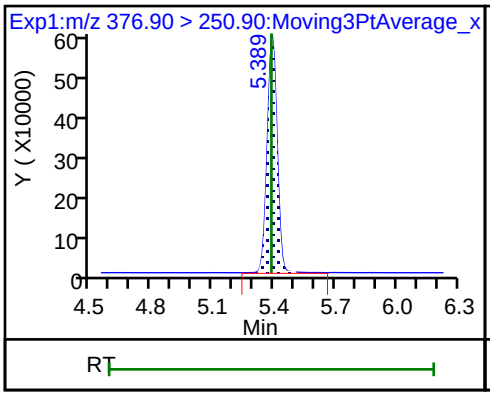
47 Perfluoroheptanoic acid



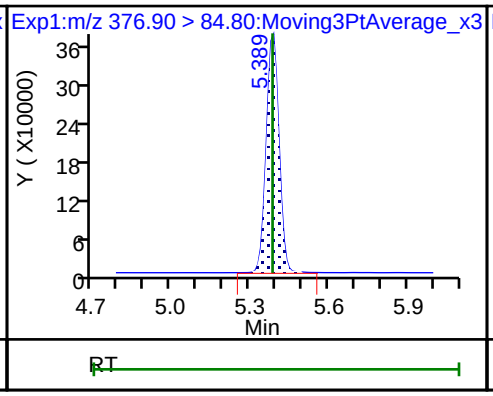
47 Perfluoroheptanoic acid



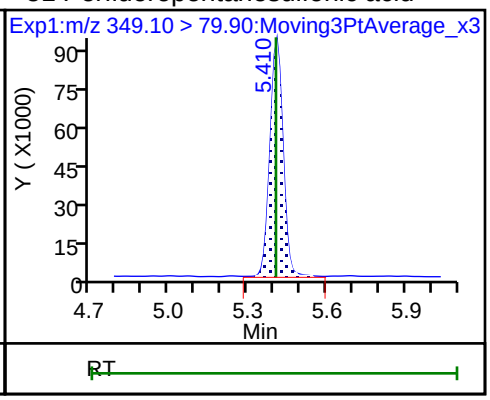
49 DONA



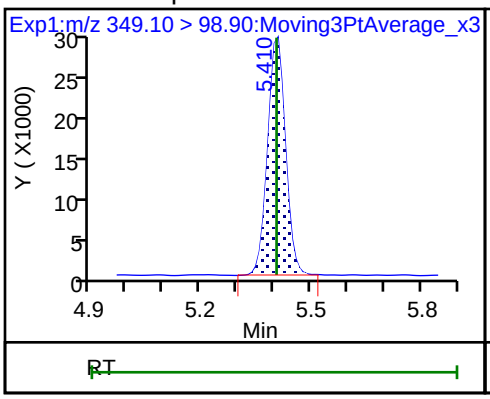
49 DONA



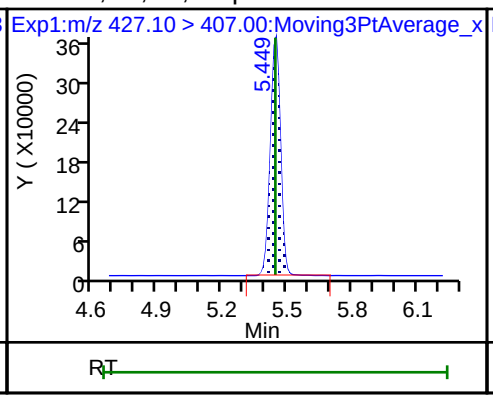
51 Perfluoropentanesulfonic acid



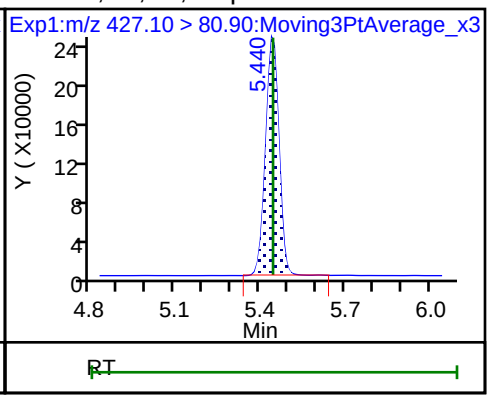
51 Perfluoropentanesulfonic acid



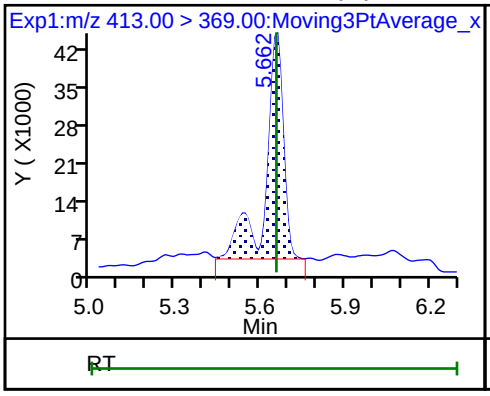
50 1H,1H,2H,2H-perfluorooctanesulfo



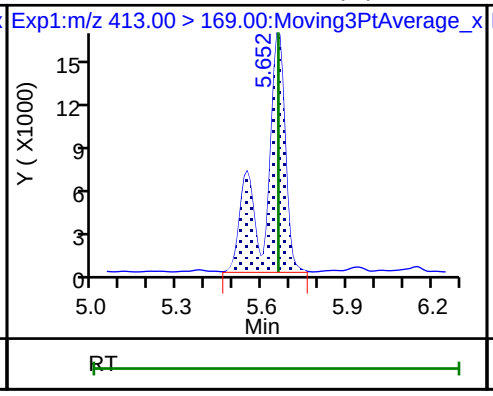
50 1H,1H,2H,2H-perfluorooctanesulfo



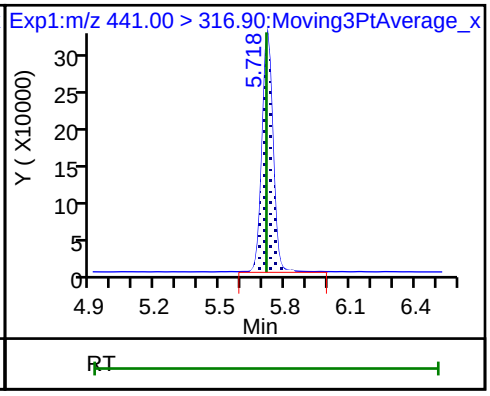
52 Perfluorooctanoic acid (M)



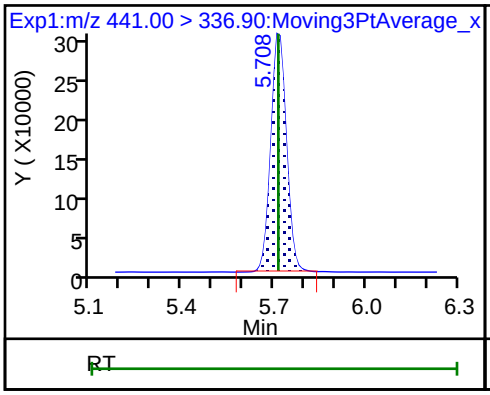
52 Perfluorooctanoic acid (M)



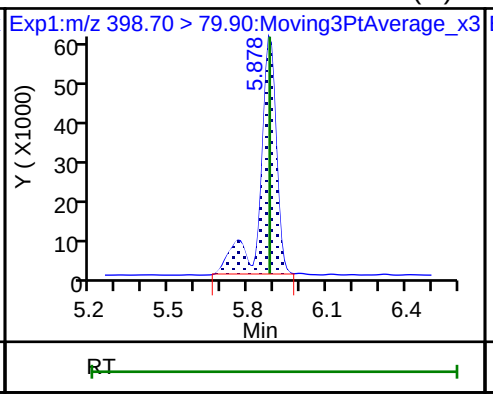
54 7:3 FTCA



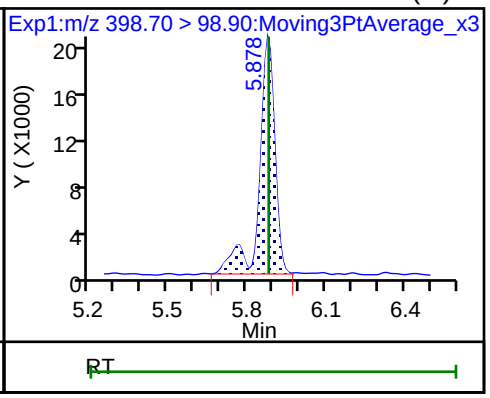
54 7:3 FTCA



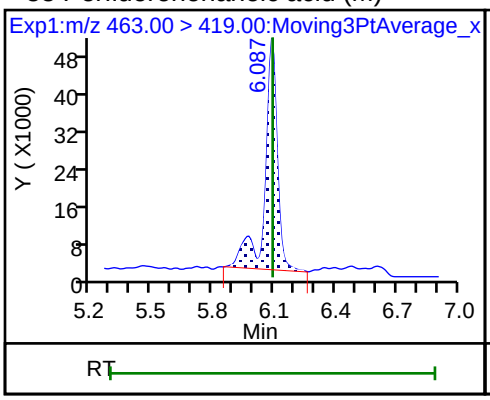
53 Perfluorohexanesulfonic acid (M)



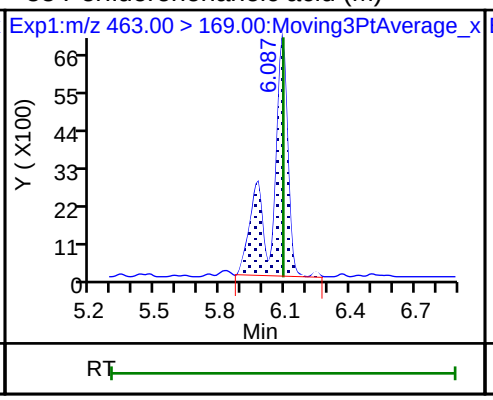
53 Perfluorohexanesulfonic acid (M)



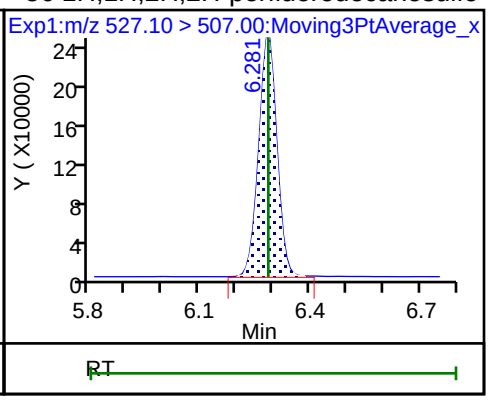
55 Perfluorononanoic acid (M)



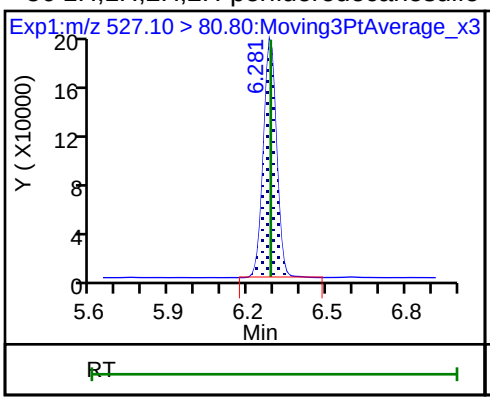
55 Perfluorononanoic acid (M)



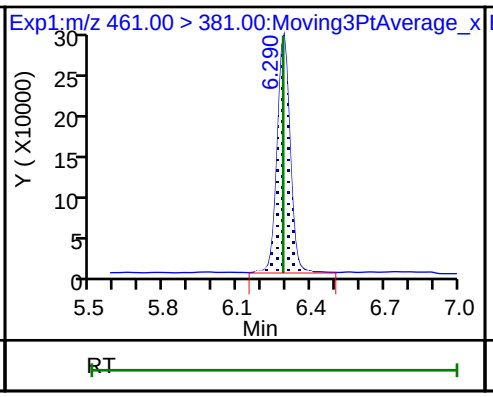
56 1H,1H,2H,2H-perfluorodecanesulfo



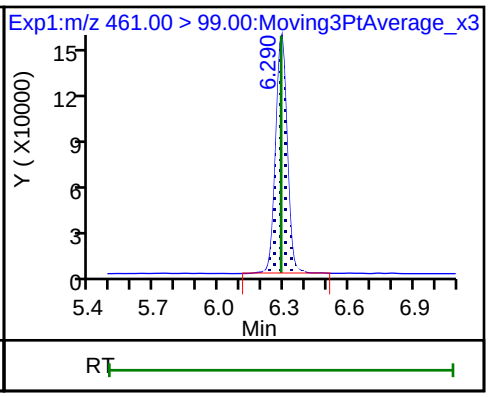
56 1H,1H,2H,2H-perfluorodecanesulfo



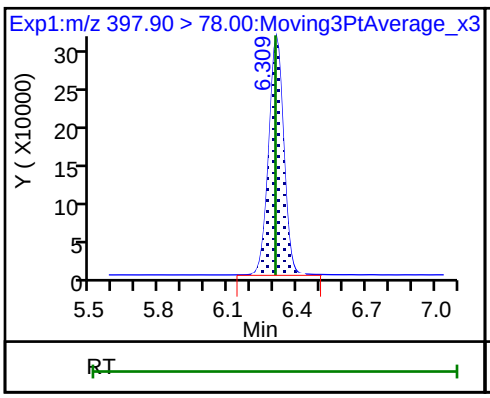
57 PFECHS



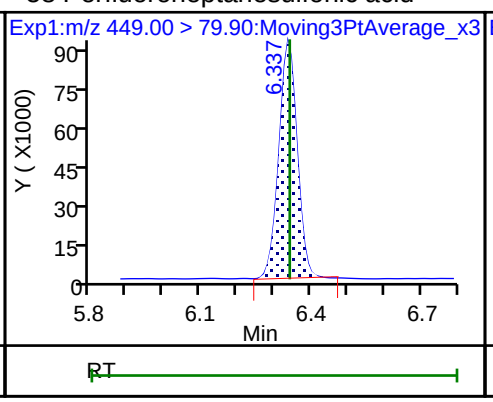
57 PFECHS



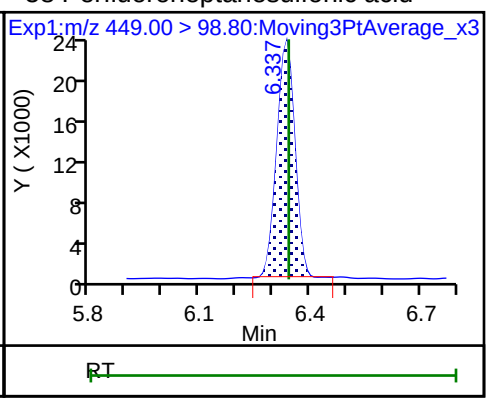
62 FHxSA



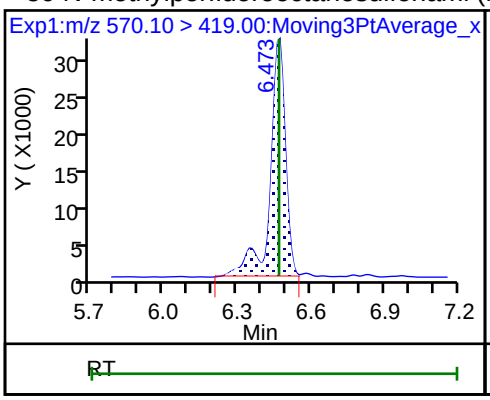
58 Perfluoroheptanesulfonic acid



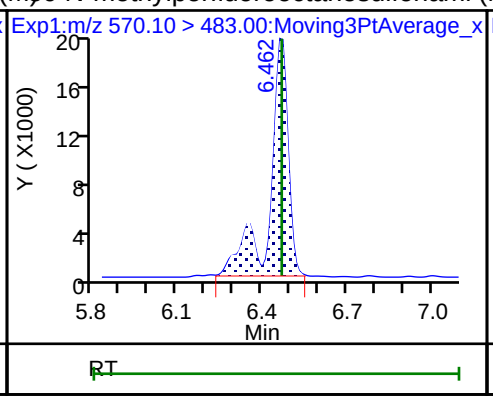
58 Perfluoroheptanesulfonic acid



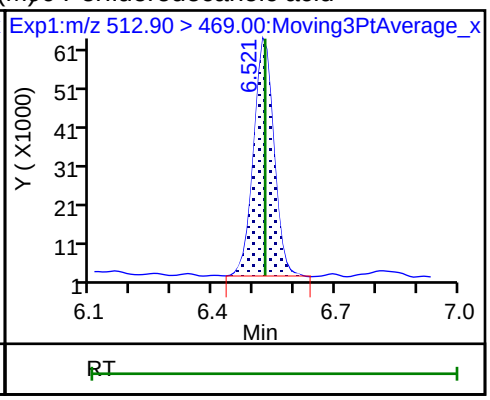
59 N-methylperfluorooctanesulfonami (M)



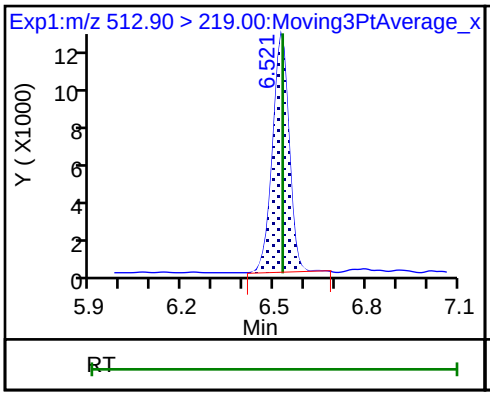
59 N-methylperfluorooctanesulfonami (M)



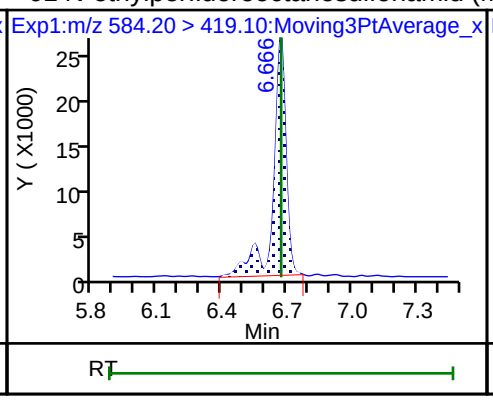
60 Perfluorodecanoic acid



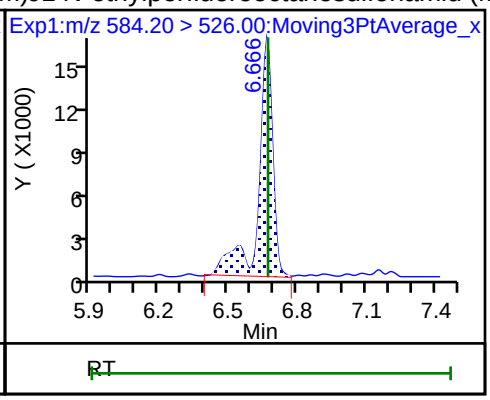
60 Perfluorodecanoic acid



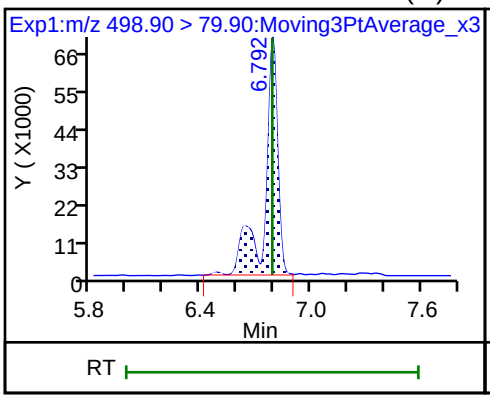
61 N-ethylperfluorooctanesulfonamid (M)



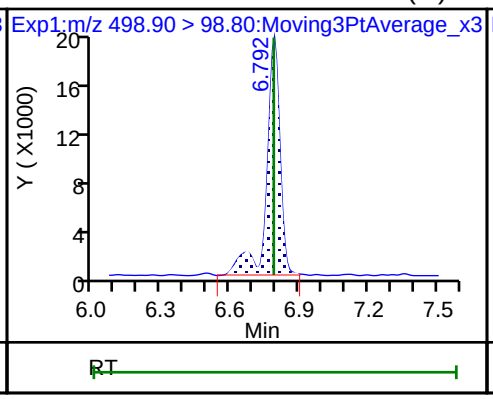
61 N-ethylperfluorooctanesulfonamid (M)



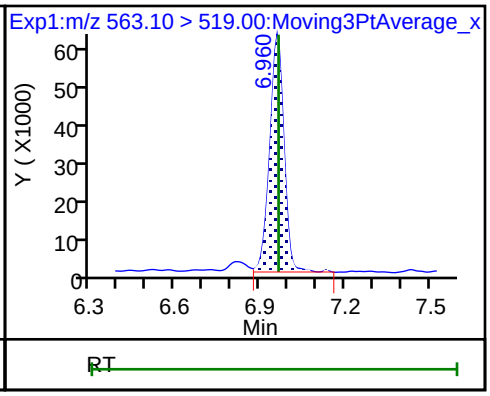
63 Perfluorooctanesulfonic acid (M)



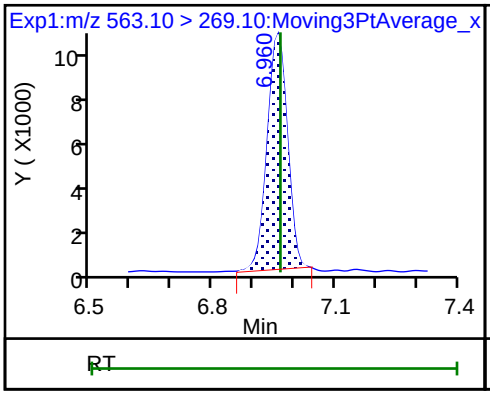
63 Perfluorooctanesulfonic acid (M)



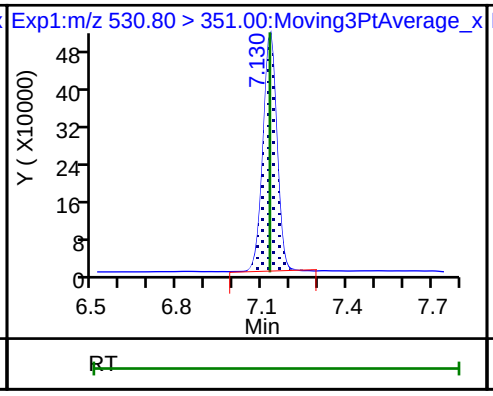
64 Perfluoroundecanoic acid



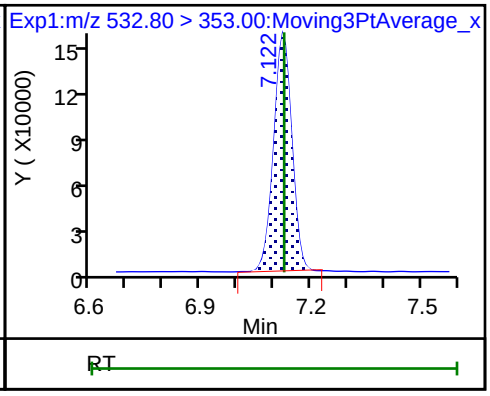
64 Perfluoroundecanoic acid



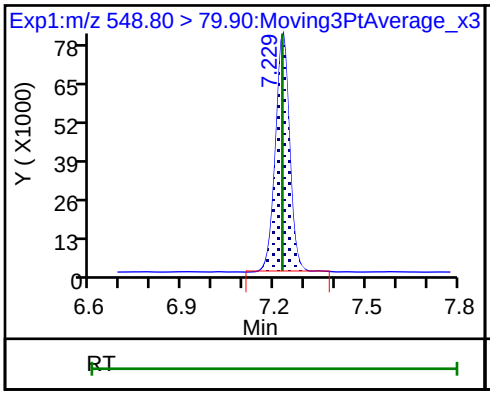
65 9-Chlorohexadecafluoro-3-oxanona



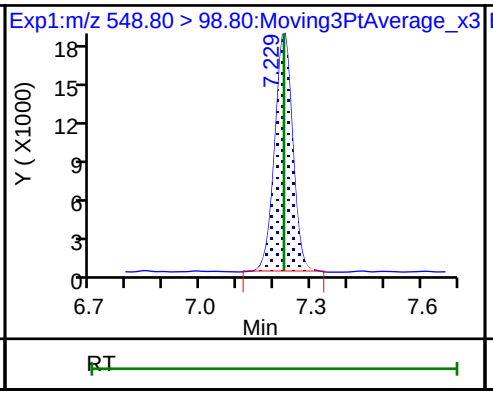
65 9-Chlorohexadecafluoro-3-oxanona



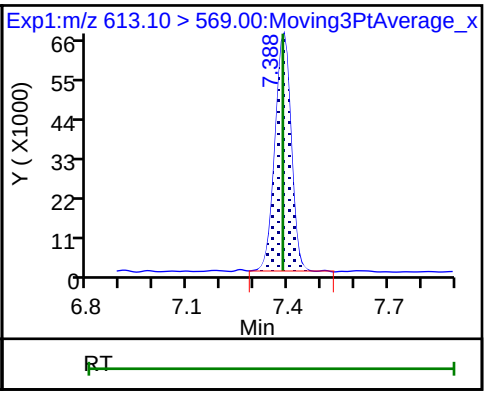
66 Perfluorononanesulfonic acid



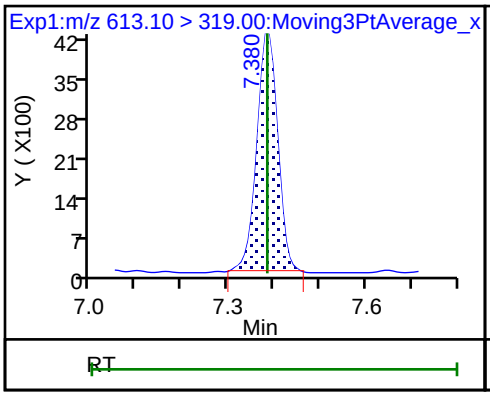
66 Perfluorononanesulfonic acid



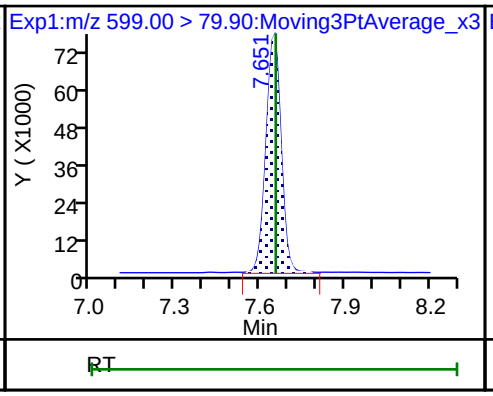
67 Perfluorododecanoic acid



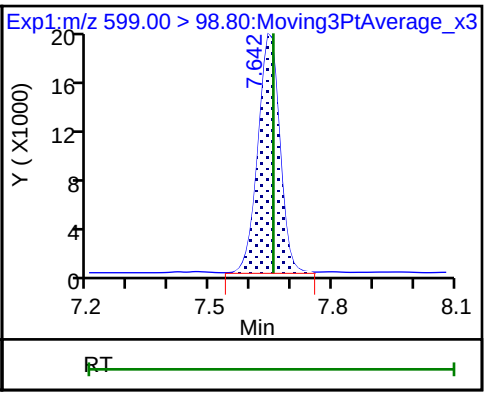
67 Perfluorododecanoic acid



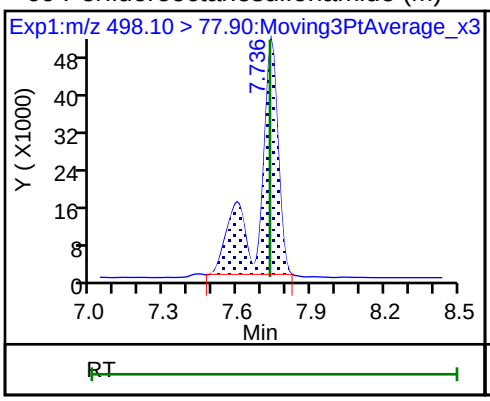
68 Perfluorodecanesulfonic acid



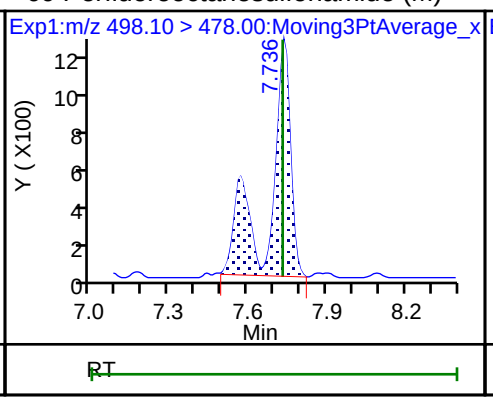
68 Perfluorodecanesulfonic acid



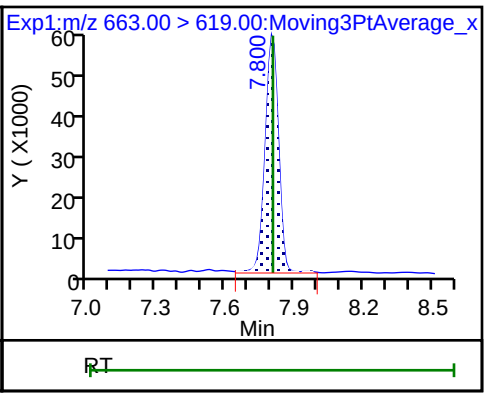
69 Perfluorooctanesulfonamide (M)



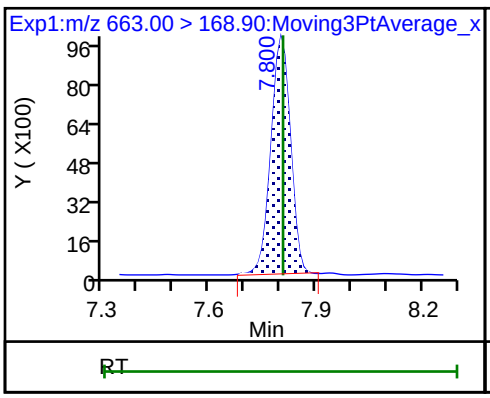
69 Perfluorooctanesulfonamide (M)



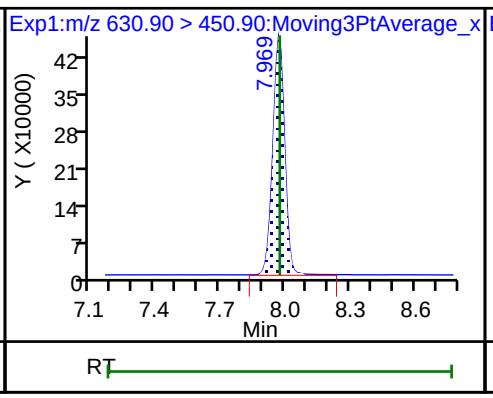
70 Perfluorotridecanoic acid



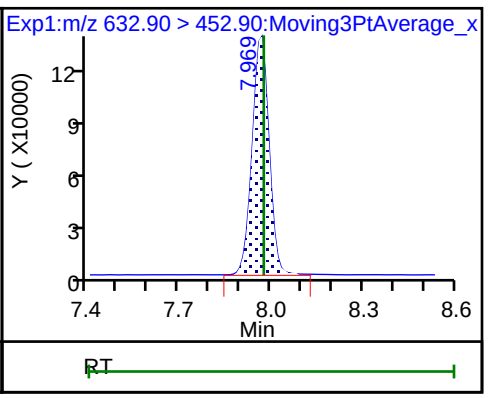
70 Perfluorotridecanoic acid



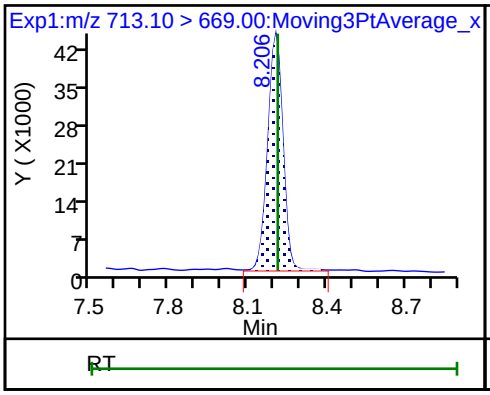
71 11-Chloroeicosafluoro-3-oxaundec



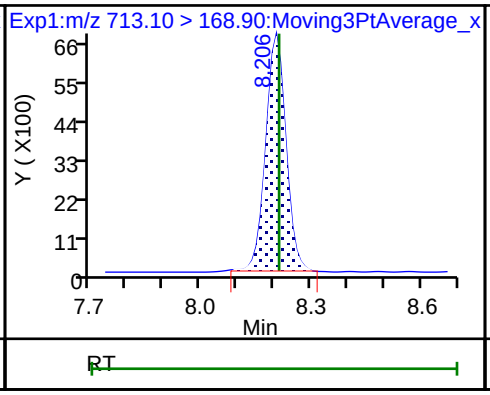
71 11-Chloroeicosafluoro-3-oxaundec



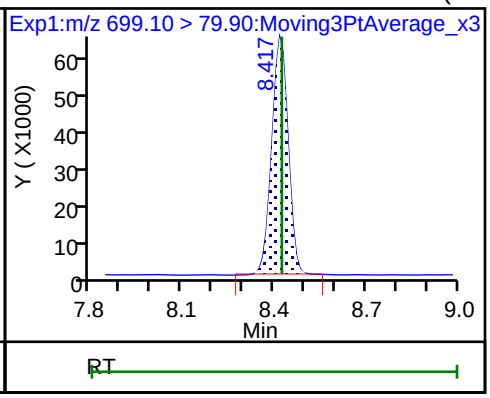
72 Perfluorotetradecanoic acid



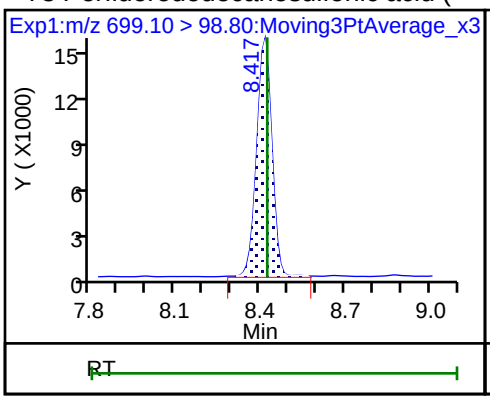
72 Perfluorotetradecanoic acid



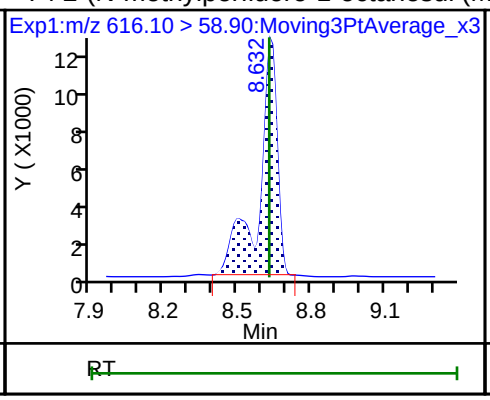
73 Perfluorododecanesulfonic acid (



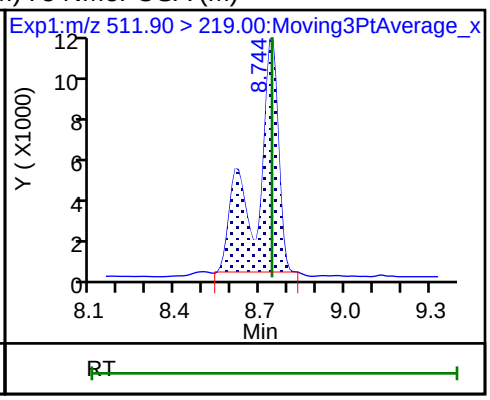
73 Perfluorododecanesulfonic acid (



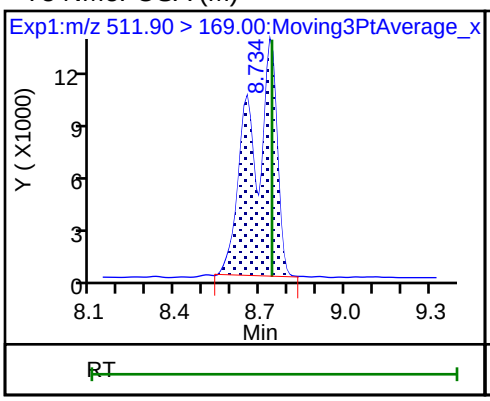
74 2-(N-methylperfluoro-1-octanesul (M)



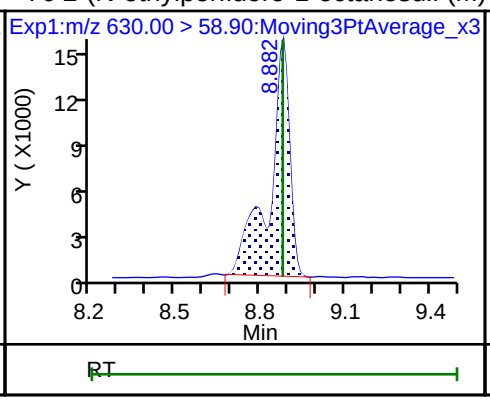
75 NMeFOSA (M)



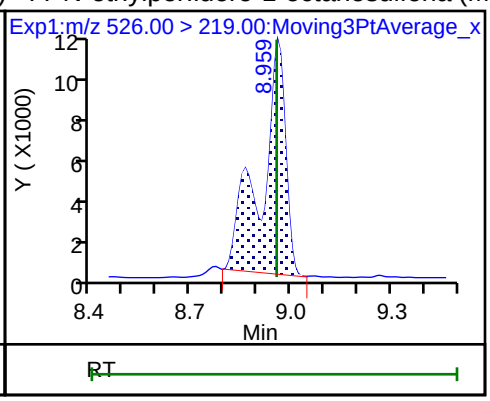
75 NMeFOSA (M)



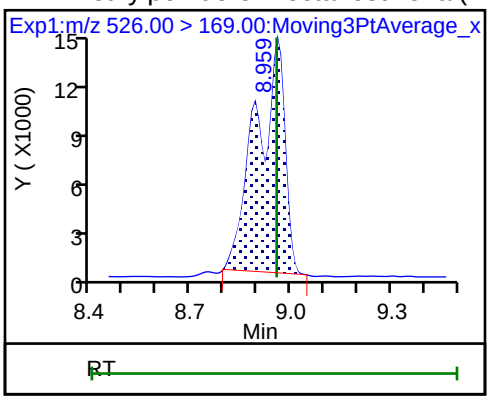
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

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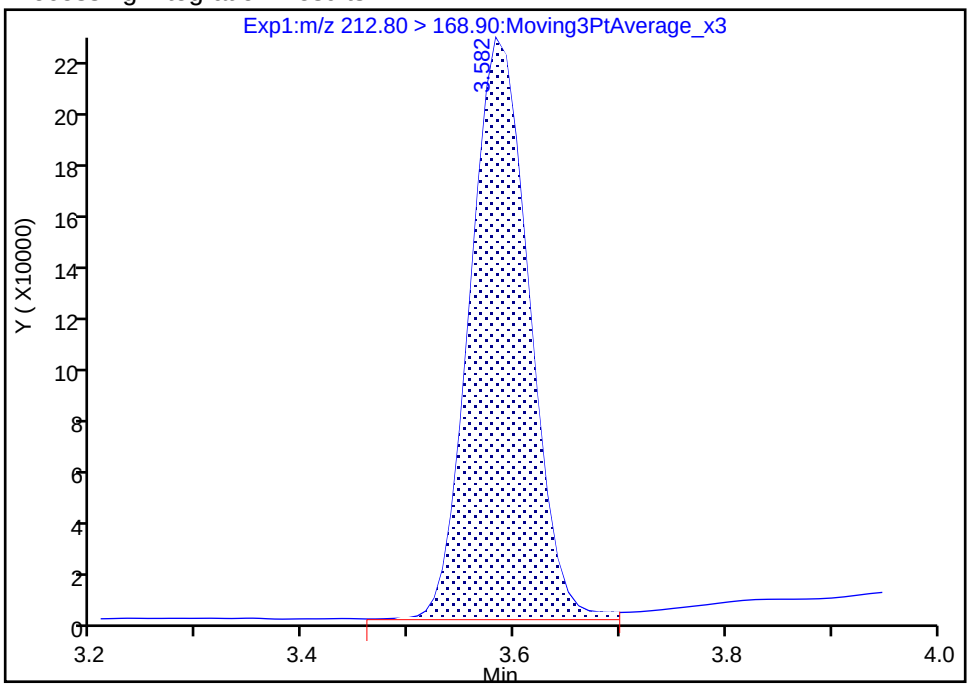
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

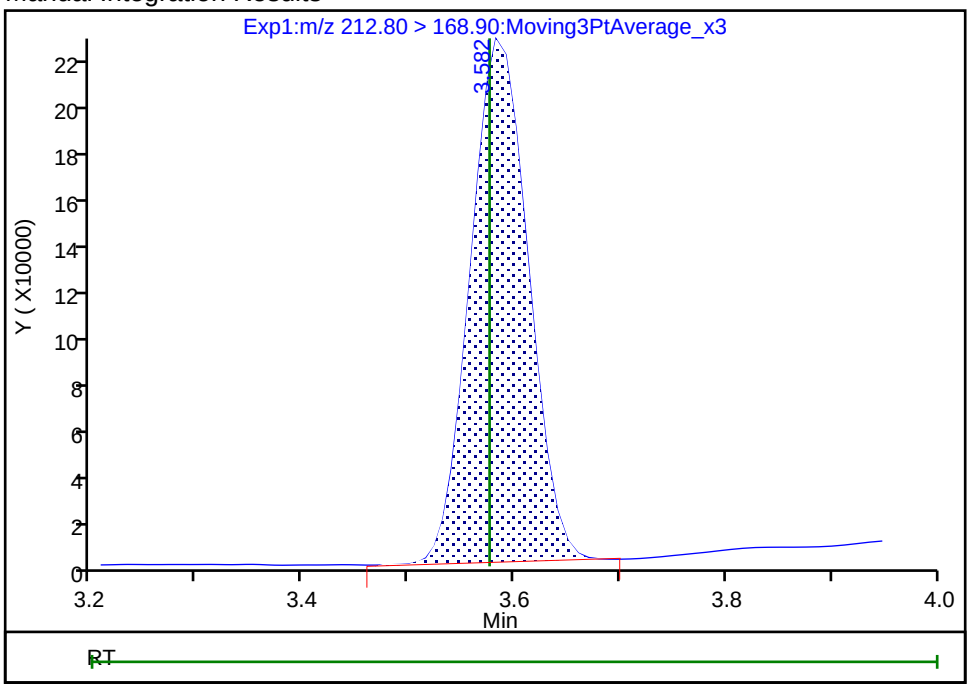
Processing Integration Results

RT: 3.58
Area: 879930
Amount: 0.502884
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 857853
Amount: 0.494644
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:18:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

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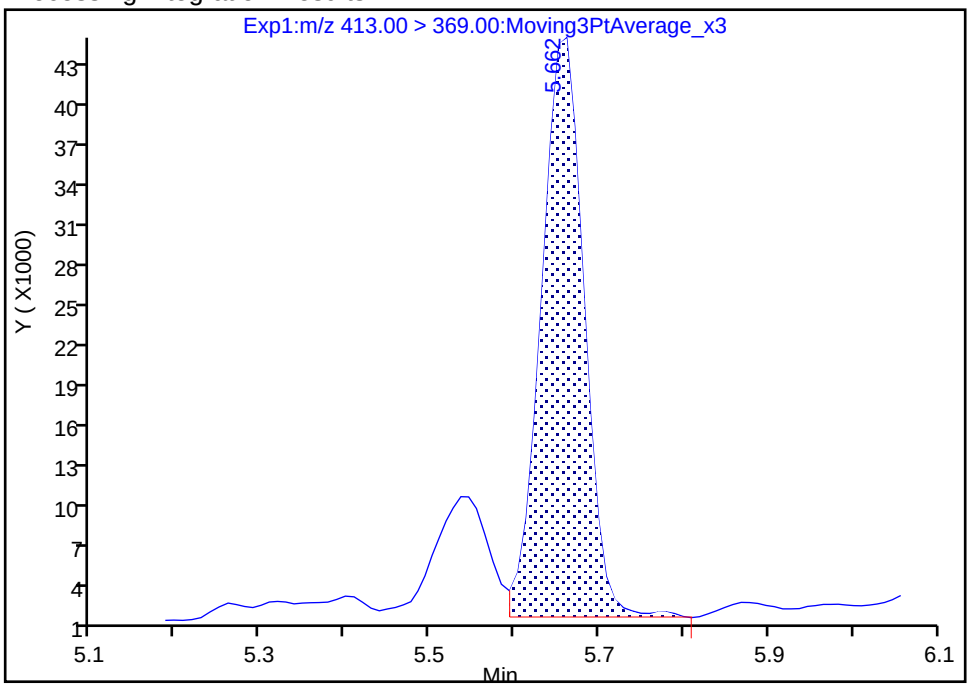
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Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

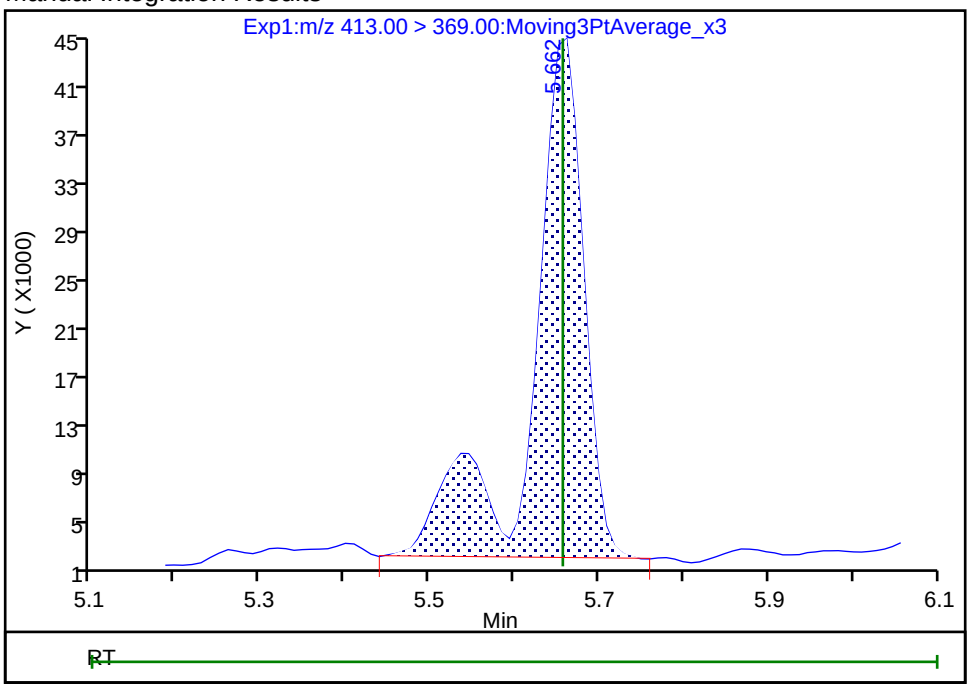
Processing Integration Results

RT: 5.66
Area: 146941
Amount: 0.121553
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 178214
Amount: 0.126974
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:20:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

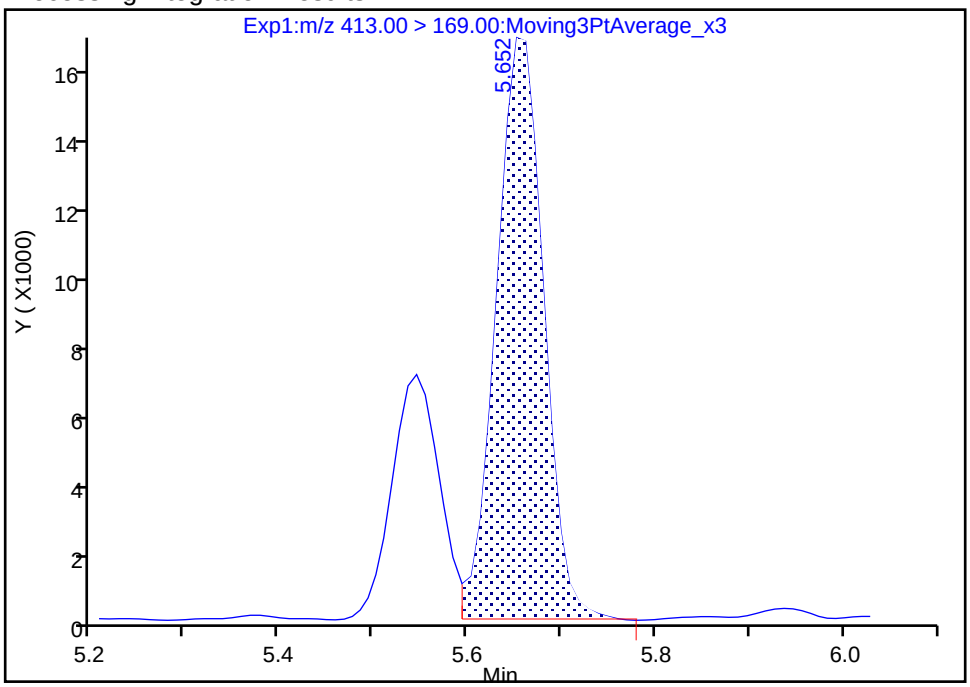
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

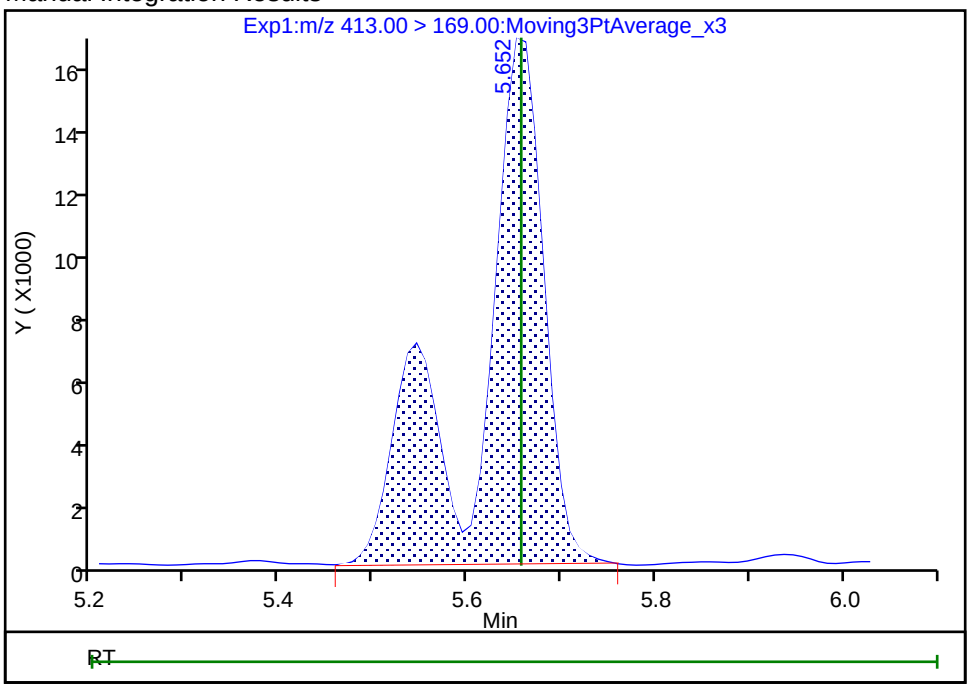
Processing Integration Results

RT: 5.65
Area: 56643
Amount: 0.121553
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 80092
Amount: 0.126974
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:20:11 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

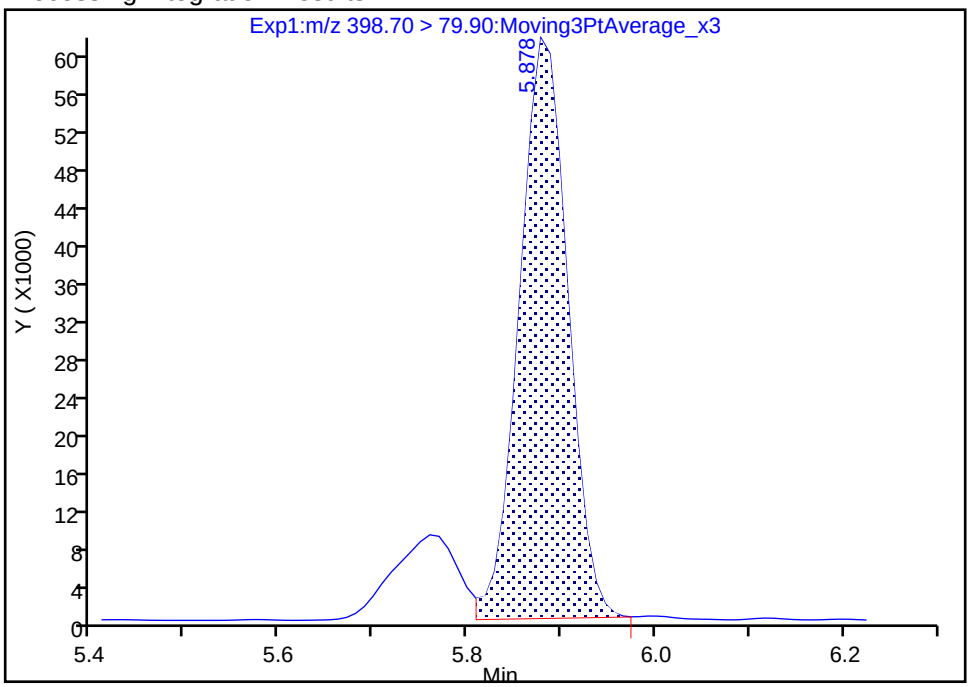
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

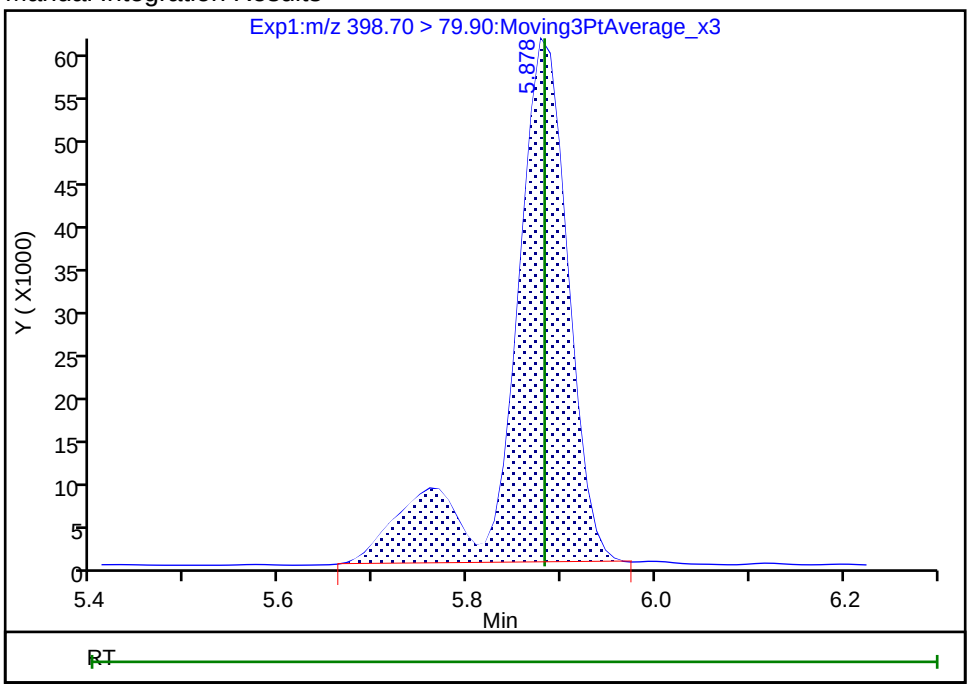
Processing Integration Results

RT: 5.88
Area: 217384
Amount: 0.104914
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 257991
Amount: 0.110218
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:20:25 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

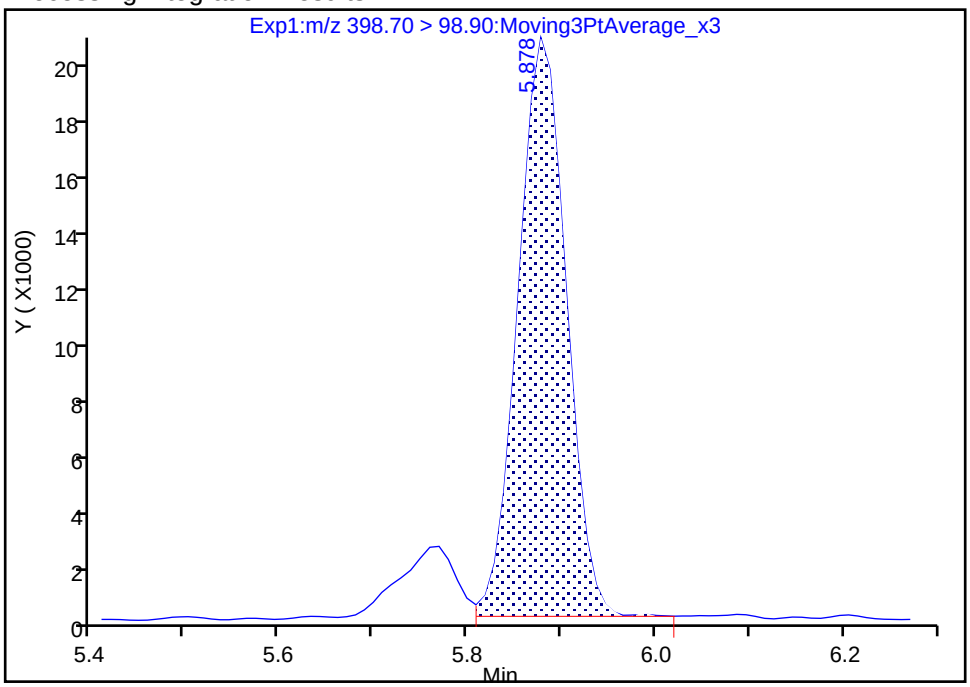
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

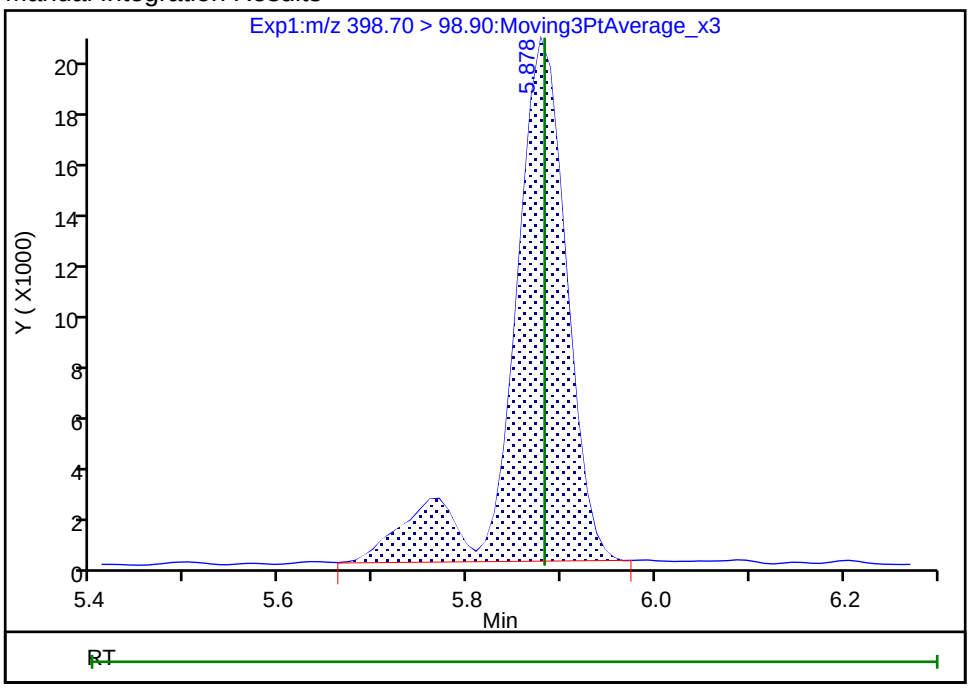
Processing Integration Results

RT: 5.88
Area: 71513
Amount: 0.104914
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 81105
Amount: 0.110218
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:20:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

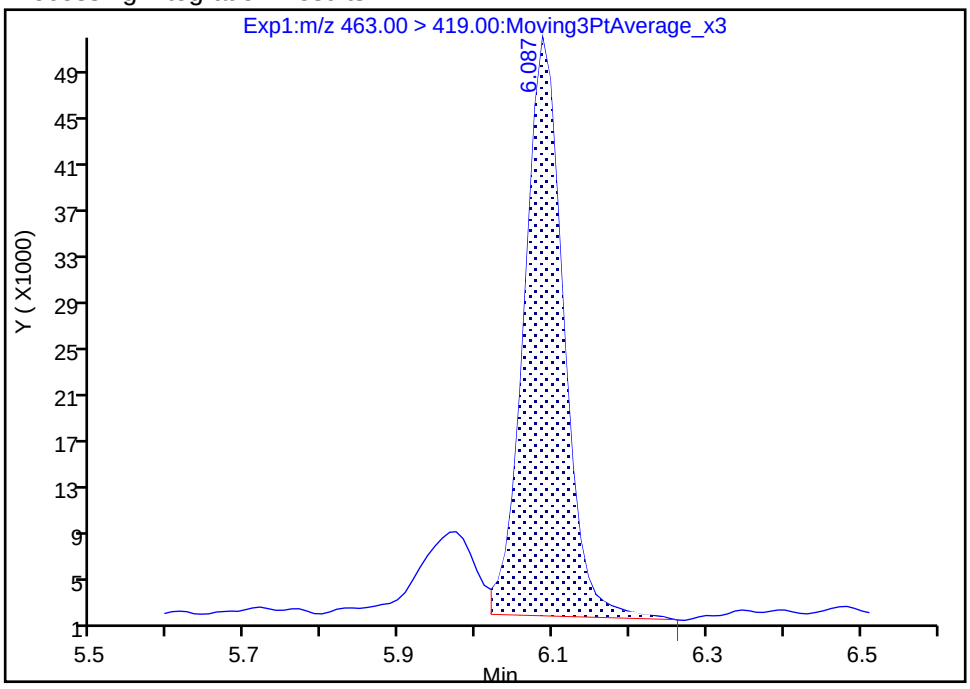
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

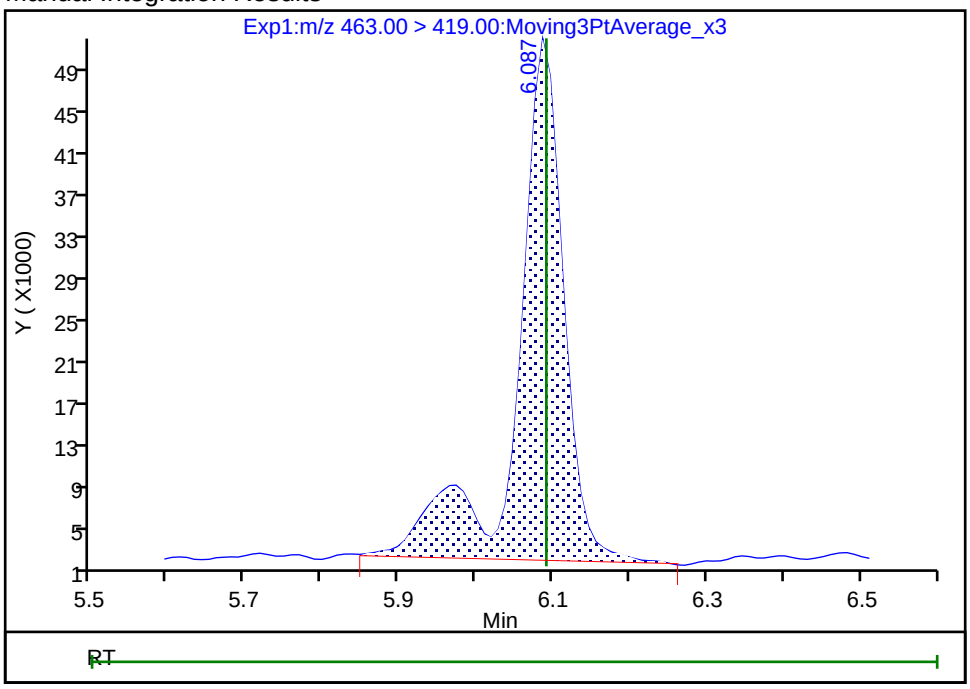
Processing Integration Results

RT: 6.09
Area: 177088
Amount: 0.134940
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 209884
Amount: 0.139978
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:20:51 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

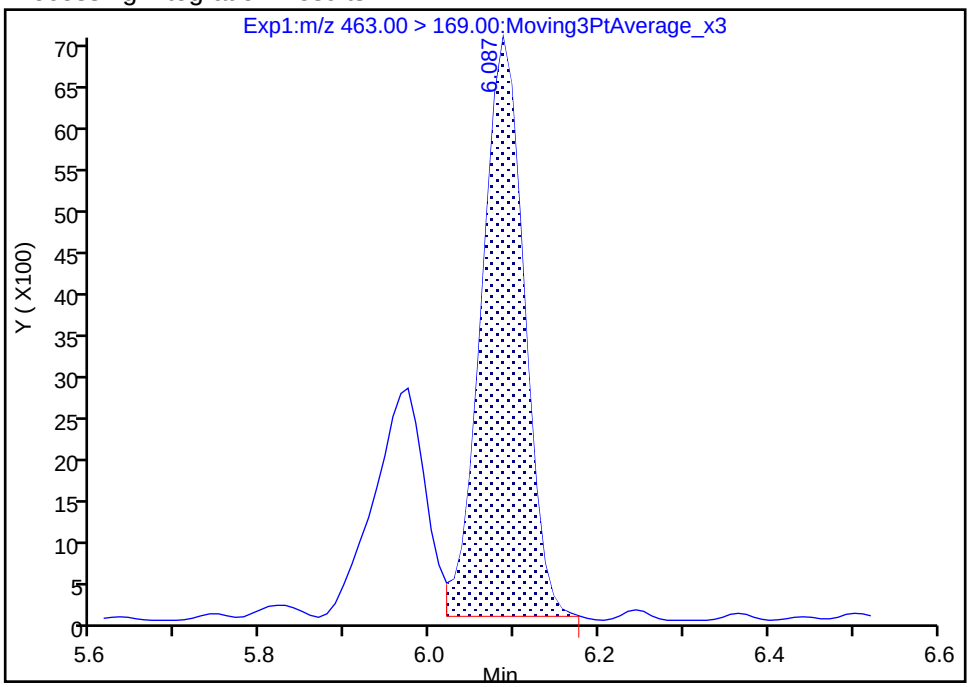
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Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

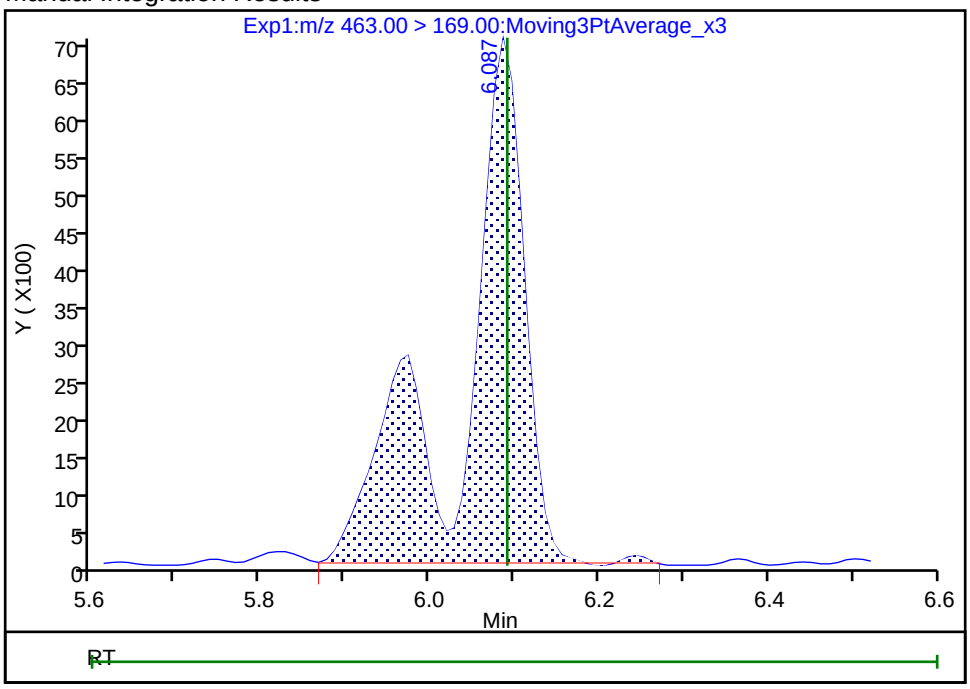
Processing Integration Results

RT: 6.09
Area: 24323
Amount: 0.134940
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 36301
Amount: 0.139978
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:21:06 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

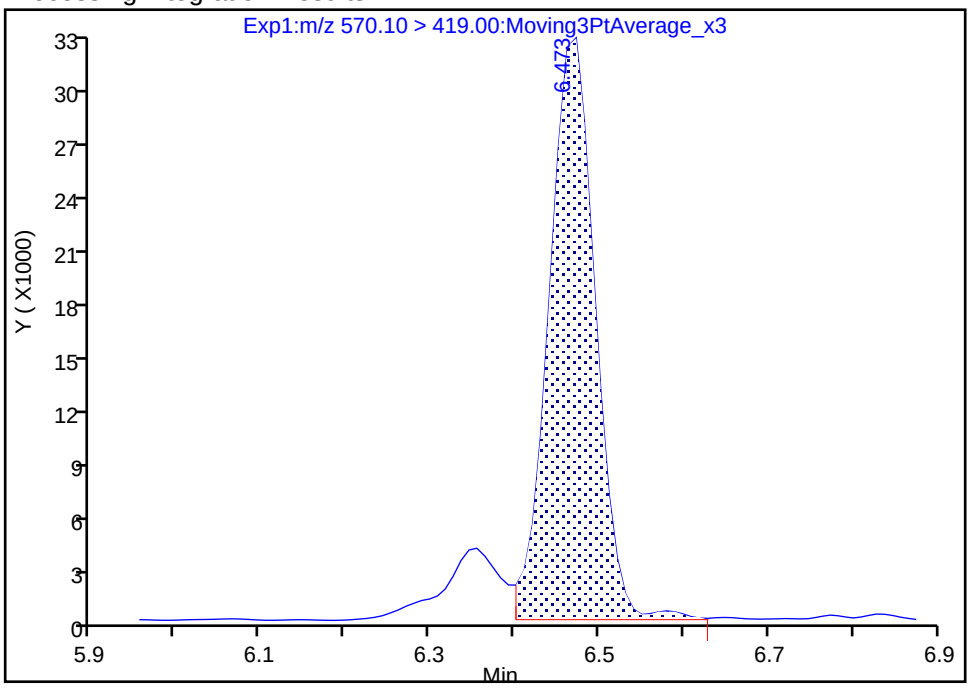
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Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

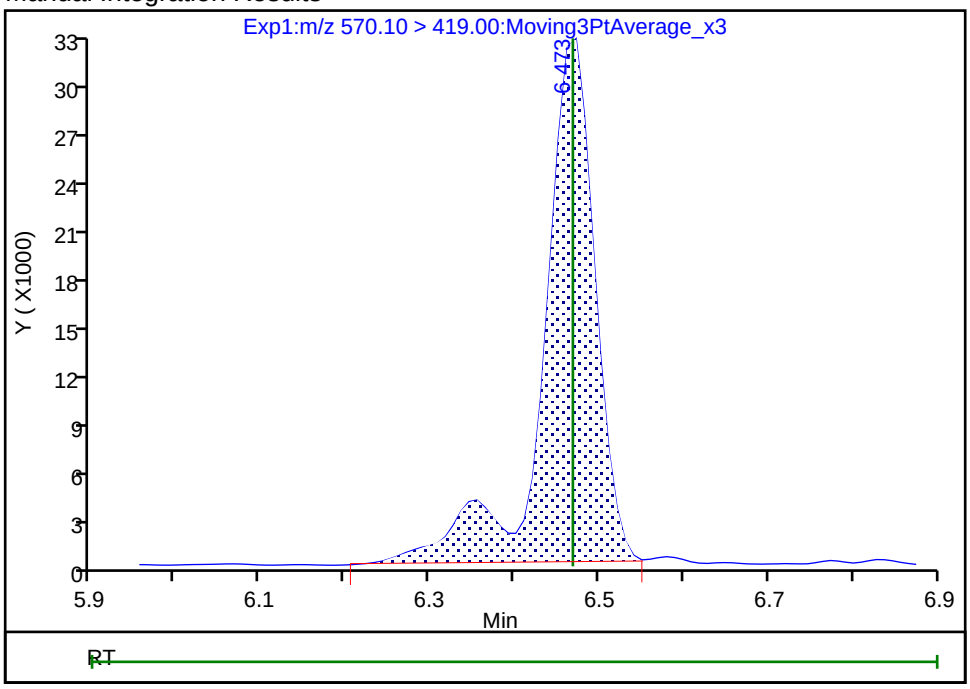
Processing Integration Results

RT: 6.47
Area: 122150
Amount: 0.114488
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 137140
Amount: 0.117719
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:21:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

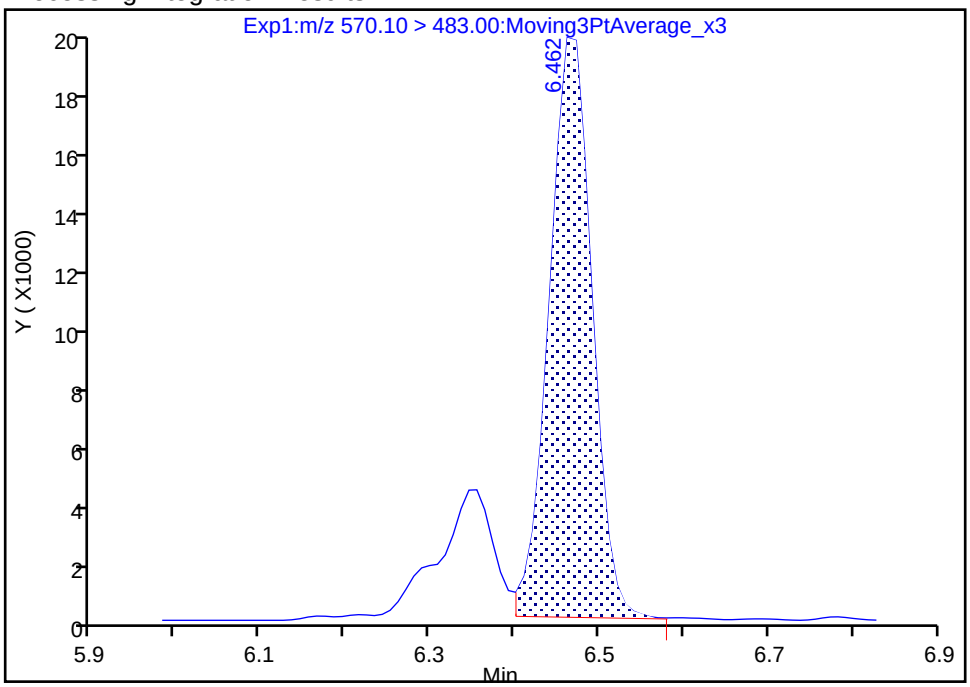
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

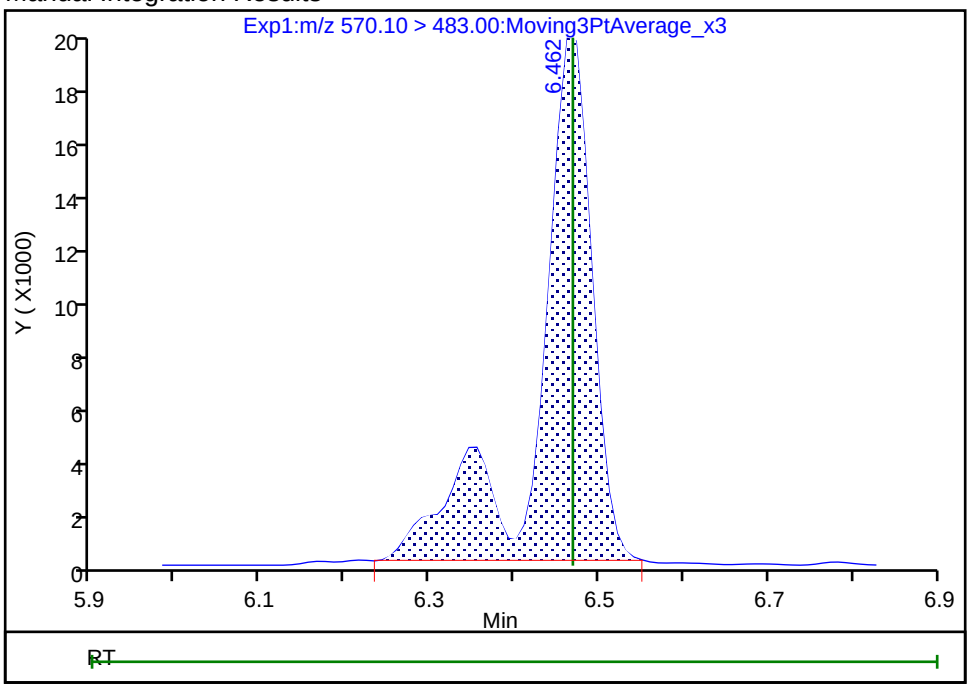
Processing Integration Results

RT: 6.46
Area: 67813
Amount: 0.114488
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 85379
Amount: 0.117719
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:21:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

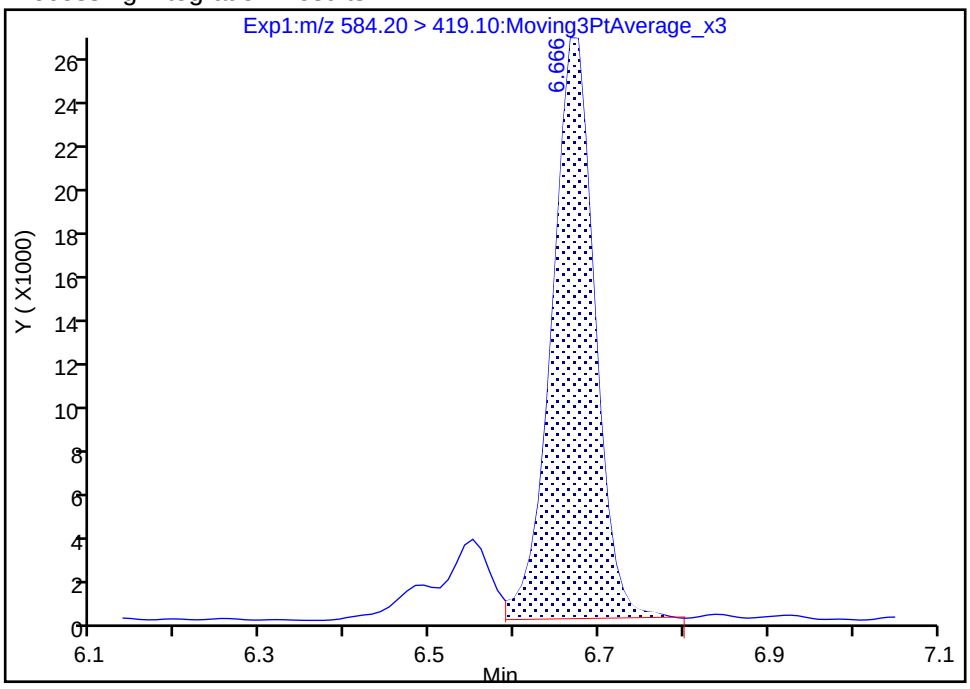
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

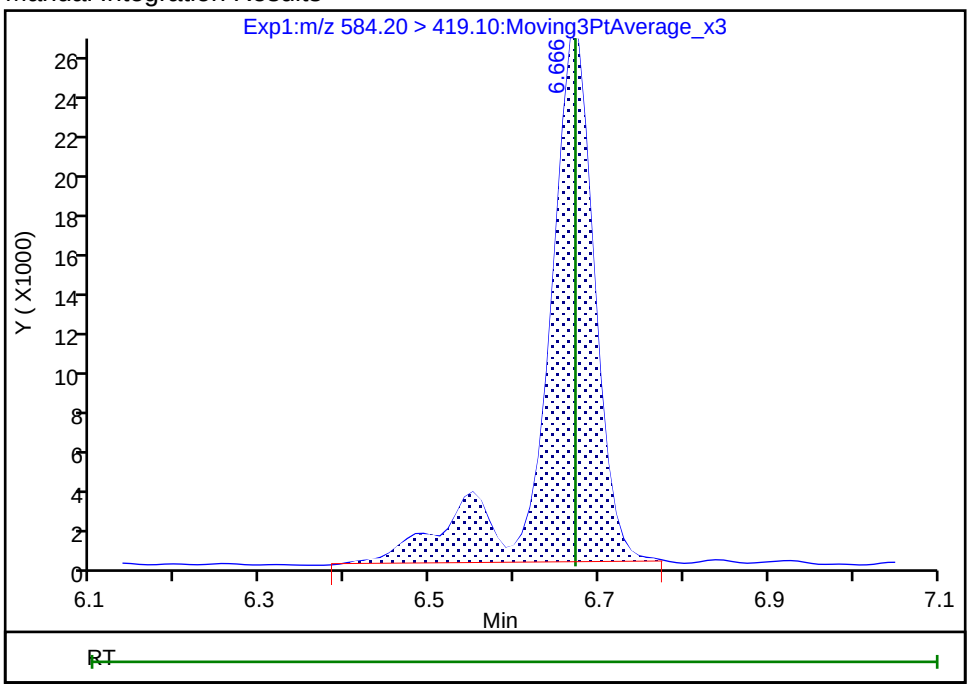
Processing Integration Results

RT: 6.67
Area: 93168
Amount: 0.118726
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 107728
Amount: 0.124727
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:21:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

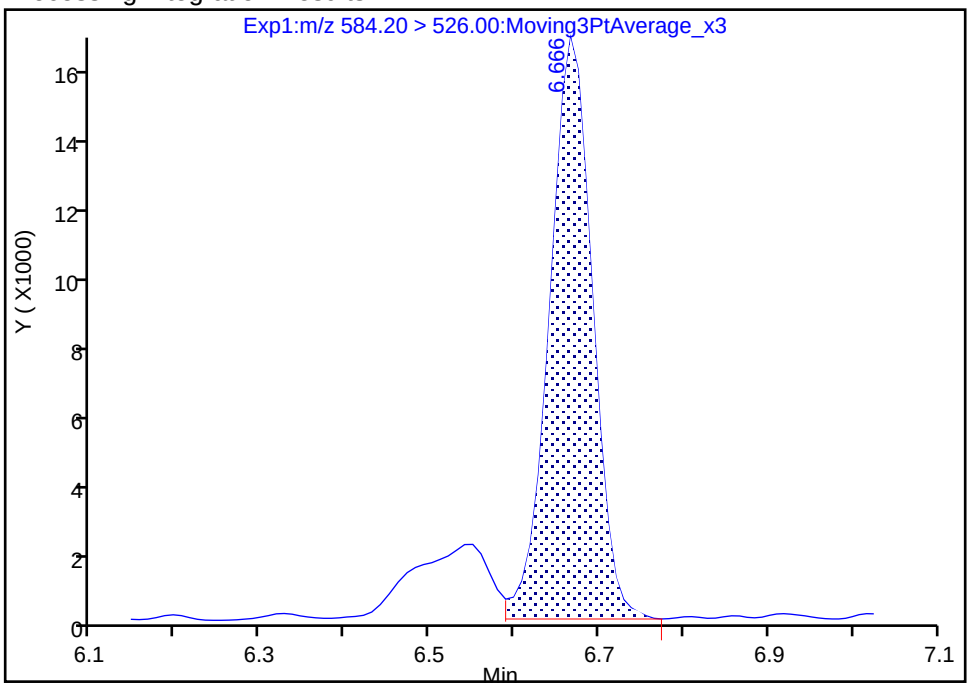
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

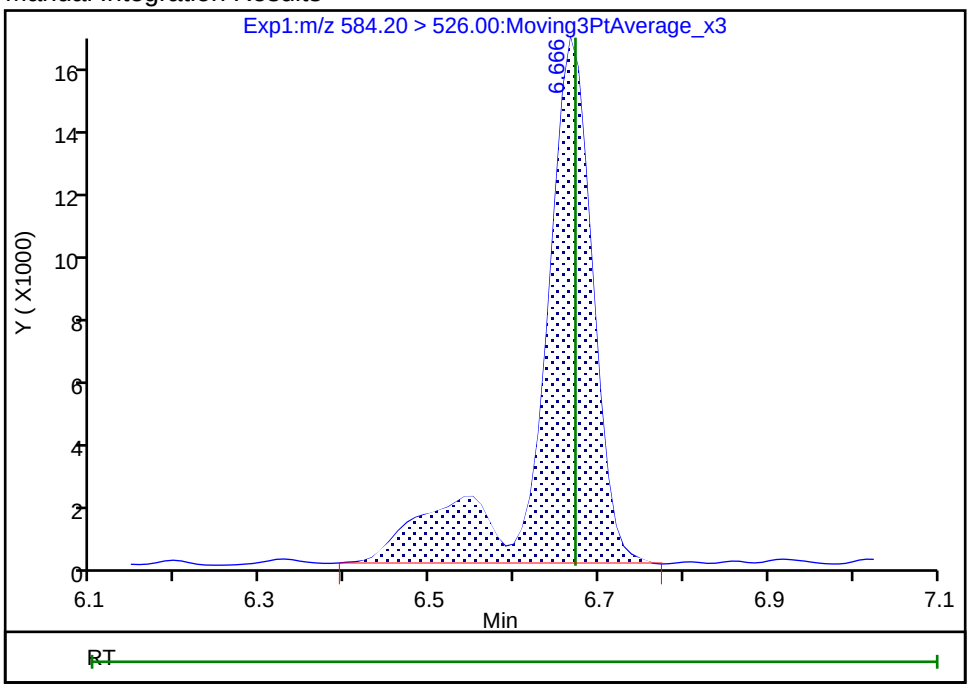
Processing Integration Results

RT: 6.67
Area: 59271
Amount: 0.118726
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 72456
Amount: 0.124727
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:22:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

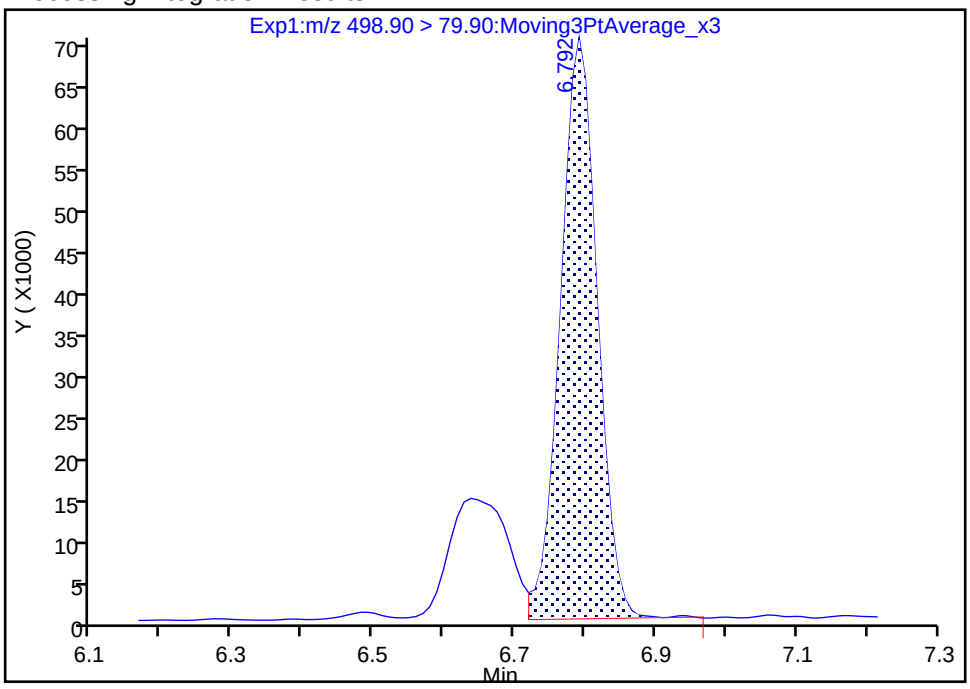
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

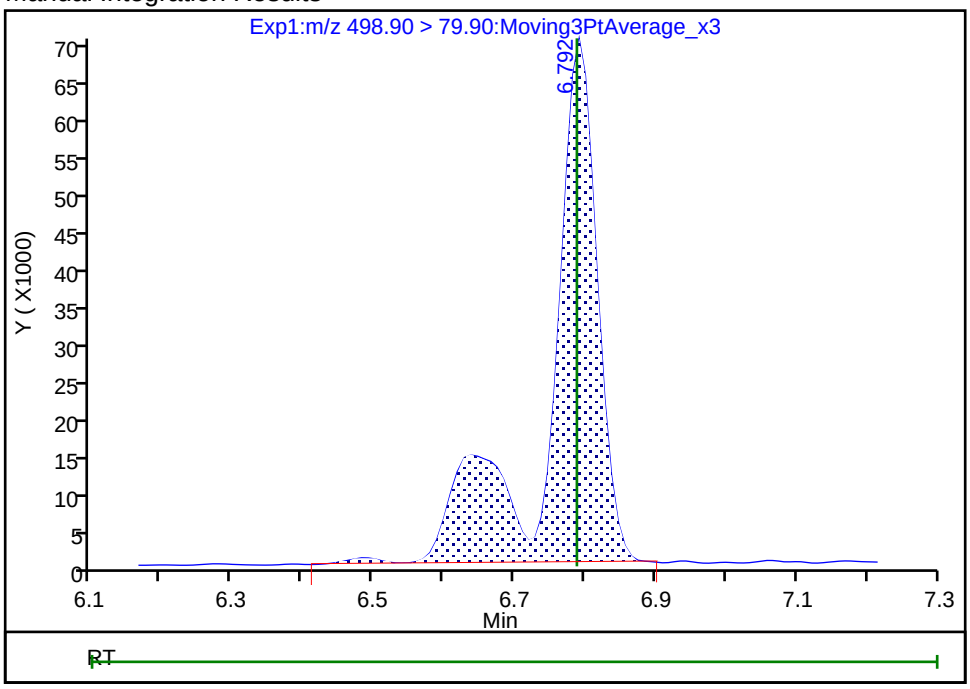
Processing Integration Results

RT: 6.79
Area: 253821
Amount: 0.106191
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 338296
Amount: 0.117133
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:22:19 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

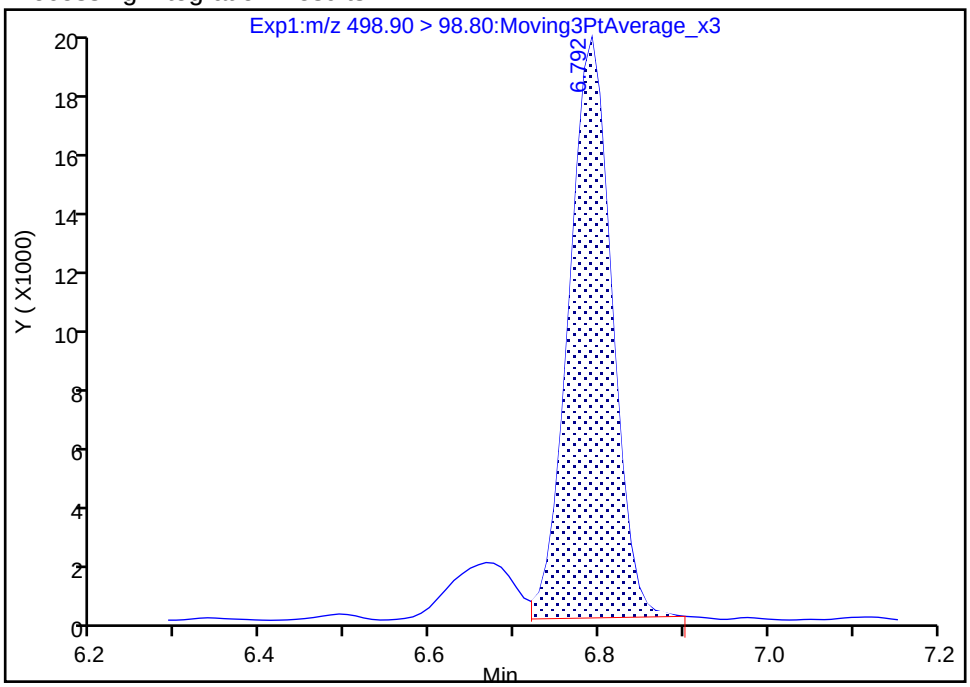
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

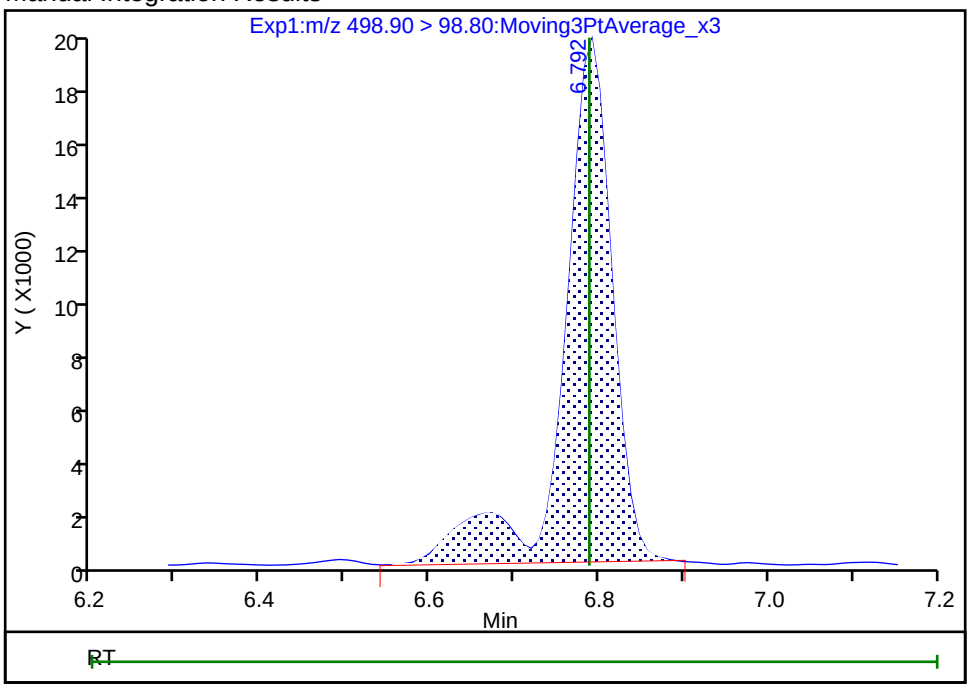
Processing Integration Results

RT: 6.79
Area: 66726
Amount: 0.106191
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 76291
Amount: 0.117133
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:22:27 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

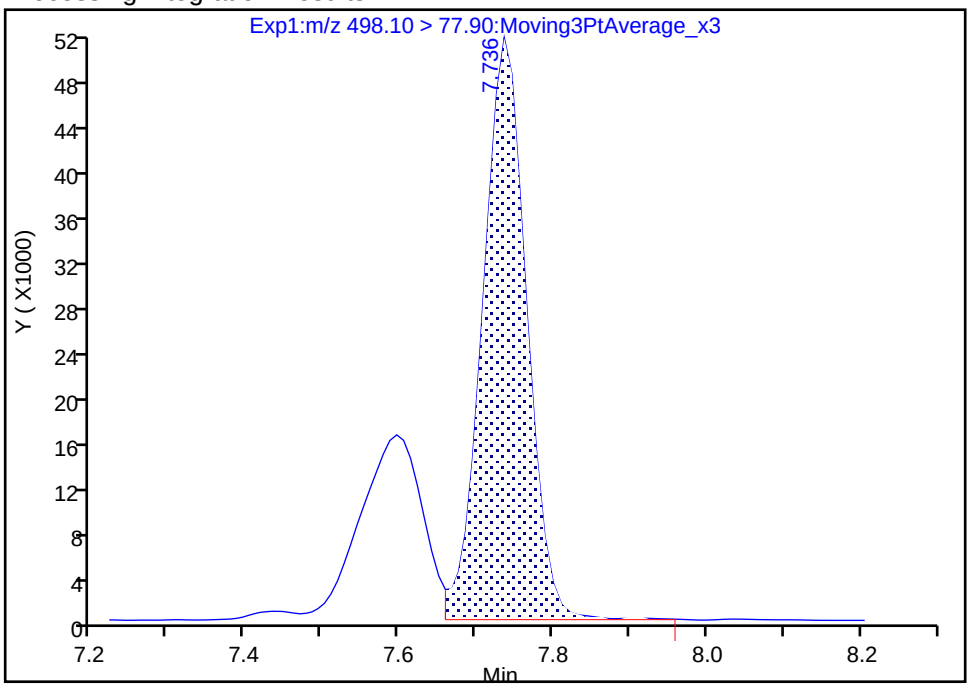
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

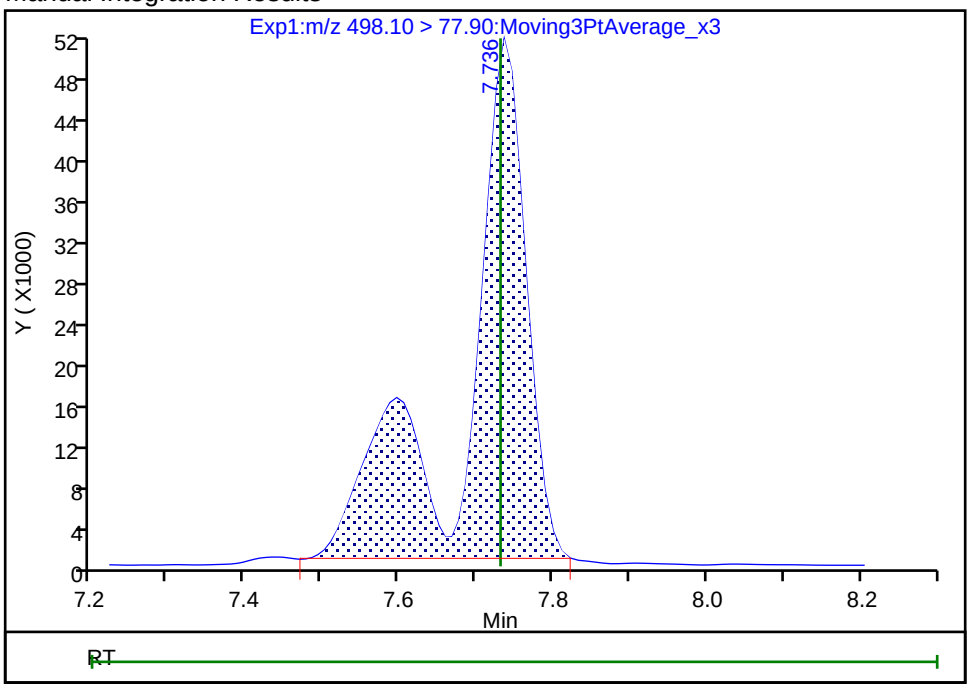
Processing Integration Results

RT: 7.74
Area: 201897
Amount: 0.106357
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 279292
Amount: 0.116439
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:22:46 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

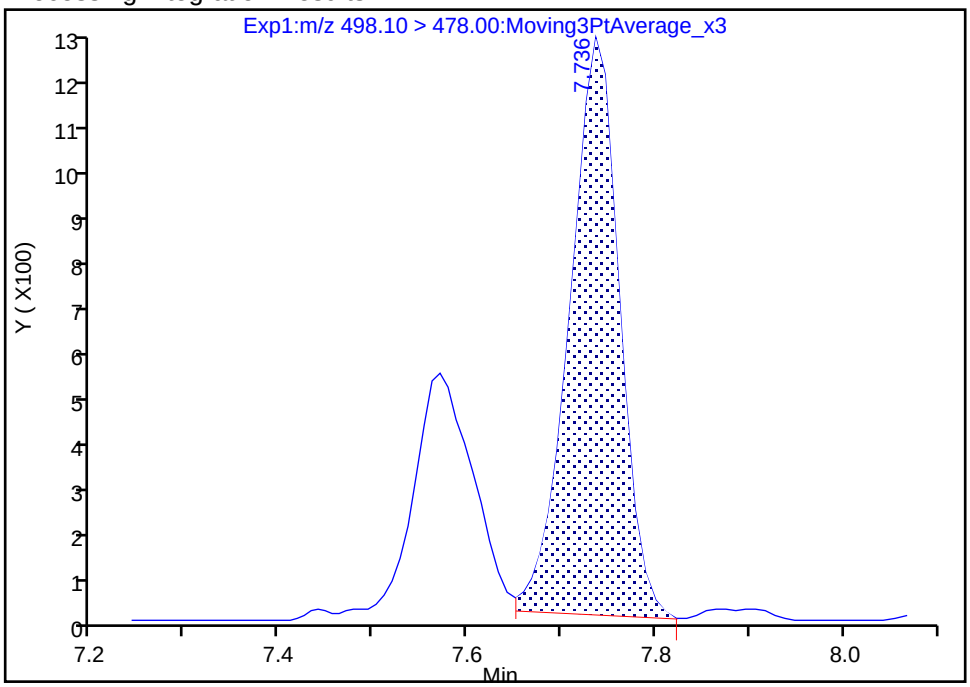
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

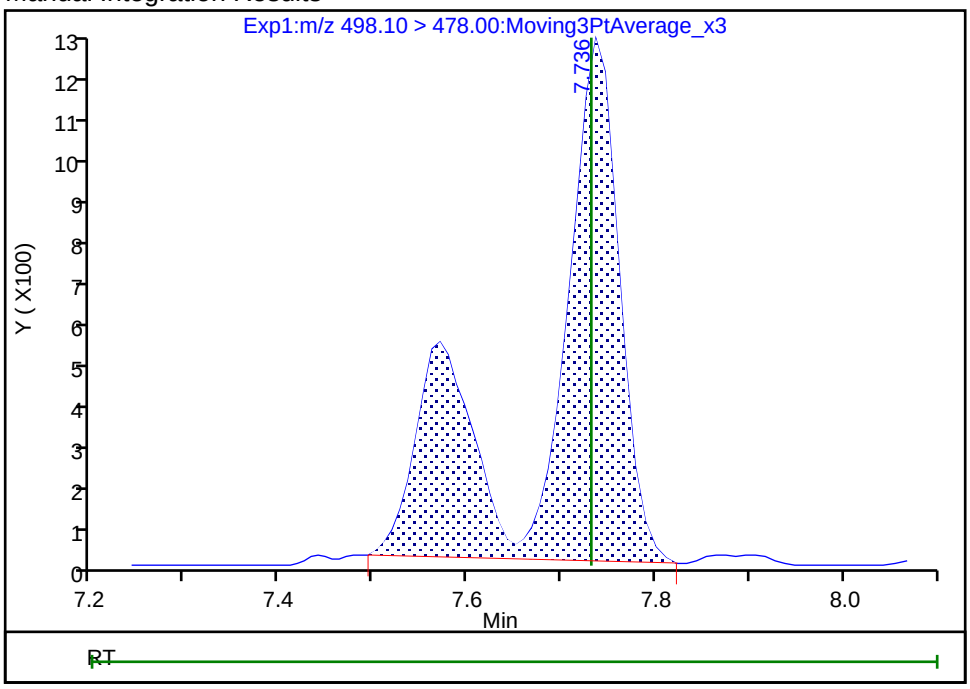
Processing Integration Results

RT: 7.74
Area: 4398
Amount: 0.106357
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 6522
Amount: 0.116439
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:22:54 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

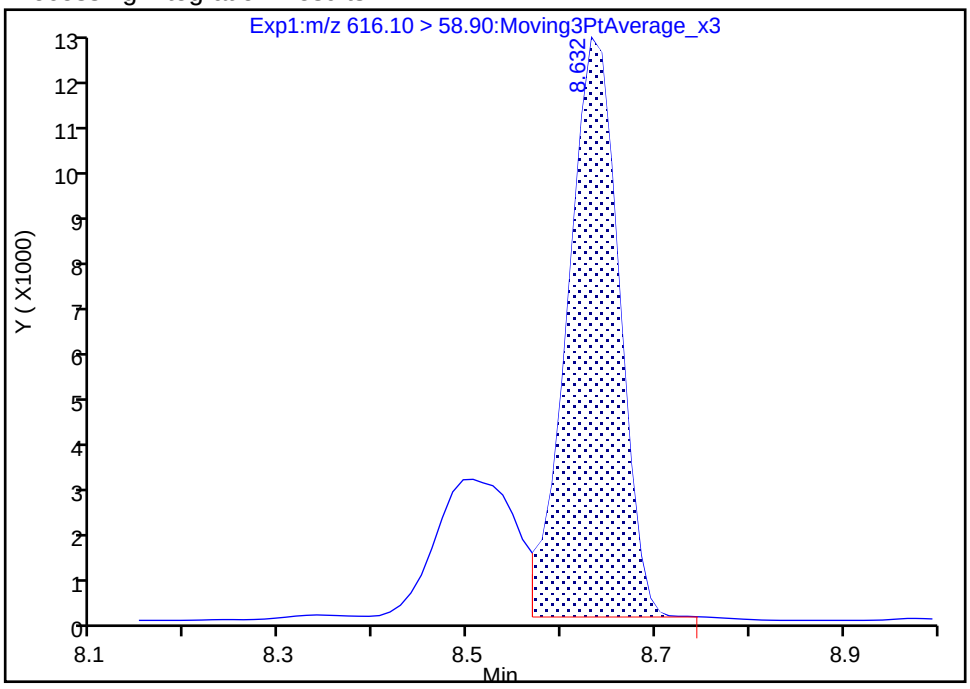
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

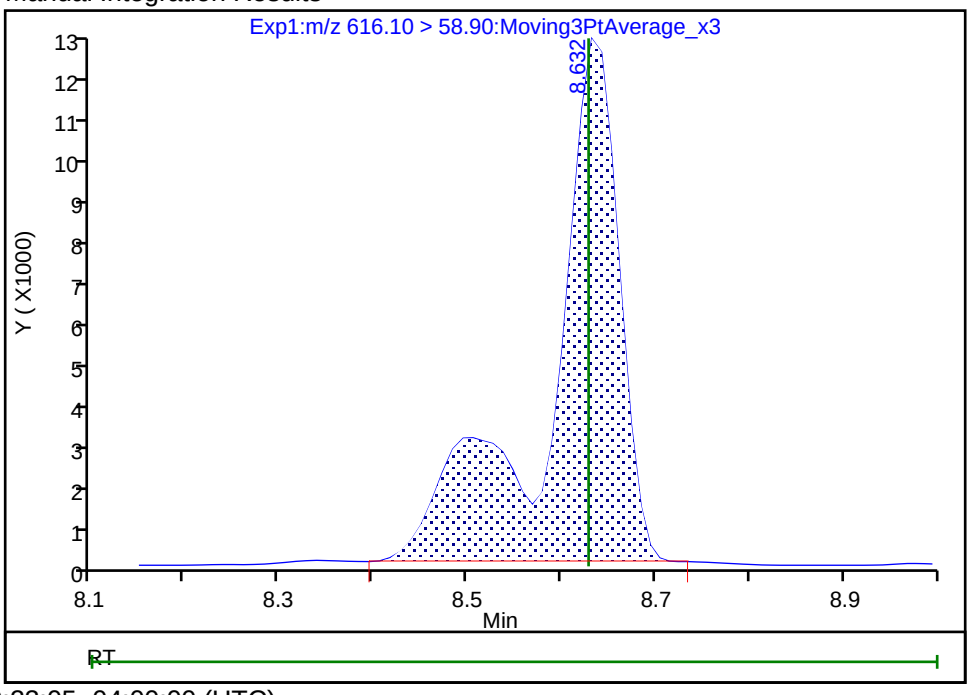
Processing Integration Results

RT: 8.63
Area: 47633
Amount: 1.081525
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 64919
Amount: 1.182392
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:05 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

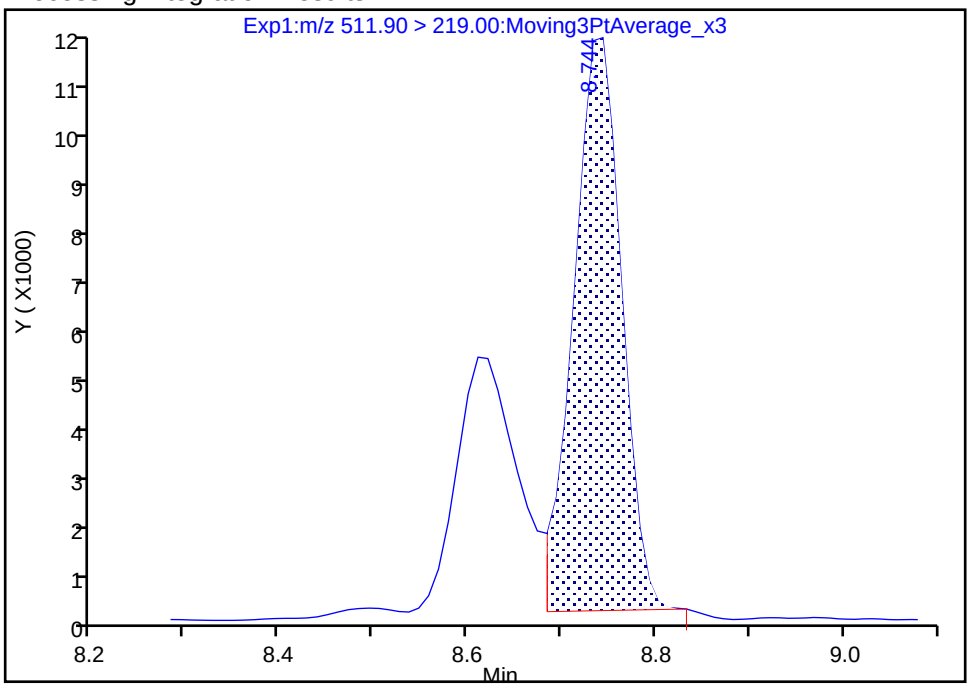
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

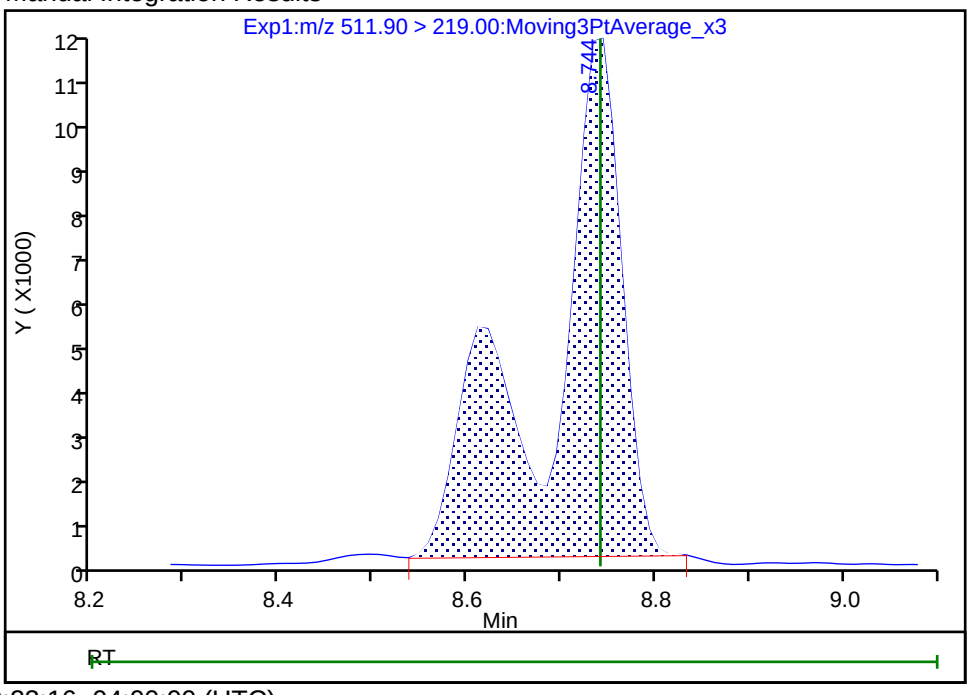
Processing Integration Results

RT: 8.74
Area: 38446
Amount: 0.103812
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 60035
Amount: 0.123243
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:16 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

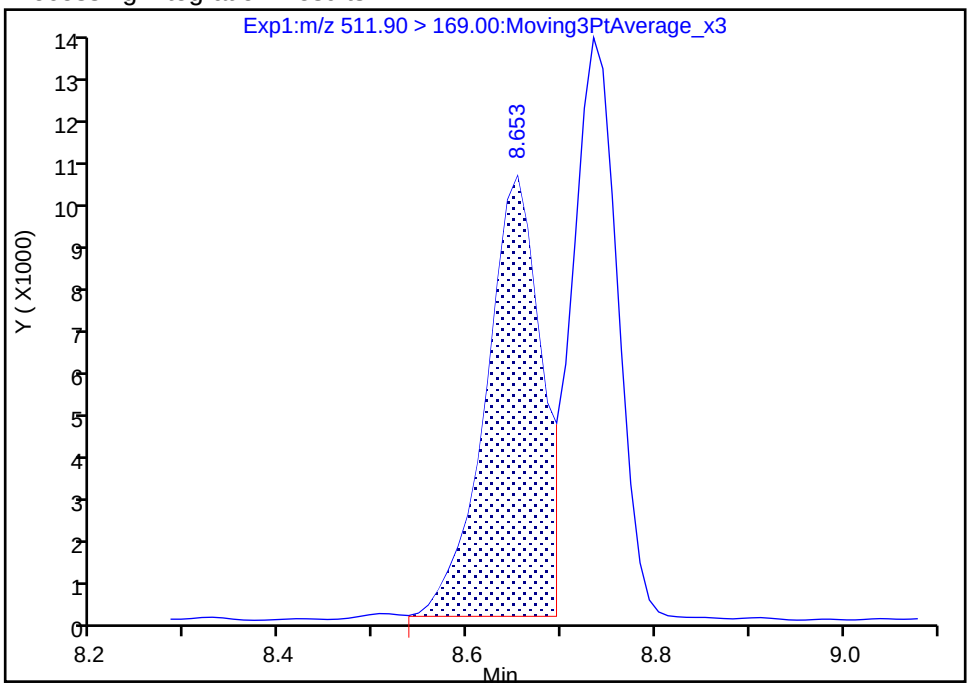
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

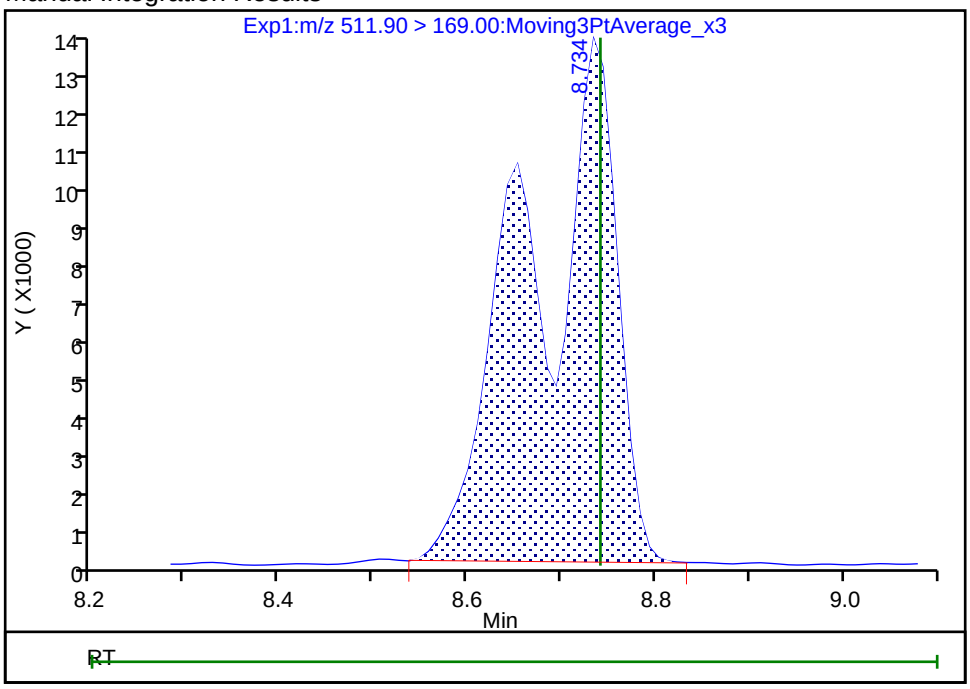
Processing Integration Results

RT: 8.65
Area: 41319
Amount: 0.103812
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 86144
Amount: 0.123243
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:24 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

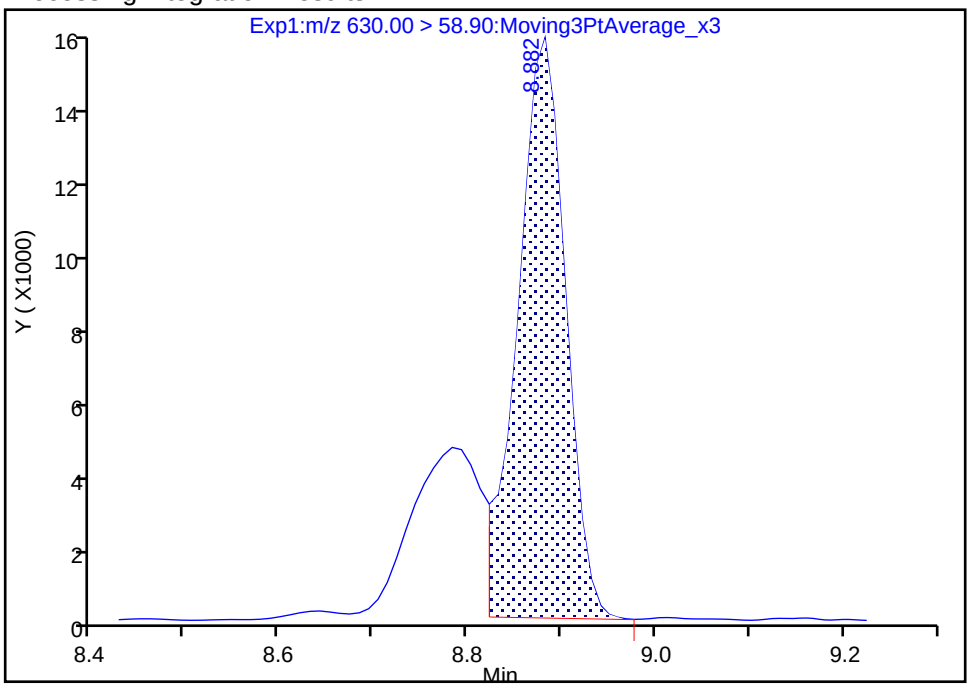
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d
Injection Date: 10-Sep-2024 17:26:23 Instrument ID: LCMS04
Lims ID: IC CAL 2
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 29 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

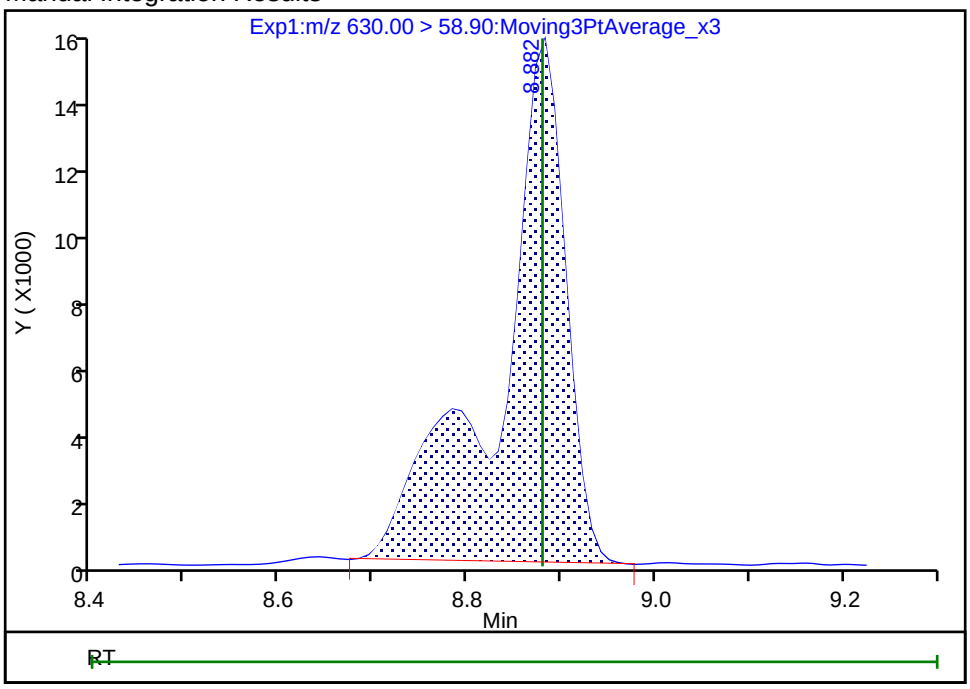
Processing Integration Results

RT: 8.88
Area: 53402
Amount: 1.116357
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 75433
Amount: 1.254893
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

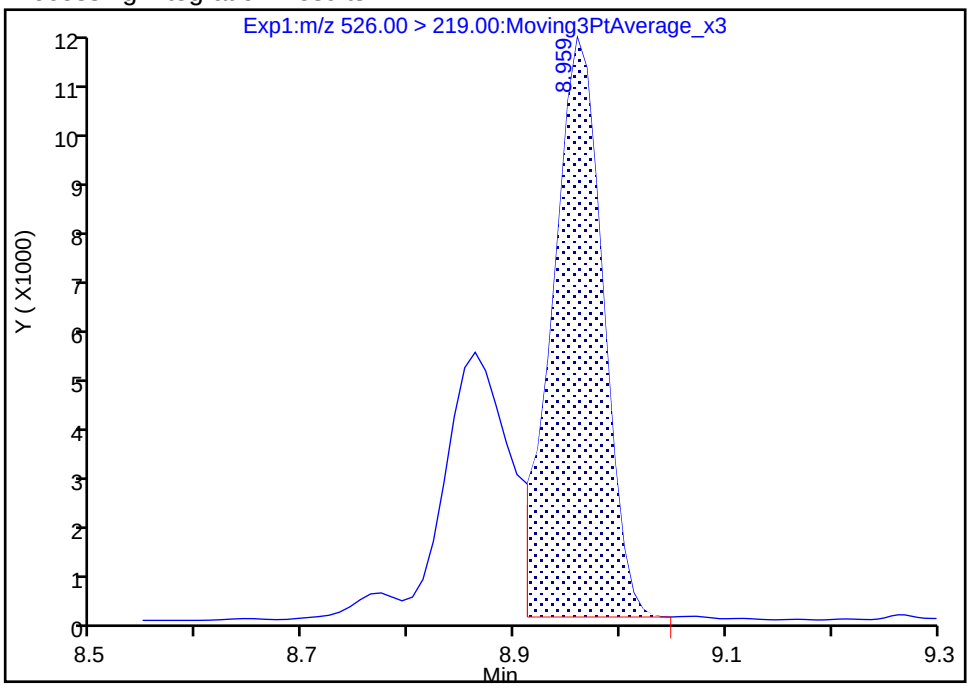
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

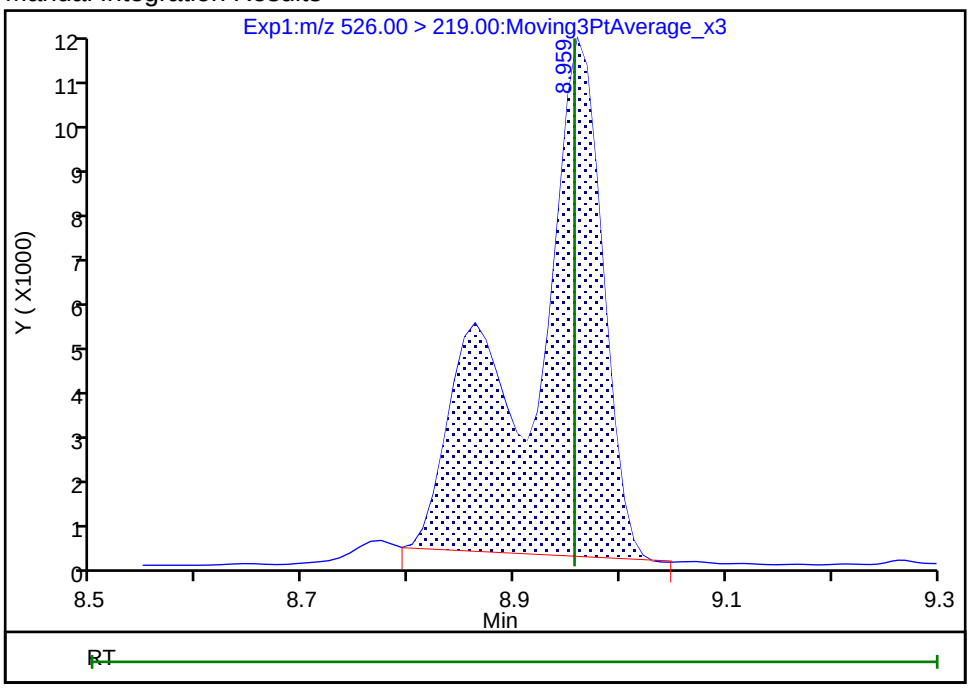
Processing Integration Results

RT: 8.96
Area: 39113
Amount: 0.101781
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 58722
Amount: 0.118847
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:42 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

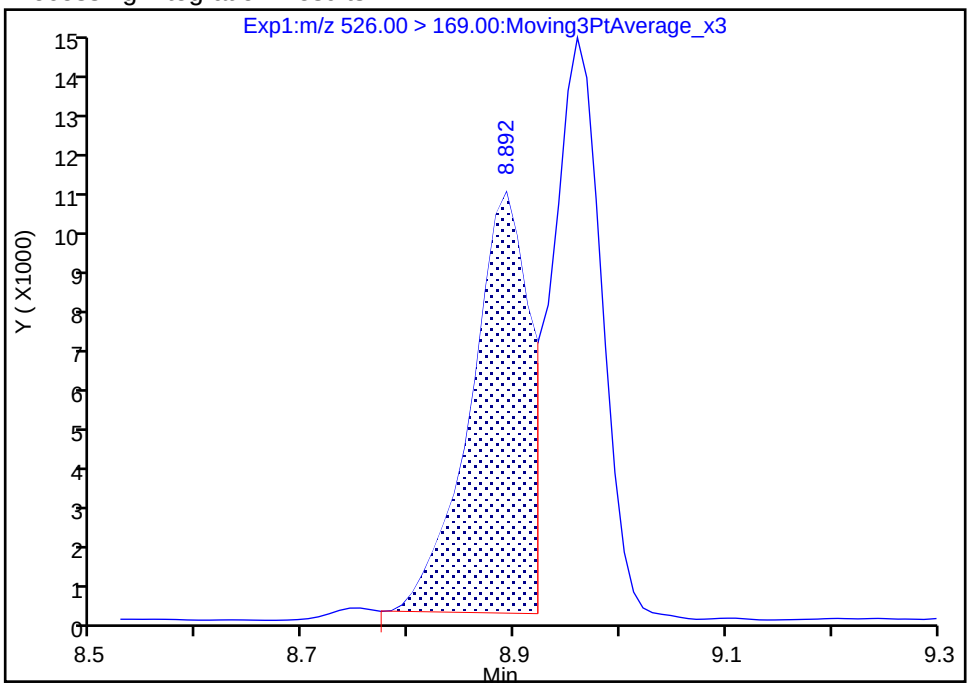
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj02.d				
Injection Date:	10-Sep-2024 17:26:23	Instrument ID:	LCMS04		
Lims ID:	IC CAL 2				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	29	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

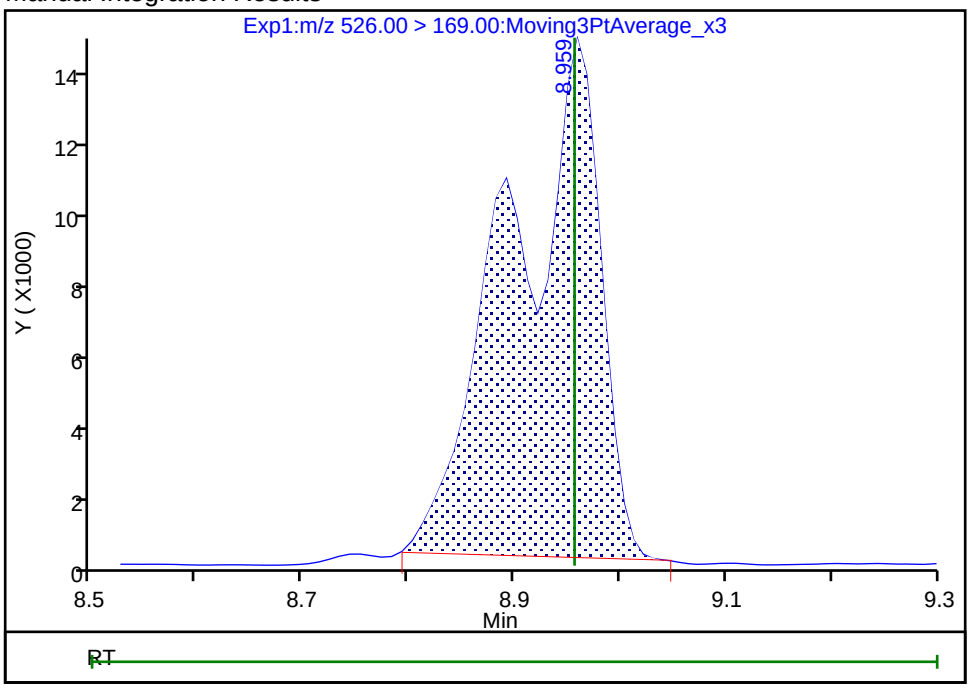
Processing Integration Results

RT: 8.89
Area: 40759
Amount: 0.101781
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 86686
Amount: 0.118847
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:23:53 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Lims ID: IC CAL 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Sep-2024 17:39:59 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 3
Misc. Info.: Plate: 2 Rack: 1 240-0146069-003
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:01:42 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:29:21
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.574	3.573	0.001		1911063	1.25			702	
* 2 13C2 PFHxA										
315.10 > 270.00	4.755	4.744	0.011		1115223	0.6250			3371	
* 3 13C4 PFOA										
417.10 > 172.00	5.653	5.653	0.0		195636	0.6250			1260	
* 4 18O2 PFHxS										
403.00 > 83.90	5.879	5.878	0.001		1482488	0.5913			4928	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.077	0.0		773074	0.3125			1908	
* 6 13C2 PFDA										
515.10 > 470.10	6.522	6.522	0.0		635481	0.3125			1456	
* 7 13C4 PFOS										
502.80 > 79.90	6.792	6.792	0.0		1284114	0.5975	Target=4.00		2506	
502.80 > 98.90	6.783	6.792	-0.009		321872		3.99(2.00-6.01)		1518	
D 8 13C4 PFBA										
216.80 > 171.90	3.574	3.573	0.001	1.000	4600618	2.65		106	24382	
D 9 13C5 PFPeA										
268.30 > 223.00	4.235	4.225	0.010	0.891	1923029	1.37		110	7156	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.555	4.555	0.0	0.775	1129810	1.35	Target=0.31	115	4186	
329.10 > 309.00	4.555	4.555	0.0	0.775	3275607		0.34(0.16-0.47)	115	966	
D 11 13C5 PFHxA										
318.00 > 273.00	4.755	4.744	0.011	1.000	1660671	0.6623	Target=39.15	106	5432	
318.00 > 120.30	4.744	4.744	0.0	0.998	46243		35.91(19.57-58.72)	106	502	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.882	4.871	0.011	0.831	1656033	0.6178	Target=3.27	106	3842	
302.10 > 98.90	4.871	4.871	0.0	0.829	503277		3.29(1.63-4.90)	106	2284	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.947	4.936	0.011	1.040	1961686	2.72	Target=1.96	109	6449	
286.90 > 184.90	4.947	4.936	0.011	1.040	1055642		1.86(0.98-2.94)	109	1771	
D 14 13C4 PFHpA										
367.10 > 322.00	5.219	5.219	0.0	1.098	1747486	0.6674		107	5810	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.441	5.441	0.0	0.926	1222116	1.27	Target=0.40	107	2387	
429.10 > 409.00	5.441	5.441	0.0	0.926	2942148		0.42(0.20-0.59)	107	5265	
D 16 13C8 PFOA										
421.10 > 376.00	5.653	5.653	0.0	1.000	1840625	0.7455		119	7737	
D 17 13C3 PFHxS										
402.10 > 79.90	5.879	5.878	0.001	1.000	1661989	0.6315	Target=3.38	107	3906	
402.10 > 98.80	5.879	5.878	0.001	1.000	481876		3.45(1.69-5.07)	107	2157	
D 18 13C9 PFNA										
472.10 > 427.00	6.087	6.087	0.0	1.002	611120	0.3150		101	1613	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.281	6.281	0.0	1.069	890678	1.35	Target=0.34	113	3955	
529.10 > 509.00	6.281	6.281	0.0	1.069	2408360		0.37(0.17-0.51)	113	6858	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.463	6.462	0.001	0.952	1279074	1.29		103	4208	
D 21 13C6 PFDA										
519.10 > 474.10	6.522	6.522	0.0	1.000	642375	0.3282		105	2634	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.658	6.657	0.001	0.980	1316588	1.34		108	2551	
D 23 13C8 PFOS										
507.10 > 79.90	6.792	6.792	0.0	1.000	1398374	0.6315	Target=4.08	106	1184	
507.10 > 98.90	6.783	6.792	-0.009	0.999	342098		4.09(2.04-6.12)	106	922	
D 24 13C7 PFUnA										
570.00 > 525.10	6.960	6.960	0.0	1.067	596945	0.3099		99.2	1719	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.381	7.388	-0.007	1.132	588907	0.3240		104	1403	
D 26 13C8 FOSA										
506.10 > 77.80	7.737	7.726	0.011	1.139	1577585	0.6638		106	4088	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.206	8.217	-0.011	1.258	340479	0.3277		105	1057	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.600	0.011	1.268	2369620	6.73		108	772	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.734	8.724	0.010	1.286	311594	0.6649		106	1643	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.853	0.0	1.303	3140982	7.26		116	1240	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.950	0.001	1.318	306776	0.6494		104	290	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.582	3.576	0.006	1.002	2224644	1.27		102	25.0	M
34 3:3 FTCA										
241.00 > 177.00	3.864	3.866	-0.002	0.912	137625	1.48	Target=1.04	94.9	1906	
241.00 > 117.00	3.864	3.866	-0.002	0.912	134571		1.02(0.52-1.56)	94.9	33.4	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.864	3.866	-0.002	0.912	1318025	0.6237		99.8	1255	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.235	4.229	0.006	1.000	1453983	0.6168		98.7	175	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.416	4.410	0.006	1.043	1382420	0.6198		99.2	4166	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.555	4.550	0.005	1.000	3164928	1.09	Target=1.37	93.8	9989	
327.10 > 80.90	4.555	4.550	0.005	1.000	2375339		1.33(0.68-2.05)	93.8	2137	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.712	4.707	0.005	0.991	151634	0.6498	Target=1.54	104	1392	
295.00 > 84.90	4.701	4.707	-0.006	0.989	104896		1.45(0.77-2.31)	104	373	
48 FBSA										
297.90 > 78.00	4.755	4.740	0.015	0.974	2421264	1.24		99.4	3054	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.755	4.750	0.005	1.000	659134	0.3121	Target=14.09	99.9	114	
313.00 > 118.90	4.755	4.750	0.005	1.000	47224		13.96(7.04-21.13)	99.9	259	
41 5:3 FTCA										
341.00 > 237.10	4.839	4.834	0.005	1.018	3056172	8.12	Target=1.54	104	3907	
341.00 > 217.00	4.839	4.834	0.005	1.018	1959651		1.56(0.77-2.31)	104	1635	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.882	4.878	0.004	1.000	761555	0.2752	Target=3.32	99.6	1955	
298.70 > 98.80	4.882	4.878	0.004	1.000	219794		3.46(1.66-4.97)	99.6	793	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.958	4.943	0.015	1.002	1141844	1.32	Target=1.98	106	3226	
284.90 > 184.90	4.947	4.943	0.004	1.000	542850		2.10(0.99-2.97)	106	1105	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.147	5.144	0.003	1.082	4644195	0.5974	Target=12.50	107	8018	
314.80 > 82.90	5.137	5.144	-0.007	1.080	353376		13.14(6.25-18.75)	107	850	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.219	5.215	0.004	1.000	978450	0.3238	Target=3.89	104	142	
363.10 > 169.00	5.219	5.215	0.004	1.000	230559		4.24(1.95-5.84)	104	688	
49 DONA										
376.90 > 250.90	5.390	5.385	0.005	1.090	5170750	1.23	Target=1.56	105	8965	
376.90 > 84.80	5.390	5.385	0.005	1.090	3194521		1.62(0.78-2.34)	105	7691	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.411	5.406	0.005	0.920	828908	0.2871	Target=3.17	97.9	1025	
349.10 > 98.90	5.411	5.406	0.005	0.920	270508		3.06(1.58-4.75)	97.9	927	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.450	5.445	0.005	1.002	3050204	1.25	Target=1.44	105	7301	
427.10 > 80.90	5.441	5.445	-0.004	1.000	2046092		1.49(0.72-2.15)	105	6372	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.662	5.657	0.005	1.002	427873	0.3029	Target=2.01	96.9	44.6	M
413.00 > 169.00	5.653	5.657	-0.004	1.000	218205		1.96(1.00-3.01)	96.9	415	M
54 7:3 FTCA										
441.00 > 316.90	5.719	5.713	0.006	1.203	3017755	8.40	Target=1.06	107	4431	
441.00 > 336.90	5.709	5.713	-0.004	1.201	2820112		1.07(0.53-1.58)	107	6818	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.879	5.882	-0.003	1.000	679323	0.2831	Target=3.33	99.5	1671	M
398.70 > 98.90	5.879	5.882	-0.003	1.000	202268		3.36(1.66-4.99)	99.5	530	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.087	6.091	-0.004	1.000	485979	0.3281	Target=4.97	105	70.6	M
463.00 > 169.00	6.087	6.091	-0.004	1.000	100206		4.85(2.49-7.46)	105	283	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.291	6.286	0.005	1.001	2168343	1.17	Target=1.32	97.7	5214	
527.10 > 80.80	6.281	6.286	-0.005	1.000	1632200		1.33(0.66-1.98)	97.7	4870	
57 PFECHS										
461.00 > 381.00	6.291	6.286	0.005	1.070	2816101	0.5924	Target=1.88	103	484	
461.00 > 99.00	6.291	6.286	0.005	1.070	1463544		1.92(0.94-2.81)	103	2663	
62 FHxSA										
397.90 > 78.00	6.309	6.305	0.004	1.073	3603490	1.28		102	6087	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.337	6.342	-0.005	0.933	842143	0.3071	Target=3.89	103	1330	
449.00 > 98.80	6.337	6.342	-0.005	0.933	210995		3.99(1.95-5.84)	103	543	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.473	6.469	0.004	1.002	379101	0.3362	Target=1.69	108	1295	M
570.10 > 483.00	6.473	6.469	0.004	1.002	231770		1.64(0.85-2.54)	108	806	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.522	6.527	-0.005	1.000	509851	0.3124	Target=4.63	100.0	70.7	
512.90 > 219.00	6.522	6.527	-0.005	1.000	114029		4.47(2.32-6.95)	100.0	609	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.667	6.672	-0.005	1.001	268804	0.3058	Target=1.55	97.8	839	M
584.20 > 526.00	6.667	6.672	-0.005	1.001	172015		1.56(0.78-2.33)	97.8	326	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.792	6.788	0.004	1.000	887760	0.3015	Target=4.64	104	555	M
498.90 > 98.80	6.792	6.788	0.004	1.000	192032		4.62(2.32-6.96)	104	937	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.960	6.965	-0.005	1.000	568881	0.3303	Target=6.10	106	177	
563.10 > 269.10	6.960	6.965	-0.005	1.000	96643		5.89(3.05-9.15)	106	979	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.130	7.127	0.003	1.441	4521225	1.21	Target=3.09	104	1290	
532.80 > 353.00	7.130	7.127	0.003	1.441	1383223		3.27(1.54-4.63)	104	1783	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.230	7.226	0.004	1.064	651502	0.2922	Target=4.11	97.4	1725	
548.80 > 98.80	7.230	7.226	0.004	1.064	166874		3.90(2.06-6.17)	97.4	1078	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.389	7.384	0.005	1.001	572261	0.3067	Target=18.06	98.2	239	
613.10 > 319.00	7.389	7.384	0.005	1.001	30632		18.68(9.03-27.08)	98.2	299	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.651	7.655	-0.004	1.127	791799	0.3138	Target=4.27	104	1951	
599.00 > 98.80	7.651	7.655	-0.004	1.127	183241		4.32(2.14-6.41)	104	1662	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.737	7.732	0.005	1.000	750406	0.3164	Target=46.53	101	622	M
498.10 > 478.00	7.737	7.732	0.005	1.000	16579		45.26(23.26-69.79)	101	93.5	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.800	7.807	-0.007	0.951	594021	0.3295	Target=6.29	105	211	
663.00 > 168.90	7.800	7.807	-0.007	0.951	91376		6.50(3.14-9.43)	105	824	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.980	7.975	0.005	1.613	4422285	1.22	Target=3.20	104	5188	
632.90 > 452.90	7.969	7.975	-0.006	1.611	1314174		3.37(1.60-4.79)	104	3037	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.206	8.213	-0.007	1.000	428299	0.3136	Target=7.27	100	244	
713.10 > 168.90	8.206	8.213	-0.007	1.000	53696		7.98(3.64-10.91)	100	696	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.429	8.424	0.005	1.241	637485	0.2984	Target=4.58	98.7	889	
699.10 > 98.80	8.417	8.424	-0.007	1.239	143445		4.44(2.29-6.87)	98.7	811	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.629	0.003	1.002	167401	2.98		95.5	623	M
75 NMeFOSA										M
511.90 > 219.00	8.734	8.741	-0.007	1.000	153619	0.3164	Target=0.71	101	400	M
511.90 > 169.00	8.734	8.741	-0.007	1.000	215665		0.71(0.35-1.06)	101	695	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.883	8.880	0.003	1.003	197119	2.90		92.9	682	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.960	8.957	0.003	1.001	155252	0.3207	Target=0.70	103	393	M
526.00 > 169.00	8.960	8.957	0.003	1.001	220236		0.70(0.35-1.05)	103	559	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

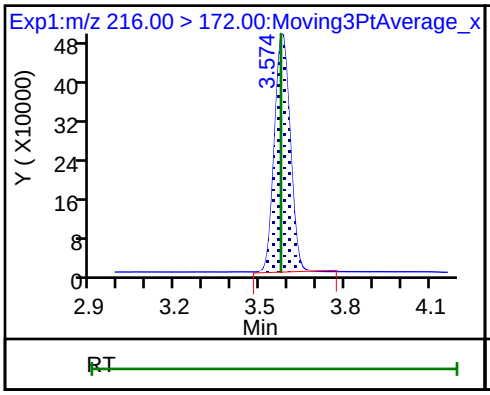
CAL 3_00013 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:01:45 Chrom Revision: 2.3 26-Aug-2024 17:14:48

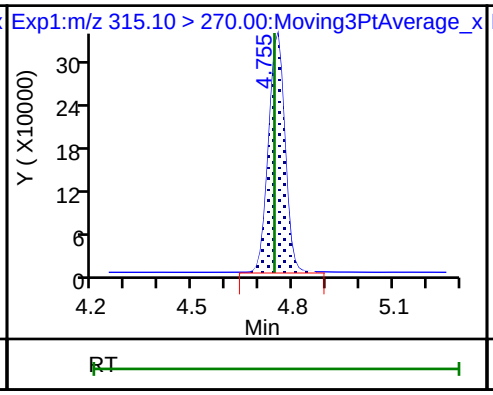
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

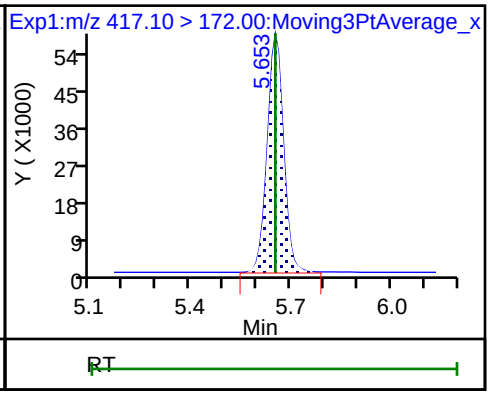
* 1 13C3-PFBA



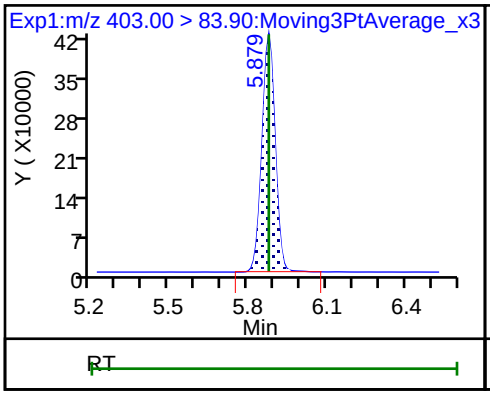
* 2 13C2 PFHxA



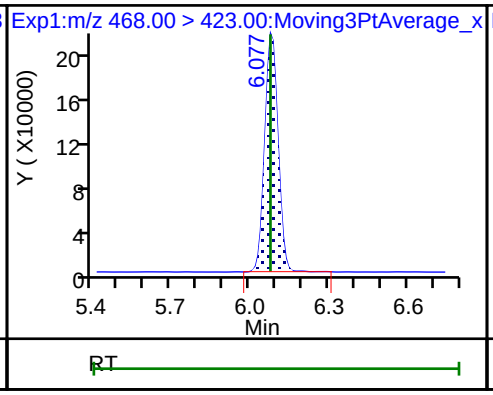
* 3 13C4 PFOA



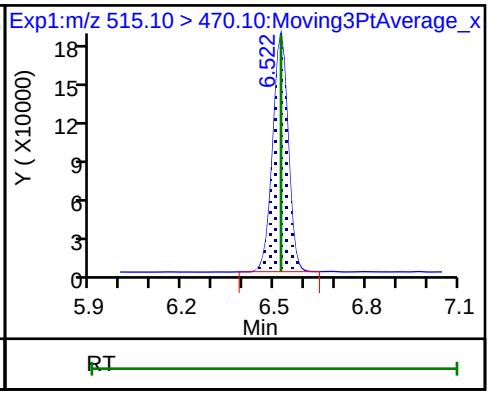
* 4 18O2 PFHxS



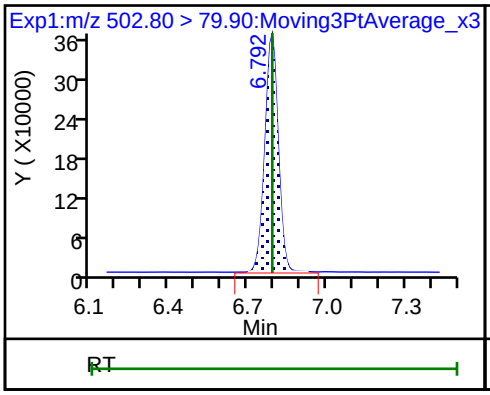
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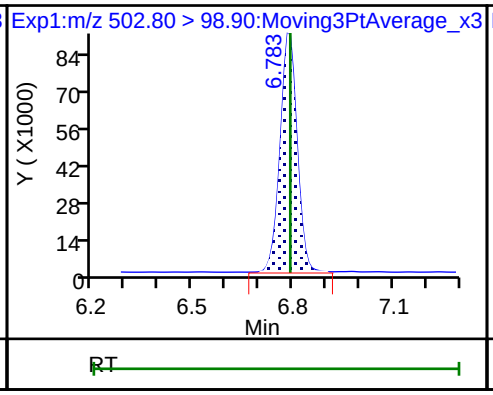
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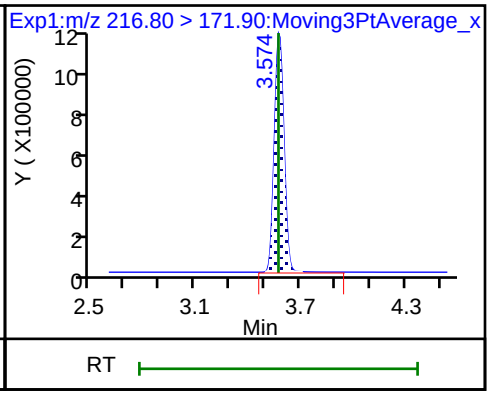
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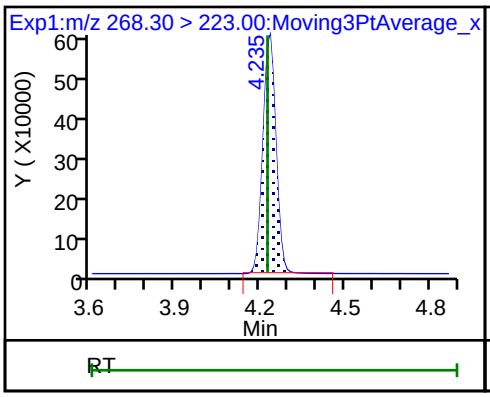
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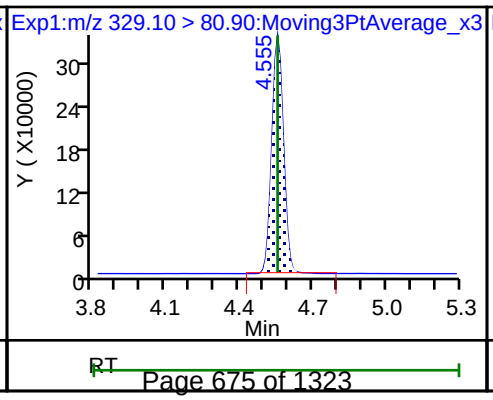
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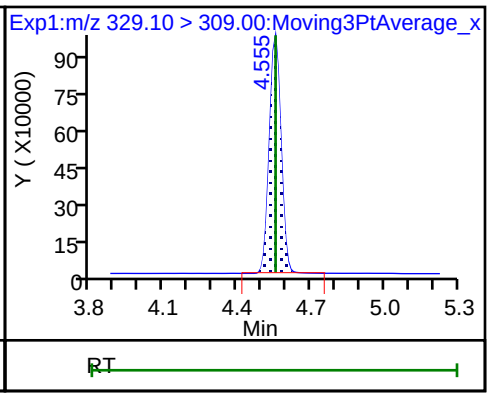
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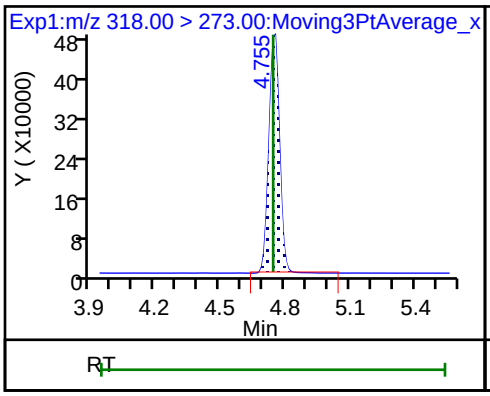
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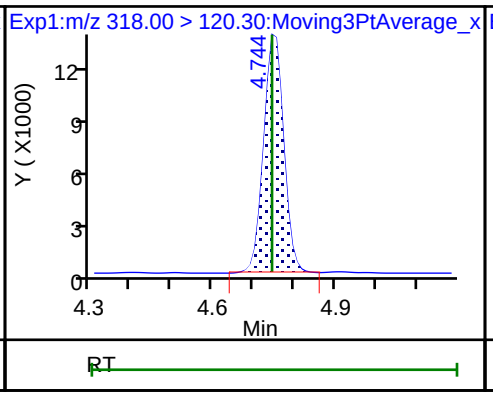
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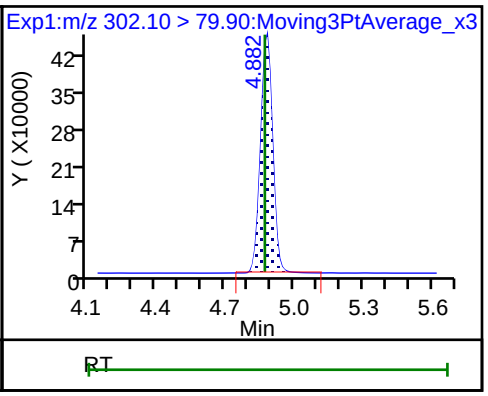
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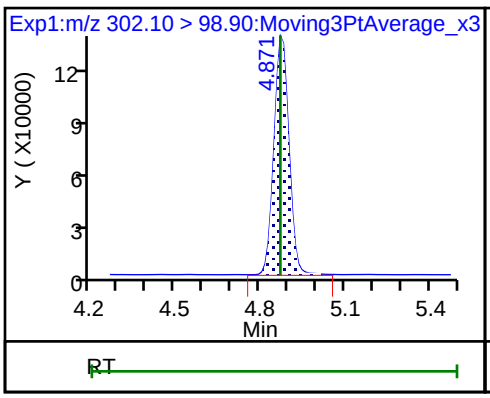
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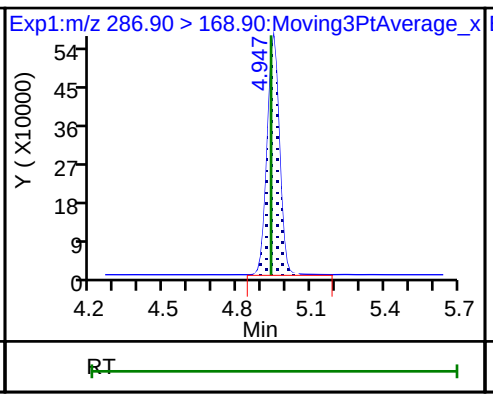
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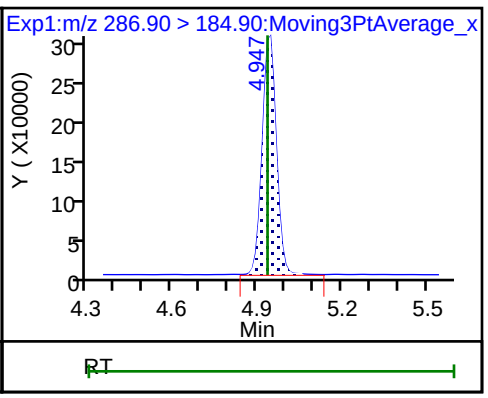
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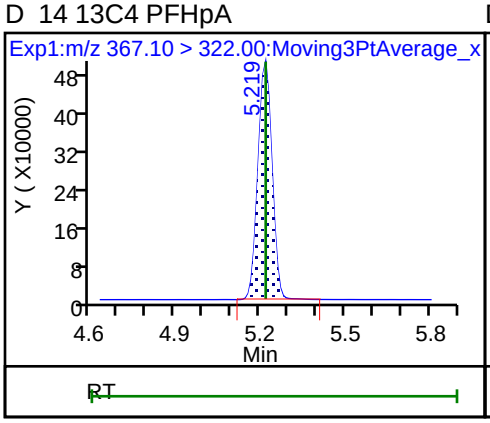
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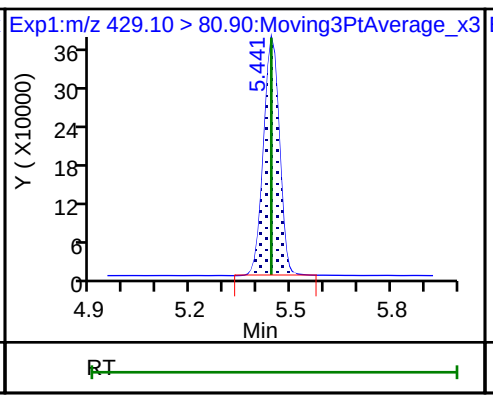
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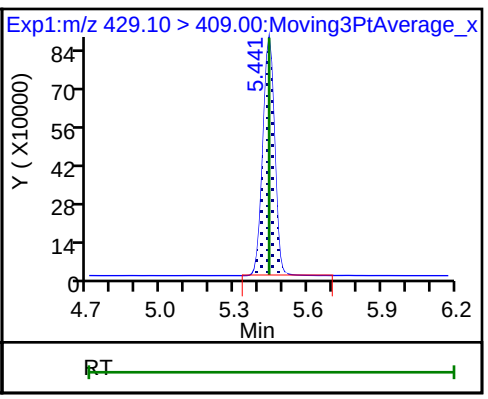
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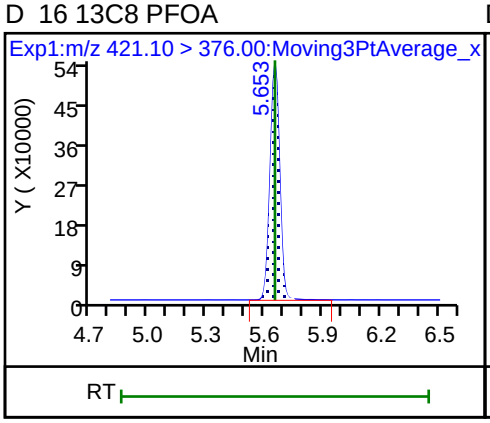
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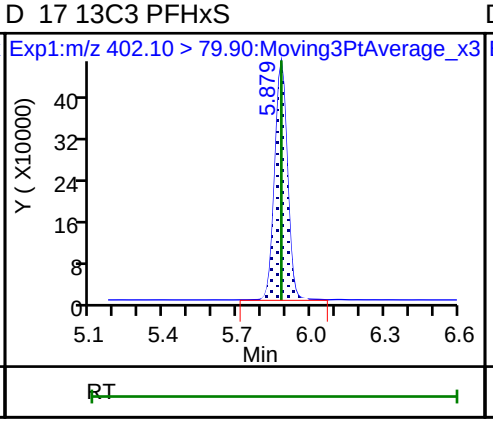
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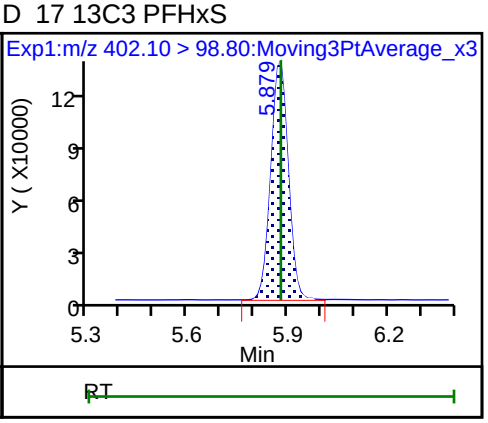
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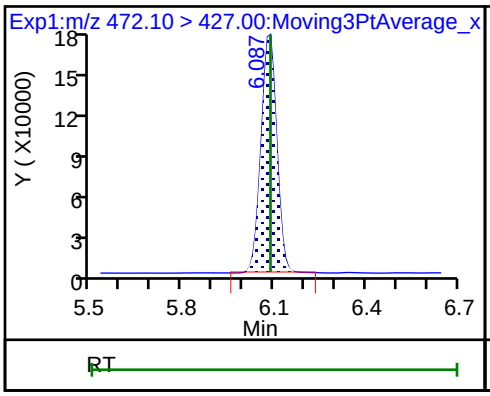
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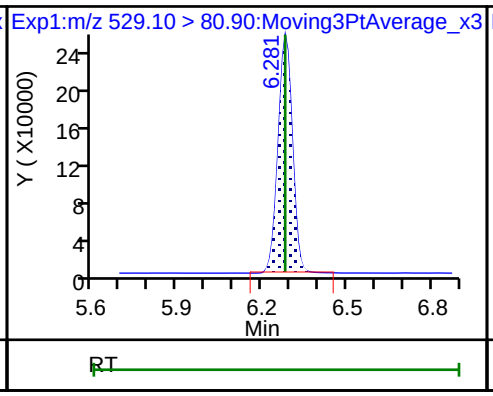
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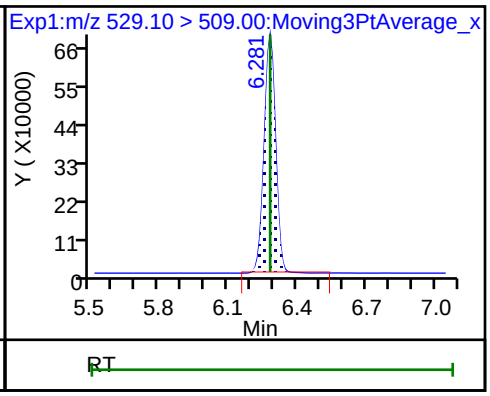
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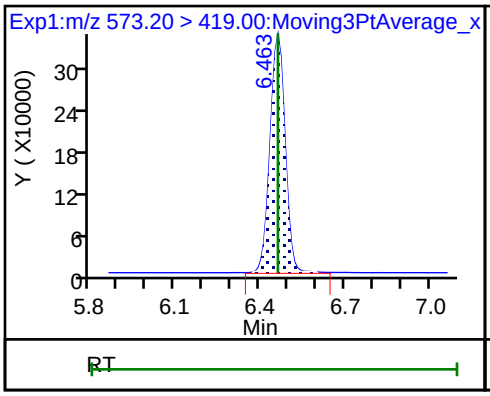
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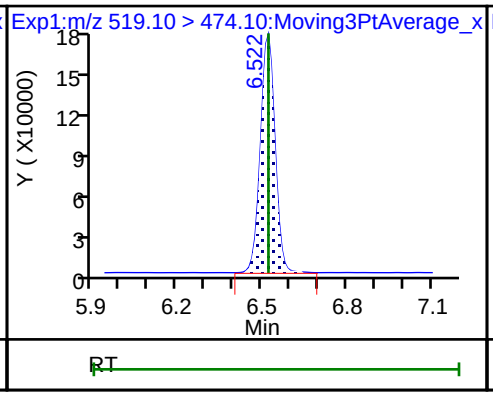
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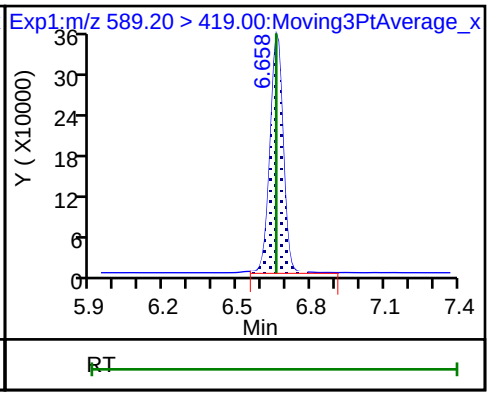
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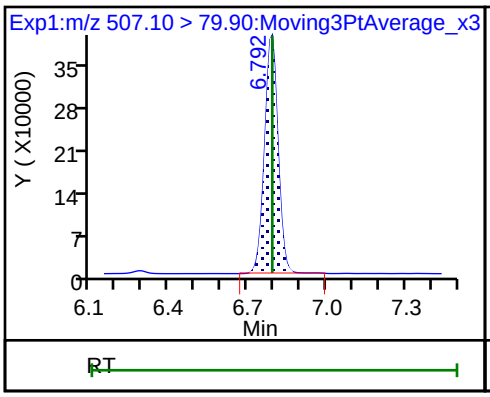
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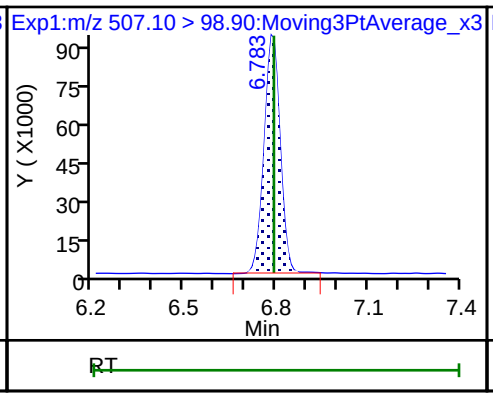
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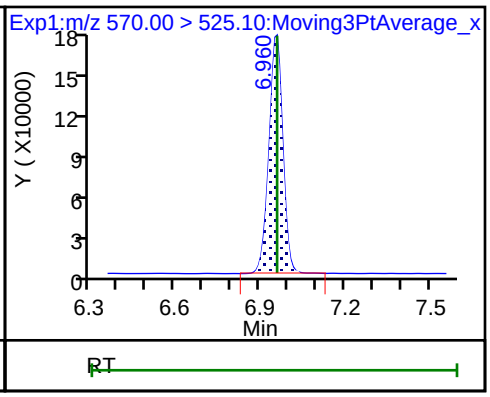
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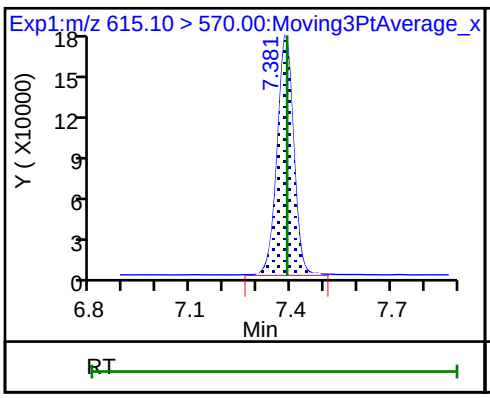
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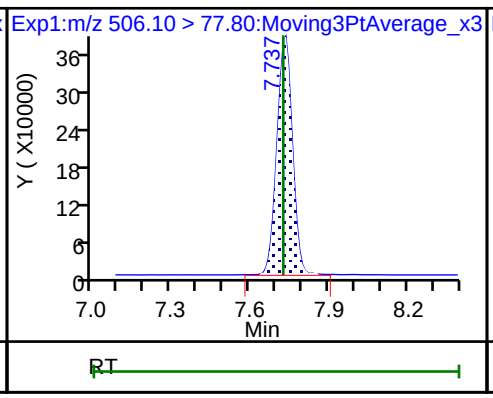
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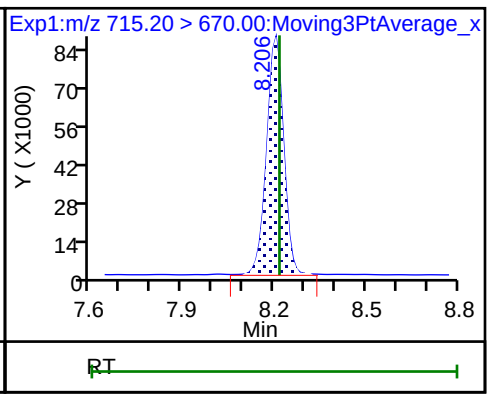
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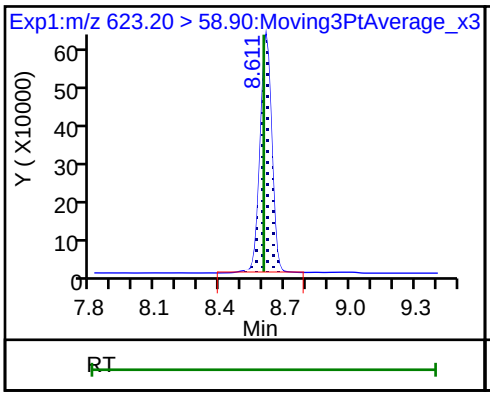
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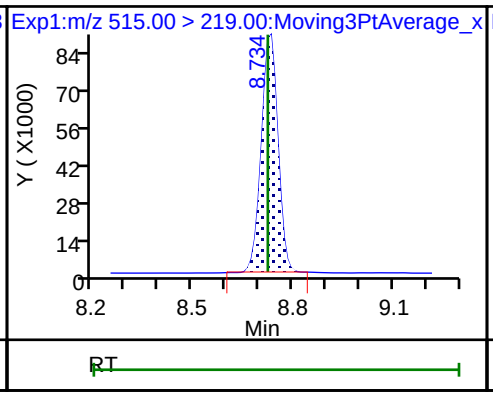
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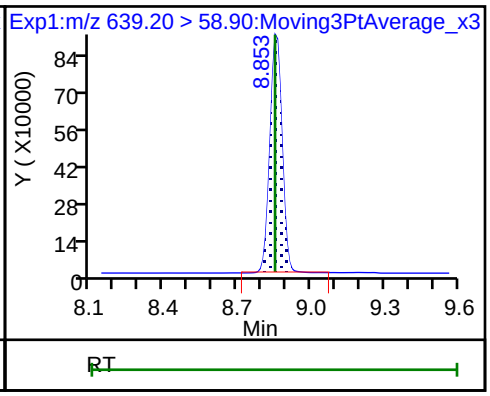
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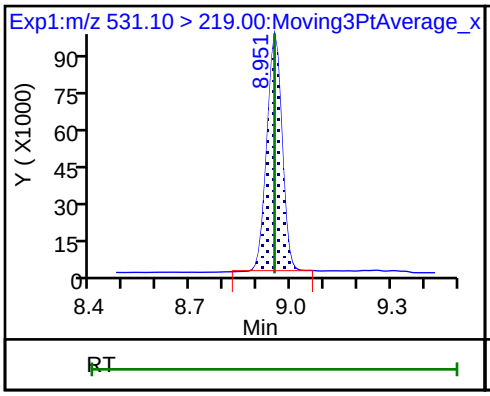
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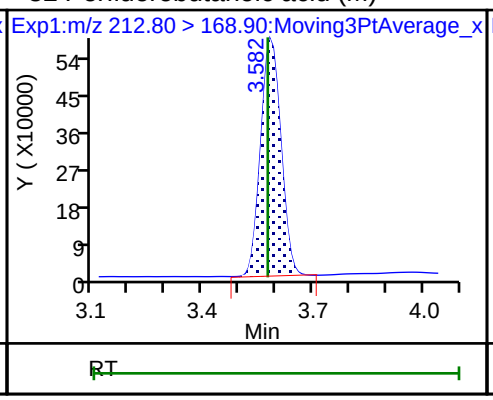
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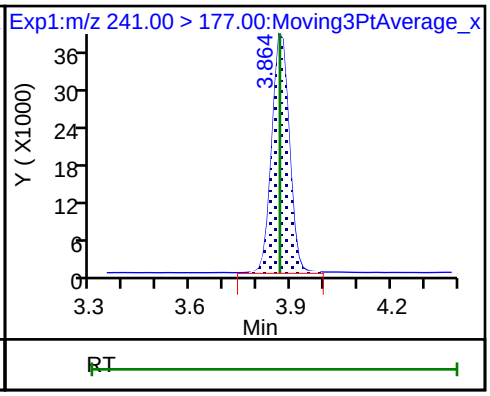
D 31 d5-NEtPFOSA



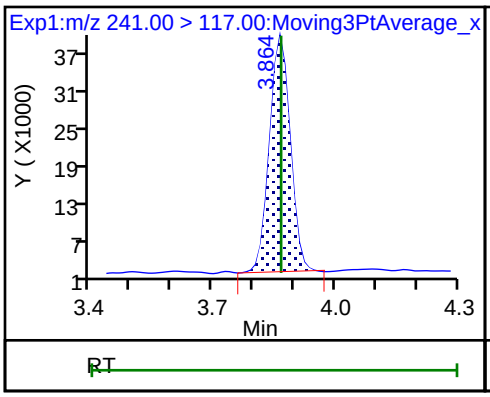
32 Perfluorobutanoic acid (M)



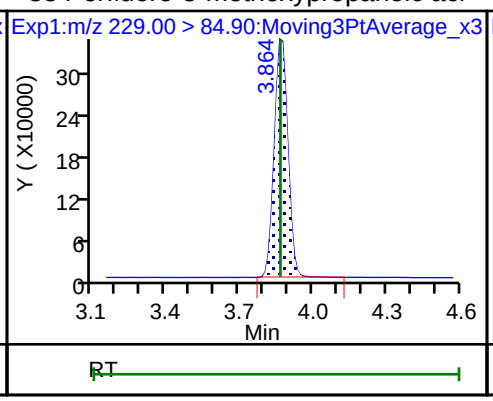
34 3:3 FTCA



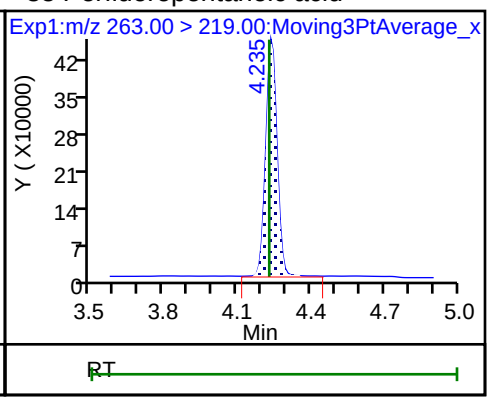
34 3:3 FTCA



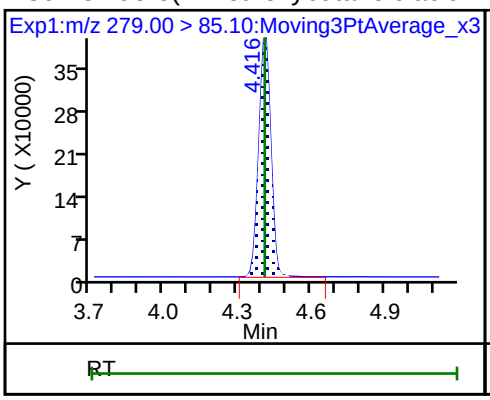
33 Perfluoro-3-methoxypropanoic aci



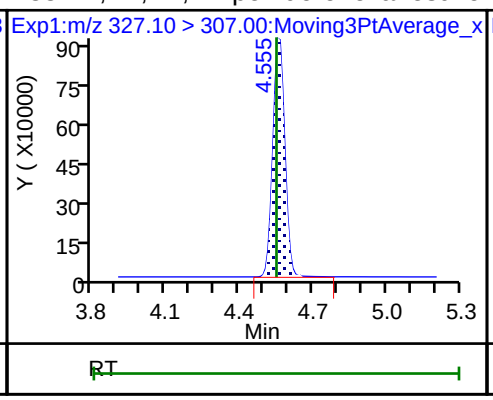
35 Perfluoropentanoic acid



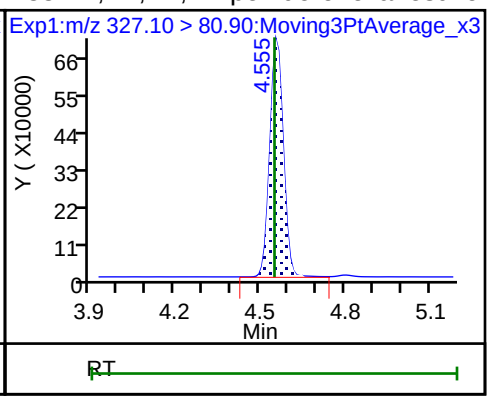
36 Perfluoro(4-methoxybutanoic acid



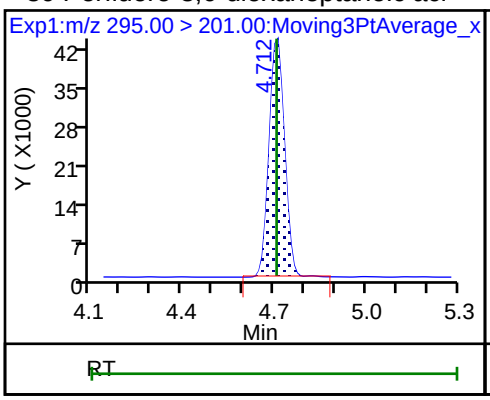
38 1H,1H,2H,2H-perfluorohexanesulfo



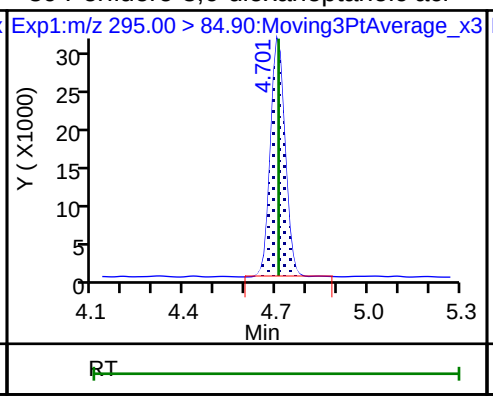
38 1H,1H,2H,2H-perfluorohexanesulfo



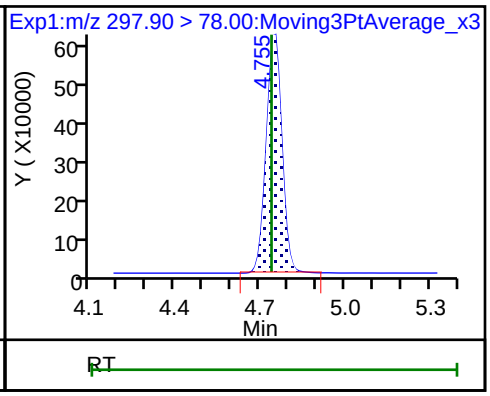
39 Perfluoro-3,6-dioxaheptanoic aci



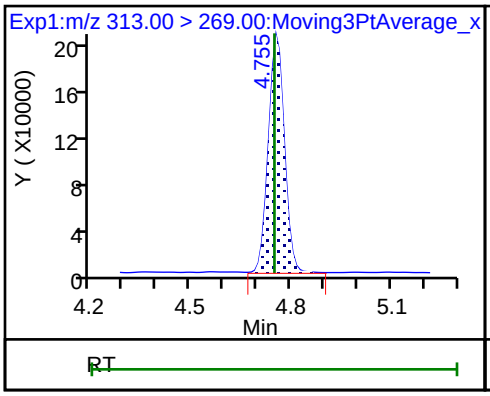
39 Perfluoro-3,6-dioxaheptanoic aci



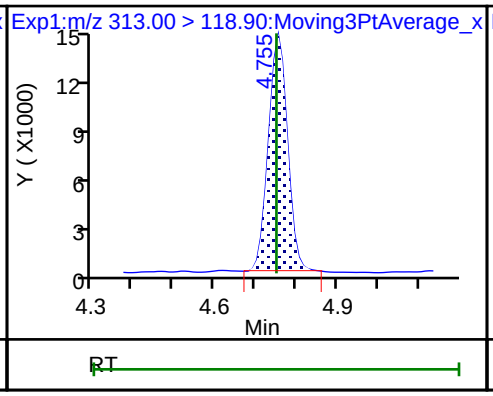
48 FBSA



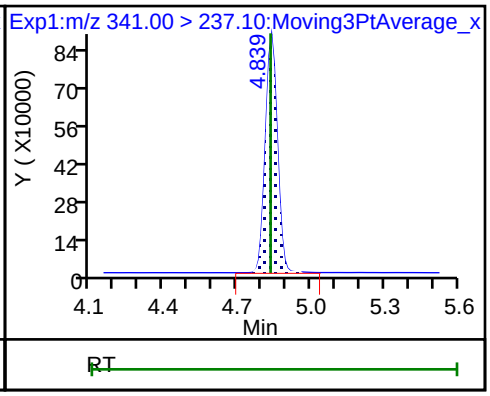
40 Perfluorohexanoic acid



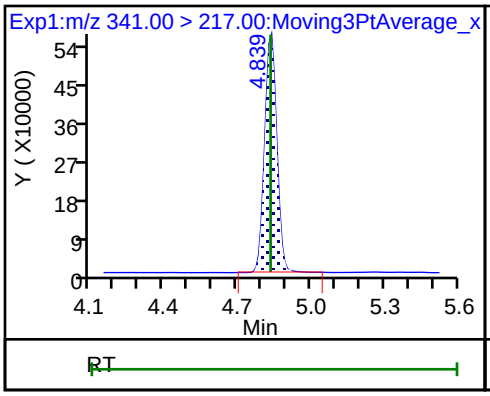
40 Perfluorohexanoic acid



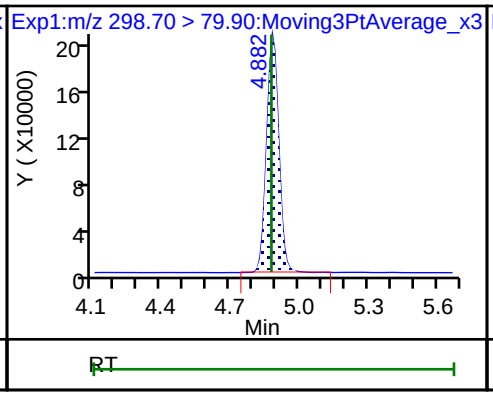
41 5:3 FTCA



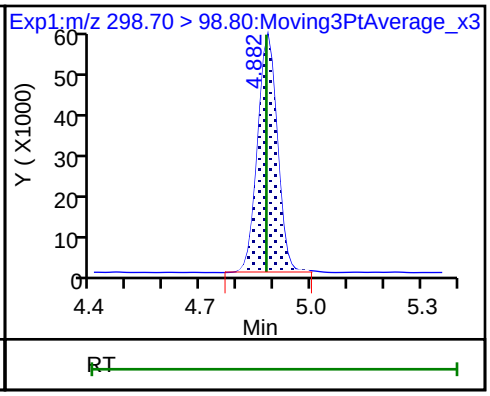
41 5:3 FTCA



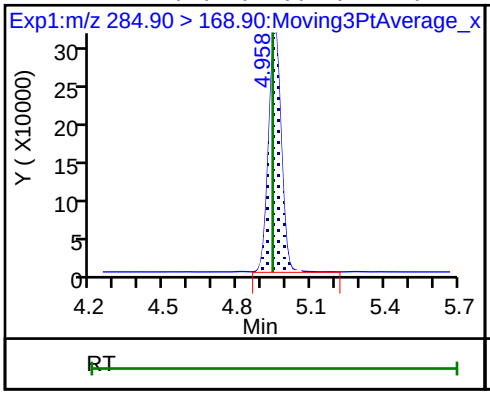
42 Perfluorobutanesulfonic acid



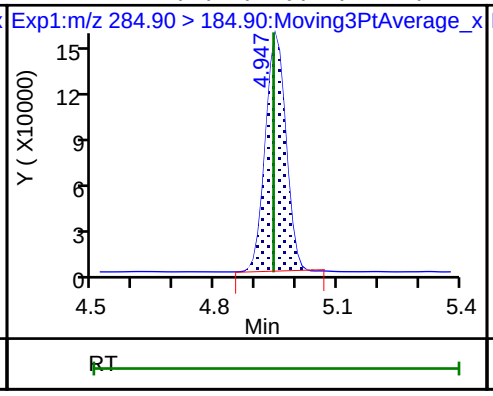
42 Perfluorobutanesulfonic acid



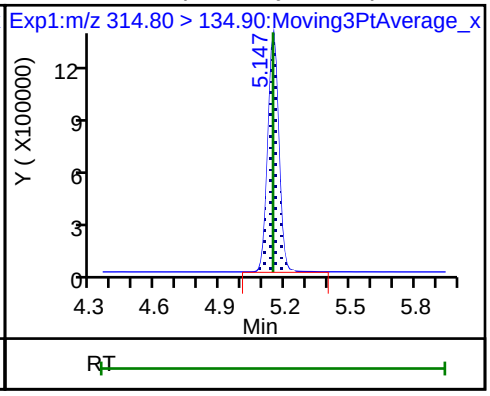
43 Perfluoro(2-propoxypropanoic) ac



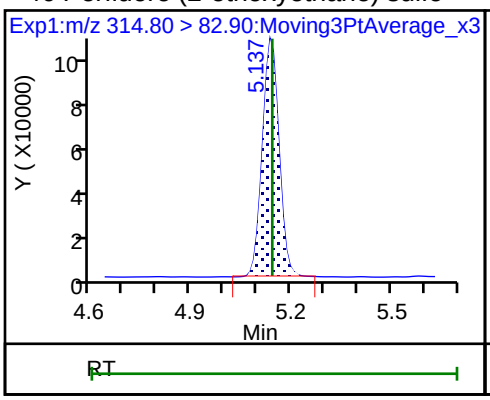
43 Perfluoro(2-propoxypropanoic) ac



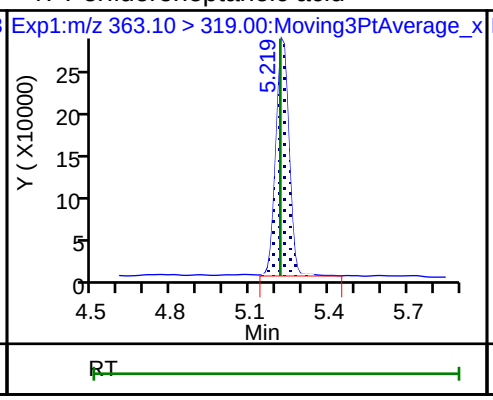
46 Perfluoro (2-ethoxyethane) sulfo



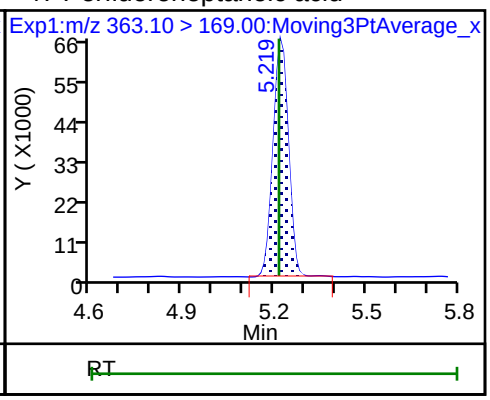
46 Perfluoro (2-ethoxyethane) sulfo



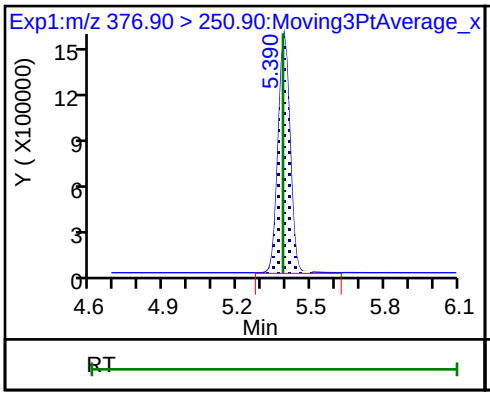
47 Perfluoroheptanoic acid



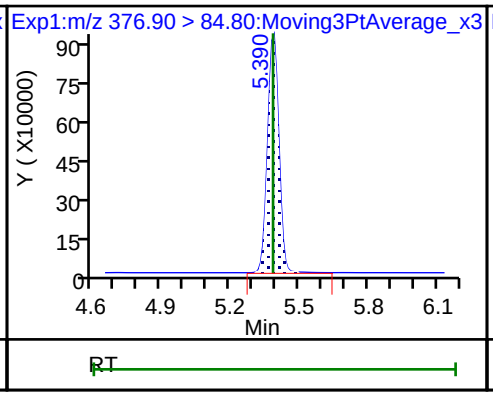
47 Perfluoroheptanoic acid



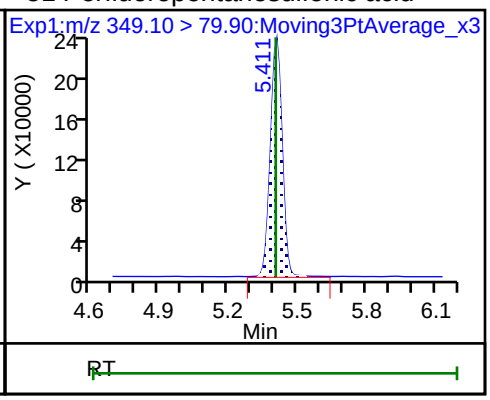
49 DONA



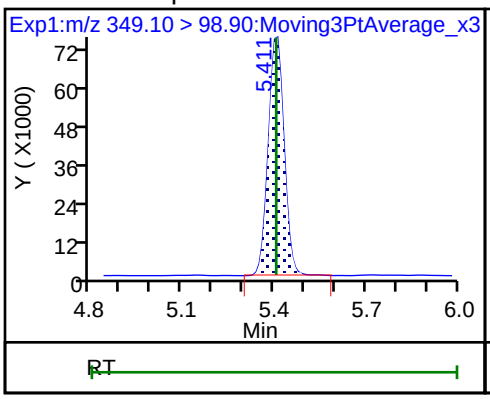
49 DONA



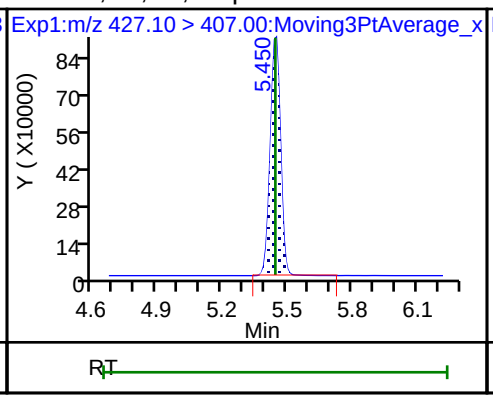
51 Perfluoropentanesulfonic acid



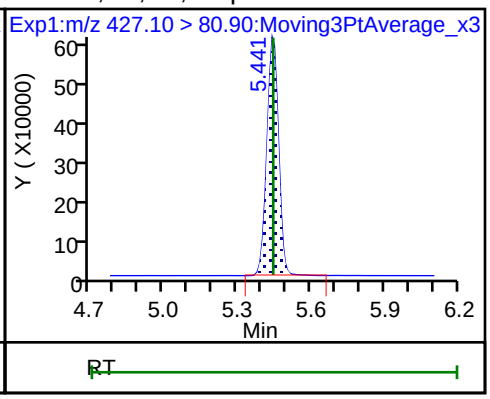
51 Perfluoropentanesulfonic acid



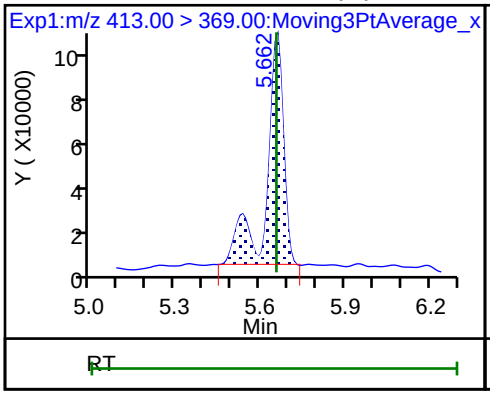
50 1H,1H,2H,2H-perfluorooctanesulfo



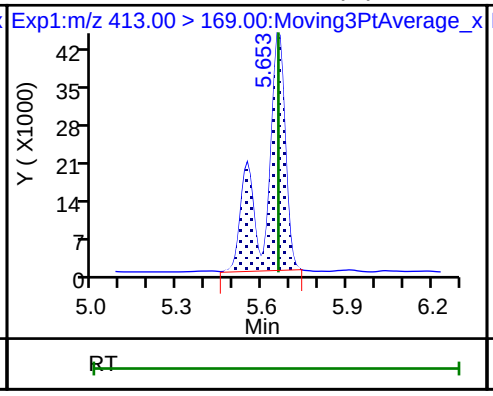
50 1H,1H,2H,2H-perfluorooctanesulfo



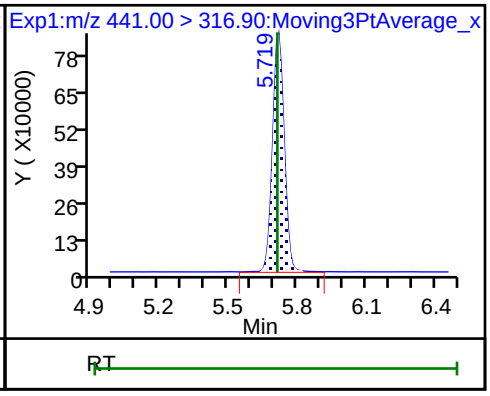
52 Perfluorooctanoic acid (M)



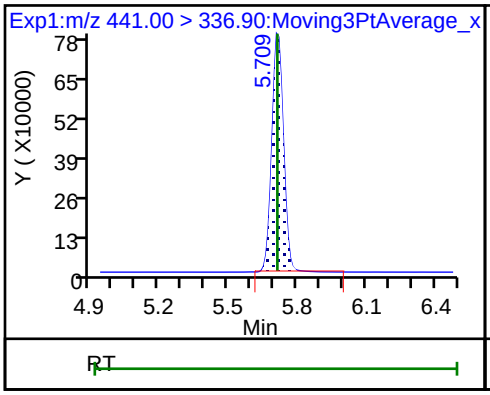
52 Perfluorooctanoic acid (M)



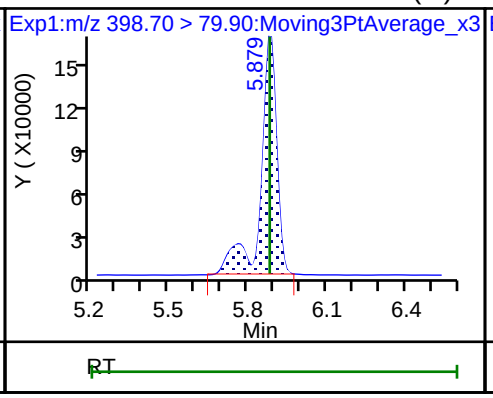
54 7:3 FTCA



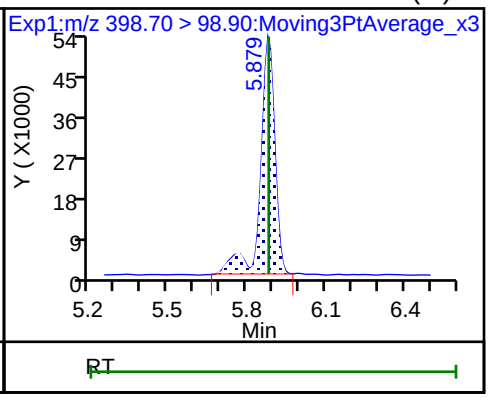
54 7:3 FTCA



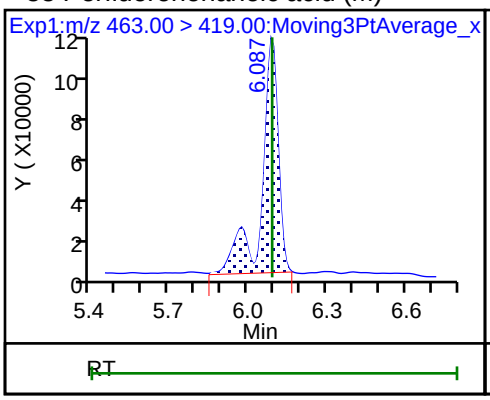
53 Perfluorohexanesulfonic acid (M)



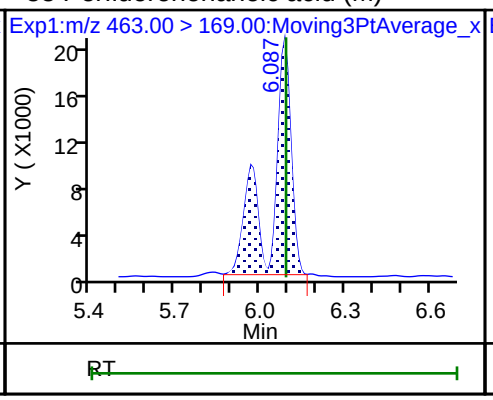
53 Perfluorohexanesulfonic acid (M)



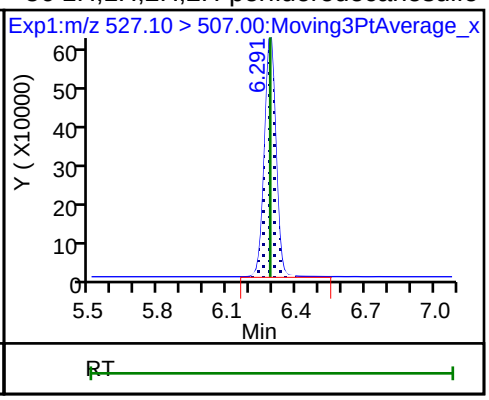
55 Perfluorononanoic acid (M)



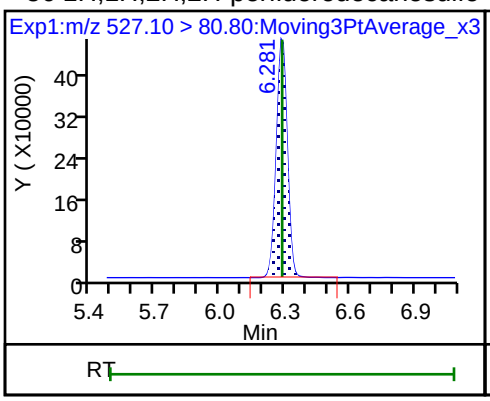
55 Perfluorononanoic acid (M)



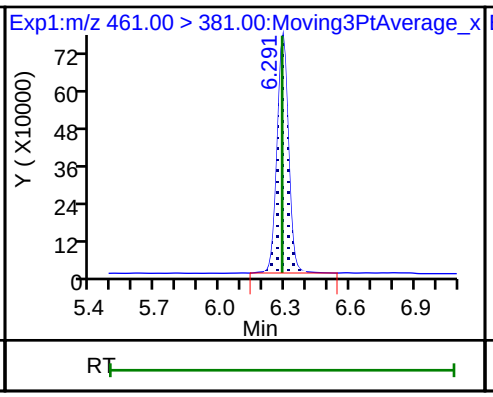
56 1H,1H,2H,2H-perfluorodecanesulfo



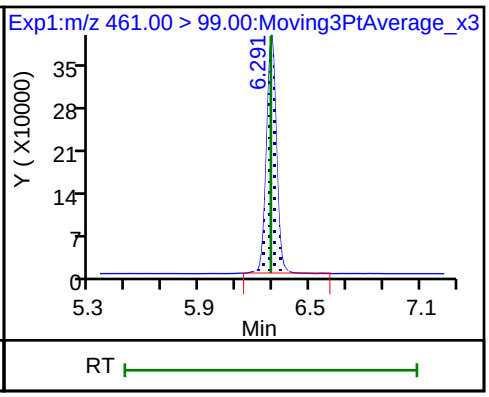
56 1H,1H,2H,2H-perfluorodecanesulfo



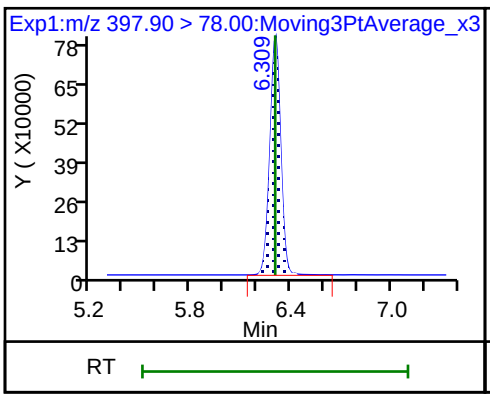
57 PFECHS



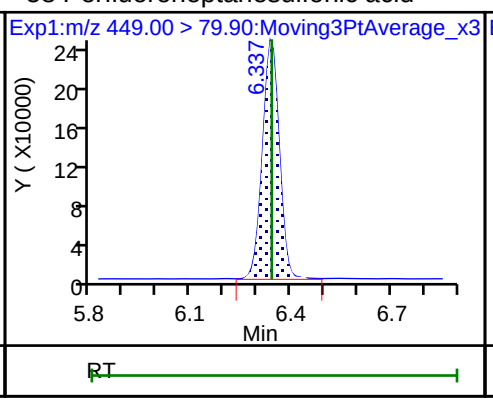
57 PFECHS



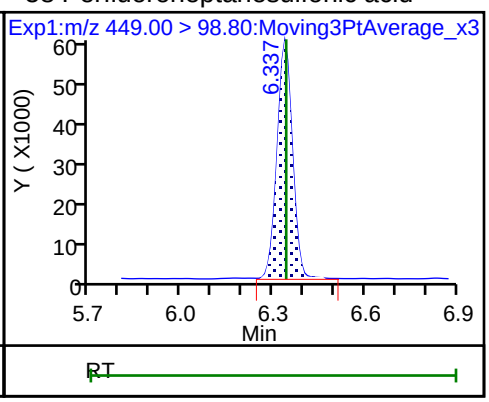
62 FHxSA



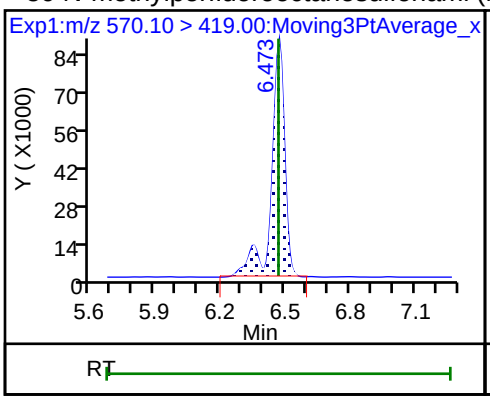
58 Perfluoroheptanesulfonic acid



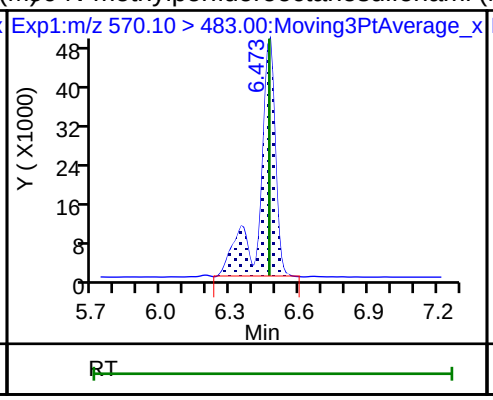
58 Perfluoroheptanesulfonic acid



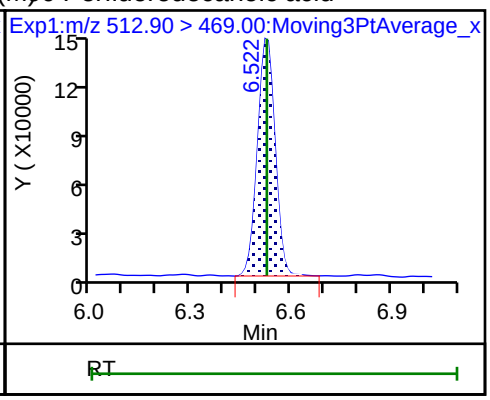
59 N-methylperfluorooctanesulfonami (M)



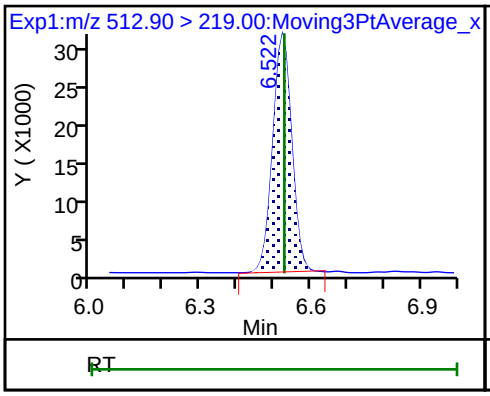
59 N-methylperfluorooctanesulfonami (M)



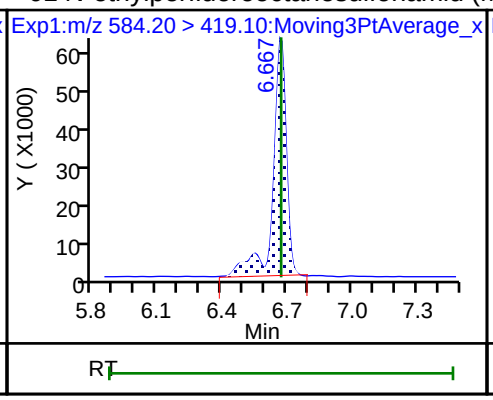
60 Perfluorodecanoic acid



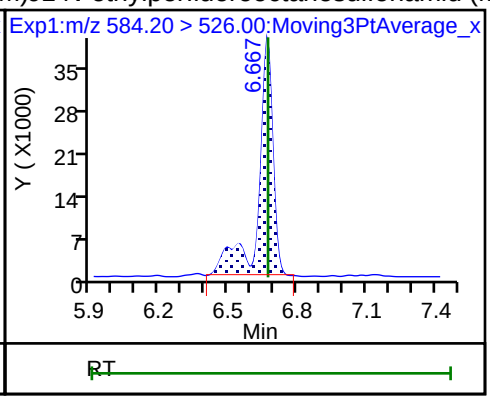
60 Perfluorodecanoic acid



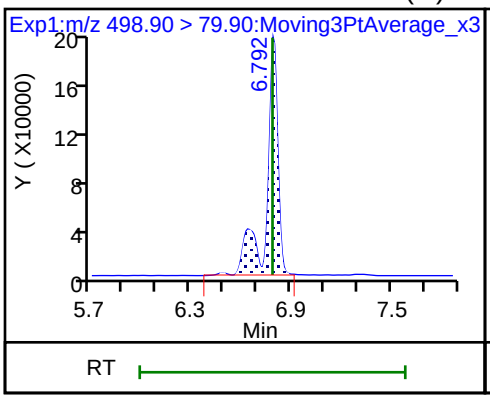
61 N-ethylperfluorooctanesulfonamid (M)



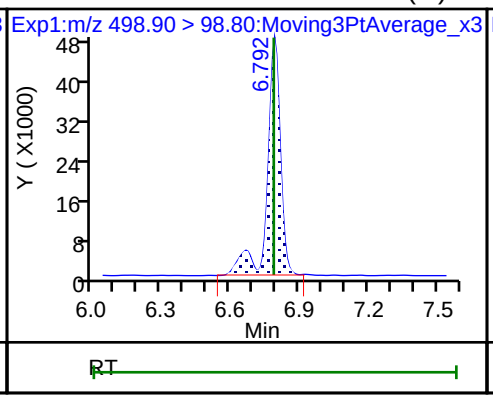
61 N-ethylperfluorooctanesulfonamid (M)



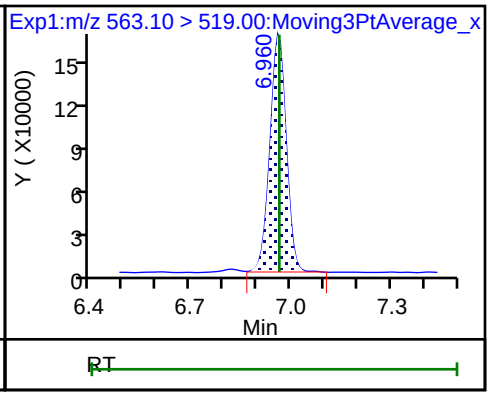
63 Perfluorooctanesulfonic acid (M)



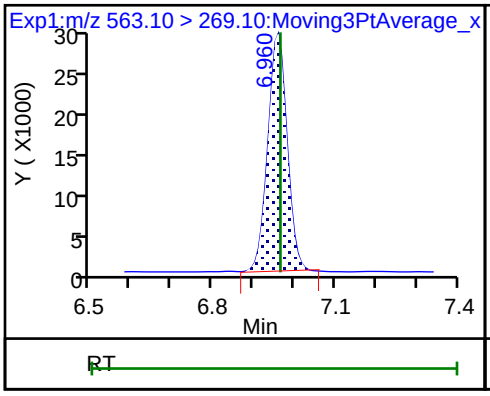
63 Perfluorooctanesulfonic acid (M)



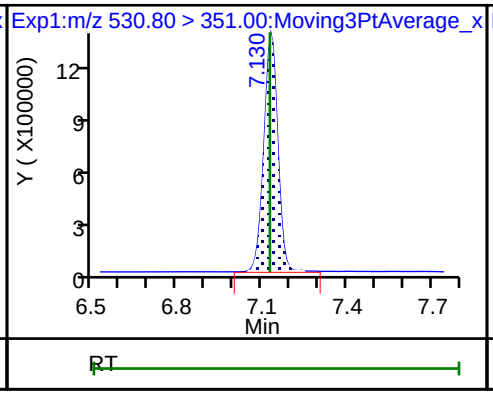
64 Perfluoroundecanoic acid



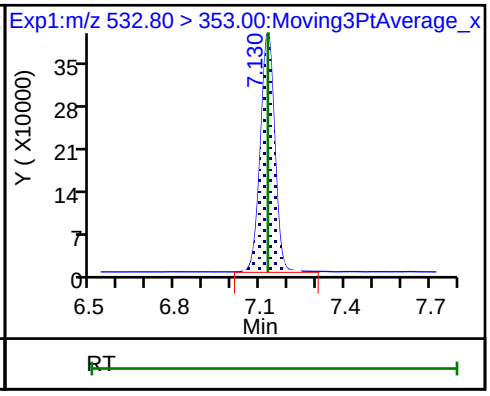
64 Perfluoroundecanoic acid



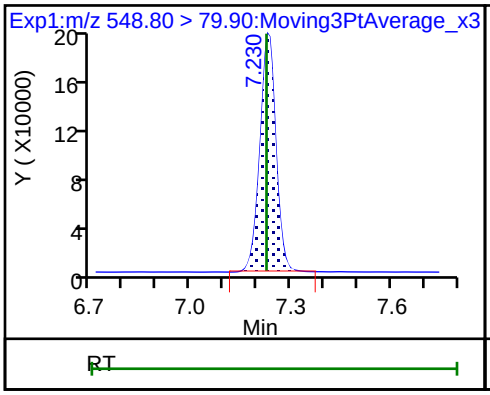
65 9-Chlorohexadecafluoro-3-oxanona



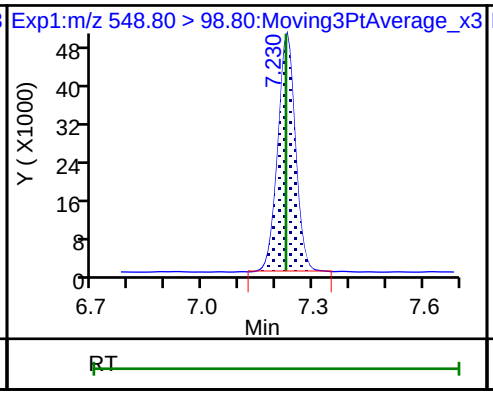
65 9-Chlorohexadecafluoro-3-oxanona



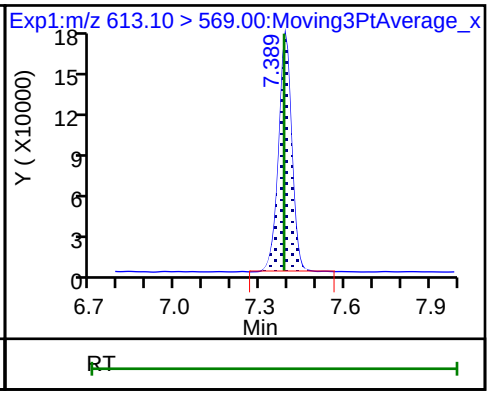
66 Perfluorononanesulfonic acid



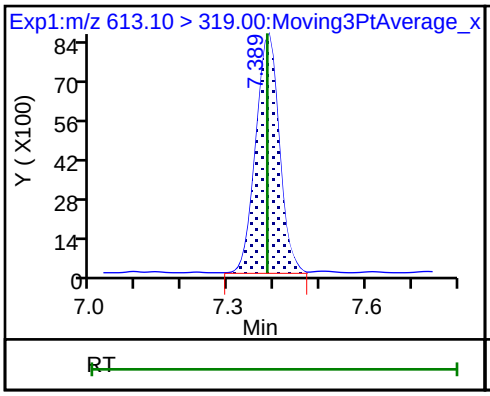
66 Perfluorononanesulfonic acid



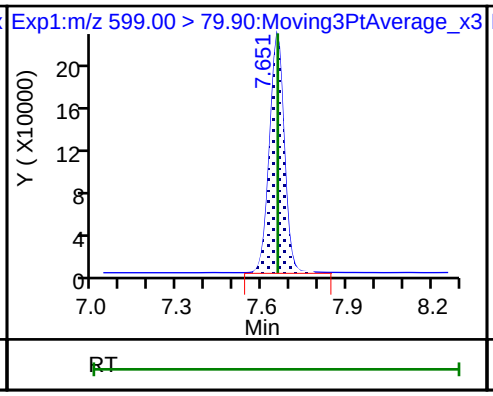
67 Perfluorododecanoic acid



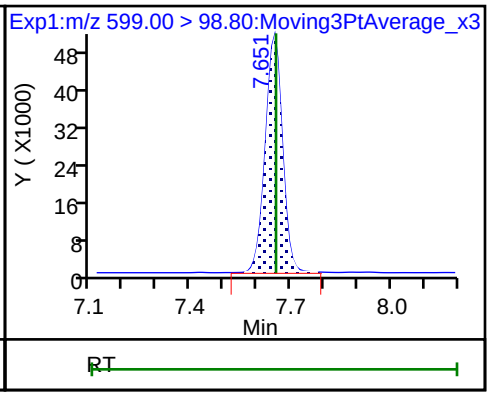
67 Perfluorododecanoic acid



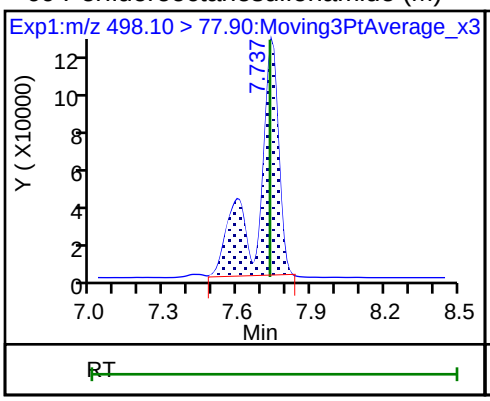
68 Perfluorodecanesulfonic acid



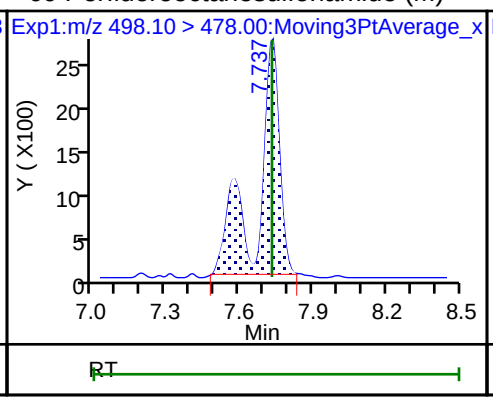
68 Perfluorodecanesulfonic acid



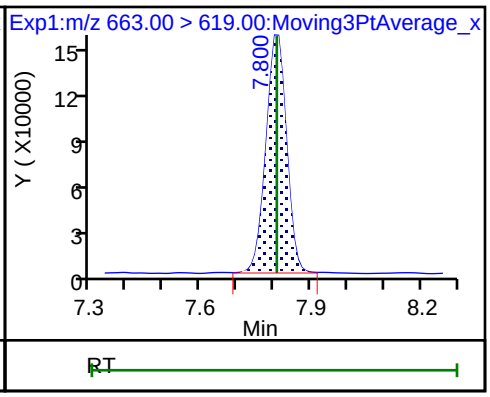
69 Perfluorooctanesulfonamide (M)



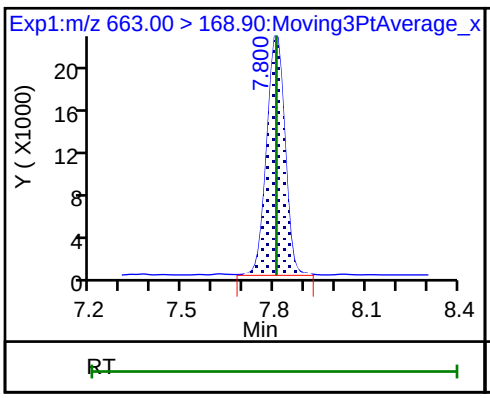
69 Perfluorooctanesulfonamide (M)



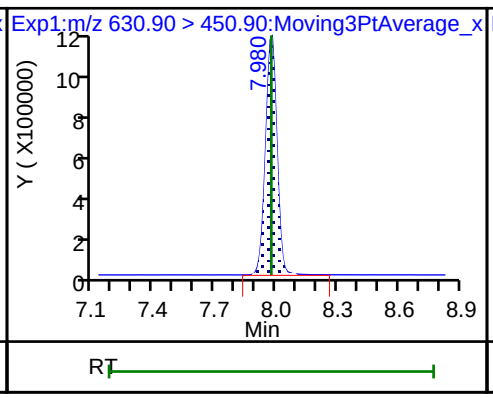
70 Perfluorotridecanoic acid



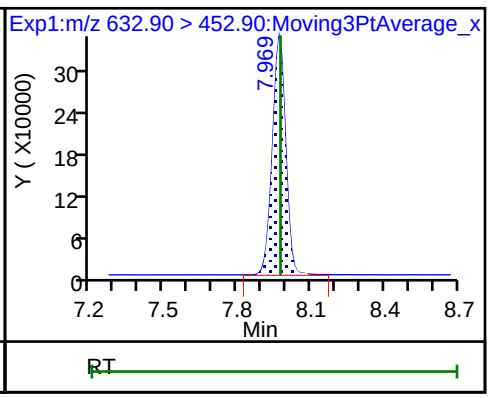
70 Perfluorotridecanoic acid



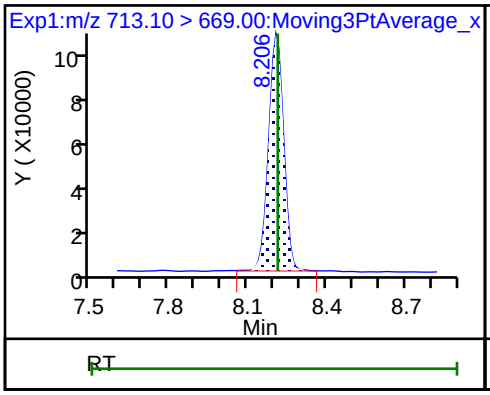
71 11-Chloroeicosafluoro-3-oxaundec



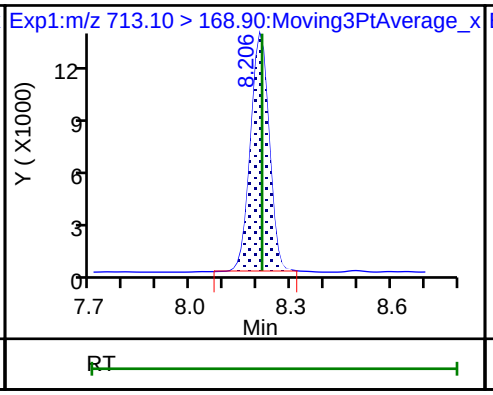
71 11-Chloroeicosafluoro-3-oxaundec



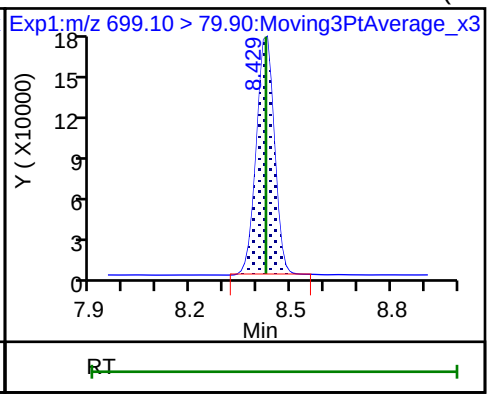
72 Perfluorotetradecanoic acid



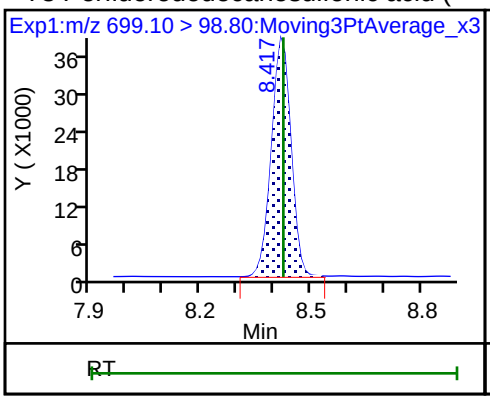
72 Perfluorotetradecanoic acid



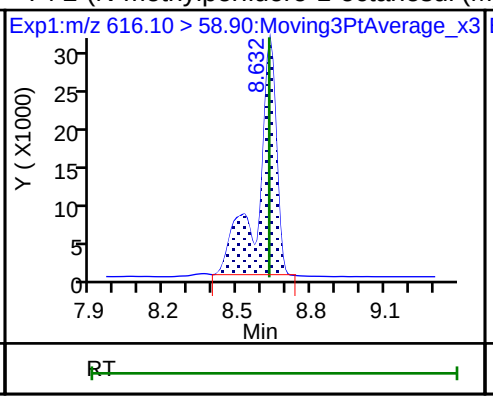
73 Perfluorododecanesulfonic acid (



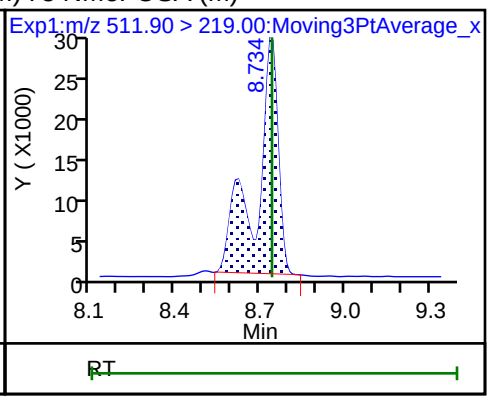
73 Perfluorododecanesulfonic acid (



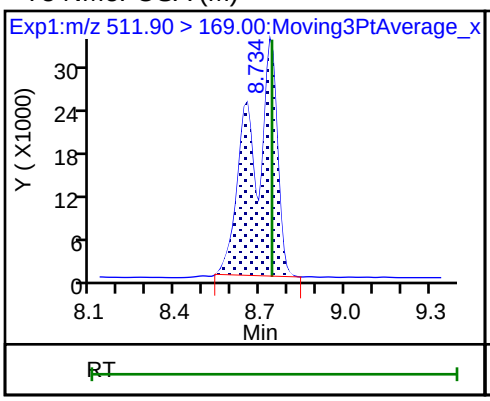
74 2-(N-methylperfluoro-1-octanesul (M)



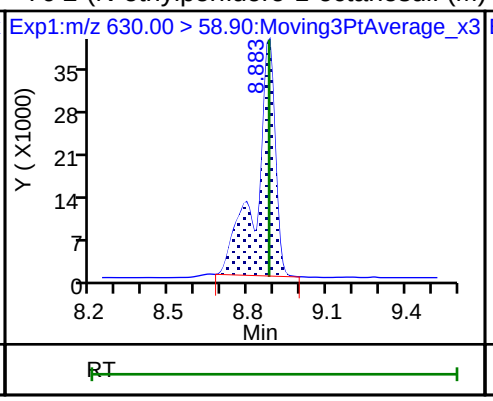
75 NMeFOSA (M)



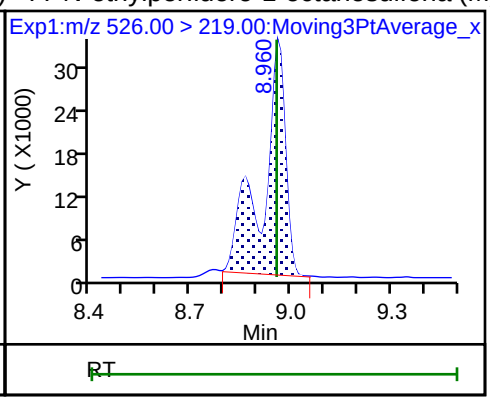
75 NMeFOSA (M)



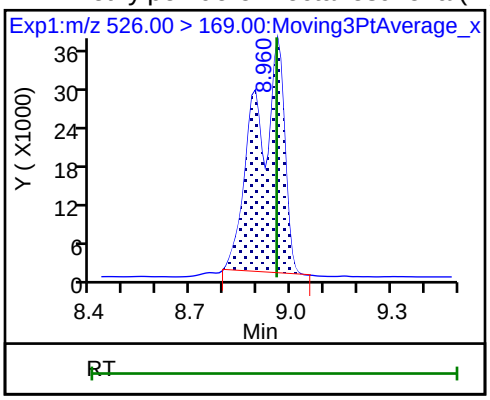
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

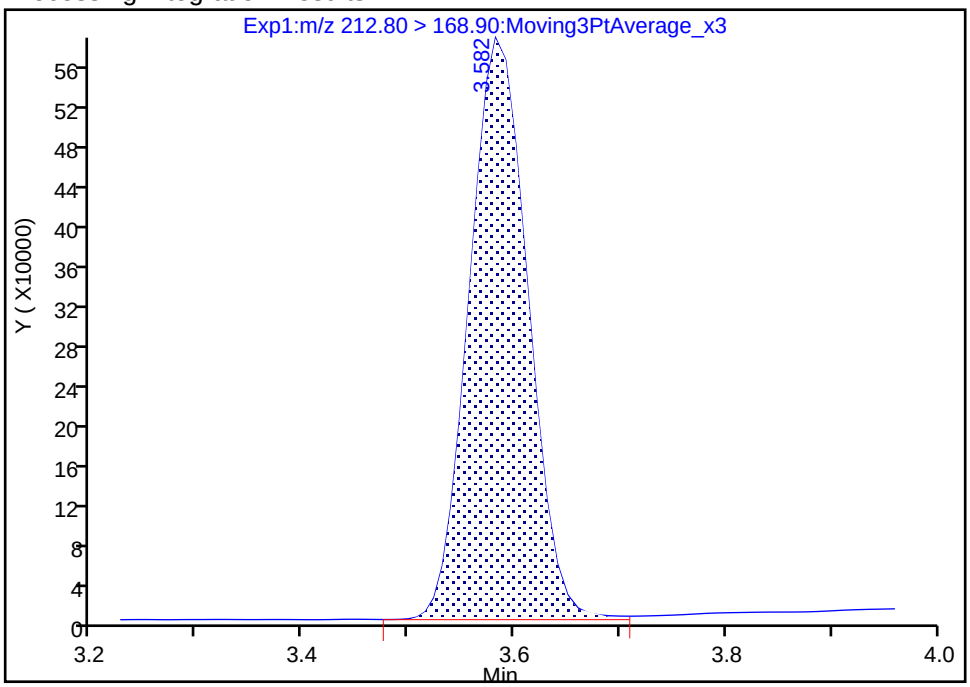
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Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

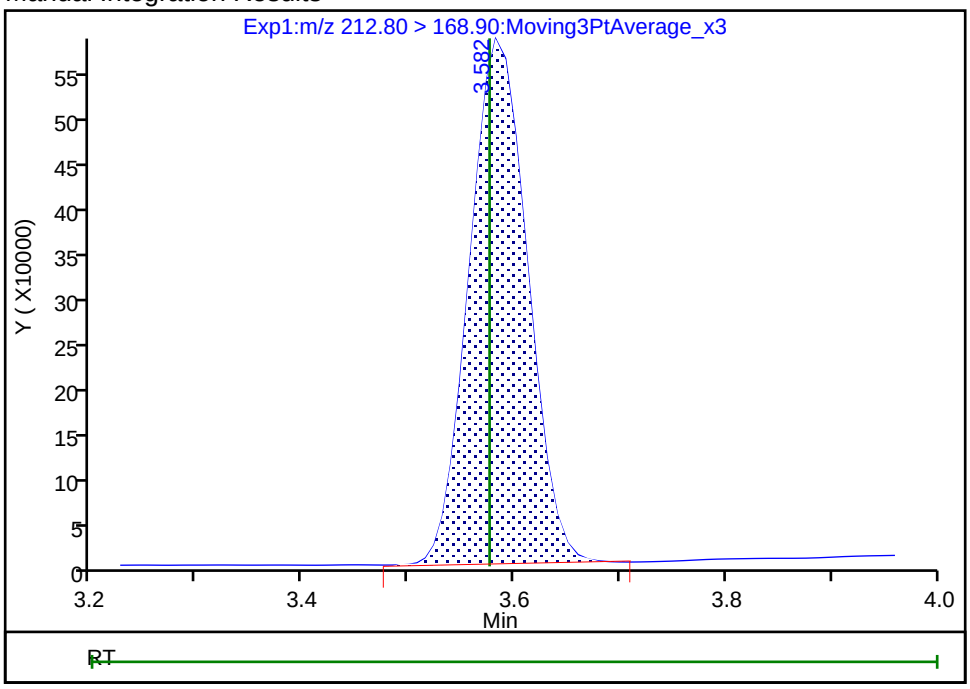
Processing Integration Results

RT: 3.58
Area: 2256098
Amount: 1.283622
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 2224644
Amount: 1.272423
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:24:50 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

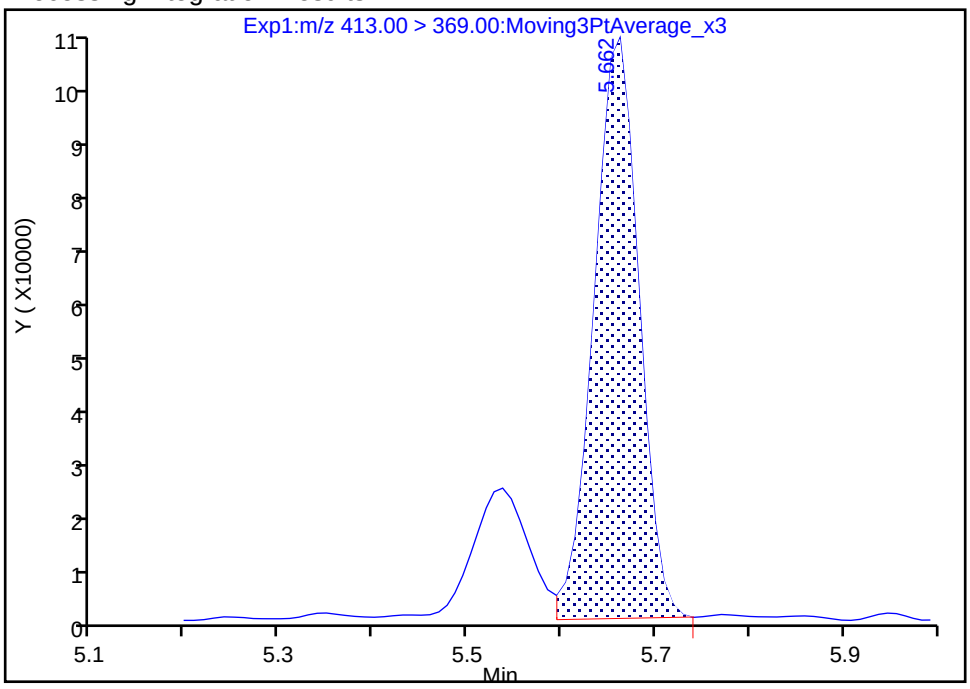
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

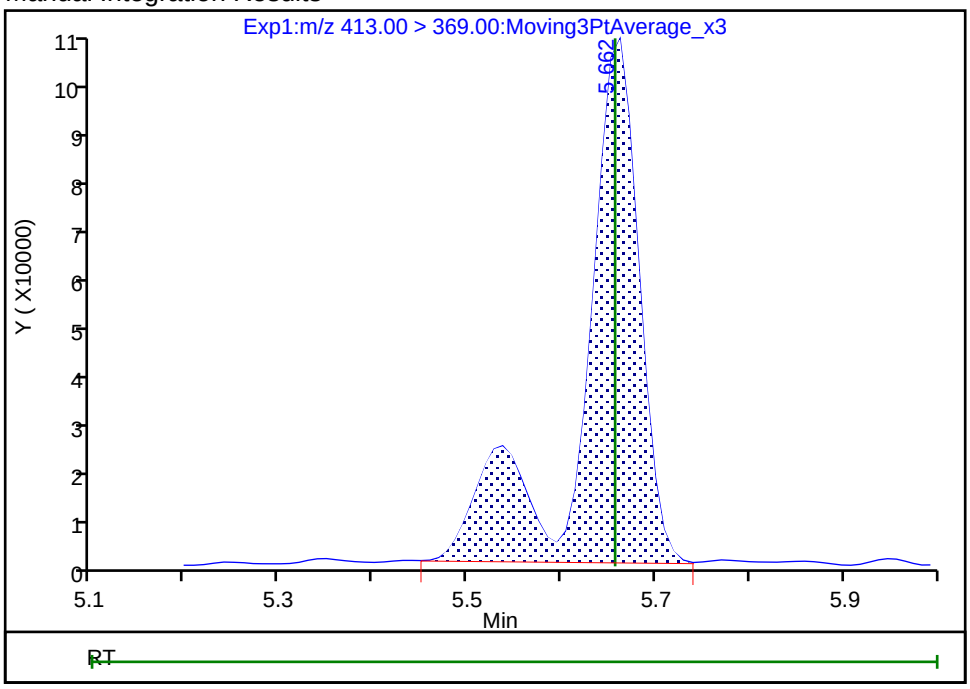
Processing Integration Results

RT: 5.66
Area: 341097
Amount: 0.272280
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 427873
Amount: 0.302870
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:25:26 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

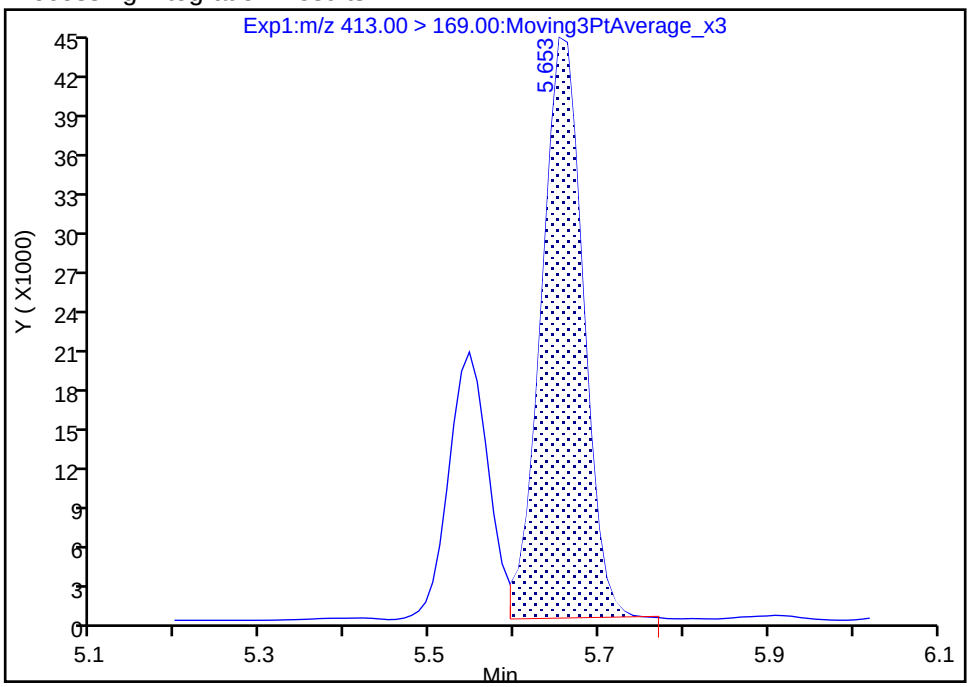
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

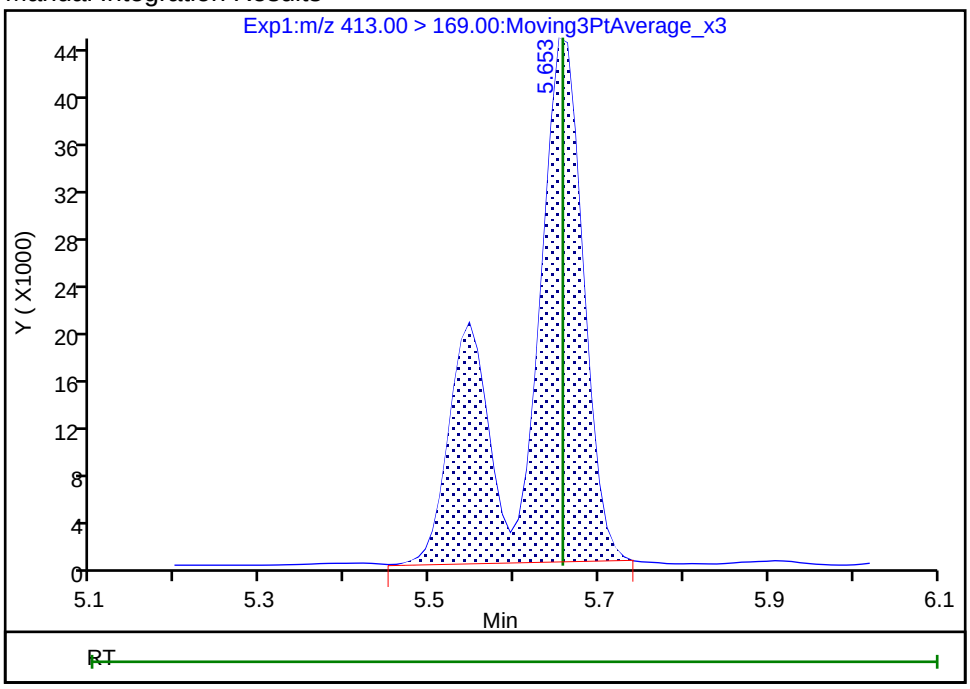
Processing Integration Results

RT: 5.65
Area: 153481
Amount: 0.272280
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 218205
Amount: 0.302870
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:25:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

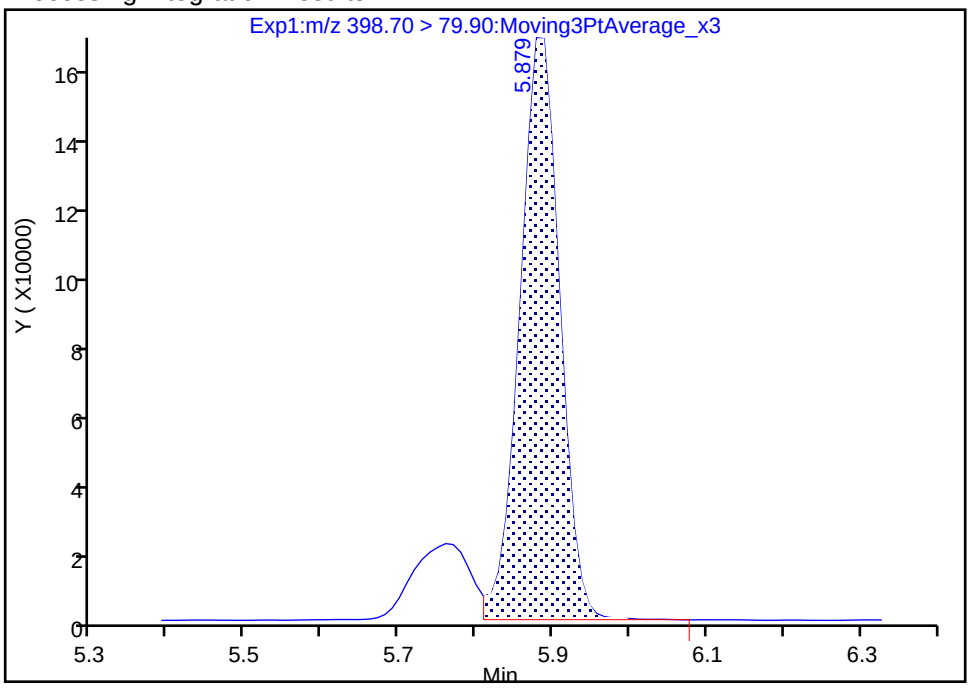
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

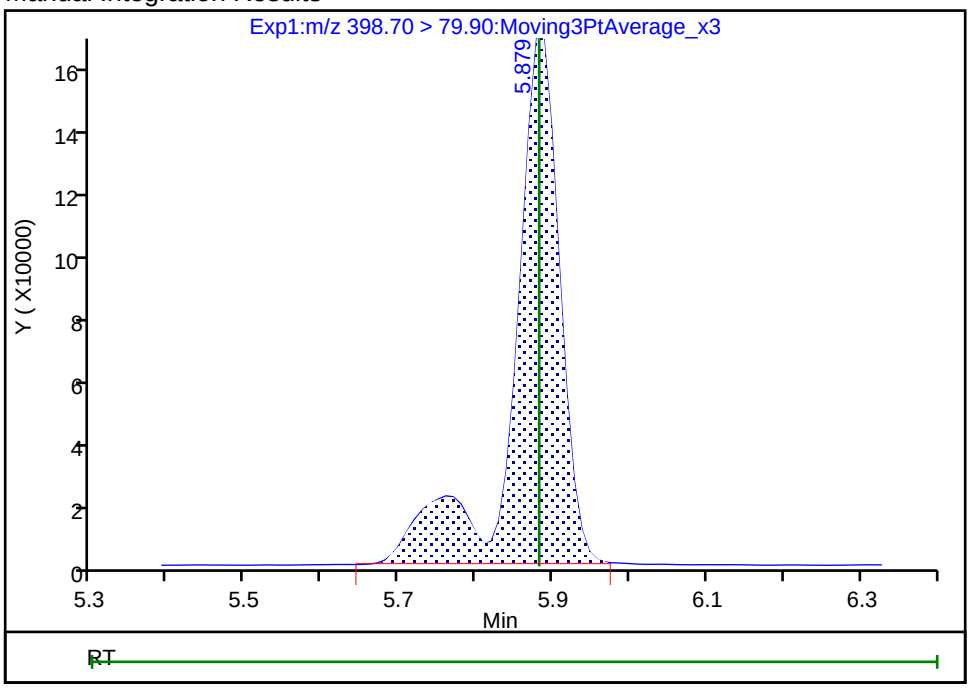
Processing Integration Results

RT: 5.88
Area: 580248
Amount: 0.266564
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 679323
Amount: 0.283053
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:25:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

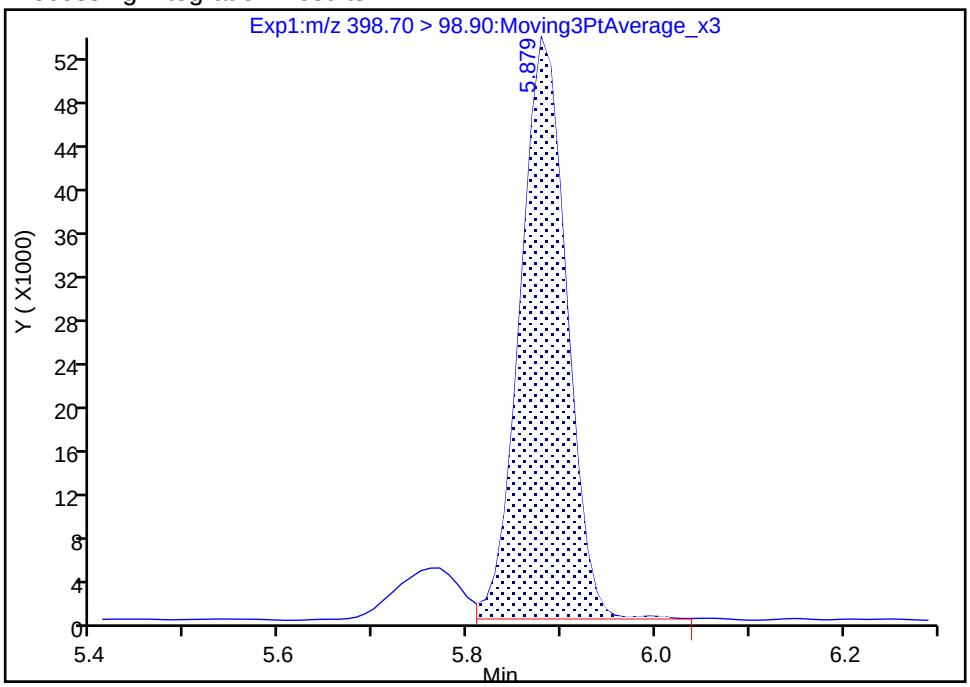
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

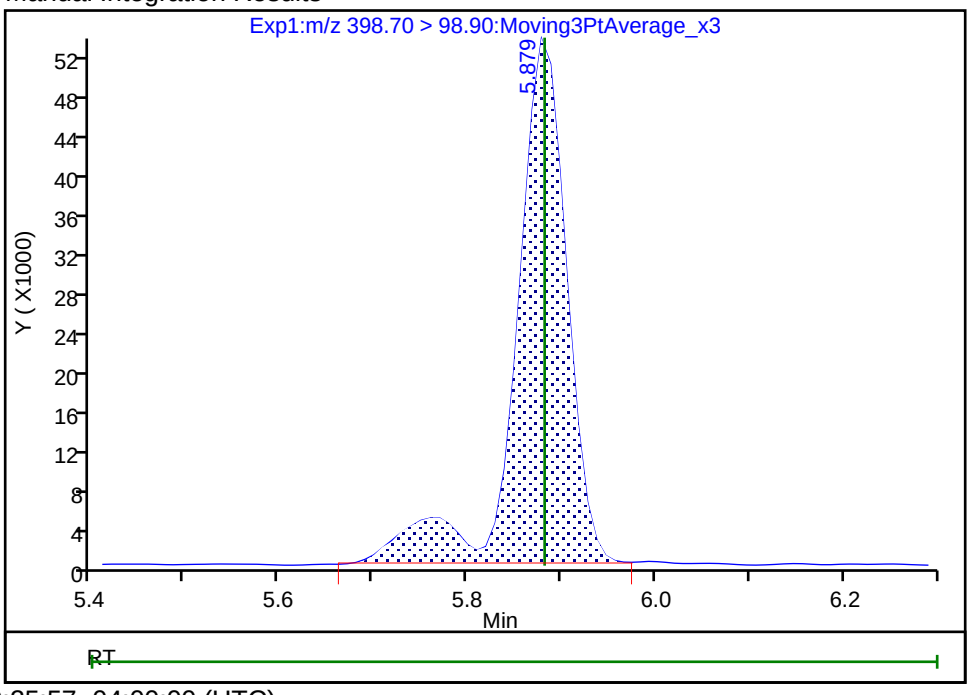
Processing Integration Results

RT: 5.88
Area: 182309
Amount: 0.266564
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 202268
Amount: 0.283053
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:25:57 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

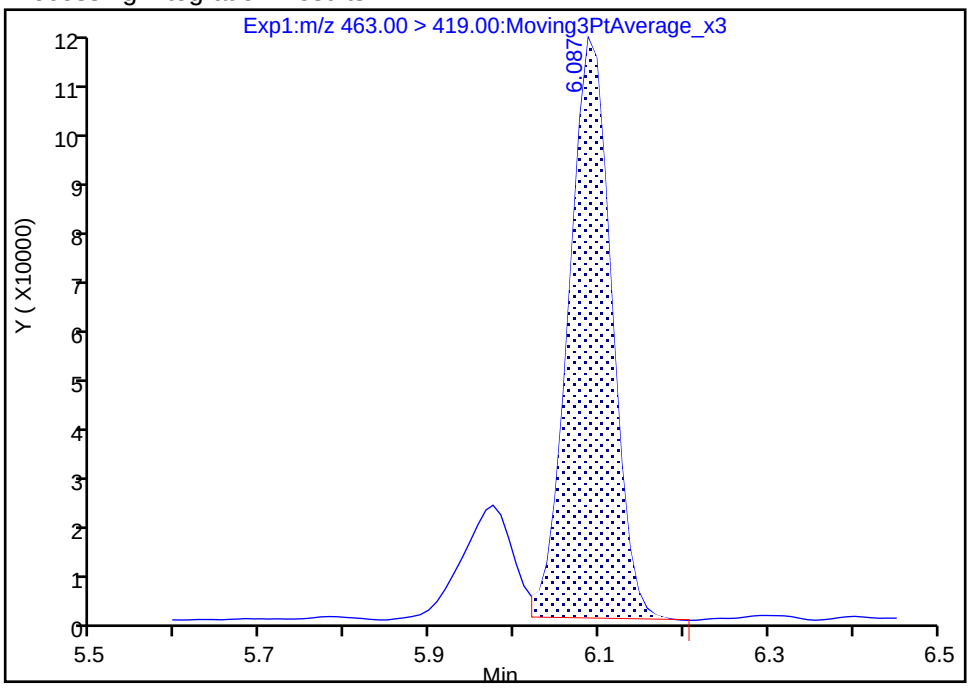
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

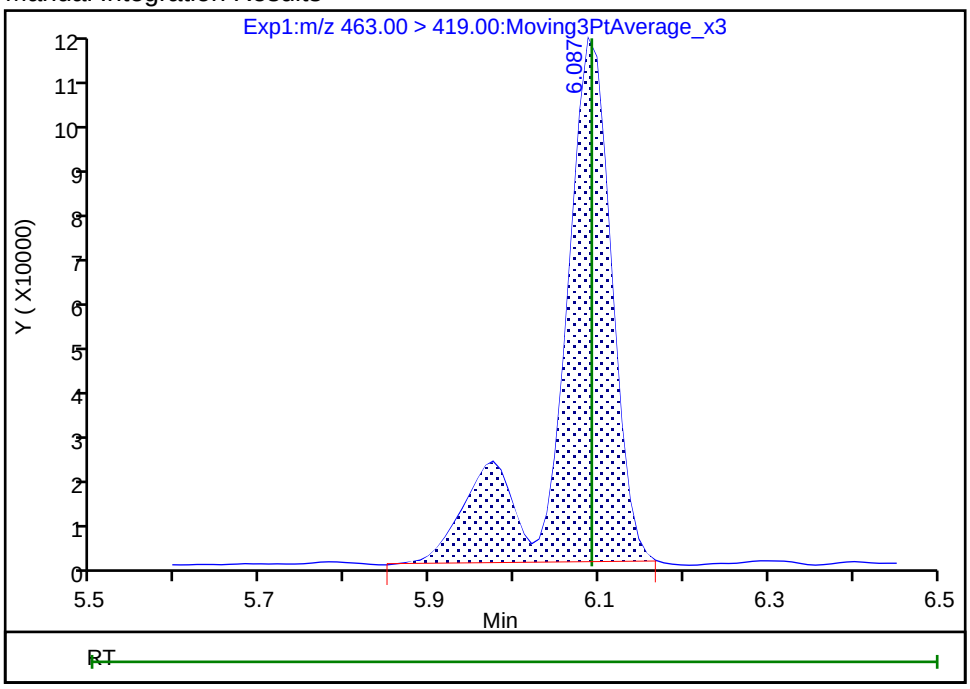
Processing Integration Results

RT: 6.09
Area: 399848
Amount: 0.299825
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 485979
Amount: 0.328056
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:26:12 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

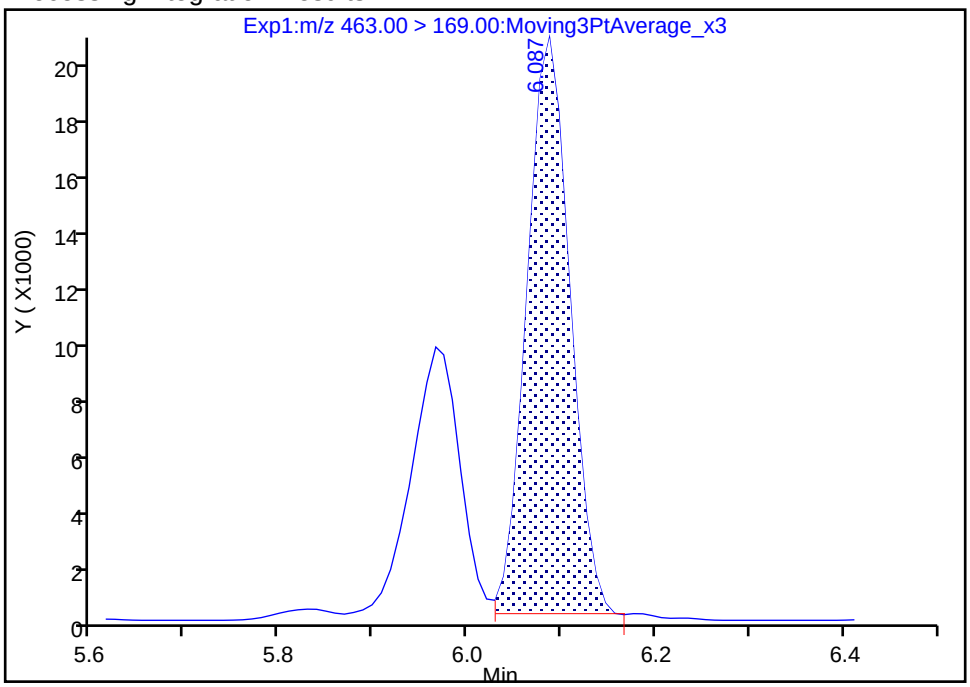
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

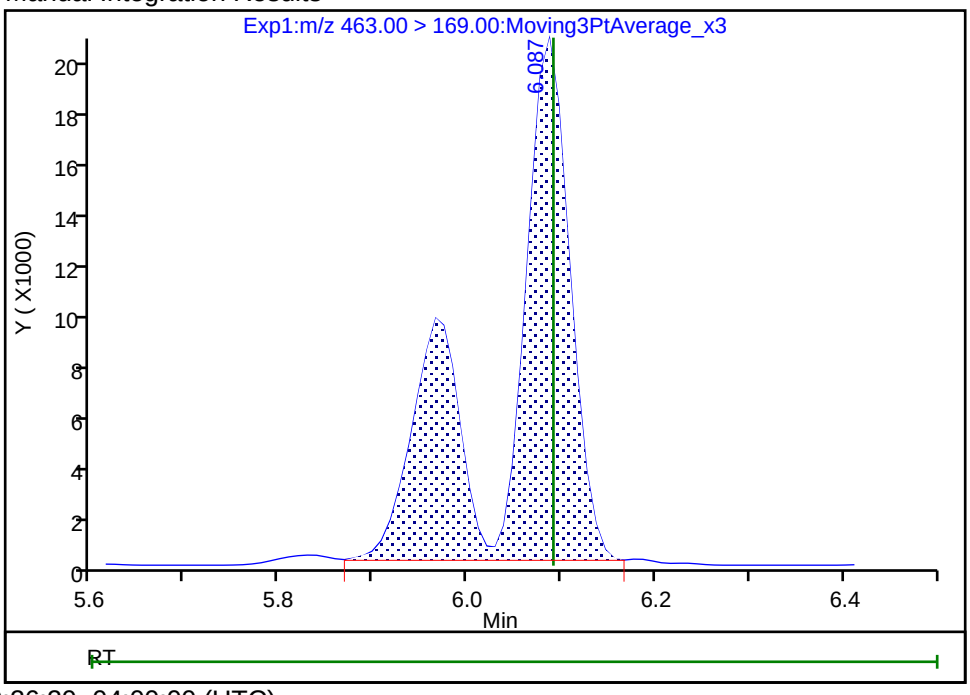
Processing Integration Results

RT: 6.09
Area: 65866
Amount: 0.299825
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 100206
Amount: 0.328056
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:26:20 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

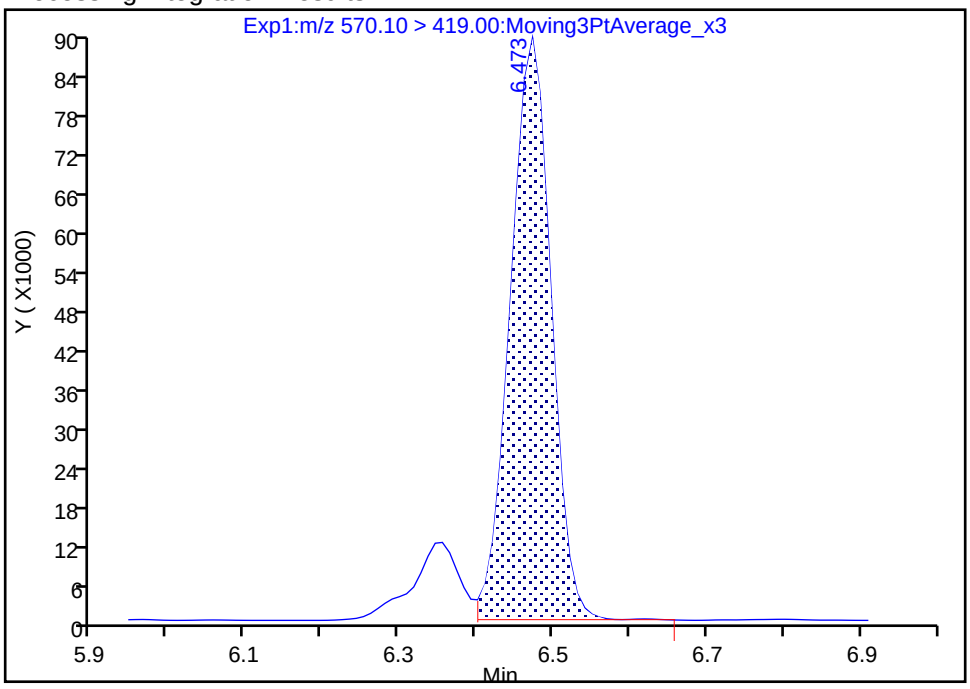
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

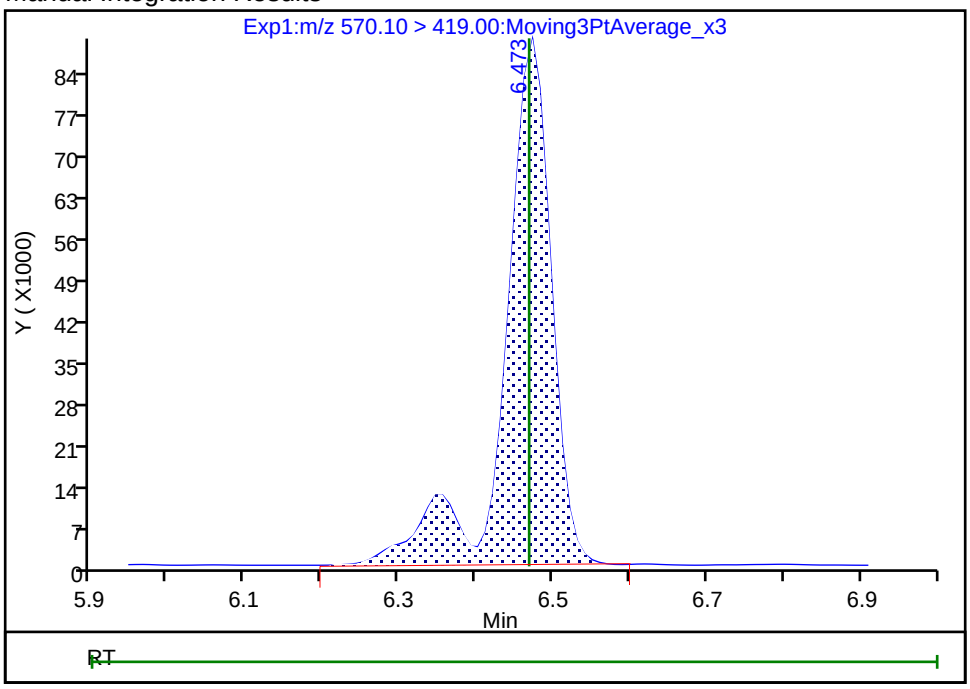
Processing Integration Results

RT: 6.47
Area: 329468
Amount: 0.314033
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 379101
Amount: 0.336241
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:26:38 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

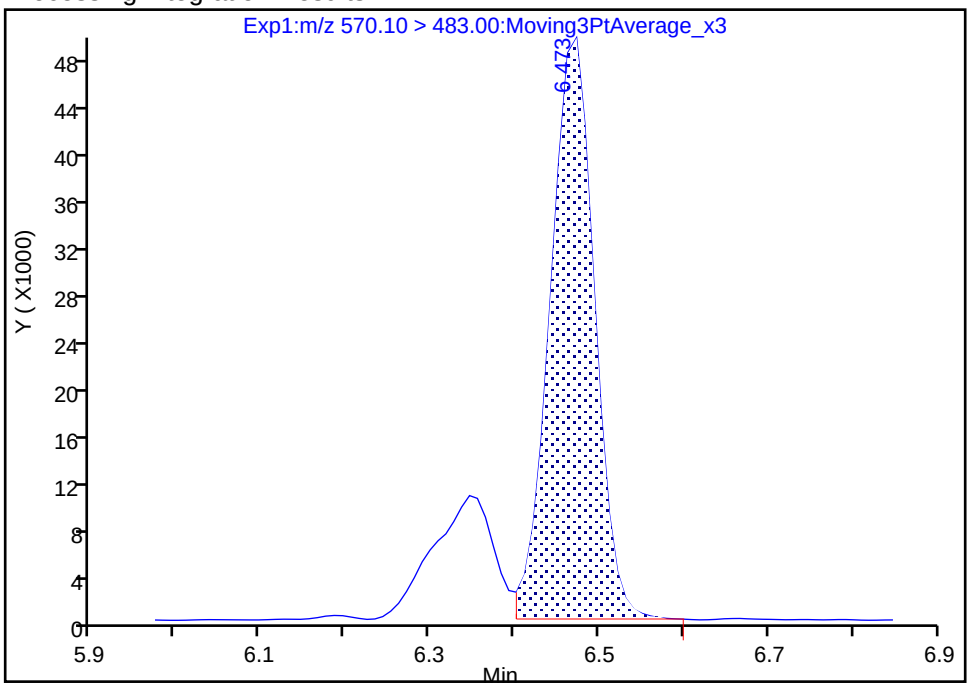
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

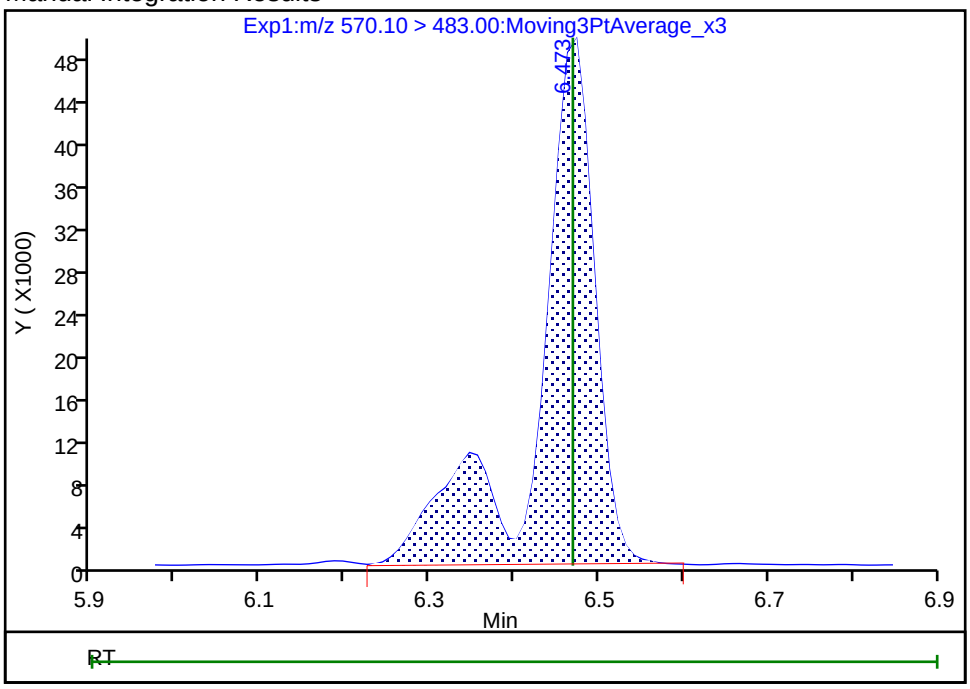
Processing Integration Results

RT: 6.47
Area: 179454
Amount: 0.314033
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 231770
Amount: 0.336241
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:26:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

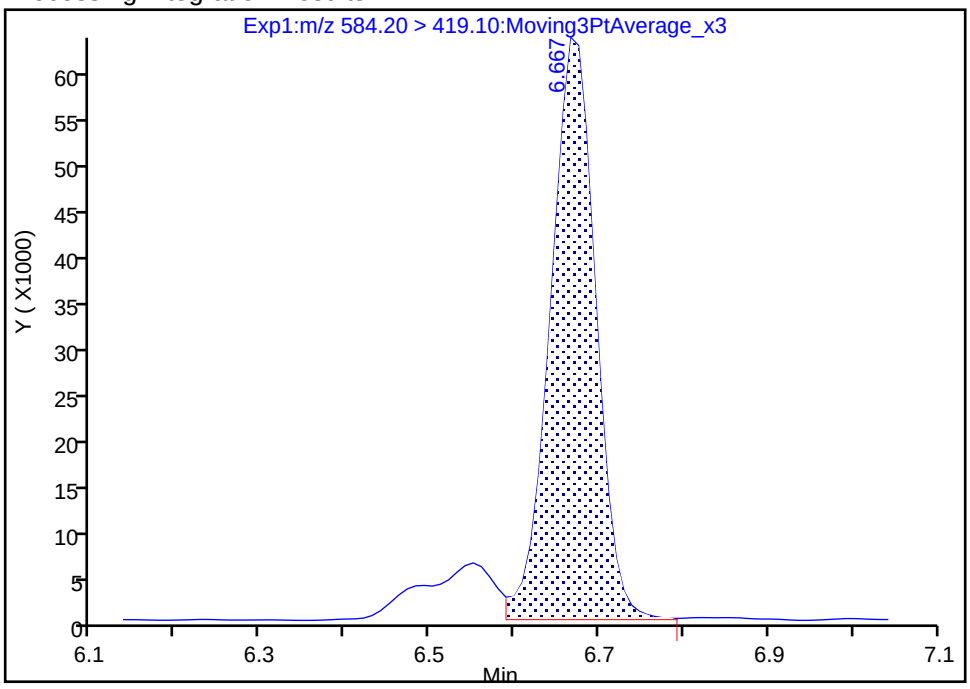
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

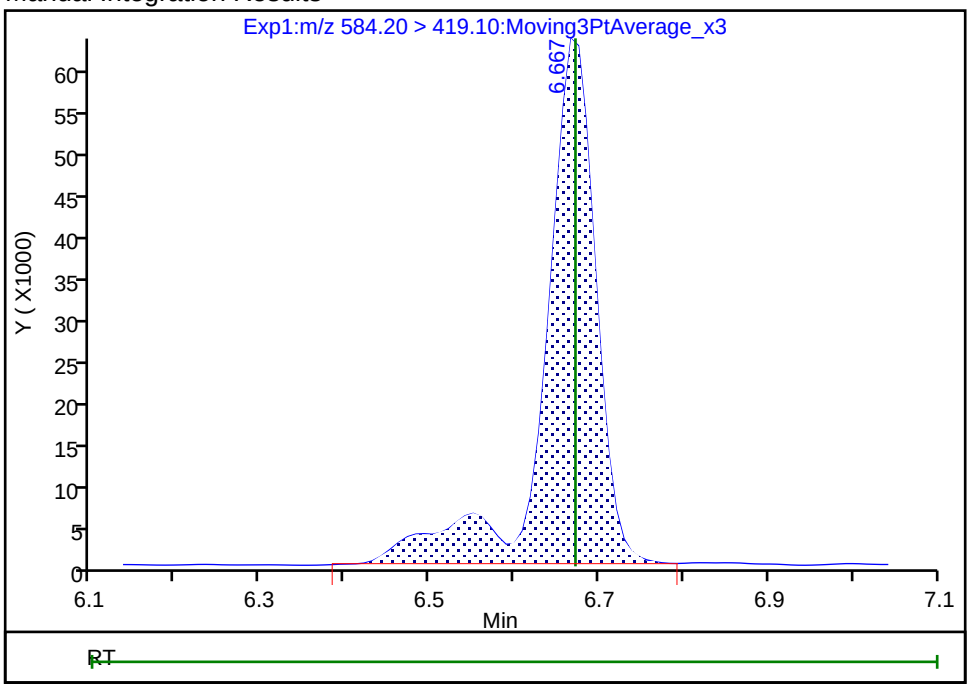
Processing Integration Results

RT: 6.67
Area: 233405
Amount: 0.286159
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 268804
Amount: 0.305773
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:27:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

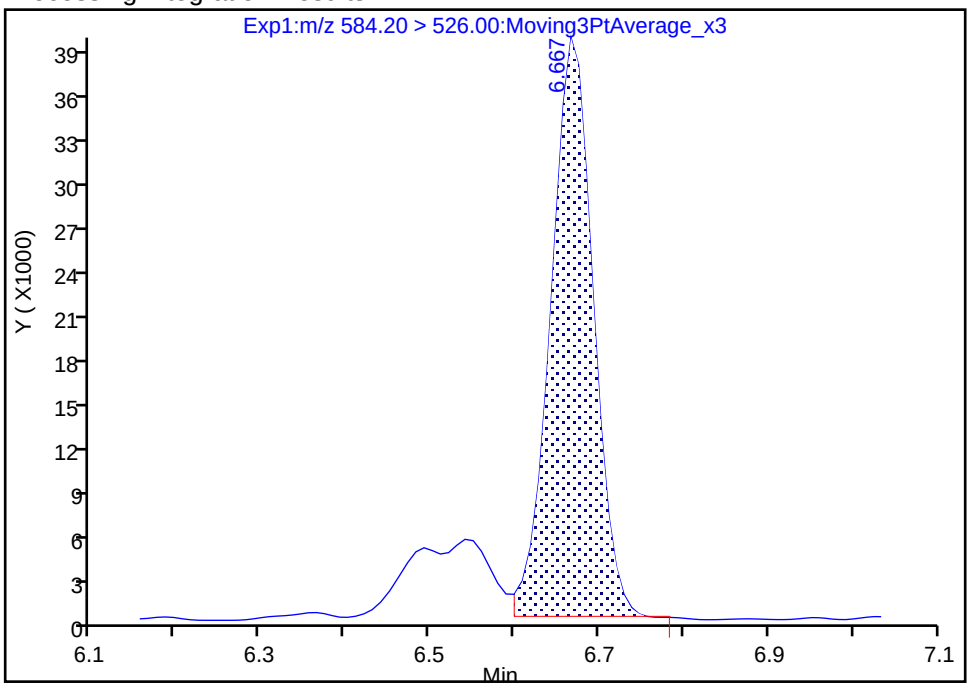
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

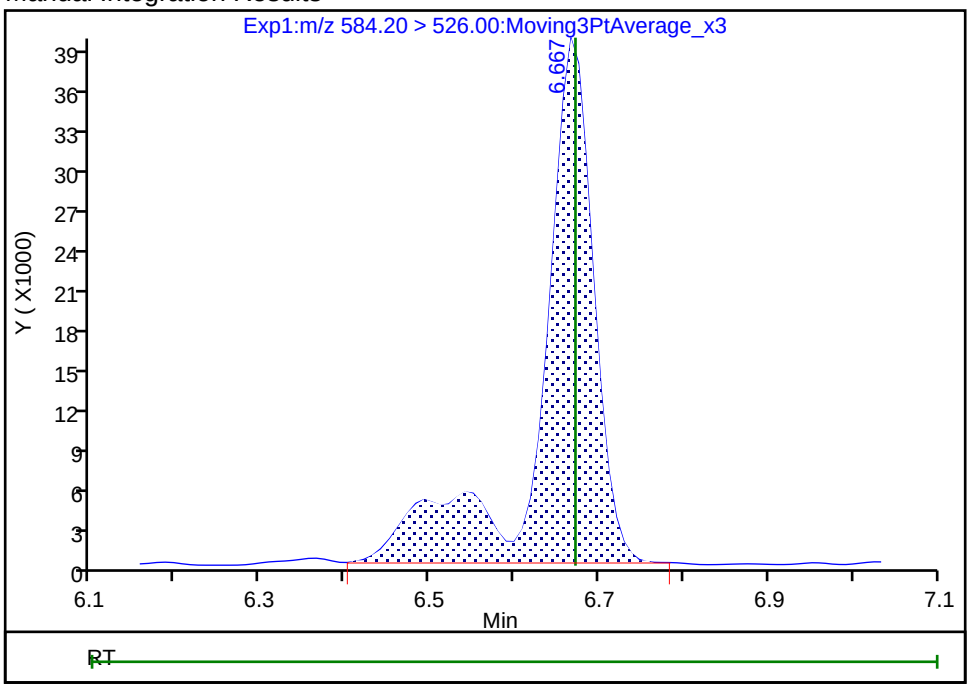
Processing Integration Results

RT: 6.67
Area: 136668
Amount: 0.286159
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 172015
Amount: 0.305773
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:27:08 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

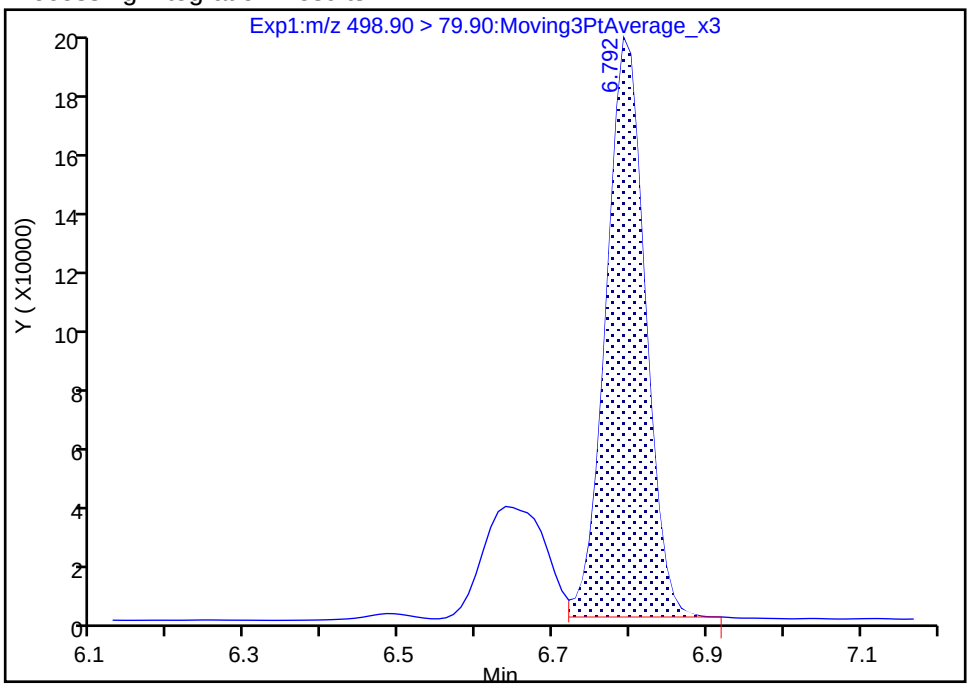
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

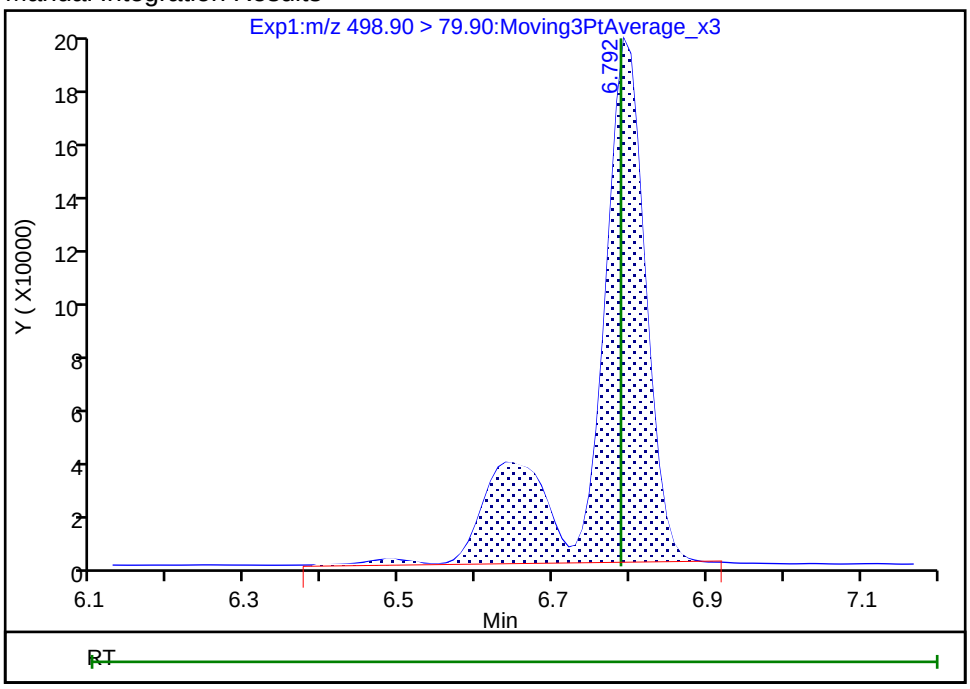
Processing Integration Results

RT: 6.79
Area: 673028
Amount: 0.264690
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 887760
Amount: 0.301527
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:27:20 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

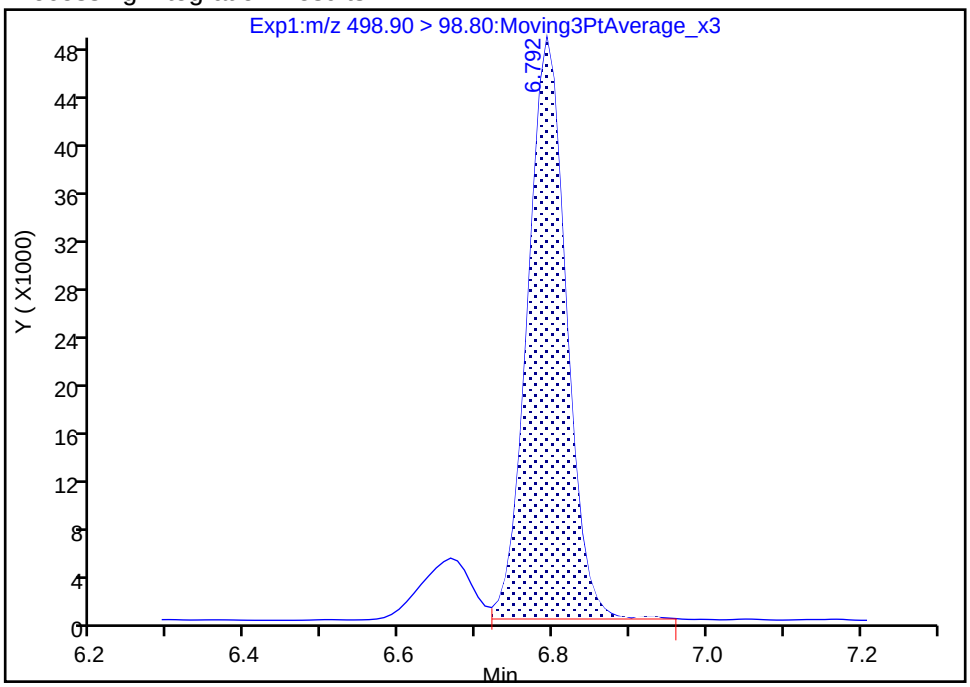
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

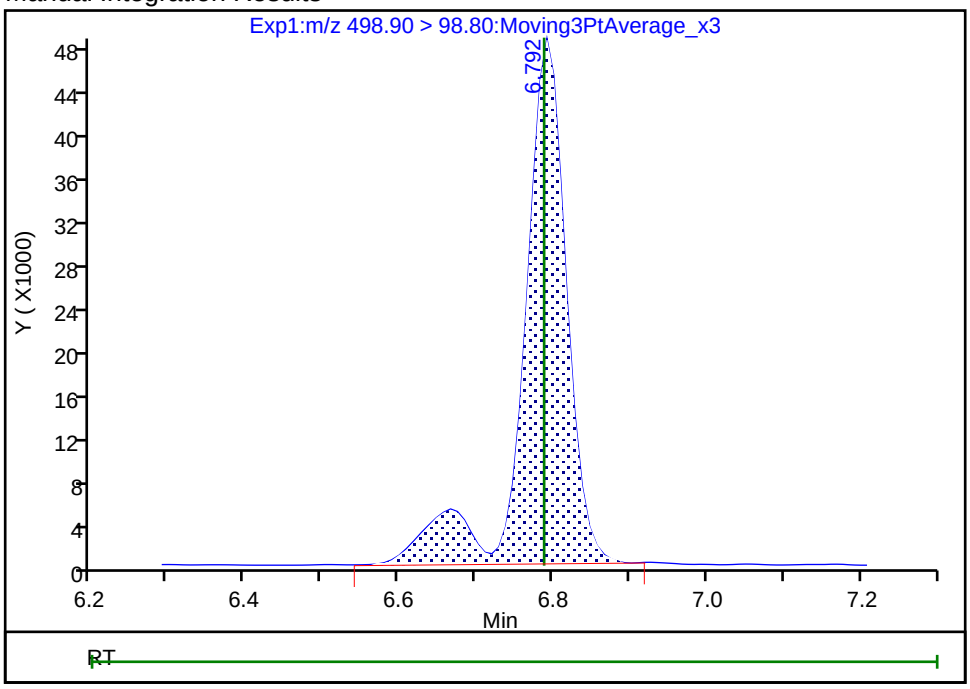
Processing Integration Results

RT: 6.79
Area: 170357
Amount: 0.264690
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 192032
Amount: 0.301527
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:27:29 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

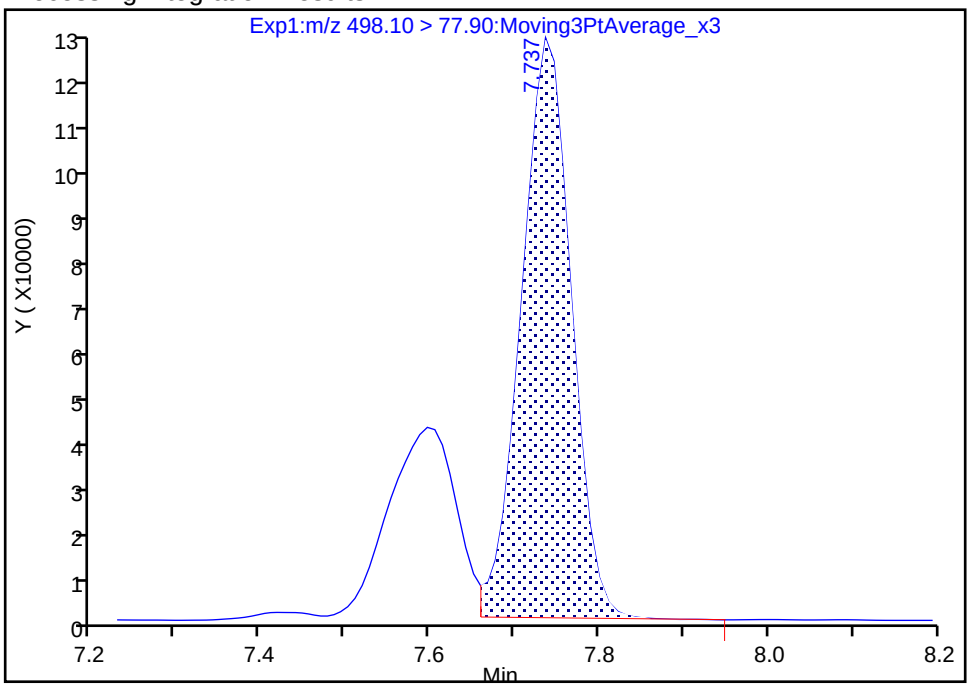
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

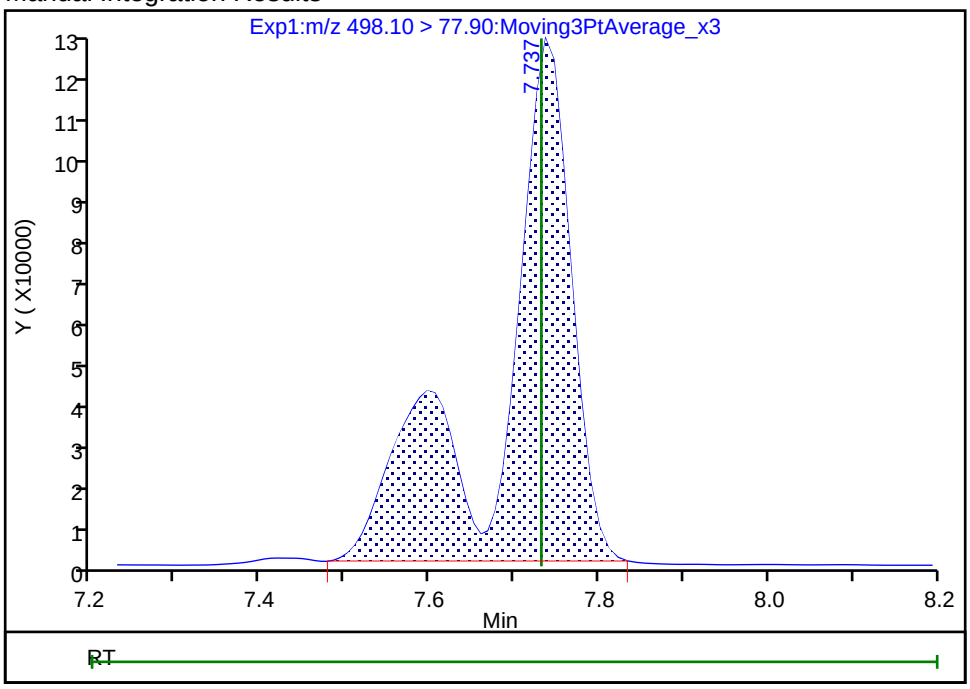
Processing Integration Results

RT: 7.74
Area: 528886
Amount: 0.269196
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 750406
Amount: 0.316362
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:27:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

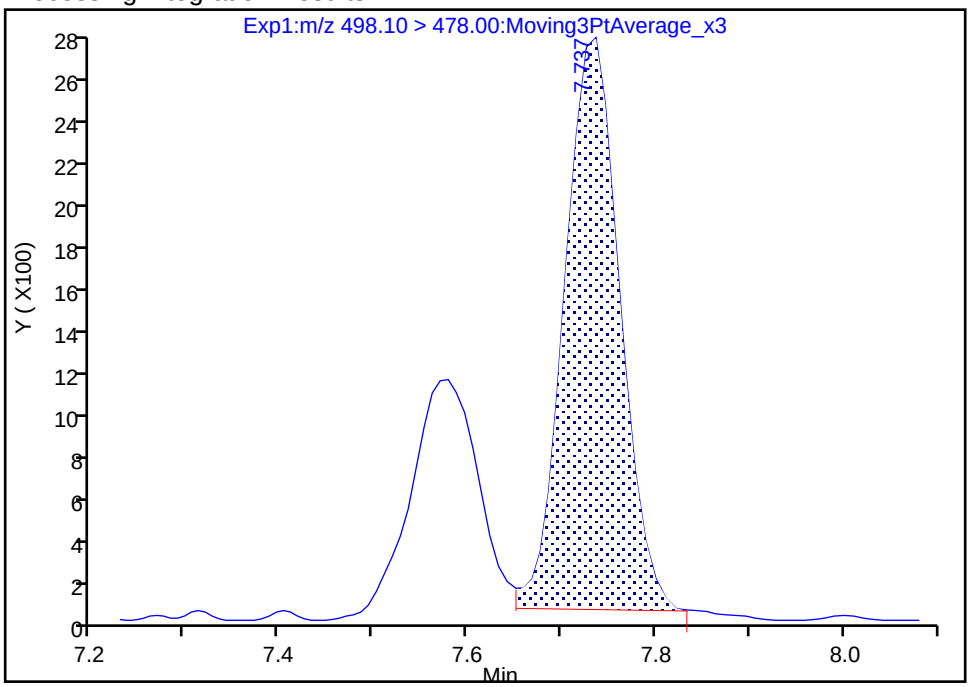
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

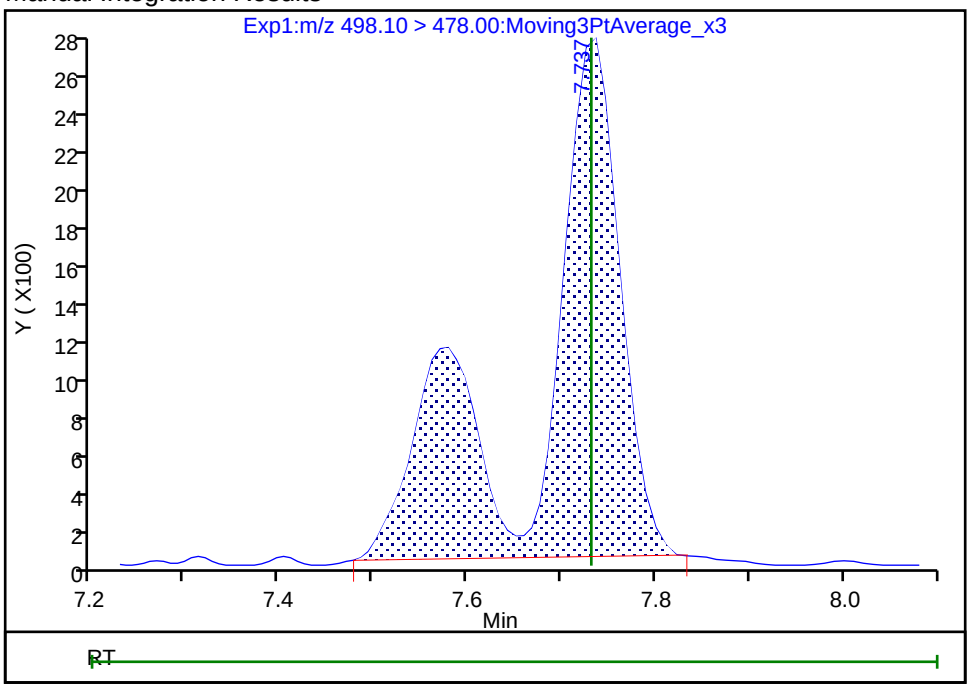
Processing Integration Results

RT: 7.74
Area: 11016
Amount: 0.269196
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 16579
Amount: 0.316362
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:00 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

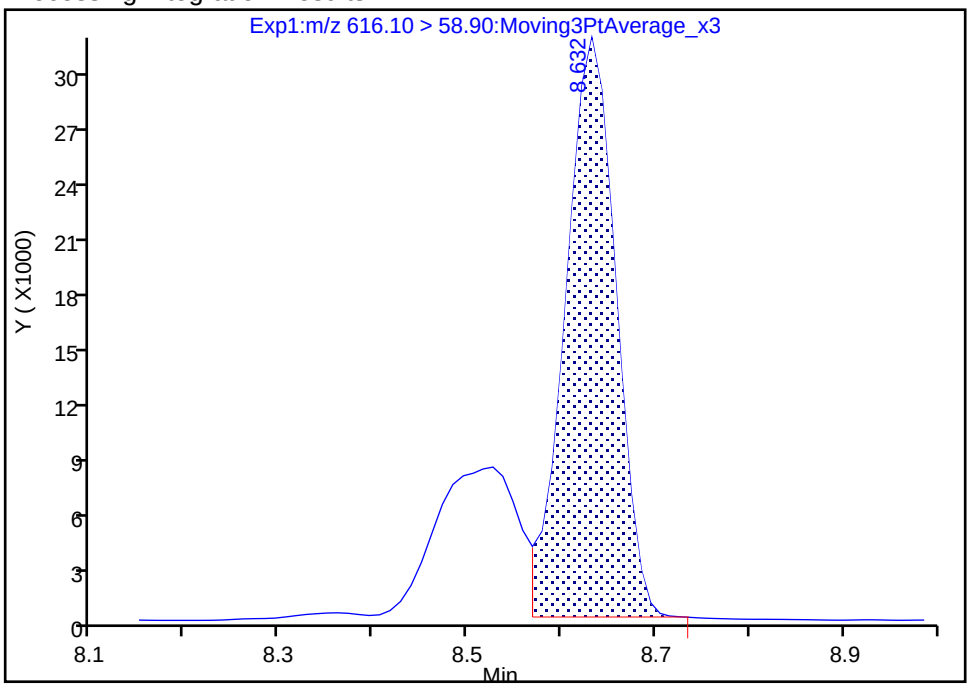
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

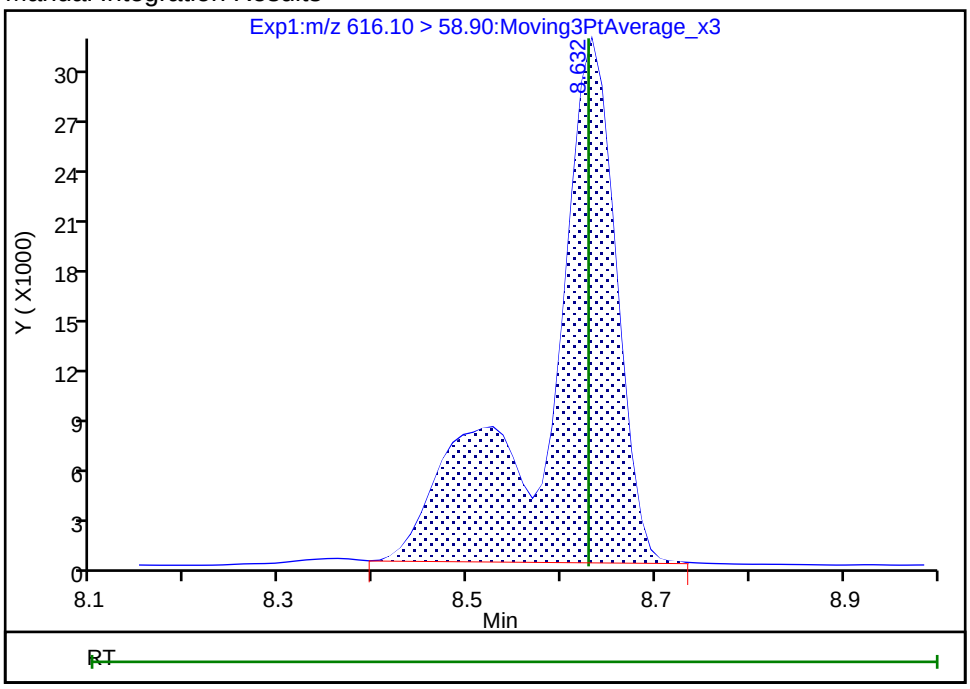
Processing Integration Results

RT: 8.63
Area: 118383
Amount: 2.517831
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 167401
Amount: 2.984095
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

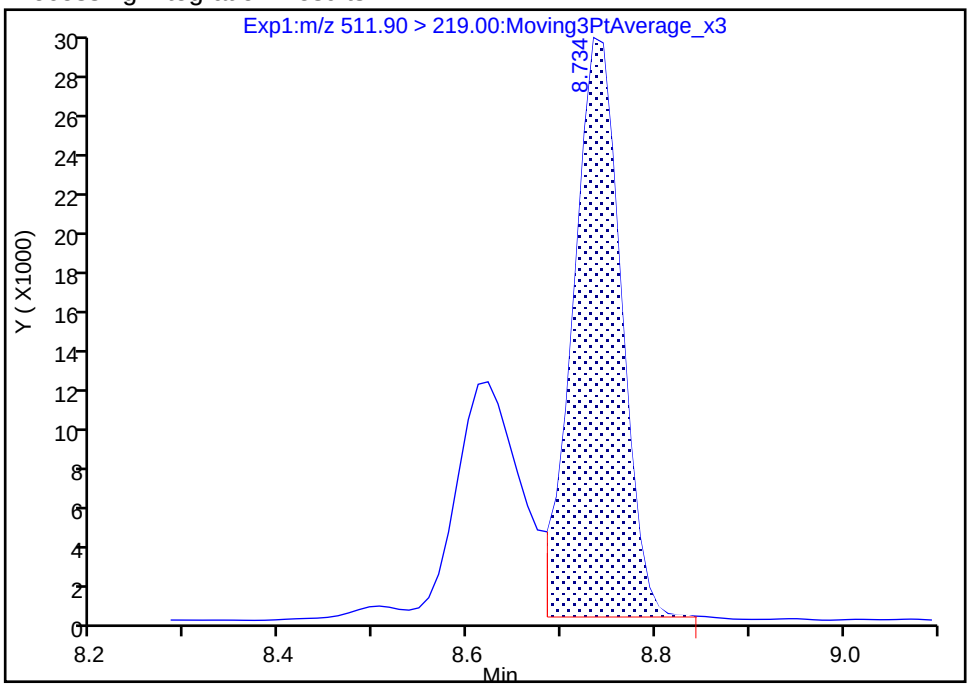
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

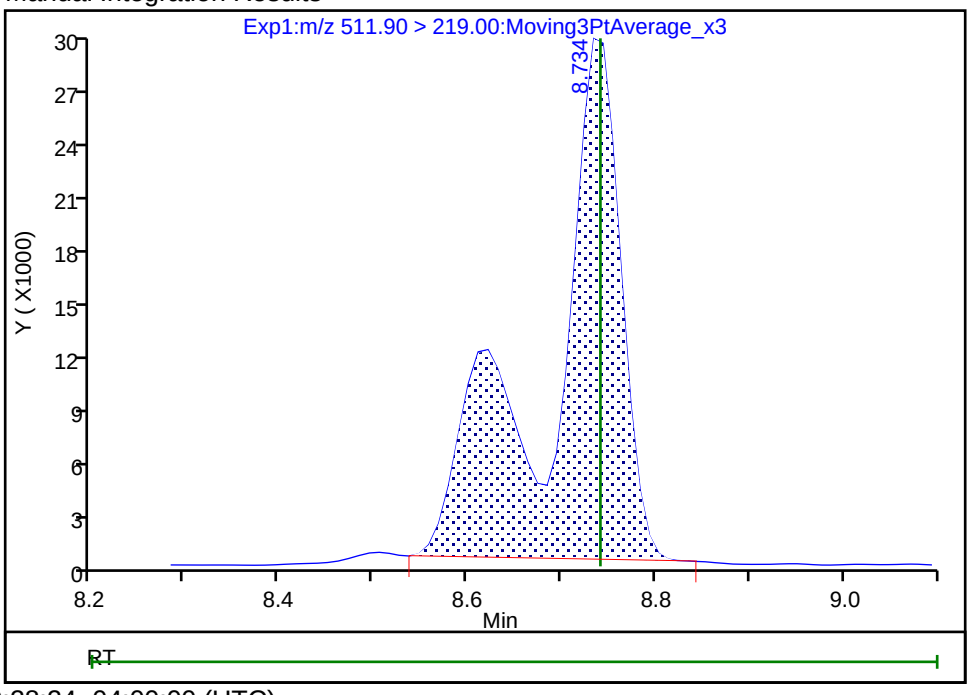
Processing Integration Results

RT: 8.73
Area: 101932
Amount: 0.258893
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 153619
Amount: 0.316393
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:24 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

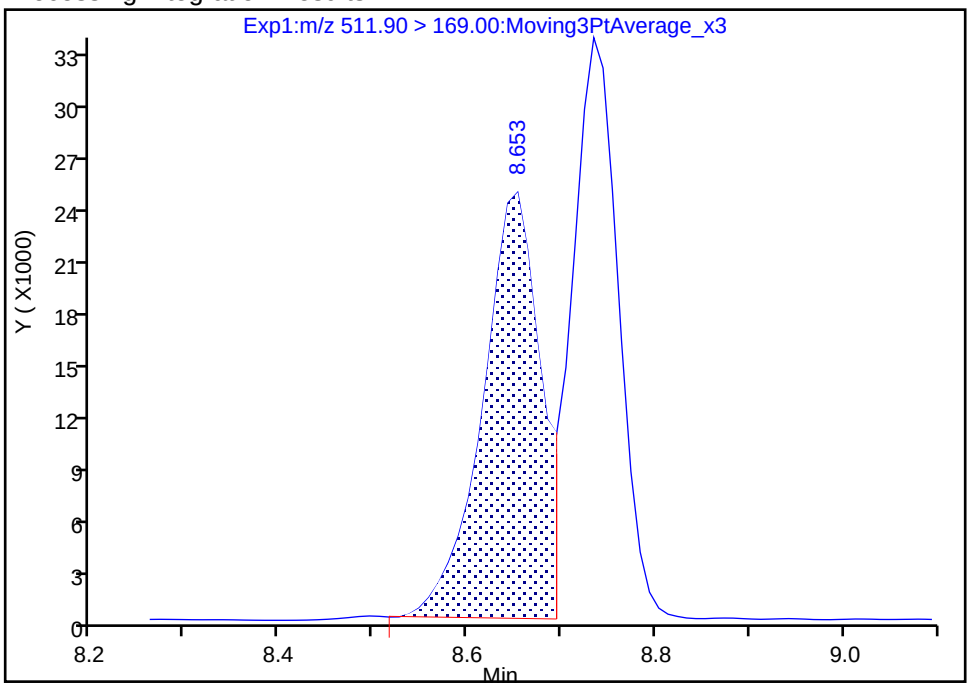
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

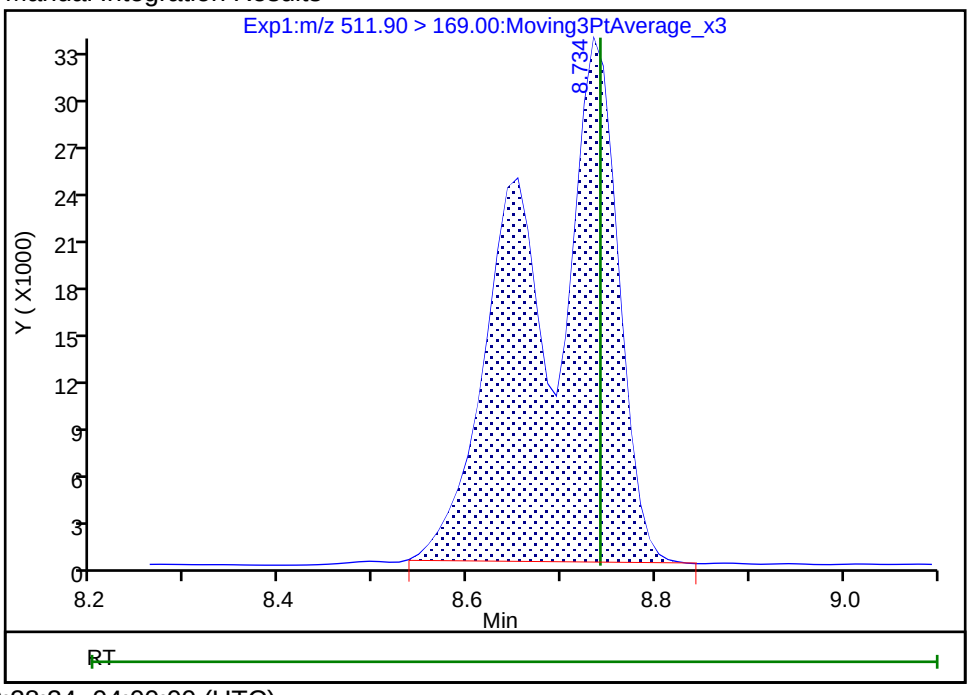
Processing Integration Results

RT: 8.65
Area: 104031
Amount: 0.258893
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 215665
Amount: 0.316393
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

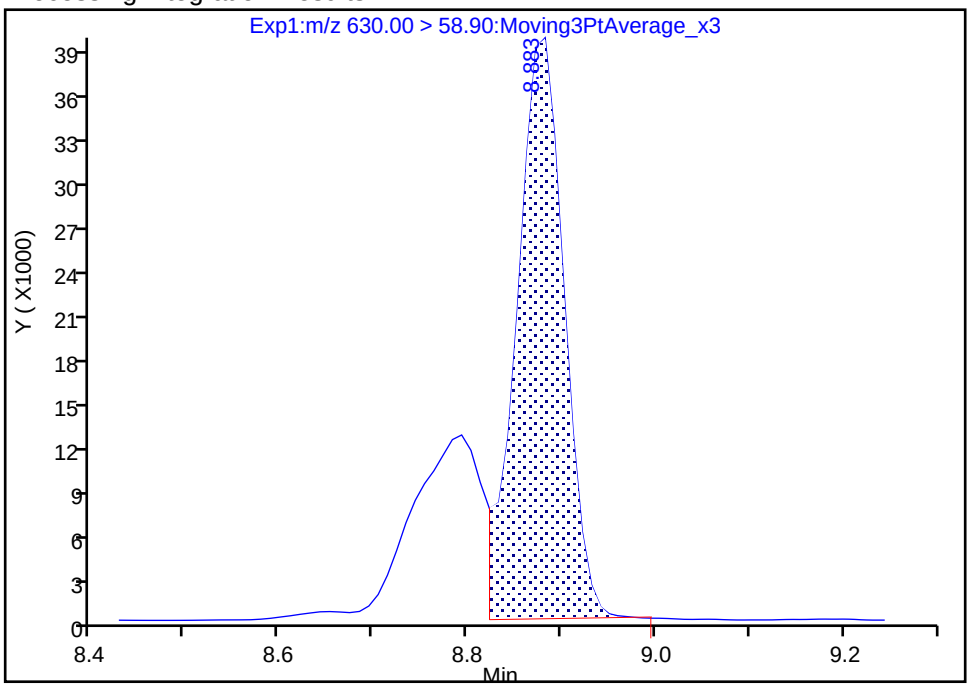
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

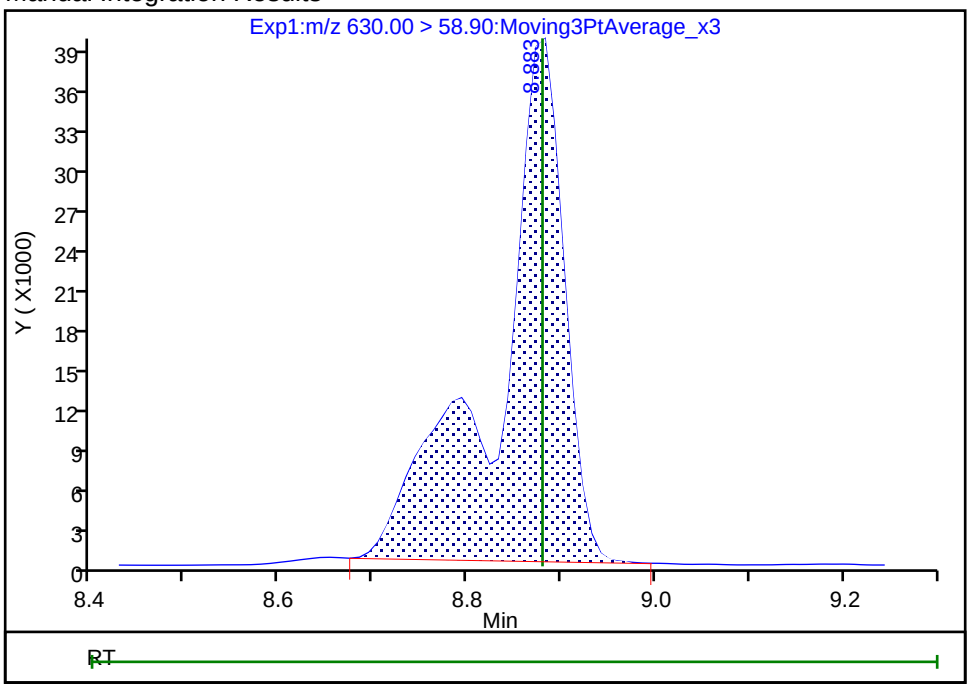
Processing Integration Results

RT: 8.88
Area: 138809
Amount: 2.441624
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 197119
Amount: 2.904470
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

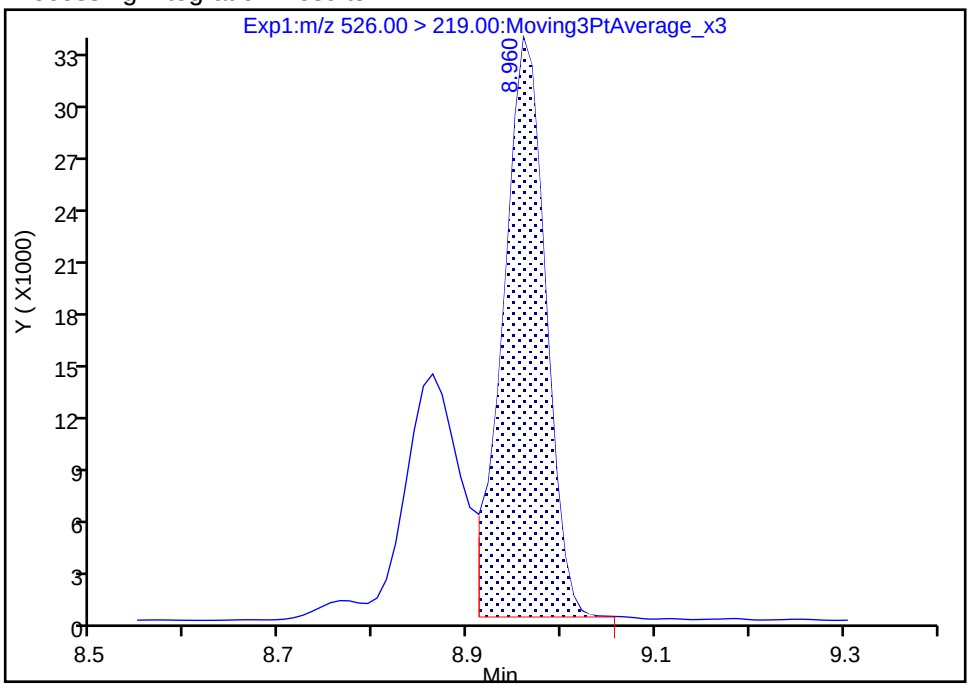
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d				
Injection Date:	10-Sep-2024 17:39:59	Instrument ID:	LCMS04		
Lims ID:	IC CAL 3				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	30	Worklist Smp#:	3
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

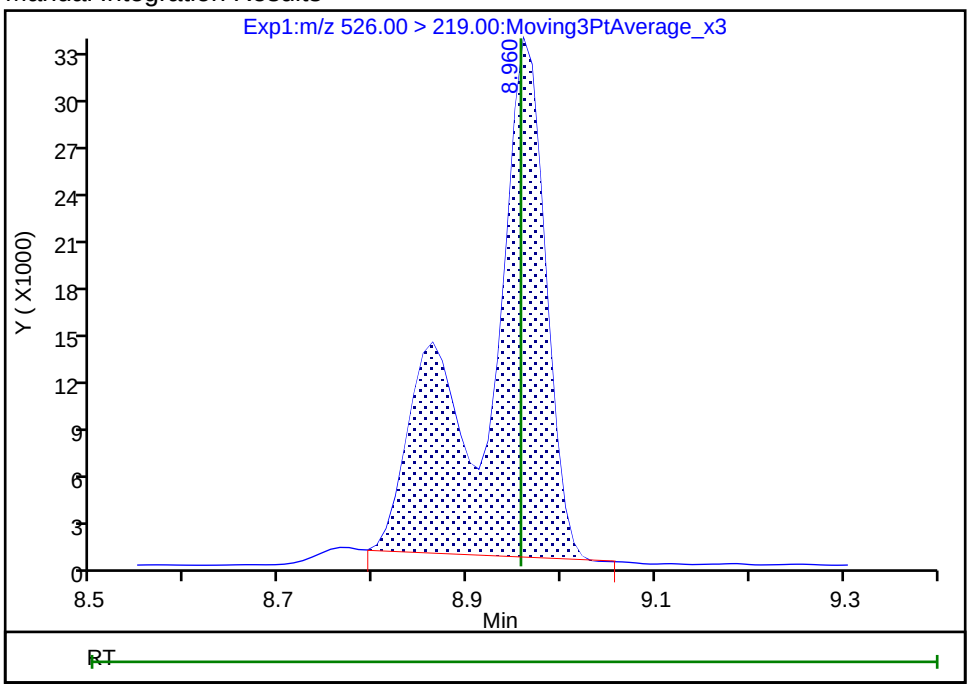
Processing Integration Results

RT: 8.96
Area: 105453
Amount: 0.264630
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 155252
Amount: 0.320681
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:28:55 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

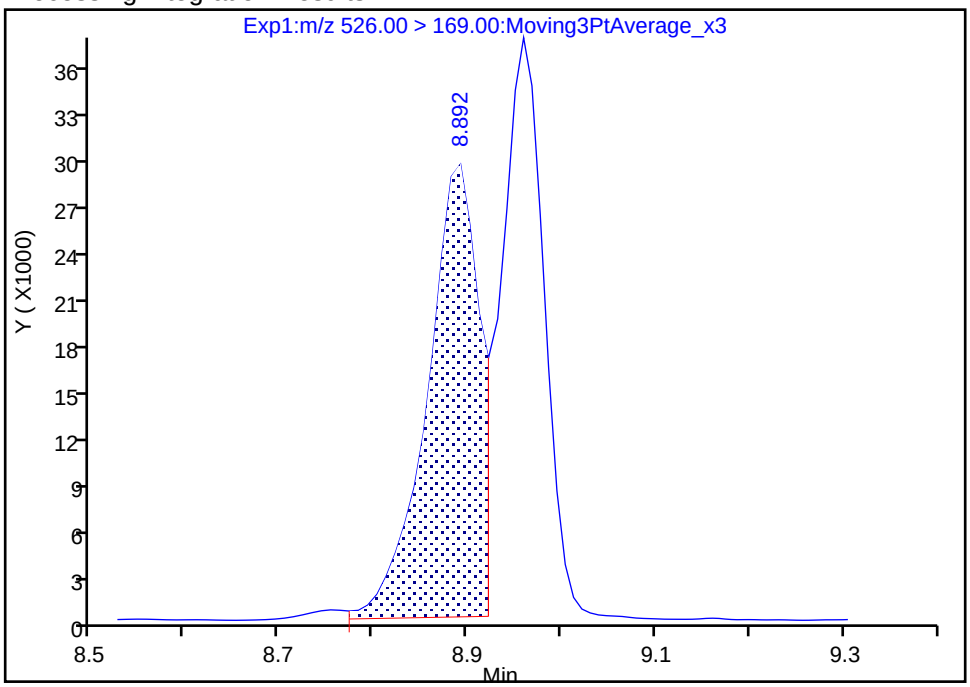
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj03.d
Injection Date: 10-Sep-2024 17:39:59 Instrument ID: LCMS04
Lims ID: IC CAL 3
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

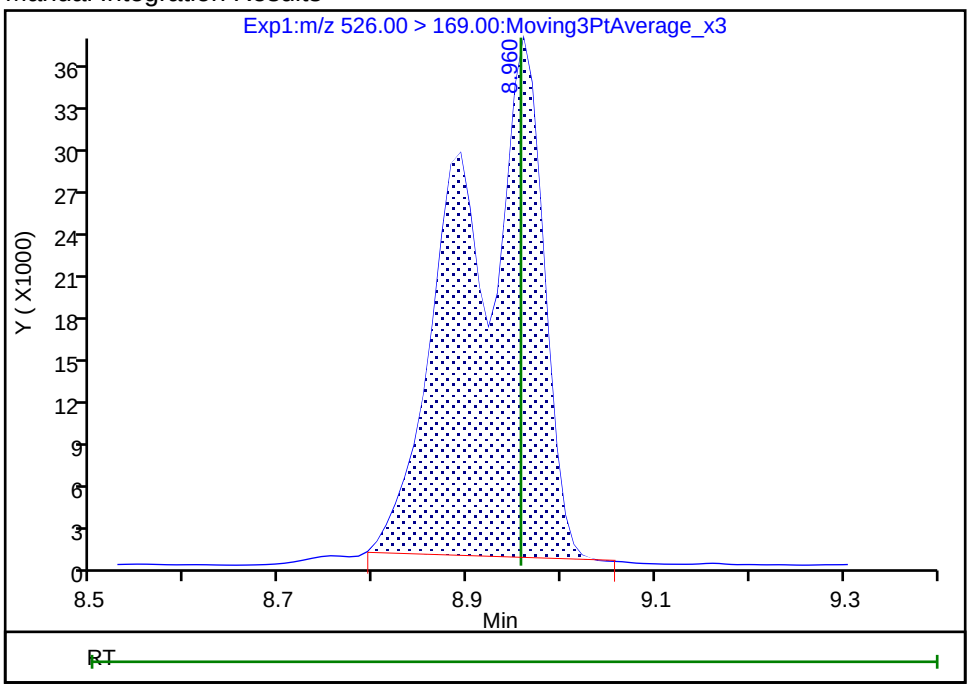
Processing Integration Results

RT: 8.89
Area: 111408
Amount: 0.264630
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 220236
Amount: 0.320681
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:29:03 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Lims ID: IC CAL 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Sep-2024 17:53:35 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 4
Misc. Info.: Plate: 2 Rack: 1 240-0146069-004
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:02:00 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:34:17
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.576	3.573	0.003		1991184	1.25			712	
* 2 13C2 PFHxA										
315.10 > 270.00	4.750	4.744	0.006		1145921	0.6250			4693	
* 3 13C4 PFOA										
417.10 > 172.00	5.647	5.653	-0.006		227362	0.6250			1958	
* 4 18O2 PFHxS										
403.00 > 83.90	5.872	5.878	-0.006		1560364	0.5913			3231	
* 5 13C5 PFNA										
468.00 > 423.00	6.081	6.077	0.004		846448	0.3125			1999	
* 6 13C2 PFDA										
515.10 > 470.10	6.517	6.522	-0.005		662979	0.3125			2339	
* 7 13C4 PFOS										
502.80 > 79.90	6.788	6.792	-0.004		1381939	0.5975	Target=4.00		2812	
502.80 > 98.90	6.779	6.792	-0.013		348287		3.97(2.00-6.01)		1446	
D 8 13C4 PFBA										
216.80 > 171.90	3.576	3.573	0.003	1.000	4402976	2.44		97.4	17432	
D 9 13C5 PFPeA										
268.30 > 223.00	4.229	4.225	0.004	0.890	1784173	1.24		99.2	6967	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.550	4.555	-0.005	0.775	1021345	1.16	Target=0.31	99.0	2899	
329.10 > 309.00	4.550	4.555	-0.005	0.775	3202818		0.32(0.16-0.47)	99.0	972	
D 11 13C5 PFHxA										
318.00 > 273.00	4.750	4.744	0.006	1.000	1615415	0.6270	Target=39.15	100	6800	
318.00 > 120.30	4.750	4.744	0.006	1.000	40791		39.60(19.57-58.72)	100	447	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.878	4.871	0.007	0.831	1564595	0.5546	Target=3.27	95.4	4723	
302.10 > 98.90	4.878	4.871	0.007	0.831	485663		3.22(1.63-4.90)	95.4	2005	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.943	4.936	0.007	1.041	1851815	2.50	Target=1.96	99.9	8629	
286.90 > 184.90	4.943	4.936	0.007	1.041	949198		1.95(0.98-2.94)	99.9	1557	
D 14 13C4 PFHpA										
367.10 > 322.00	5.215	5.219	-0.004	1.098	1607756	0.5976		95.6	5548	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.435	5.441	-0.006	0.926	1172565	1.16	Target=0.40	97.6	2554	
429.10 > 409.00	5.435	5.441	-0.006	0.926	3012702		0.39(0.20-0.59)	97.6	5339	
D 16 13C8 PFOA										
421.10 > 376.00	5.647	5.653	-0.006	1.000	1738544	0.6059		96.9	4946	
D 17 13C3 PFHxS										
402.10 > 79.90	5.872	5.878	-0.006	1.000	1594321	0.5755	Target=3.38	97.3	3404	
402.10 > 98.80	5.872	5.878	-0.006	1.000	486583		3.28(1.69-5.07)	97.3	2648	
D 18 13C9 PFNA										
472.10 > 427.00	6.081	6.087	-0.006	1.000	611214	0.2877		92.1	1770	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.277	6.281	-0.005	1.069	828393	1.20	Target=0.34	99.8	5155	
529.10 > 509.00	6.277	6.281	-0.005	1.069	2307272		0.36(0.17-0.51)	99.8	8447	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.458	6.462	-0.004	0.951	1252522	1.17		93.6	3829	
D 21 13C6 PFDA										
519.10 > 474.10	6.517	6.522	-0.005	1.000	576241	0.2822		90.3	1816	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.653	6.657	-0.004	0.980	1253212	1.19		95.2	2182	
D 23 13C8 PFOS										
507.10 > 79.90	6.788	6.792	-0.004	1.000	1365622	0.5731	Target=4.08	95.9	795	
507.10 > 98.90	6.779	6.792	-0.013	0.999	344047		3.97(2.04-6.12)	95.9	1004	
D 24 13C7 PFUnA										
570.00 > 525.10	6.948	6.960	-0.012	1.066	642273	0.3197		102	1766	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.376	7.388	-0.012	1.132	575554	0.3035		97.1	1440	
D 26 13C8 FOSA										
506.10 > 77.80	7.721	7.726	-0.005	1.137	1500309	0.5866		93.9	5467	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.201	8.217	-0.016	1.258	314200	0.2898		92.7	924	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.608	8.600	0.008	1.268	2236135	5.90		94.4	787	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.724	-0.003	1.285	297482	0.5898		94.4	1325	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.850	8.853	-0.003	1.304	2746016	5.90		94.4	1181	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.948	8.950	-0.002	1.318	307110	0.6041		96.7	270	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.576	3.576	0.0	1.000	4103912	2.45		98.1	45.6	M
34 3:3 FTCA										
241.00 > 177.00	3.866	3.866	0.0	0.914	264173	3.07	Target=1.04	98.2	3247	
241.00 > 117.00	3.854	3.866	-0.012	0.911	252002		1.05(0.52-1.56)	98.2	60.4	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.866	3.866	0.0	0.914	2428543	1.24		99.1	2324	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.238	4.229	0.009	1.002	2699376	1.23		98.7	309	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.410	4.410	0.0	1.043	2582753	1.25		99.8	6902	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.561	4.550	0.010	1.002	5994074	2.29	Target=1.37	98.2	10600	
327.10 > 80.90	4.550	4.550	0.0	1.000	4458323		1.34(0.68-2.05)	98.2	3724	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.707	4.707	0.0	0.991	216619	0.9542	Target=1.54	76.3	1415	
295.00 > 84.90	4.696	4.707	-0.011	0.989	168072		1.29(0.77-2.31)	76.3	542	
48 FBSA										
297.90 > 78.00	4.739	4.740	-0.001	0.972	4701473	2.55		102	5865	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.750	4.750	0.0	1.000	1251046	0.6090	Target=14.09	97.4	207	
313.00 > 118.90	4.750	4.750	0.0	1.000	84229		14.85(7.04-21.13)	97.4	462	
41 5:3 FTCA										
341.00 > 237.10	4.834	4.834	0.0	1.018	5720785	15.6	Target=1.54	100	6783	
341.00 > 217.00	4.834	4.834	0.0	1.018	3656619		1.56(0.77-2.31)	100	2322	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.878	4.878	0.0	1.000	1439668	0.5507	Target=3.32	99.7	2926	
298.70 > 98.80	4.878	4.878	0.0	1.000	427807		3.37(1.66-4.97)	99.7	1628	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.943	4.943	0.0	1.000	2067102	2.53	Target=1.98	101	4193	
284.90 > 184.90	4.943	4.943	0.0	1.000	978738		2.11(0.99-2.97)	101	1929	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.143	5.144	-0.001	1.083	8365537	1.11	Target=12.50	99.4	9461	
314.80 > 82.90	5.133	5.144	-0.011	1.081	671897		12.45(6.25-18.75)	99.4	1470	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.215	5.215	0.0	1.000	1832556	0.6592	Target=3.89	105	249	
363.10 > 169.00	5.215	5.215	0.0	1.000	453764		4.04(1.95-5.84)	105	1399	
49 DONA										
376.90 > 250.90	5.385	5.385	0.0	1.089	9275385	2.34	Target=1.56	99.4	9981	
376.90 > 84.80	5.385	5.385	0.0	1.089	6023772		1.54(0.78-2.34)	99.4	6398	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.406	5.406	0.0	0.921	1594515	0.5757	Target=3.17	98.2	1745	
349.10 > 98.90	5.406	5.406	0.0	0.921	518258		3.08(1.58-4.75)	98.2	1851	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.445	5.445	0.0	1.002	5651681	2.40	Target=1.44	101	12851	
427.10 > 80.90	5.445	5.445	0.0	1.002	3896165		1.45(0.72-2.15)	101	7629	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.657	5.657	0.0	1.002	849440	0.6366	Target=2.01	102	84.0	M
413.00 > 169.00	5.647	5.657	-0.010	1.000	399822		2.12(1.00-3.01)	102	559	M
54 7:3 FTCA										
441.00 > 316.90	5.713	5.713	0.0	1.203	5280353	15.1	Target=1.06	96.7	4648	
441.00 > 336.90	5.713	5.713	0.0	1.203	5240435		1.01(0.53-1.58)	96.7	7184	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.882	5.882	0.0	1.002	1241147	0.5391	Target=3.33	94.8	1655	M
398.70 > 98.90	5.882	5.882	0.0	1.002	377429		3.29(1.66-4.99)	94.8	921	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.091	6.091	0.0	1.002	909538	0.6139	Target=4.97	98.2	124	M
463.00 > 169.00	6.081	6.091	-0.010	1.000	177269		5.13(2.49-7.46)	98.2	181	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.286	6.286	0.0	1.001	4141874	2.40	Target=1.32	100	5040	
527.10 > 80.80	6.277	6.286	-0.010	1.000	3064705		1.35(0.66-1.98)	100	6373	
57 PFECHS										
461.00 > 381.00	6.286	6.286	0.0	1.070	5328332	1.17	Target=1.88	101	894	
461.00 > 99.00	6.286	6.286	0.0	1.070	2711506		1.97(0.94-2.81)	101	3225	
62 FHxSA										
397.90 > 78.00	6.295	6.305	-0.010	1.072	6677624	2.46		98.6	5328	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.332	6.342	-0.010	0.933	1536379	0.5737	Target=3.89	96.4	1743	
449.00 > 98.80	6.332	6.342	-0.010	0.933	408247		3.76(1.95-5.84)	96.4	727	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.469	6.469	0.0	1.002	726576	0.6581	Target=1.69	105	2177	M
570.10 > 483.00	6.469	6.469	0.0	1.002	405512		1.79(0.85-2.54)	105	1169	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.517	6.527	-0.010	1.000	956205	0.6531	Target=4.63	105	128	
512.90 > 219.00	6.517	6.527	-0.010	1.000	199316		4.80(2.32-6.95)	105	1039	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.663	6.672	-0.009	1.001	527168	0.6300	Target=1.55	101	1327	M
584.20 > 526.00	6.663	6.672	-0.009	1.001	342082		1.54(0.78-2.33)	101	612	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.788	6.788	0.0	1.000	1618123	0.5628	Target=4.64	97.0	1006	M
498.90 > 98.80	6.788	6.788	0.0	1.000	343230		4.71(2.32-6.96)	97.0	1111	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.957	6.965	-0.009	1.001	1103626	0.5955	Target=6.10	95.3	367	
563.10 > 269.10	6.957	6.965	-0.009	1.001	183725		6.01(3.05-9.15)	95.3	1093	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.126	7.127	-0.001	1.442	8512366	2.42	Target=3.09	104	2289	
532.80 > 353.00	7.119	7.127	-0.008	1.440	2707994		3.14(1.54-4.63)	104	2984	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.226	7.226	0.0	1.064	1294300	0.5944	Target=4.11	99.1	2635	
548.80 > 98.80	7.226	7.226	0.0	1.064	310153		4.17(2.06-6.17)	99.1	1583	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.384	7.384	0.0	1.001	1136089	0.6230	Target=18.06	99.7	406	
613.10 > 319.00	7.384	7.384	0.0	1.001	60931		18.65(9.03-27.08)	99.7	677	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.646	7.655	-0.009	1.126	1446860	0.5872	Target=4.27	97.5	2713	
599.00 > 98.80	7.646	7.655	-0.009	1.126	329057		4.40(2.14-6.41)	97.5	1832	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.731	7.732	-0.001	1.001	1412671	0.6262	Target=46.53	100	656	M
498.10 > 478.00	7.731	7.732	-0.001	1.001	27707		50.99(23.26-69.79)	100	175	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.806	7.807	-0.001	0.952	1001550	0.5803	Target=6.29	92.8	367	
663.00 > 168.90	7.795	7.807	-0.012	0.950	162604		6.16(3.14-9.43)	92.8	1182	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.975	7.975	0.0	1.613	8266841	2.42	Target=3.20	103	6277	
632.90 > 452.90	7.964	7.975	-0.011	1.611	2557892		3.23(1.60-4.79)	103	5150	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.201	8.213	-0.012	1.000	821201	0.6516	Target=7.27	104	461	
713.10 > 168.90	8.201	8.213	-0.012	1.000	98893		8.30(3.64-10.91)	104	900	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.424	8.424	0.0	1.241	1212792	0.5814	Target=4.58	96.1	1604	
699.10 > 98.80	8.413	8.424	-0.011	1.239	268610		4.52(2.29-6.87)	96.1	1386	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.629	8.629	0.0	1.002	329618	6.23		99.6	1010	M
75 NMeFOSA										M
511.90 > 219.00	8.731	8.741	-0.010	1.001	285843	0.6166	Target=0.71	98.7	475	M
511.90 > 169.00	8.731	8.741	-0.010	1.001	400315		0.71(0.35-1.06)	98.7	1165	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.870	8.880	-0.010	1.002	352612	5.94		95.1	792	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.957	8.957	0.0	1.001	299787	0.6186	Target=0.70	99.0	446	M
526.00 > 169.00	8.957	8.957	0.0	1.001	417141		0.72(0.35-1.05)	99.0	640	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

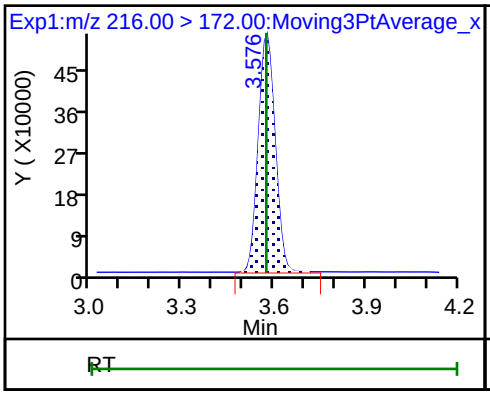
CAL 4_00020 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:02:02 Chrom Revision: 2.3 26-Aug-2024 17:14:48

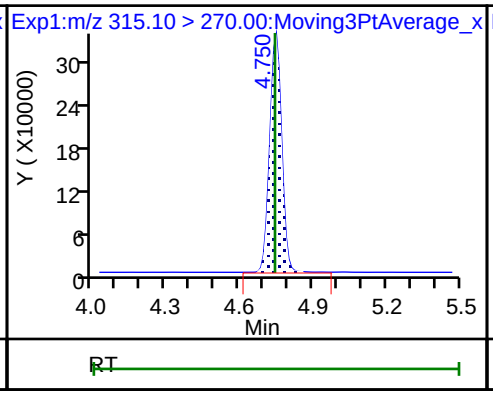
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

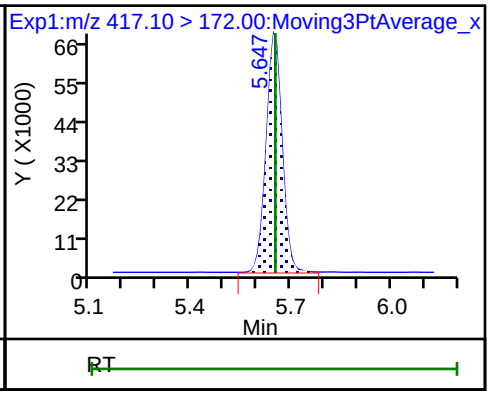
* 1 13C3-PFBA



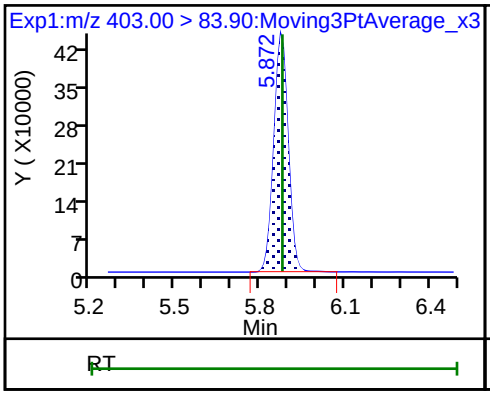
* 2 13C2 PFHxA



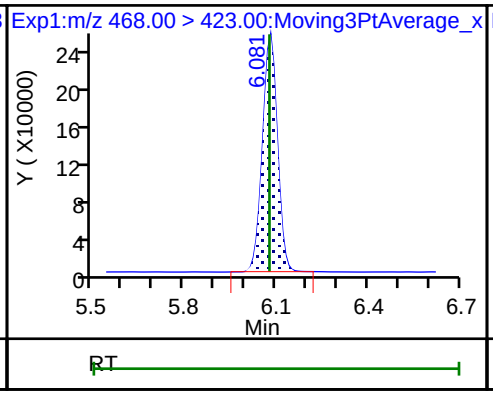
* 3 13C4 PFOA



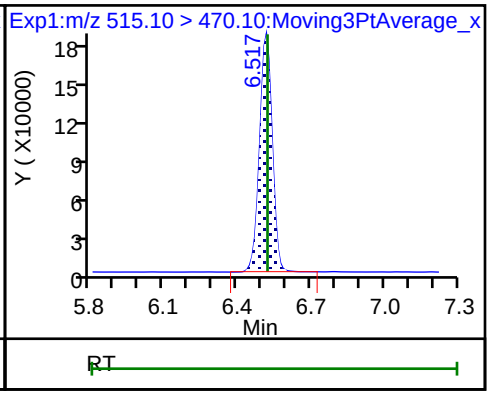
* 4 18O2 PFHxS



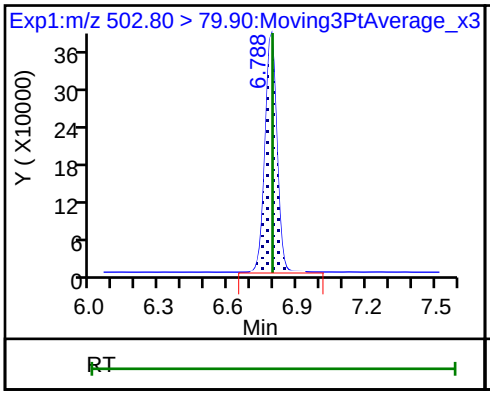
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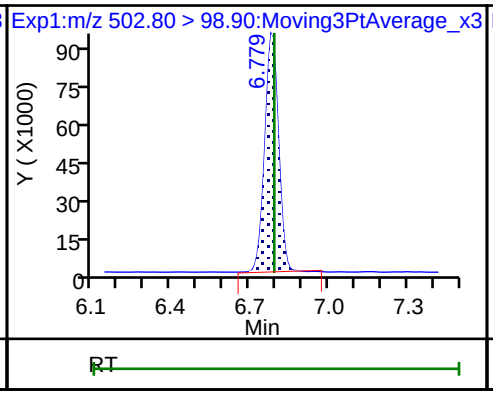
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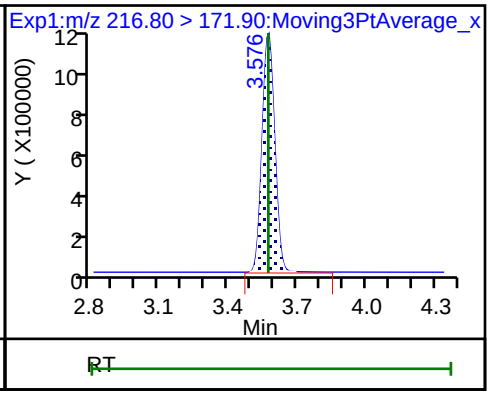
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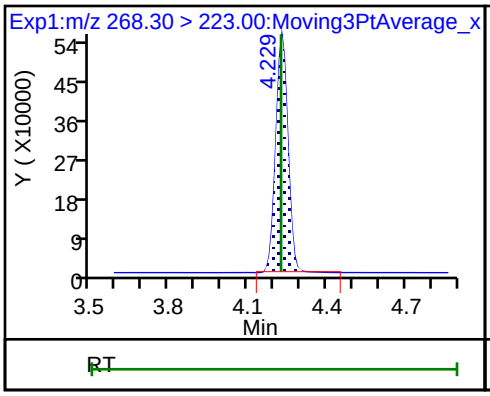
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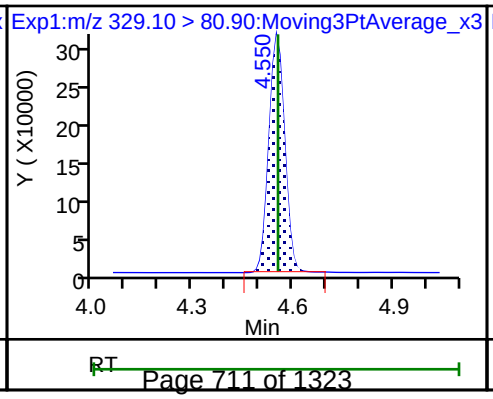
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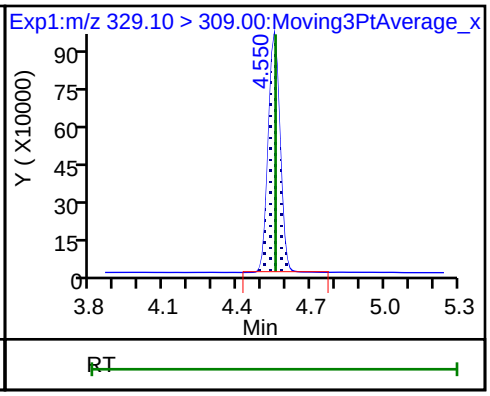
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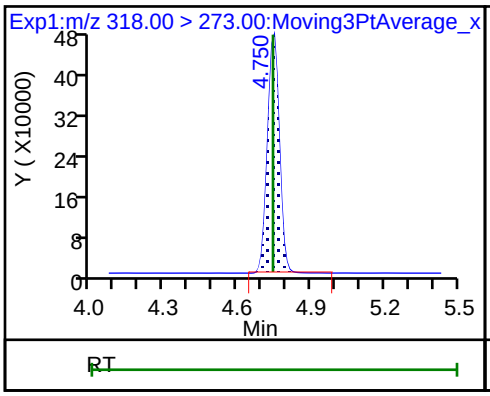
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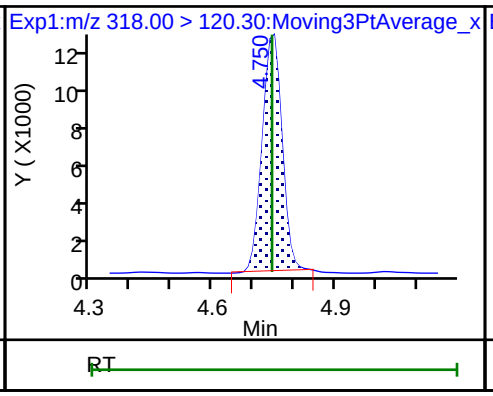
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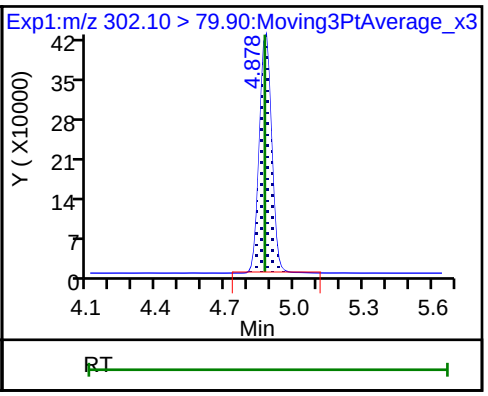
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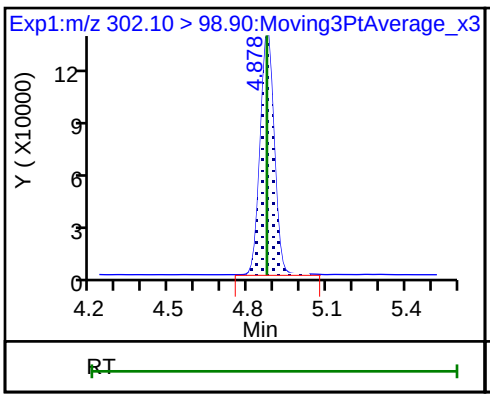
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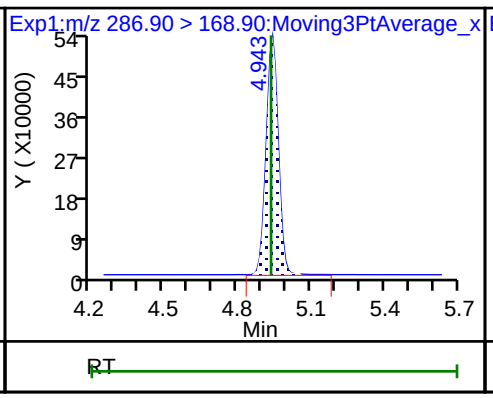
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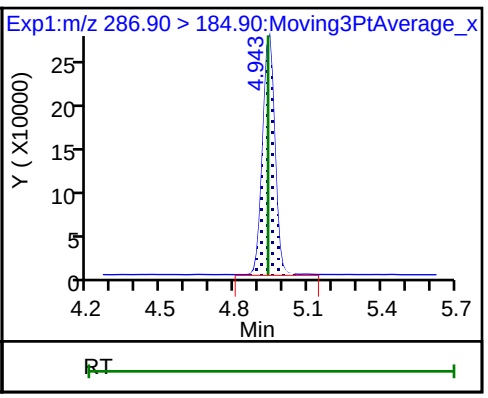
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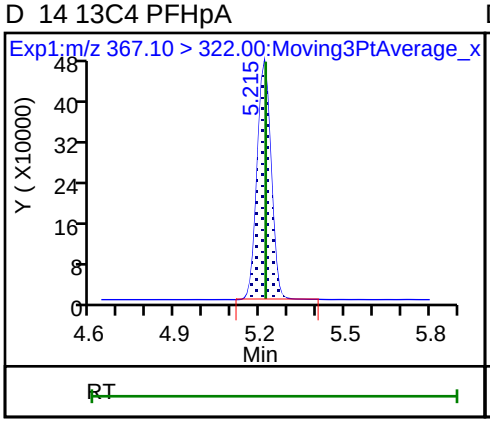
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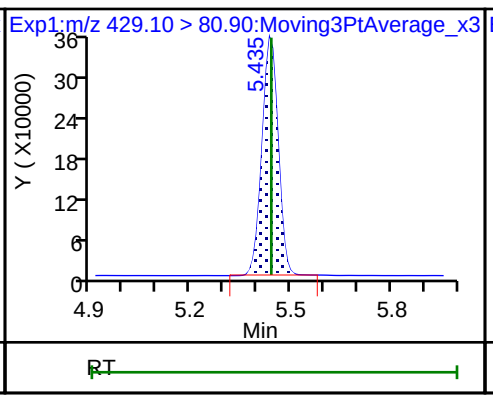
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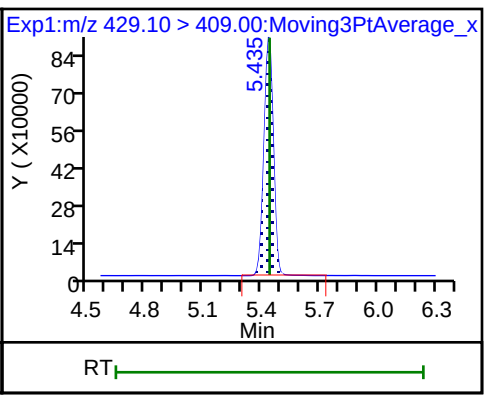
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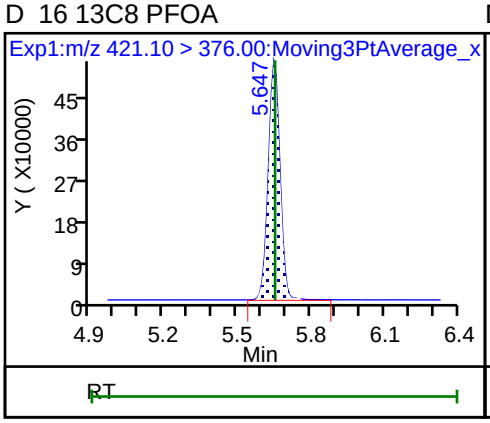
D 15 M2-6:2 FTS



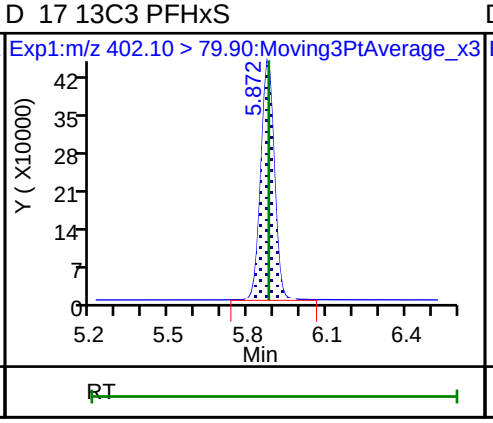
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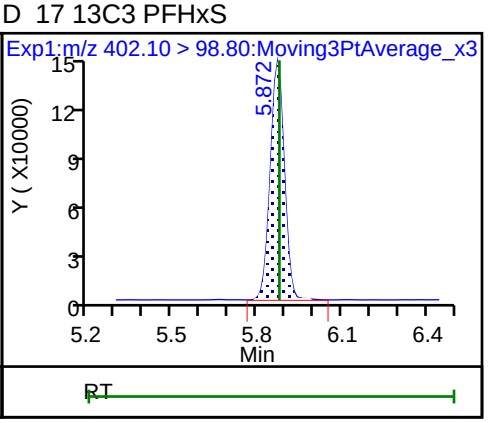
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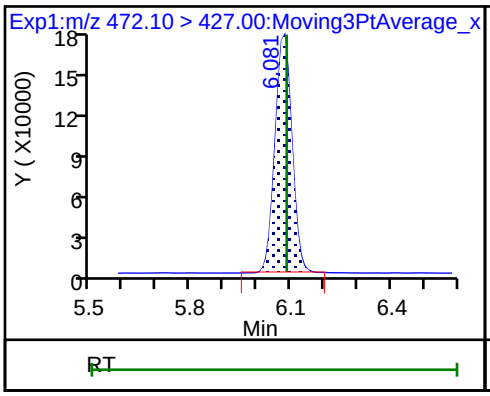
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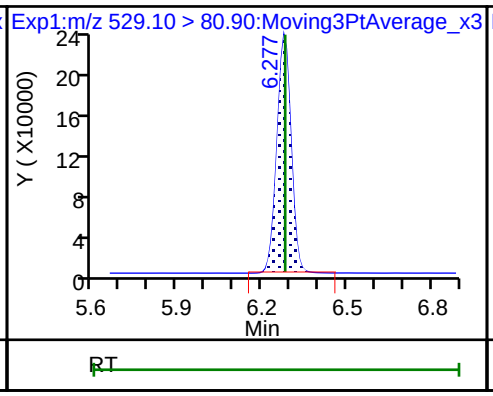
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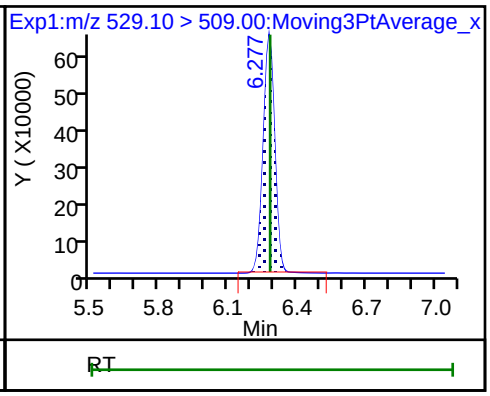
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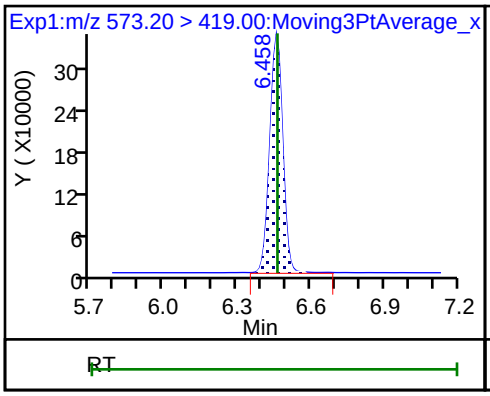
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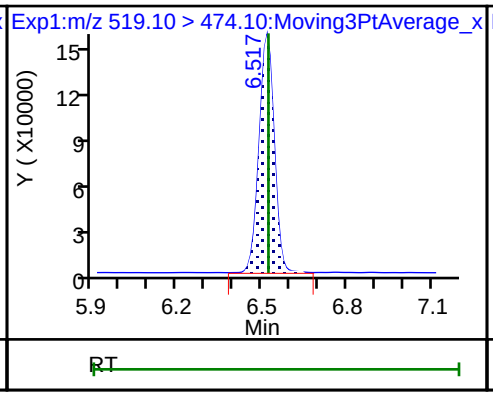
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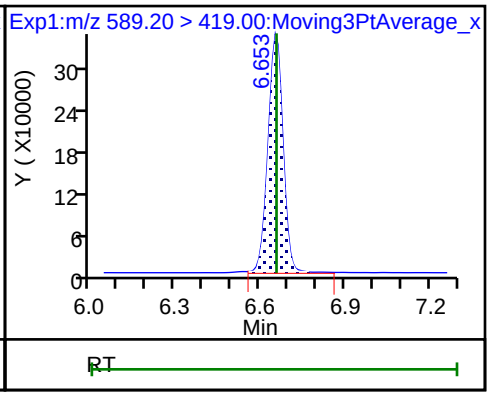
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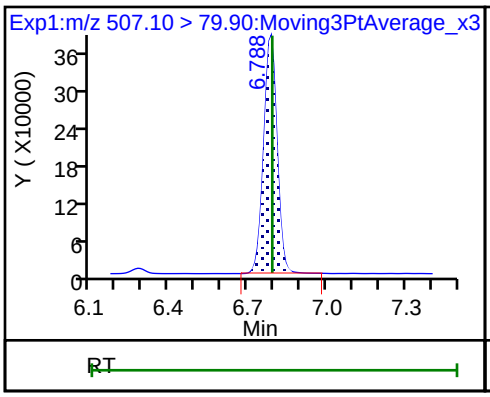
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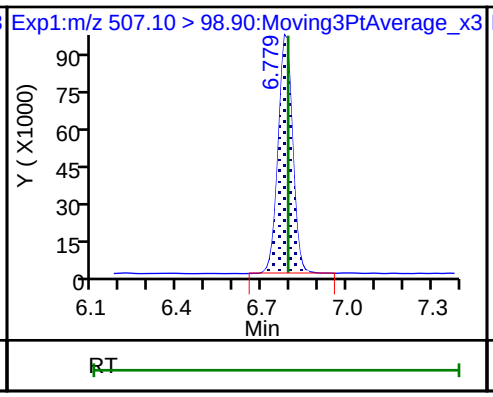
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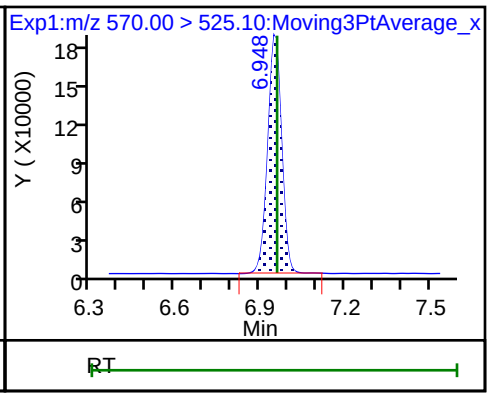
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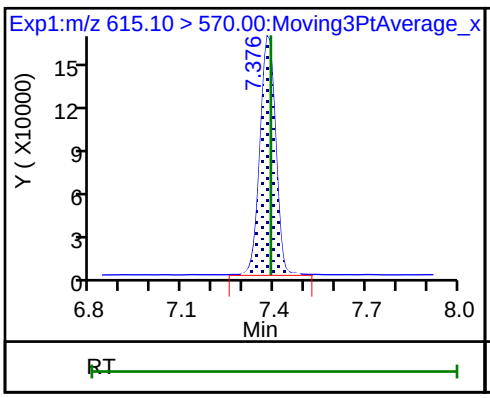
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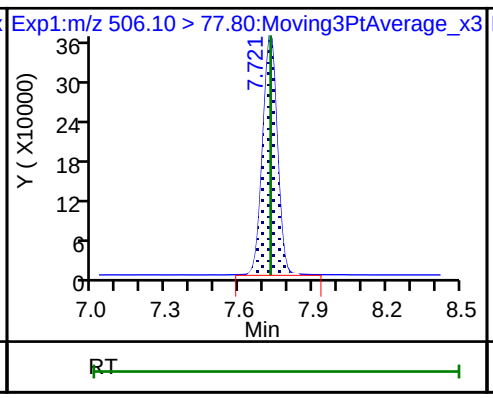
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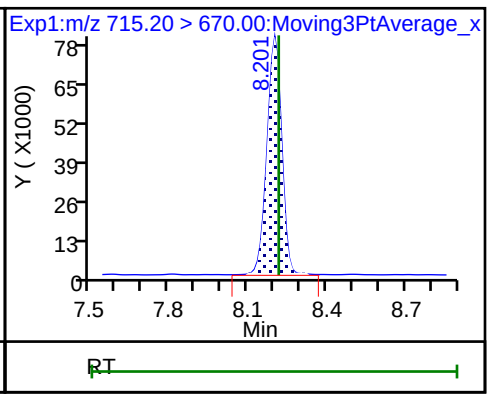
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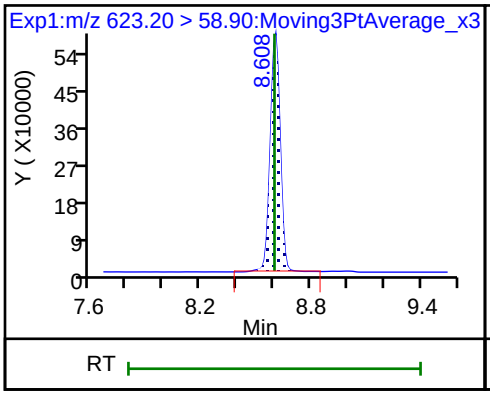
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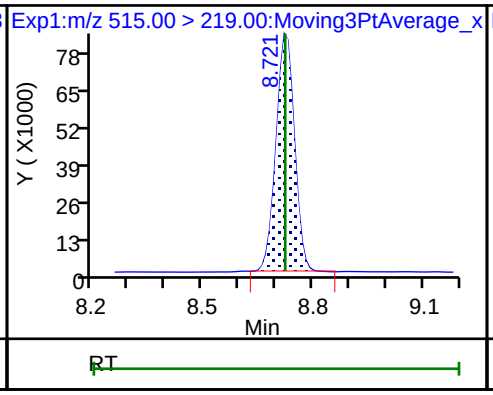
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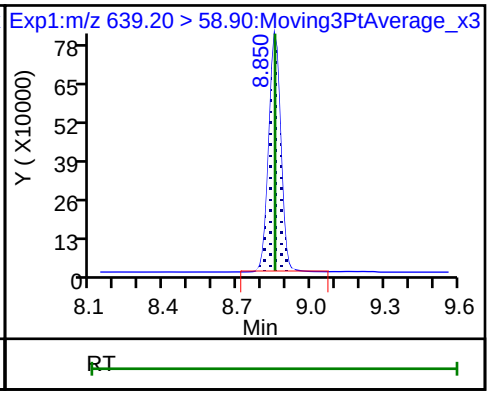
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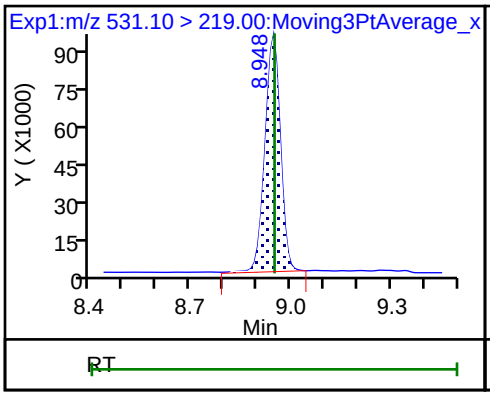
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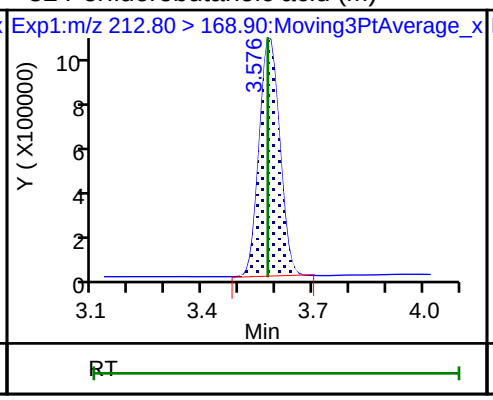
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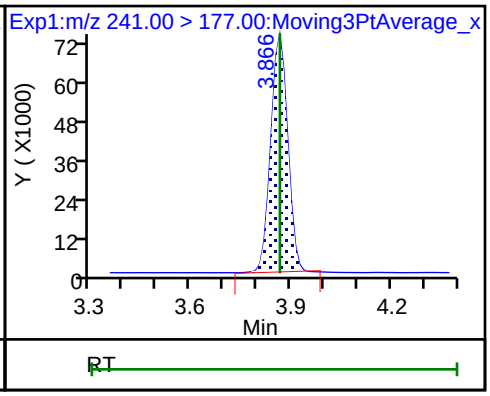
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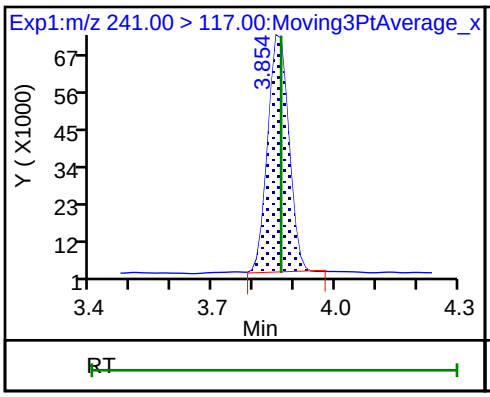
32 Perfluorobutanoic acid (M)



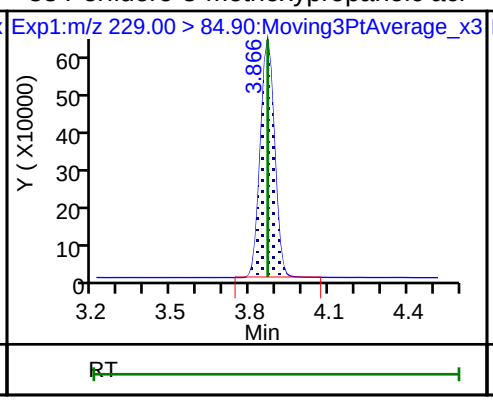
34 3:3 FTCA



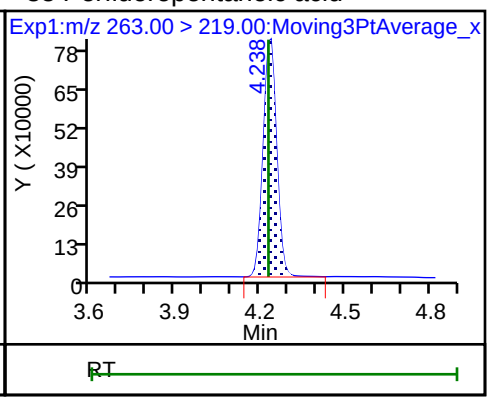
34 3:3 FTCA



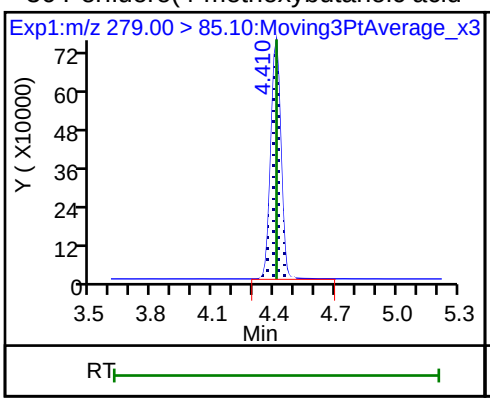
33 Perfluoro-3-methoxypropanoic aci



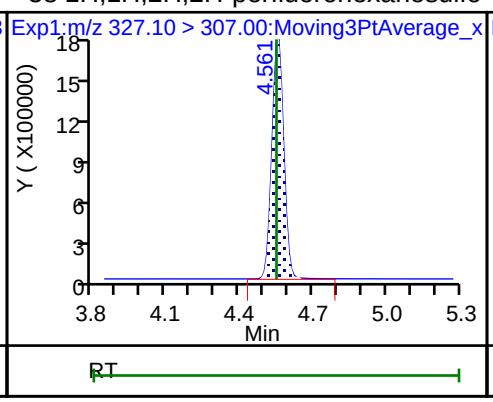
35 Perfluoropentanoic acid



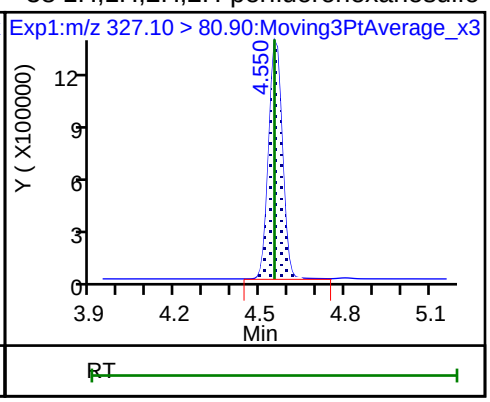
36 Perfluoro(4-methoxybutanoic acid



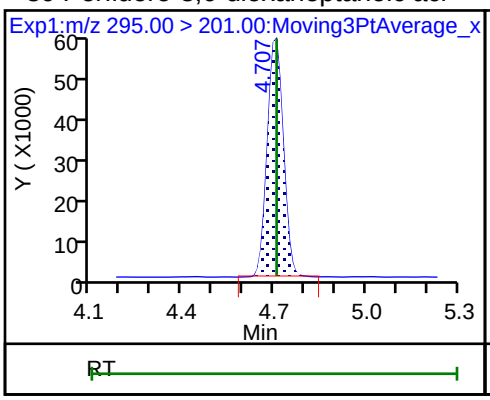
38 1H,1H,2H,2H-perfluorohexanesulfo



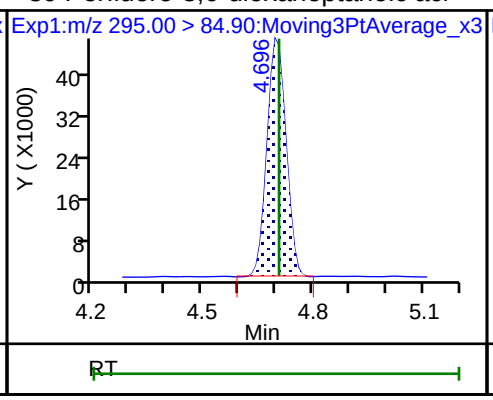
38 1H,1H,2H,2H-perfluorohexanesulfo



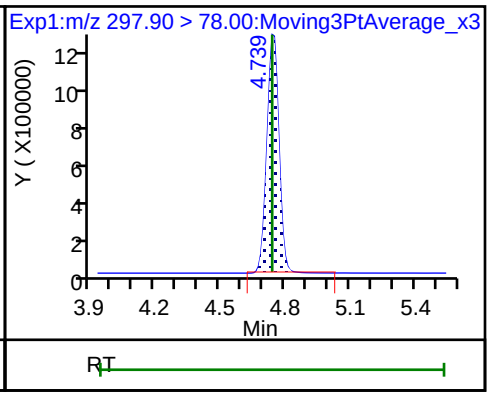
39 Perfluoro-3,6-dioxaheptanoic aci



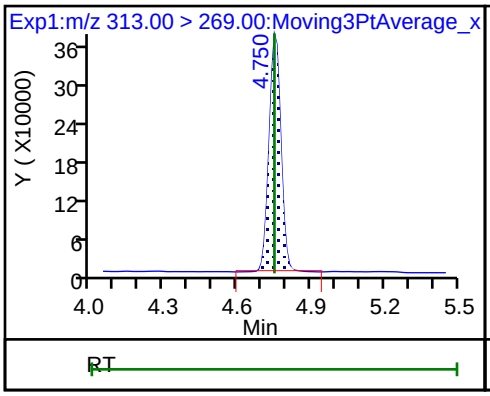
39 Perfluoro-3,6-dioxaheptanoic aci



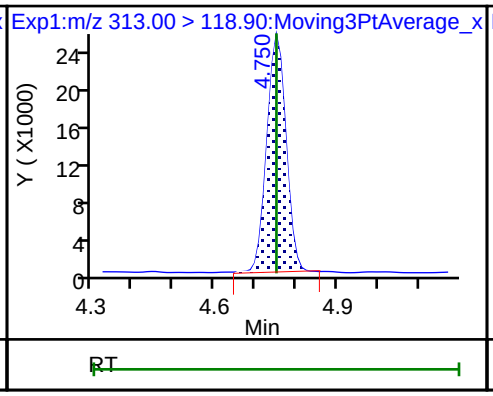
48 FBSA



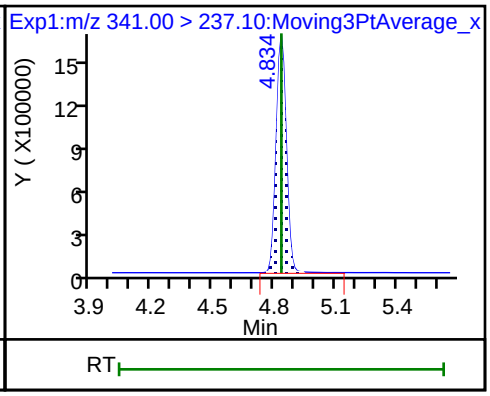
40 Perfluorohexanoic acid



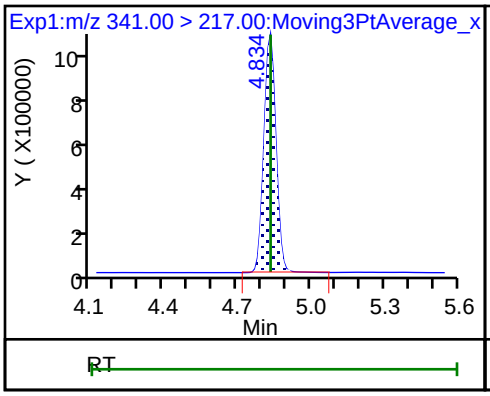
40 Perfluorohexanoic acid



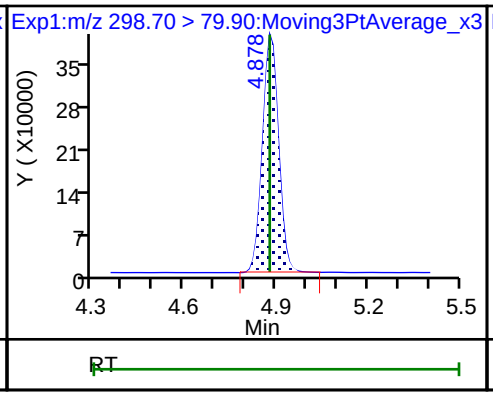
41 5:3 FTCA



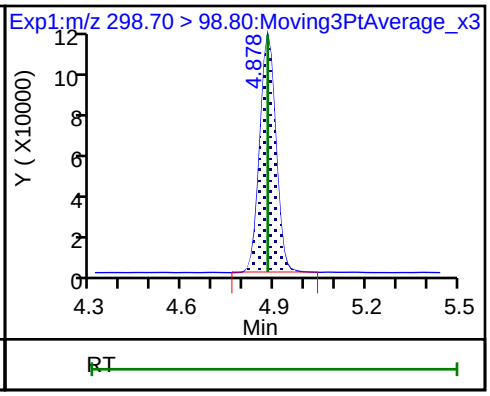
41 5:3 FTCA



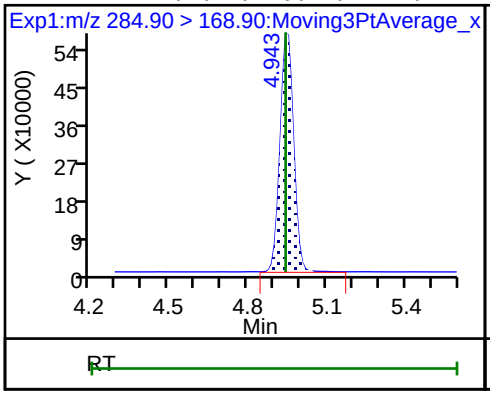
42 Perfluorobutanesulfonic acid



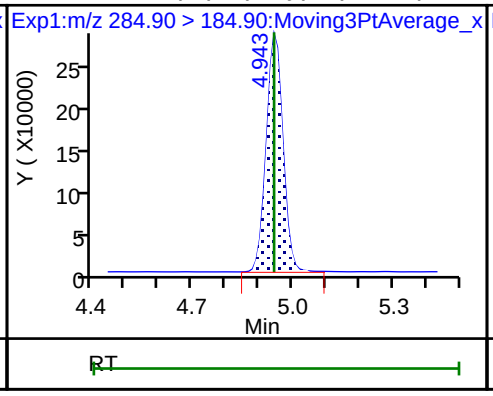
42 Perfluorobutanesulfonic acid



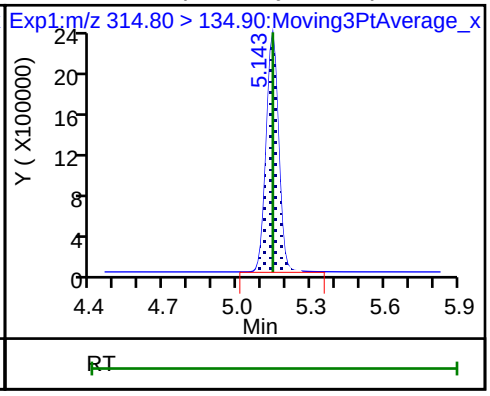
43 Perfluoro(2-propoxypropanoic) ac



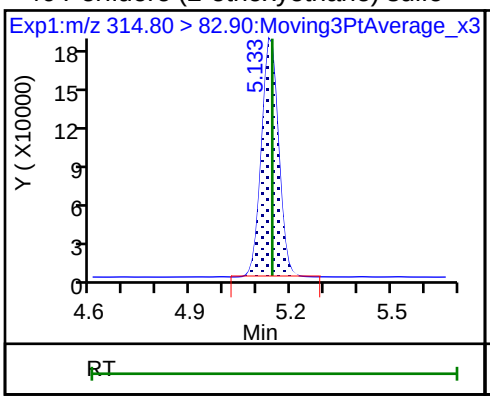
43 Perfluoro(2-propoxypropanoic) ac



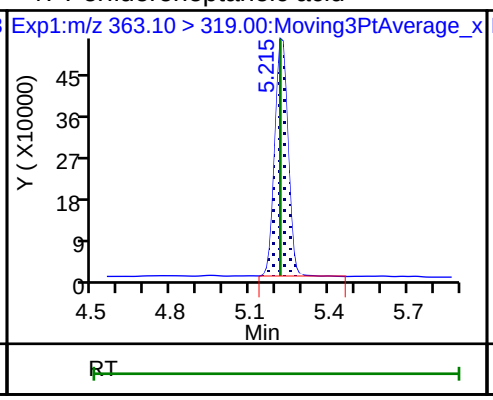
46 Perfluoro (2-ethoxyethane) sulfo



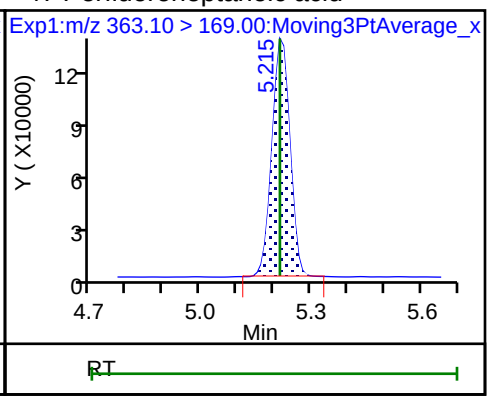
46 Perfluoro (2-ethoxyethane) sulfo



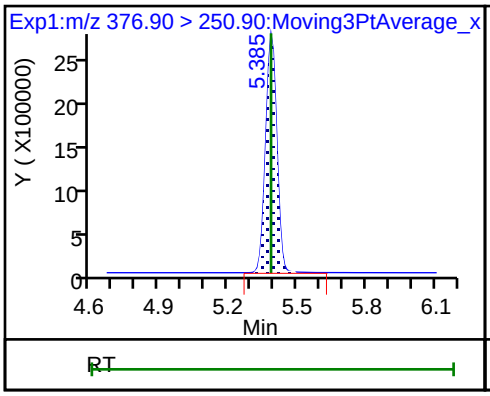
47 Perfluoroheptanoic acid



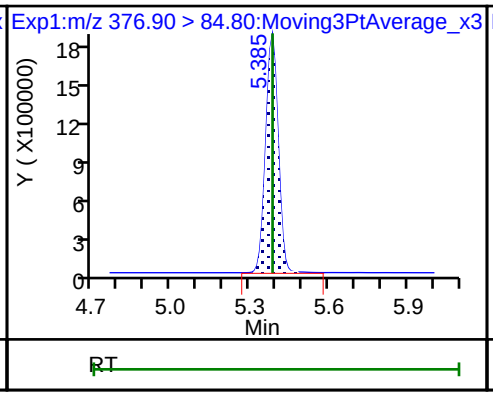
47 Perfluoroheptanoic acid



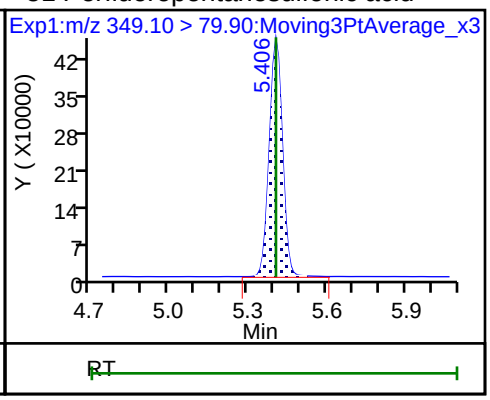
49 DONA



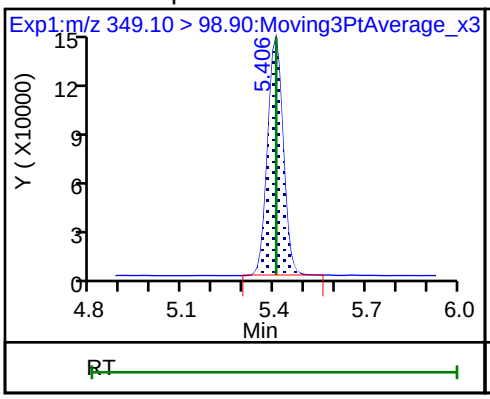
49 DONA



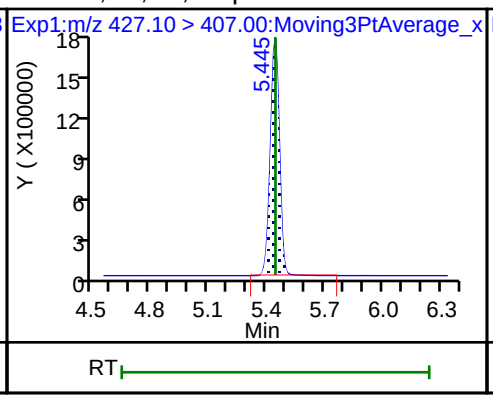
51 Perfluoropentanesulfonic acid



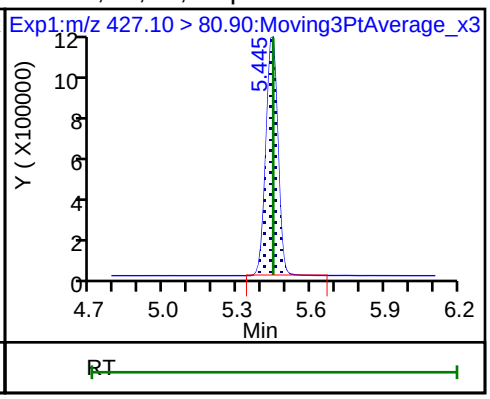
51 Perfluoropentanesulfonic acid



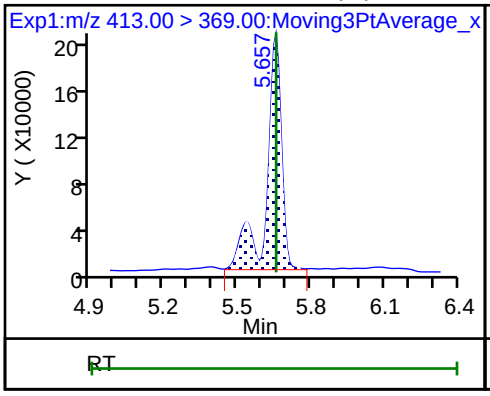
50 1H,1H,2H,2H-perfluorooctanesulfo



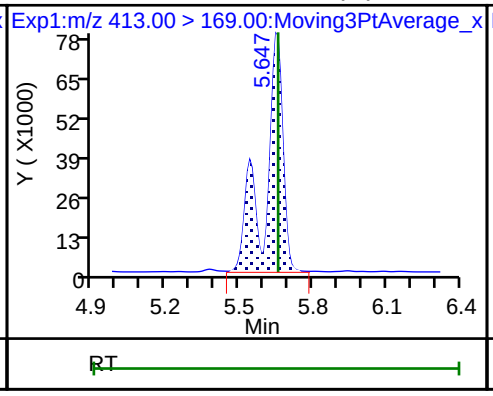
50 1H,1H,2H,2H-perfluorooctanesulfo



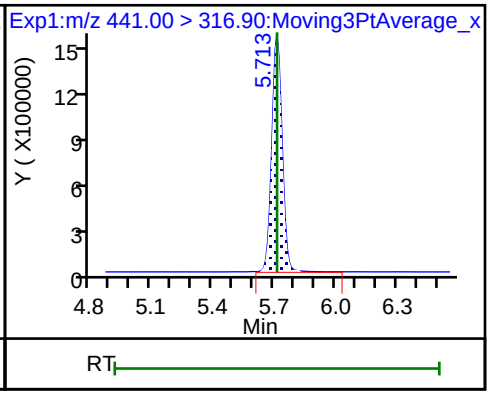
52 Perfluorooctanoic acid (M)



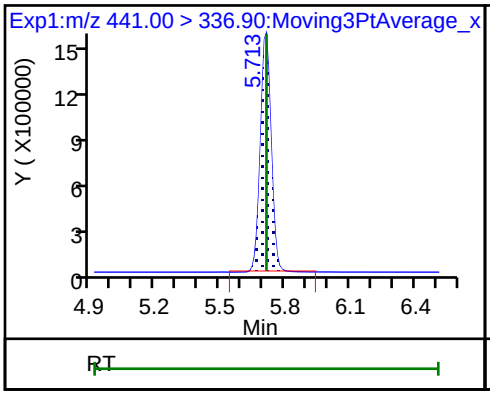
52 Perfluorooctanoic acid (M)



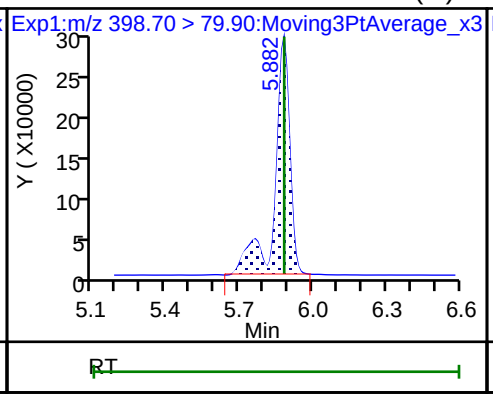
54 7:3 FTCA



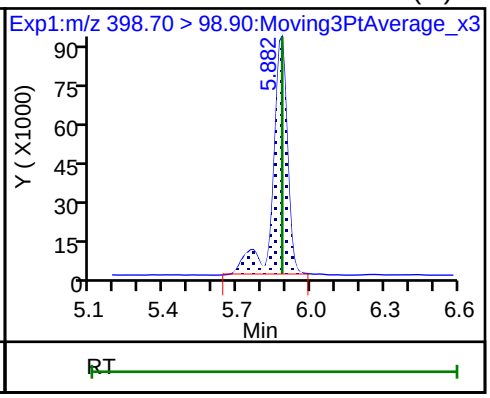
54 7:3 FTCA



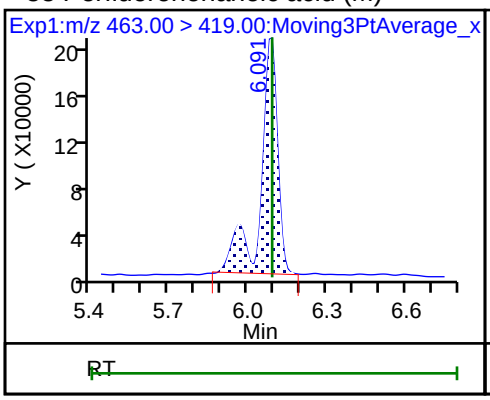
53 Perfluorohexanesulfonic acid (M)



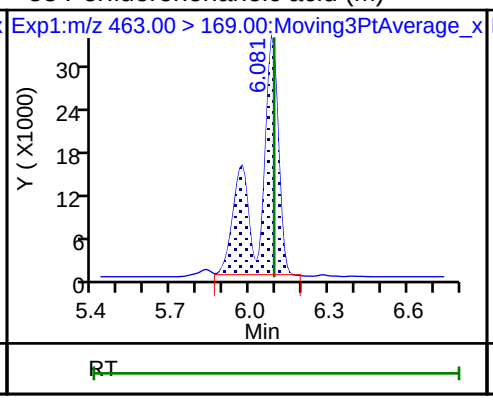
53 Perfluorohexanesulfonic acid (M)



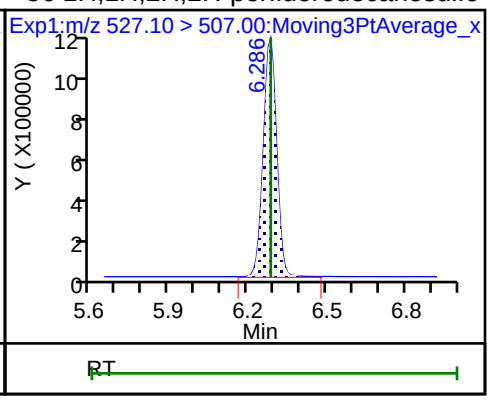
55 Perfluorononanoic acid (M)



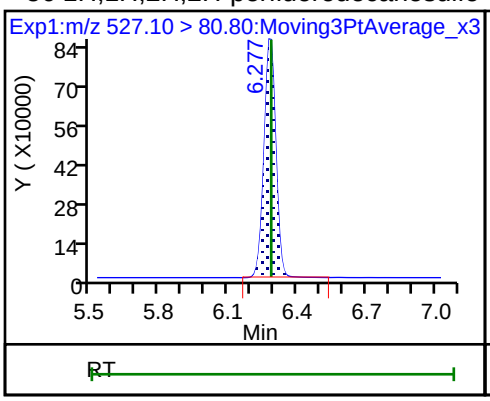
55 Perfluorononanoic acid (M)



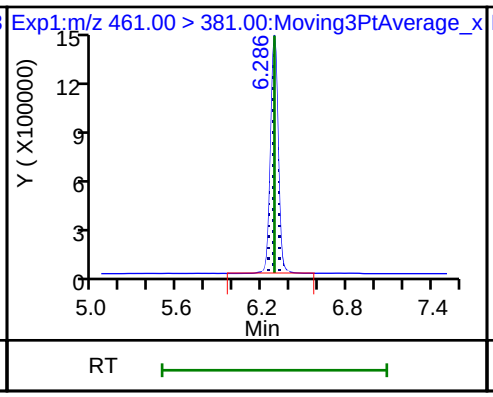
56 1H,1H,2H,2H-perfluorodecanesulfo



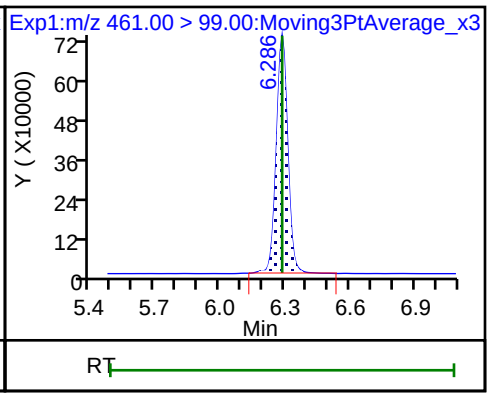
56 1H,1H,2H,2H-perfluorodecanesulfo



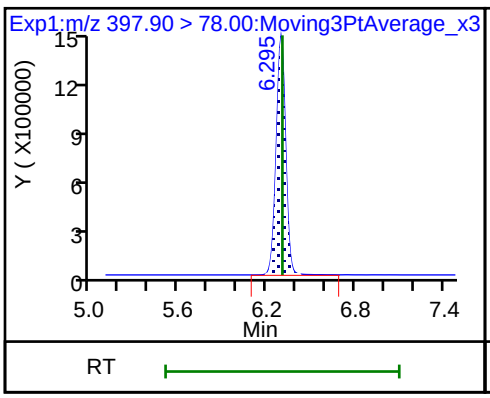
57 PFECHS



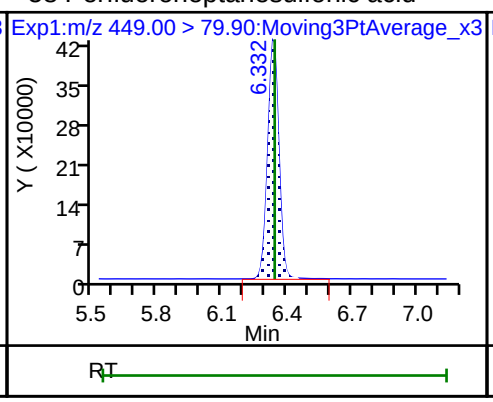
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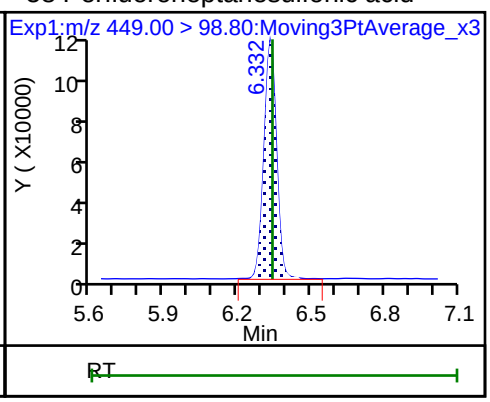
62 FHxSA



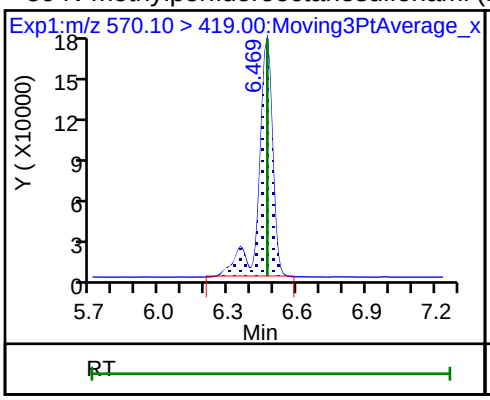
58 Perfluoroheptanesulfonic acid



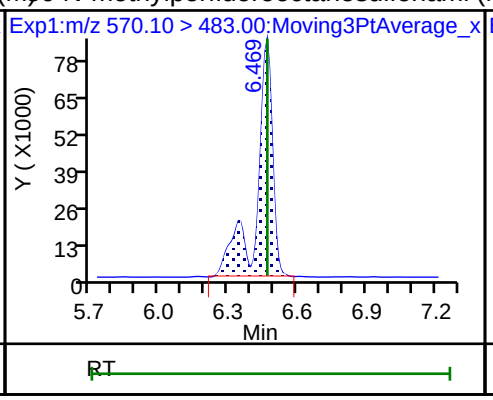
58 Perfluoroheptanesulfonic acid



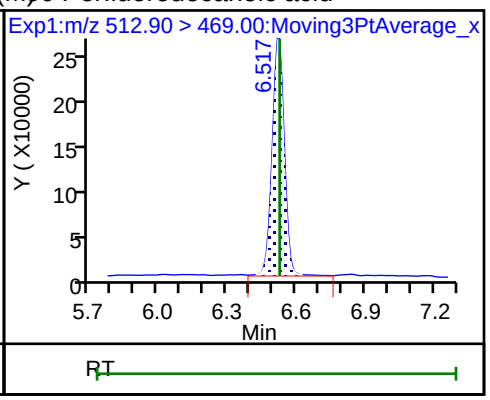
59 N-methylperfluorooctanesulfonami (M)



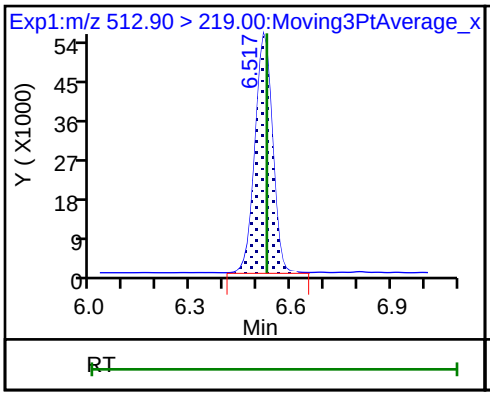
59 N-methylperfluorooctanesulfonami (M)



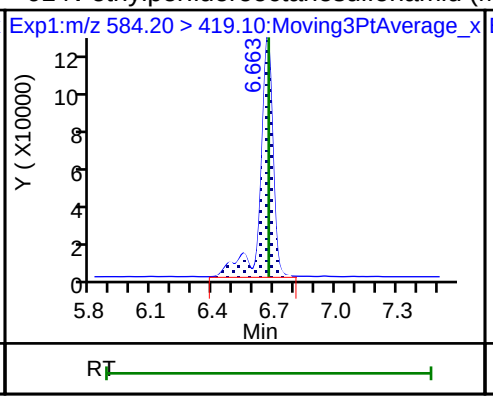
60 Perfluorodecanoic acid



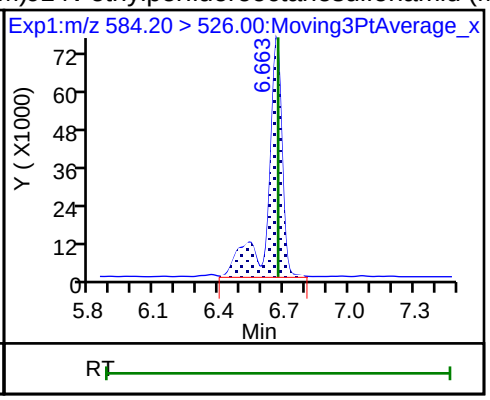
60 Perfluorodecanoic acid



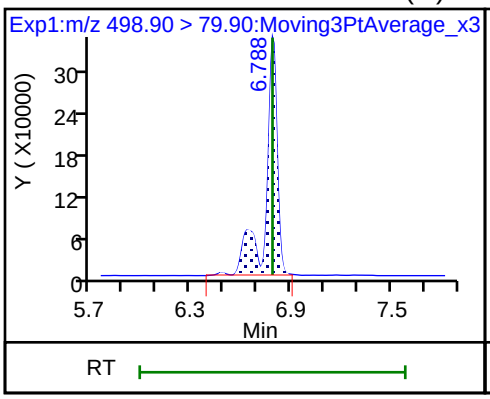
61 N-ethylperfluorooctanesulfonamid (M)



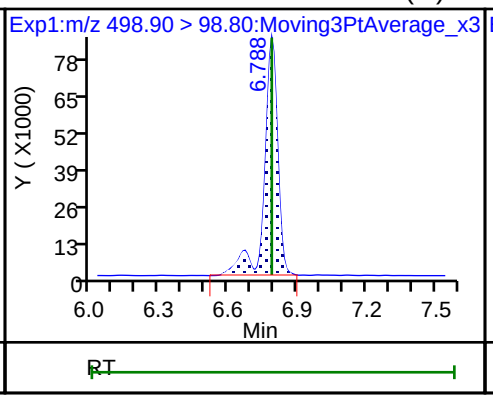
61 N-ethylperfluorooctanesulfonamid (M)



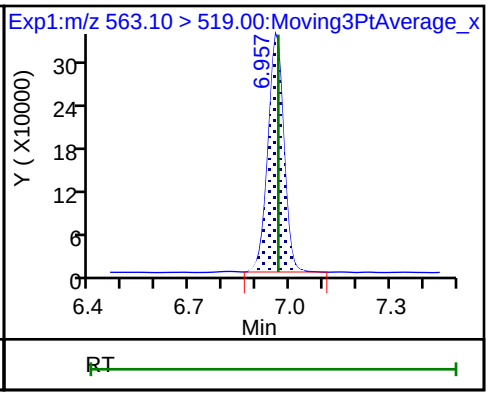
63 Perfluorooctanesulfonic acid (M)



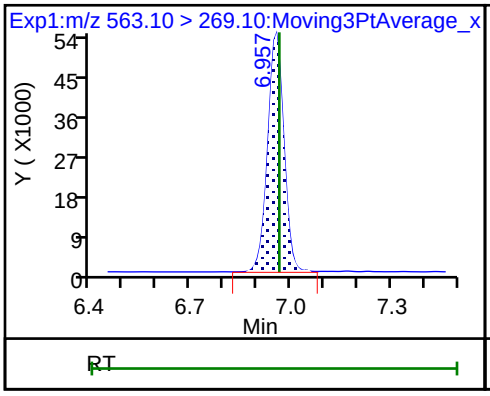
63 Perfluorooctanesulfonic acid (M)



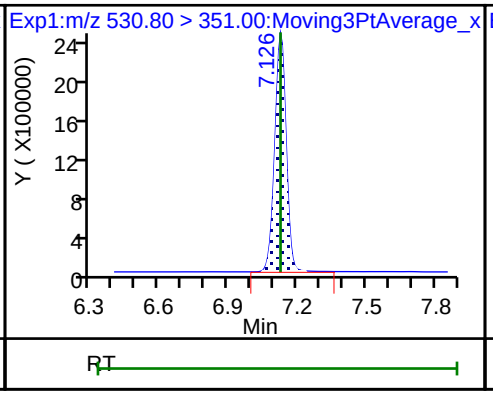
64 Perfluoroundecanoic acid



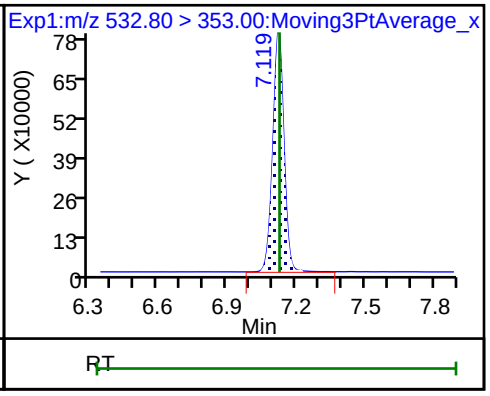
64 Perfluoroundecanoic acid



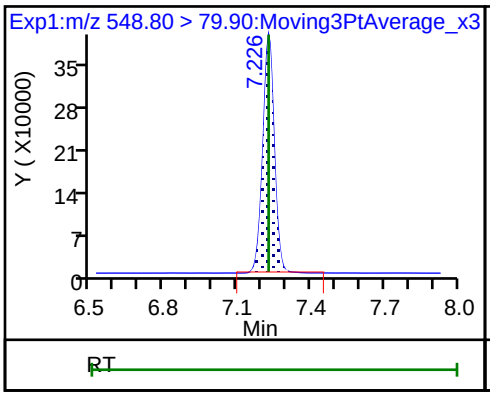
65 9-Chlorohexadecafluoro-3-oxanona



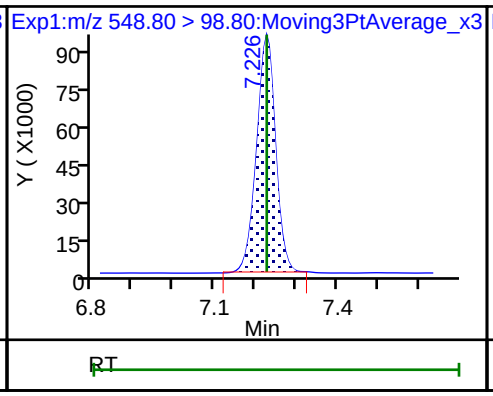
65 9-Chlorohexadecafluoro-3-oxanona



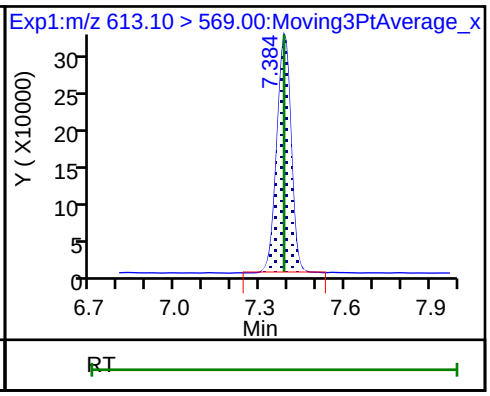
66 Perfluorononanesulfonic acid



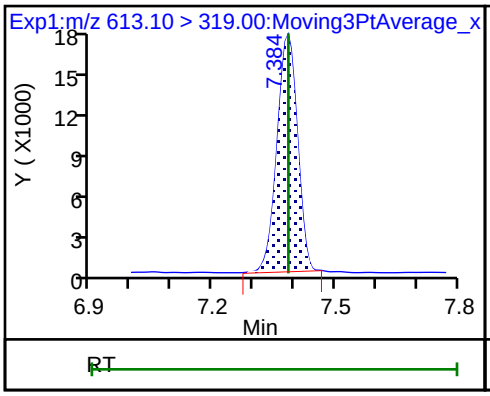
66 Perfluorononanesulfonic acid



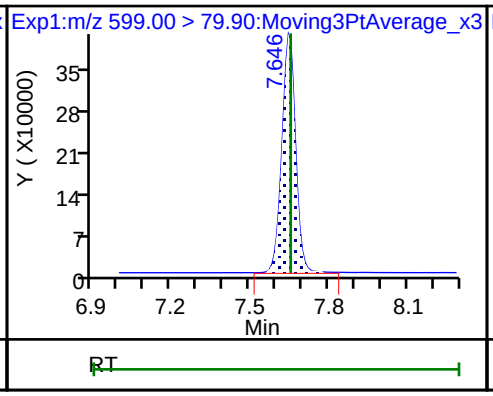
67 Perfluorododecanoic acid



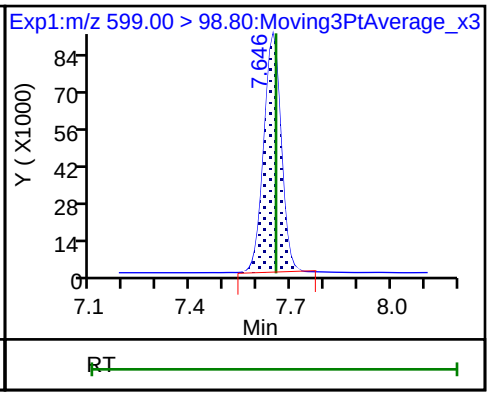
67 Perfluorododecanoic acid



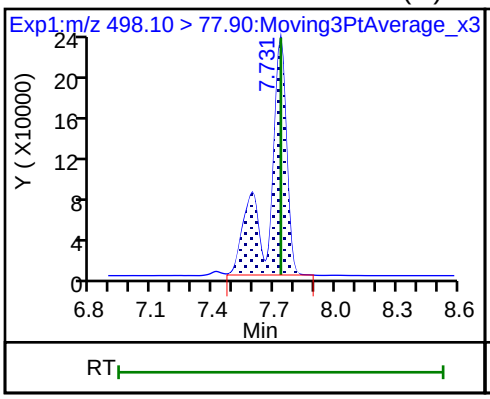
68 Perfluorodecanesulfonic acid



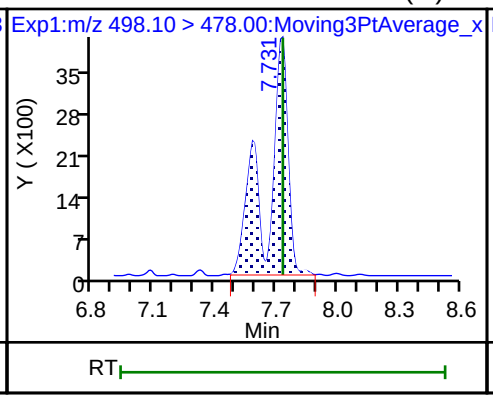
68 Perfluorodecanesulfonic acid



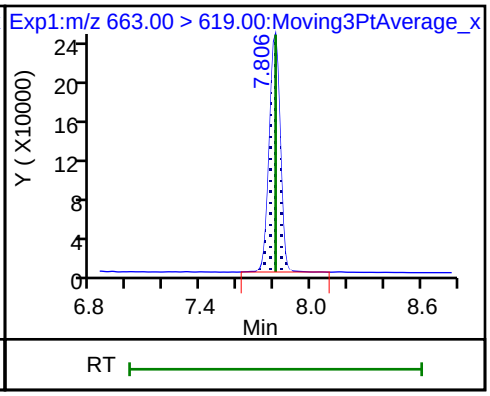
69 Perfluorooctanesulfonamide (M)



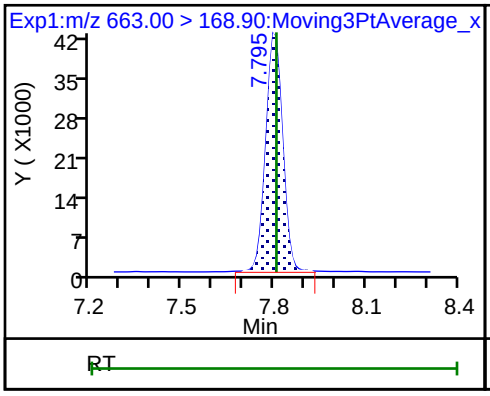
69 Perfluorooctanesulfonamide (M)



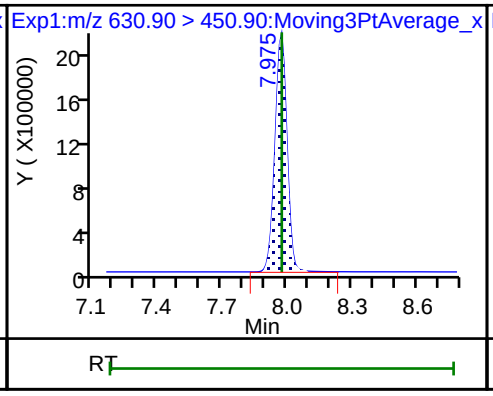
70 Perfluorotridecanoic acid



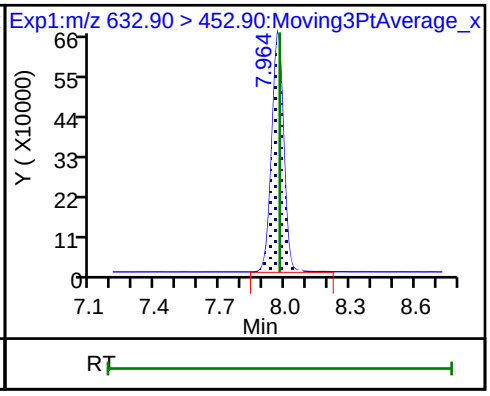
70 Perfluorotridecanoic acid



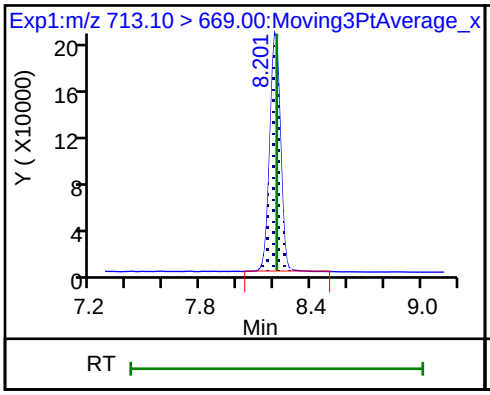
71 11-Chloroeicosafluoro-3-oxaundec



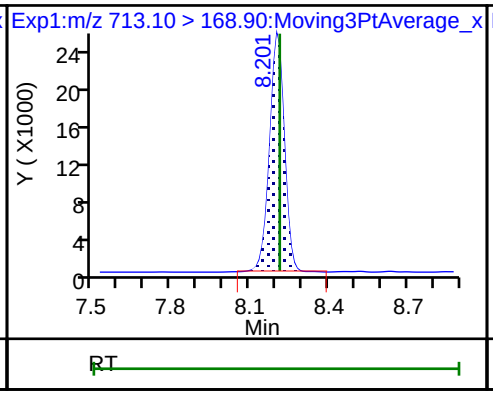
71 11-Chloroeicosafluoro-3-oxaundec



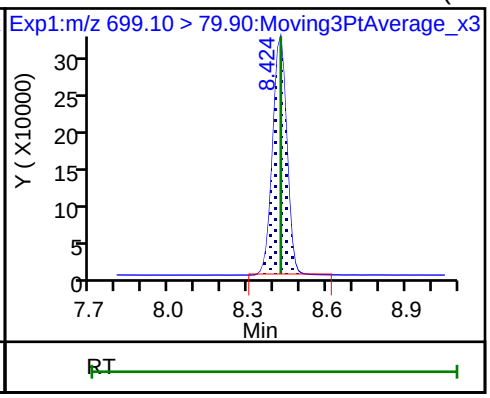
72 Perfluorotetradecanoic acid



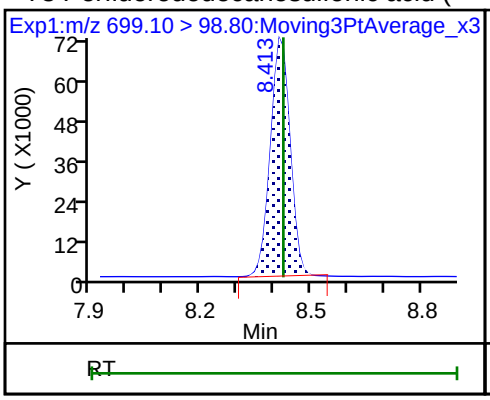
72 Perfluorotetradecanoic acid



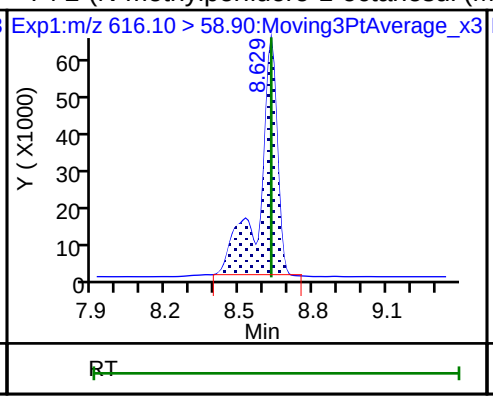
73 Perfluorododecanesulfonic acid (



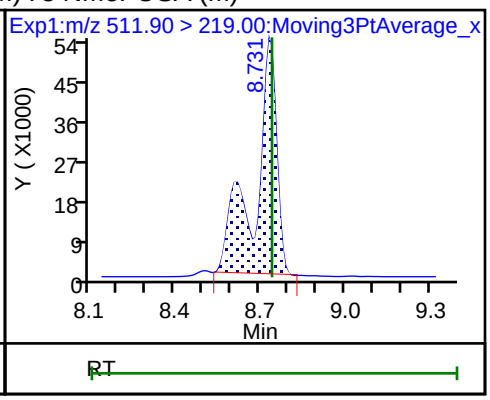
73 Perfluorododecanesulfonic acid (



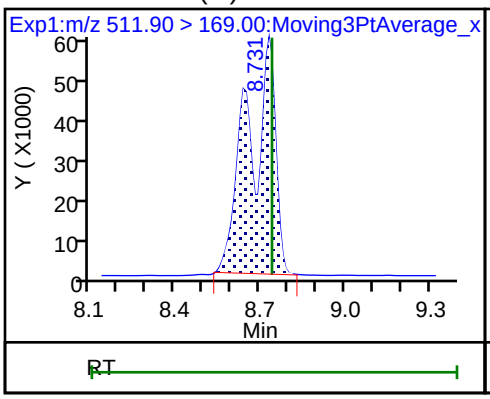
74 2-(N-methylperfluoro-1-octanesul (M)



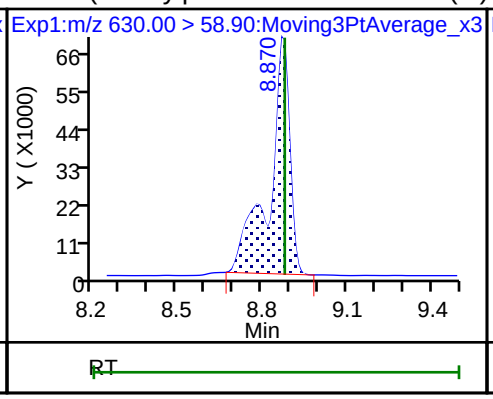
75 NMeFOSA (M)



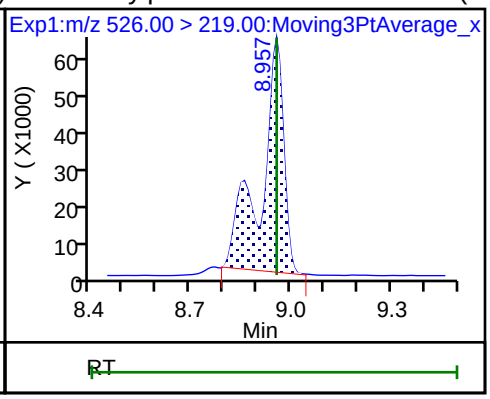
75 NMeFOSA (M)



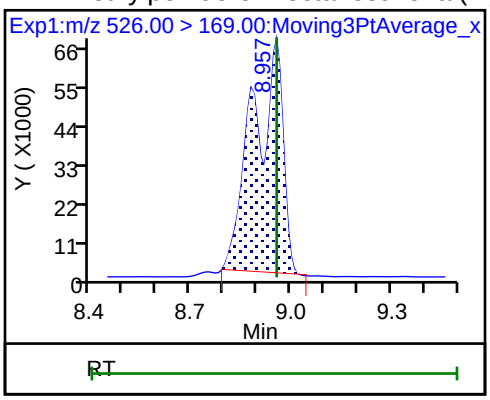
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

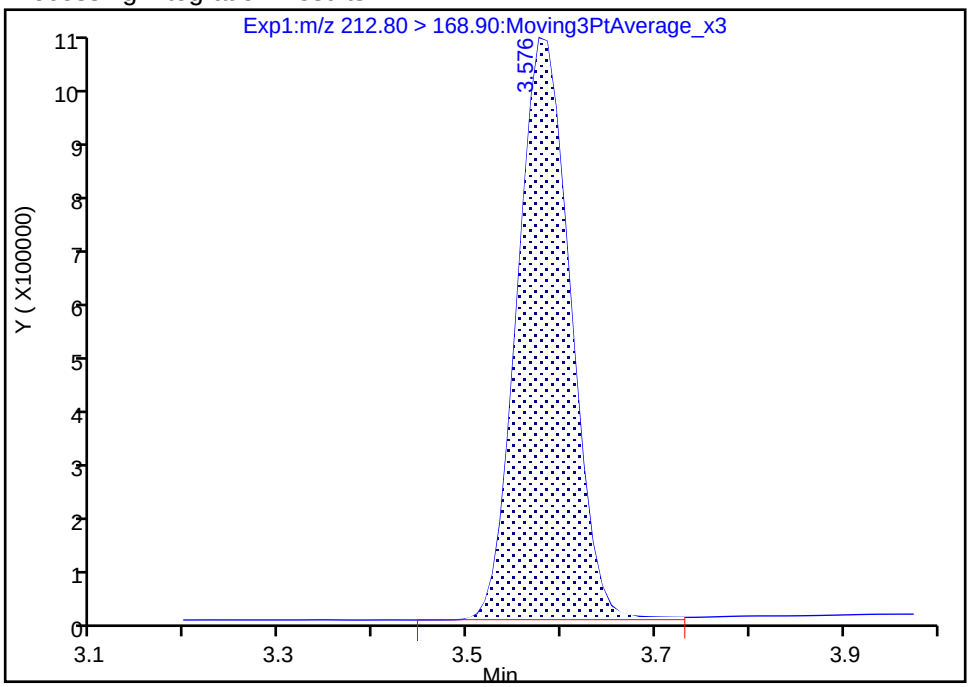
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

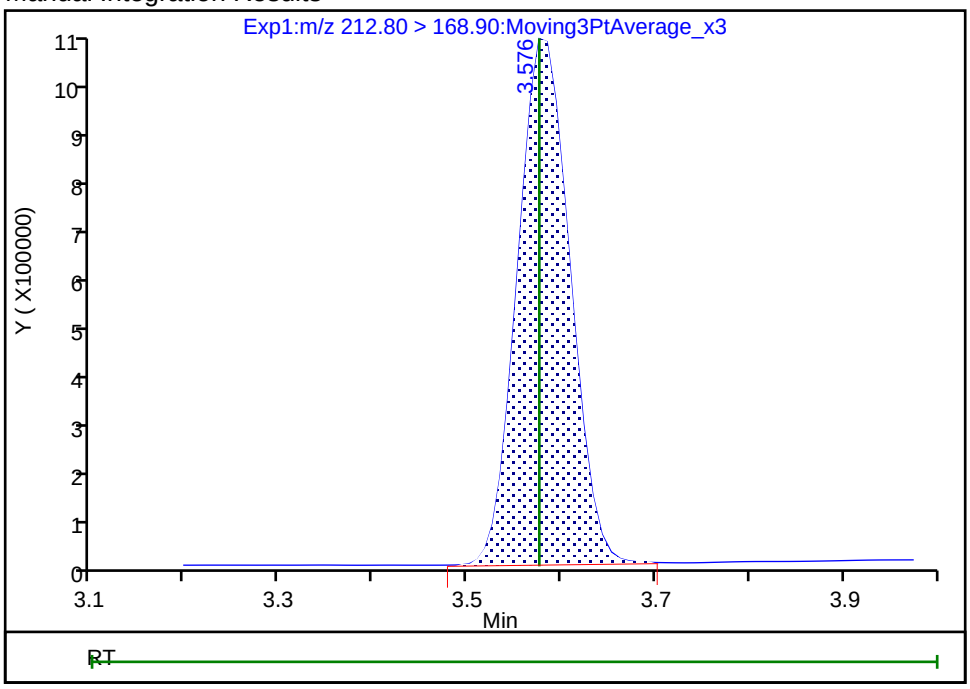
Processing Integration Results

RT: 3.58
Area: 4155460
Amount: 2.475468
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 4103912
Amount: 2.452668
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:30:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

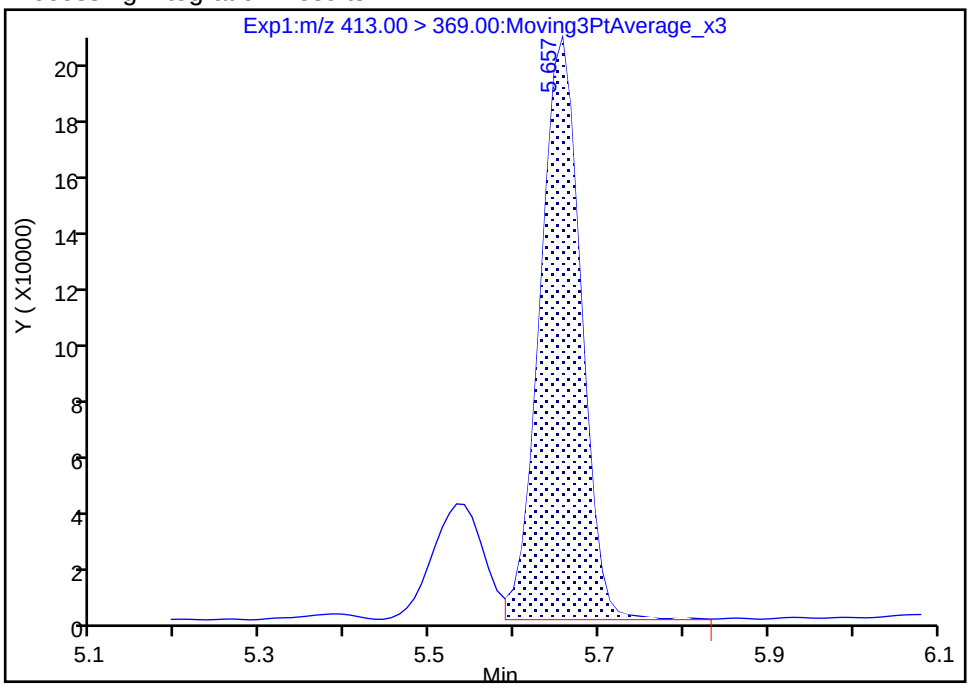
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

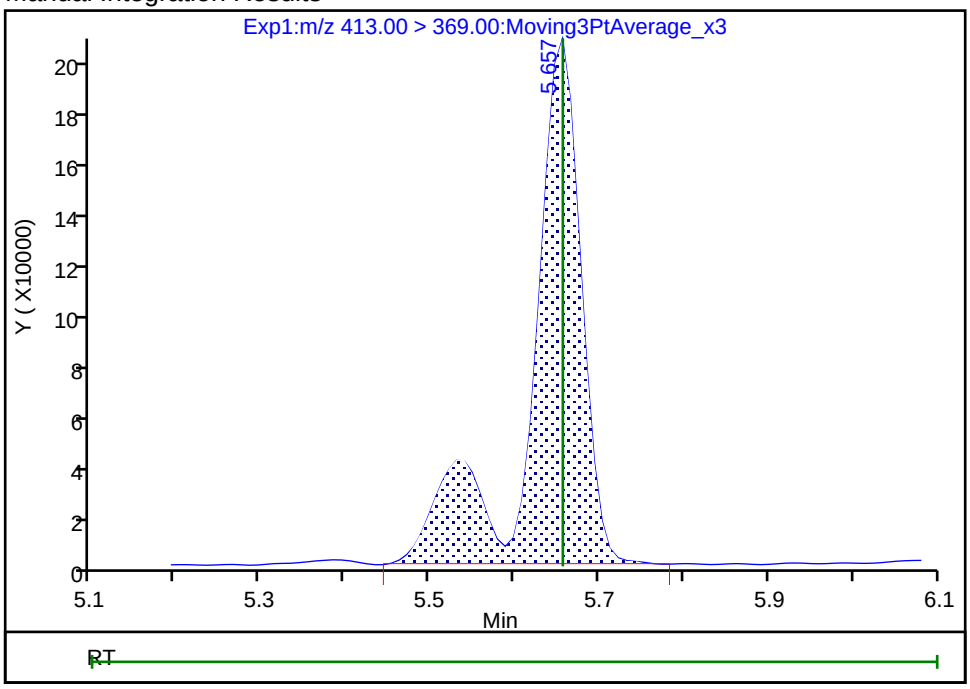
Processing Integration Results

RT: 5.66
Area: 686541
Amount: 0.562400
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 849440
Amount: 0.636581
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:30:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

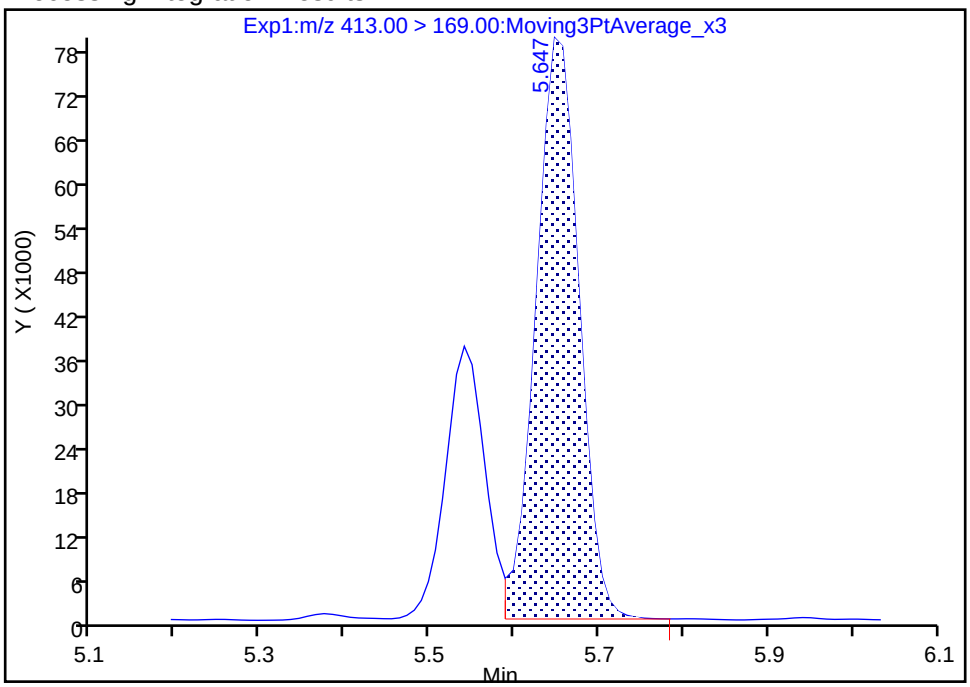
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

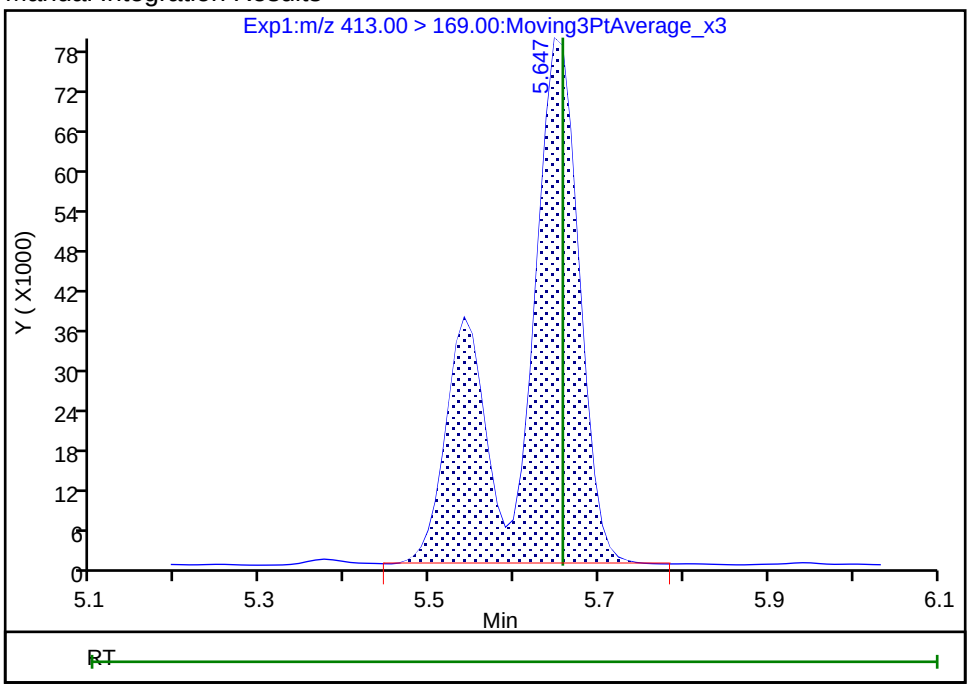
Processing Integration Results

RT: 5.65
Area: 280269
Amount: 0.562400
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 399822
Amount: 0.636581
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:30:39 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

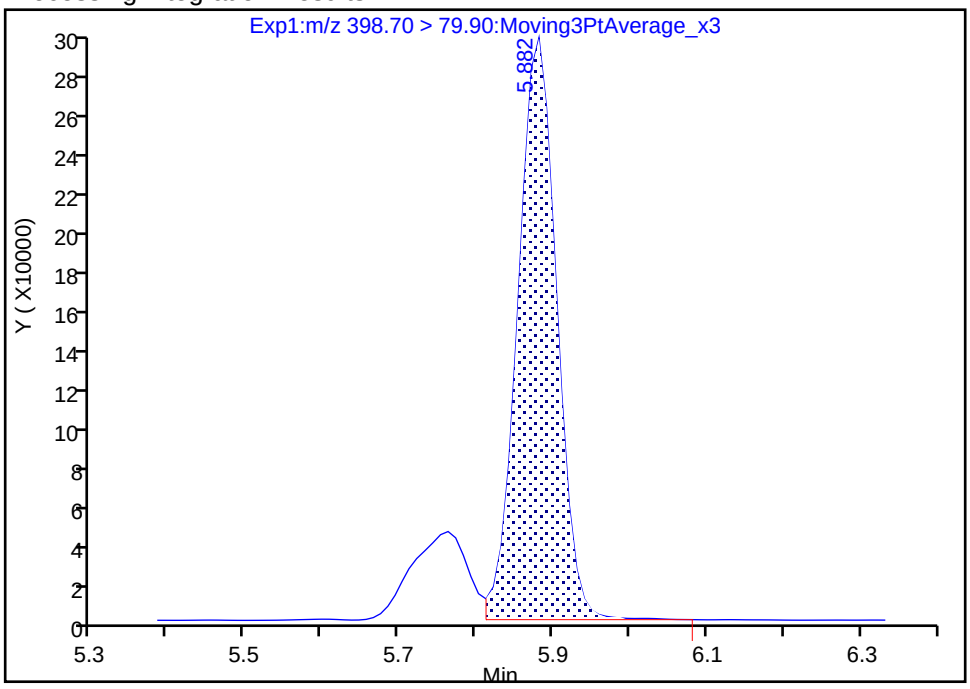
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

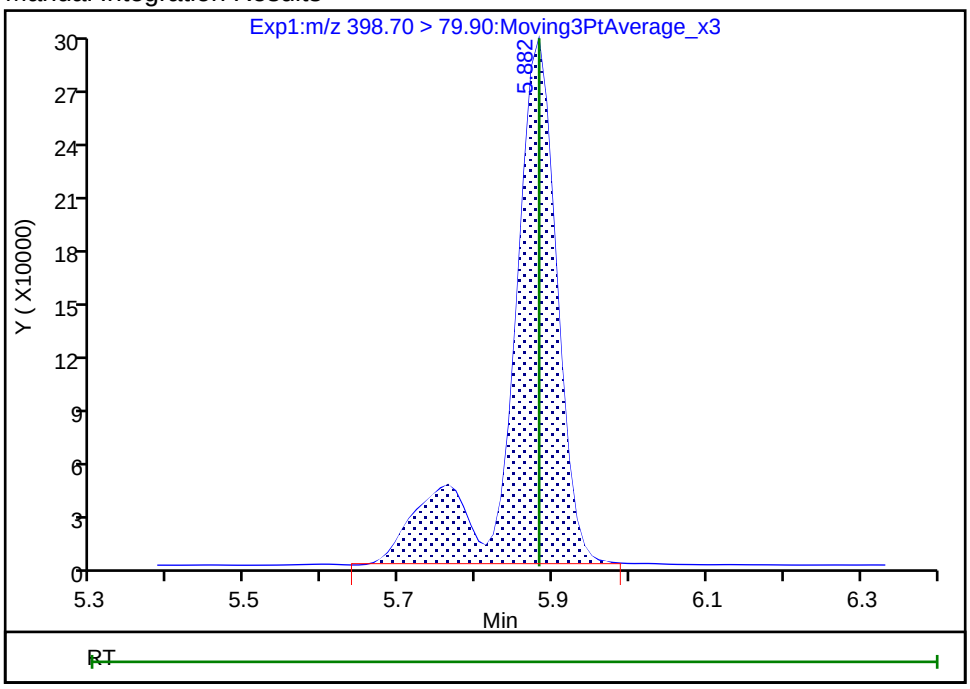
Processing Integration Results

RT: 5.88
Area: 1028740
Amount: 0.481647
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 1241147
Amount: 0.539097
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:30:50 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

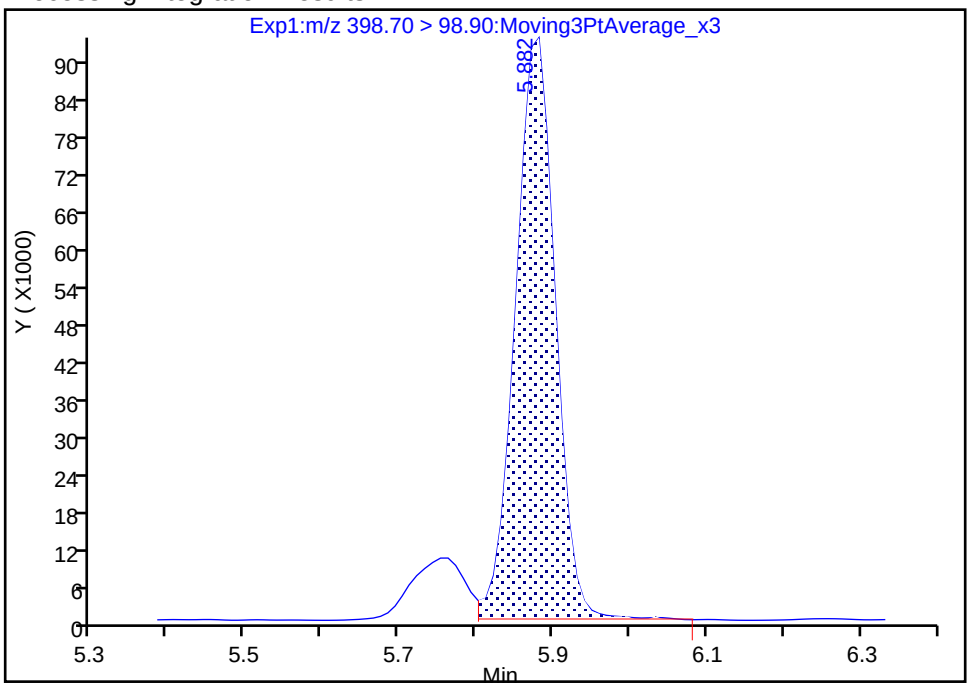
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

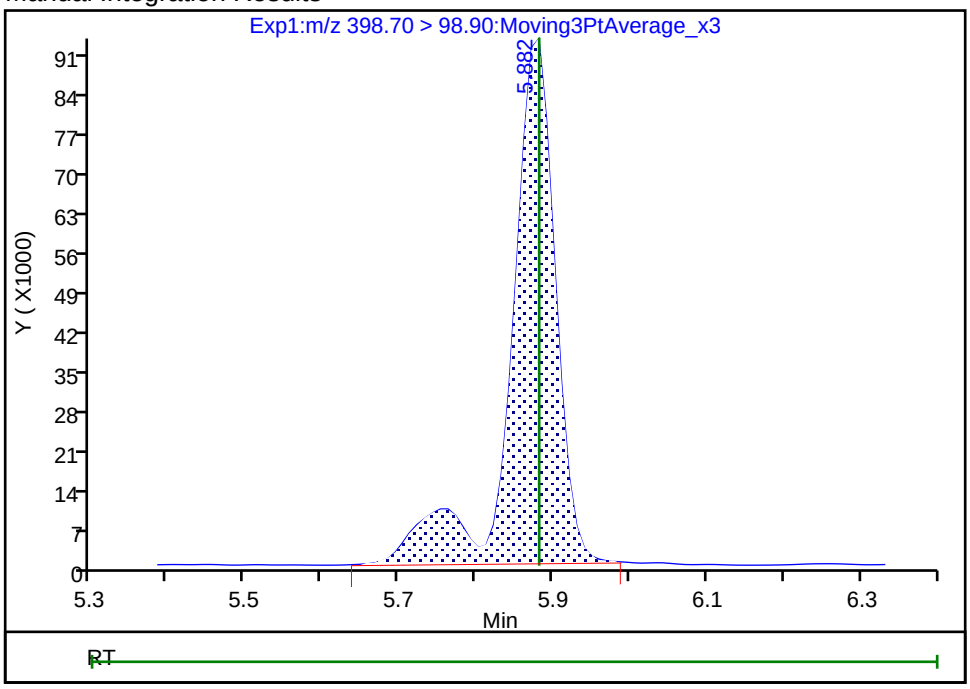
Processing Integration Results

RT: 5.88
Area: 337352
Amount: 0.481647
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 377429
Amount: 0.539097
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:30:58 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

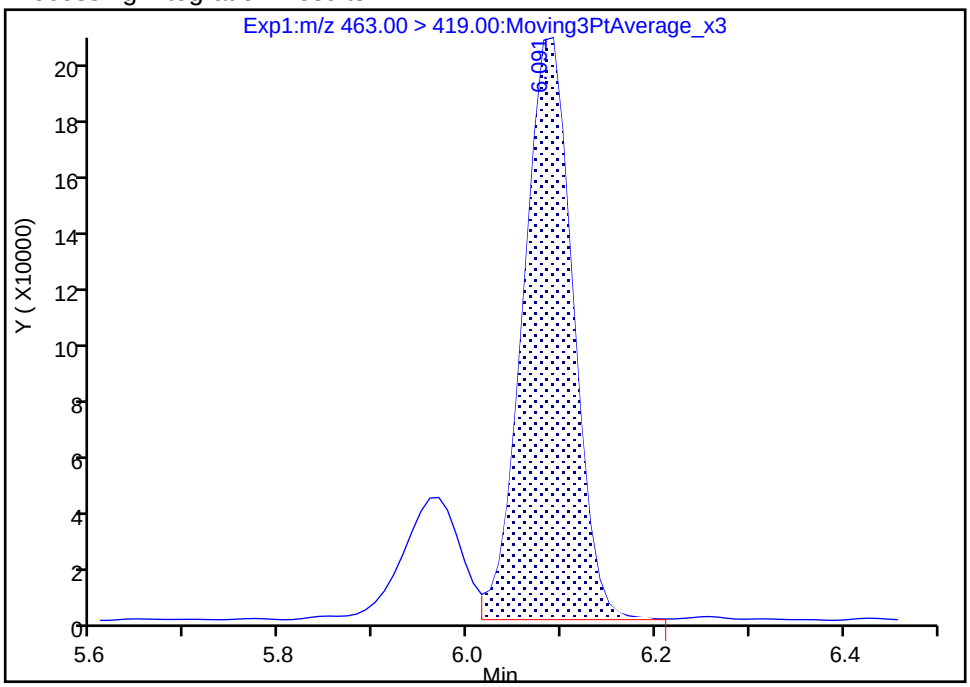
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

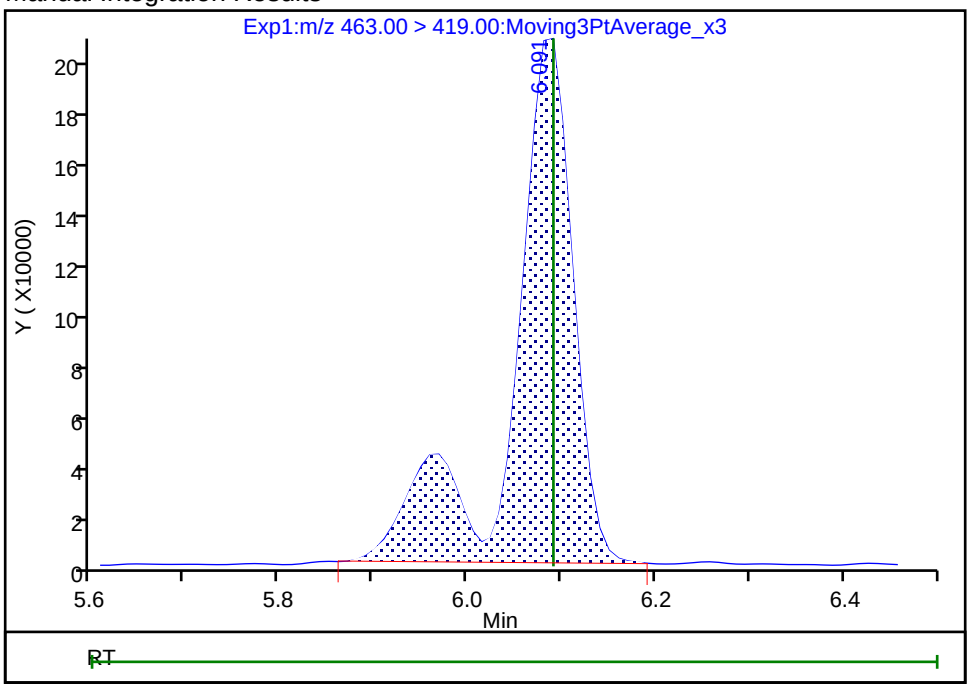
Processing Integration Results

RT: 6.09
Area: 746540
Amount: 0.543654
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 909538
Amount: 0.613882
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:31:11 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

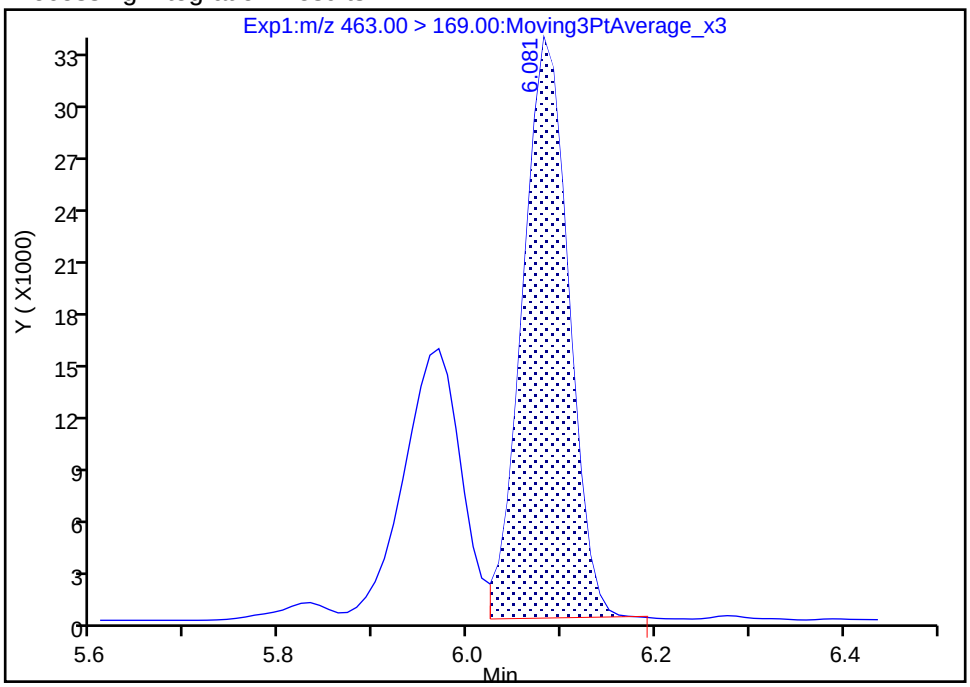
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

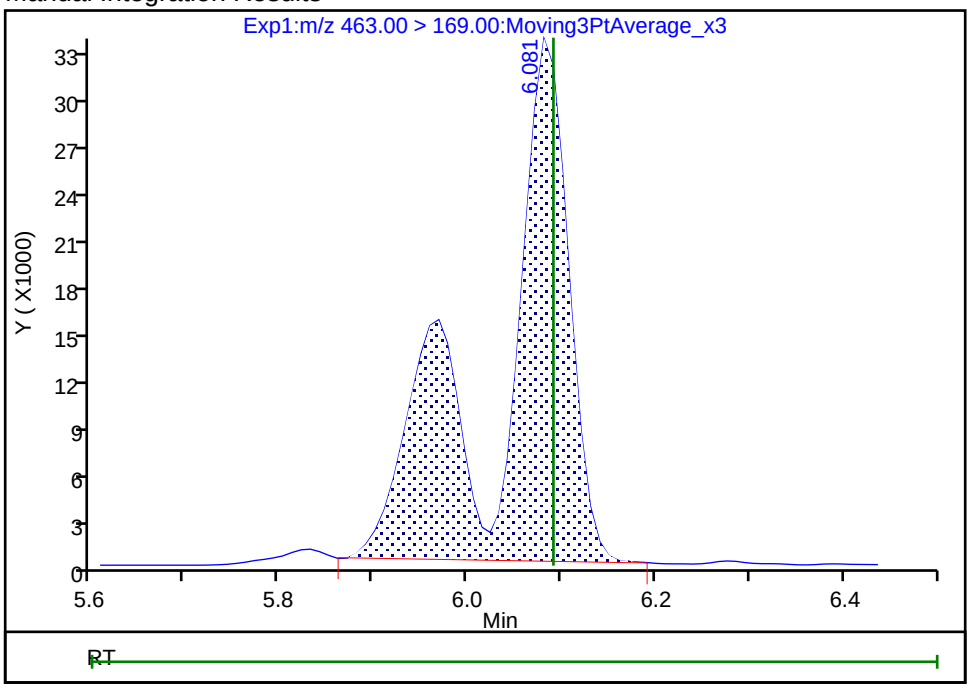
Processing Integration Results

RT: 6.08
Area: 114814
Amount: 0.543654
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 177269
Amount: 0.613882
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:31:23 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

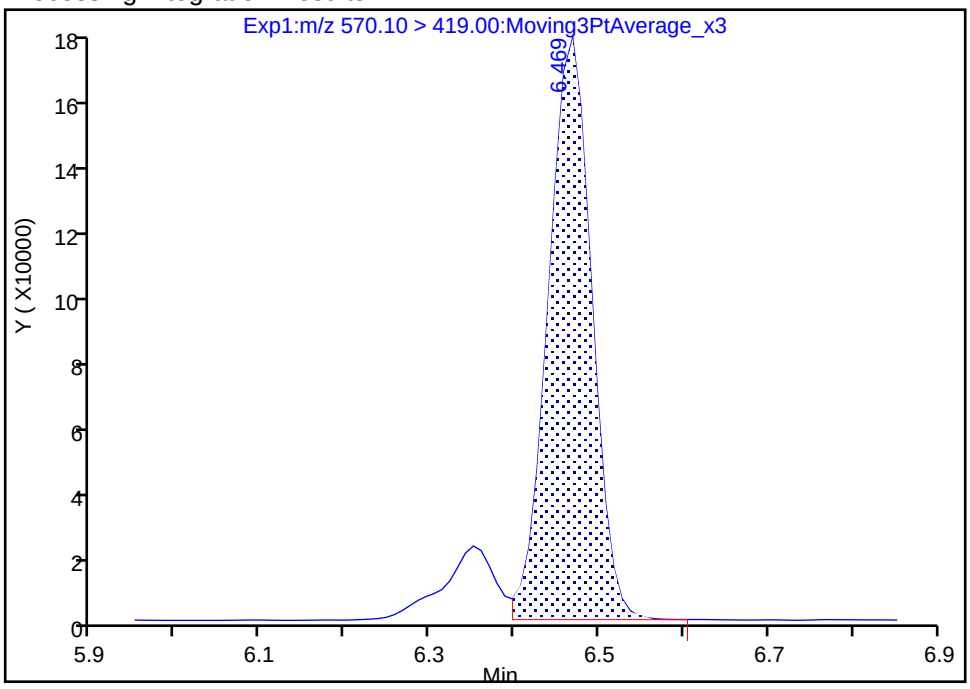
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

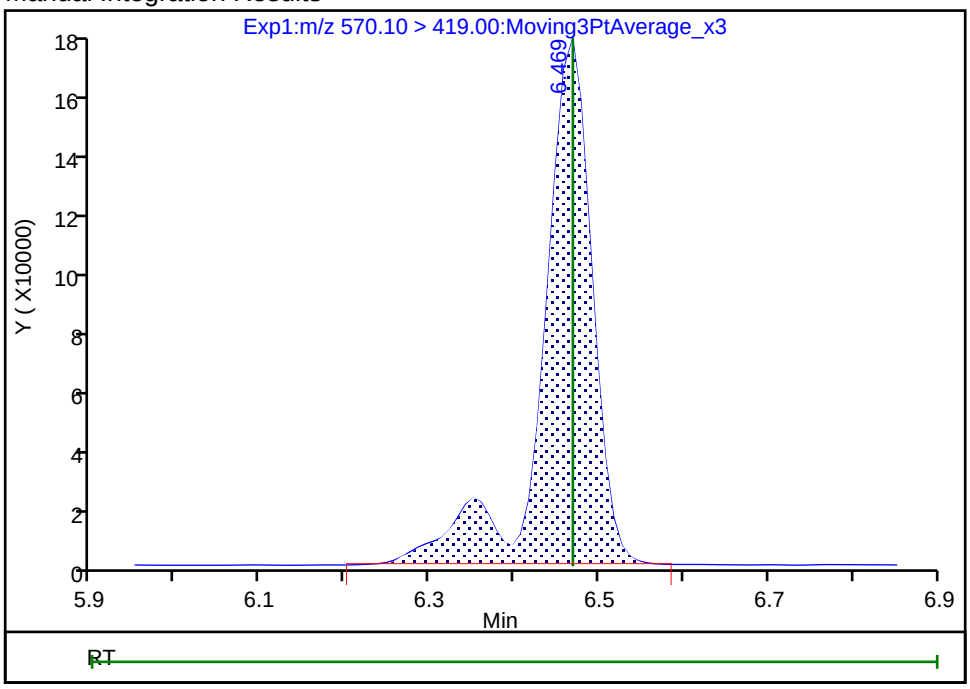
Processing Integration Results

RT: 6.47
Area: 631814
Amount: 0.601963
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 726576
Amount: 0.658092
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:31:39 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

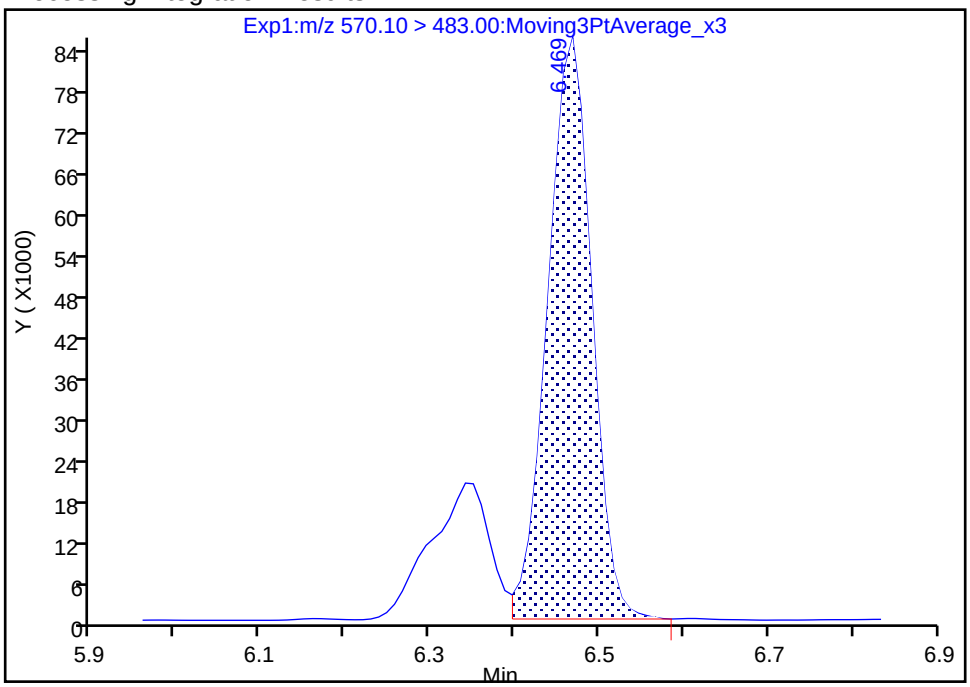
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

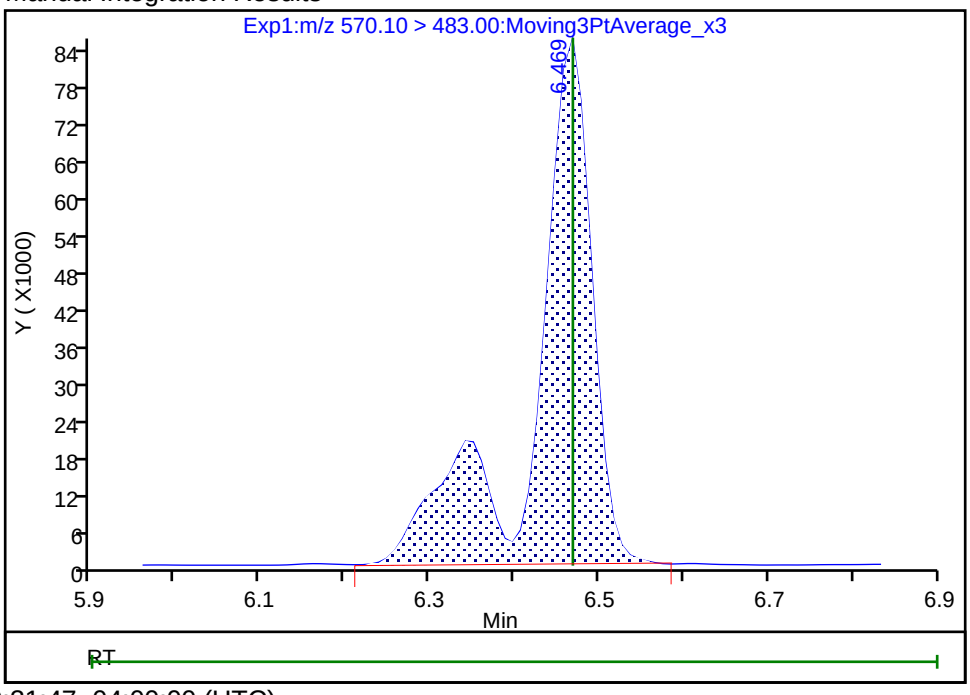
Processing Integration Results

RT: 6.47
Area: 308191
Amount: 0.601963
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 405512
Amount: 0.658092
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:31:47 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

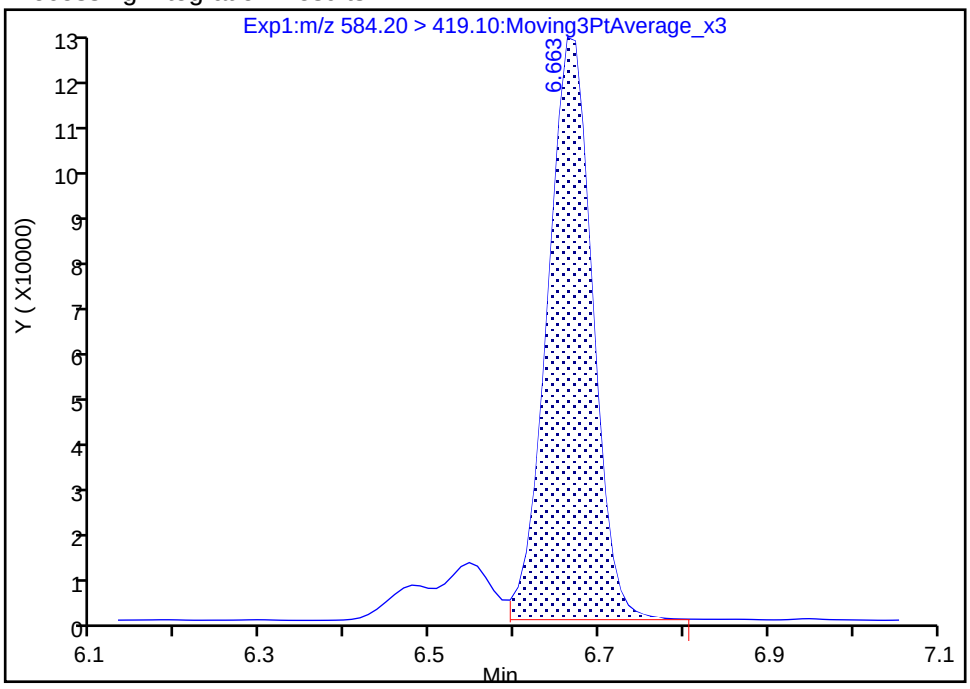
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

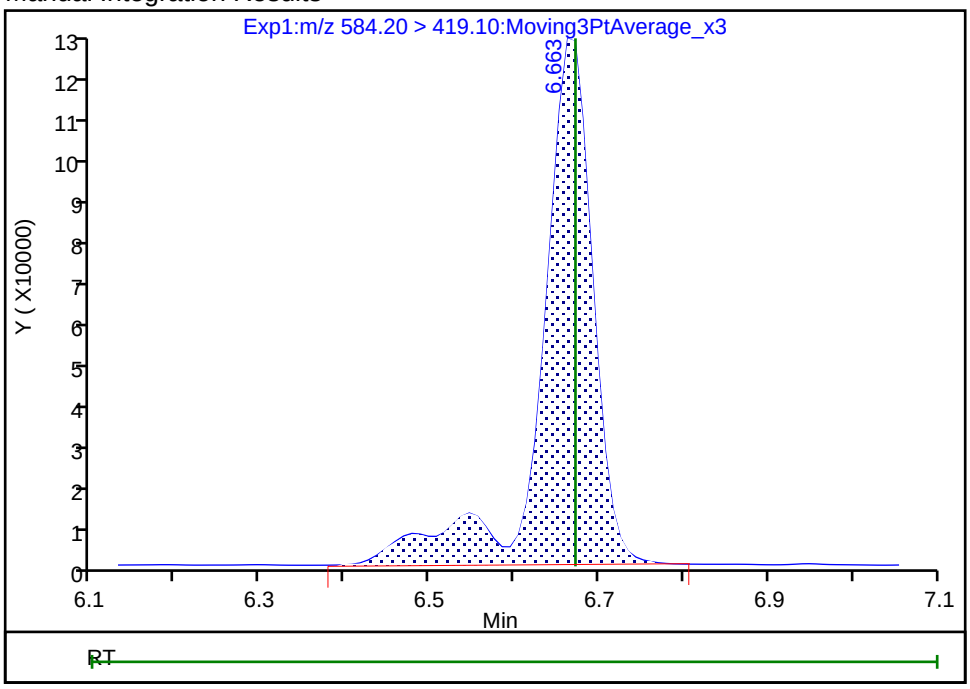
Processing Integration Results

RT: 6.66
Area: 455540
Amount: 0.575330
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 527168
Amount: 0.629996
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:31:58 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

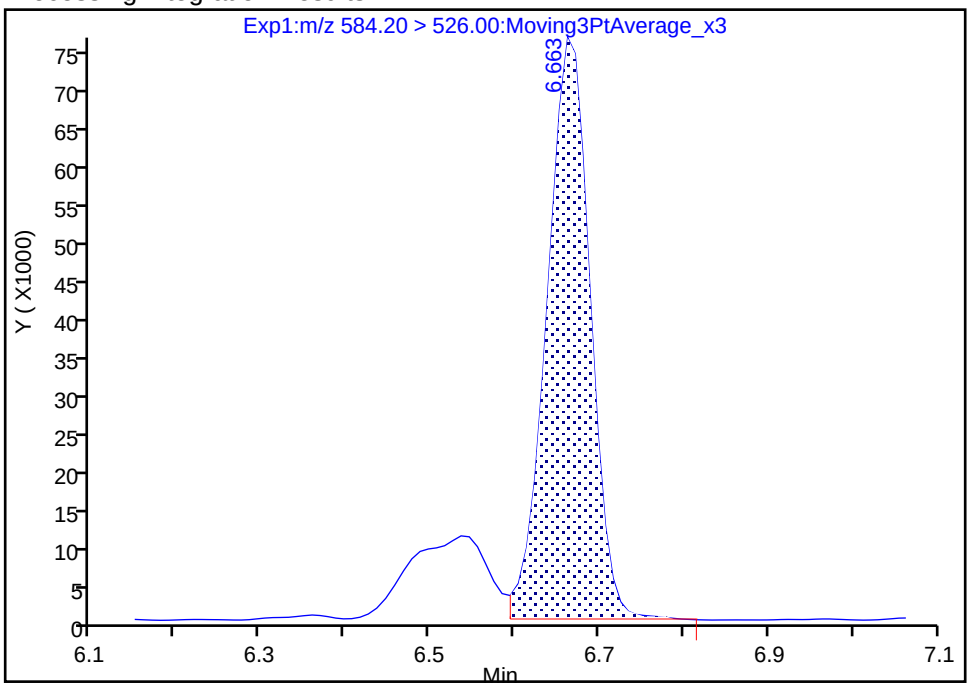
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

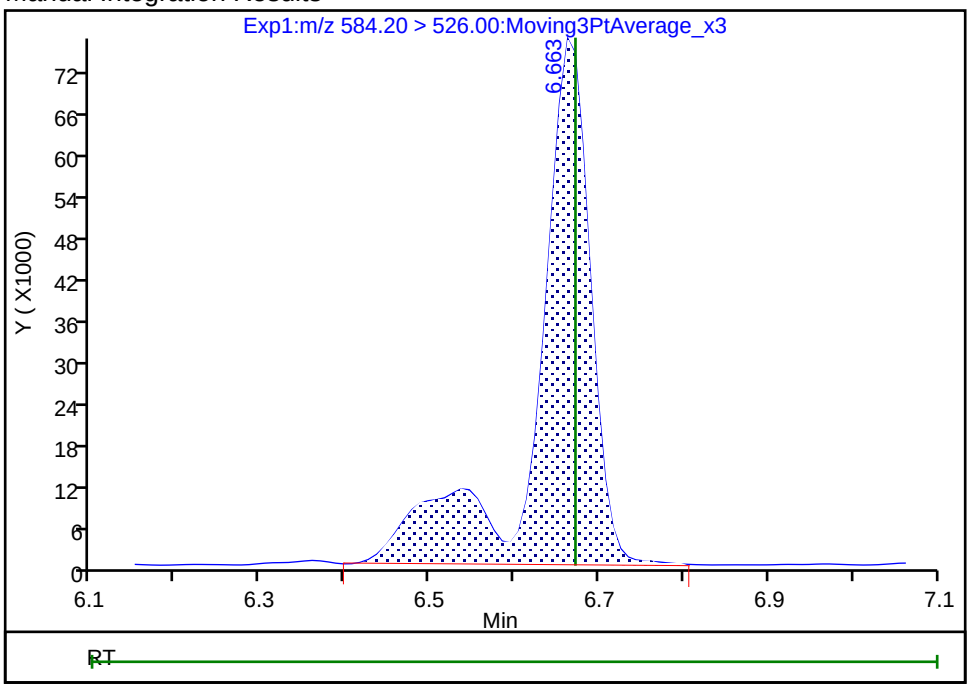
Processing Integration Results

RT: 6.66
Area: 272761
Amount: 0.575330
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 342082
Amount: 0.629996
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:32:07 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

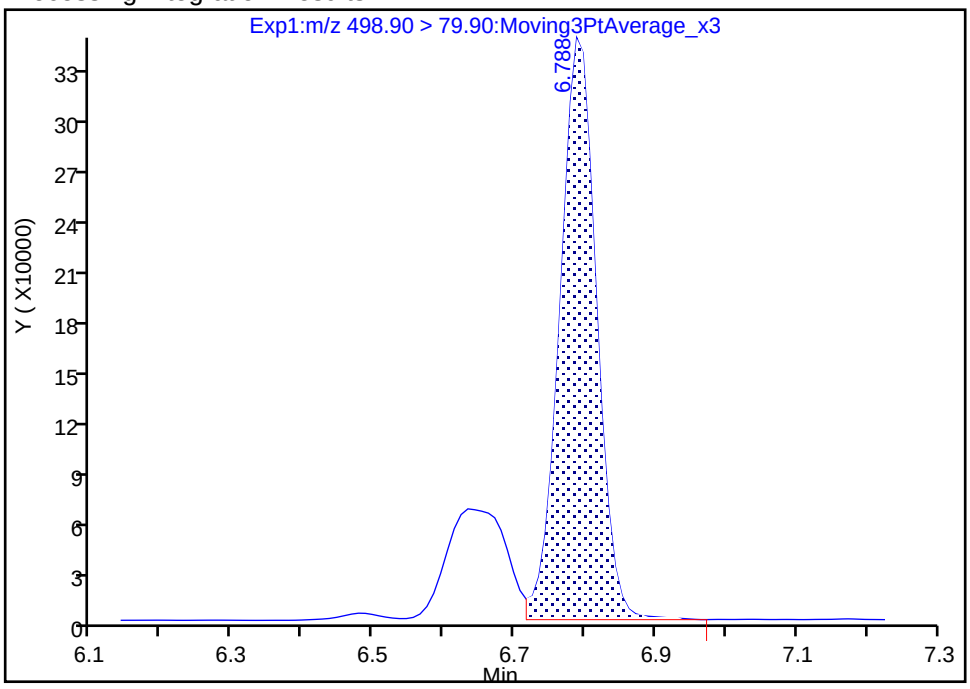
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

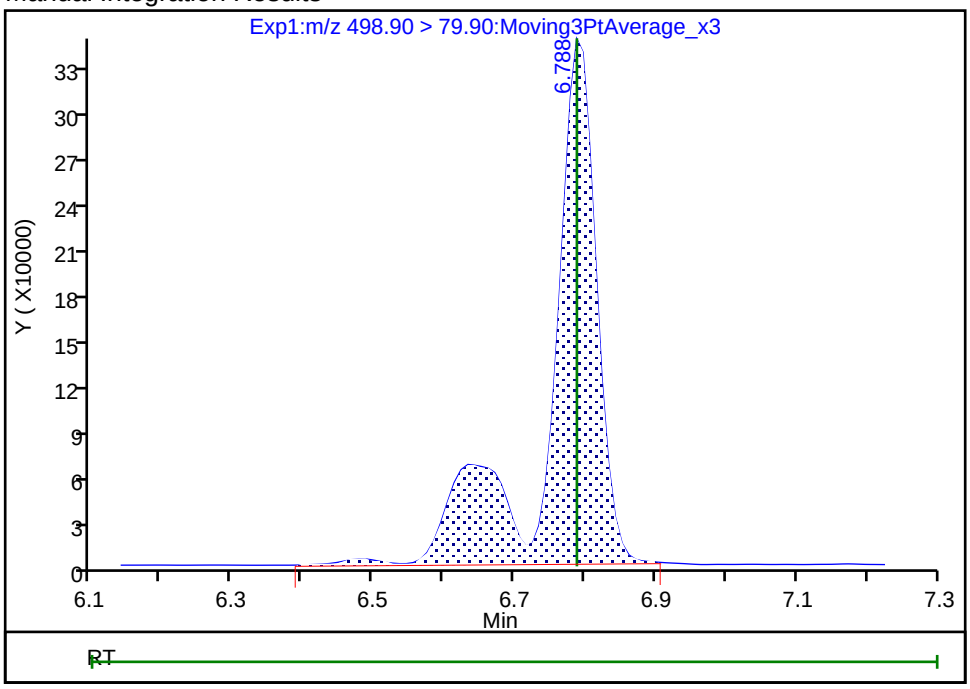
Processing Integration Results

RT: 6.79
Area: 1242844
Amount: 0.480522
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 1618123
Amount: 0.562775
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:32:20 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

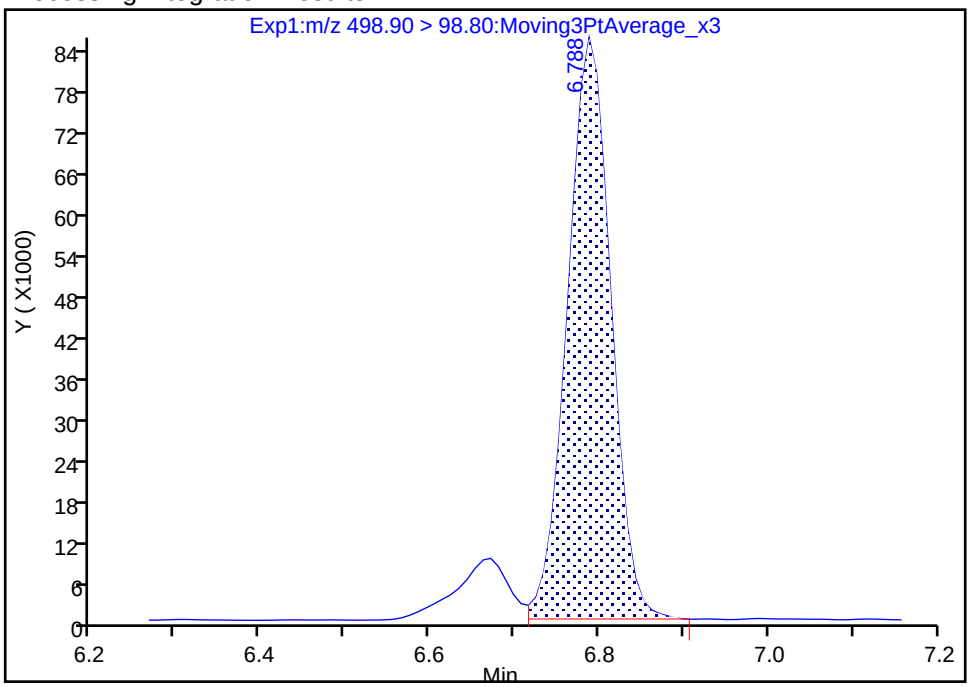
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

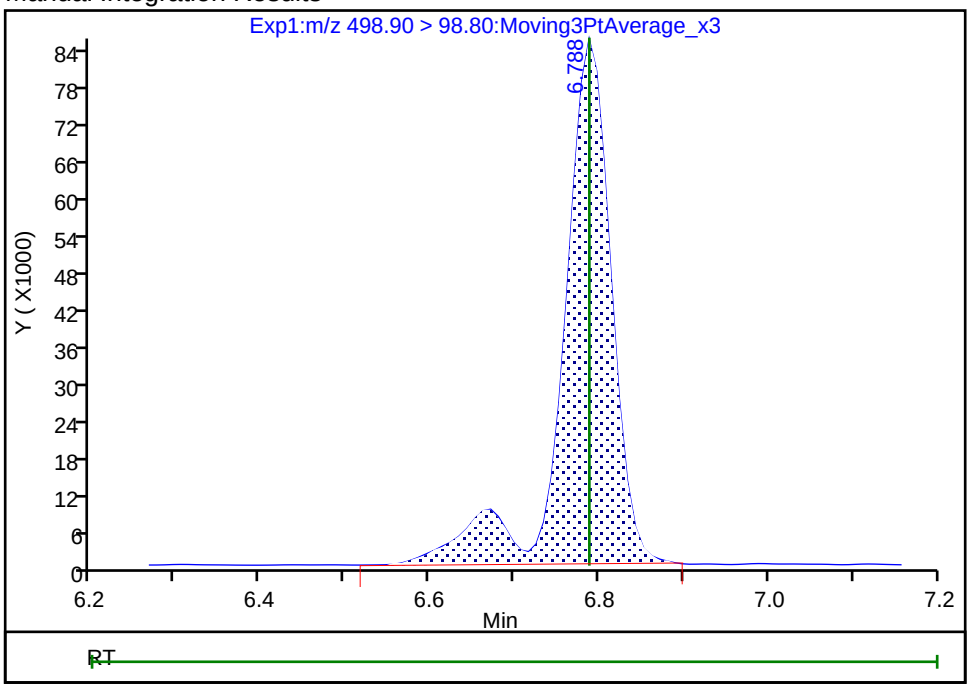
Processing Integration Results

RT: 6.79
Area: 304972
Amount: 0.480522
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 343230
Amount: 0.562775
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:32:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

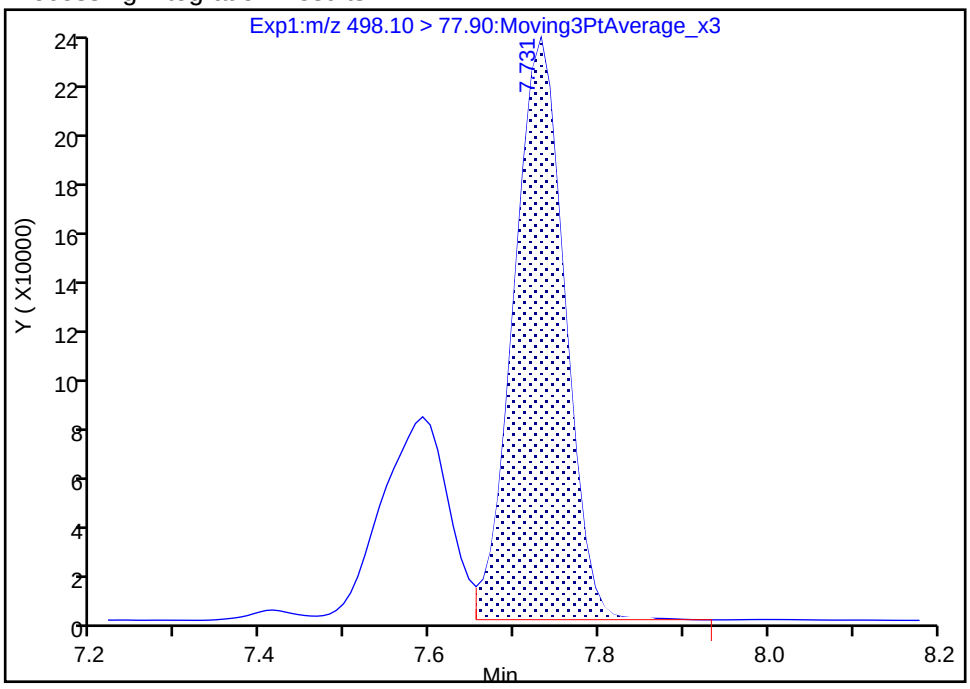
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d				
Injection Date:	10-Sep-2024 17:53:35	Instrument ID:	LCMS04		
Lims ID:	IC CAL 4				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	4
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

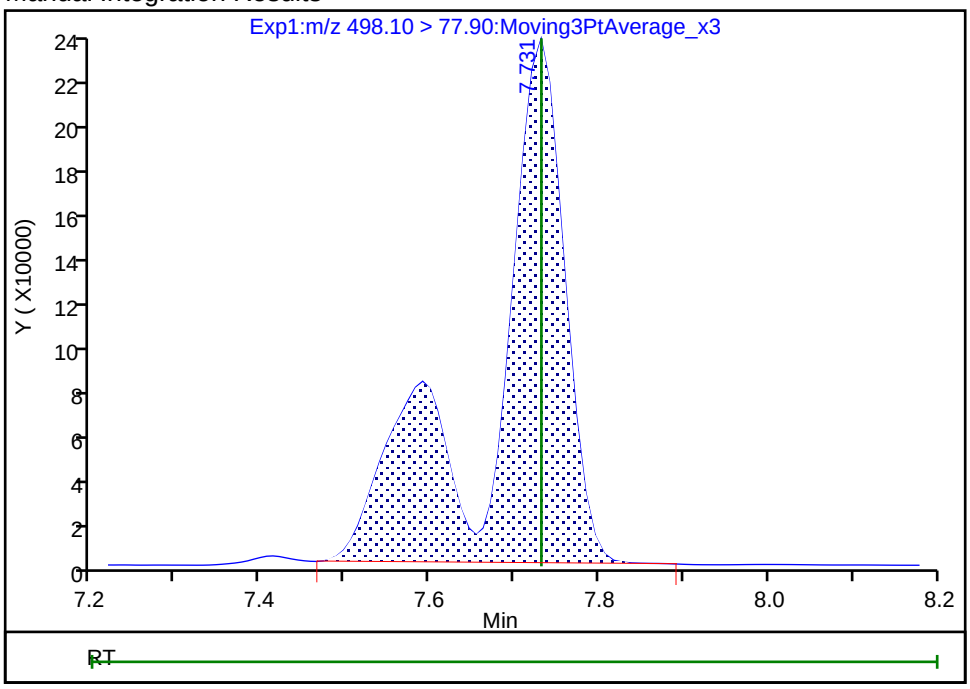
Processing Integration Results

RT: 7.73
Area: 987650
Amount: 0.502684
Amount Units: ng/ml



Manual Integration Results

RT: 7.73
Area: 1412671
Amount: 0.626239
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:32:50 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

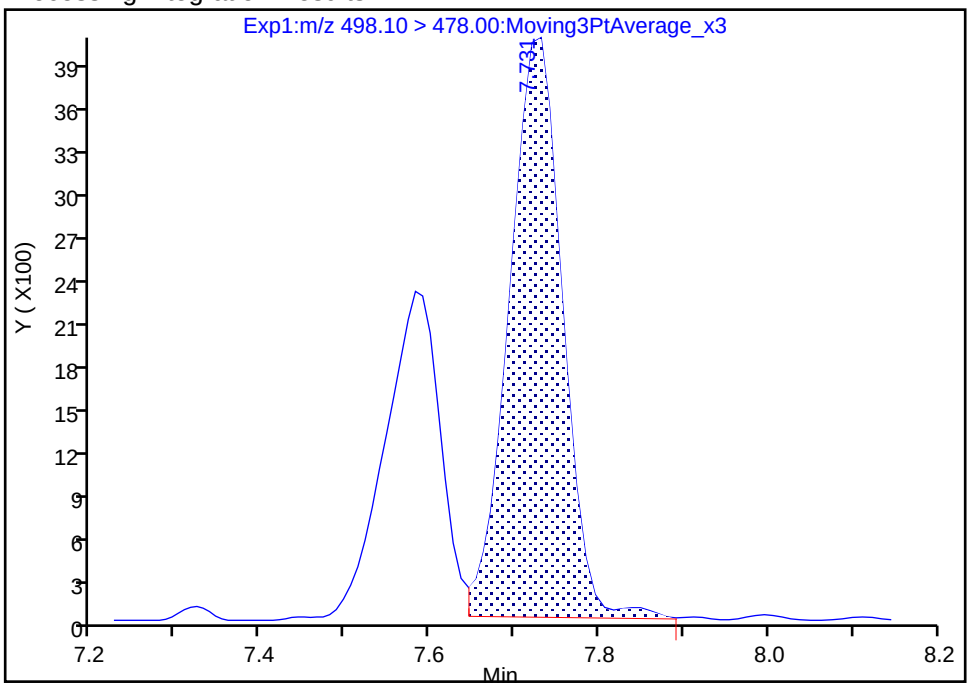
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

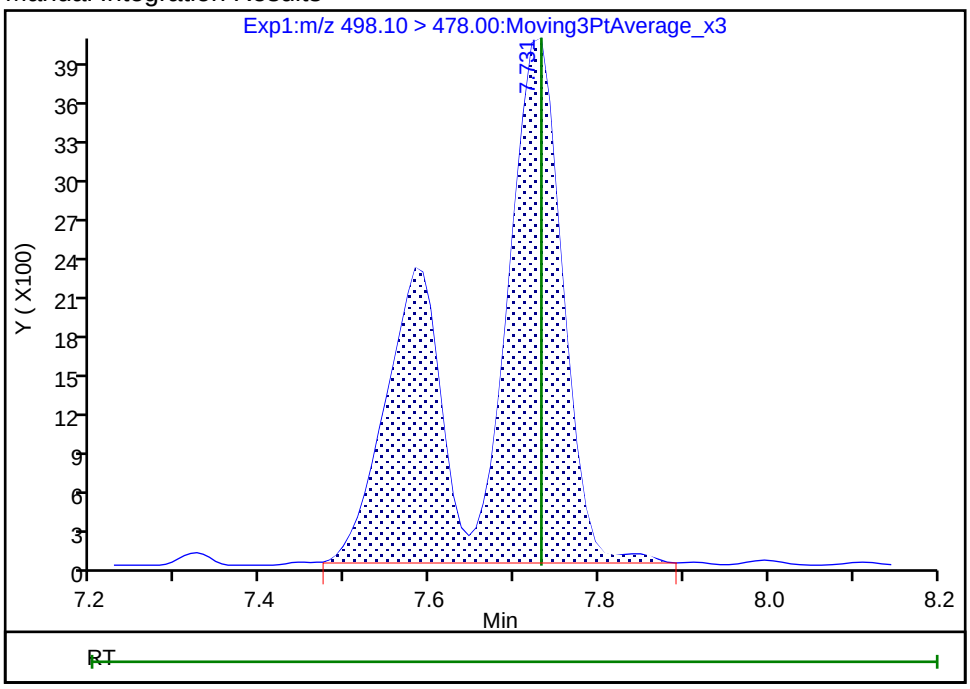
Processing Integration Results

RT: 7.73
Area: 17551
Amount: 0.502684
Amount Units: ng/ml



Manual Integration Results

RT: 7.73
Area: 27707
Amount: 0.626239
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:32:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

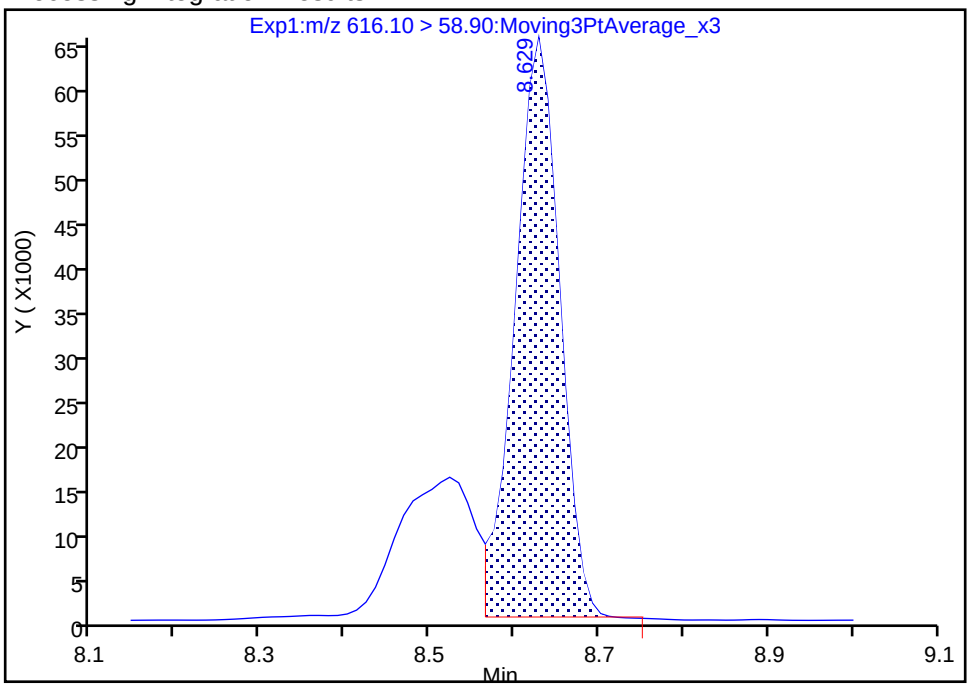
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

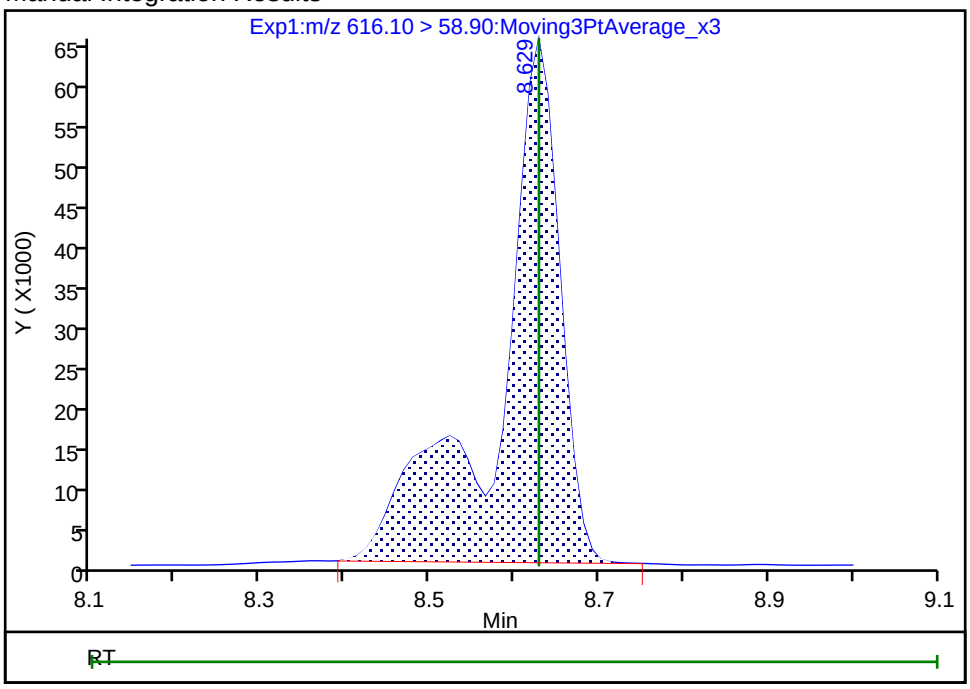
Processing Integration Results

RT: 8.63
Area: 236629
Amount: 5.090564
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 329618
Amount: 6.226531
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:33:12 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

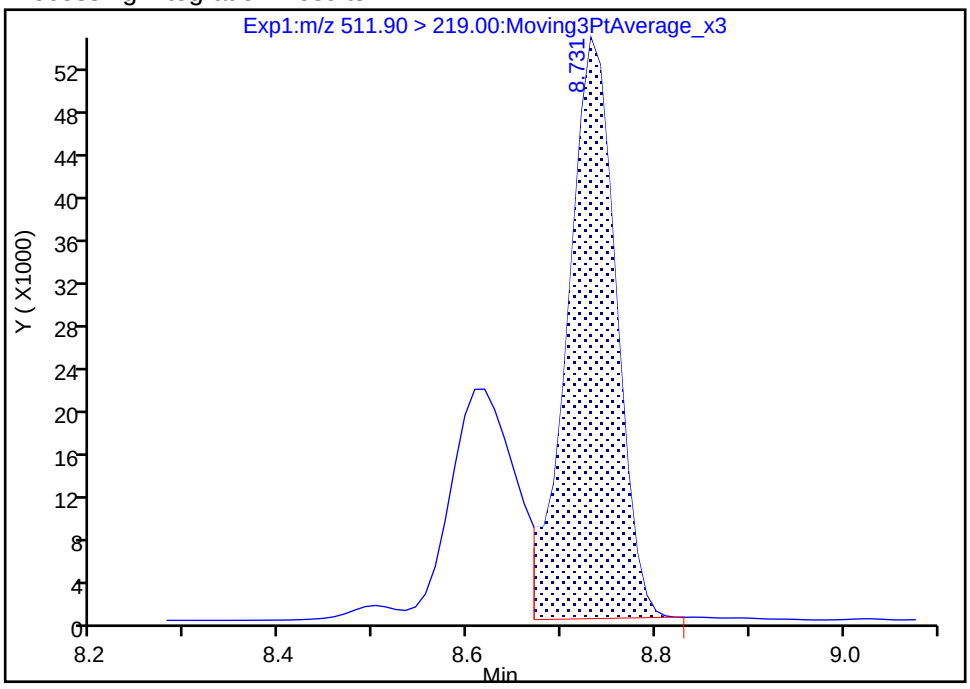
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

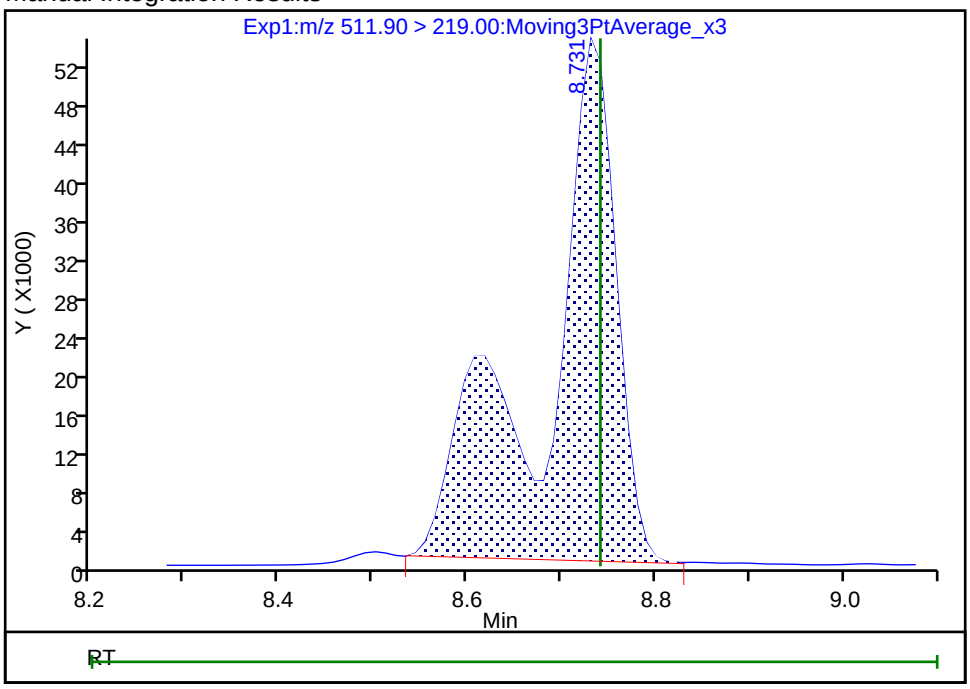
Processing Integration Results

RT: 8.73
Area: 192900
Amount: 0.484127
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 285843
Amount: 0.616648
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:33:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

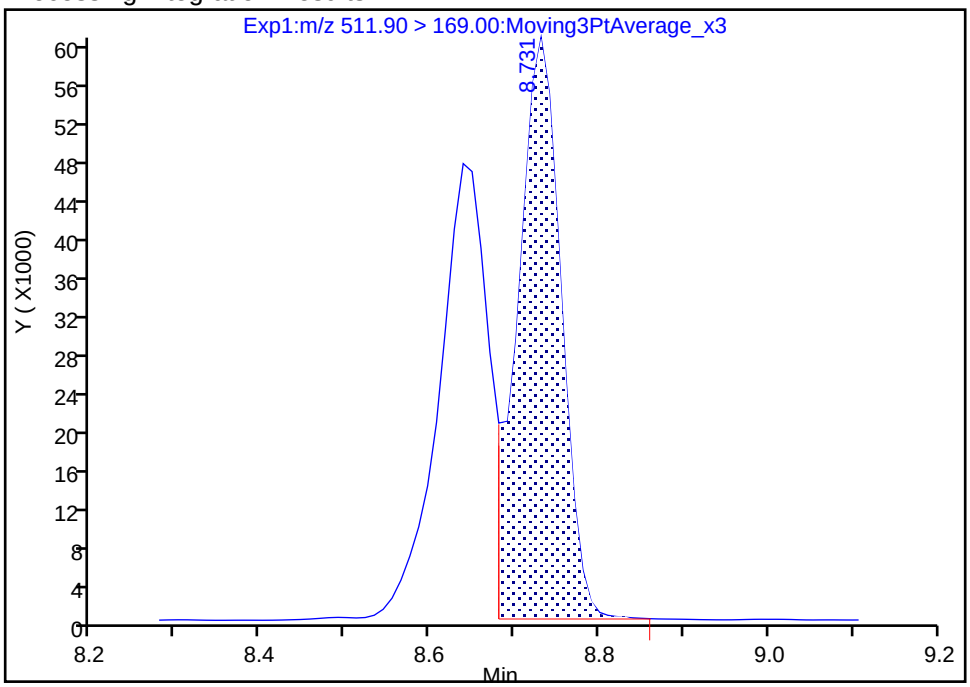
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

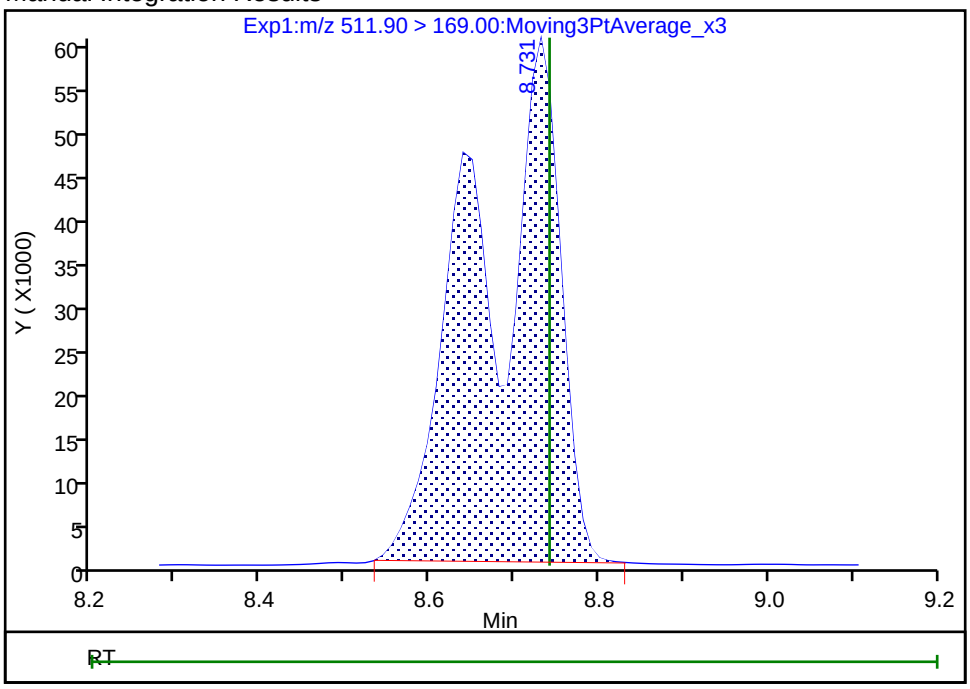
Processing Integration Results

RT: 8.73
Area: 215180
Amount: 0.484127
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 400315
Amount: 0.616648
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:33:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

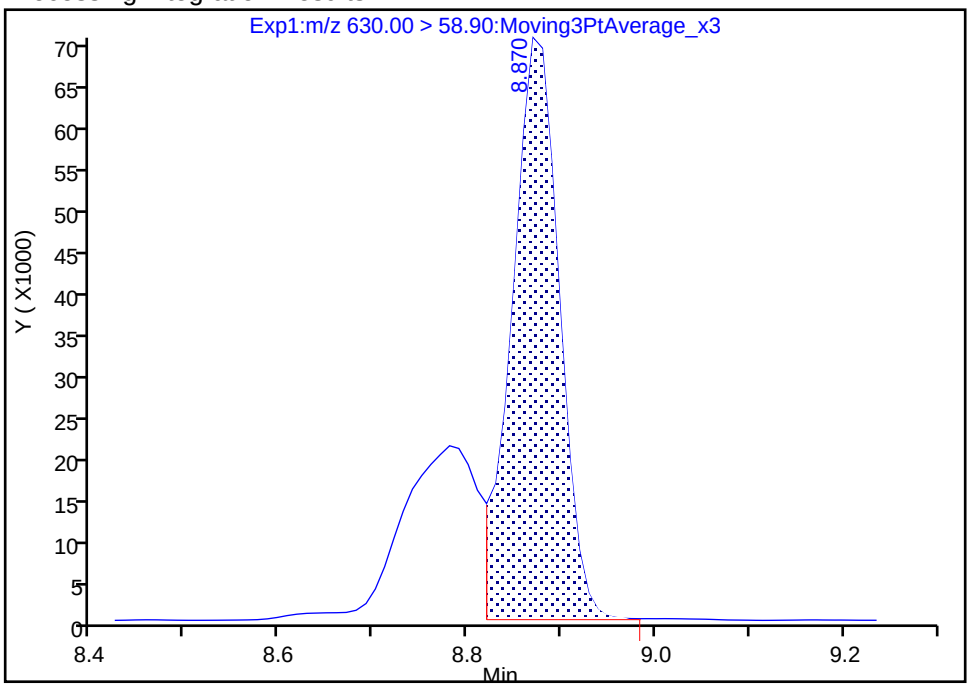
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

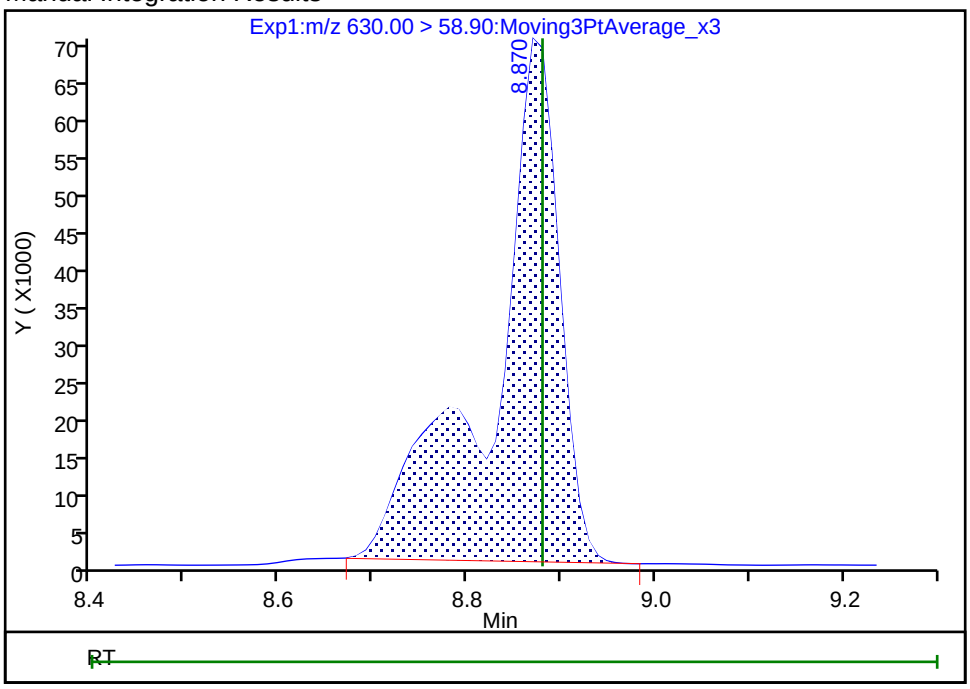
Processing Integration Results

RT: 8.87
Area: 246550
Amount: 4.738365
Amount Units: ng/ml



Manual Integration Results

RT: 8.87
Area: 352612
Amount: 5.942893
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:33:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

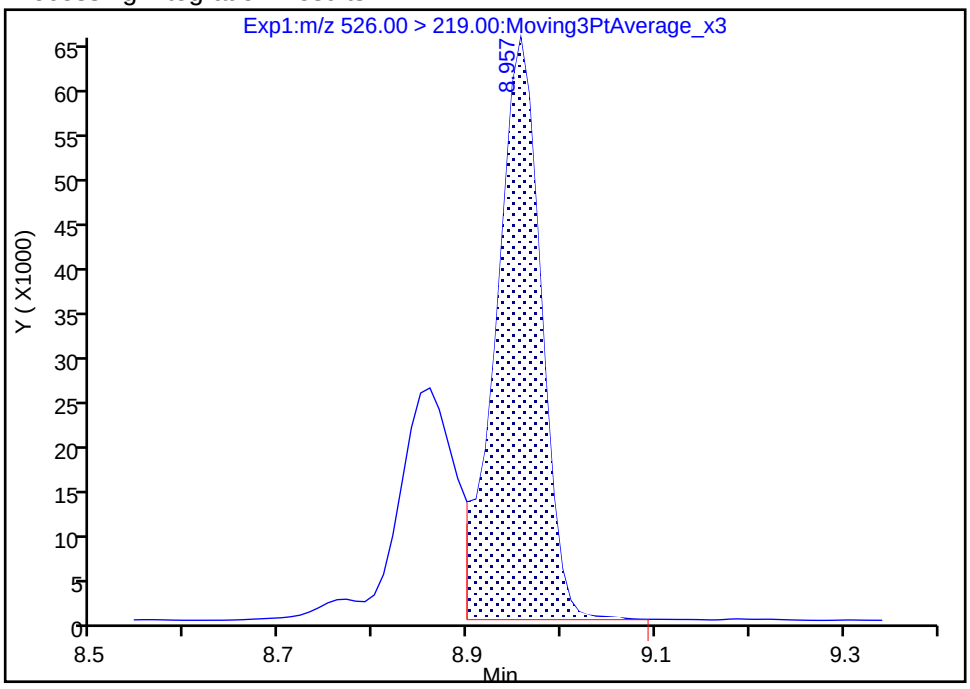
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

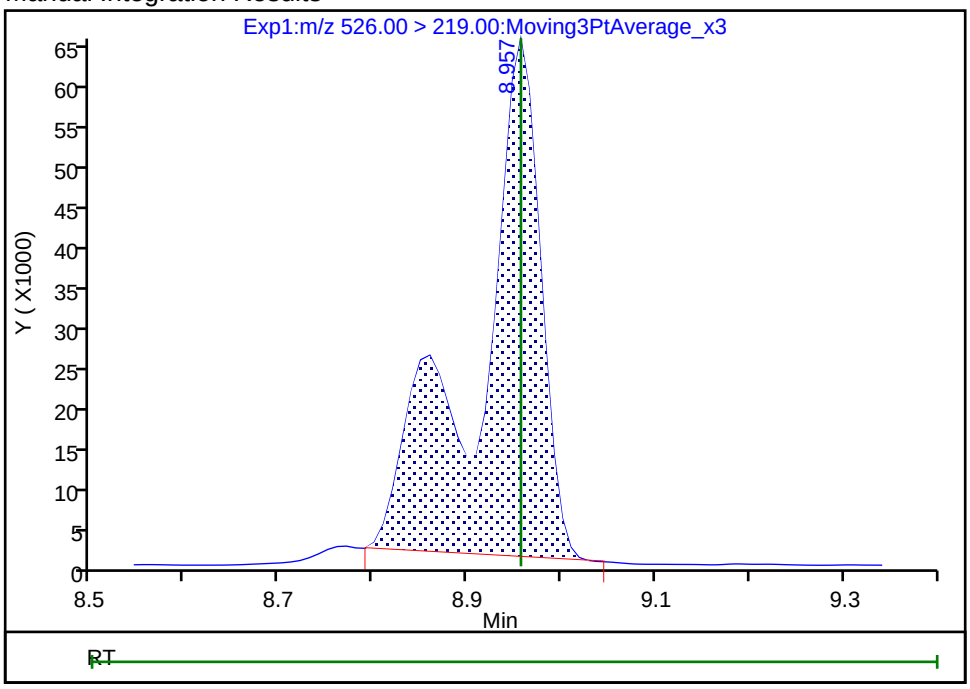
Processing Integration Results

RT: 8.96
Area: 216001
Amount: 0.512195
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 299787
Amount: 0.618553
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:33:52 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

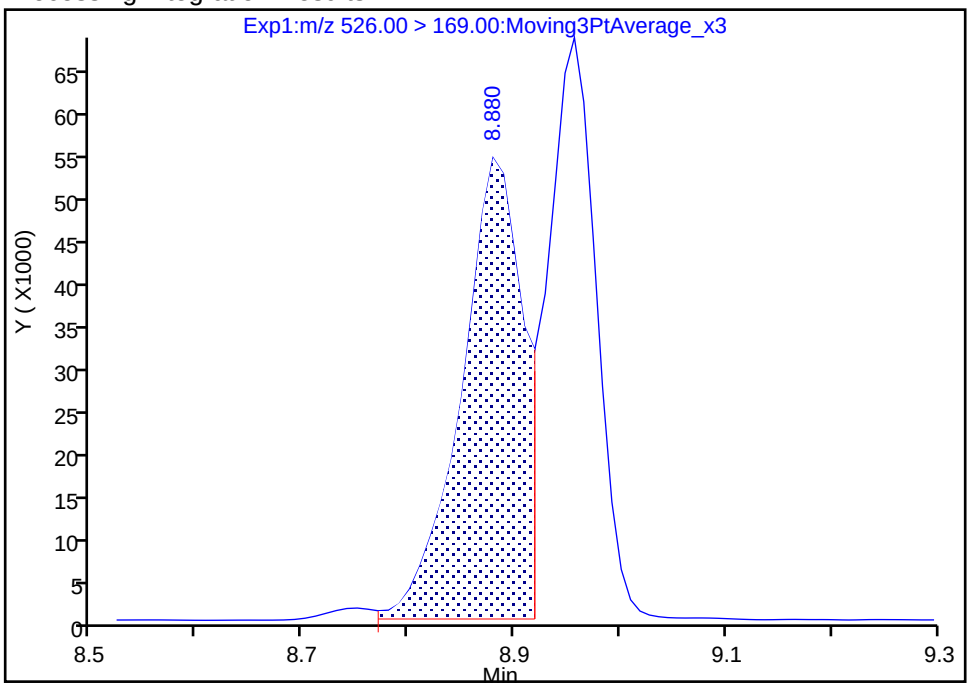
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj04.d
Injection Date: 10-Sep-2024 17:53:35 Instrument ID: LCMS04
Lims ID: IC CAL 4
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

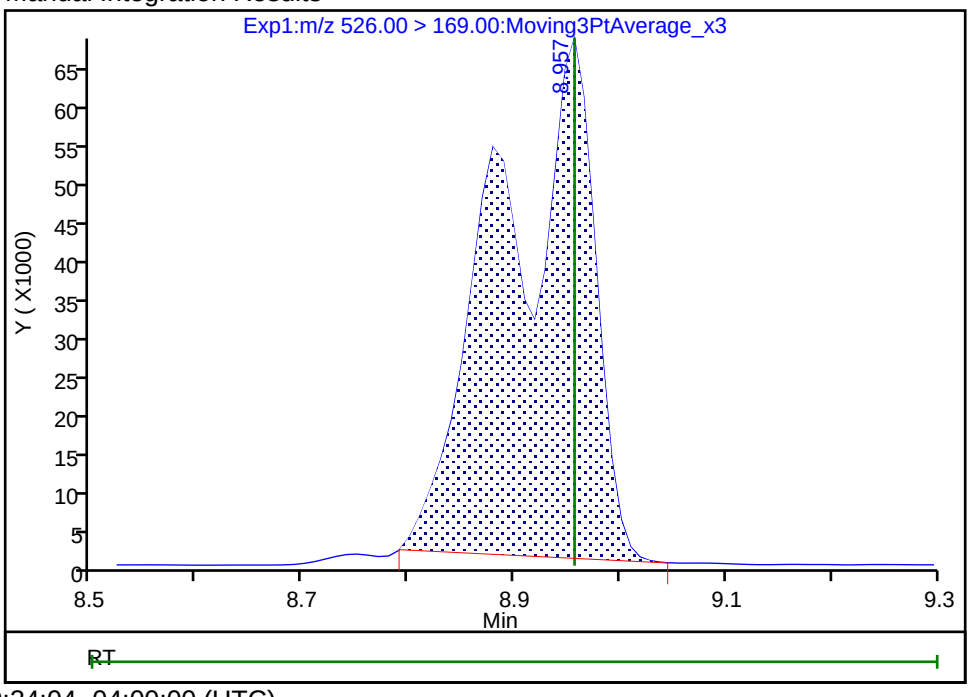
Processing Integration Results

RT: 8.88
Area: 218155
Amount: 0.512195
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 417141
Amount: 0.618553
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:34:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Lims ID: ICISAV CAL 5
Client ID:
Sample Type: ICISAV Calib Level: 5
Inject. Date: 10-Sep-2024 18:07:11 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICISAV CAL 5
Misc. Info.: Plate: 2 Rack: 1 240-0146069-005
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:02:15 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:12:00
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.576	3.576	0.0		1880333	1.25			715	
* 2 13C2 PFHxA										
315.10 > 270.00	4.750	4.750	0.0		1048707	0.6250			8040	
* 3 13C4 PFOA										
417.10 > 172.00	5.648	5.648	0.0		220510	0.6250			1614	
* 4 18O2 PFHxS										
403.00 > 83.90	5.872	5.872	0.0		1469687	0.5913			3188	
* 5 13C5 PFNA										
468.00 > 423.00	6.081	6.081	0.0		788276	0.3125			1633	
* 6 13C2 PFDA										
515.10 > 470.10	6.517	6.517	0.0		609004	0.3125			1965	
* 7 13C4 PFOS										
502.80 > 79.90	6.788	6.788	0.0		1276166	0.5975	Target=4.00		2742	
502.80 > 98.90	6.788	6.788	0.0		318896		4.00(2.00-6.01)		1823	
D 8 13C4 PFBA										
216.80 > 171.90	3.568	3.568	0.0	0.998	4679461	2.74		110	22879	
D 9 13C5 PFPeA										
268.30 > 223.00	4.229	4.229	0.0	0.890	1947559	1.48		118	6464	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.550	4.550	0.0	0.775	1027151	1.23	Target=0.31	106	4137	
329.10 > 309.00	4.550	4.550	0.0	0.775	3585806		0.29(0.16-0.47)	106	1006	
D 11 13C5 PFHxA										
318.00 > 273.00	4.750	4.750	0.0	1.000	1763152	0.7478	Target=39.15	120	6141	
318.00 > 120.30	4.740	4.750	-0.010	0.998	43848		40.21(19.57-58.72)	120	373	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.878	4.878	0.0	0.831	1655536	0.6230	Target=3.27	107	3862	
302.10 > 98.90	4.867	4.878	-0.011	0.829	505016		3.28(1.63-4.90)	107	2191	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.943	4.943	0.0	1.041	1907384	2.81	Target=1.96	112	5873	
286.90 > 184.90	4.932	4.943	-0.011	1.038	1027620		1.86(0.98-2.94)	112	1886	
D 14 13C4 PFHpA										
367.10 > 322.00	5.215	5.215	0.0	1.098	1817163	0.7380		118	5678	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.436	5.436	0.0	0.926	1280353	1.34	Target=0.40	113	3701	
429.10 > 409.00	5.436	5.436	0.0	0.926	3380261		0.38(0.20-0.59)	113	5535	
D 16 13C8 PFOA										
421.10 > 376.00	5.648	5.648	0.0	1.000	1839135	0.6608		106	4175	
D 17 13C3 PFHxS										
402.10 > 79.90	5.872	5.872	0.0	1.000	1669872	0.6400	Target=3.38	108	3185	
402.10 > 98.80	5.872	5.872	0.0	1.000	513697		3.25(1.69-5.07)	108	2309	
D 18 13C9 PFNA										
472.10 > 427.00	6.081	6.081	0.0	1.000	663051	0.3352		107	1730	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.277	6.277	0.0	1.069	849267	1.30	Target=0.34	109	3216	
529.10 > 509.00	6.277	6.277	0.0	1.069	2579872		0.33(0.17-0.51)	109	6542	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.458	6.458	0.0	0.951	1395914	1.41		113	5132	
D 21 13C6 PFDA										
519.10 > 474.10	6.517	6.517	0.0	1.000	670866	0.3577		114	3023	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.653	6.653	0.0	0.980	1355154	1.39		111	2754	
D 23 13C8 PFOS										
507.10 > 79.90	6.788	6.788	0.0	1.000	1478665	0.6720	Target=4.08	112	468	
507.10 > 98.90	6.779	6.788	-0.009	0.999	346973		4.26(2.04-6.12)	112	1323	
D 24 13C7 PFUnA										
570.00 > 525.10	6.957	6.957	0.0	1.067	666537	0.3611		116	1807	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.384	7.384	0.0	1.133	611610	0.3511		112	1552	
D 26 13C8 FOSA										
506.10 > 77.80	7.732	7.732	0.0	1.139	1642793	0.6956		111	4028	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.202	8.202	0.0	1.258	337999	0.3394		109	914	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.608	8.608	0.0	1.268	2422015	6.92		111	904	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.731	8.731	0.0	1.286	315746	0.6779		108	1422	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.860	8.860	0.0	1.305	2976245	6.93		111	1558	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.948	8.948	0.0	1.318	330637	0.7043		113	298	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.576	3.576	0.0	1.002	8572860	4.82		96.4	98.2	M
34 3:3 FTCA										
241.00 > 177.00	3.866	3.866	0.0	0.914	560616	5.96	Target=1.04	95.4	5245	
241.00 > 117.00	3.854	3.866	-0.012	0.911	530589		1.06(0.52-1.56)	95.4	133	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.866	3.866	0.0	0.914	5080402	2.37		95.0	5028	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.229	4.229	0.0	1.000	5784699	2.42		96.9	678	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.410	4.410	0.0	1.043	5448270	2.41		96.5	12744	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.550	4.550	0.0	1.000	11993149	4.56	Target=1.37	97.7	15352	
327.10 > 80.90	4.550	4.550	0.0	1.000	8959107		1.34(0.68-2.05)	97.7	6116	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.707	4.707	0.0	0.991	658072	2.66	Target=1.54	106	3118	
295.00 > 84.90	4.697	4.707	-0.010	0.989	382622		1.72(0.77-2.31)	106	1305	
48 FBSA										
297.90 > 78.00	4.740	4.740	0.0	0.972	10141035	5.20		104	4795	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.750	4.750	0.0	1.000	2659307	1.19	Target=14.09	94.9	455	
313.00 > 118.90	4.750	4.750	0.0	1.000	187256		14.20(7.04-21.13)	94.9	1347	
41 5:3 FTCA										
341.00 > 237.10	4.834	4.834	0.0	1.018	12215083	30.6	Target=1.54	97.9	12252	
341.00 > 217.00	4.834	4.834	0.0	1.018	7938379		1.54(0.77-2.31)	97.9	5397	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.878	4.878	0.0	1.000	3042929	1.10	Target=3.32	99.5	5783	
298.70 > 98.80	4.878	4.878	0.0	1.000	919234		3.31(1.66-4.97)	99.5	2609	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.943	4.943	0.0	1.000	4246803	5.05	Target=1.98	101	6590	
284.90 > 184.90	4.943	4.943	0.0	1.000	2129460		1.99(0.99-2.97)	101	3156	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.144	5.144	0.0	1.083	17775679	2.15	Target=12.50	96.8	14177	
314.80 > 82.90	5.134	5.144	-0.010	1.081	1376741		12.91(6.25-18.75)	96.8	2571	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.215	5.215	0.0	1.000	3543732	1.13	Target=3.89	90.2	483	
363.10 > 169.00	5.215	5.215	0.0	1.000	996232		3.56(1.95-5.84)	90.2	3722	
49 DONA										
376.90 > 250.90	5.385	5.385	0.0	1.089	20190112	4.95	Target=1.56	105	13578	
376.90 > 84.80	5.385	5.385	0.0	1.089	12509903		1.61(0.78-2.34)	105	12161	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.406	5.406	0.0	0.921	3329884	1.15	Target=3.17	97.9	2190	
349.10 > 98.90	5.406	5.406	0.0	0.921	1079532		3.08(1.58-4.75)	97.9	3800	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.445	5.445	0.0	1.002	11020337	4.29	Target=1.44	90.6	8907	
427.10 > 80.90	5.436	5.445	-0.009	1.000	7819822		1.41(0.72-2.15)	90.6	18064	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.657	5.657	0.0	1.002	1714597	1.21	Target=2.01	97.2	167	M
413.00 > 169.00	5.648	5.657	-0.009	1.000	888940		1.93(1.00-3.01)	97.2	1008	M
54 7:3 FTCA										
441.00 > 316.90	5.713	5.713	0.0	1.203	11433102	30.0	Target=1.06	95.9	6127	
441.00 > 336.90	5.713	5.713	0.0	1.203	10721658		1.07(0.53-1.58)	95.9	11526	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.882	5.882	0.0	1.002	2648909	1.10	Target=3.33	96.6	2296	M
398.70 > 98.90	5.882	5.882	0.0	1.002	834704		3.17(1.66-4.99)	96.6	1392	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.091	6.091	0.0	1.002	1910879	1.19	Target=4.97	95.1	253	M
463.00 > 169.00	6.081	6.091	-0.010	1.000	400440		4.77(2.49-7.46)	95.1	382	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.286	6.286	0.0	1.001	8147231	4.61	Target=1.32	96.3	8108	
527.10 > 80.80	6.286	6.286	0.0	1.001	6045726		1.35(0.66-1.98)	96.3	6788	
57 PFECHS										
461.00 > 381.00	6.286	6.286	0.0	1.070	11039918	2.31	Target=1.88	100	1863	
461.00 > 99.00	6.286	6.286	0.0	1.070	5845169		1.89(0.94-2.81)	100	6285	
62 FHxSA										
397.90 > 78.00	6.305	6.305	0.0	1.074	14321134	5.05		101	6544	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.342	6.342	0.0	0.934	3291108	1.14	Target=3.89	95.4	2526	
449.00 > 98.80	6.333	6.342	-0.009	0.933	850880		3.87(1.95-5.84)	95.4	2208	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.469	6.469	0.0	1.002	1475062	1.20	Target=1.69	95.9	2118	M
570.10 > 483.00	6.469	6.469	0.0	1.002	872169		1.69(0.85-2.54)	95.9	1577	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.527	6.527	0.0	1.001	1988940	1.17	Target=4.63	93.4	255	
512.90 > 219.00	6.517	6.527	-0.010	1.000	389688		5.10(2.32-6.95)	93.4	1187	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.672	6.672	0.0	1.003	1081501	1.20	Target=1.55	95.6	2617	M
584.20 > 526.00	6.663	6.672	-0.009	1.001	724478		1.49(0.78-2.33)	95.6	844	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.788	6.788	0.0	1.000	3426419	1.10	Target=4.64	94.9	1089	M
498.90 > 98.80	6.788	6.788	0.0	1.000	713365		4.80(2.32-6.96)	94.9	1783	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.965	6.965	0.0	1.001	2239509	1.16	Target=6.10	93.2	649	
563.10 > 269.10	6.957	6.965	-0.008	1.000	367158		6.10(3.05-9.15)	93.2	2362	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.127	7.127	0.0	1.442	17344313	4.78	Target=3.09	103	4029	
532.80 > 353.00	7.127	7.127	0.0	1.442	5595204		3.10(1.54-4.63)	103	4939	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.226	7.226	0.0	1.064	2741646	1.16	Target=4.11	96.9	3541	
548.80 > 98.80	7.226	7.226	0.0	1.064	682358		4.02(2.06-6.17)	96.9	3707	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.384	7.384	0.0	1.000	2459615	1.27	Target=18.06	102	799	
613.10 > 319.00	7.384	7.384	0.0	1.000	146299		16.81(9.03-27.08)	102	1405	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.655	7.655	0.0	1.128	3046397	1.14	Target=4.27	94.8	4972	
599.00 > 98.80	7.646	7.655	-0.009	1.126	717342		4.25(2.14-6.41)	94.8	3021	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.732	7.732	0.0	1.000	3023798	1.22	Target=46.53	97.9	752	M
498.10 > 478.00	7.721	7.732	-0.011	0.999	58661		51.55(23.26-69.79)	97.9	362	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.807	7.807	0.0	0.952	2255234	1.22	Target=6.29	97.9	770	
663.00 > 168.90	7.807	7.807	0.0	0.952	359724		6.27(3.14-9.43)	97.9	2461	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.975	7.975	0.0	1.613	17604952	5.00	Target=3.20	106	13874	
632.90 > 452.90	7.975	7.975	0.0	1.613	5308590		3.32(1.60-4.79)	106	7802	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.213	8.213	0.0	1.001	1574234	1.16	Target=7.27	92.9	937	
713.10 > 168.90	8.213	8.213	0.0	1.001	230676		6.82(3.64-10.91)	92.9	2364	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.424	8.424	0.0	1.241	2677413	1.19	Target=4.58	98.0	2746	
699.10 > 98.80	8.424	8.424	0.0	1.241	581354		4.61(2.29-6.87)	98.0	2425	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.629	8.629	0.0	1.002	714474	12.5		99.7	1229	M
75 NMeFOSA										M
511.90 > 219.00	8.741	8.741	0.0	1.001	595238	1.21	Target=0.71	96.8	746	M
511.90 > 169.00	8.731	8.741	-0.010	1.000	854106		0.70(0.35-1.06)	96.8	1601	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.880	8.880	0.0	1.002	786305	12.2		97.8	1218	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.957	8.957	0.0	1.001	614211	1.18	Target=0.70	94.2	622	M
526.00 > 169.00	8.957	8.957	0.0	1.001	867323		0.71(0.35-1.05)	94.2	812	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

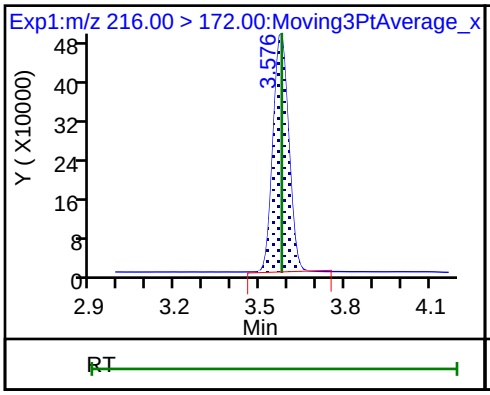
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Report Date: 11-Sep-2024 10:02:18 Chrom Revision: 2.3 26-Aug-2024 17:14:48

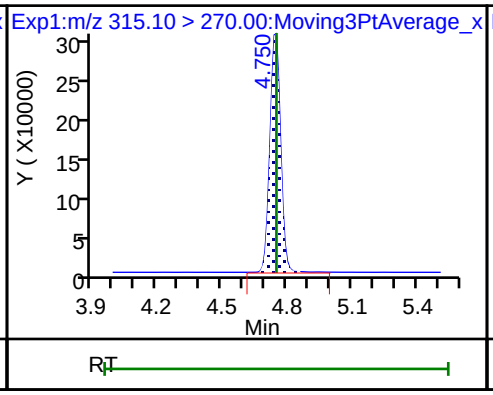
Eurofins Cleveland

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Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

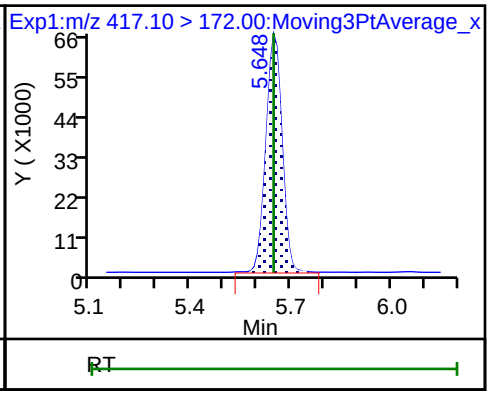
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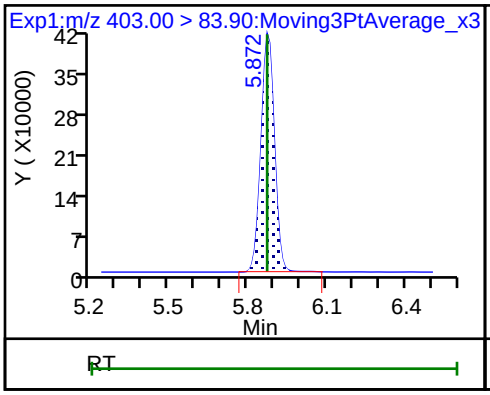
* 2 13C2 PFHxA



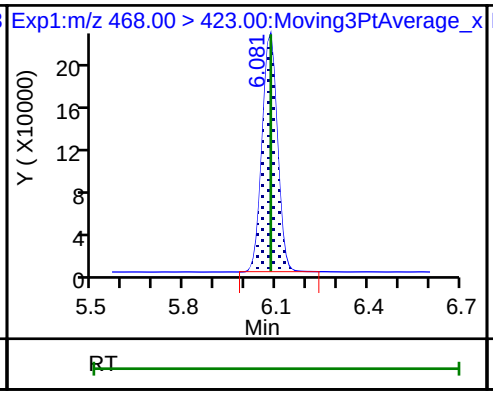
* 3 13C4 PFOA



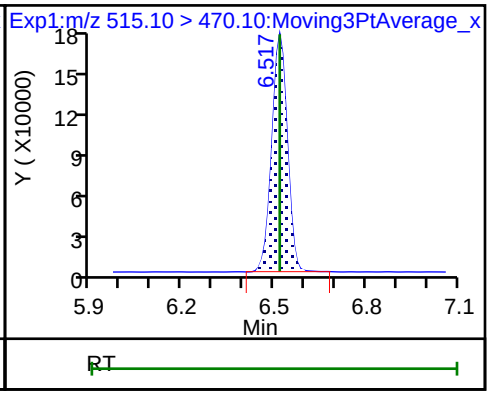
* 4 18O2 PFHxS



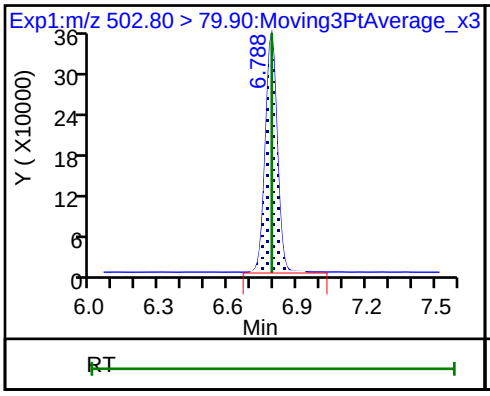
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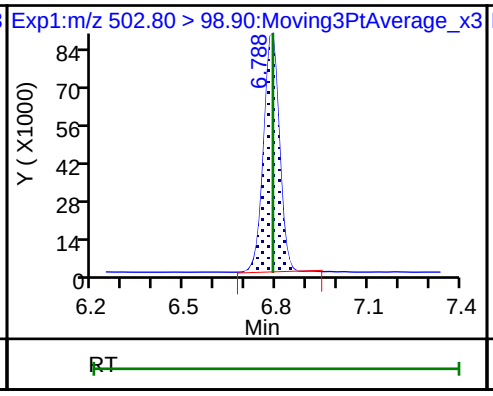
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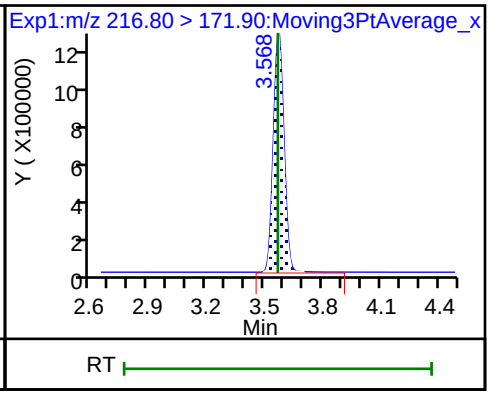
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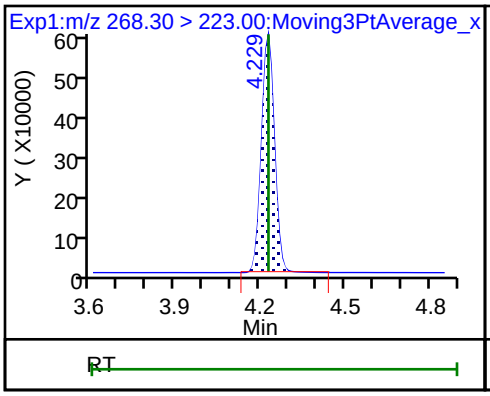
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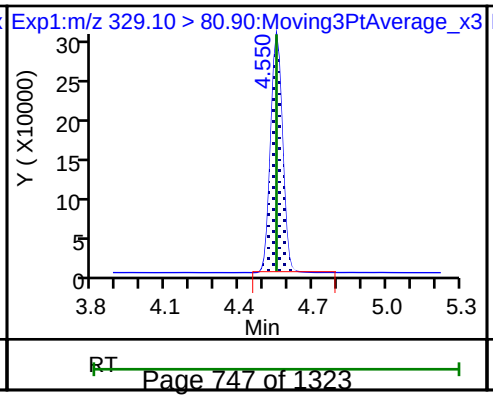
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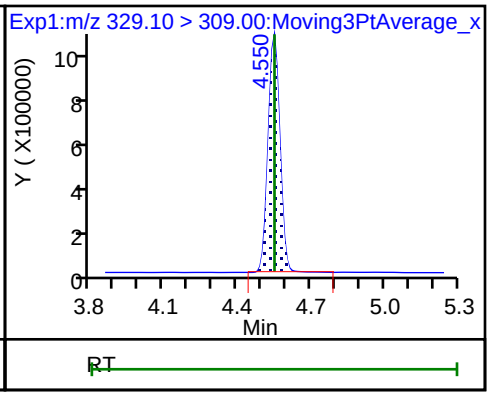
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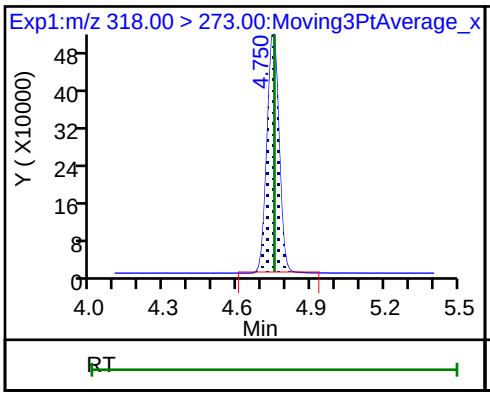
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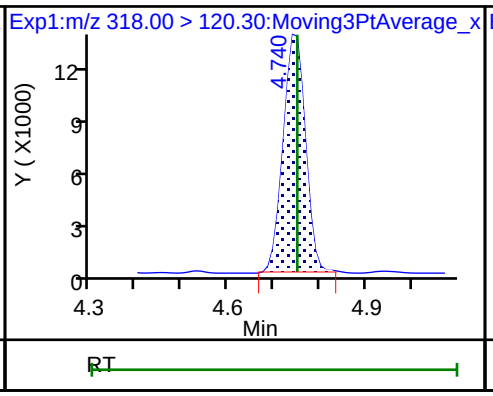
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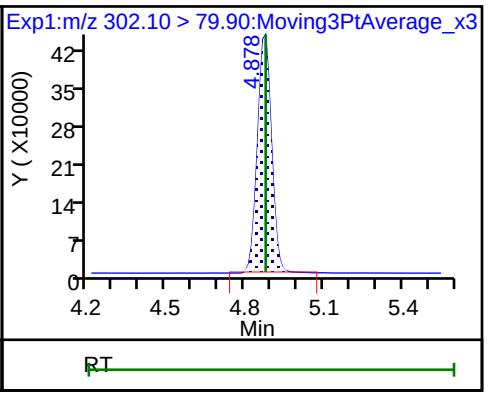
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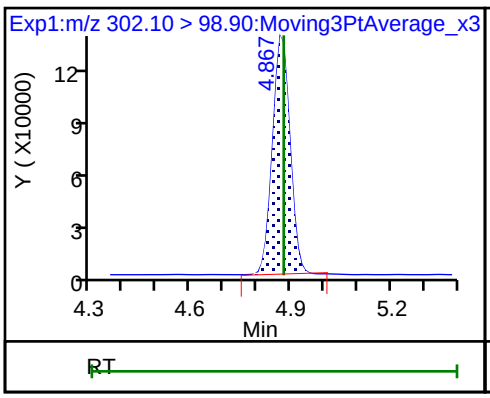
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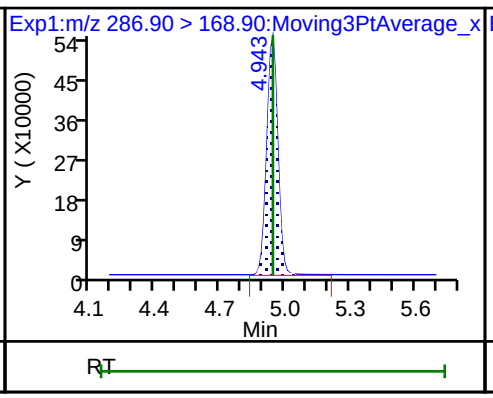
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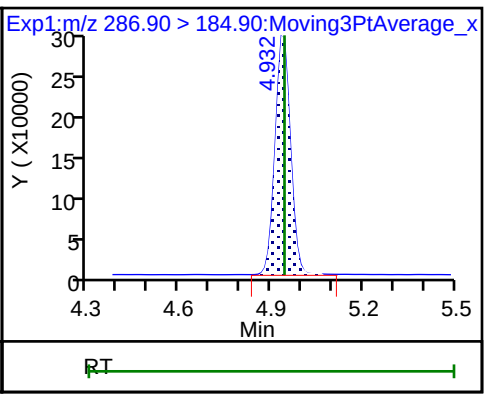
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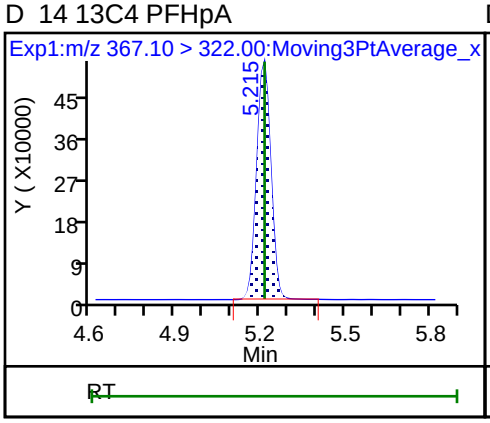
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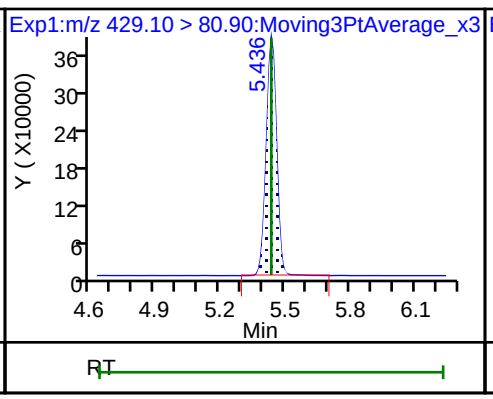
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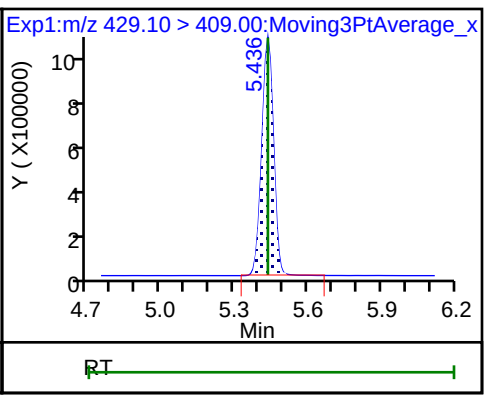
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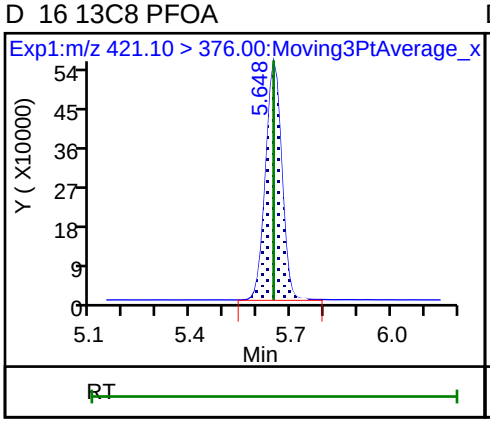
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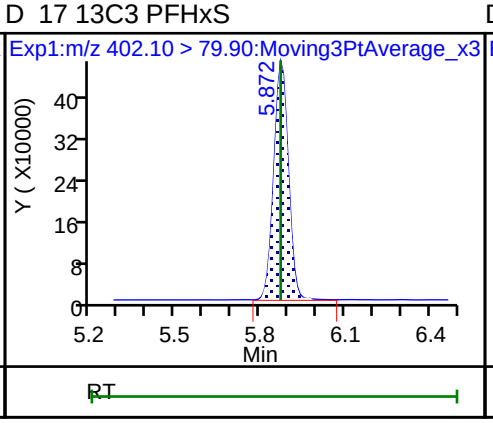
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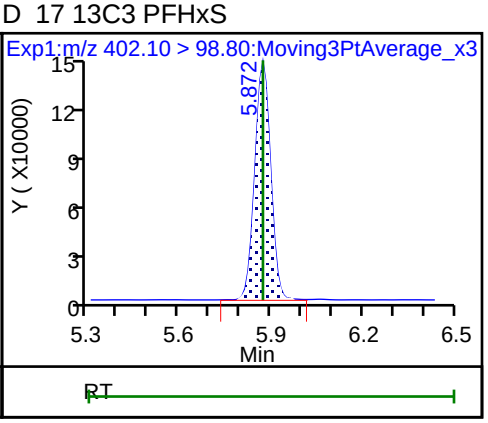
D 16 13C8 PFOA



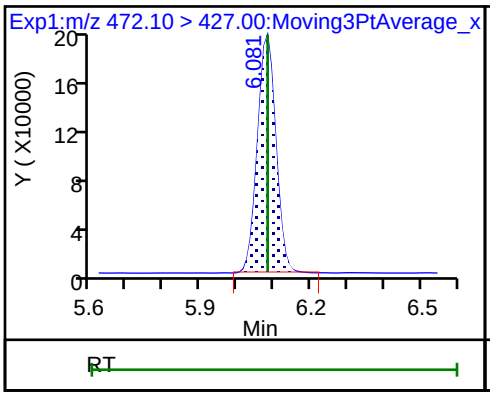
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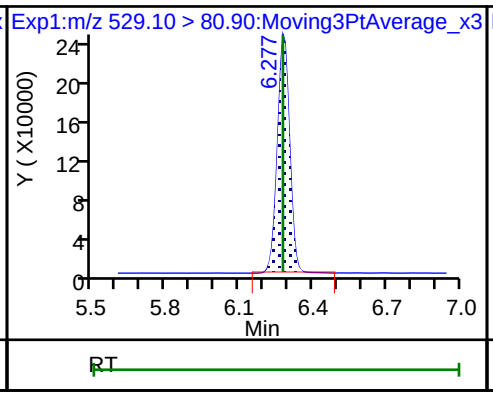
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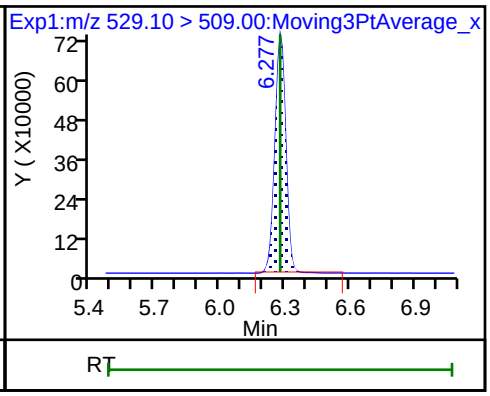
D 18 13C9 PFNA



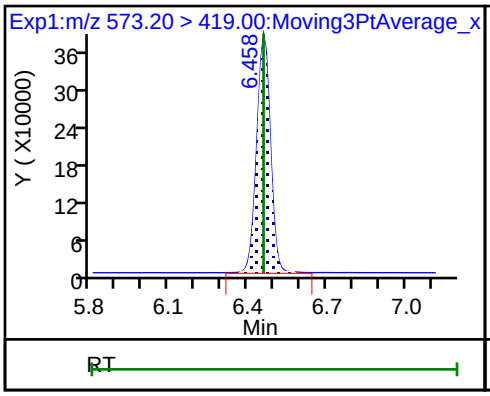
D 19 M2-8:2 FTS



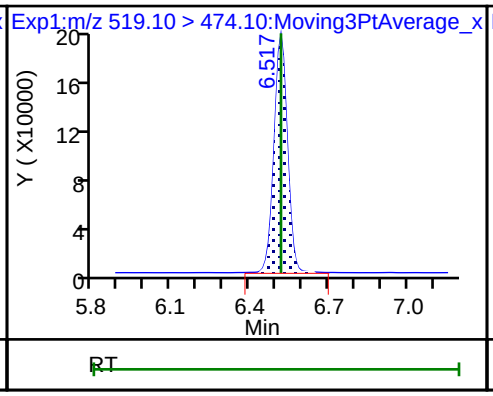
D 19 M2-8:2 FTS



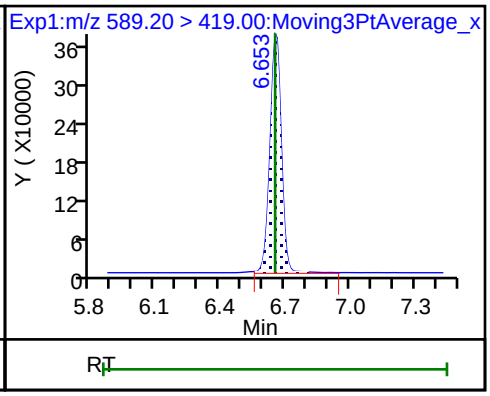
D 20 d3-NMeFOSAA



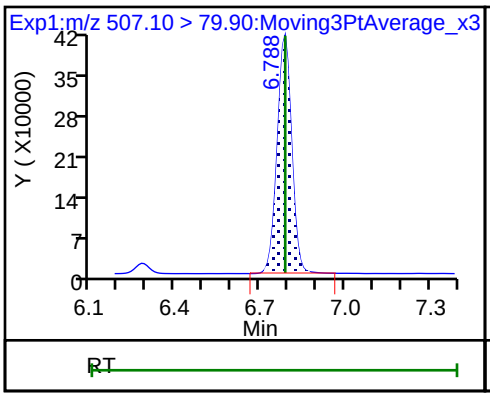
D 21 13C6 PFDA



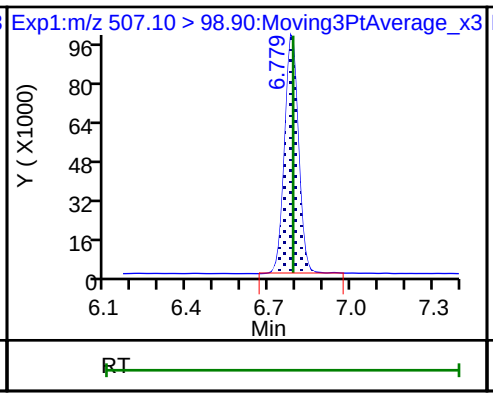
D 22 d5-NEtFOSAA



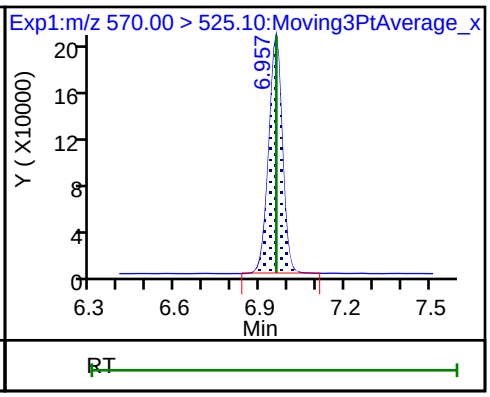
D 23 13C8 PFOS



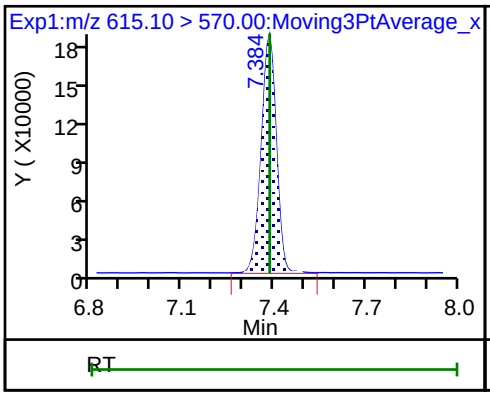
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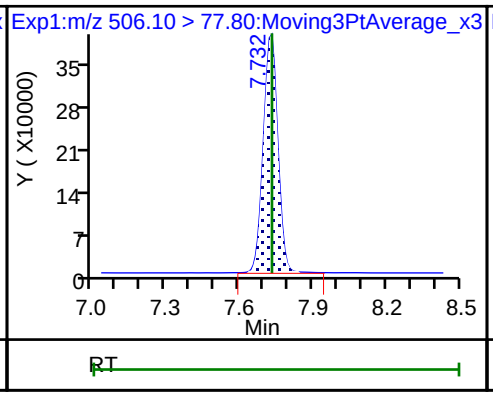
D 24 13C7 PFUnA



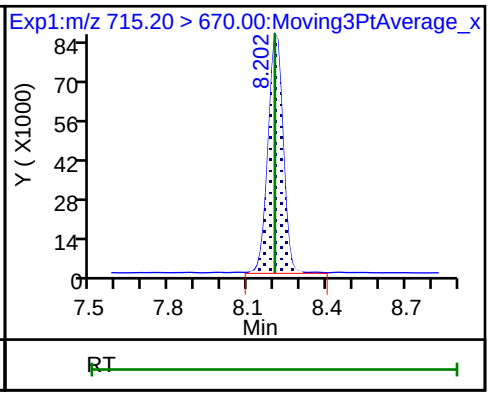
D 25 13C2-PFDoDA



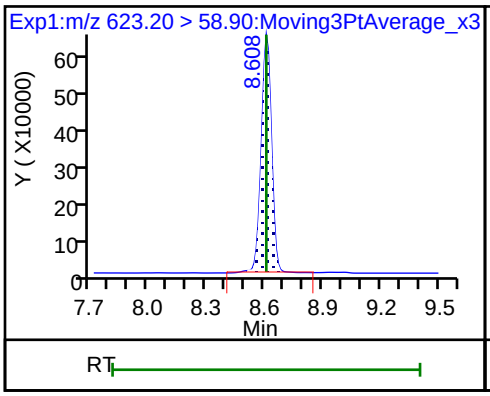
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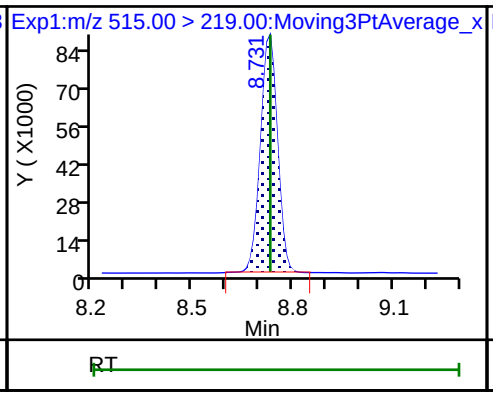
D 27 13C2 PFTeDA



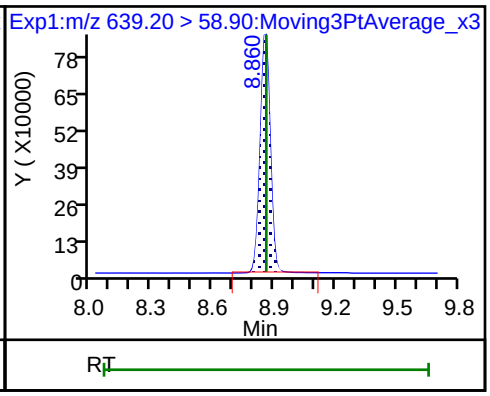
D 28 d7-N-MeFOSE-M



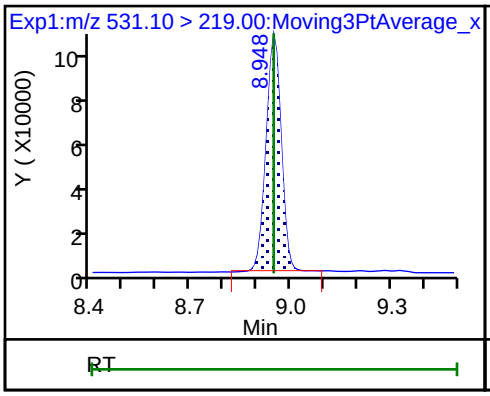
D 29 d3-NMePFOSA



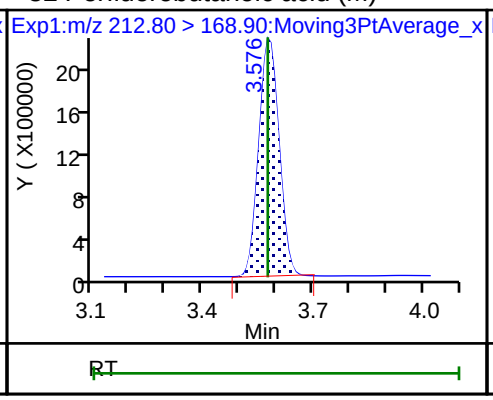
D 30 d9-N-EtFOSE-M



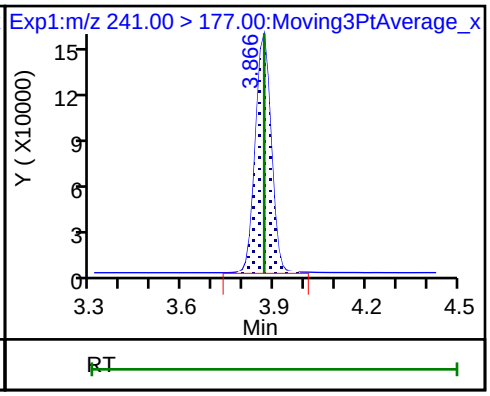
D 31 d5-NEtPFOSA



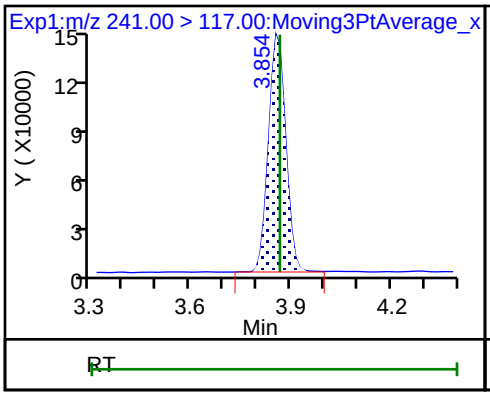
32 Perfluorobutanoic acid (M)



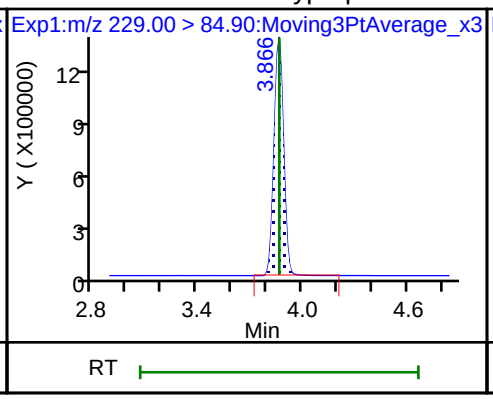
34 3:3 FTCA



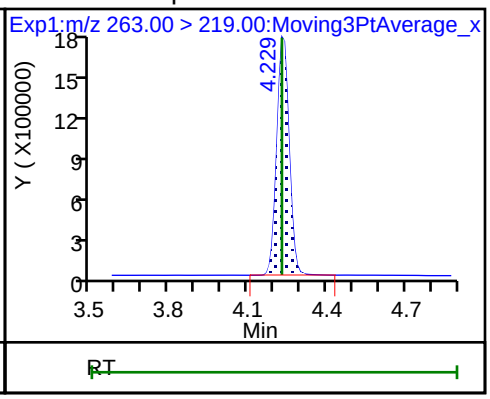
34 3:3 FTCA



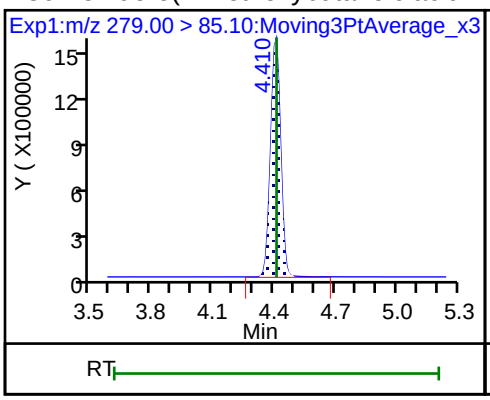
33 Perfluoro-3-methoxypropanoic aci



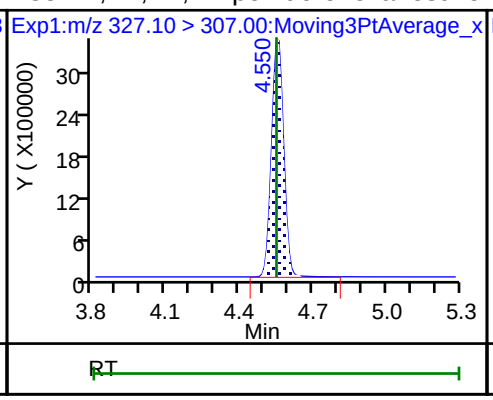
35 Perfluoropentanoic acid



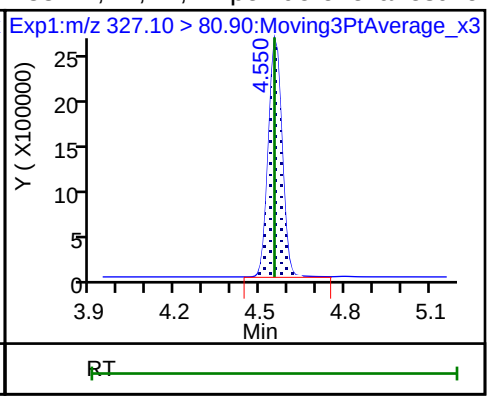
36 Perfluoro(4-methoxybutanoic acid



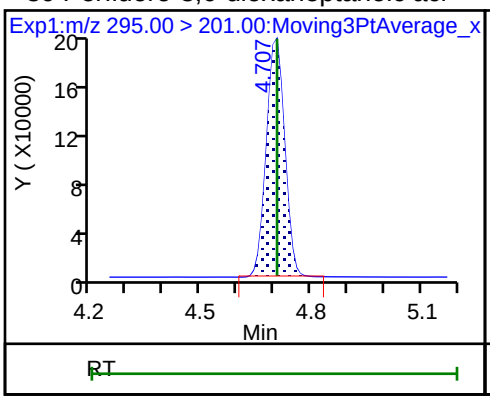
38 1H,1H,2H,2H-perfluorohexanesulfo



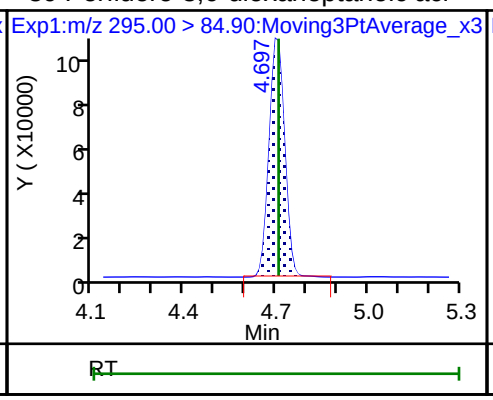
38 1H,1H,2H,2H-perfluorohexanesulfo



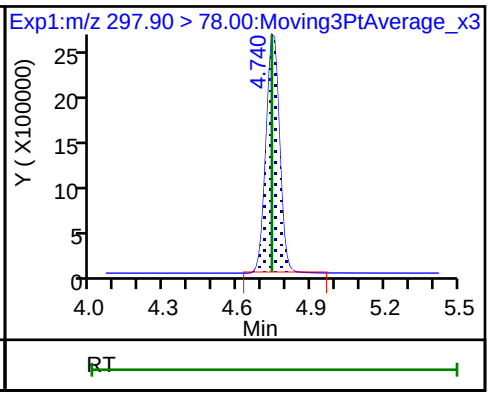
39 Perfluoro-3,6-dioxaheptanoic aci



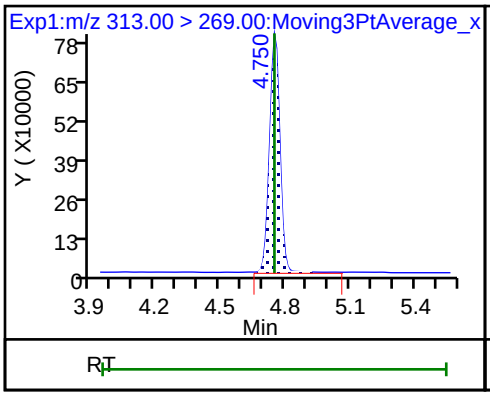
39 Perfluoro-3,6-dioxaheptanoic aci



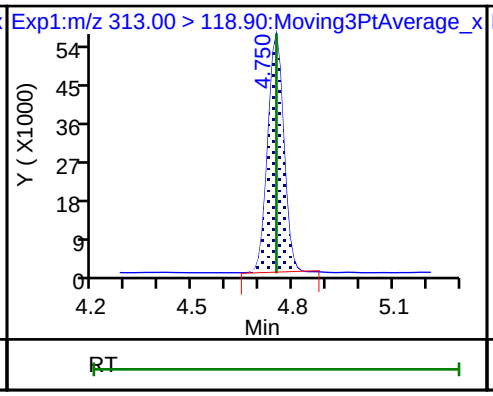
48 FBSA



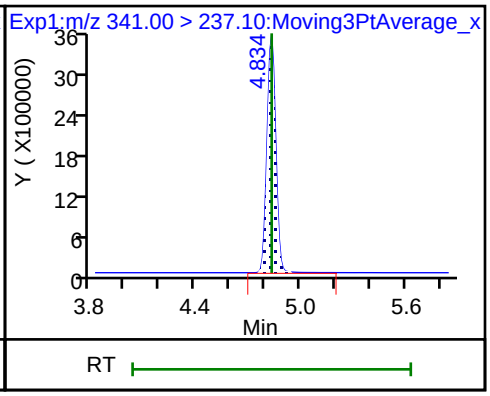
40 Perfluorohexanoic acid



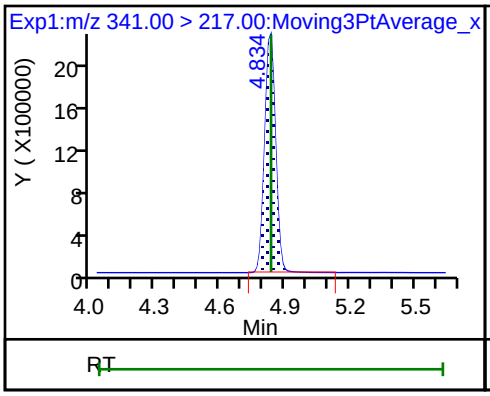
40 Perfluorohexanoic acid



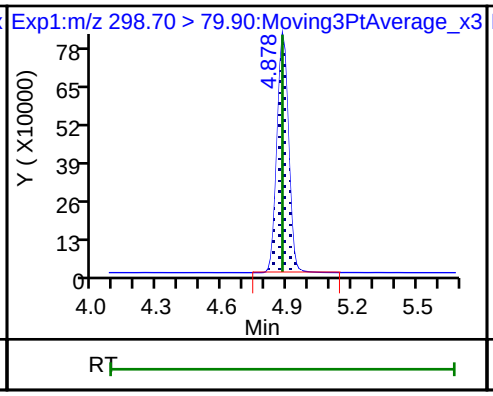
41 5:3 FTCA



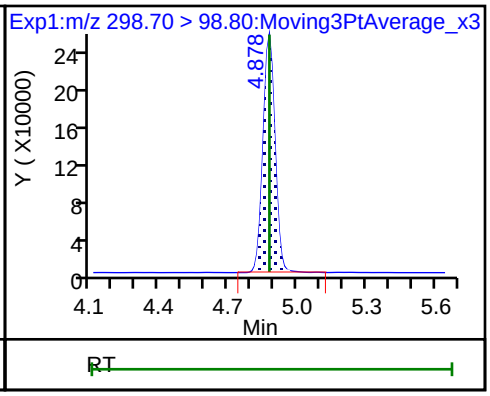
41 5:3 FTCA



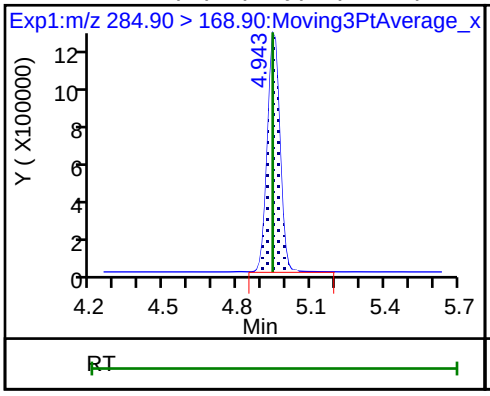
42 Perfluorobutanesulfonic acid



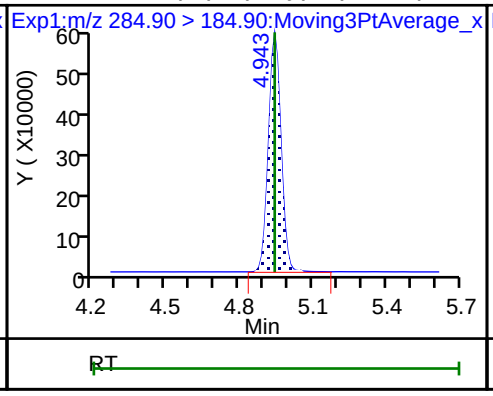
42 Perfluorobutanesulfonic acid



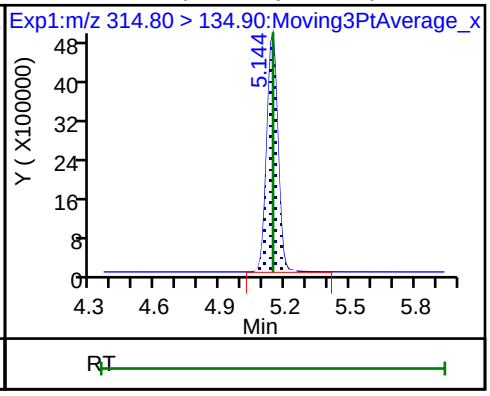
43 Perfluoro(2-propoxypropanoic) ac



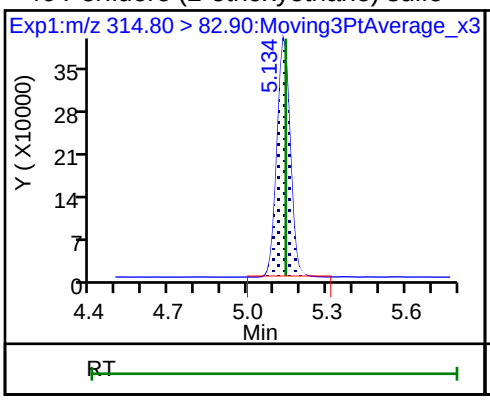
43 Perfluoro(2-propoxypropanoic) ac



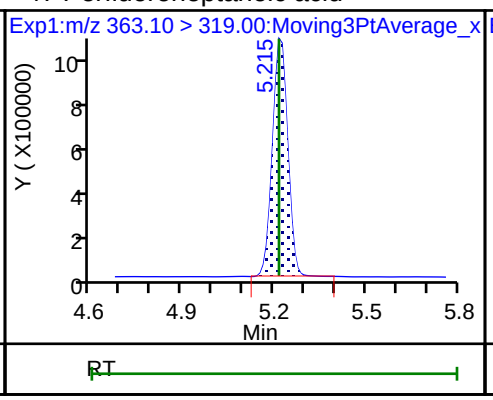
46 Perfluoro (2-ethoxyethane) sulfo



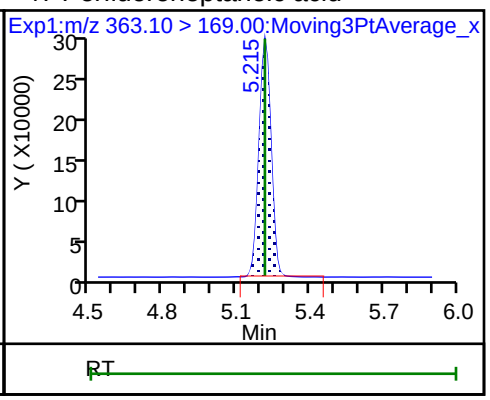
46 Perfluoro (2-ethoxyethane) sulfo



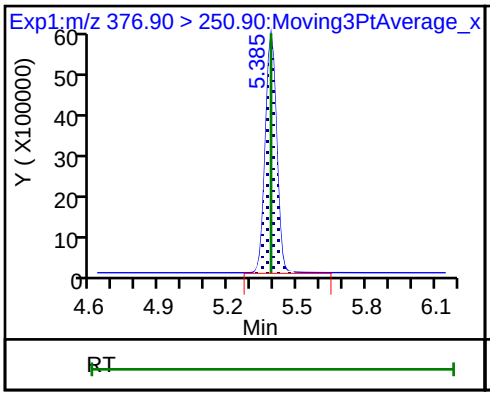
47 Perfluoroheptanoic acid



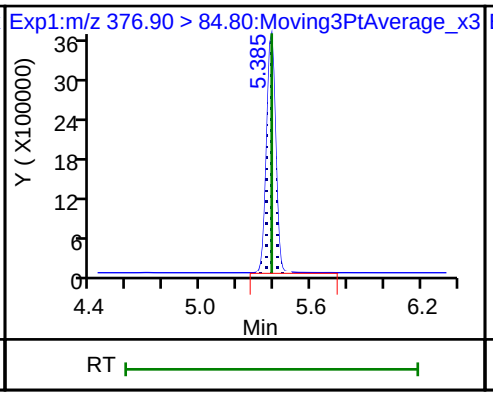
47 Perfluoroheptanoic acid



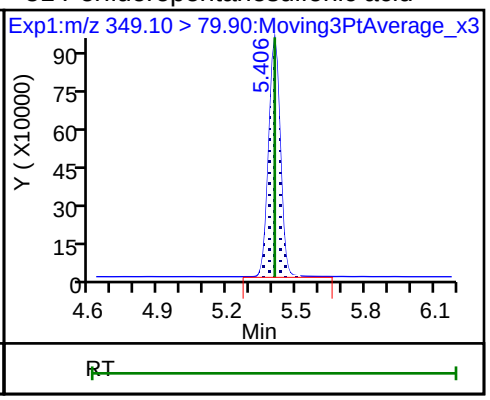
49 DONA



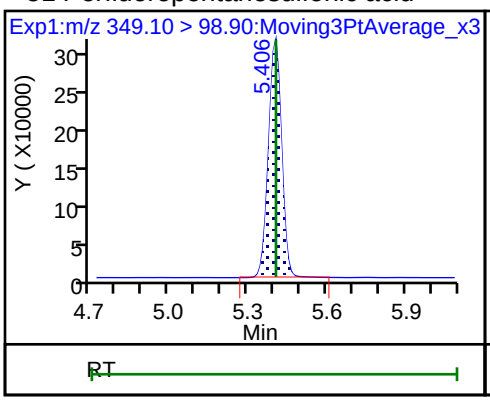
49 DONA



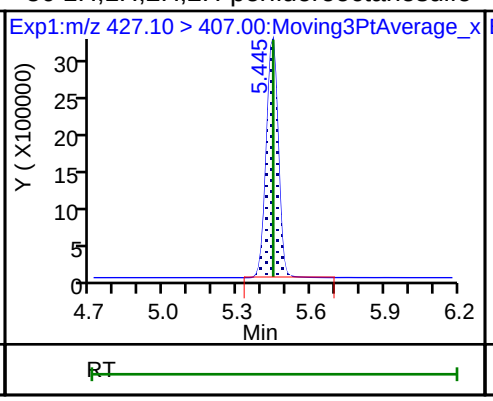
51 Perfluoropentanesulfonic acid



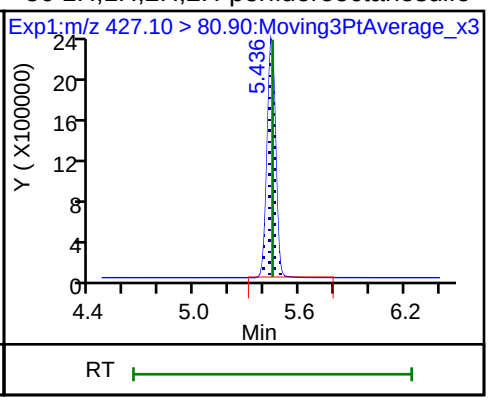
51 Perfluoropentanesulfonic acid



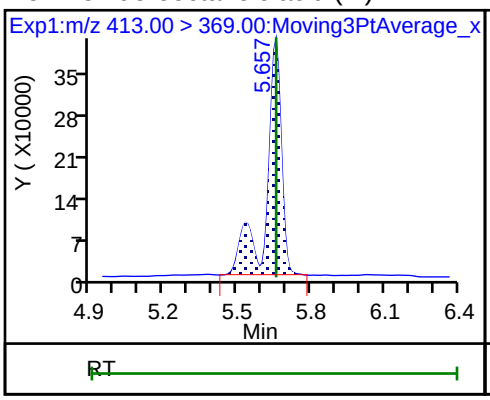
50 1H,1H,2H,2H-perfluorooctanesulfo



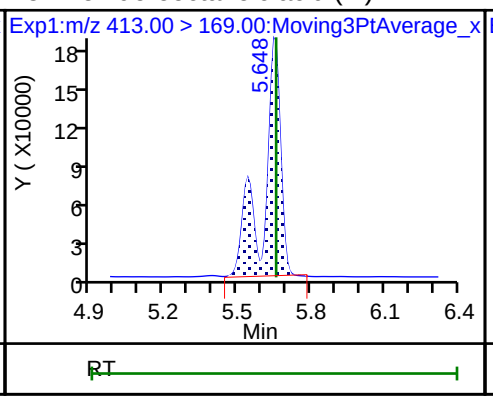
50 1H,1H,2H,2H-perfluorooctanesulfo



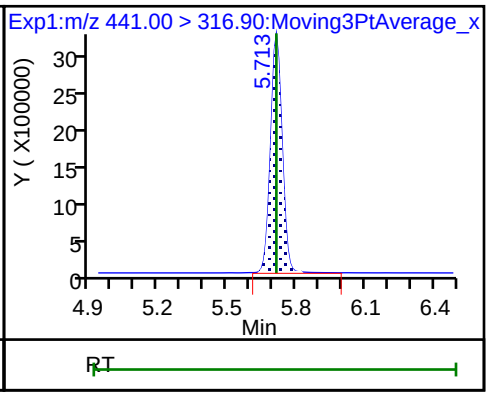
52 Perfluorooctanoic acid (M)



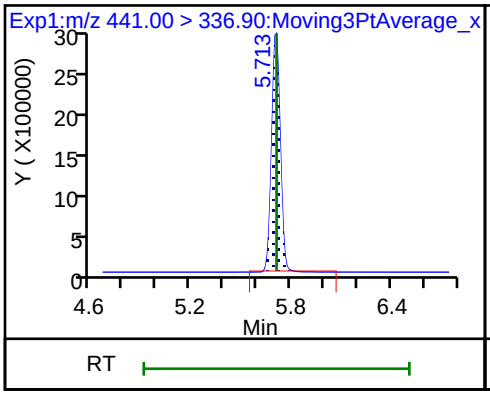
52 Perfluorooctanoic acid (M)



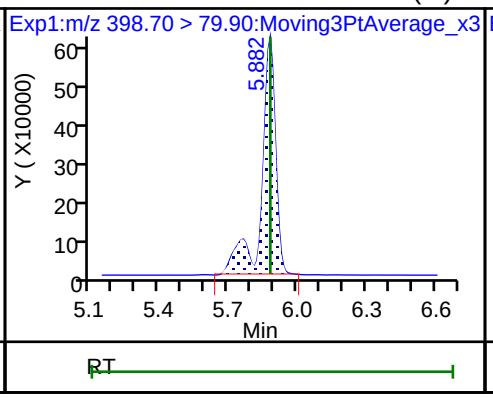
54 7:3 FTCA



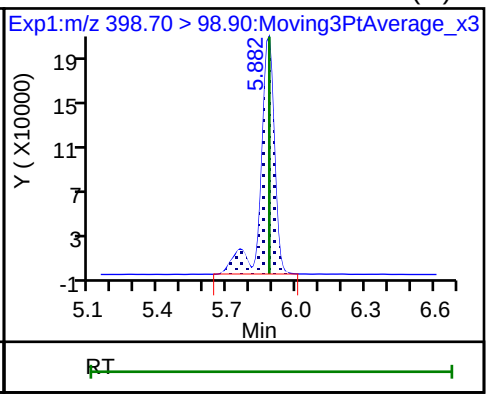
54 7:3 FTCA



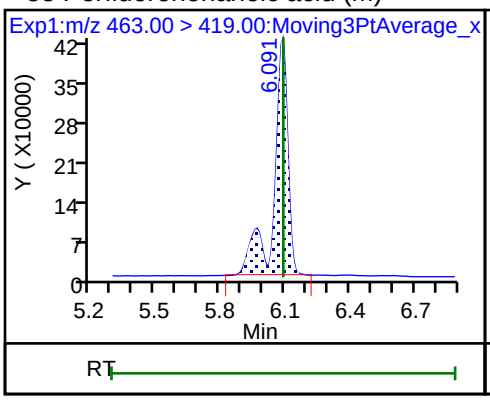
53 Perfluorohexanesulfonic acid (M)



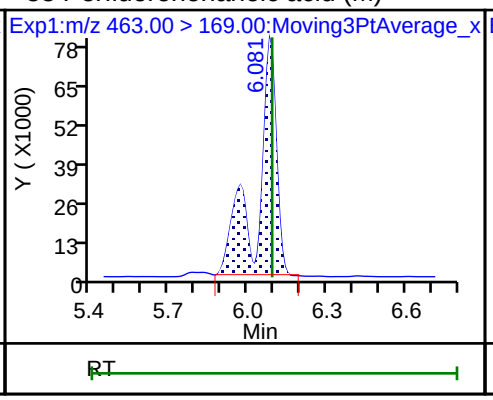
53 Perfluorohexanesulfonic acid (M)



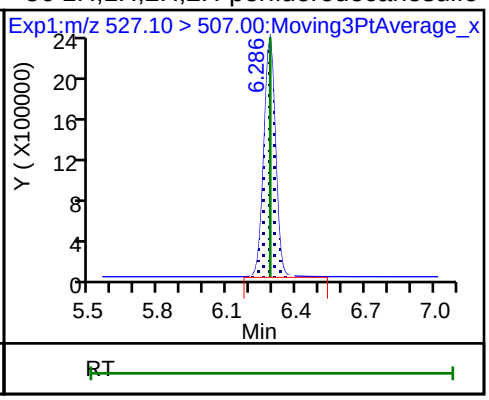
55 Perfluorononanoic acid (M)



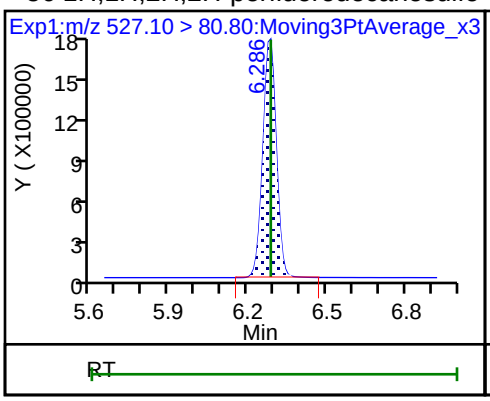
55 Perfluorononanoic acid (M)



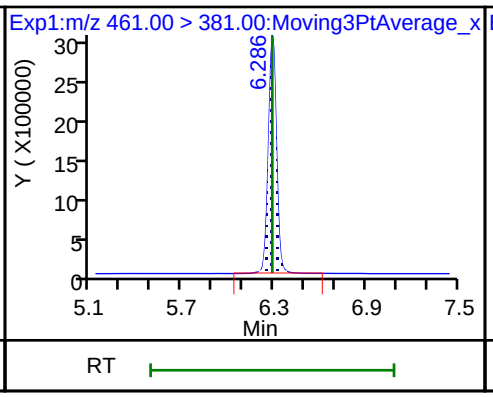
56 1H,1H,2H,2H-perfluorodecanesulfo



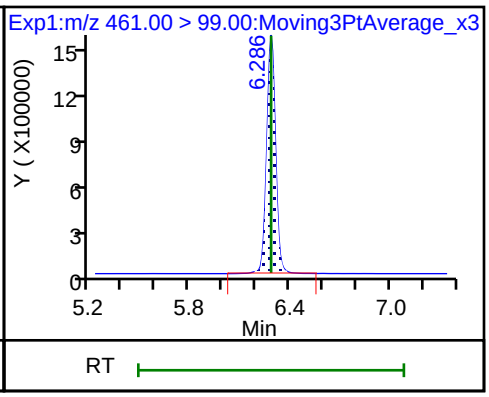
56 1H,1H,2H,2H-perfluorodecanesulfo



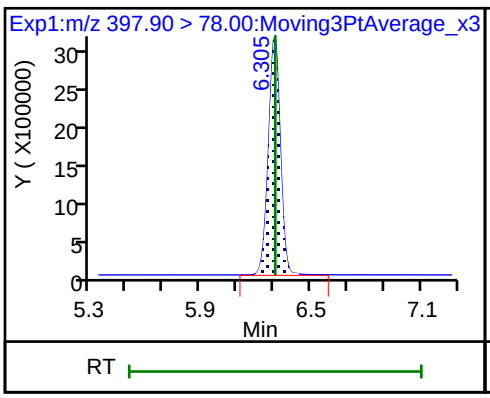
57 PFECHS



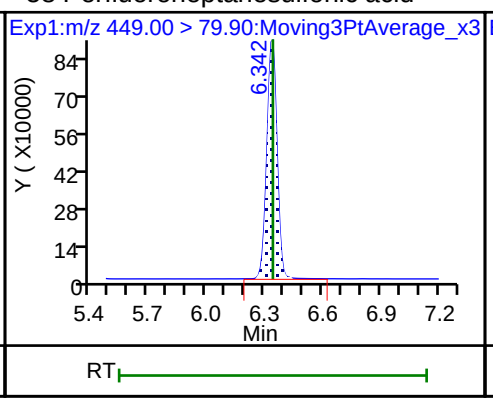
57 PFECHS



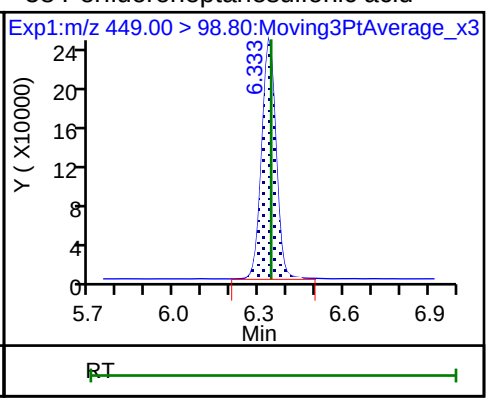
62 FHxSA



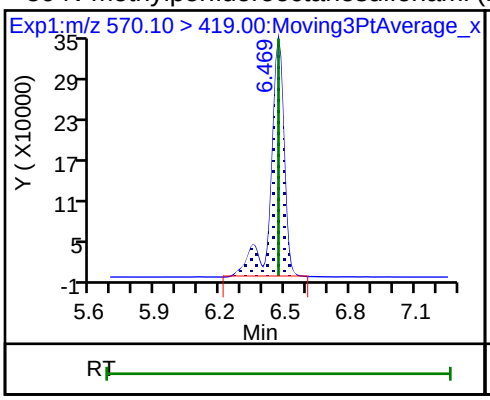
58 Perfluoroheptanesulfonic acid



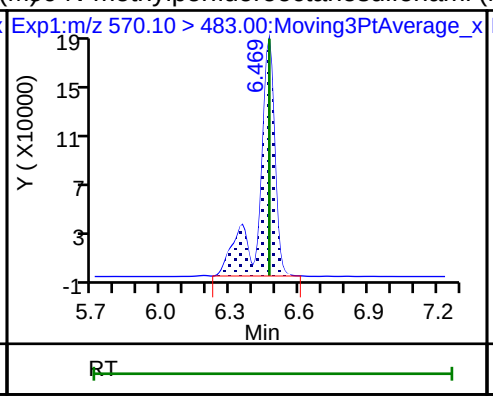
58 Perfluoroheptanesulfonic acid



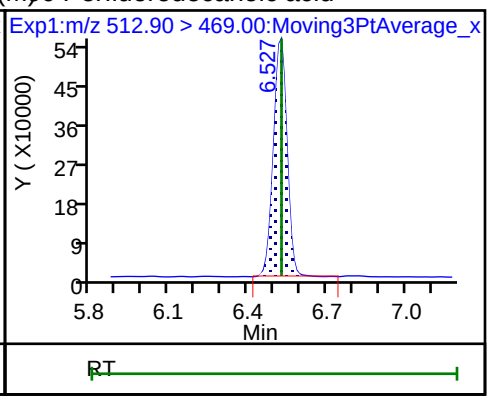
59 N-methylperfluorooctanesulfonami (M)



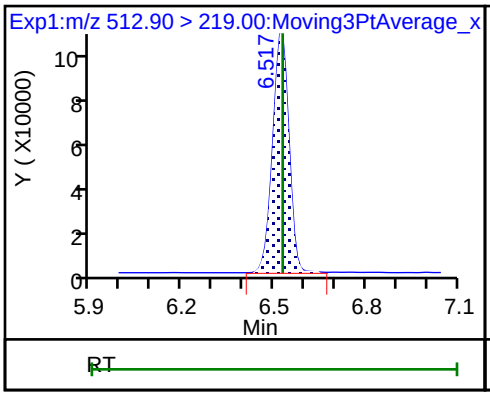
59 N-methylperfluorooctanesulfonami (M)



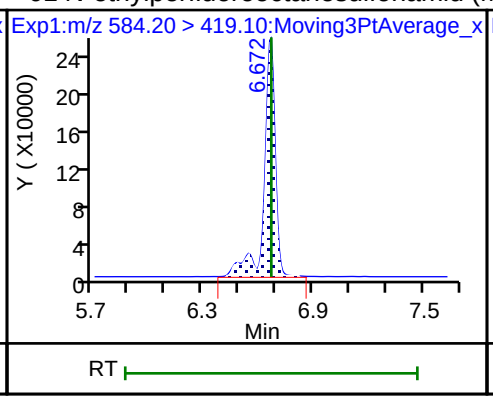
60 Perfluorodecanoic acid



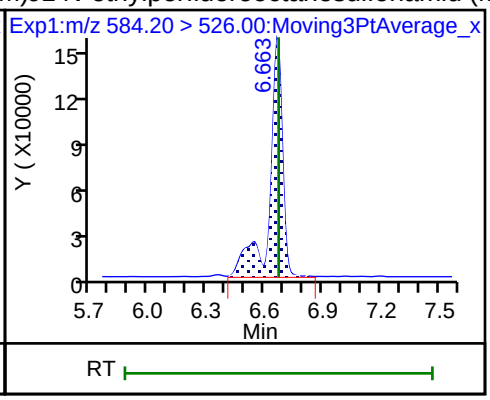
60 Perfluorodecanoic acid



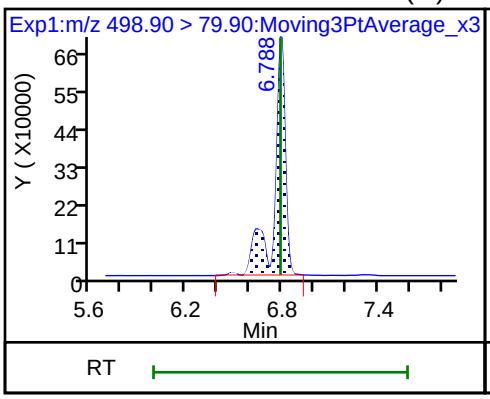
61 N-ethylperfluorooctanesulfonamid (M)



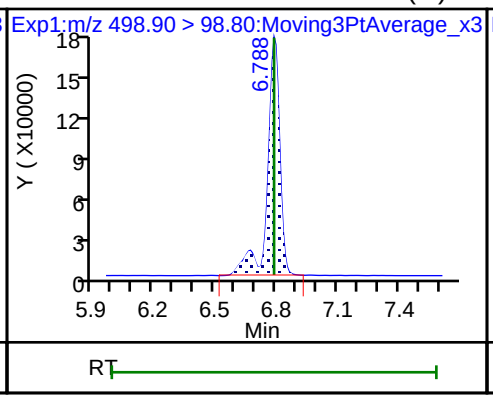
61 N-ethylperfluorooctanesulfonamid (M)



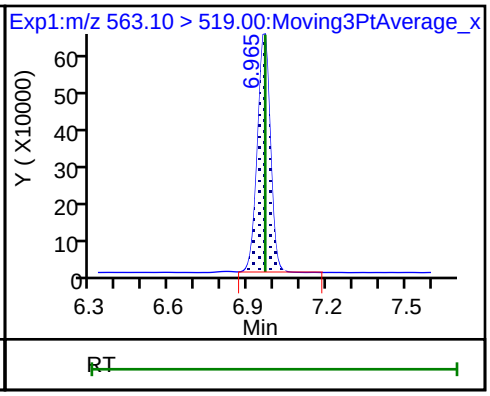
63 Perfluorooctanesulfonic acid (M)



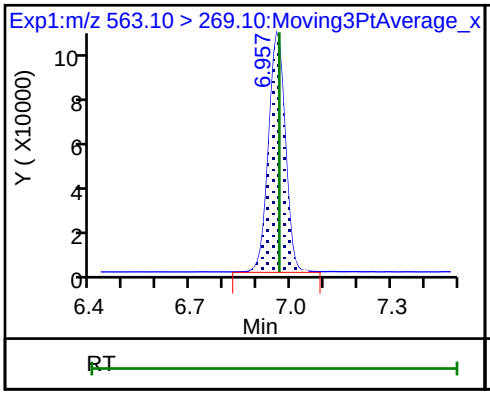
63 Perfluorooctanesulfonic acid (M)



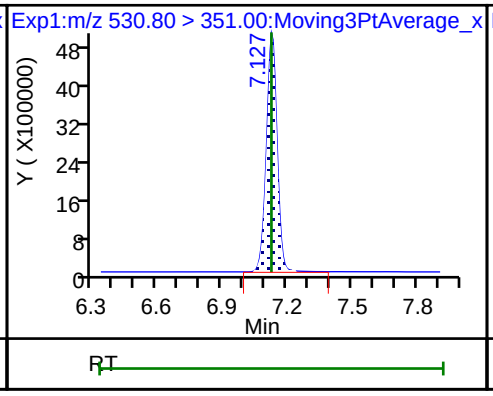
64 Perfluoroundecanoic acid



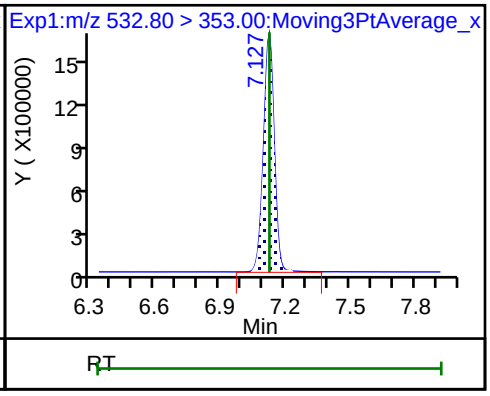
64 Perfluoroundecanoic acid



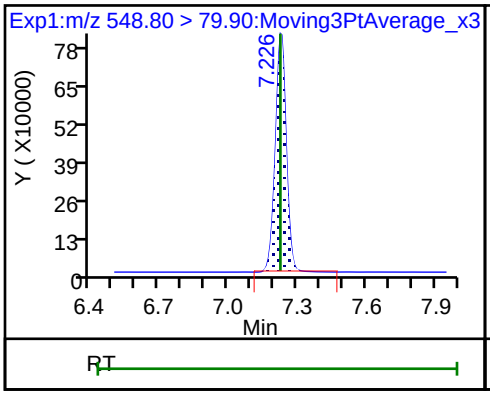
65 9-Chlorohexadecafluoro-3-oxanona



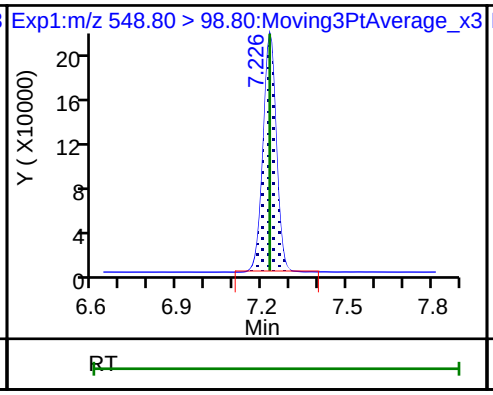
65 9-Chlorohexadecafluoro-3-oxanona



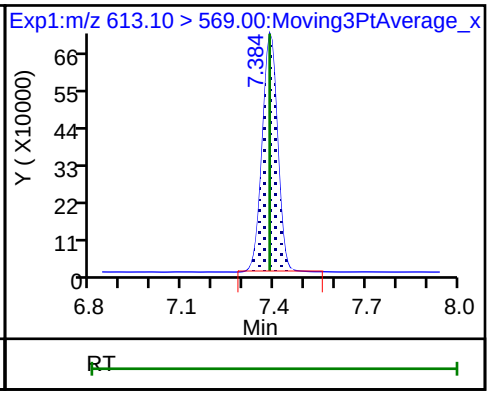
66 Perfluorononanesulfonic acid



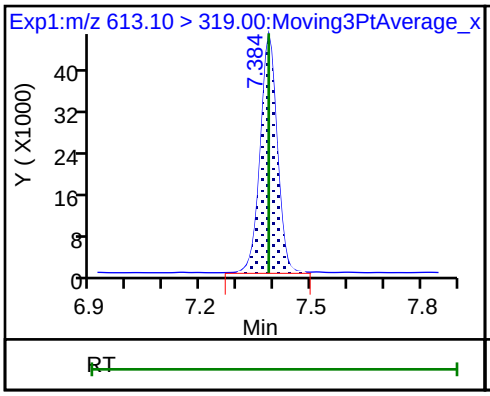
66 Perfluorononanesulfonic acid



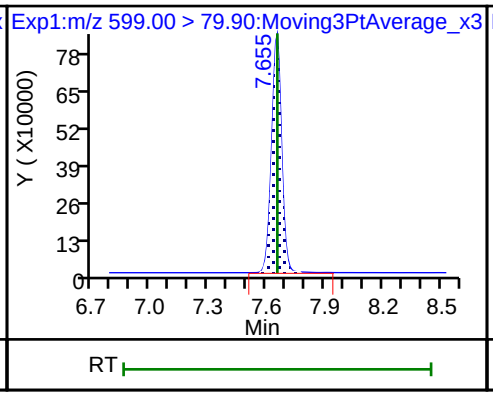
67 Perfluorododecanoic acid



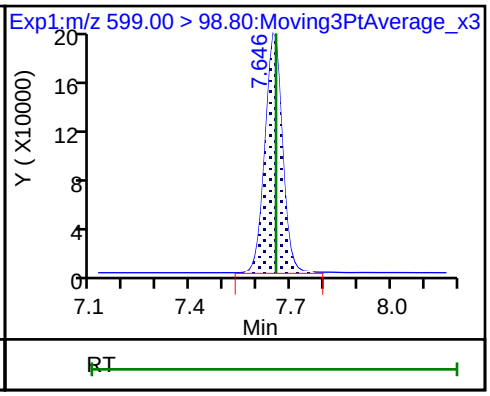
67 Perfluorododecanoic acid



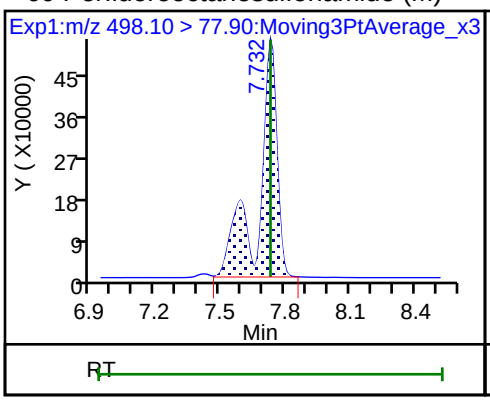
68 Perfluorodecanesulfonic acid



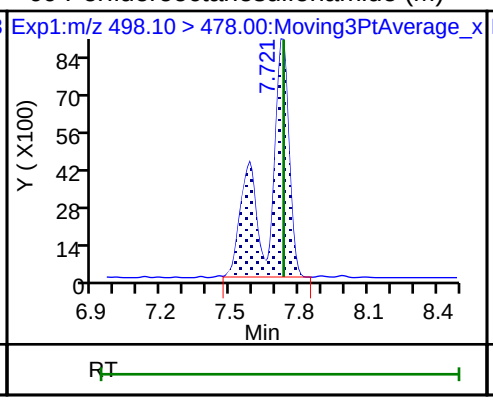
68 Perfluorodecanesulfonic acid



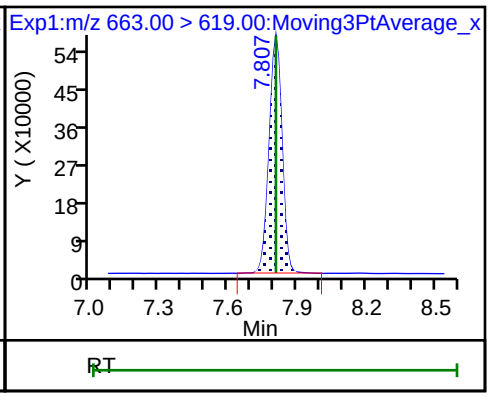
69 Perfluorooctanesulfonamide (M)



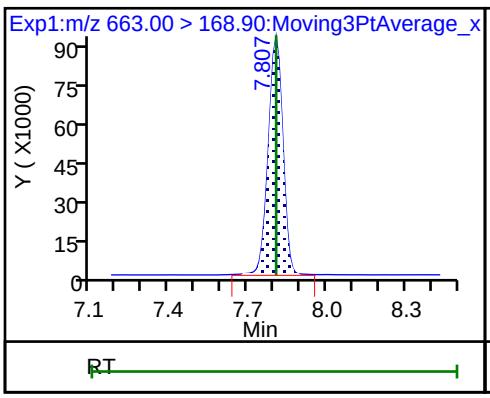
69 Perfluorooctanesulfonamide (M)



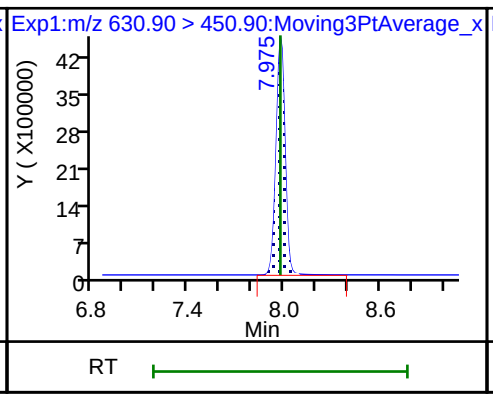
70 Perfluorotridecanoic acid



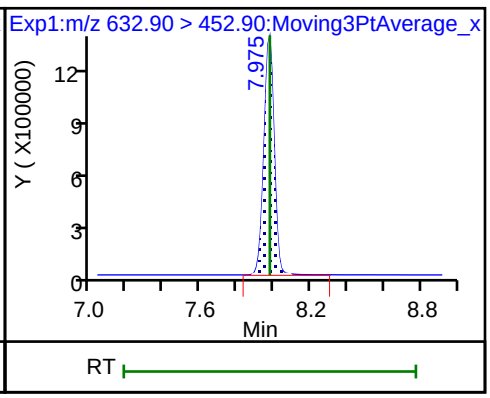
70 Perfluorotridecanoic acid



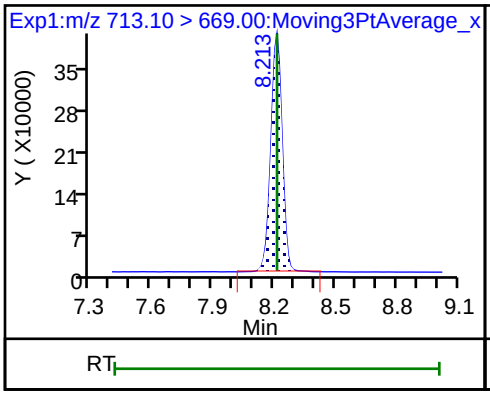
71 11-Chloroeicosafluoro-3-oxaundec



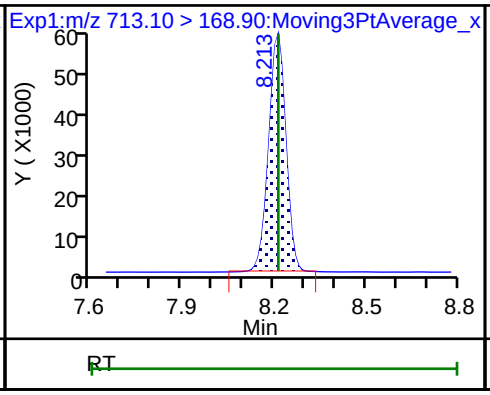
71 11-Chloroeicosafluoro-3-oxaundec



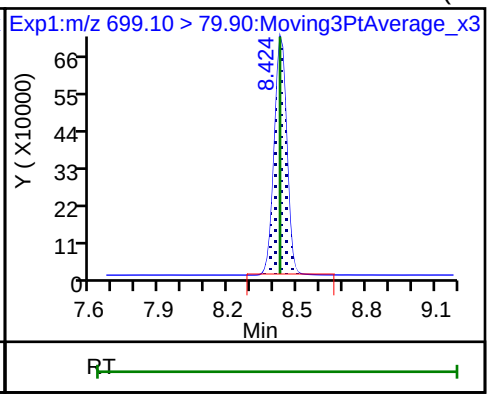
72 Perfluorotetradecanoic acid



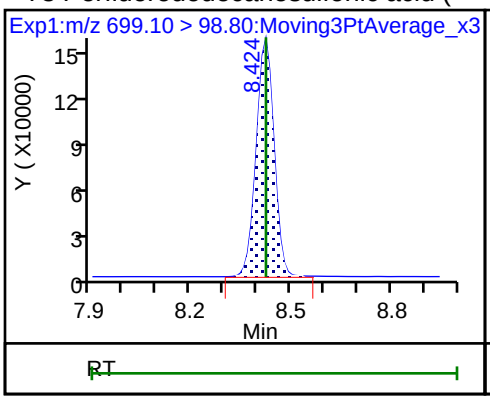
72 Perfluorotetradecanoic acid



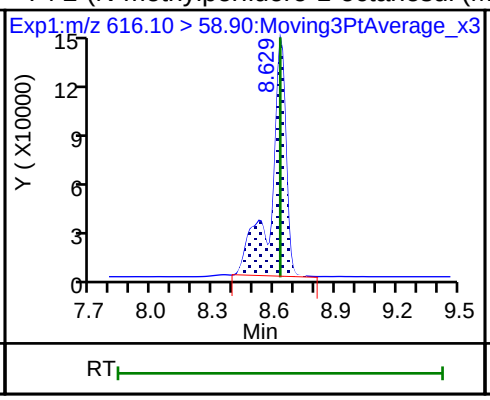
73 Perfluorododecanesulfonic acid (



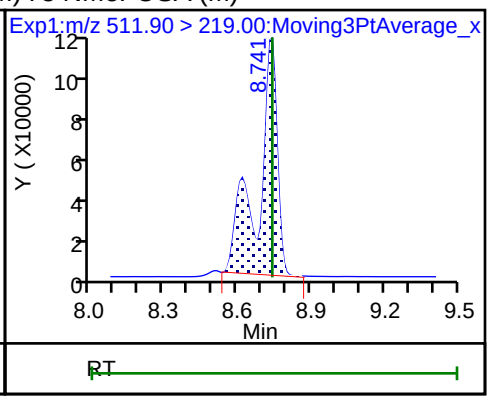
73 Perfluorododecanesulfonic acid (



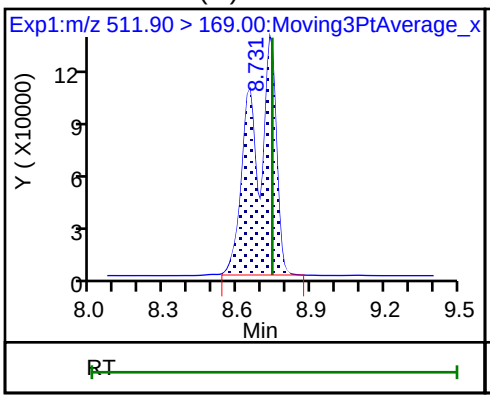
74 2-(N-methylperfluoro-1-octanesul (M)



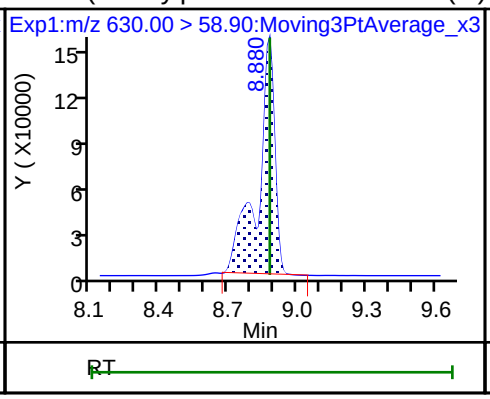
75 NMeFOSA (M)



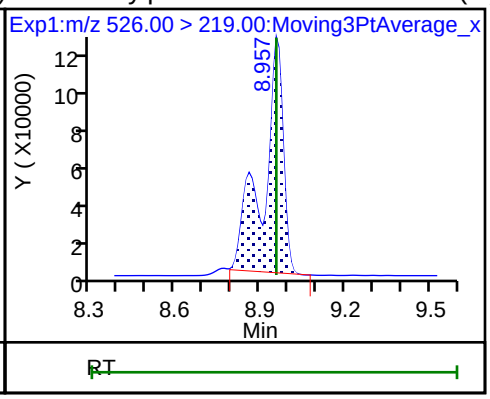
75 NMeFOSA (M)



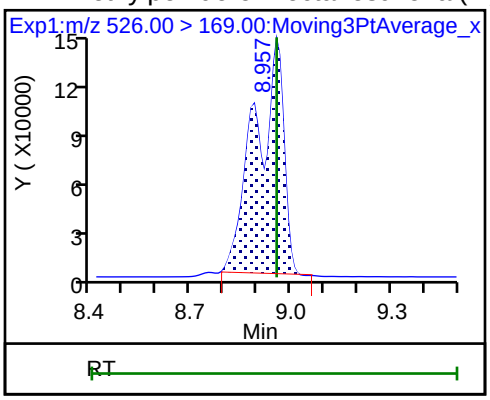
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

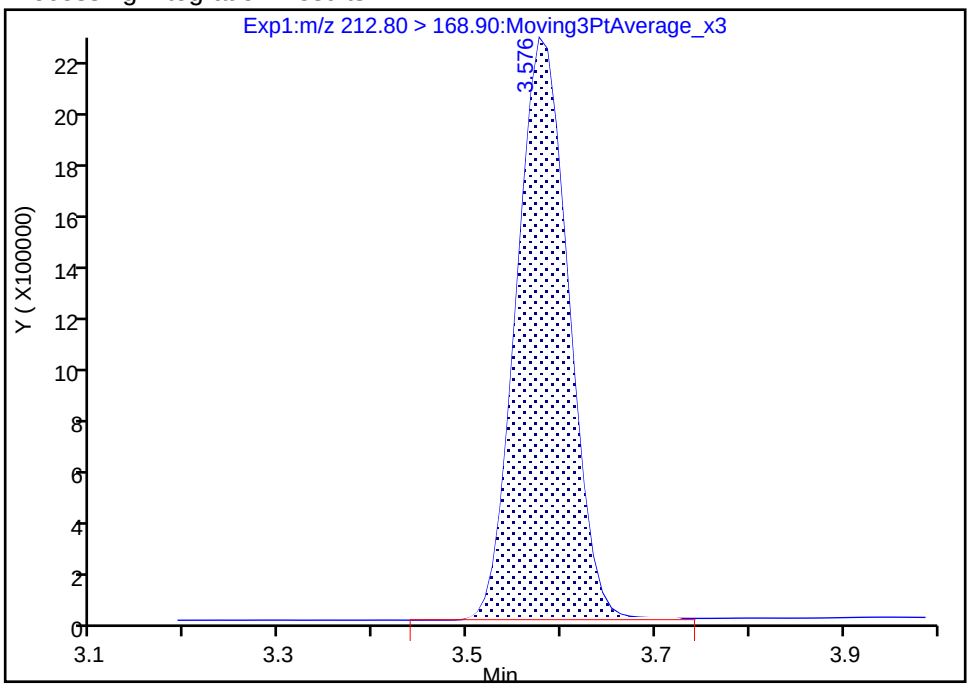
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Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

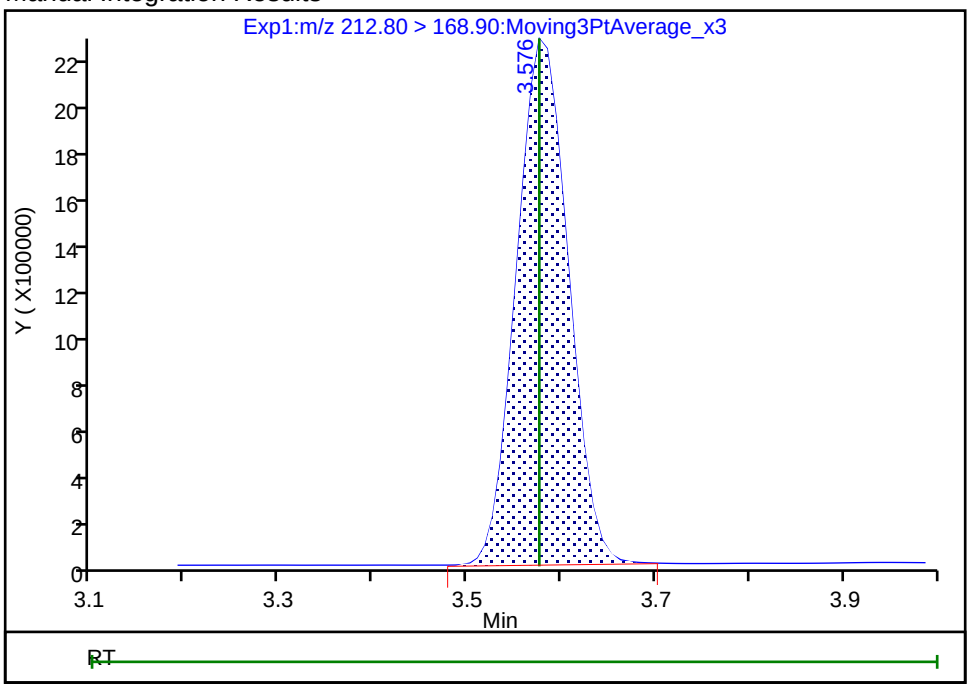
Processing Integration Results

RT: 3.58
Area: 8653275
Amount: 4.781963
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 8572860
Amount: 4.820775
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:03:59 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

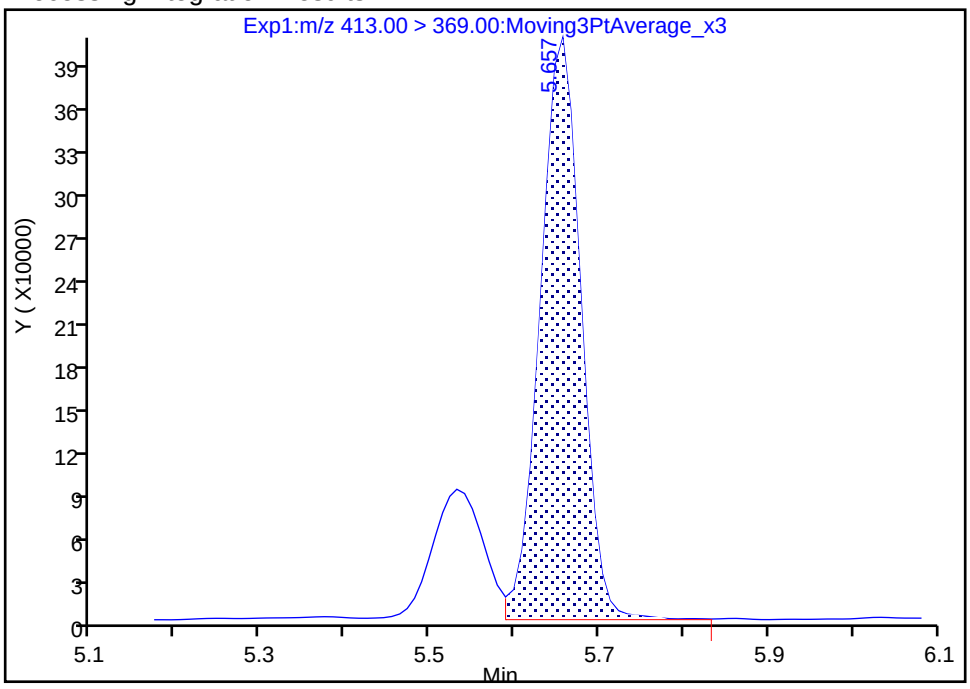
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Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

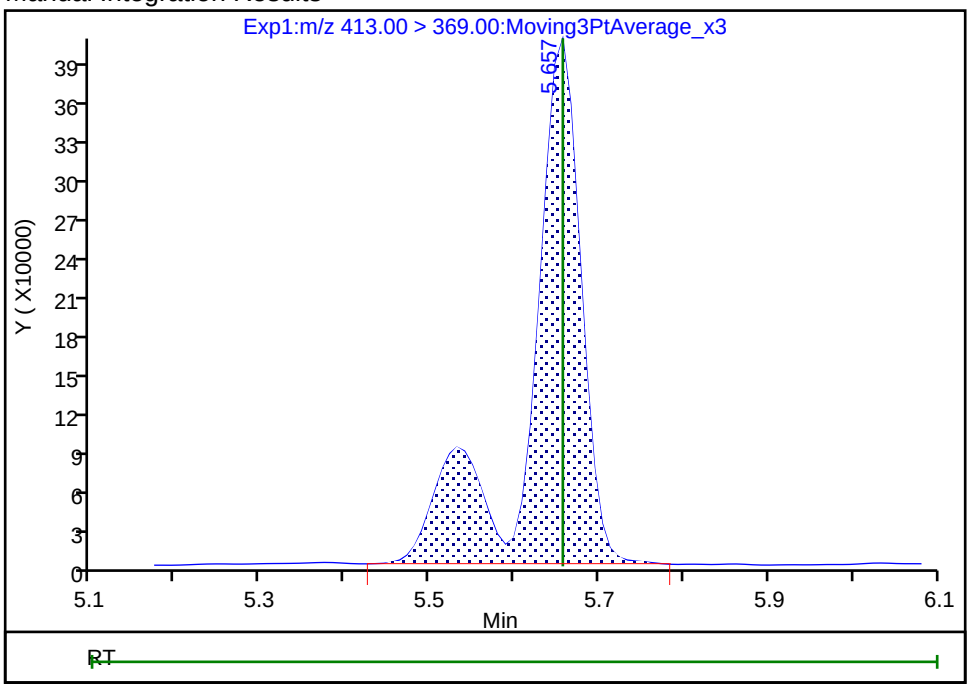
Processing Integration Results

RT: 5.66
Area: 1356329
Amount: 1.191208
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 1714597
Amount: 1.214662
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:04:28 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

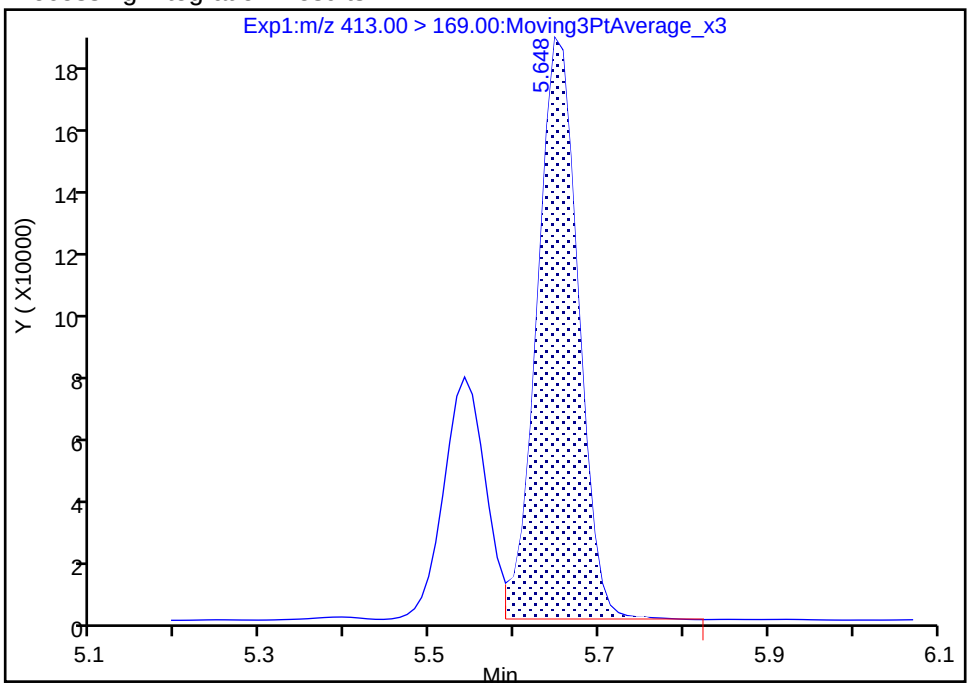
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

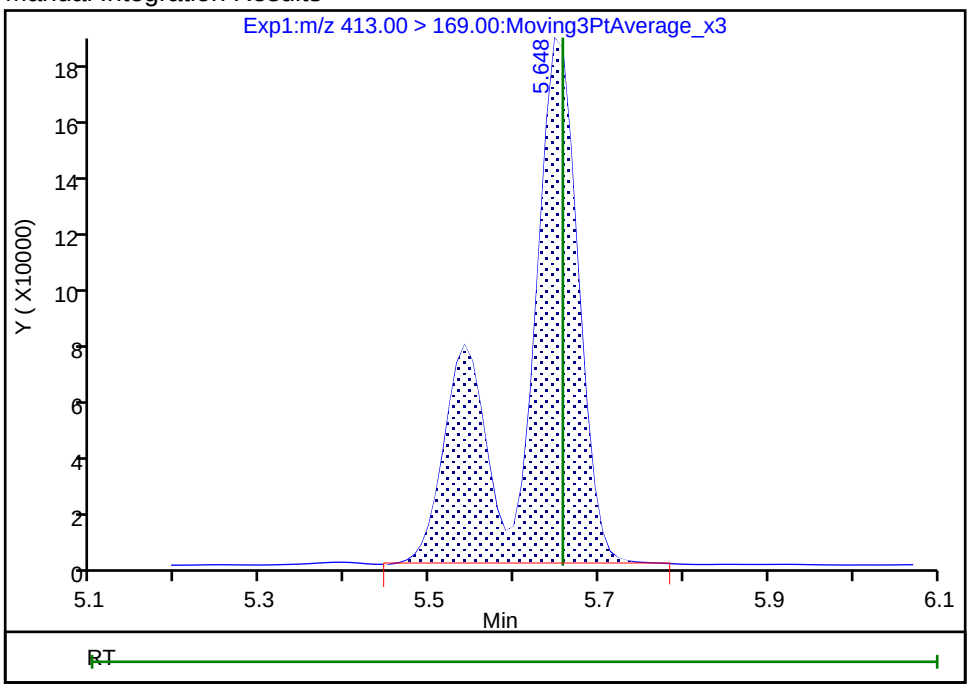
Processing Integration Results

RT: 5.65
Area: 632903
Amount: 1.191208
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 888940
Amount: 1.214662
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:04:37 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

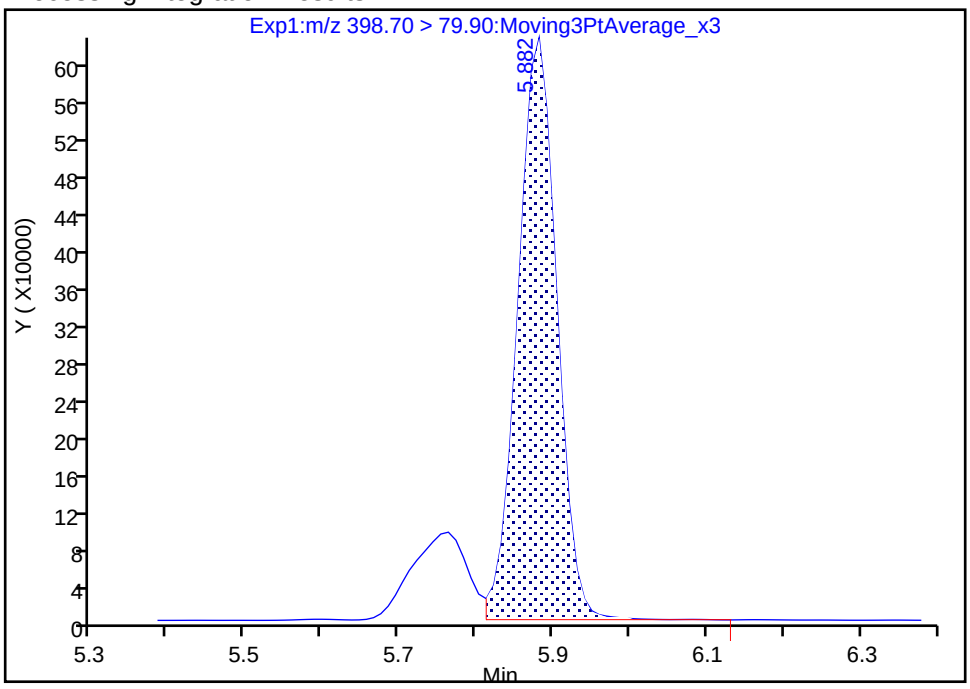
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

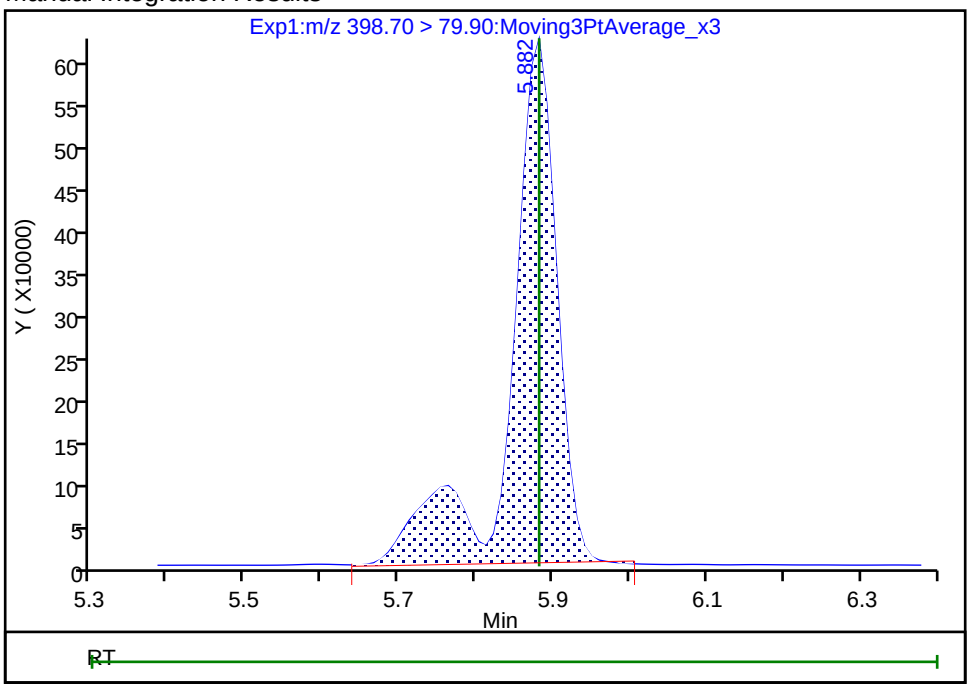
Processing Integration Results

RT: 5.88
Area: 2214771
Amount: 1.093008
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 2648909
Amount: 1.098508
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:04:51 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

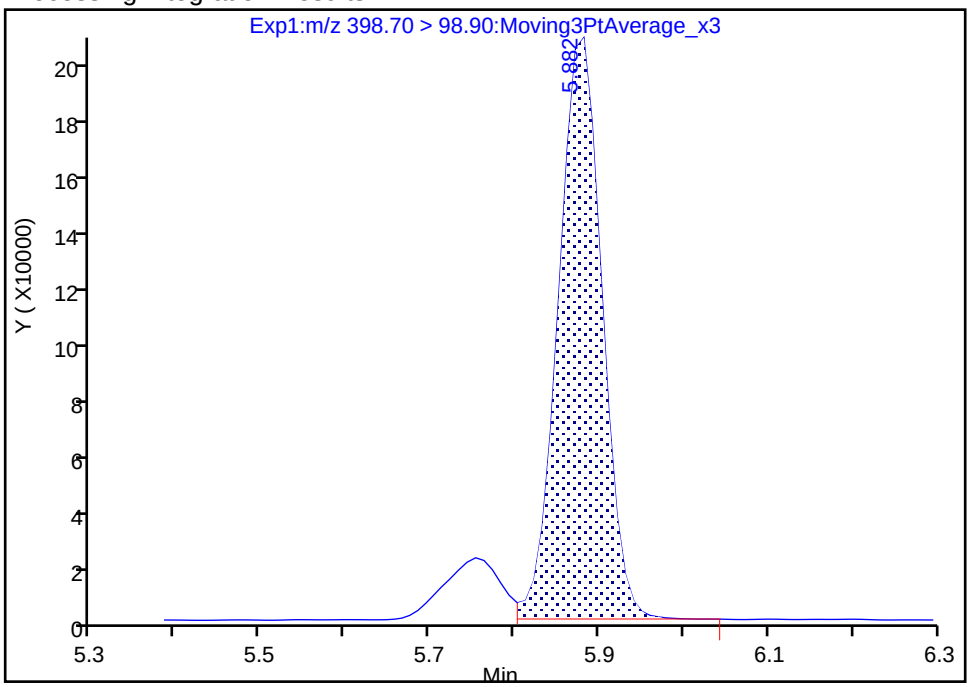
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d				
Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

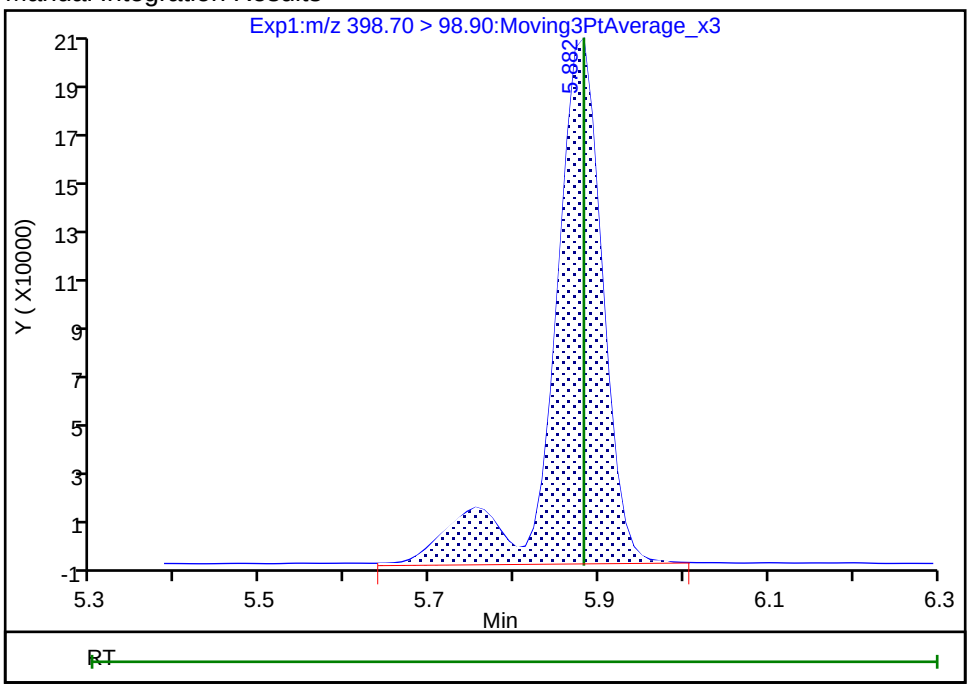
Processing Integration Results

RT: 5.88
Area: 730652
Amount: 1.093008
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 834704
Amount: 1.098508
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:05:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

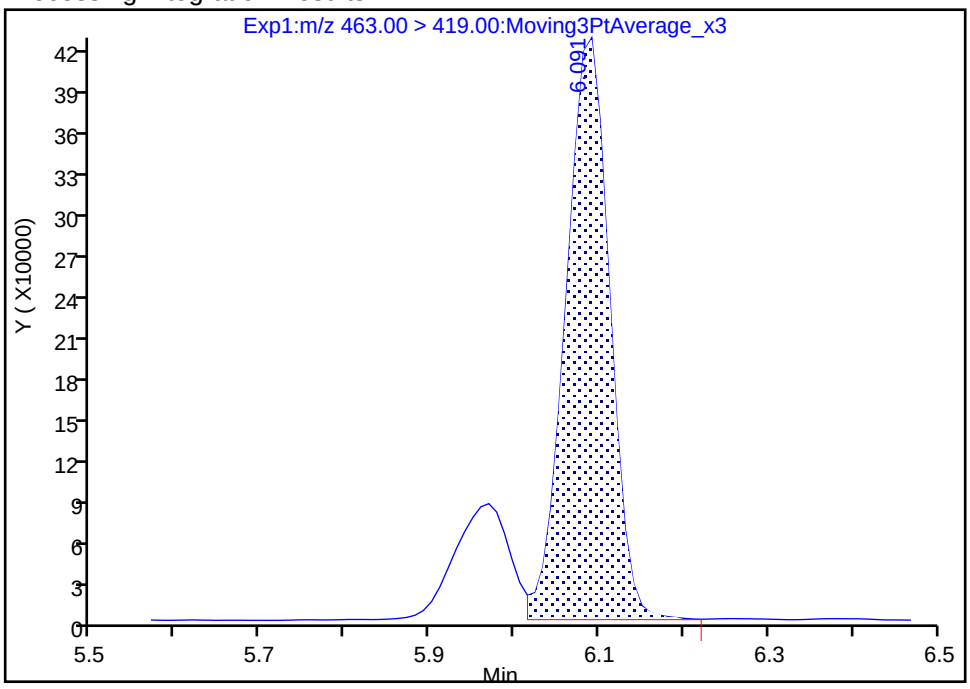
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

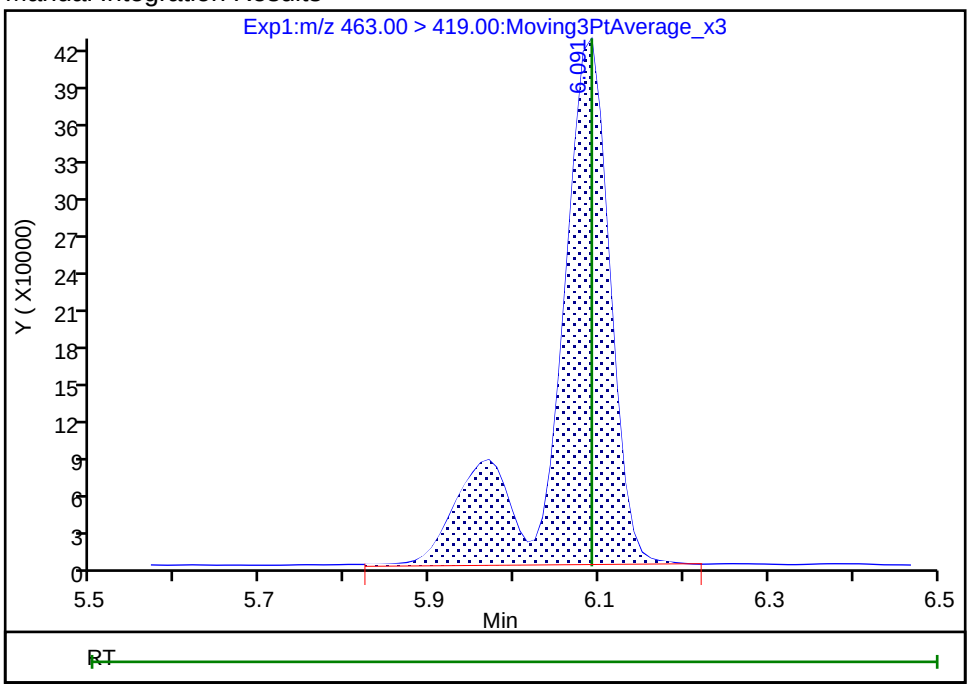
Processing Integration Results

RT: 6.09
Area: 1527705
Amount: 1.151414
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 1910879
Amount: 1.188896
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:05:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

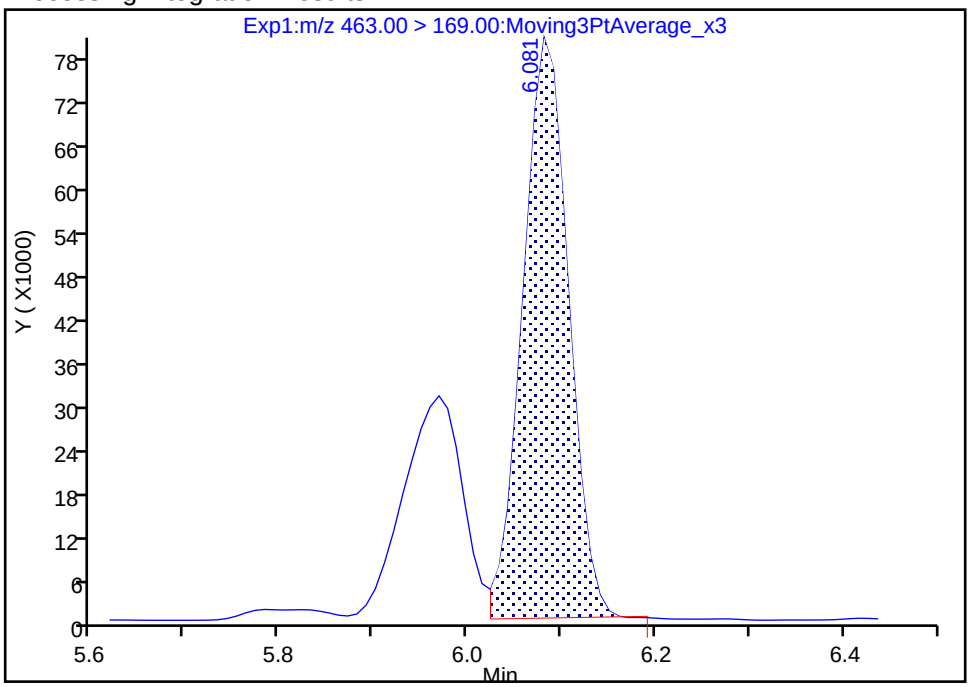
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d				
Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

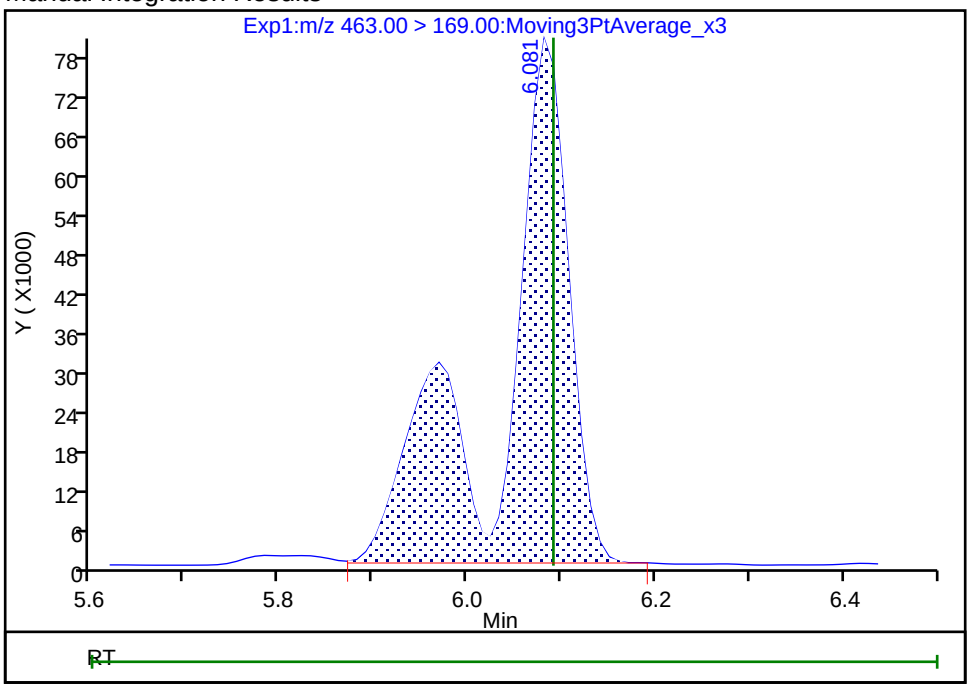
Processing Integration Results

RT: 6.08
Area: 270587
Amount: 1.151414
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 400440
Amount: 1.188896
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:05:27 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

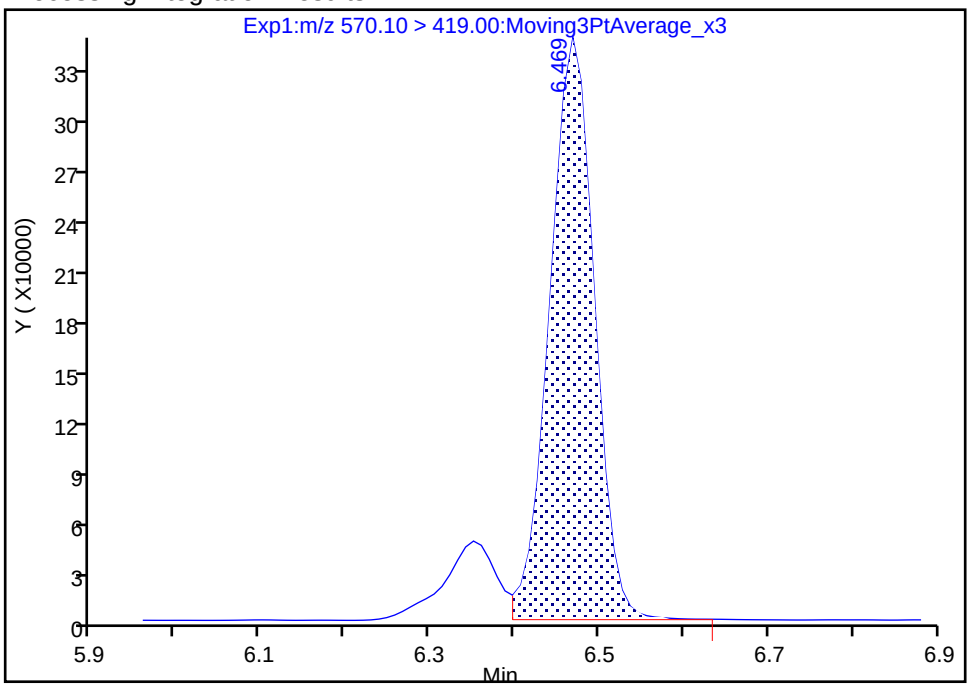
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

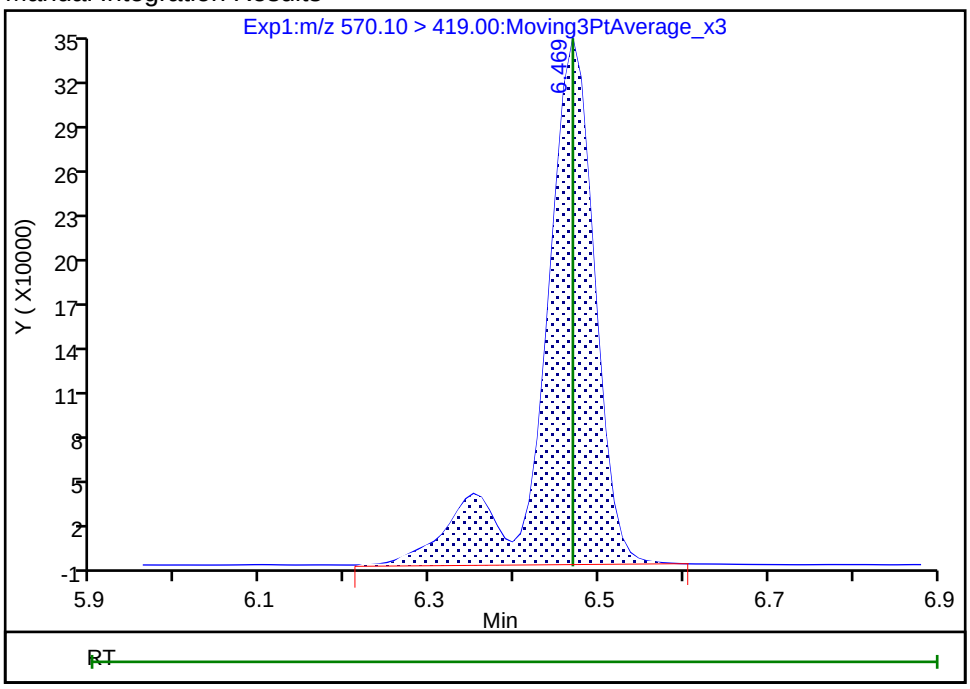
Processing Integration Results

RT: 6.47
Area: 1272407
Amount: 1.180402
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 1475062
Amount: 1.198789
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:05:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

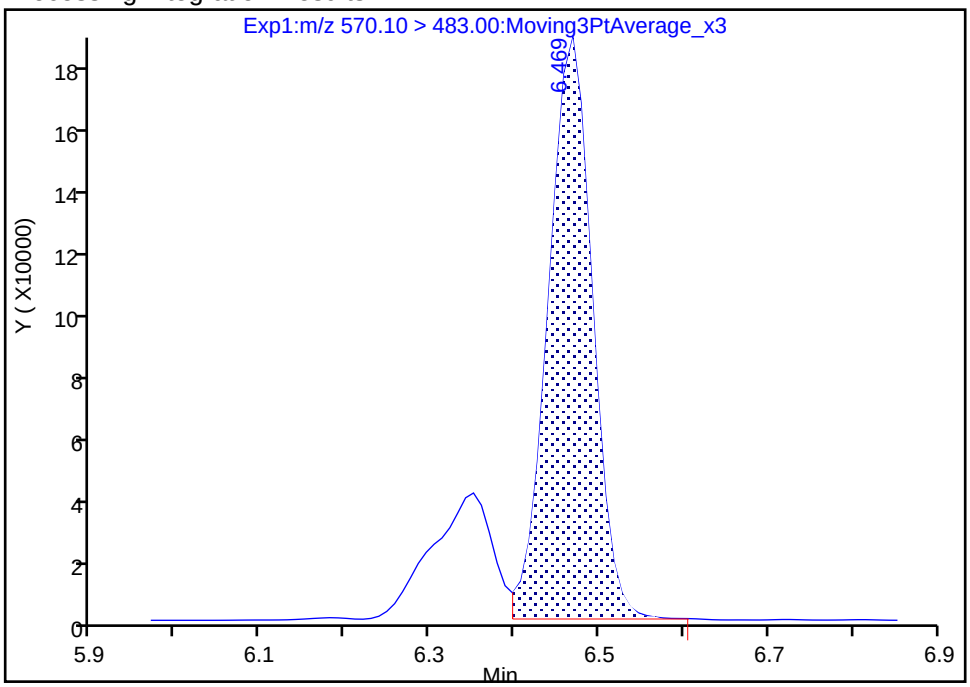
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

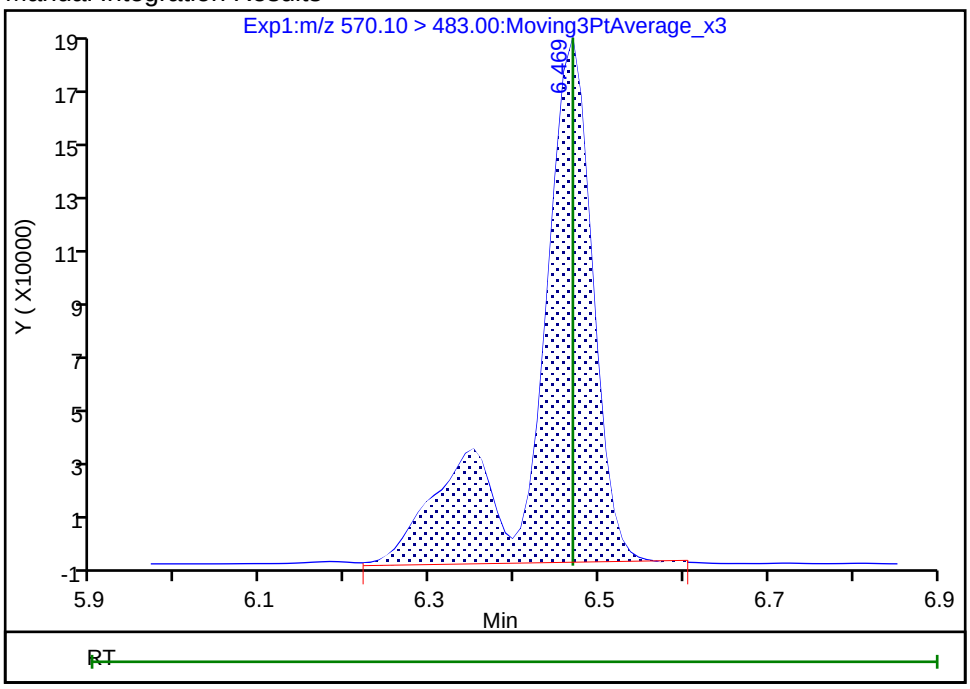
Processing Integration Results

RT: 6.47
Area: 670179
Amount: 1.180402
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 872169
Amount: 1.198789
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:06:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

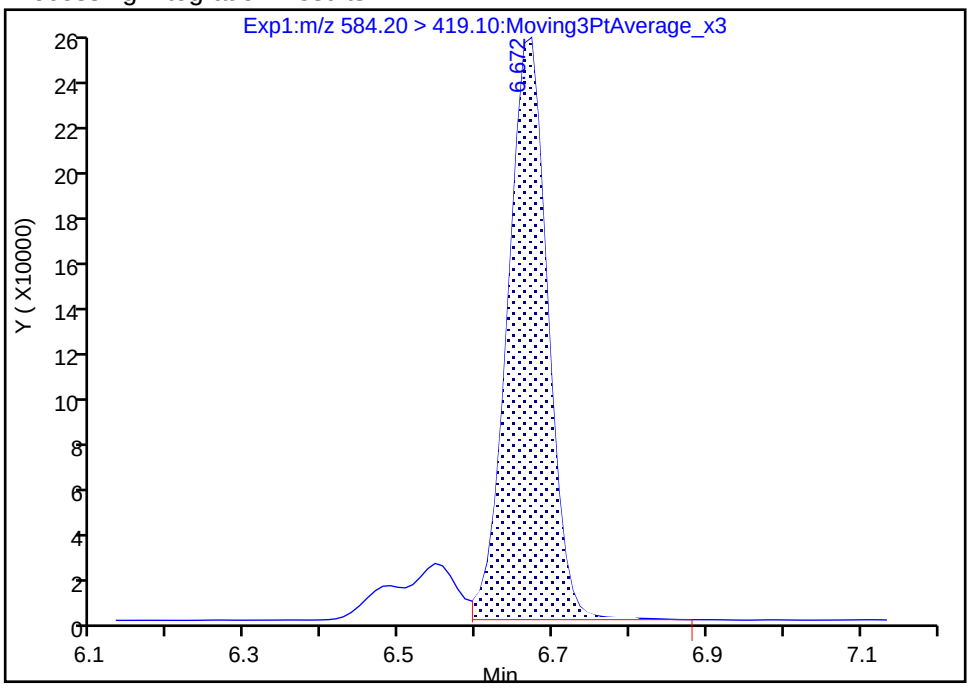
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

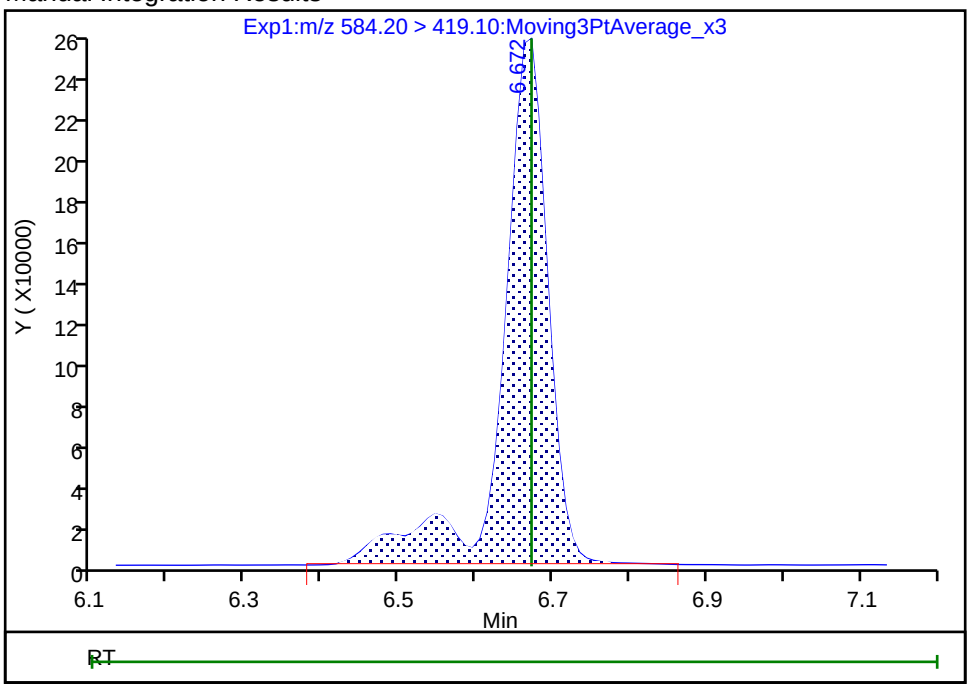
Processing Integration Results

RT: 6.67
Area: 936843
Amount: 1.180828
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 1081501
Amount: 1.195231
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:06:36 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

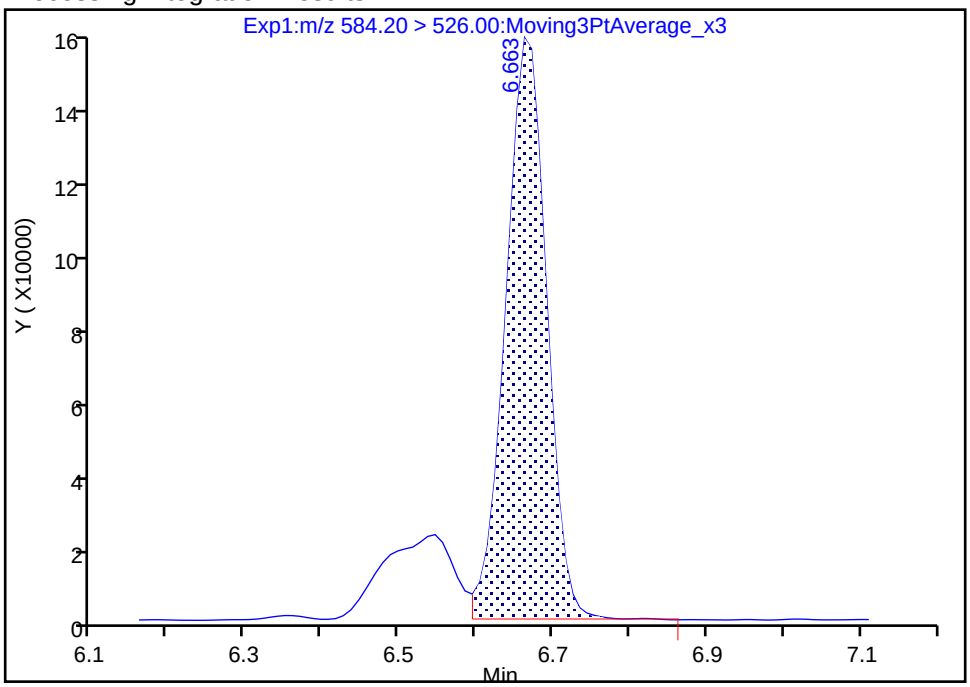
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d				
Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

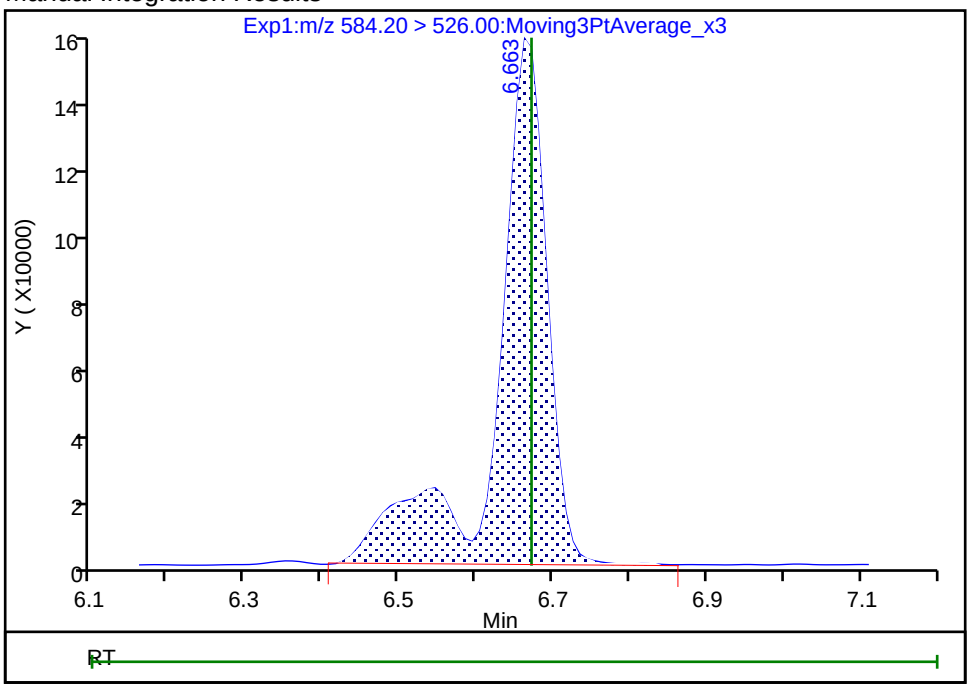
Processing Integration Results

RT: 6.66
Area: 580703
Amount: 1.180828
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 724478
Amount: 1.195231
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:06:46 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

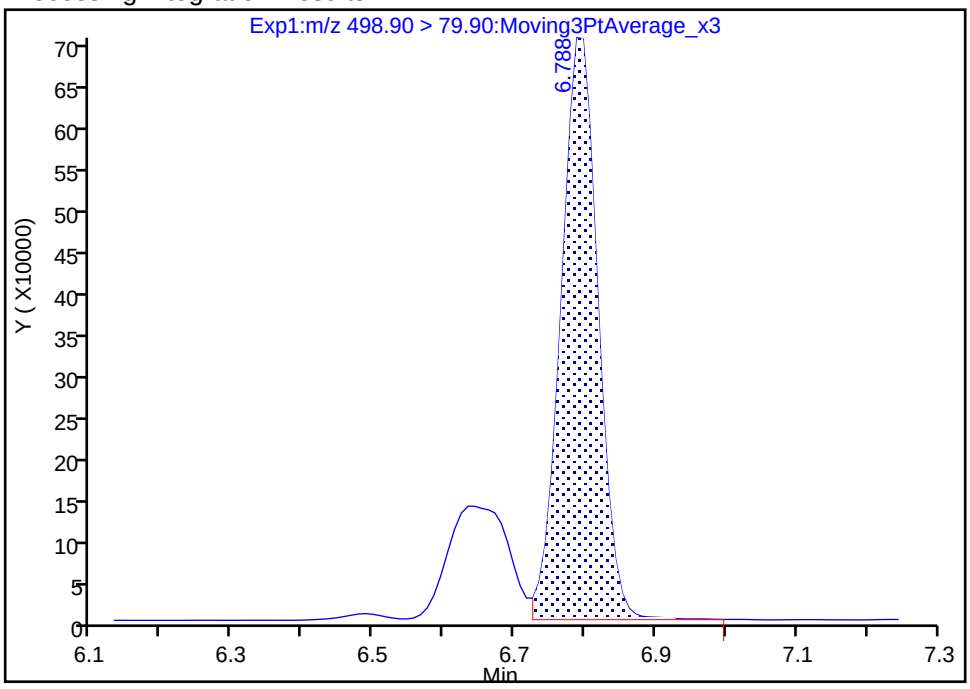
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

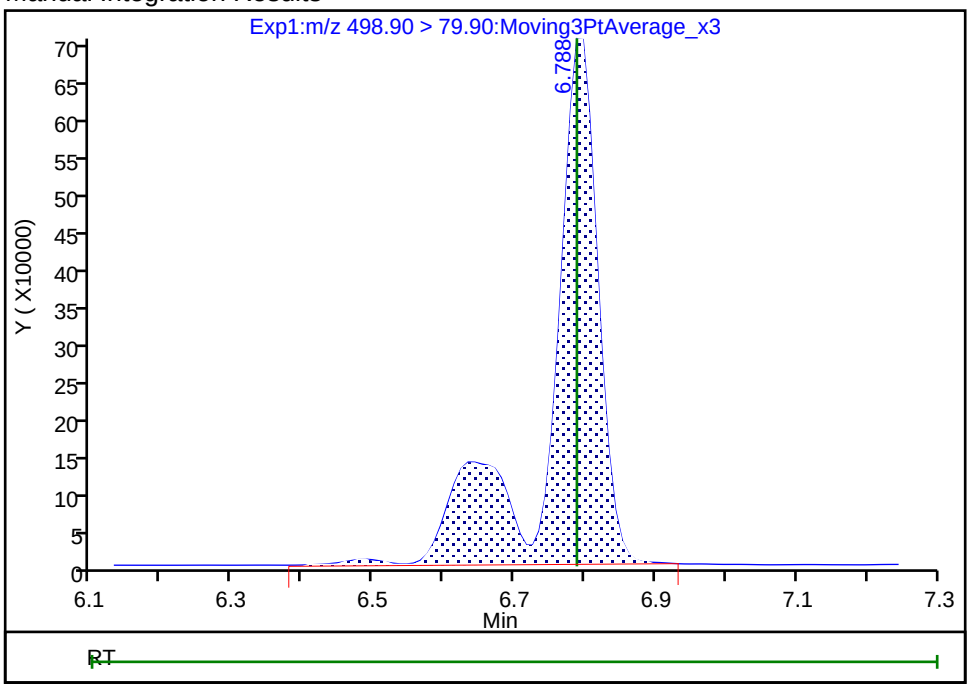
Processing Integration Results

RT: 6.79
Area: 2583871
Amount: 1.093666
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 3426419
Amount: 1.100587
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:07:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

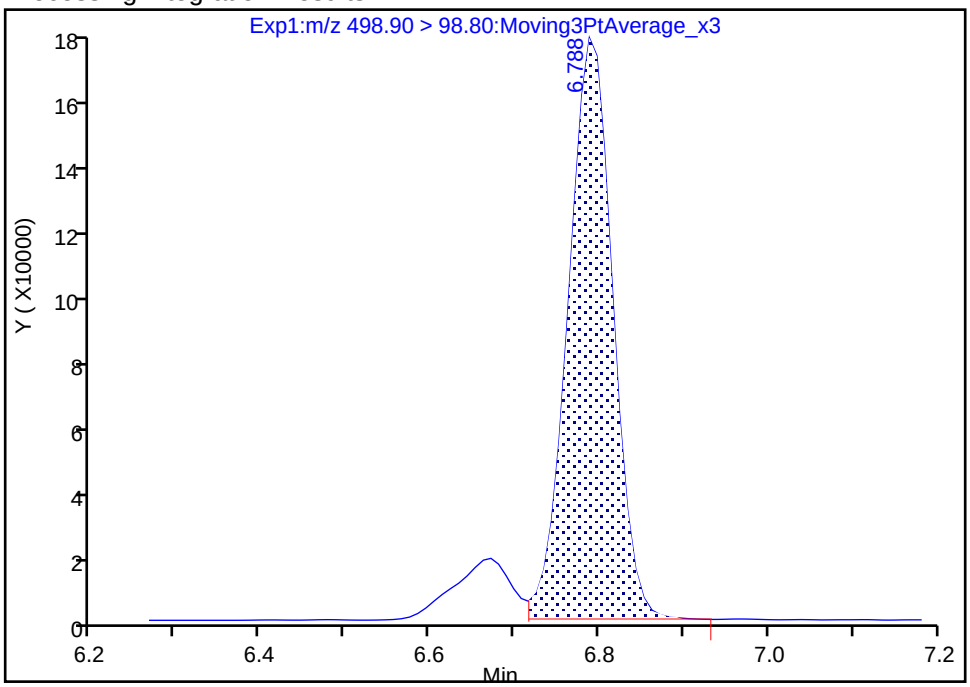
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

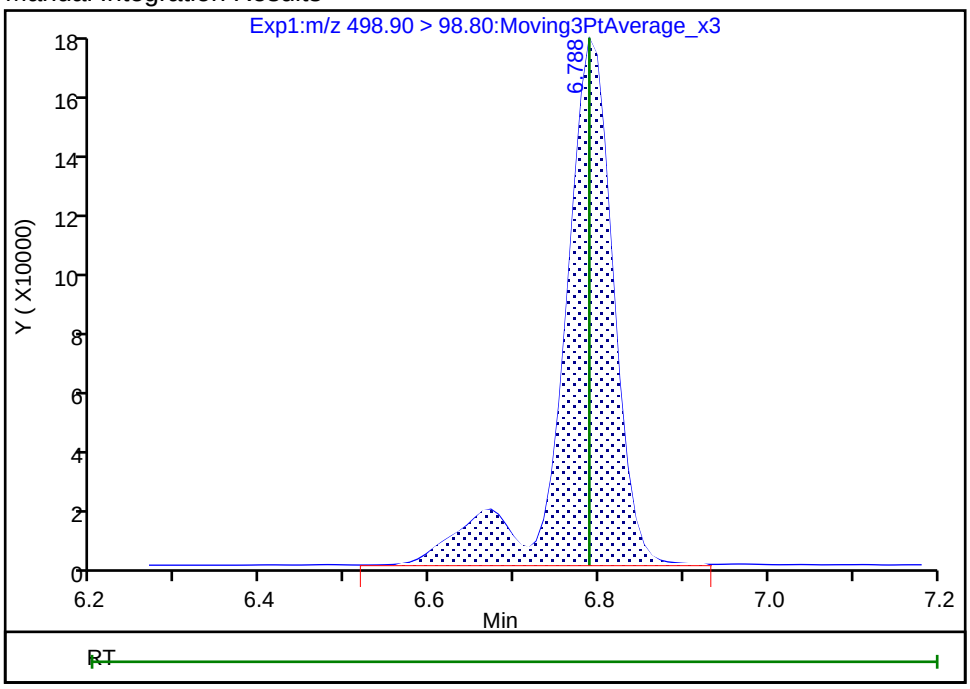
Processing Integration Results

RT: 6.79
Area: 628389
Amount: 1.093666
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 713365
Amount: 1.100587
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:07:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

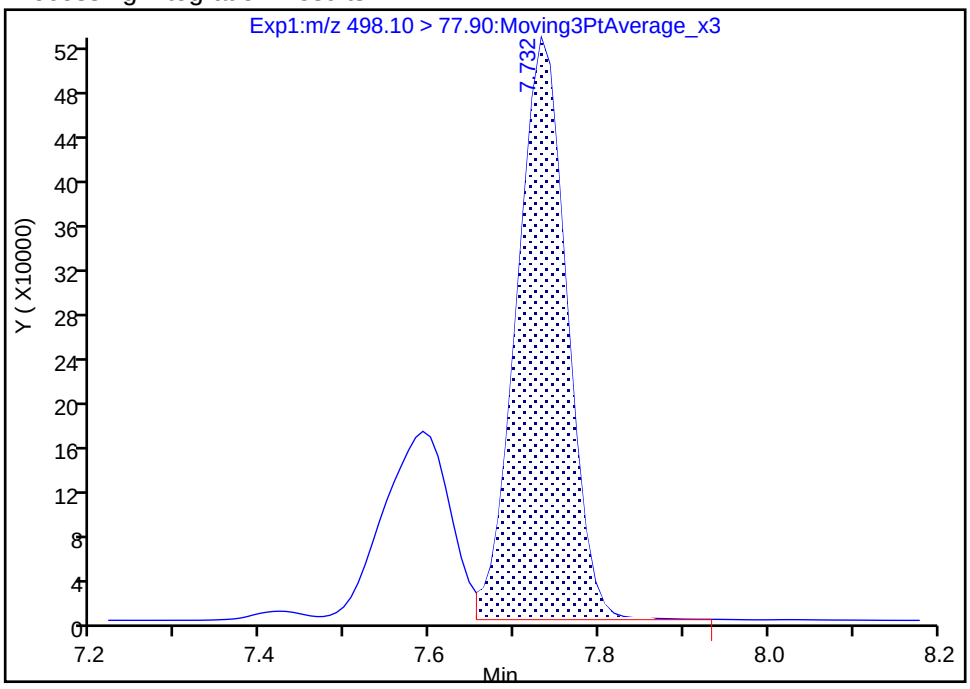
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

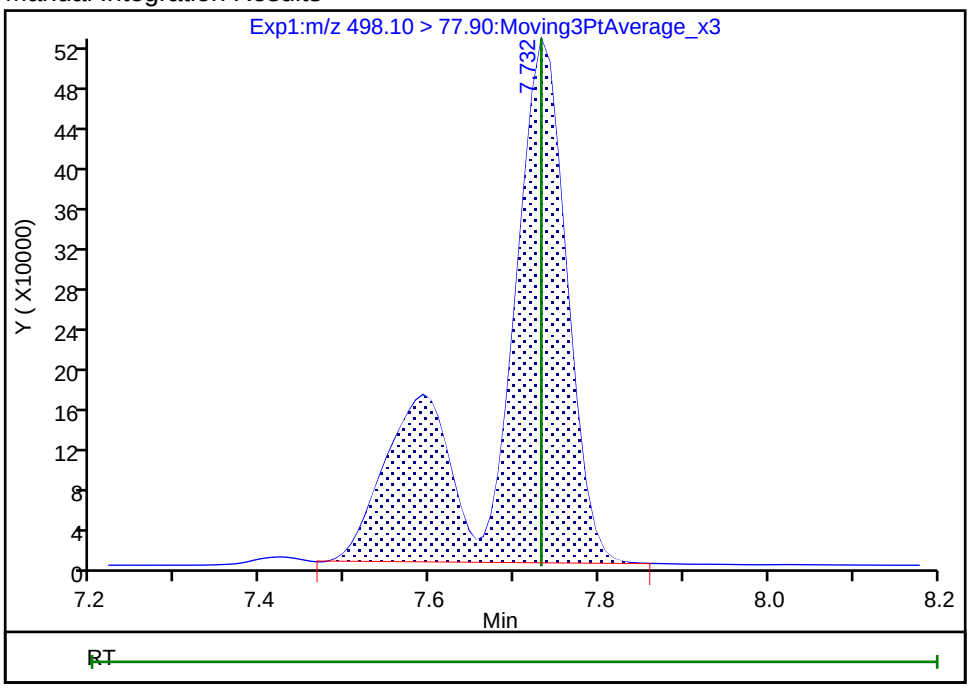
Processing Integration Results

RT: 7.73
Area: 2149502
Amount: 1.240326
Amount Units: ng/ml



Manual Integration Results

RT: 7.73
Area: 3023798
Amount: 1.224194
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:07:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

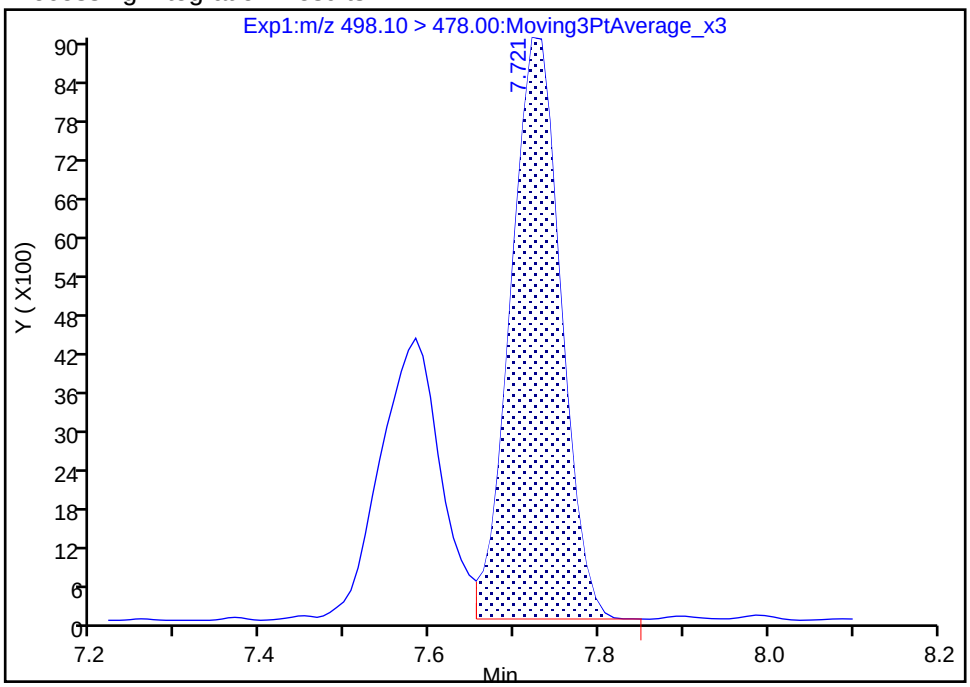
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d				
Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

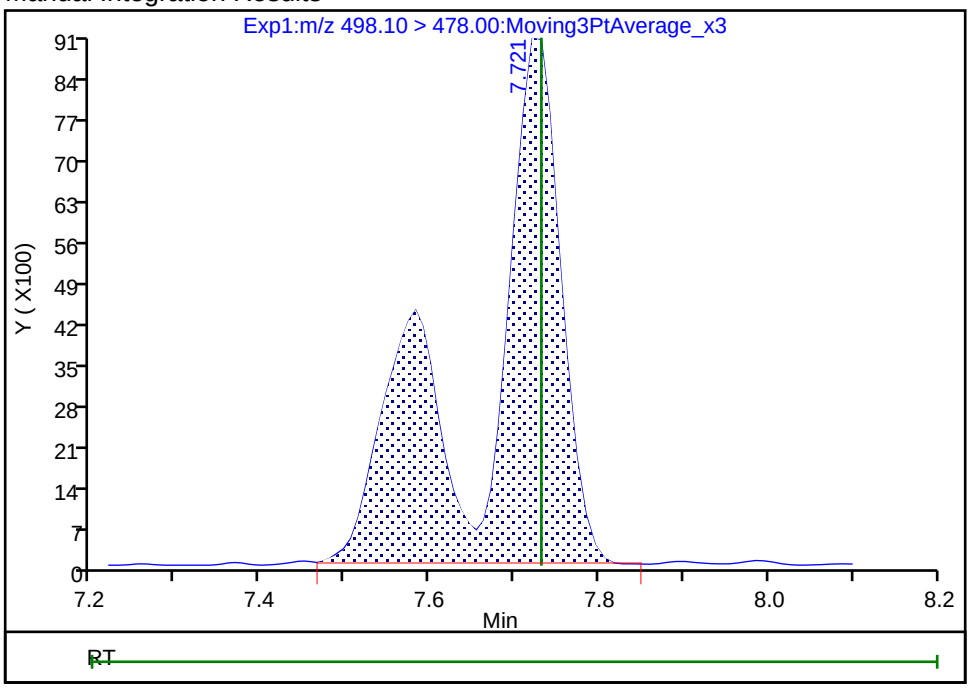
Processing Integration Results

RT: 7.72
Area: 37273
Amount: 1.240326
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 58661
Amount: 1.224194
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:07:39 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

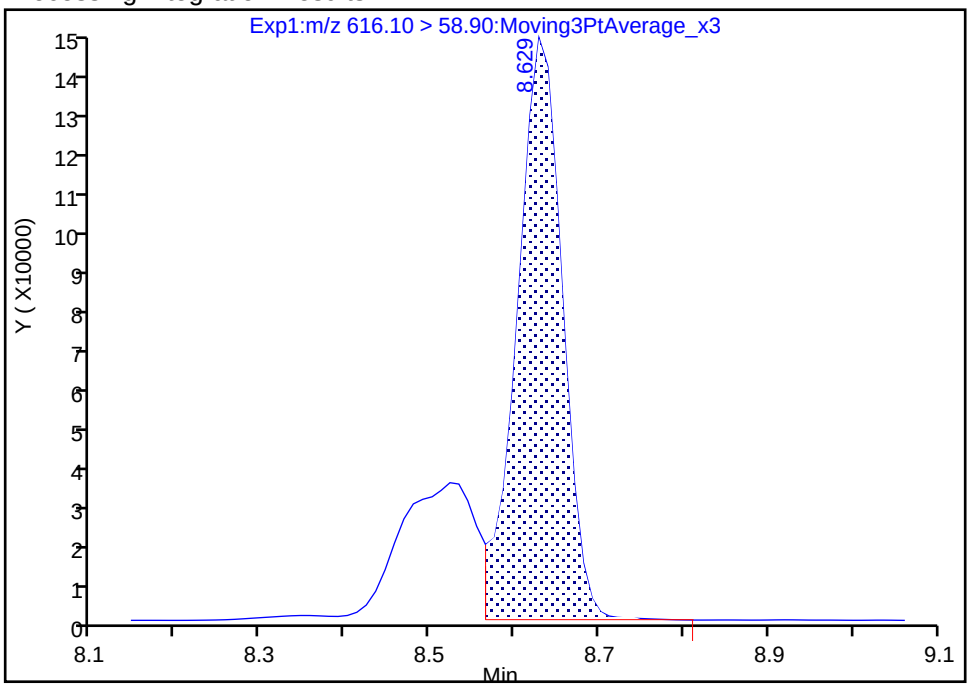
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

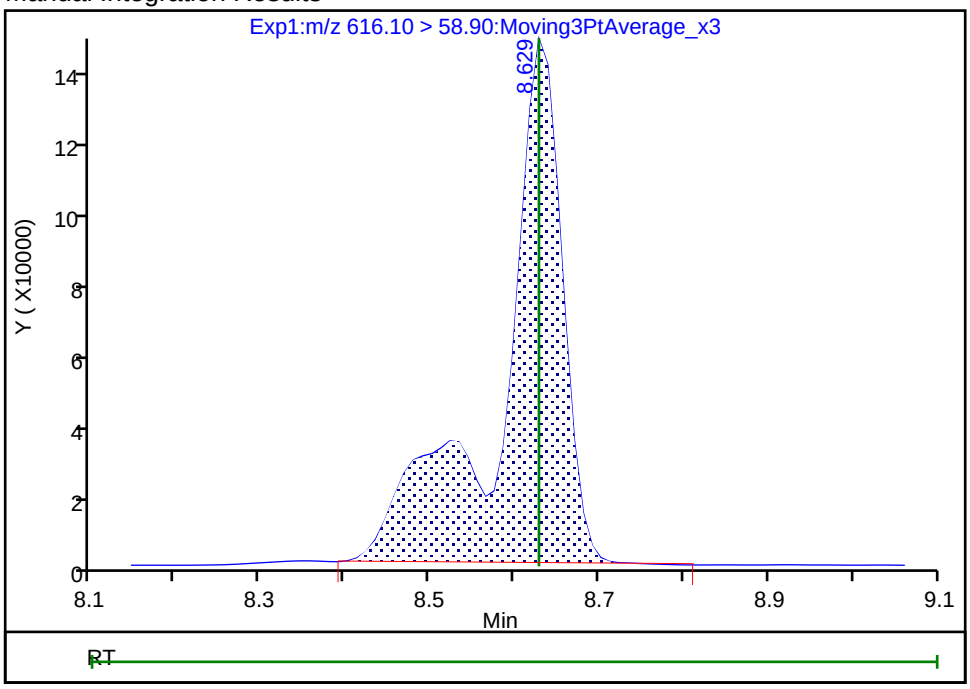
Processing Integration Results

RT: 8.63
Area: 522144
Amount: 12.789600
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 714474
Amount: 12.460713
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:07:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

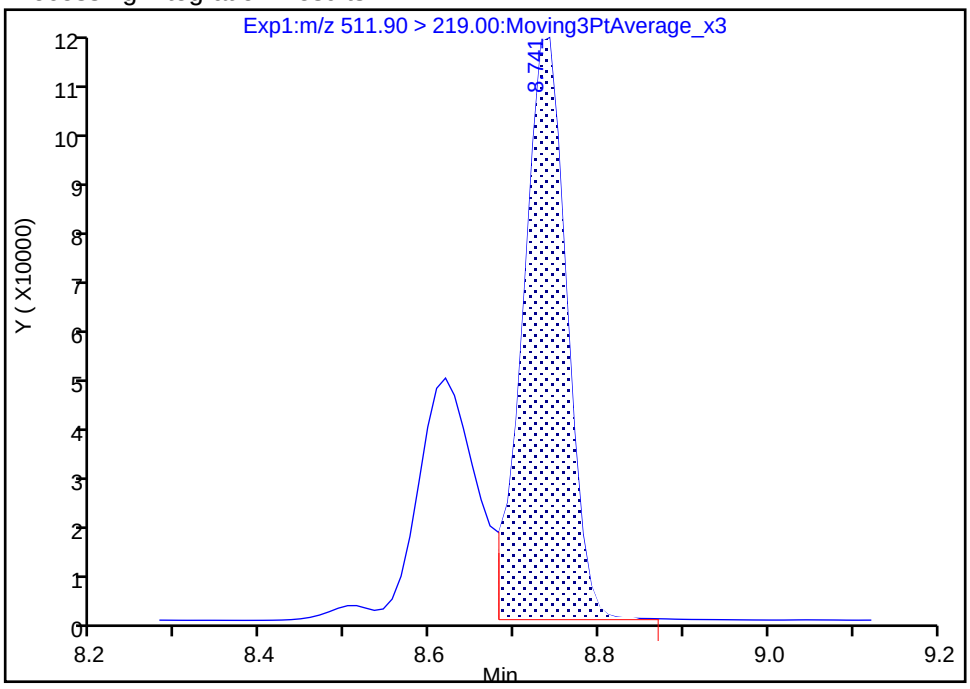
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

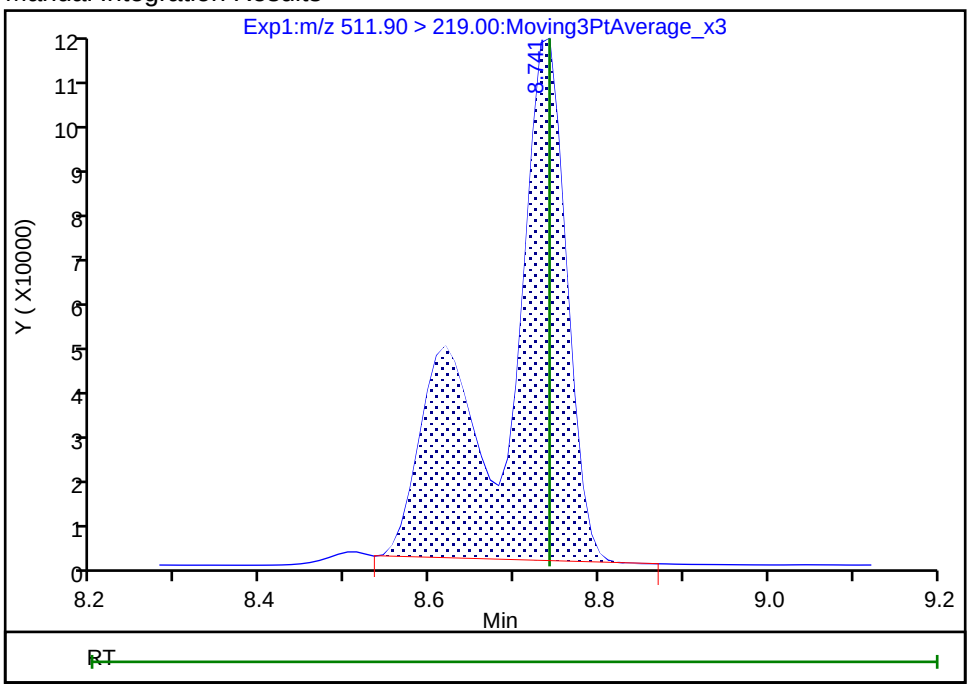
Processing Integration Results

RT: 8.74
Area: 395995
Amount: 1.214178
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 595238
Amount: 1.209827
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:08:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

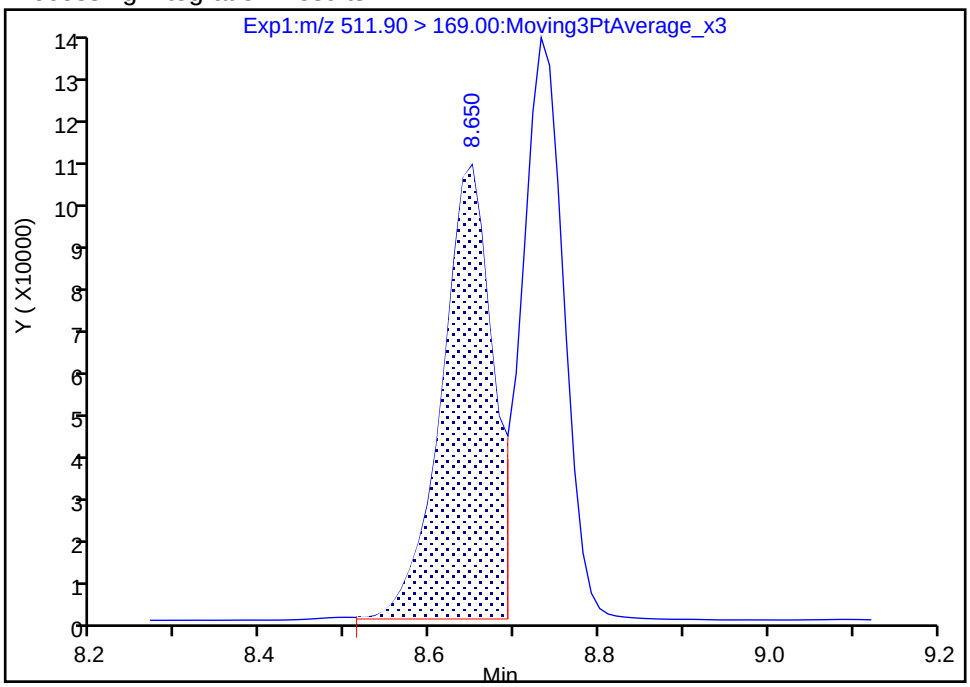
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

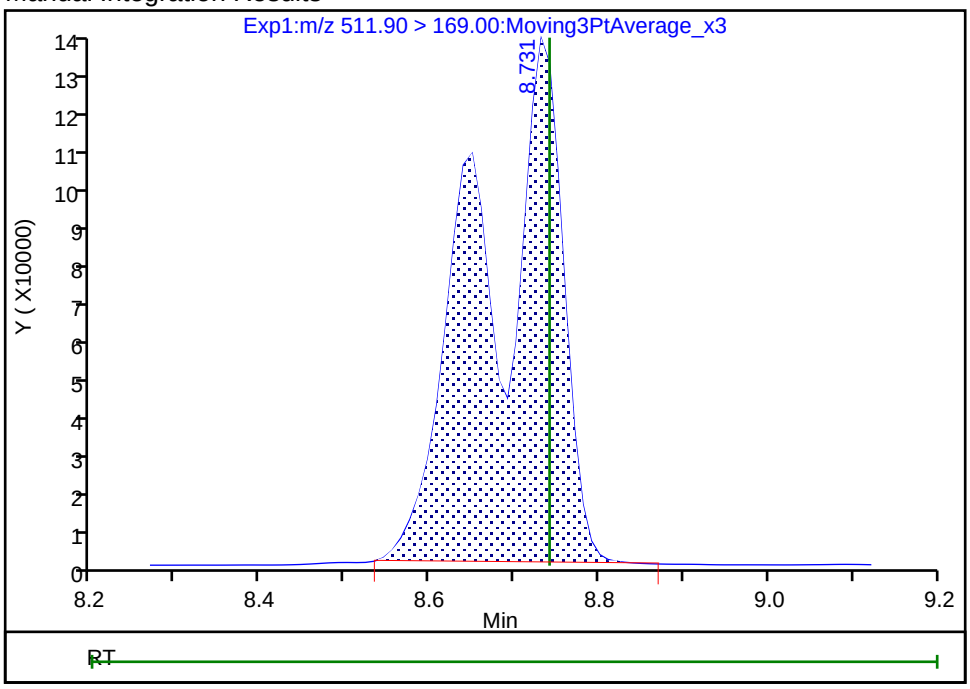
Processing Integration Results

RT: 8.65
Area: 421490
Amount: 1.214178
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 854106
Amount: 1.209827
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:08:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

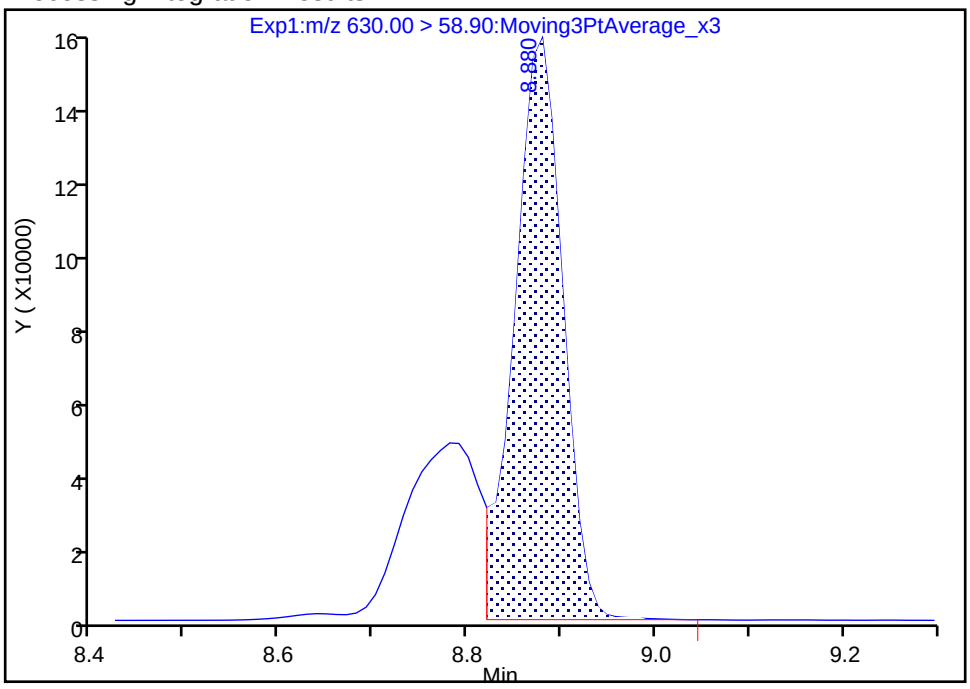
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

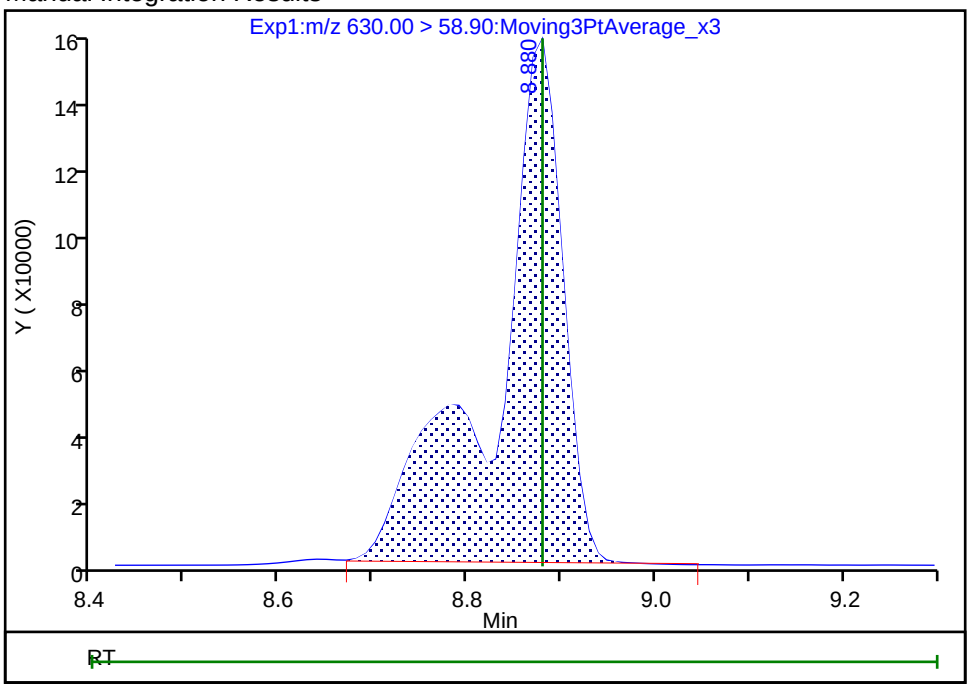
Processing Integration Results

RT: 8.88
Area: 550824
Amount: 12.266113
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 786305
Amount: 12.227178
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:08:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

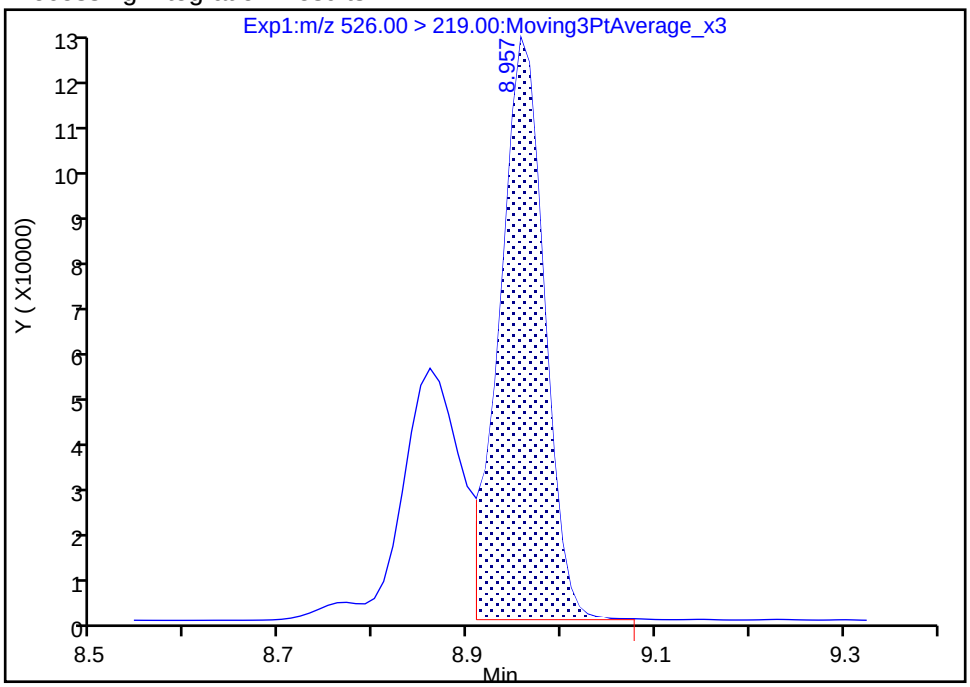
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d
Injection Date: 10-Sep-2024 18:07:11 Instrument ID: LCMS04
Lims ID: ICISAV CAL 5
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

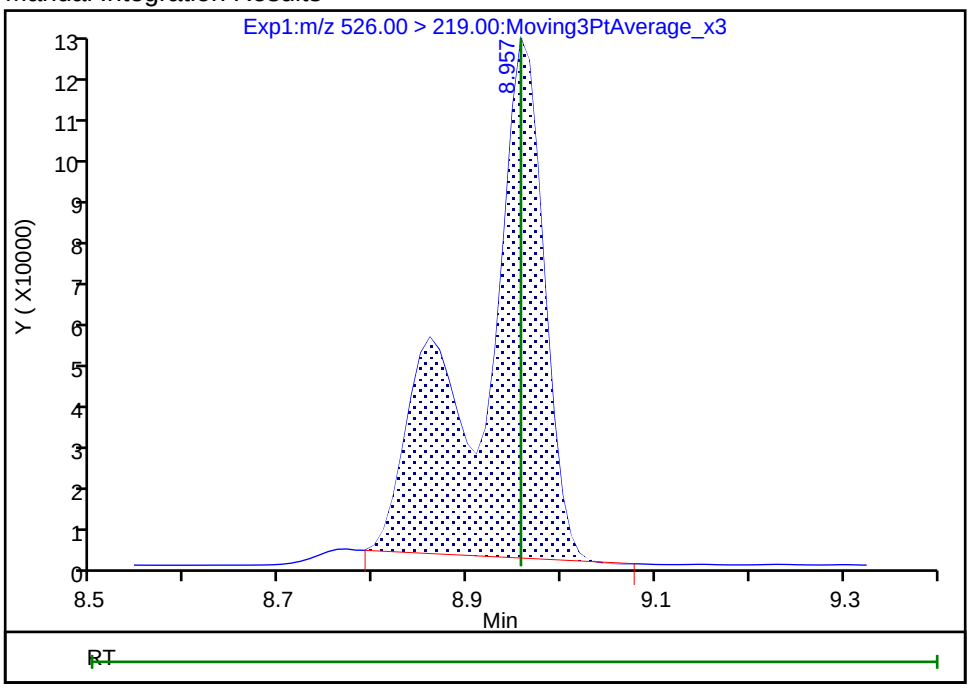
Processing Integration Results

RT: 8.96
Area: 417023
Amount: 1.162607
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 614211
Amount: 1.177129
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:08:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

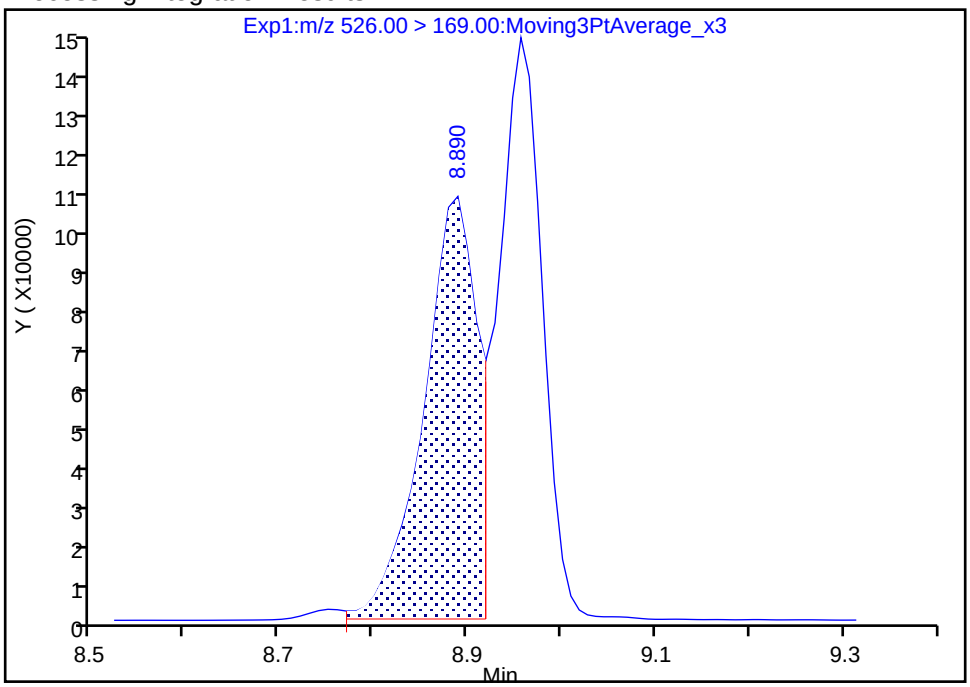
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj05.d				
Injection Date:	10-Sep-2024 18:07:11	Instrument ID:	LCMS04		
Lims ID:	ICISAV CAL 5				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	5
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

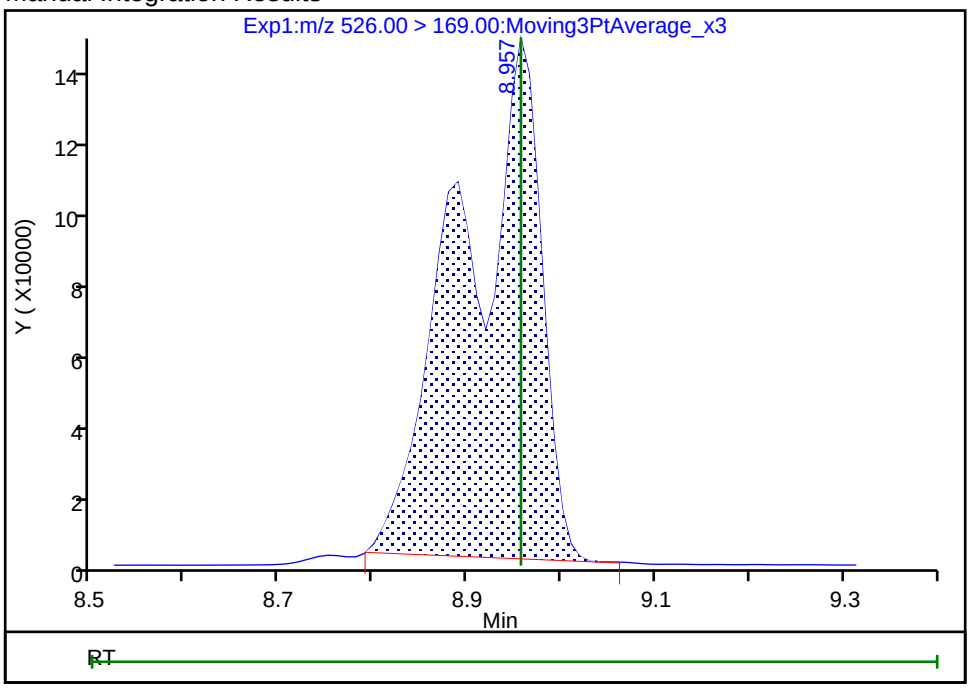
Processing Integration Results

RT: 8.89
Area: 424934
Amount: 1.162607
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 867323
Amount: 1.177129
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:09:03 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Lims ID: IC CAL 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Sep-2024 18:20:47 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 6
Misc. Info.: Plate: 2 Rack: 1 240-0146069-006
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:02:37 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:39:39
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.576	-0.003		2069709	1.25			775	
* 2 13C2 PFHxA										
315.10 > 270.00	4.744	4.750	-0.006		1253990	0.6250			5385	
* 3 13C4 PFOA										
417.10 > 172.00	5.652	5.648	0.004		250079	0.6250			2144	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.872	0.006		1610871	0.5913			4510	
* 5 13C5 PFNA										
468.00 > 423.00	6.076	6.081	-0.005		914558	0.3125			1865	
* 6 13C2 PFDA										
515.10 > 470.10	6.521	6.517	0.004		706099	0.3125			2440	
* 7 13C4 PFOS										
502.80 > 79.90	6.782	6.788	-0.006		1418005	0.5975	Target=4.00		2640	
502.80 > 98.90	6.782	6.788	-0.006		350103		4.05(2.00-6.01)		1486	
D 8 13C4 PFBA										
216.80 > 171.90	3.573	3.568	0.005	1.000	3900808	2.08		83.0	16703	
D 9 13C5 PFPeA										
268.30 > 223.00	4.225	4.229	-0.004	0.891	1572834	1.00		79.9	6526	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.544	4.550	-0.006	0.773	828359	0.9081	Target=0.31	77.8	2973	
329.10 > 309.00	4.544	4.550	-0.006	0.773	3831047		0.22(0.16-0.47)	77.8	1114	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.750	-0.006	1.000	1418415	0.5031	Target=39.15	80.5	4548	
318.00 > 120.30	4.744	4.750	-0.006	1.000	34629		40.96(19.57-58.72)	80.5	569	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.878	-0.007	0.829	1457945	0.5006	Target=3.27	86.1	3648	
302.10 > 98.90	4.871	4.878	-0.007	0.829	443809		3.29(1.63-4.90)	86.1	2539	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.943	-0.007	1.040	1646590	2.03	Target=1.96	81.2	5383	
286.90 > 184.90	4.936	4.943	-0.007	1.040	809771		2.03(0.98-2.94)	81.2	1522	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.215	-0.008	1.098	1560836	0.5301		84.8	5102	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.440	5.436	0.004	0.925	965108	0.9241	Target=0.40	77.8	1806	
429.10 > 409.00	5.440	5.436	0.004	0.925	3463611		0.28(0.20-0.59)	77.8	5561	
D 16 13C8 PFOA										
421.10 > 376.00	5.642	5.648	-0.006	0.998	1576389	0.4995		79.9	3262	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.872	0.006	1.000	1403826	0.4909	Target=3.38	83.0	2860	
402.10 > 98.80	5.868	5.872	-0.004	0.998	413843		3.39(1.69-5.07)	83.0	2111	
D 18 13C9 PFNA										
472.10 > 427.00	6.076	6.081	-0.005	1.000	565828	0.2465		78.9	2149	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.280	6.277	0.003	1.068	662557	0.9260	Target=0.34	77.3	2920	
529.10 > 509.00	6.280	6.277	0.003	1.068	2700649		0.25(0.17-0.51)	77.3	6977	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.462	6.458	0.004	0.953	1168426	1.06		85.1	4068	
D 21 13C6 PFDA										
519.10 > 474.10	6.511	6.517	-0.006	0.999	587530	0.2702		86.5	1827	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.657	6.653	0.004	0.982	1152029	1.07		85.3	2563	
D 23 13C8 PFOS										
507.10 > 79.90	6.791	6.788	0.003	1.001	1221723	0.4997	Target=4.08	83.6	215	
507.10 > 98.90	6.782	6.788	-0.006	1.000	303801		4.02(2.04-6.12)	83.6	846	
D 24 13C7 PFUnA										
570.00 > 525.10	6.951	6.957	-0.006	1.066	506698	0.2368		75.8	1212	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.379	7.384	-0.005	1.132	539982	0.2673		85.6	1510	
D 26 13C8 FOSA										
506.10 > 77.80	7.724	7.732	-0.008	1.139	1367477	0.5211		83.4	4251	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.204	8.202	0.002	1.258	271362	0.2350		75.2	734	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.609	8.608	0.001	1.269	2015962	5.18		82.9	708	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.723	8.731	-0.008	1.286	264806	0.5117		81.9	1158	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.852	8.860	-0.008	1.305	2547576	5.34		85.4	1203	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.948	0.001	1.320	258526	0.4956		79.3	194	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.582	3.576	0.006	1.002	20811580	14.0		112	231	M
34 3:3 FTCA										
241.00 > 177.00	3.863	3.866	-0.003	0.914	1349635	17.8	Target=1.04	114	8831	
241.00 > 117.00	3.863	3.866	-0.003	0.914	1271173		1.06(0.52-1.56)	114	302	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.863	3.866	-0.003	0.914	12463407	7.21		115	10732	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.235	4.229	0.006	1.002	13520420	7.01		112	1563	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.405	4.410	-0.005	1.043	13225762	7.25		116	22104	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.555	4.550	0.005	1.002	25848741	12.2	Target=1.37	104	215216	
327.10 > 80.90	4.555	4.550	0.005	1.002	18493501		1.40(0.68-2.05)	104	8296	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.701	4.707	-0.006	0.991	1308236	6.56	Target=1.54	105	6187	
295.00 > 84.90	4.701	4.707	-0.006	0.991	773083		1.69(0.77-2.31)	105	2745	
48 FBSA										
297.90 > 78.00	4.744	4.740	0.004	0.974	23089356	13.5		108	9559	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.754	4.750	0.004	1.002	6217363	3.45	Target=14.09	110	967	
313.00 > 118.90	4.754	4.750	0.004	1.002	459450		13.53(7.04-21.13)	110	2472	
41 5:3 FTCA										
341.00 > 237.10	4.827	4.834	-0.007	1.018	29094741	90.6	Target=1.54	116	24215	
341.00 > 217.00	4.827	4.834	-0.007	1.018	17881382		1.63(0.77-2.31)	116	9528	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.882	4.878	0.004	1.002	7238246	2.97	Target=3.32	108	8637	
298.70 > 98.80	4.871	4.878	-0.007	1.000	2134370		3.39(1.66-4.97)	108	4621	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.947	4.943	0.004	1.002	9939514	13.7	Target=1.98	110	8768	
284.90 > 184.90	4.947	4.943	0.004	1.002	5113250		1.94(0.99-2.97)	110	6785	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.137	5.144	-0.007	1.083	41290615	6.22	Target=12.50	112	129834	
314.80 > 82.90	5.137	5.144	-0.007	1.083	3250747		12.70(6.25-18.75)	112	4693	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.218	5.215	0.003	1.002	9342519	3.46	Target=3.89	111	1141	
363.10 > 169.00	5.218	5.215	0.003	1.002	2267439		4.12(1.95-5.84)	111	4352	
49 DONA										
376.90 > 250.90	5.389	5.385	0.004	1.092	46874243	13.3	Target=1.56	113	86351	
376.90 > 84.80	5.379	5.385	-0.006	1.090	30806563		1.52(0.78-2.34)	113	16251	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.410	5.406	0.004	0.920	8036102	3.30	Target=3.17	112	3246	
349.10 > 98.90	5.400	5.406	-0.006	0.919	2526943		3.18(1.58-4.75)	112	7676	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.440	5.445	-0.005	1.000	23899121	12.4	Target=1.44	104	20684	
427.10 > 80.90	5.440	5.445	-0.005	1.000	17079877		1.40(0.72-2.15)	104	15287	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.652	5.657	-0.005	1.002	4138631	3.42	Target=2.01	109	371	M
413.00 > 169.00	5.652	5.657	-0.005	1.002	2169399		1.91(1.00-3.01)	109	1409	M
54 7:3 FTCA										
441.00 > 316.90	5.708	5.713	-0.005	1.203	26885930	87.6	Target=1.06	112	12180	
441.00 > 336.90	5.708	5.713	-0.005	1.203	25830390		1.04(0.53-1.58)	112	17199	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.882	-0.004	1.000	6471601	3.19	Target=3.33	112	2955	M
398.70 > 98.90	5.878	5.882	-0.004	1.000	1868424		3.46(1.66-4.99)	112	2016	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.086	6.091	-0.005	1.002	4708733	3.43	Target=4.97	110	594	M
463.00 > 169.00	6.086	6.091	-0.005	1.002	920656		5.11(2.49-7.46)	110	378	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.280	6.286	-0.006	1.000	17546984	12.7	Target=1.32	106	6856	
527.10 > 80.80	6.280	6.286	-0.006	1.000	13145368		1.33(0.66-1.98)	106	11930	
57 PFECHS										
461.00 > 381.00	6.289	6.286	0.003	1.070	25178087	6.27	Target=1.88	109	3081	
461.00 > 99.00	6.289	6.286	0.003	1.070	13523739		1.86(0.94-2.81)	109	5895	
62 FHxSA										
397.90 > 78.00	6.298	6.305	-0.007	1.072	32406193	13.6		109	11785	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.336	6.342	-0.006	0.933	7870303	3.29	Target=3.89	110	2757	
449.00 > 98.80	6.336	6.342	-0.006	0.933	1981086		3.97(1.95-5.84)	110	3523	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.462	6.469	-0.007	1.000	3416179	3.32	Target=1.69	106	2418	M
570.10 > 483.00	6.462	6.469	-0.007	1.000	2048761		1.67(0.85-2.54)	106	1200	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.521	6.527	-0.006	1.001	4739278	3.18	Target=4.63	102	609	
512.90 > 219.00	6.521	6.527	-0.006	1.001	1135910		4.17(2.32-6.95)	102	3152	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.666	6.672	-0.006	1.001	2603603	3.38	Target=1.55	108	3072	M
584.20 > 526.00	6.666	6.672	-0.006	1.001	1708225		1.52(0.78-2.33)	108	1261	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.791	6.788	0.003	1.000	8200902	3.19	Target=4.64	110	1561	M
498.90 > 98.80	6.791	6.788	0.003	1.000	1715835		4.78(2.32-6.96)	110	2813	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.959	6.965	-0.006	1.001	5463118	3.74	Target=6.10	120	1610	
563.10 > 269.10	6.959	6.965	-0.006	1.001	904963		6.04(3.05-9.15)	120	3032	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.129	7.127	0.002	1.444	41235234	13.2	Target=3.09	113	16716	
532.80 > 353.00	7.121	7.127	-0.006	1.443	13203833		3.12(1.54-4.63)	113	8904	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.229	7.226	0.003	1.064	6456986	3.31	Target=4.11	110	3759	
548.80 > 98.80	7.229	7.226	0.003	1.064	1559901		4.14(2.06-6.17)	110	5247	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.387	7.384	0.003	1.001	5699069	3.33	Target=18.06	107	1927	
613.10 > 319.00	7.387	7.384	0.003	1.001	325822		17.49(9.03-27.08)	107	1895	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.650	7.655	-0.005	1.126	7407397	3.36	Target=4.27	112	6359	
599.00 > 98.80	7.650	7.655	-0.005	1.126	1706988		4.34(2.14-6.41)	112	5998	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.724	7.732	-0.008	1.000	7092638	3.45	Target=46.53	110	768	M
498.10 > 478.00	7.724	7.732	-0.008	1.000	150977		46.98(23.26-69.79)	110	701	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.809	7.807	0.002	0.952	5480277	3.48	Target=6.29	111	1703	
663.00 > 168.90	7.798	7.807	-0.009	0.951	815919		6.72(3.14-9.43)	111	3123	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.978	7.975	0.003	1.616	38908057	12.8	Target=3.20	109	16043	
632.90 > 452.90	7.967	7.975	-0.008	1.614	12397543		3.14(1.60-4.79)	109	14503	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.204	8.213	-0.009	1.000	4009428	3.68	Target=7.27	118	1969	
713.10 > 168.90	8.204	8.213	-0.009	1.000	566740		7.07(3.64-10.91)	118	3293	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.427	8.424	0.003	1.241	6420708	3.44	Target=4.58	114	4937	
699.10 > 98.80	8.427	8.424	0.003	1.241	1374217		4.67(2.29-6.87)	114	3555	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.630	8.629	0.001	1.002	1683423	35.3		113	1261	M
75 NMeFOSA										M
511.90 > 219.00	8.733	8.741	-0.008	1.001	1477817	3.58	Target=0.71	115	896	M
511.90 > 169.00	8.733	8.741	-0.008	1.001	2033485		0.73(0.35-1.06)	115	1689	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.871	8.880	-0.009	1.002	1875843	34.1		109	1044	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.958	8.957	0.001	1.001	1468819	3.60	Target=0.70	115	632	M
526.00 > 169.00	8.958	8.957	0.001	1.001	2113984		0.69(0.35-1.05)	115	965	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

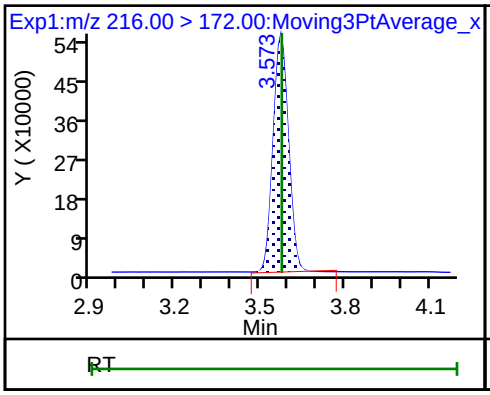
CAL 6_00014 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:02:39 Chrom Revision: 2.3 26-Aug-2024 17:14:48

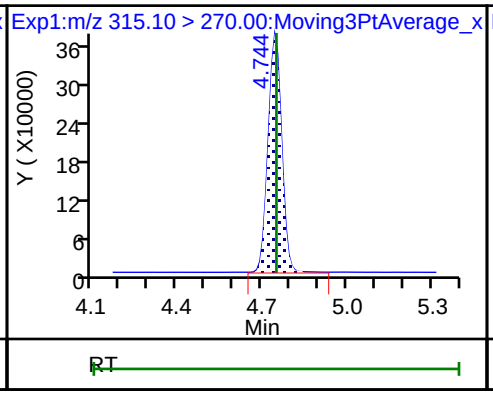
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

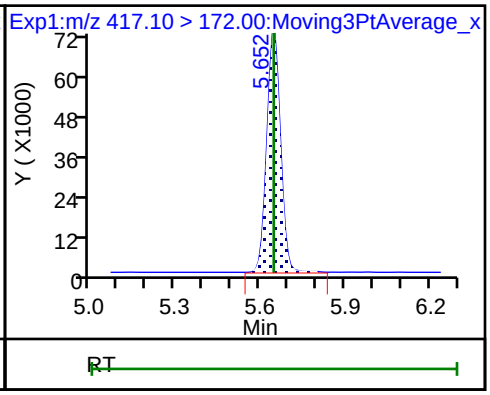
* 1 13C3-PFBA



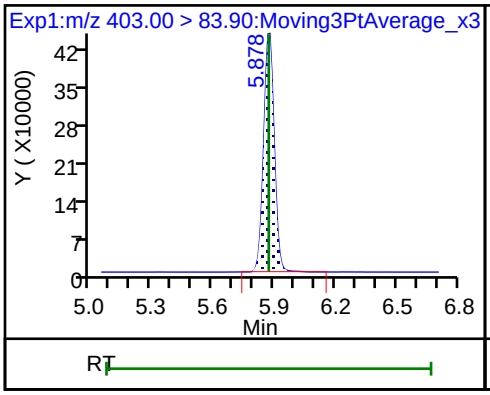
* 2 13C2 PFHxA



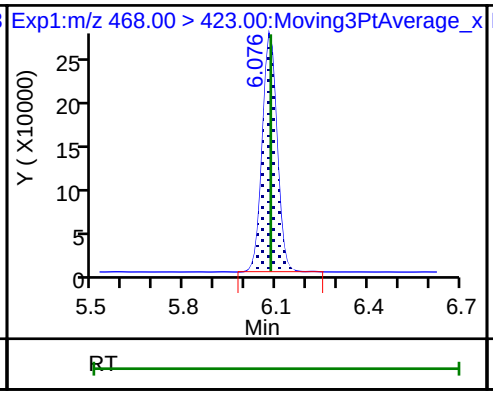
* 3 13C4 PFOA



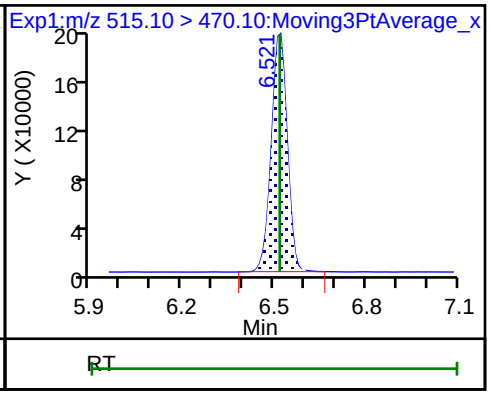
* 4 18O2 PFHxS



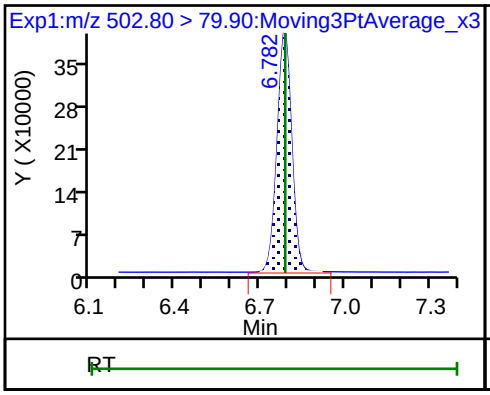
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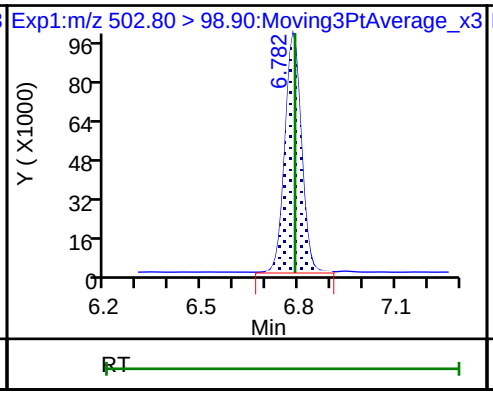
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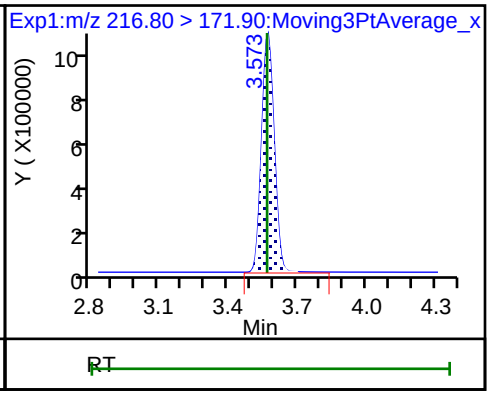
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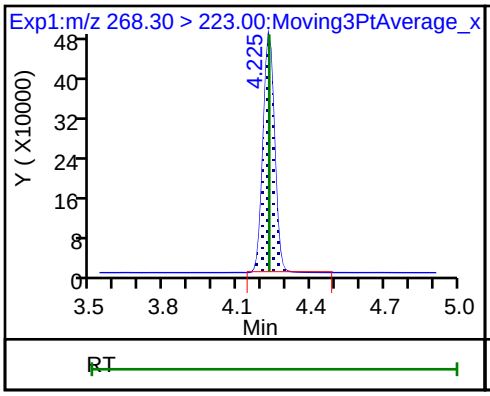
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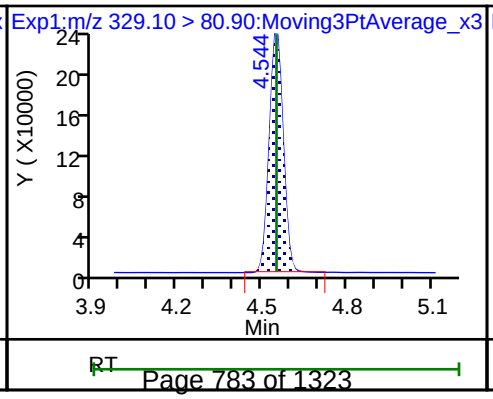
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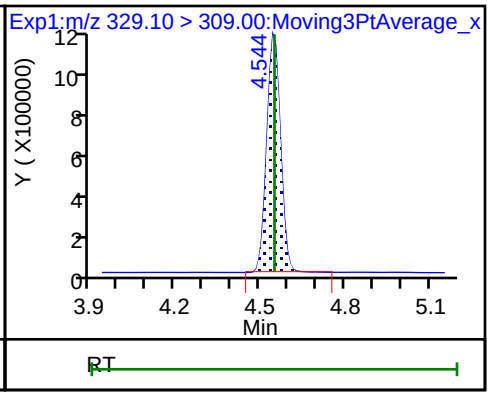
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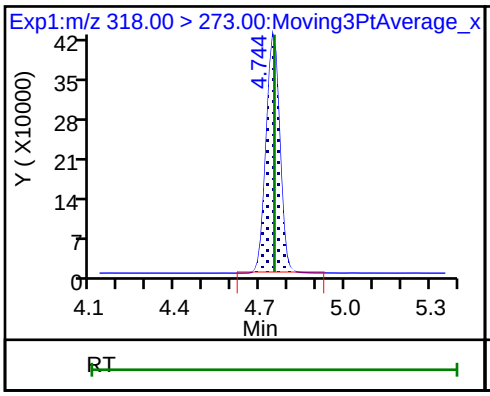
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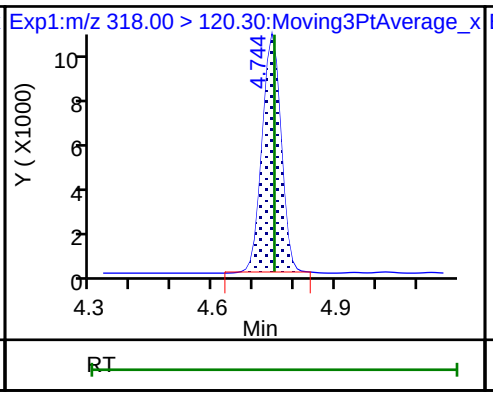
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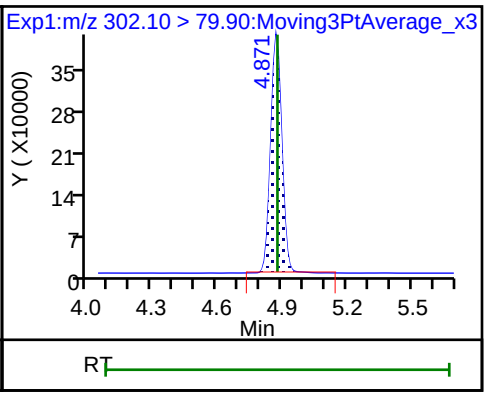
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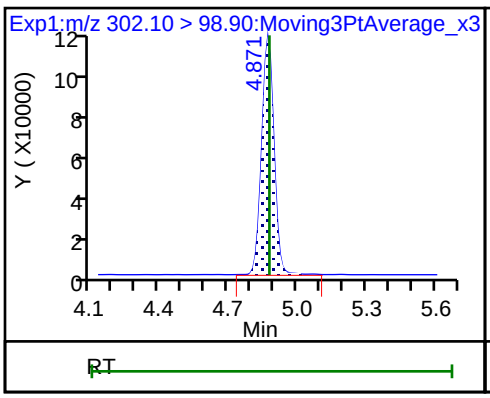
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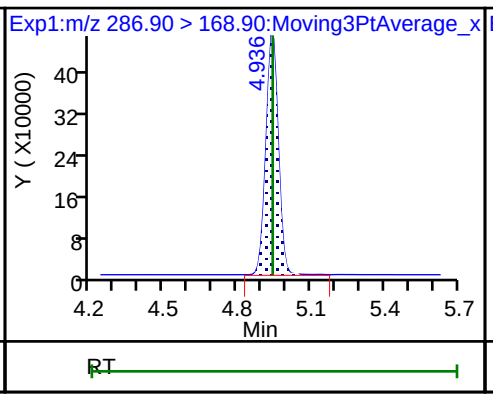
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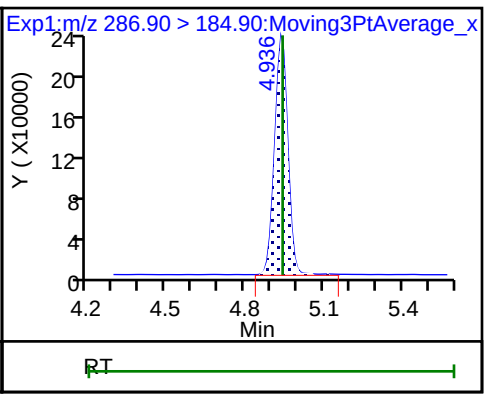
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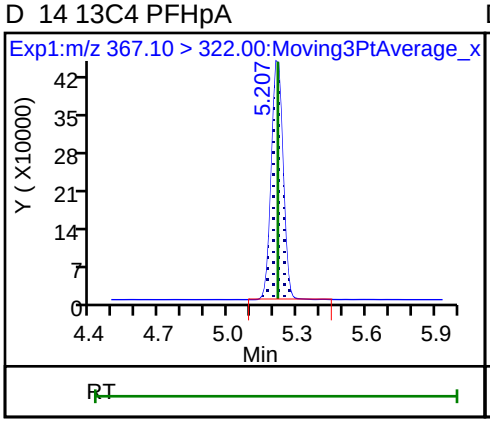
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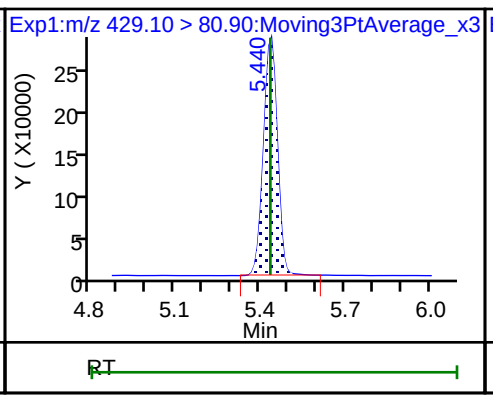
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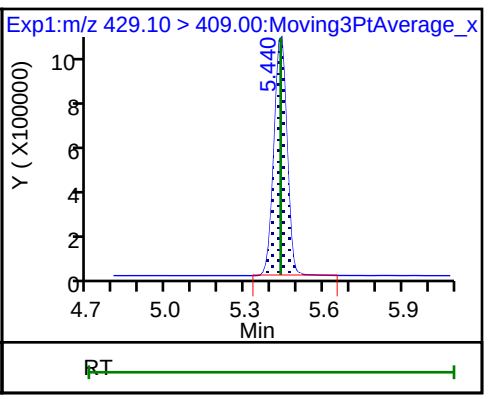
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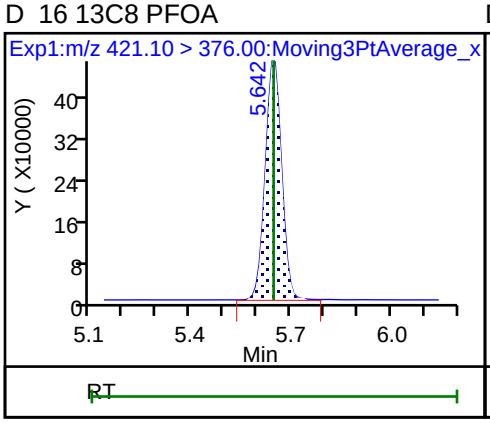
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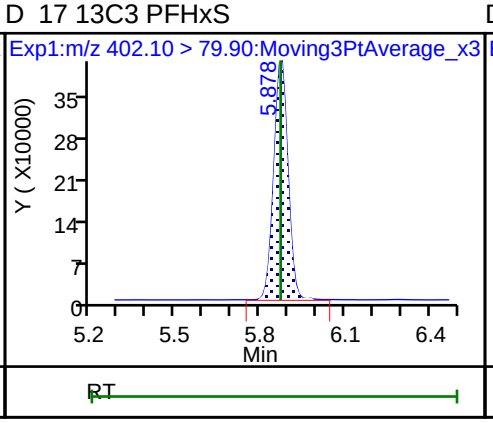
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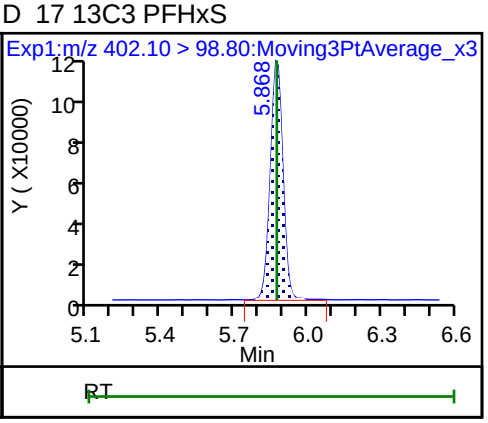
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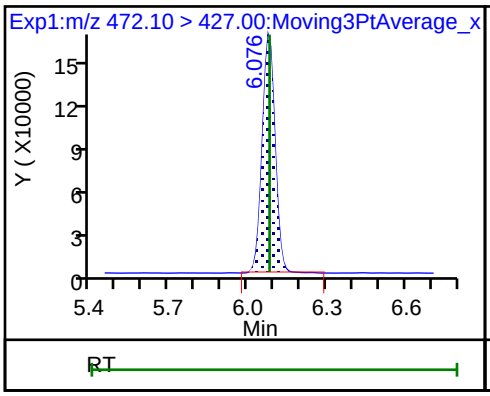
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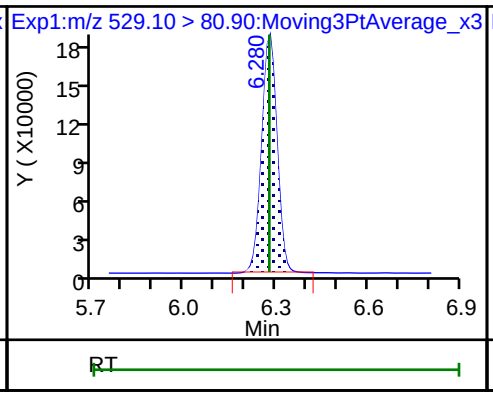
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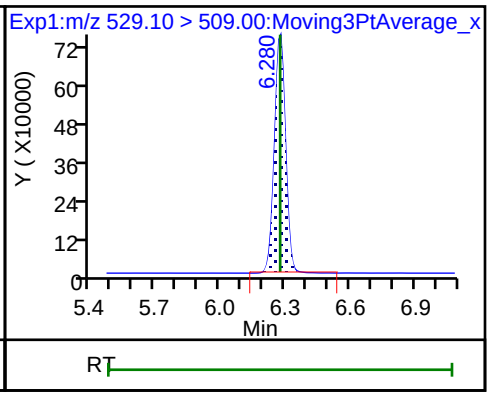
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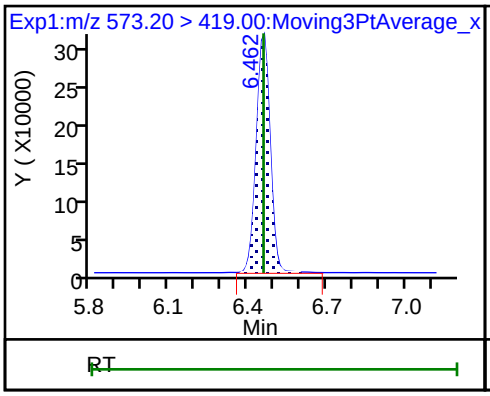
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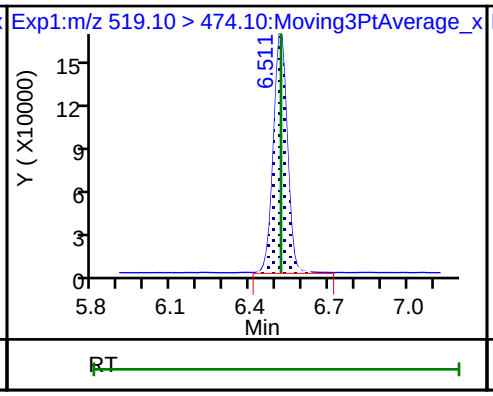
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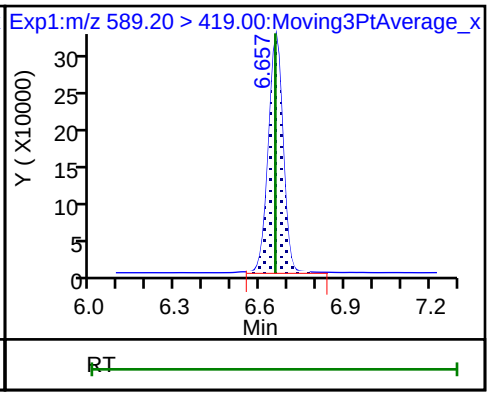
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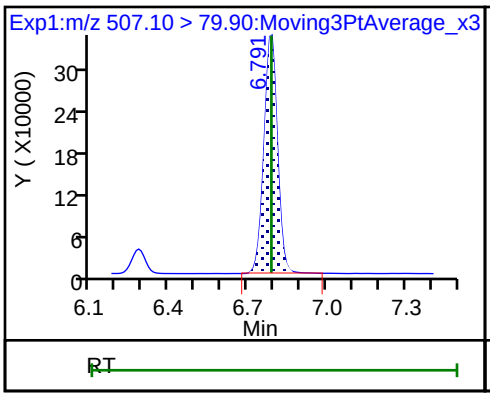
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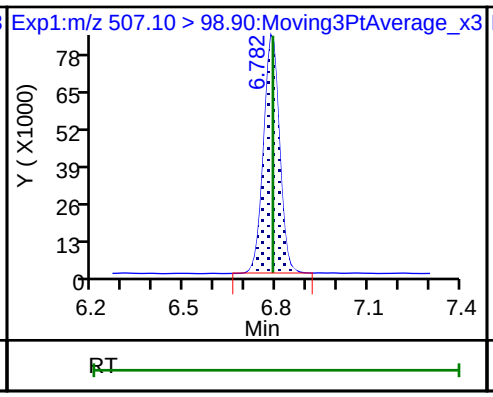
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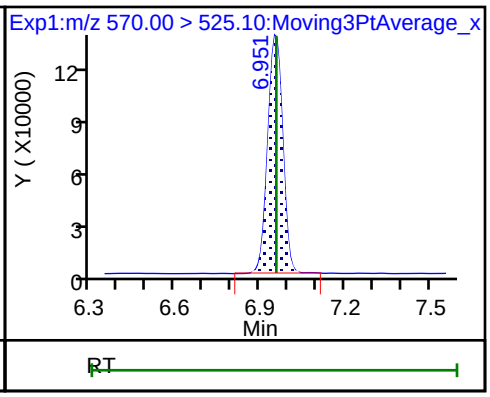
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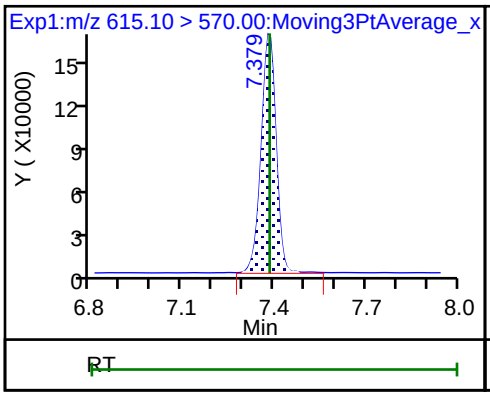
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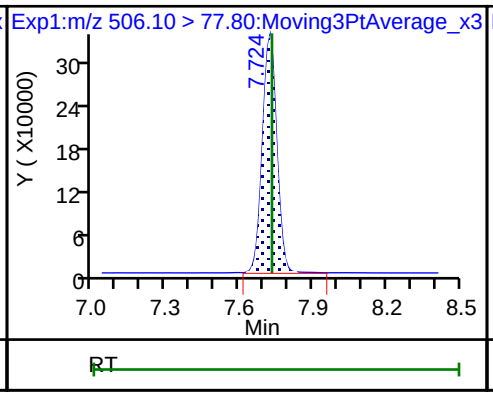
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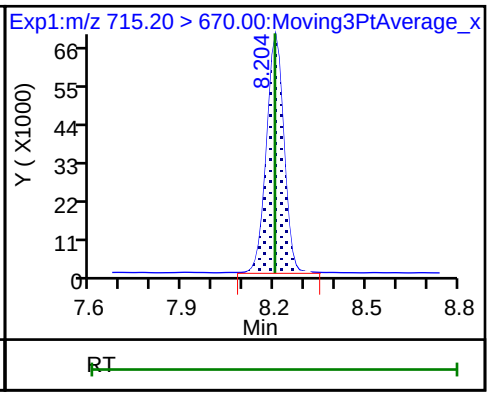
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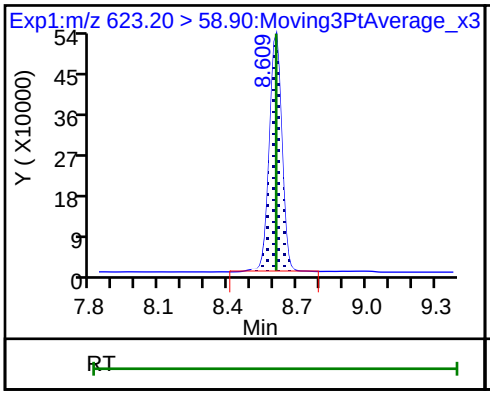
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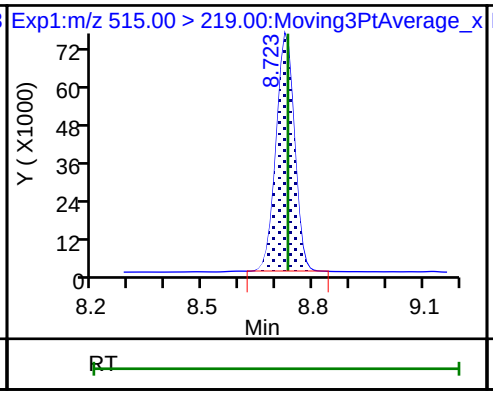
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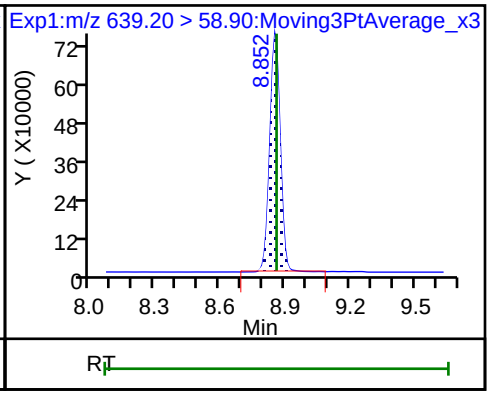
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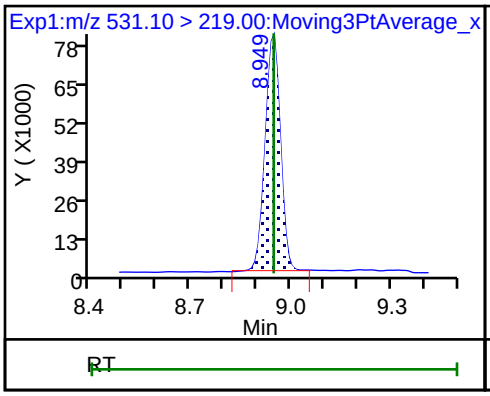
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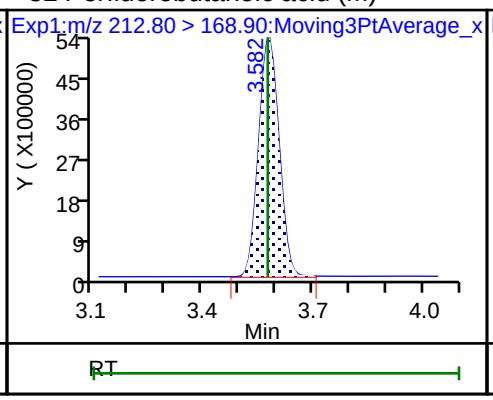
D 30 d9-N-EtFOSE-M



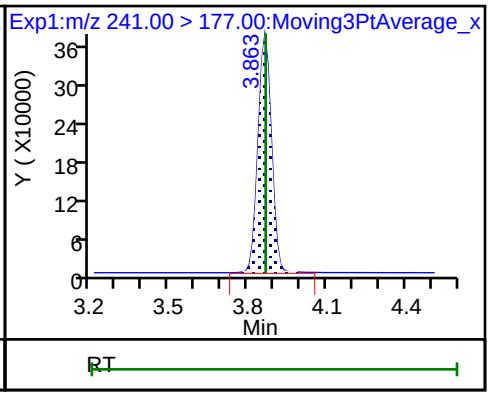
D 31 d5-NEtPFOSA



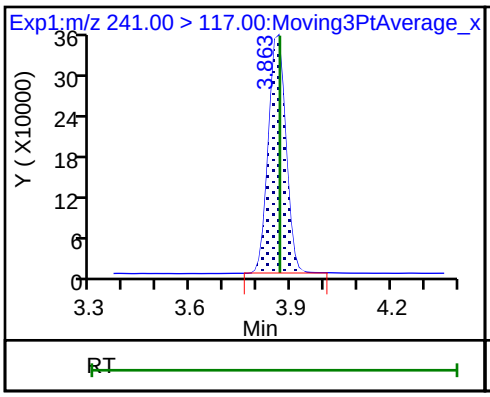
32 Perfluorobutanoic acid (M)



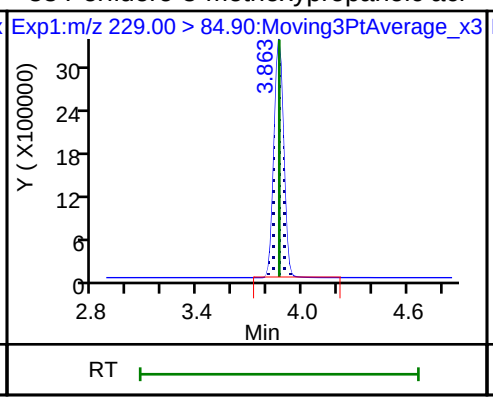
34 3:3 FTCA



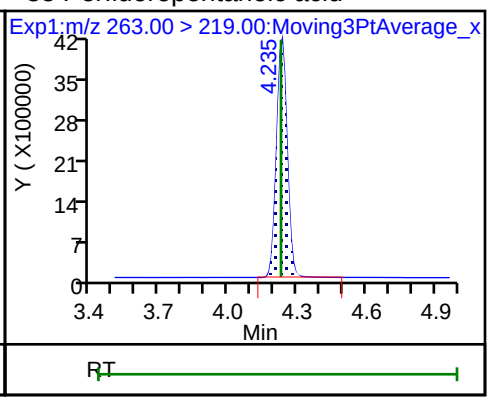
34 3:3 FTCA



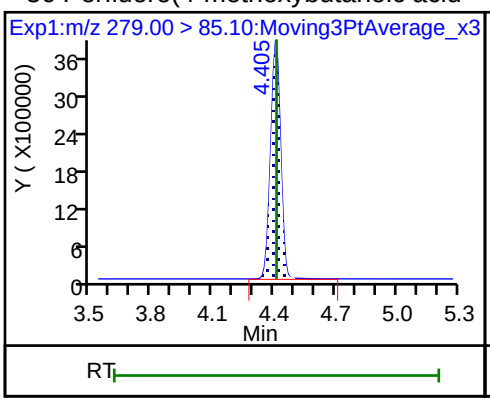
33 Perfluoro-3-methoxypropanoic aci



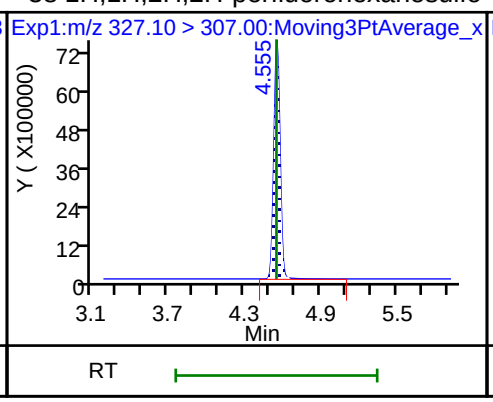
35 Perfluoropentanoic acid



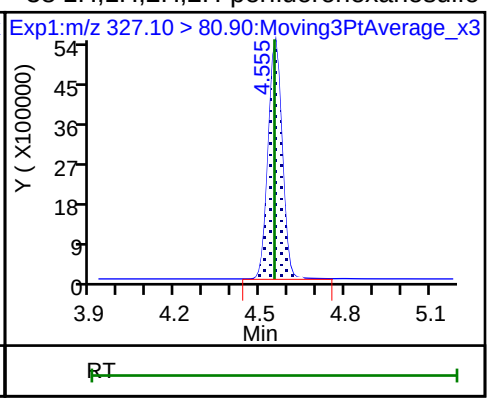
36 Perfluoro(4-methoxybutanoic acid



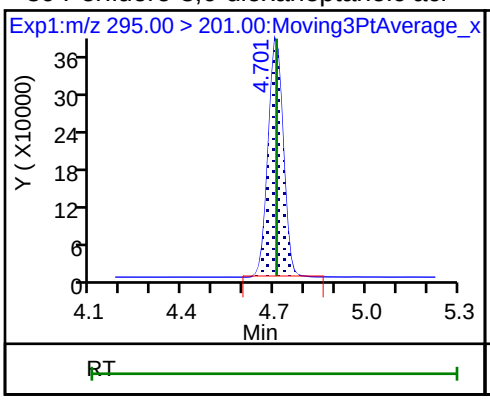
38 1H,1H,2H,2H-perfluorohexanesulfo



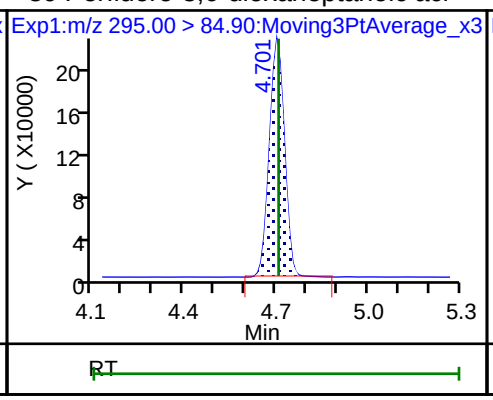
38 1H,1H,2H,2H-perfluorohexanesulfo



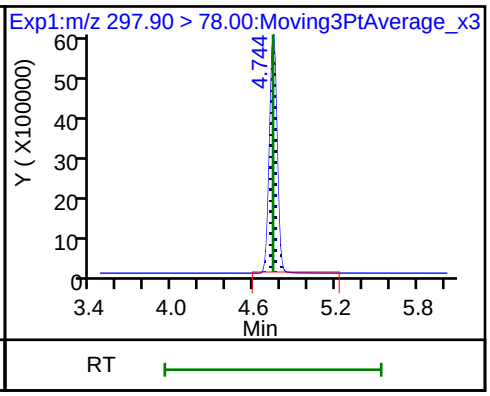
39 Perfluoro-3,6-dioxaheptanoic aci



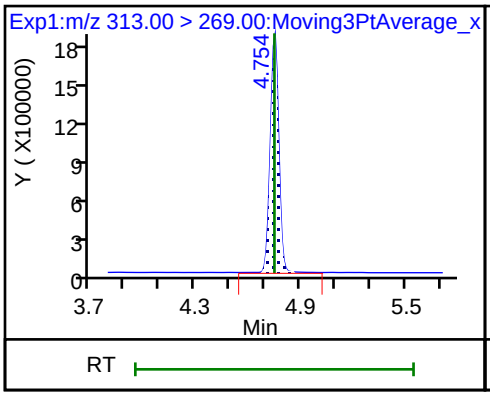
39 Perfluoro-3,6-dioxaheptanoic aci



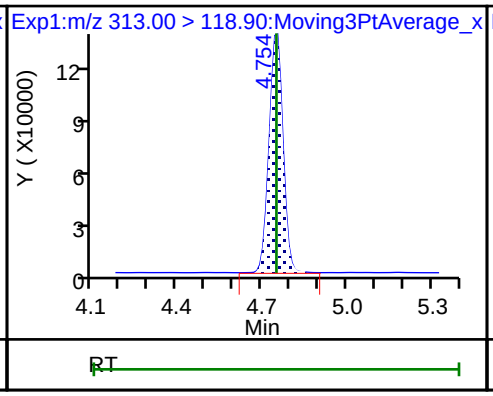
48 FBSA



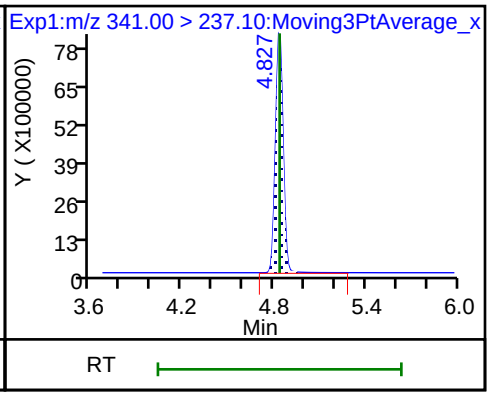
40 Perfluorohexanoic acid



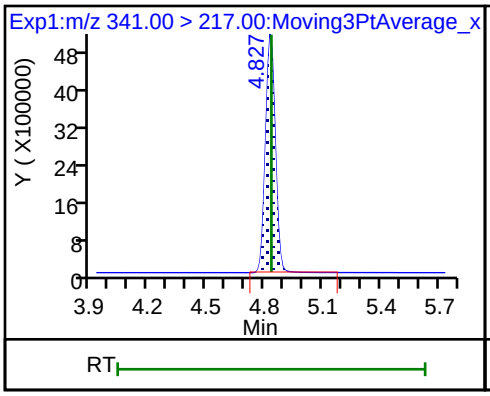
40 Perfluorohexanoic acid



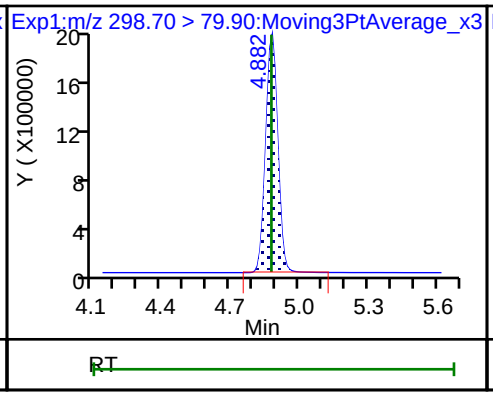
41 5:3 FTCA



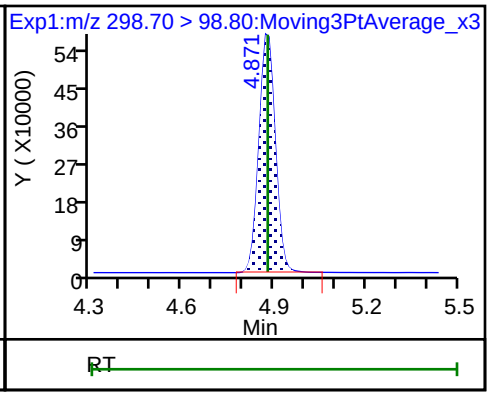
41 5:3 FTCA



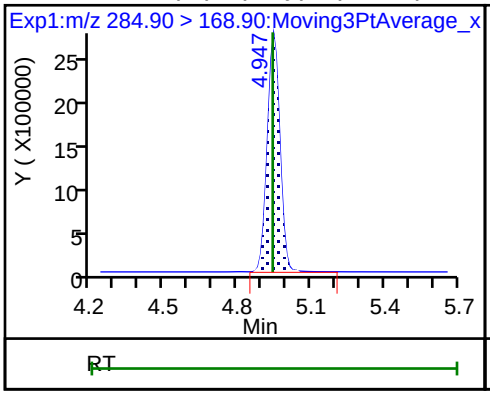
42 Perfluorobutanesulfonic acid



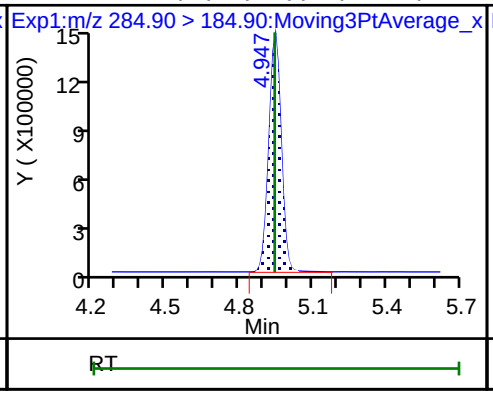
42 Perfluorobutanesulfonic acid



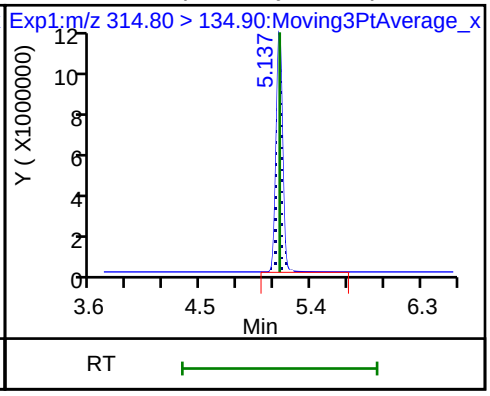
43 Perfluoro(2-propoxypropanoic) ac



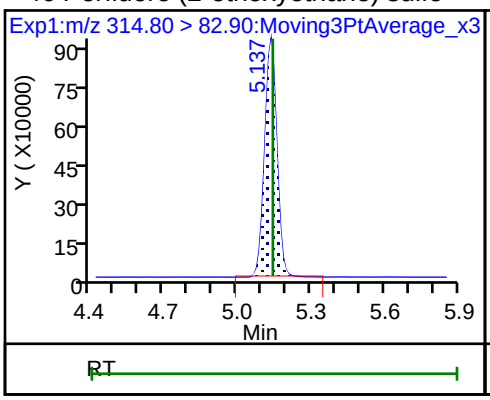
43 Perfluoro(2-propoxypropanoic) ac



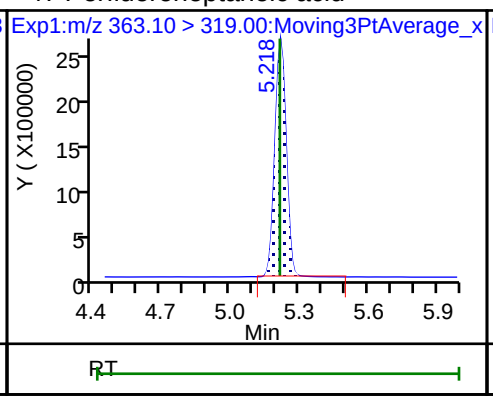
46 Perfluoro (2-ethoxyethane) sulfo



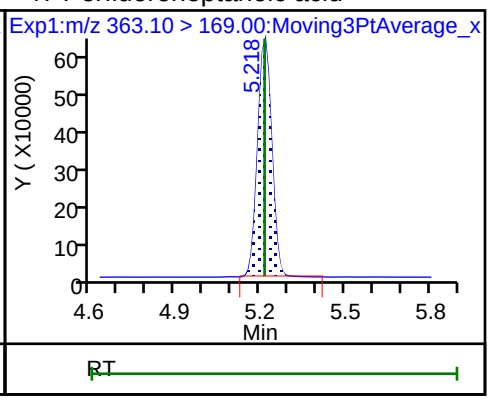
46 Perfluoro (2-ethoxyethane) sulfo



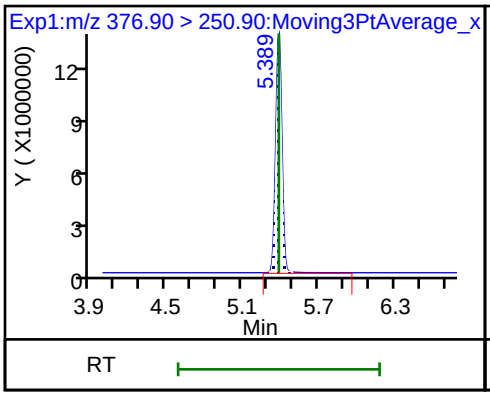
47 Perfluoroheptanoic acid



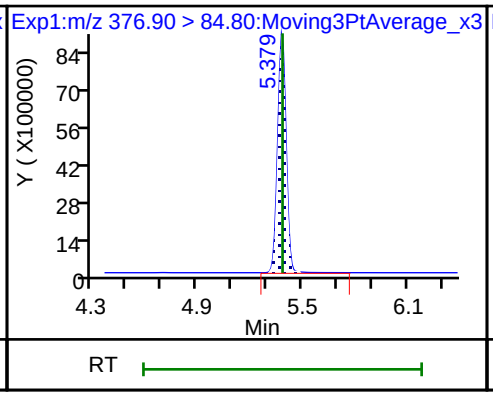
47 Perfluoroheptanoic acid



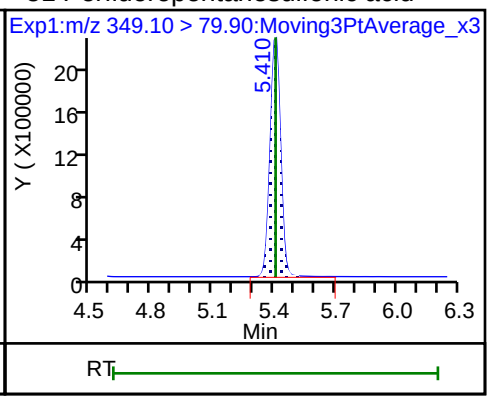
49 DONA



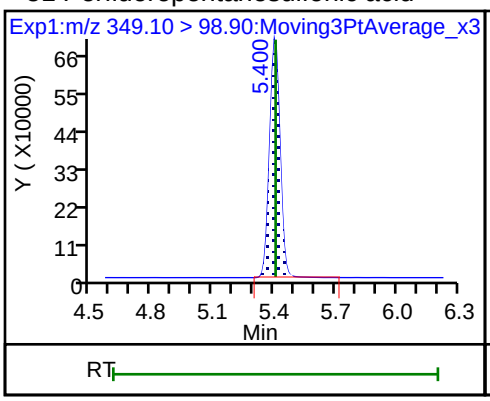
49 DONA



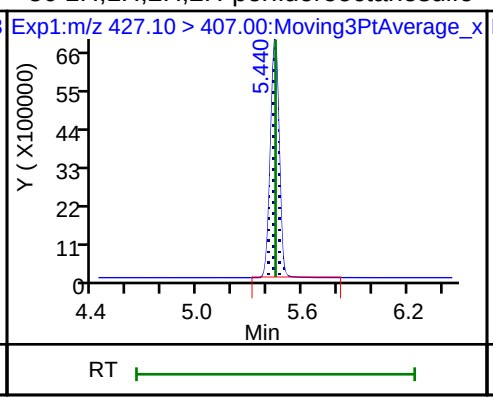
51 Perfluoropentanesulfonic acid



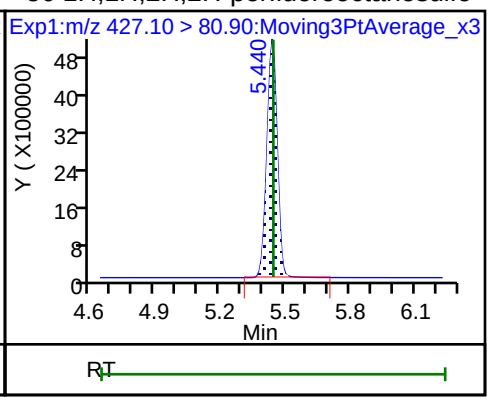
51 Perfluoropentanesulfonic acid



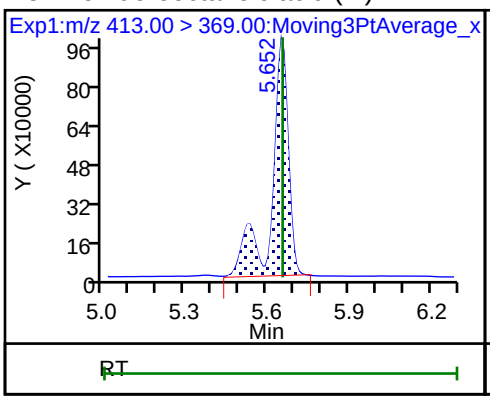
50 1H,1H,2H,2H-perfluorooctanesulfo



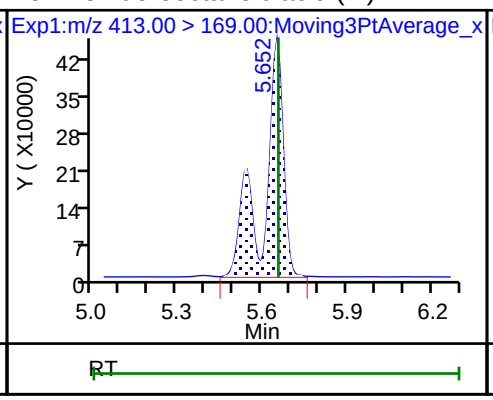
50 1H,1H,2H,2H-perfluorooctanesulfo



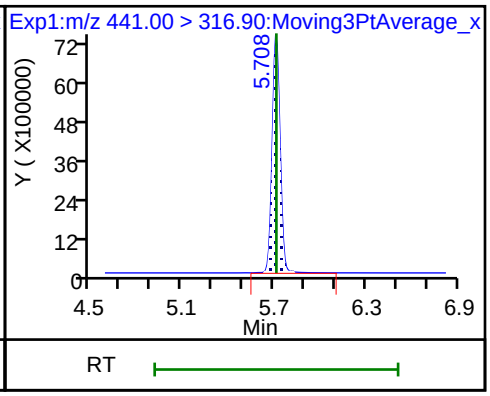
52 Perfluorooctanoic acid (M)



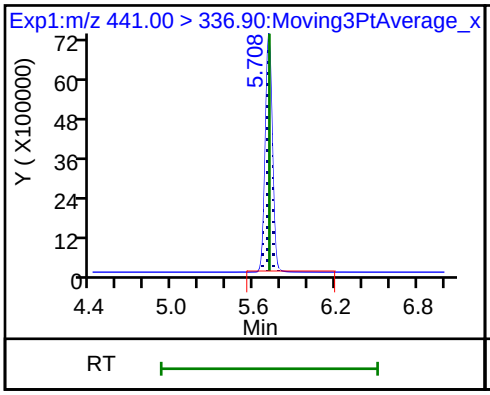
52 Perfluorooctanoic acid (M)



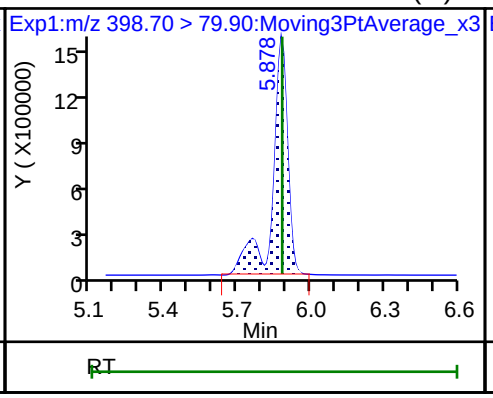
54 7:3 FTCA



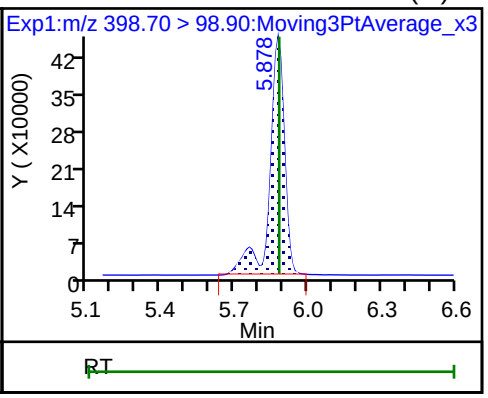
54 7:3 FTCA



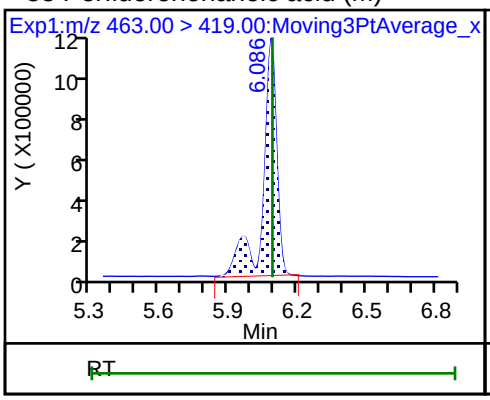
53 Perfluorohexanesulfonic acid (M)



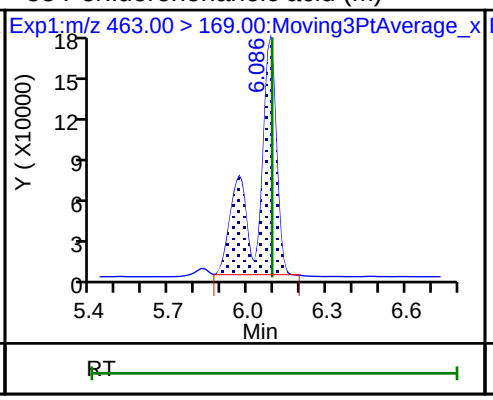
53 Perfluorohexanesulfonic acid (M)



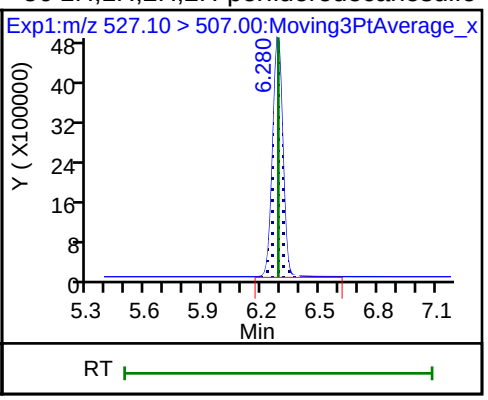
55 Perfluorononanoic acid (M)



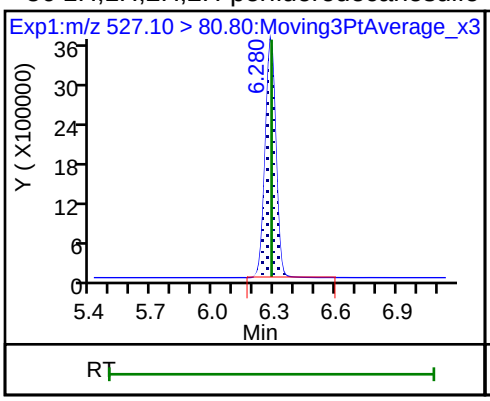
55 Perfluorononanoic acid (M)



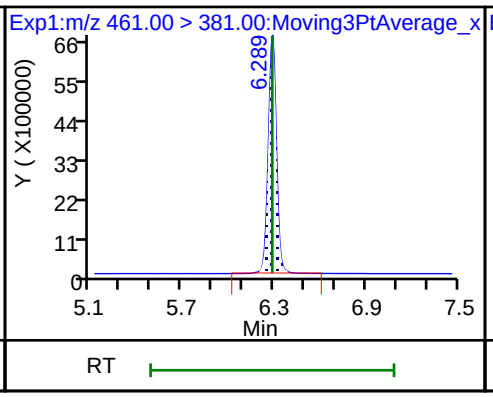
56 1H,1H,2H,2H-perfluorodecanesulfo



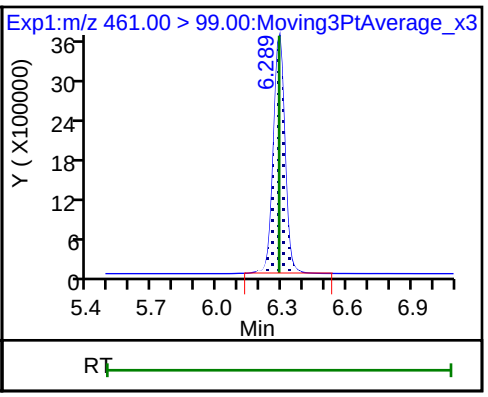
56 1H,1H,2H,2H-perfluorodecanesulfo



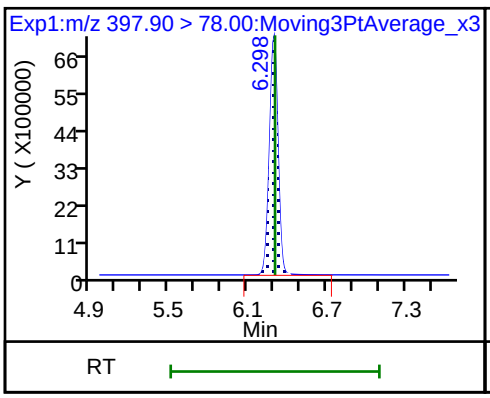
57 PFECHS



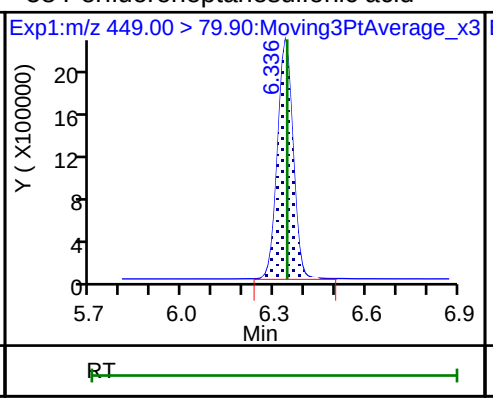
57 PFECHS



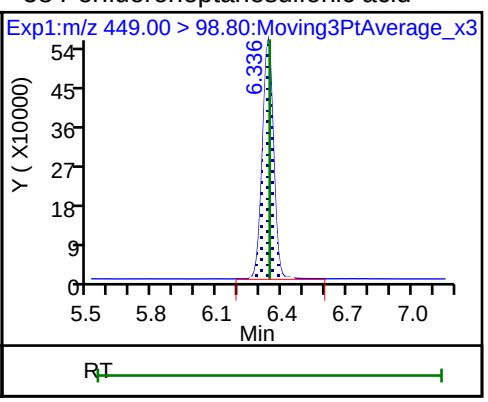
62 FHxSA



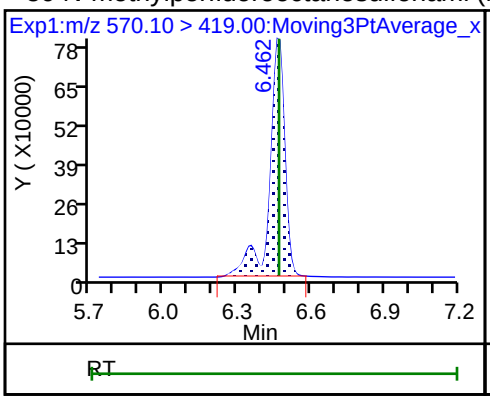
58 Perfluoroheptanesulfonic acid



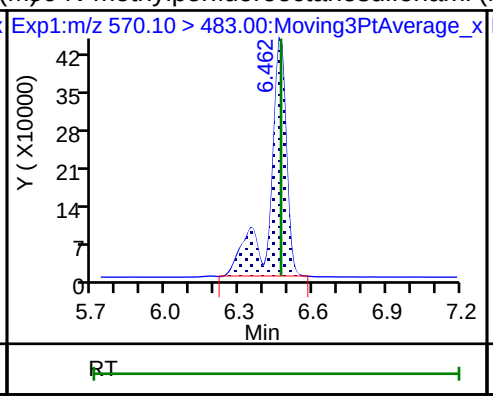
58 Perfluoroheptanesulfonic acid



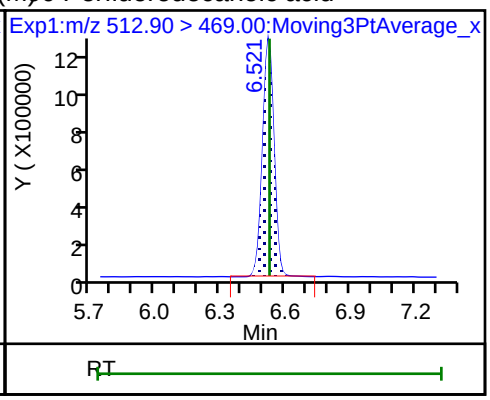
59 N-methylperfluorooctanesulfonami (M)



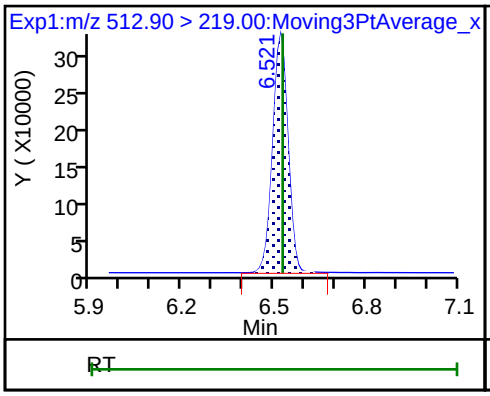
59 N-methylperfluorooctanesulfonami (M)



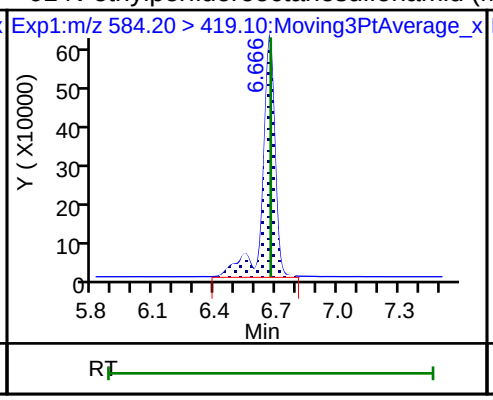
60 Perfluorodecanoic acid



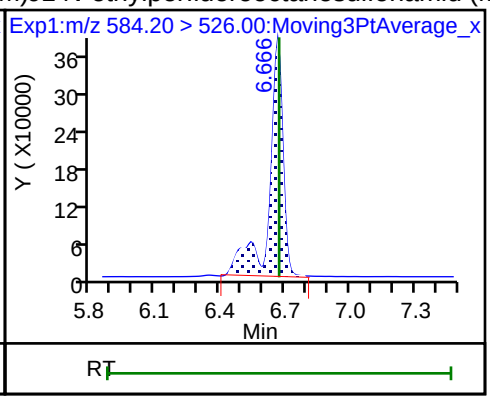
60 Perfluorodecanoic acid



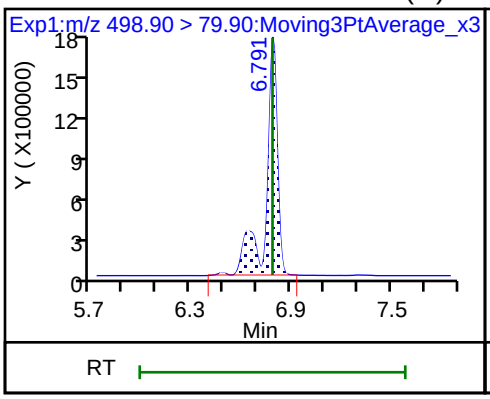
61 N-ethylperfluorooctanesulfonamid (M)



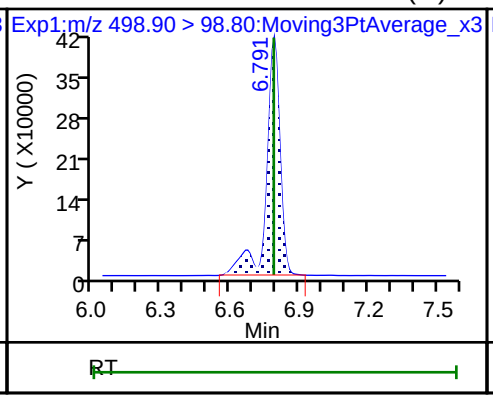
61 N-ethylperfluorooctanesulfonamid (M)



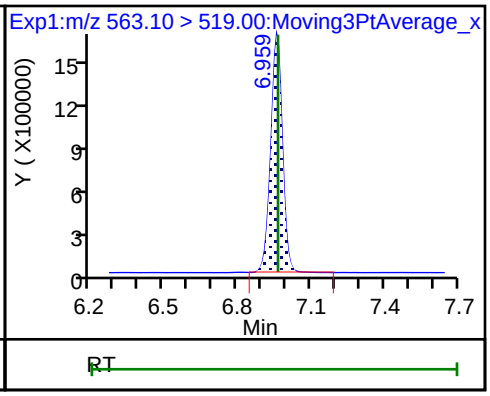
63 Perfluorooctanesulfonic acid (M)



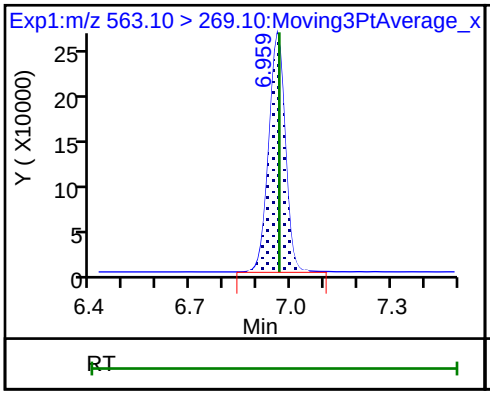
63 Perfluorooctanesulfonic acid (M)



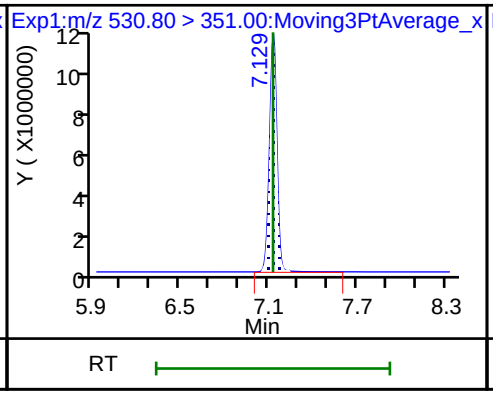
64 Perfluoroundecanoic acid



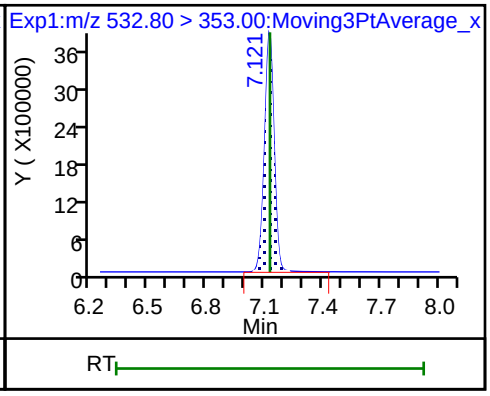
64 Perfluoroundecanoic acid



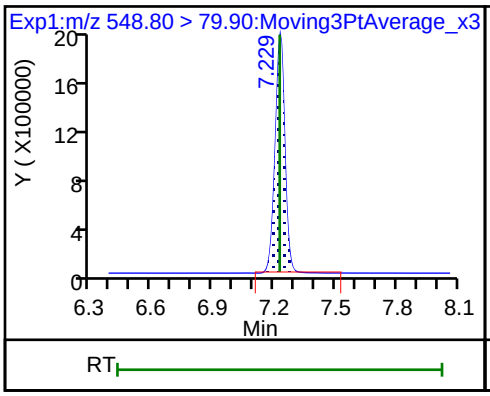
65 9-Chlorohexadecafluoro-3-oxanona



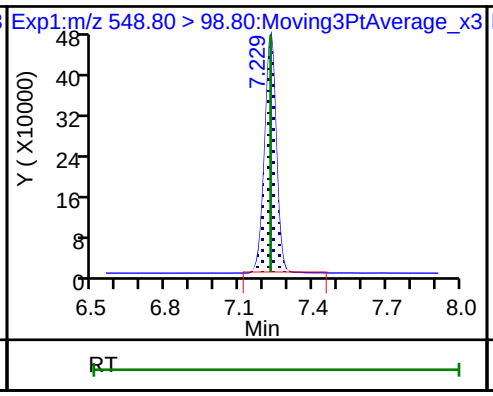
65 9-Chlorohexadecafluoro-3-oxanona



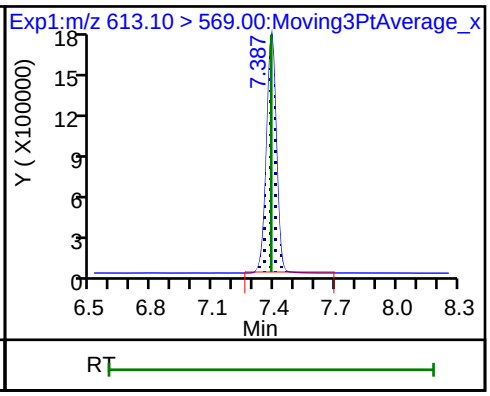
66 Perfluorononanesulfonic acid



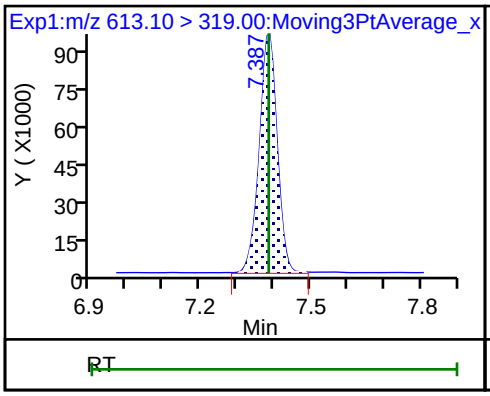
66 Perfluorononanesulfonic acid



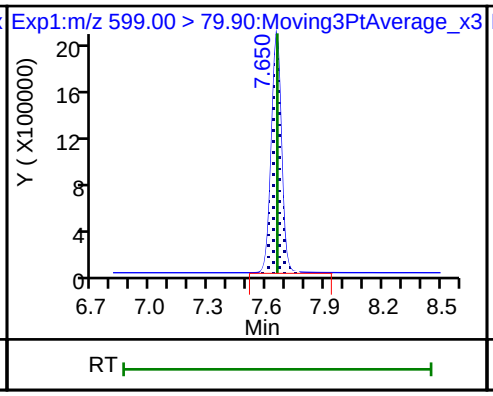
67 Perfluorododecanoic acid



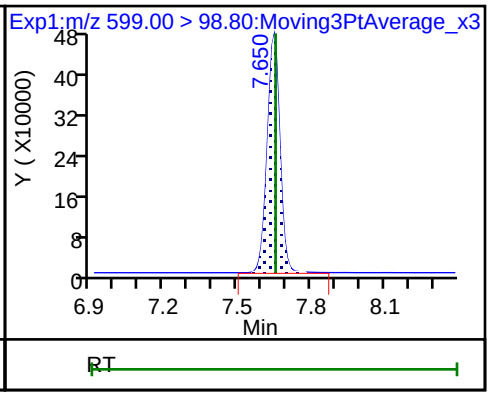
67 Perfluorododecanoic acid



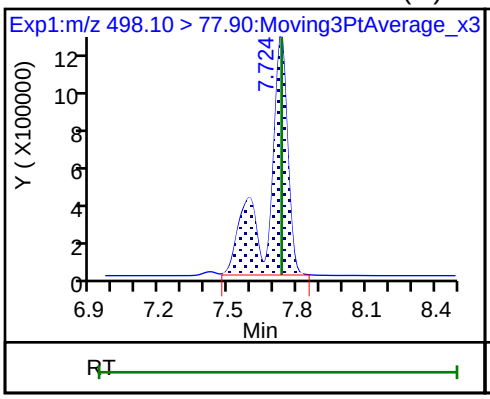
68 Perfluorodecanesulfonic acid



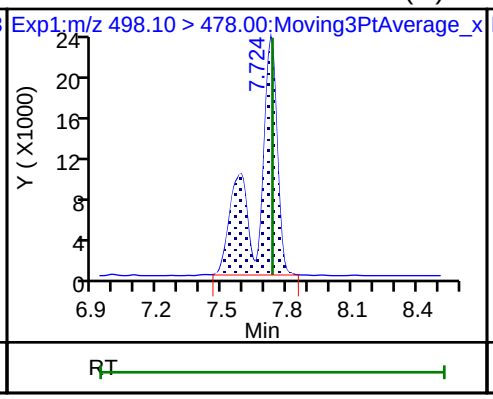
68 Perfluorodecanesulfonic acid



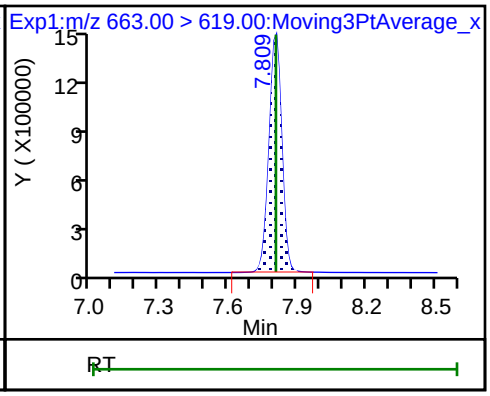
69 Perfluorooctanesulfonamide (M)



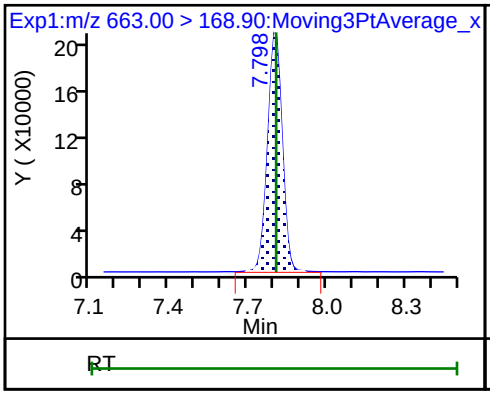
69 Perfluorooctanesulfonamide (M)



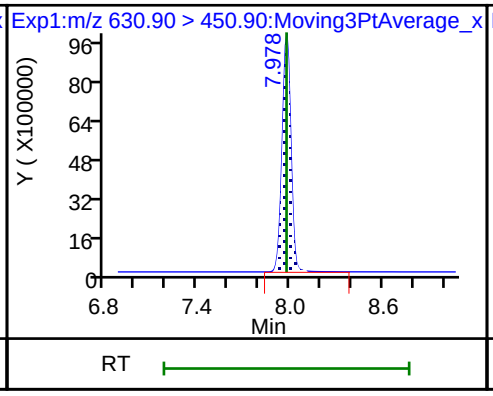
70 Perfluorotridecanoic acid



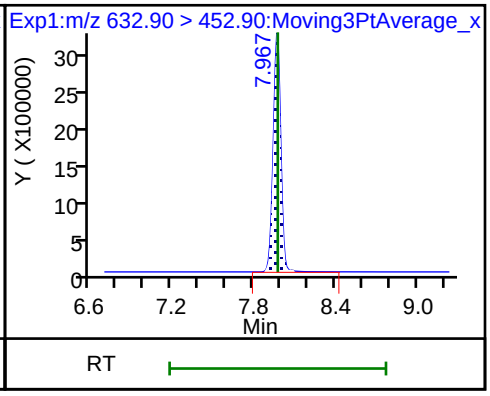
70 Perfluorotridecanoic acid



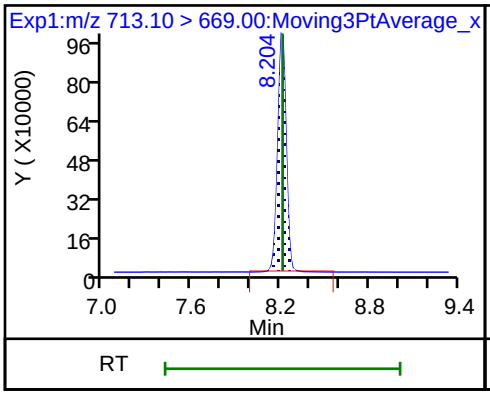
71 11-Chloroeicosafluoro-3-oxaundec



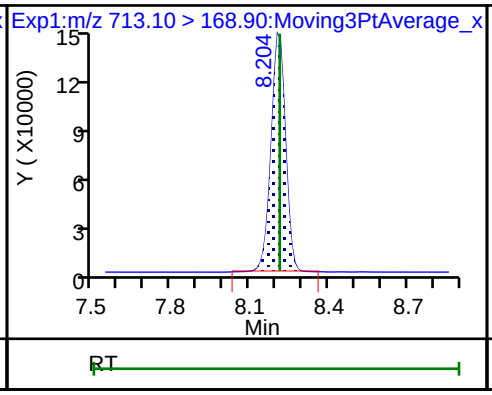
71 11-Chloroeicosafluoro-3-oxaundec



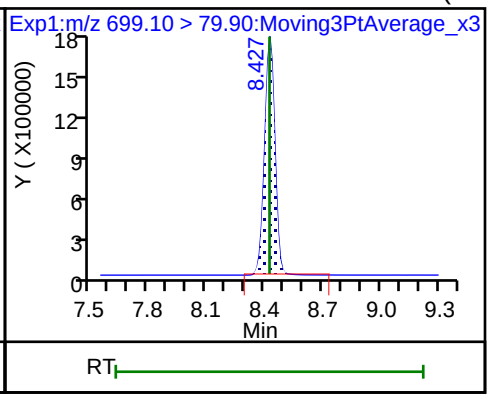
72 Perfluorotetradecanoic acid



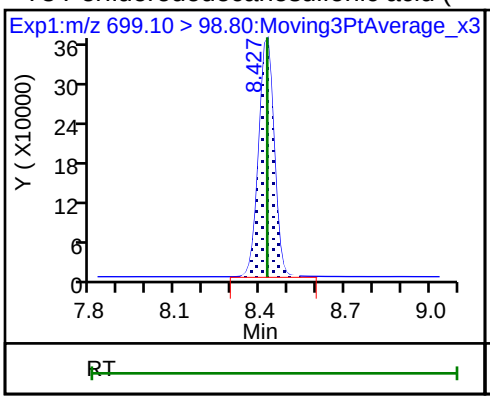
72 Perfluorotetradecanoic acid



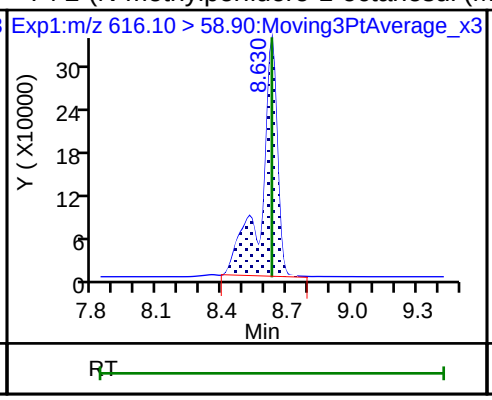
73 Perfluorododecanesulfonic acid (



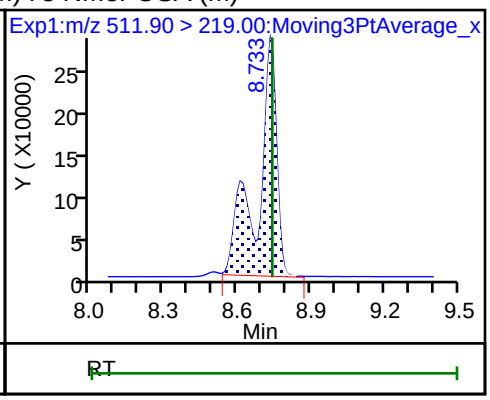
73 Perfluorododecanesulfonic acid (



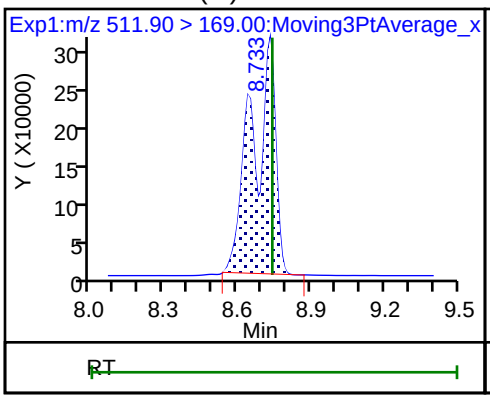
74 2-(N-methylperfluoro-1-octanesul (M)



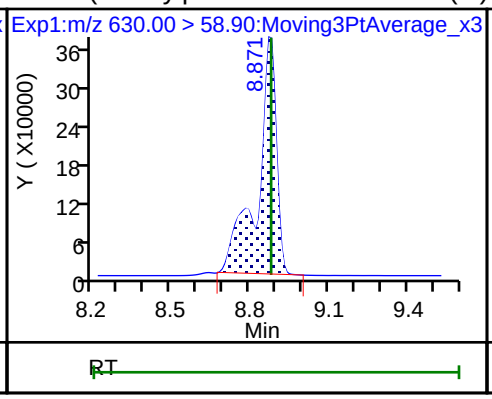
75 NMeFOSA (M)



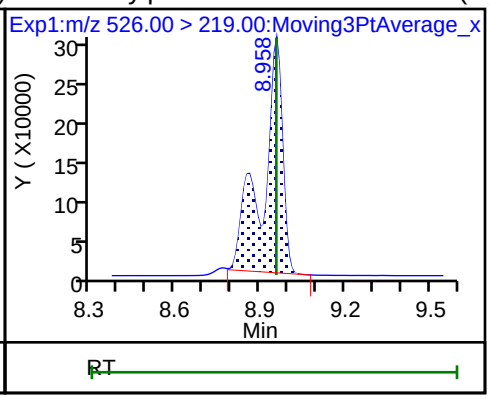
75 NMeFOSA (M)



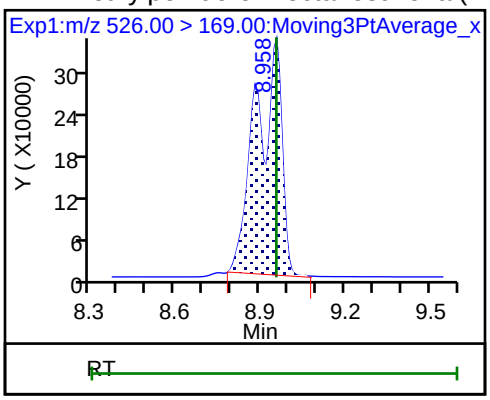
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

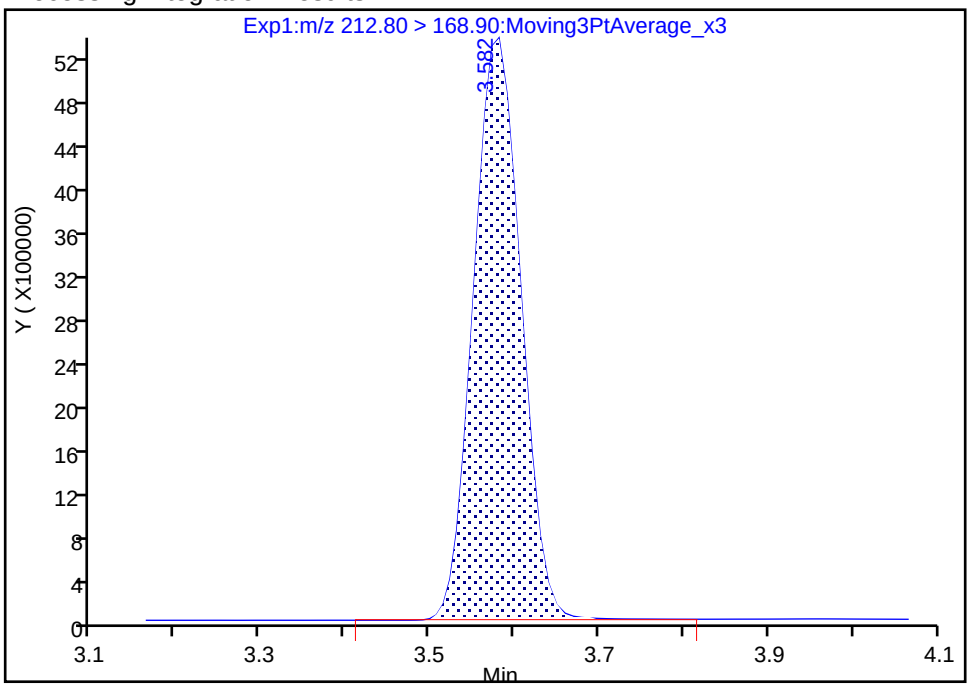
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Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

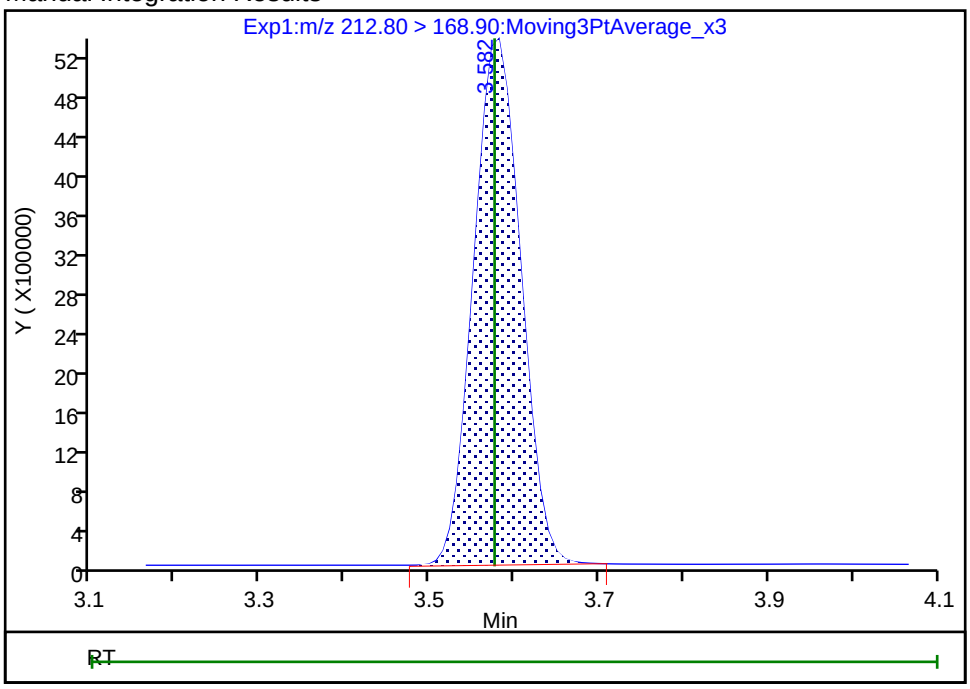
Processing Integration Results

RT: 3.58
Area: 21002791
Amount: 14.147174
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 20811580
Amount: 14.039042
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:35:01 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

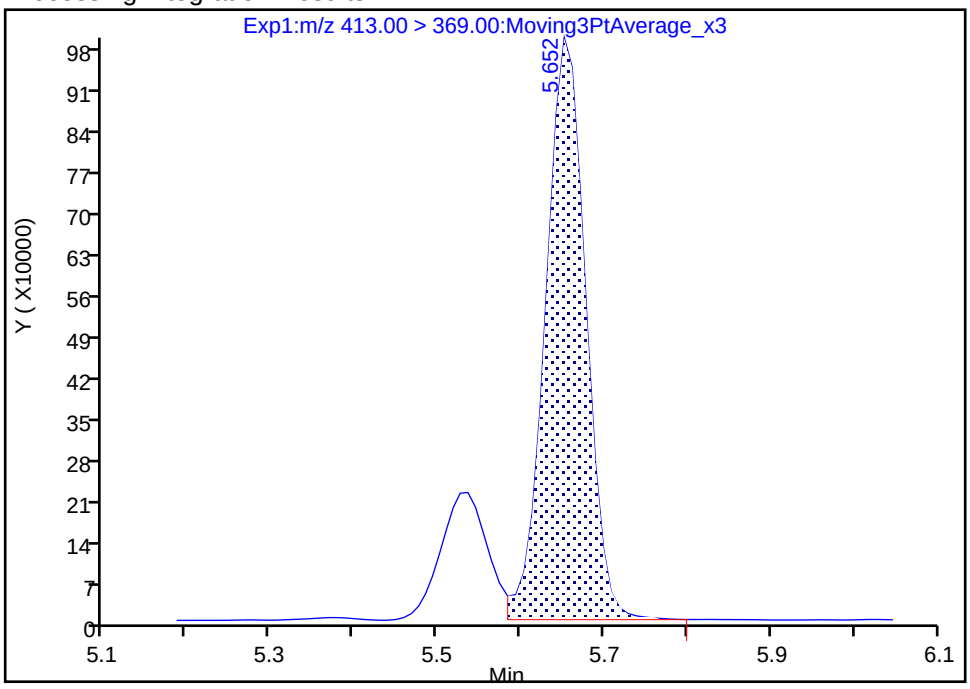
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Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

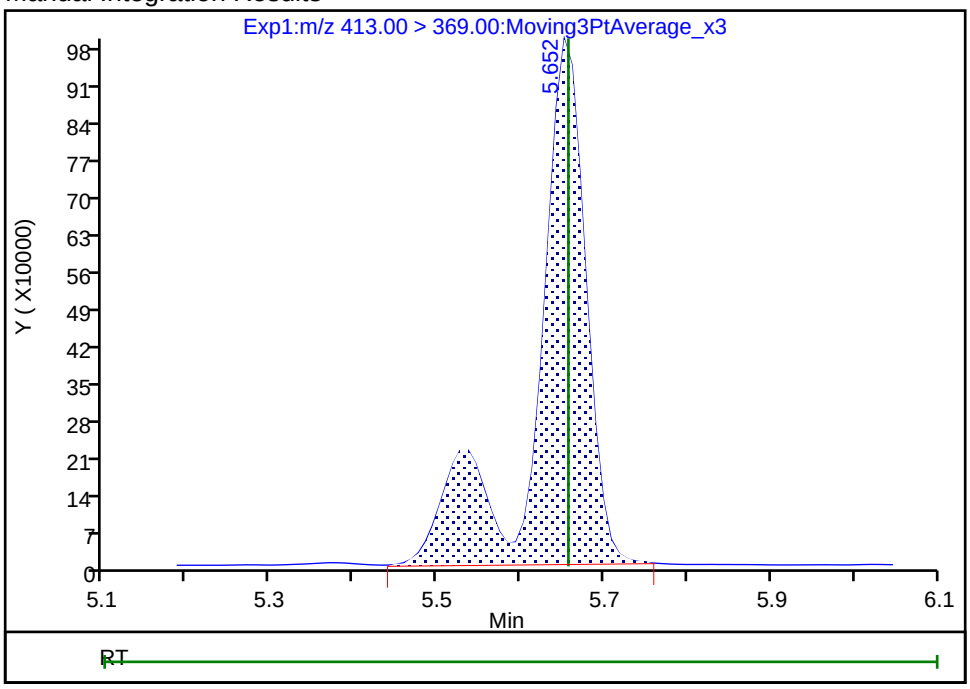
Processing Integration Results

RT: 5.65
Area: 3325545
Amount: 2.915514
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 4138631
Amount: 3.420583
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:35:27 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

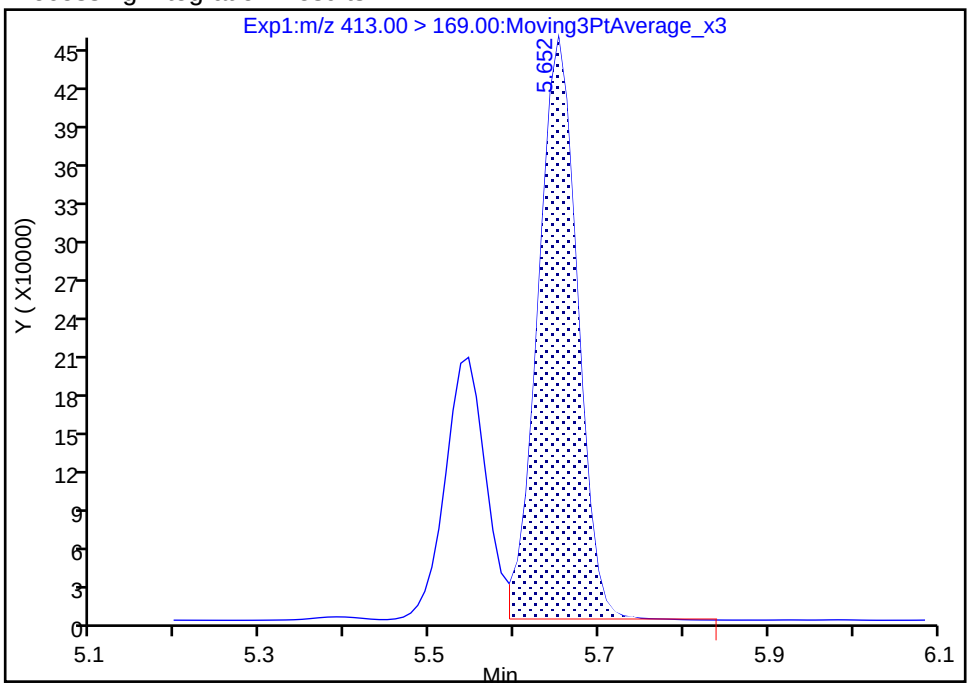
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Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

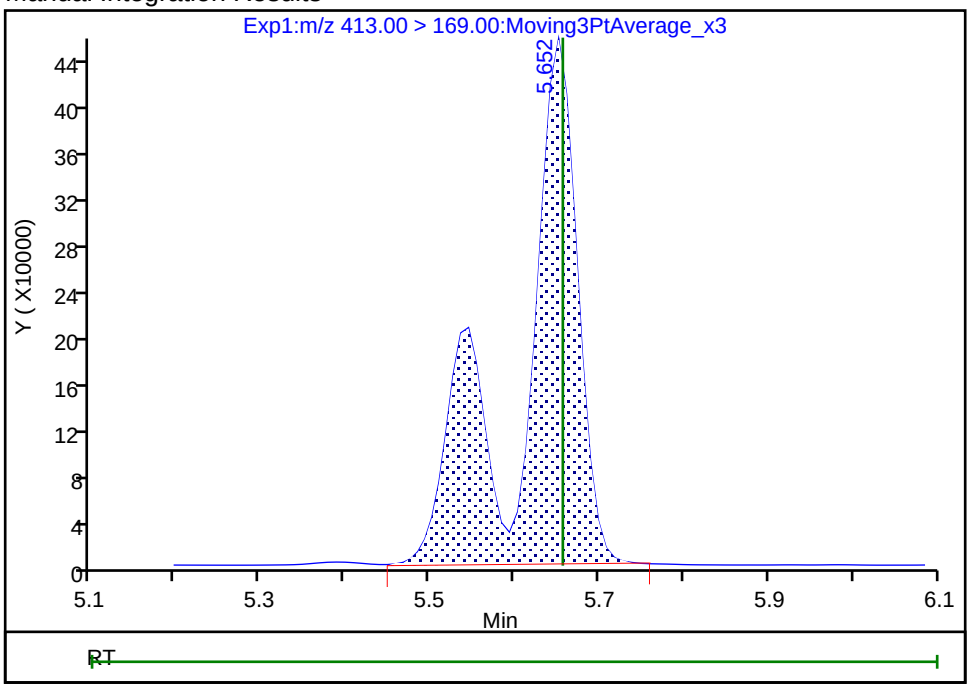
Processing Integration Results

RT: 5.65
Area: 1491323
Amount: 2.915514
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 2169399
Amount: 3.420583
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:35:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

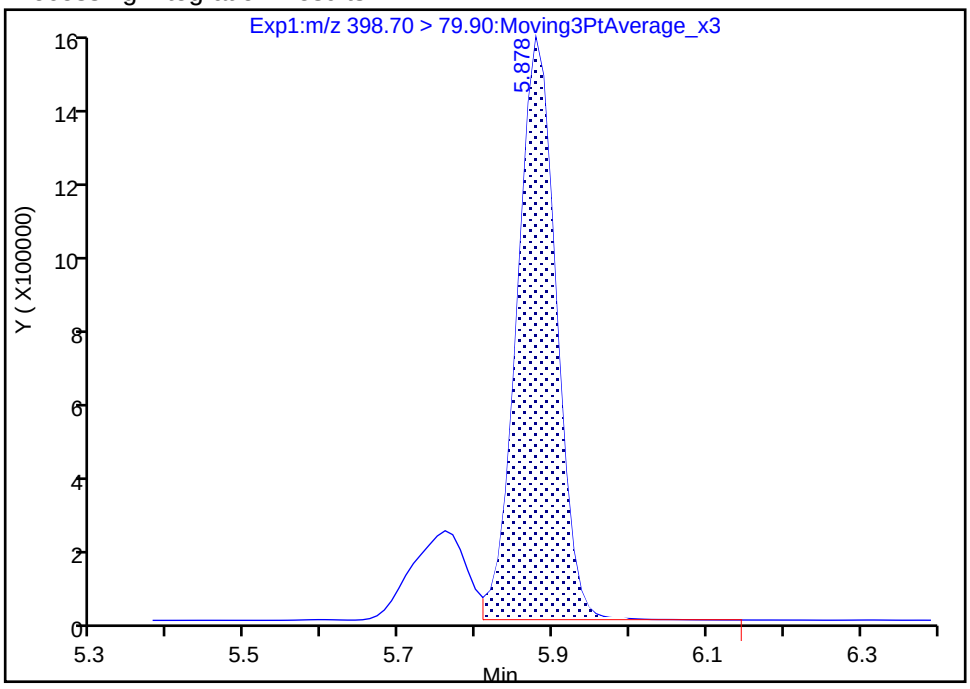
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Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

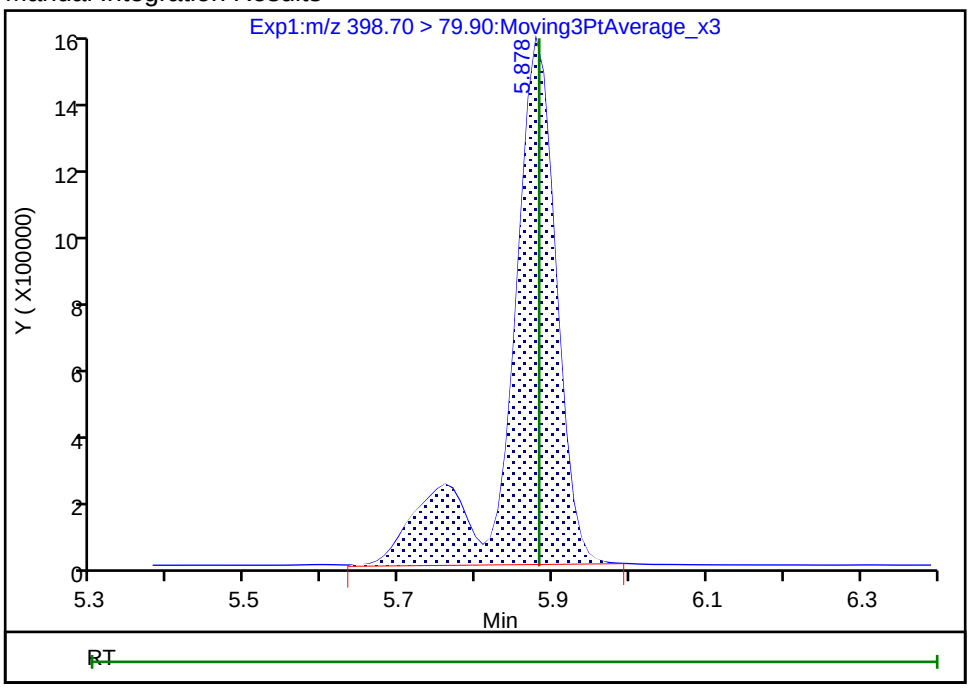
Processing Integration Results

RT: 5.88
Area: 5388210
Amount: 2.795213
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 6471601
Amount: 3.192403
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:35:49 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

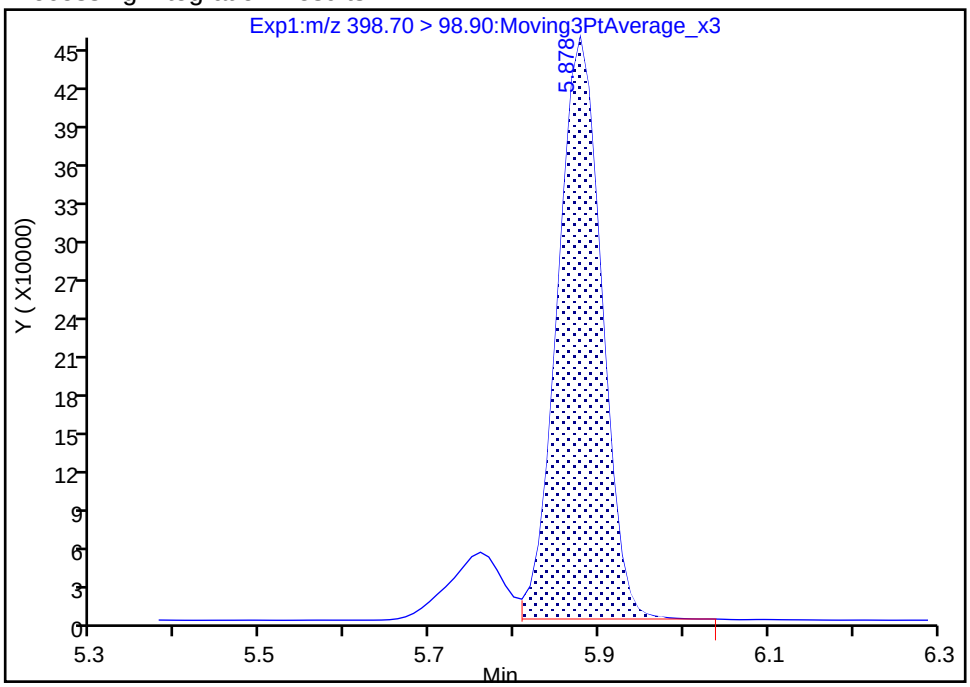
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

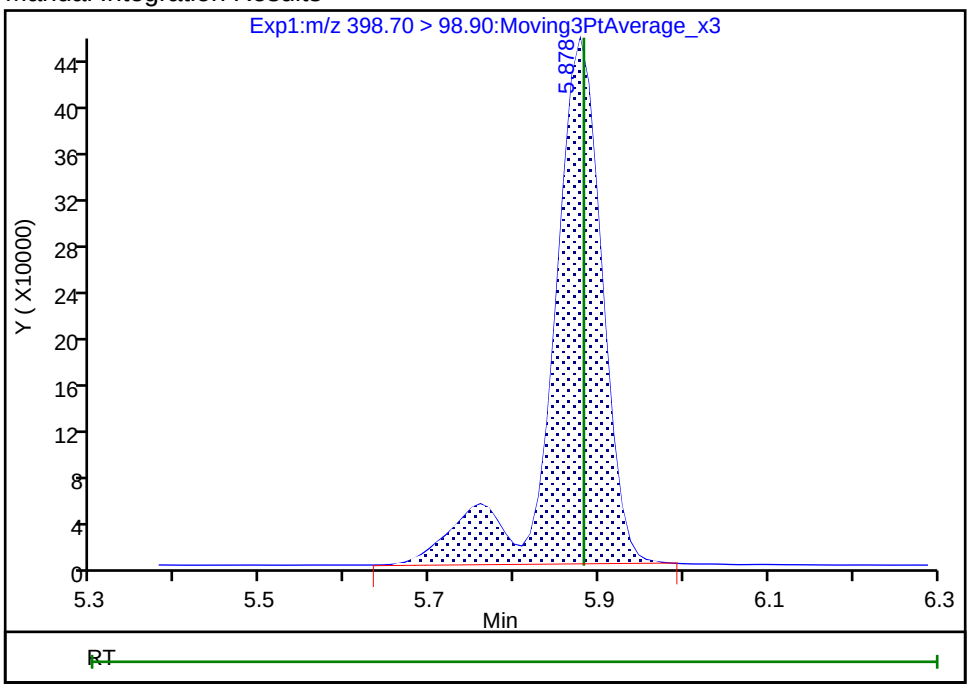
Processing Integration Results

RT: 5.88
Area: 1640755
Amount: 2.795213
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 1868424
Amount: 3.192403
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:36:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

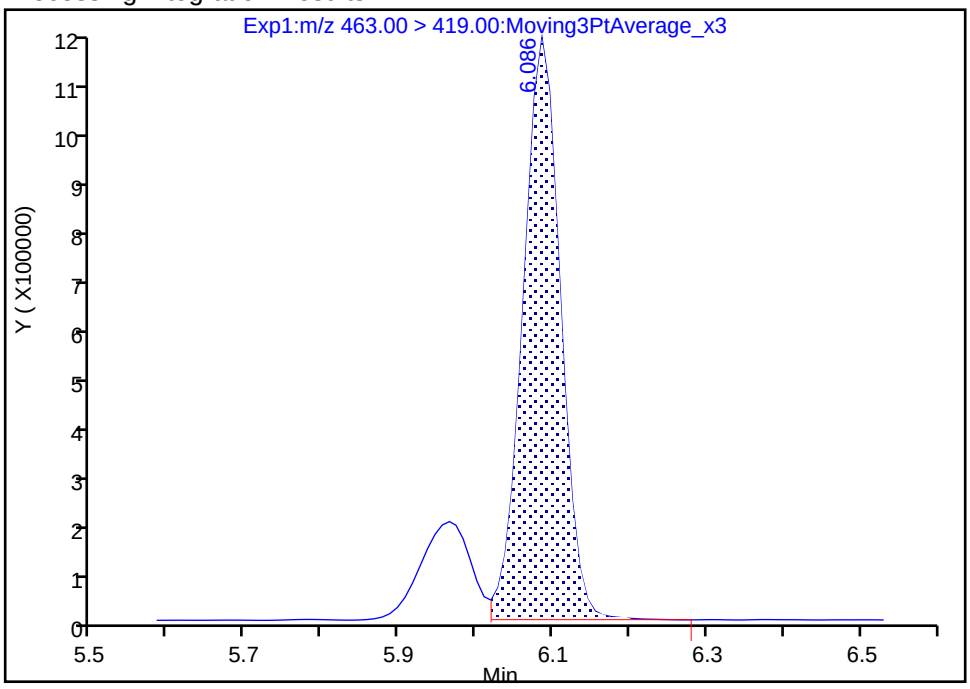
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

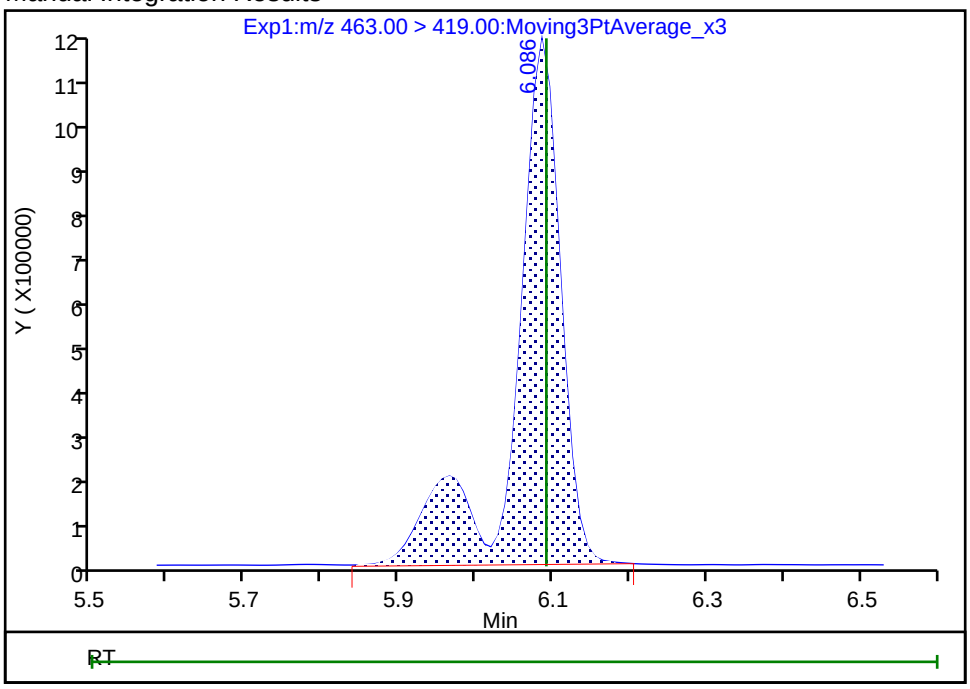
Processing Integration Results

RT: 6.09
Area: 3872706
Amount: 2.975100
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 4708733
Amount: 3.433026
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:36:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

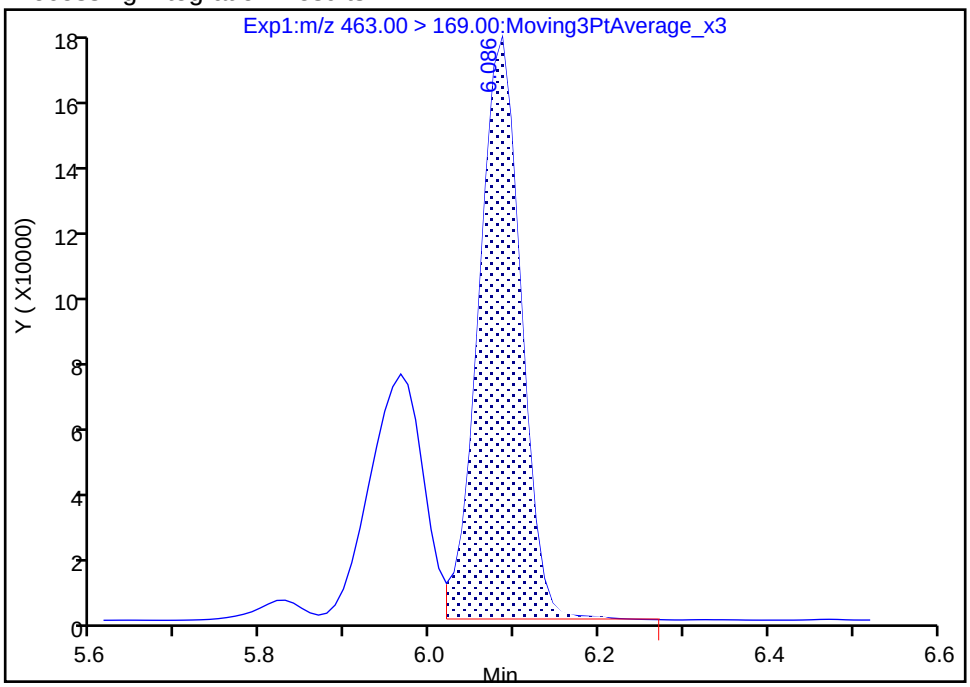
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Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

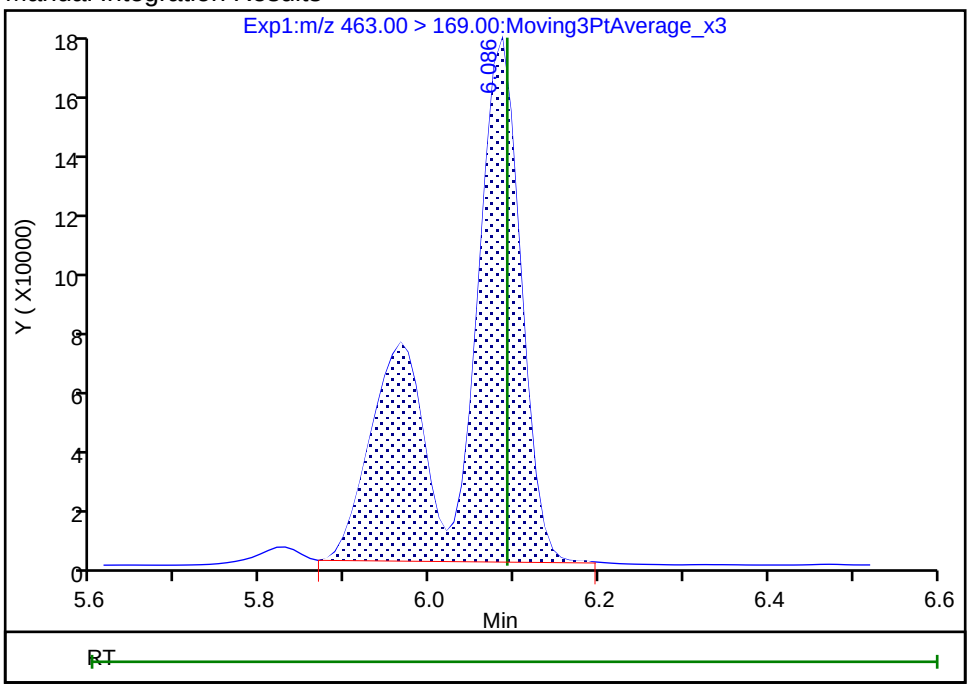
Processing Integration Results

RT: 6.09
Area: 615668
Amount: 2.975100
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 920656
Amount: 3.433026
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:36:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

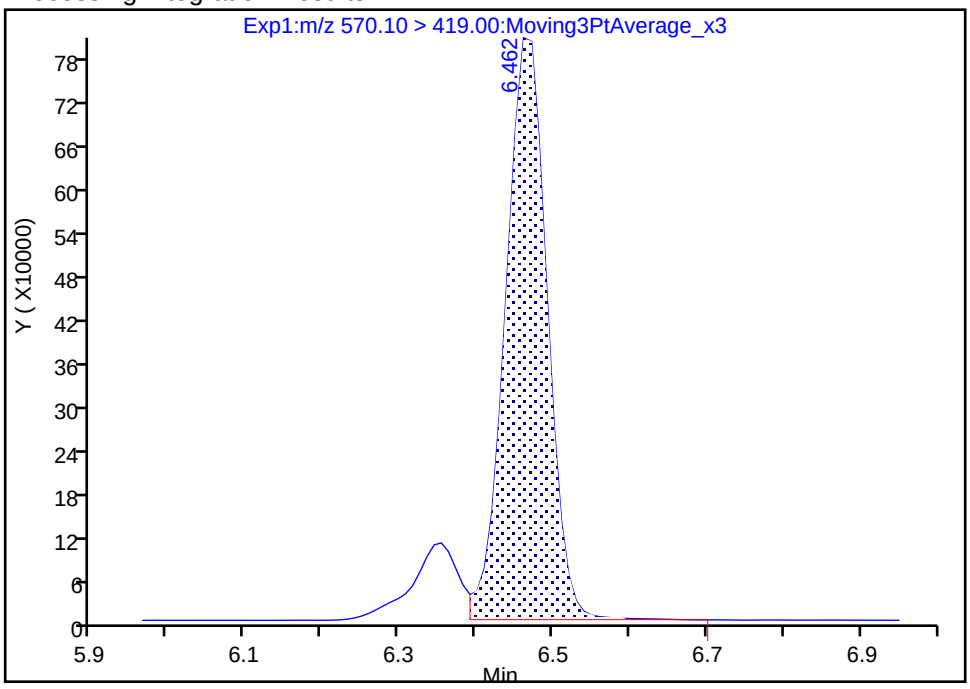
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

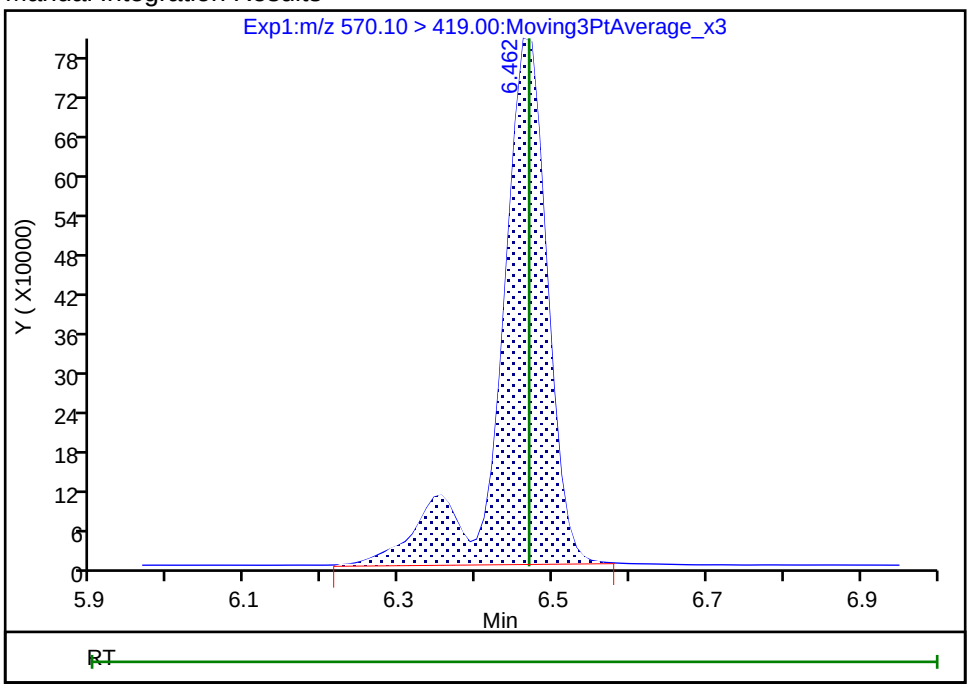
Processing Integration Results

RT: 6.46
Area: 3018904
Amount: 3.020943
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 3416179
Amount: 3.316886
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:37:08 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

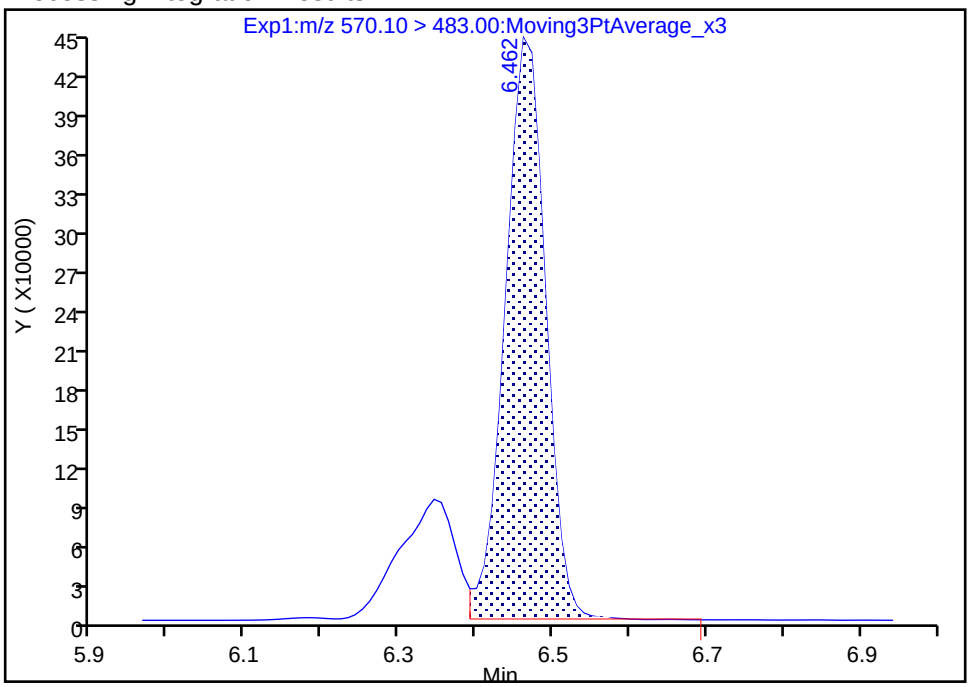
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

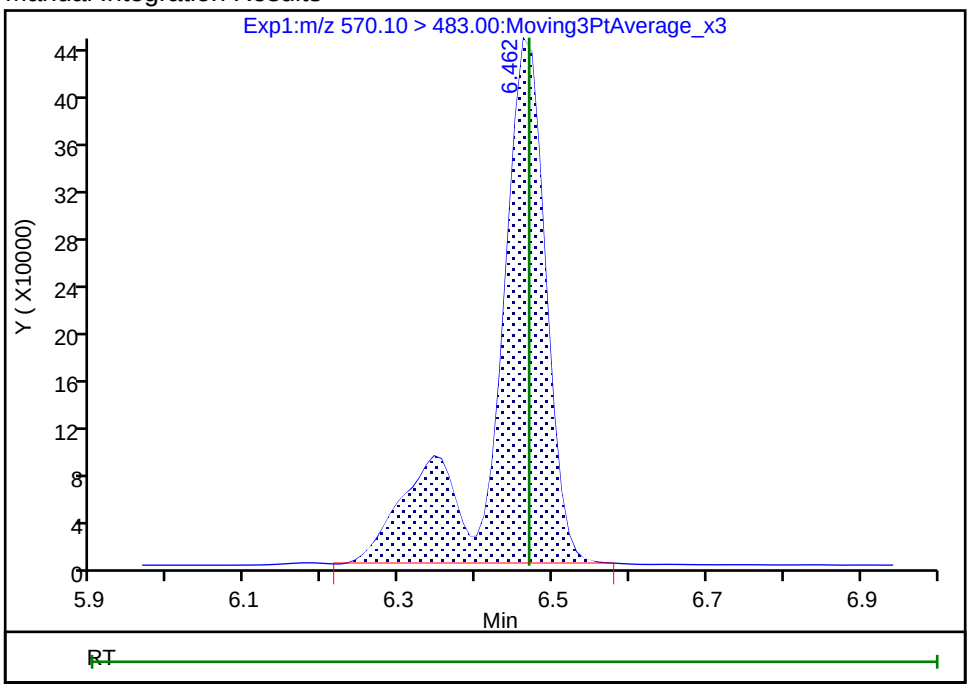
Processing Integration Results

RT: 6.46
Area: 1616827
Amount: 3.020943
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 2048761
Amount: 3.316886
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:37:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

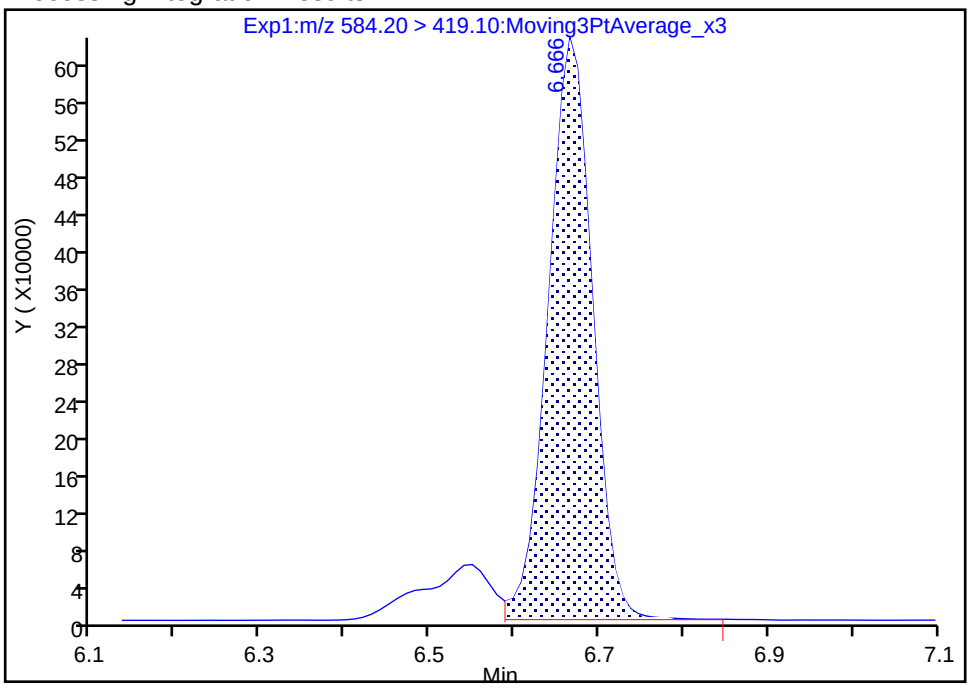
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

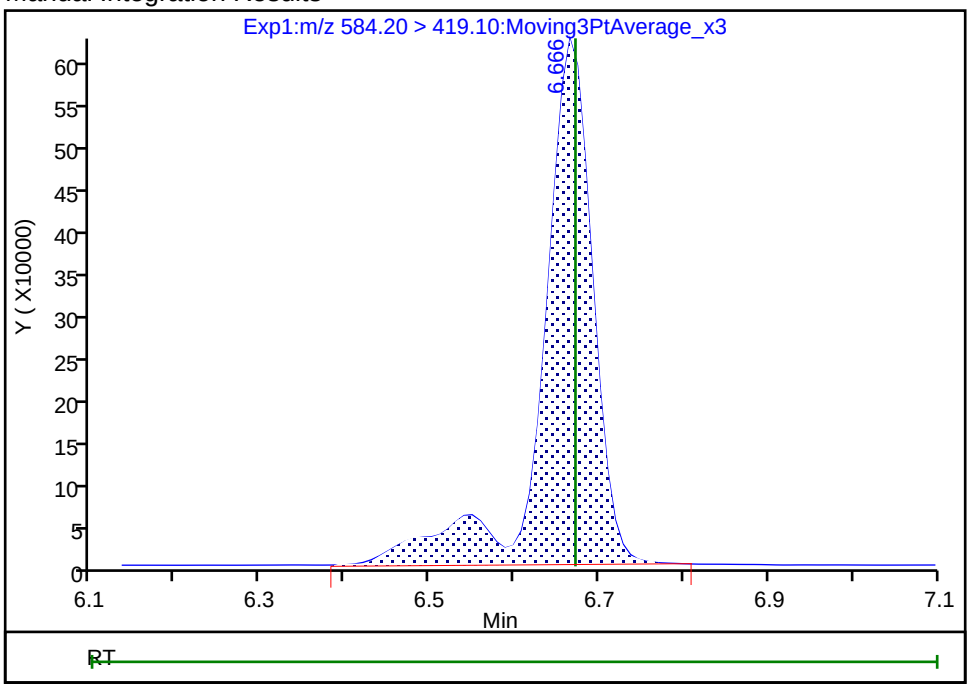
Processing Integration Results

RT: 6.67
Area: 2275893
Amount: 3.063480
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 2603603
Amount: 3.384737
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:37:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

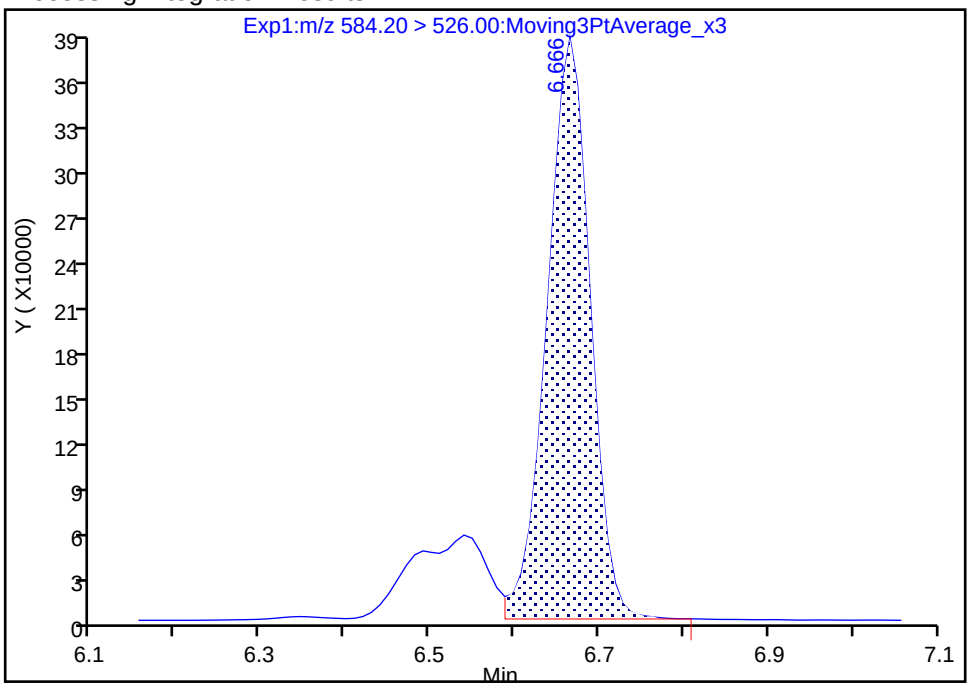
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

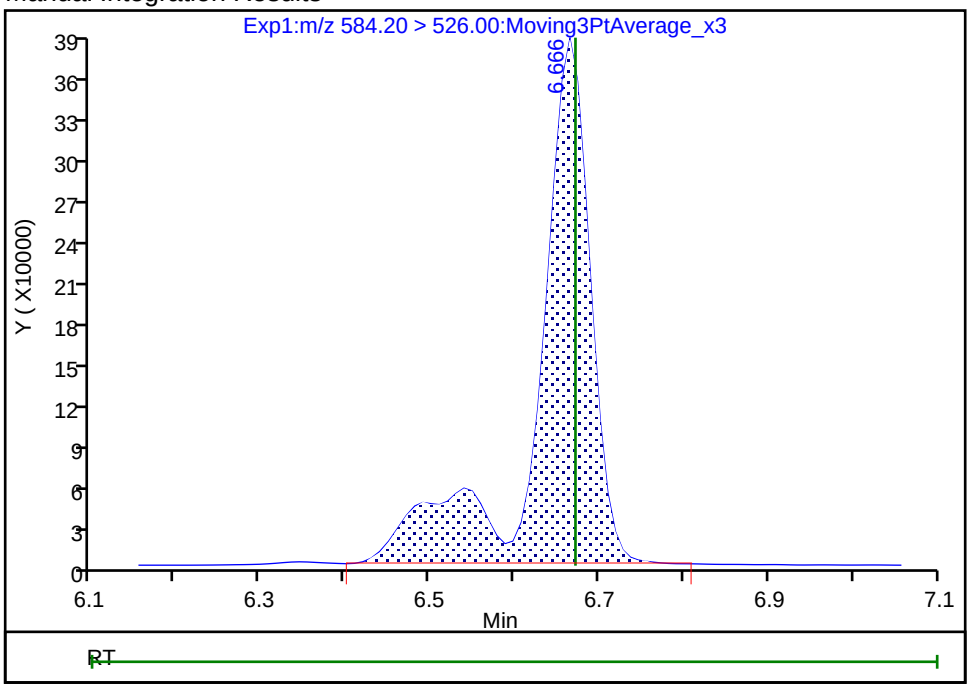
Processing Integration Results

RT: 6.67
Area: 1369428
Amount: 3.063480
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 1708225
Amount: 3.384737
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:37:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

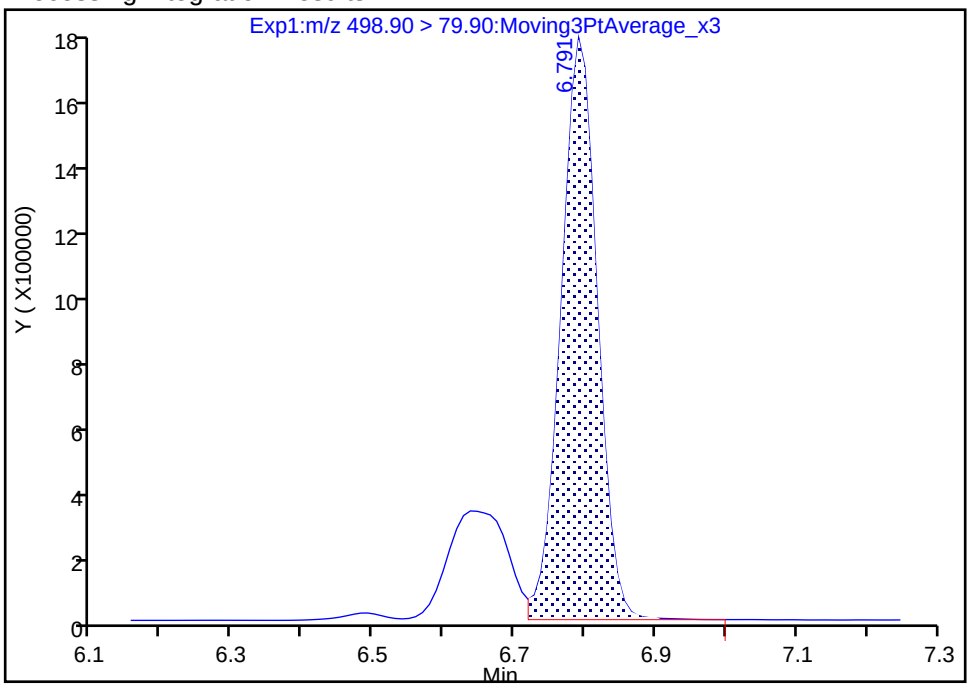
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

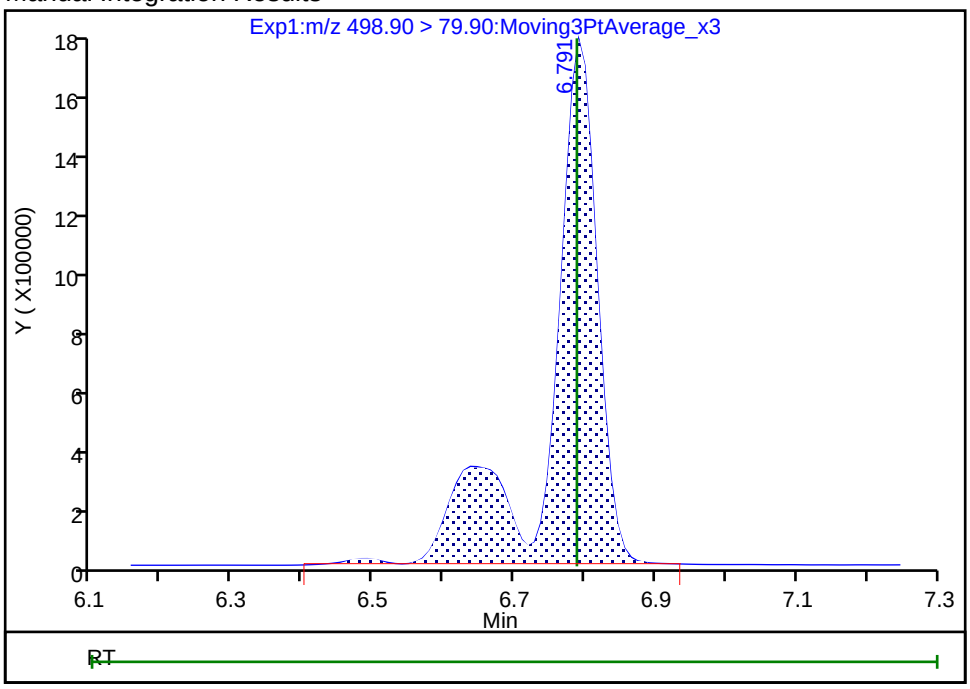
Processing Integration Results

RT: 6.79
Area: 6248422
Amount: 2.607202
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 8200902
Amount: 3.188178
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:37:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

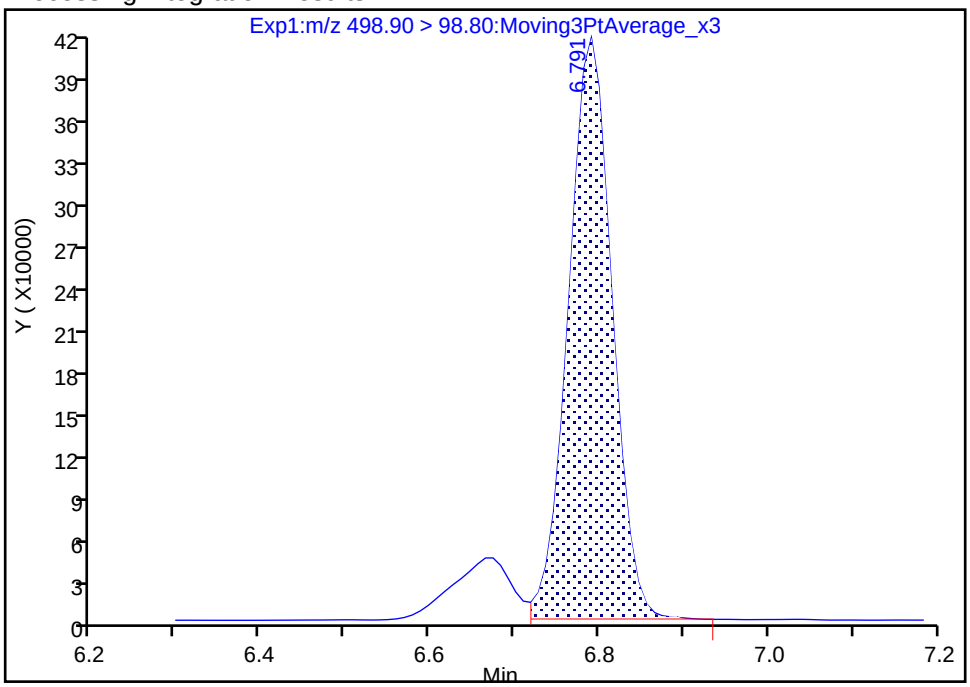
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

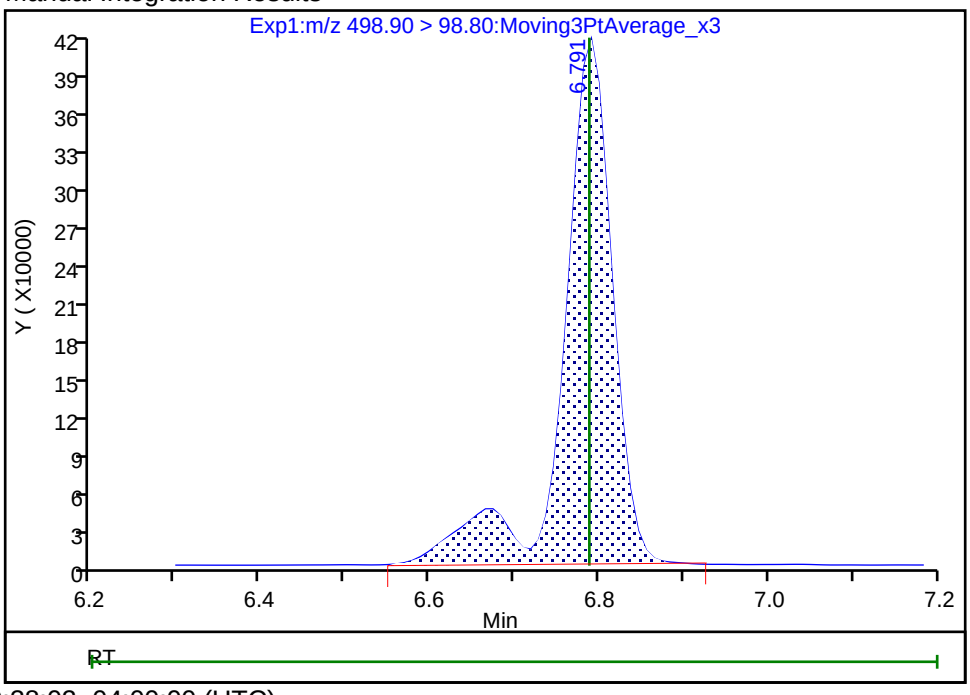
Processing Integration Results

RT: 6.79
Area: 1503363
Amount: 2.607202
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 1715835
Amount: 3.188178
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:38:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

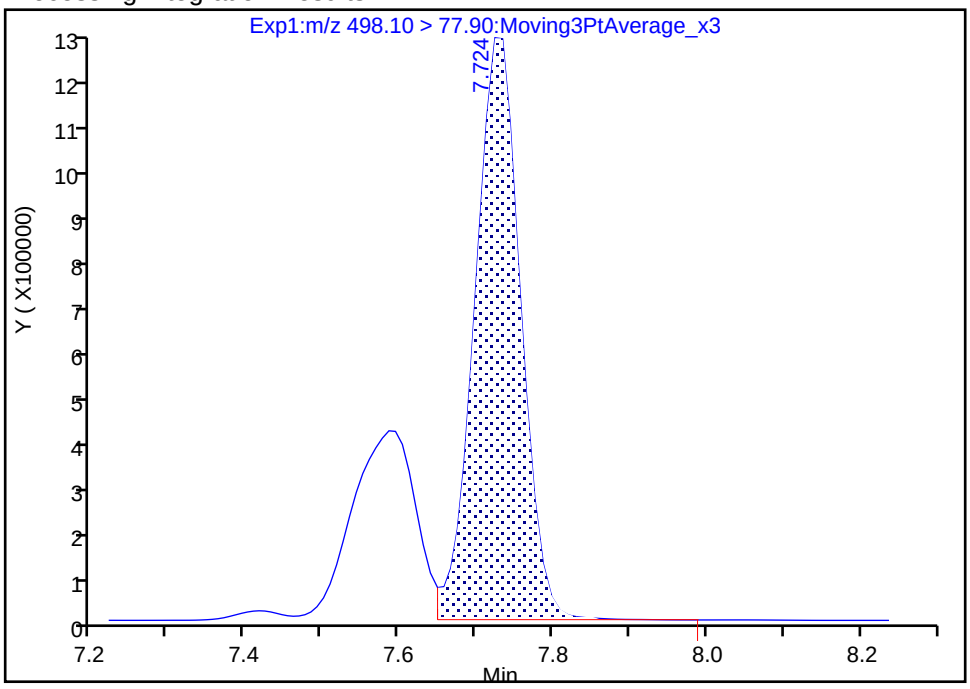
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

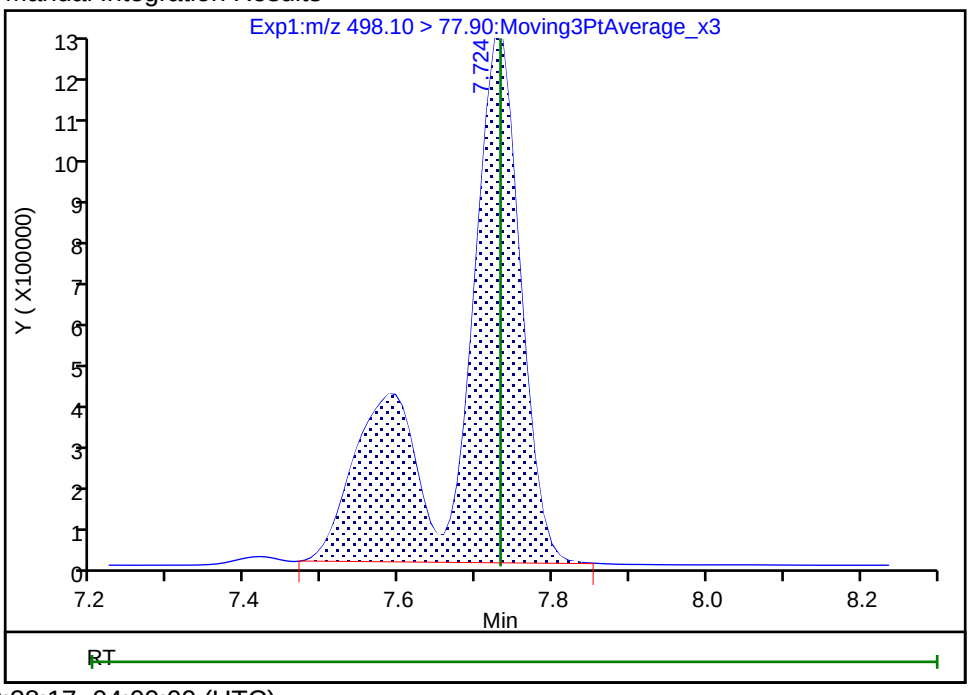
Processing Integration Results

RT: 7.72
Area: 5016701
Amount: 2.669383
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 7092638
Amount: 3.449593
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:38:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

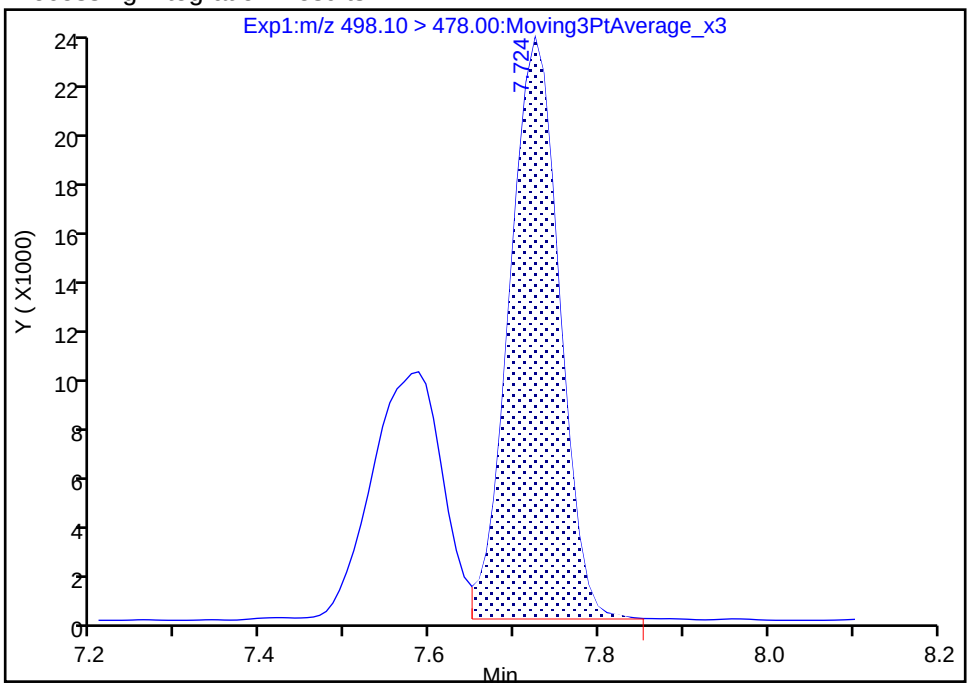
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

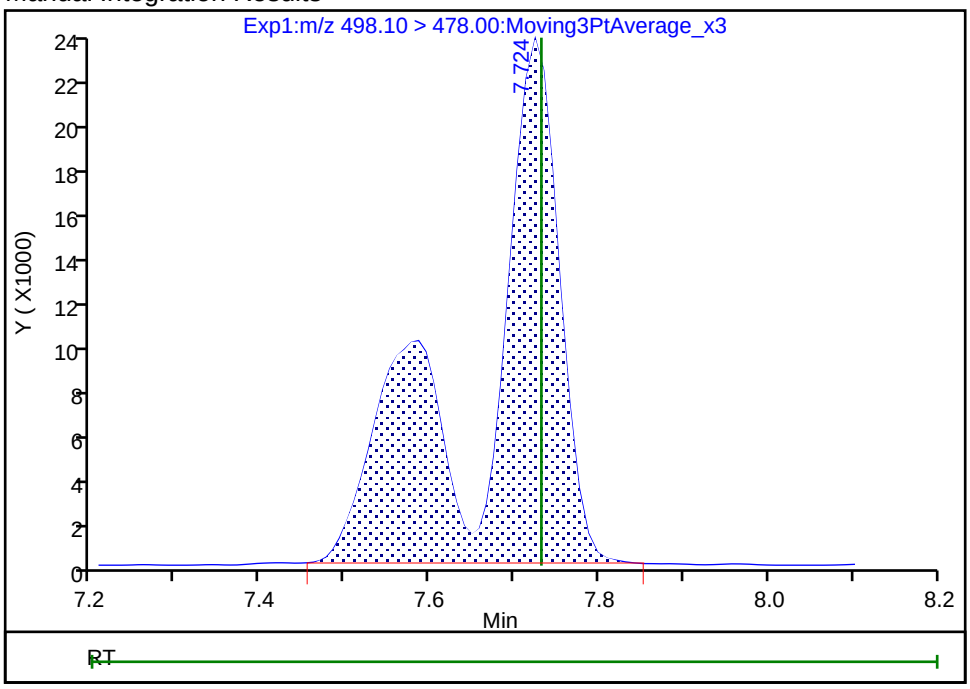
Processing Integration Results

RT: 7.72
Area: 94806
Amount: 2.669383
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 150977
Amount: 3.449593
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:38:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

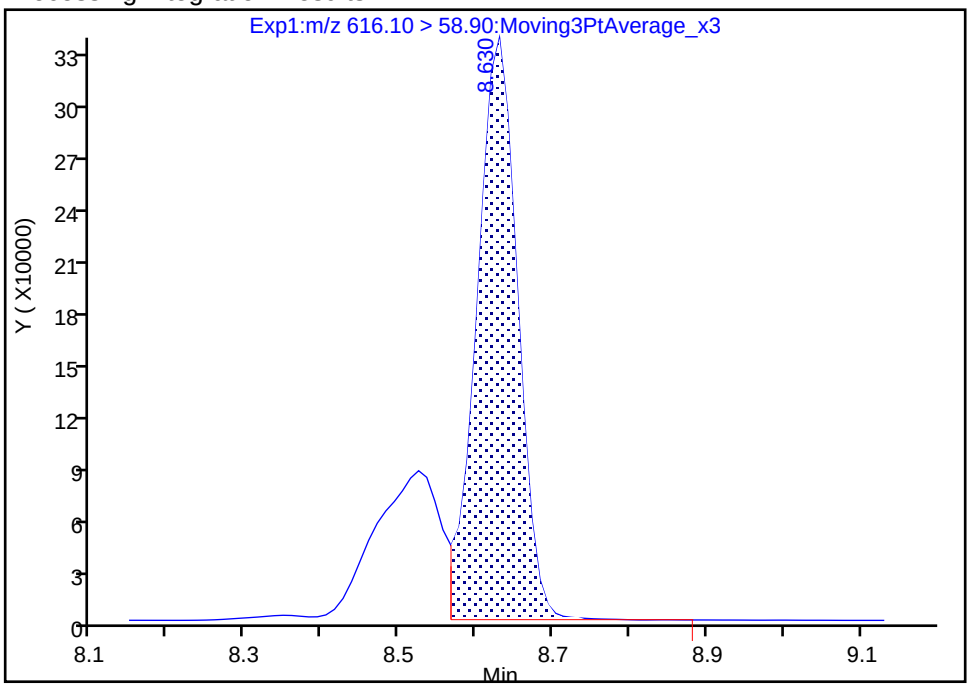
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d				
Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

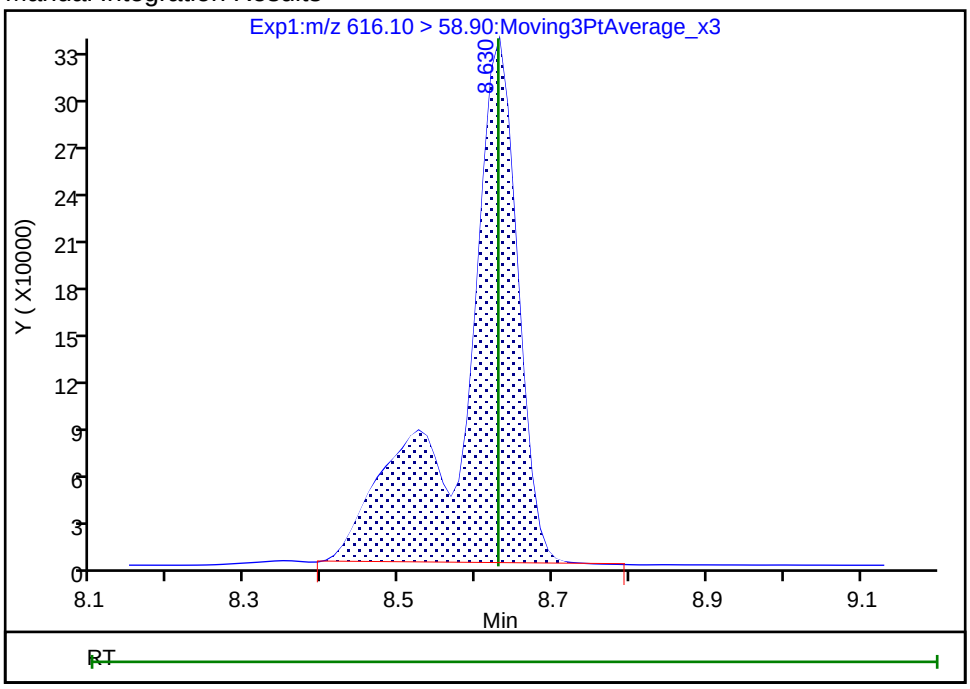
Processing Integration Results

RT: 8.63
Area: 1215844
Amount: 28.451258
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 1683423
Amount: 35.273146
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:38:38 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

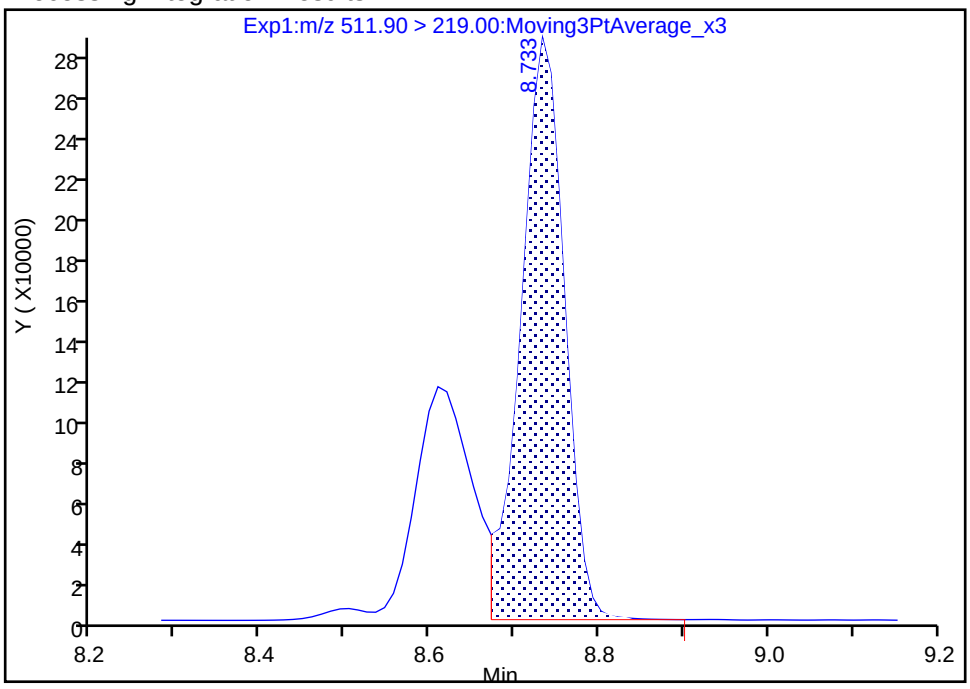
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

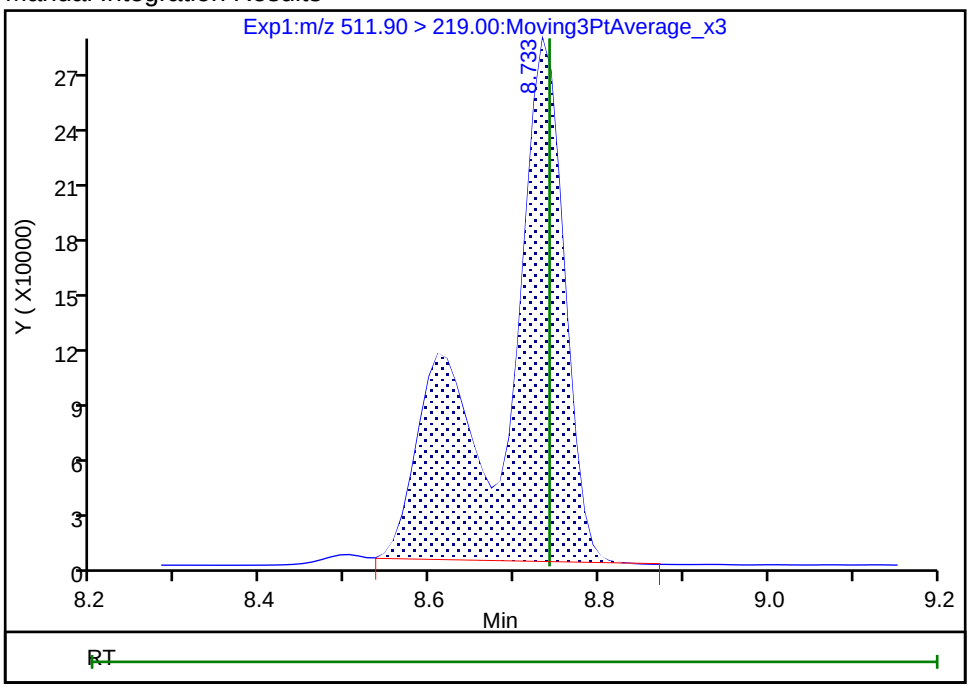
Processing Integration Results

RT: 8.73
Area: 1003654
Amount: 2.700273
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 1477817
Amount: 3.581486
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:38:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

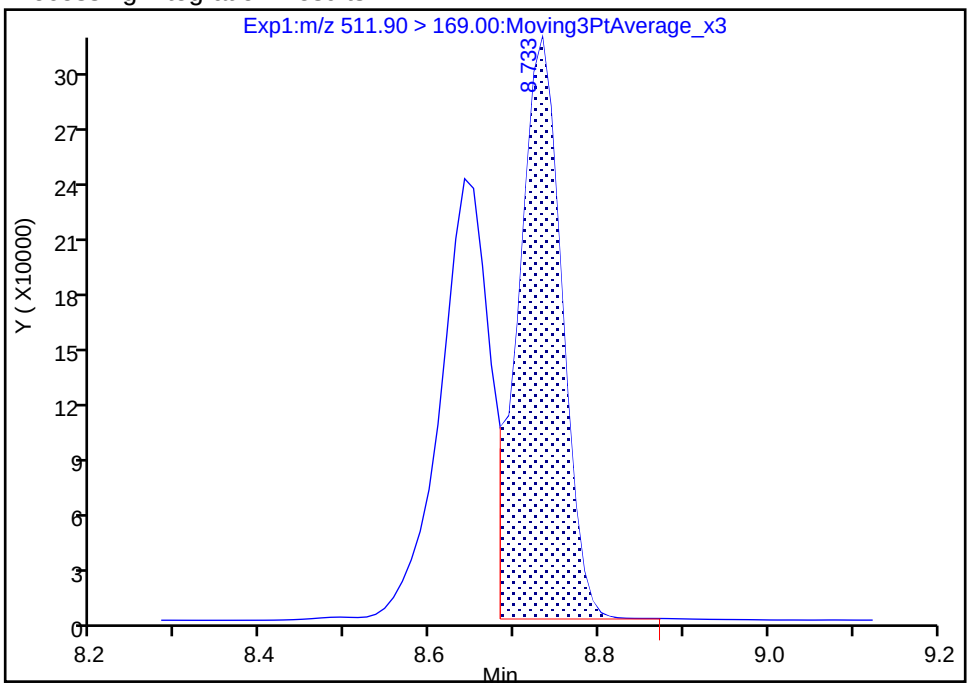
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

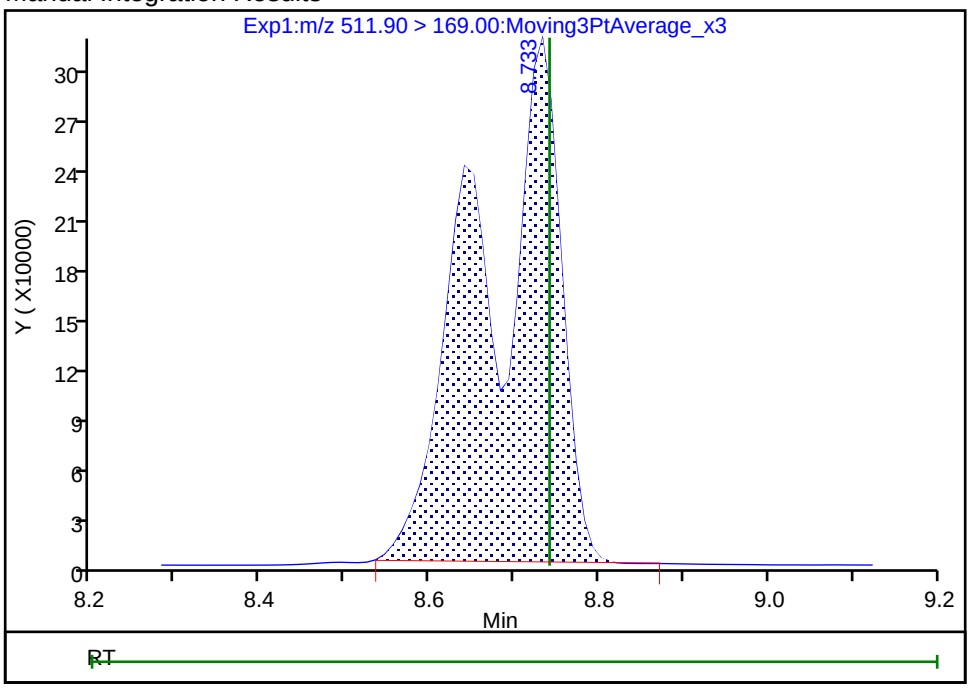
Processing Integration Results

RT: 8.73
Area: 1112053
Amount: 2.700273
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 2033485
Amount: 3.581486
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:39:00 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

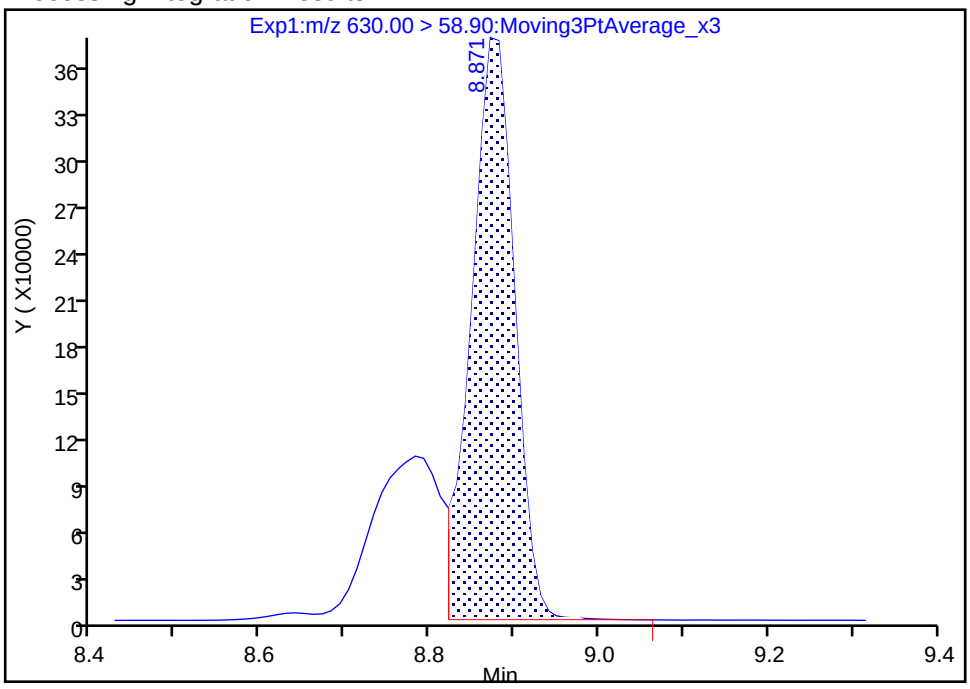
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d				
Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

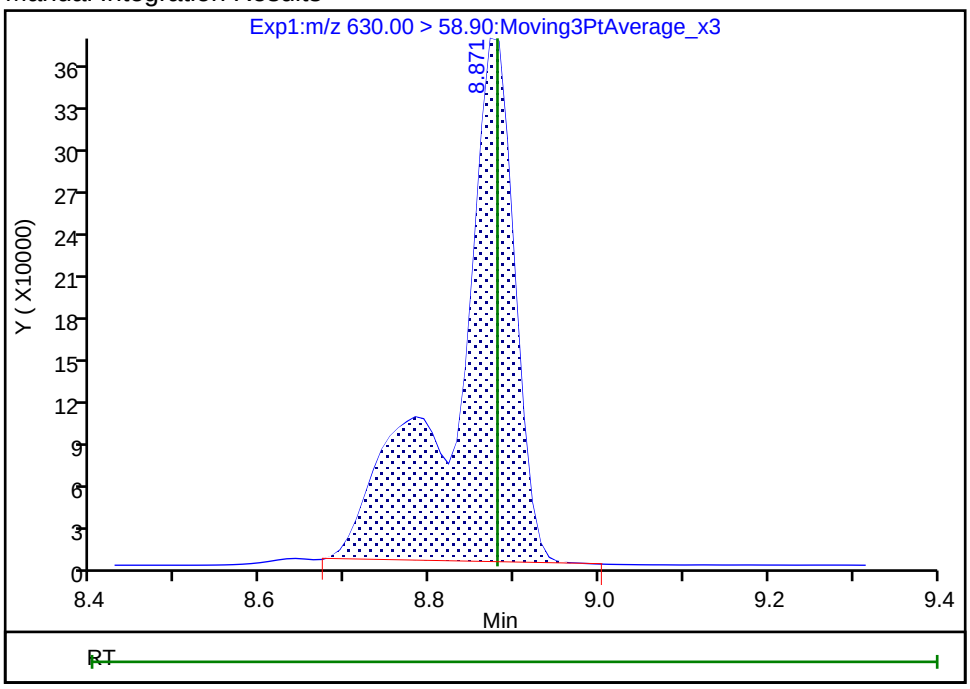
Processing Integration Results

RT: 8.87
Area: 1334292
Amount: 28.027266
Amount Units: ng/ml



Manual Integration Results

RT: 8.87
Area: 1875843
Amount: 34.077932
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:39:09 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

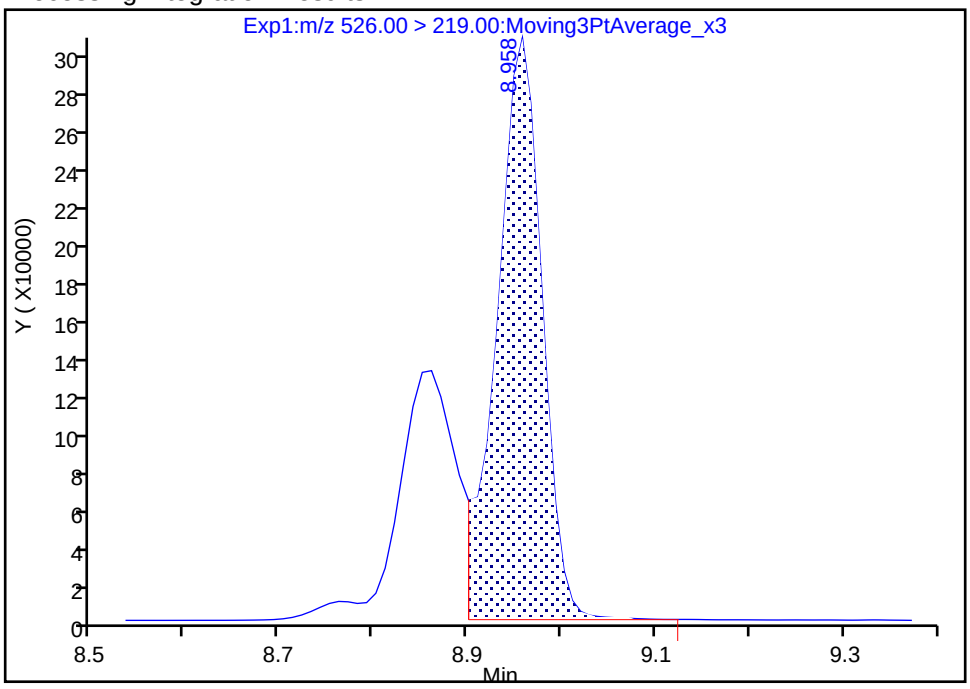
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d				
Injection Date:	10-Sep-2024 18:20:47	Instrument ID:	LCMS04		
Lims ID:	IC CAL 6				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	33	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

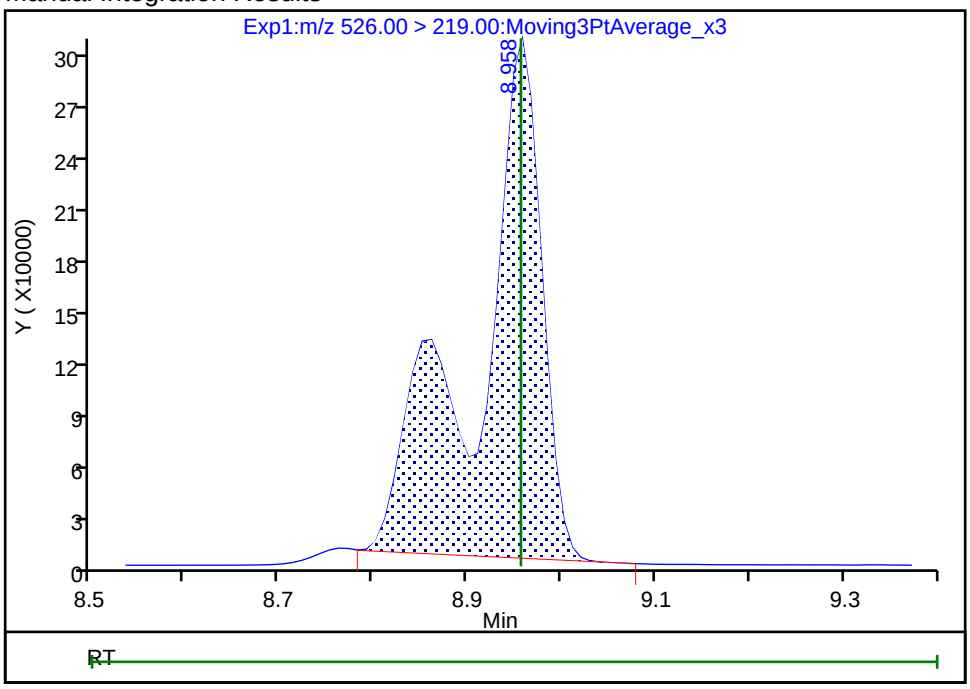
Processing Integration Results

RT: 8.96
Area: 1023961
Amount: 2.759085
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 1468819
Amount: 3.600161
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:39:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

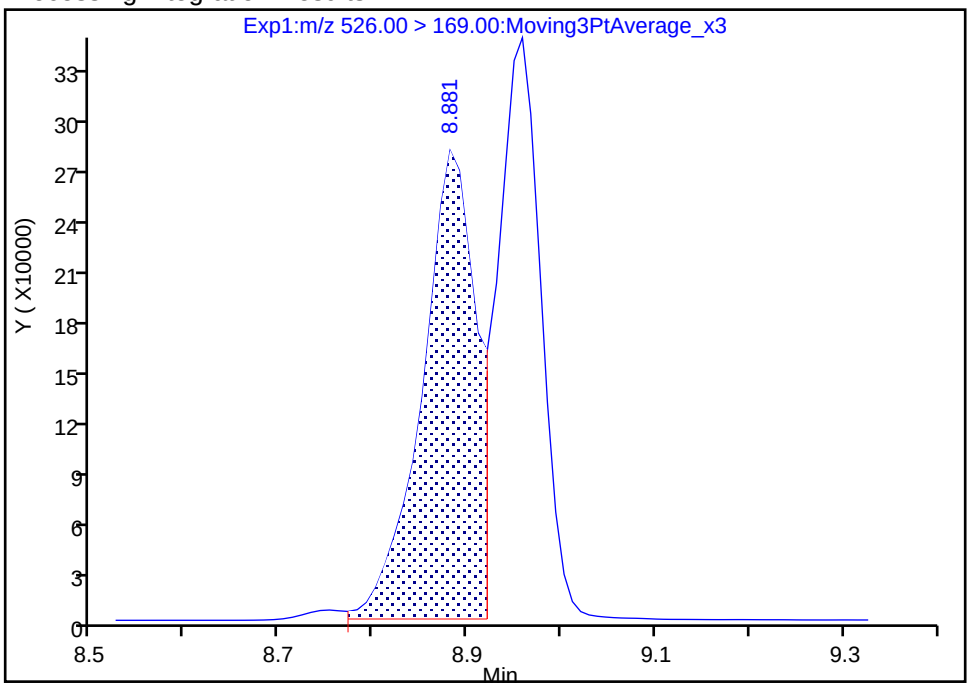
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj06.d
Injection Date: 10-Sep-2024 18:20:47 Instrument ID: LCMS04
Lims ID: IC CAL 6
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 33 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

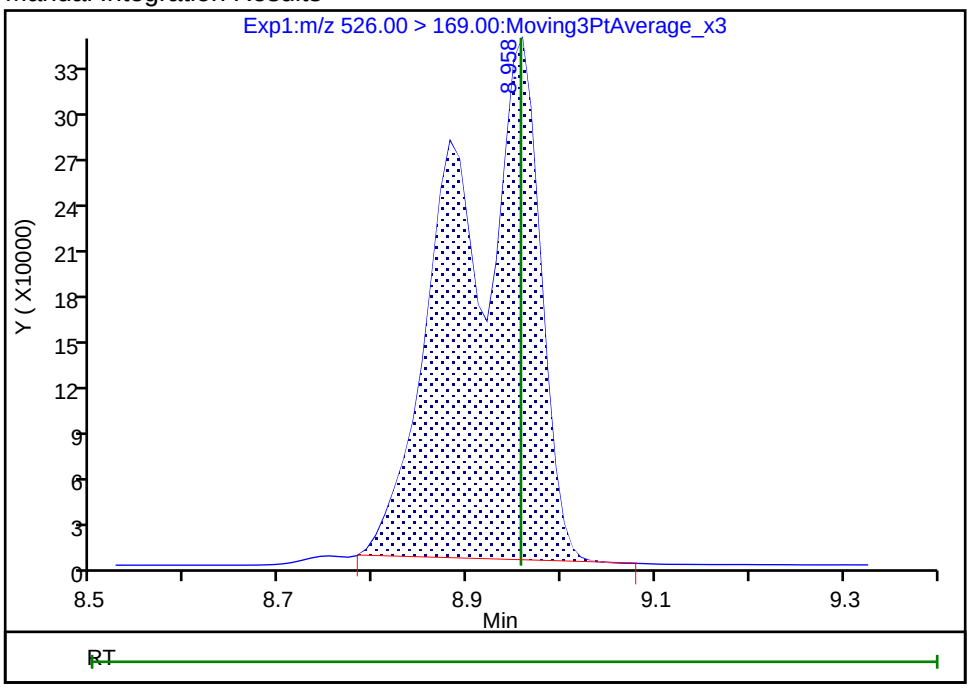
Processing Integration Results

RT: 8.88
Area: 1100628
Amount: 2.759085
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 2113984
Amount: 3.600161
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:39:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Lims ID: IC CAL 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Sep-2024 18:34:24 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 7
Misc. Info.: Plate: 2 Rack: 1 240-0146069-007
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:04:30 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 10:04:30
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.582	3.573	0.009		1853231	1.25			662	
* 2 13C2 PFHxA										
315.10 > 270.00	4.755	4.744	0.011		1223702	0.6250			6010	
* 3 13C4 PFOA										
417.10 > 172.00	5.653	5.653	0.0		262131	0.6250			2522	
* 4 18O2 PFHxS										
403.00 > 83.90	5.879	5.878	0.001		1548545	0.5913			2469	
* 5 13C5 PFNA										
468.00 > 423.00	6.087	6.077	0.010		838346	0.3125			2069	
* 6 13C2 PFDA										
515.10 > 470.10	6.532	6.522	0.010		681332	0.3125			2152	
* 7 13C4 PFOS										
502.80 > 79.90	6.801	6.792	0.009		1356859	0.5975	Target=4.00		2257	
502.80 > 98.90	6.792	6.792	0.0		338814		4.00(2.00-6.00)		1683	
D 8 13C4 PFBA										
216.80 > 171.90	3.582	3.573	0.009	1.000	4863257	2.89		116	21320	
D 9 13C5 PFPeA										
268.30 > 223.00	4.236	4.225	0.011	0.891	2029785	1.32		106	6416	
D 10 M2-4:2 FTS										R
329.10 > 80.90	4.555	4.555	0.0	0.775	780608	0.8902	Target=0.29	76.2	2848	R
329.10 > 309.00	4.555	4.555	0.0	0.775	7333523		0.11(0.14-0.43)	76.2	2004	
D 11 13C5 PFHxA										
318.00 > 273.00	4.755	4.744	0.011	1.000	1857971	0.6753	Target=40.21	108	4522	
318.00 > 120.30	4.755	4.744	0.011	1.000	46336		40.10(20.11-60.32)	108	635	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.882	4.871	0.011	0.830	1827128	0.6525	Target=3.28	112	2619	
302.10 > 98.90	4.882	4.871	0.011	0.830	576204		3.17(1.64-4.92)	112	2718	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.947	4.936	0.011	1.040	2020886	2.55	Target=1.86	102	4877	
286.90 > 184.90	4.947	4.936	0.011	1.040	970809		2.08(0.93-2.78)	102	1837	
D 14 13C4 PFHpA										
367.10 > 322.00	5.219	5.219	0.0	1.098	1911597	0.6653		106	5537	
D 15 M2-6:2 FTS										R
429.10 > 80.90	5.450	5.441	0.009	0.927	946447	0.9427	Target=0.38	79.4	1850	R
429.10 > 409.00	5.441	5.441	0.0	0.926	6906341		0.14(0.19-0.57)	79.4	6873	
D 16 13C8 PFOA										
421.10 > 376.00	5.653	5.653	0.0	1.000	2233580	0.6751		108	6423	
D 17 13C3 PFHxS										
402.10 > 79.90	5.889	5.878	0.011	1.002	1883477	0.6851	Target=3.25	116	1478	
402.10 > 98.80	5.879	5.878	0.001	1.000	510327		3.69(1.63-4.88)	116	1080	
D 18 13C9 PFNA										
472.10 > 427.00	6.087	6.087	0.0	1.000	825316	0.3923		126	2599	
D 19 M2-8:2 FTS										R
529.10 > 80.90	6.291	6.281	0.010	1.070	689281	1.00	Target=0.33	83.7	1973	R
529.10 > 509.00	6.282	6.281	0.001	1.069	5097771		0.14(0.16-0.49)	83.7	4206	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.473	6.462	0.011	0.952	1529044	1.45		116	5007	
D 21 13C6 PFDA										
519.10 > 474.10	6.522	6.522	0.0	0.999	783597	0.3734		120	1947	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.667	6.657	0.010	0.980	1469731	1.42		114	2770	
D 23 13C8 PFOS										
507.10 > 79.90	6.792	6.792	0.0	0.999	1651633	0.7059	Target=4.26	118	75.5	
507.10 > 98.90	6.792	6.792	0.0	0.999	389443		4.24(2.13-6.39)	118	1059	
D 24 13C7 PFUnA										
570.00 > 525.10	6.968	6.960	0.008	1.067	727401	0.3523		113	1523	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.396	7.388	0.008	1.132	710877	0.3648		117	1777	
D 26 13C8 FOSA										
506.10 > 77.80	7.737	7.726	0.011	1.138	1844902	0.7347		118	4607	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.217	8.217	0.0	1.258	458692	0.4117		132	1279	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.600	0.011	1.266	2797829	7.52		120	1188	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.735	8.724	0.011	1.284	382110	0.7716		123	787	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.853	0.0	1.302	3300504	7.22		116	1307	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.950	0.001	1.316	376775	0.7548		121	129	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										
212.80 > 168.90	3.582	3.576	0.006	1.000	98878732	53.5		85.6	1018	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.876	3.866	0.010	0.915	62441118	28.0		89.6	33691	
34 3:3 FTCA										
241.00 > 177.00	3.876	3.866	0.010	0.915	7284750	74.4	Target=1.06	95.2	21257	
241.00 > 117.00	3.864	3.866	-0.002	0.912	6817253		1.07(0.53-1.58)	95.2	1591	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.245	4.229	0.016	1.002	65867025	26.5		84.7	7673	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.416	4.410	0.006	1.043	68079032	28.9		92.5	109559	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.566	4.550	0.016	1.002	84637278	42.4	Target=1.34	72.6	504702	
327.10 > 80.90	4.566	4.550	0.016	1.002	66245404		1.28(0.67-2.01)	72.6	13567	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.712	4.707	0.005	0.991	6822470	26.1	Target=1.72	83.6	11309	
295.00 > 84.90	4.712	4.707	0.005	0.991	4723609		1.44(0.86-2.58)	83.6	8974	
48 FBSA										
297.90 > 78.00	4.755	4.740	0.015	0.974	116947522	54.4		87.0	7815	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.765	4.750	0.015	1.002	34811212	14.7	Target=14.20	94.3	3699	
313.00 > 118.90	4.755	4.750	0.005	1.000	2533782		13.74(7.10-21.30)	94.3	6876	
41 5:3 FTCA										
341.00 > 237.10	4.838	4.834	0.004	1.018	119965624	285.1	Target=1.54	73.0	15588	
341.00 > 217.00	4.838	4.834	0.004	1.018	85039331		1.41(0.77-2.31)	73.0	24896	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.893	4.878	0.015	1.002	38589252	12.6	Target=3.31	91.5	49391	
298.70 > 98.80	4.882	4.878	0.004	1.000	11465321		3.37(1.66-4.97)	91.5	18592	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.957	4.943	0.014	1.002	47743564	53.6	Target=1.99	85.8	12720	
284.90 > 184.90	4.957	4.943	0.014	1.002	24461838		1.95(1.00-2.99)	85.8	20002	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.147	5.144	0.003	1.083	179077380	20.6	Target=12.91	74.0	65562	
314.80 > 82.90	5.147	5.144	0.003	1.083	16027647		11.17(6.46-19.37)	74.0	15100	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.230	5.215	0.015	1.002	46396790	14.0	Target=3.56	89.8	3631	
363.10 > 169.00	5.230	5.215	0.015	1.002	13175453		3.52(1.78-5.34)	89.8	7871	
49 DONA										
376.90 > 250.90	5.390	5.385	0.005	1.090	188204090	43.5	Target=1.61	73.9	54884	
376.90 > 84.80	5.390	5.385	0.005	1.090	131982851		1.43(0.81-2.42)	73.9	16383	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.411	5.406	0.005	0.919	39445402	12.1	Target=3.08	82.3	4327	
349.10 > 98.90	5.411	5.406	0.005	0.919	12508265		3.15(1.54-4.63)	82.3	10528	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.450	5.445	0.005	1.000	78839100	41.6	Target=1.41	70.1	644398	
427.10 > 80.90	5.450	5.445	0.005	1.000	61113283		1.29(0.70-2.11)	70.1	99883	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.663	5.657	0.005	1.002	25684345	15.0	Target=1.93	95.9	1315	M
413.00 > 169.00	5.663	5.657	0.005	1.002	12231125		2.10(0.96-2.89)	95.9	1598	M
54 7:3 FTCA										
441.00 > 316.90	5.719	5.713	0.006	1.203	119698866	297.7	Target=1.07	76.2	7606	
441.00 > 336.90	5.719	5.713	0.006	1.203	115109818		1.04(0.53-1.60)	76.2	8491	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.889	5.882	0.007	1.000	35333086	13.0	Target=3.17	91.4	2593	M
398.70 > 98.90	5.889	5.882	0.007	1.000	10232417		3.45(1.59-4.76)	91.4	3062	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.097	6.091	0.006	1.002	25156100	12.6	Target=4.77	80.5	1684	M
463.00 > 169.00	6.097	6.091	0.006	1.002	5603176		4.49(2.39-7.16)	80.5	518	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.291	6.286	0.005	1.000	59257481	41.3	Target=1.35	69.0	5770	
527.10 > 80.80	6.291	6.286	0.005	1.000	45588471		1.30(0.67-2.02)	69.0	6426	
57 PFECHS										
461.00 > 381.00	6.300	6.286	0.014	1.070	110733829	20.6	Target=1.89	71.3	12349	
461.00 > 99.00	6.300	6.286	0.014	1.070	68189052		1.62(0.94-2.83)	71.3	28660	
62 FHxSA										
397.90 > 78.00	6.310	6.305	0.005	1.071	154585513	48.3		77.3	14560	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.347	6.342	0.005	0.934	41248903	12.7	Target=3.87	85.6	3371	
449.00 > 98.80	6.347	6.342	0.005	0.934	10868884		3.80(1.93-5.80)	85.6	8998	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.473	6.469	0.004	1.000	18080483	13.4	Target=1.69	85.9	2856	M
570.10 > 483.00	6.473	6.469	0.004	1.000	10579557		1.71(0.85-2.54)	85.9	1627	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.532	6.527	0.005	1.001	29153681	14.6	Target=5.10	93.7	3540	
512.90 > 219.00	6.532	6.527	0.005	1.001	6286131		4.64(2.55-7.66)	93.7	8222	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.676	6.672	0.004	1.001	13951983	14.2	Target=1.49	91.0	2969	M
584.20 > 526.00	6.676	6.672	0.004	1.001	9160924		1.52(0.75-2.24)	91.0	1491	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.801	6.788	0.013	1.001	44696558	12.9	Target=4.80	88.6	3235	M
498.90 > 98.80	6.801	6.788	0.013	1.001	9651315		4.63(2.40-7.20)	88.6	3924	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.976	6.965	0.011	1.001	28661233	13.7	Target=6.10	87.4	5432	
563.10 > 269.10	6.968	6.965	0.003	1.000	4845549		5.91(3.05-9.15)	87.4	5622	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.138	7.127	0.011	1.443	157417338	41.0	Target=3.10	70.3	123784	
532.80 > 353.00	7.138	7.127	0.011	1.443	60026370		2.62(1.55-4.65)	70.3	21855	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.242	7.226	0.016	1.066	35181145	13.4	Target=4.02	89.1	5148	
548.80 > 98.80	7.236	7.226	0.010	1.065	8587528		4.10(2.01-6.03)	89.1	12474	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.396	7.384	0.012	1.000	29041699	12.9	Target=16.81	82.5	8266	
613.10 > 319.00	7.396	7.384	0.012	1.000	1704414		17.04(8.41-25.22)	82.5	5313	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.660	7.655	0.005	1.128	39709957	13.3	Target=4.25	88.5	9698	
599.00 > 98.80	7.660	7.655	0.005	1.128	9433271		4.21(2.12-6.37)	88.5	9628	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.737	7.732	0.005	1.000	40044834	14.4	Target=51.55	92.4	863	M
498.10 > 478.00	7.737	7.732	0.005	1.000	848322		47.20(25.77-77.32)	92.4	1010	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.811	7.807	0.004	0.951	28846799	12.7	Target=6.27	81.4	7621	
663.00 > 168.90	7.811	7.807	0.004	0.951	4863283		5.93(3.13-9.40)	81.4	6739	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.990	7.975	0.015	1.615	155188110	41.6	Target=3.32	70.7	50435	
632.90 > 452.90	7.980	7.975	0.005	1.613	57857101		2.68(1.66-4.97)	70.7	43901	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.217	8.213	0.004	1.000	23009165	12.5	Target=6.82	80.0	9857	
713.10 > 168.90	8.217	8.213	0.004	1.000	3072989		7.49(3.41-10.24)	80.0	7336	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.440	8.424	0.016	1.243	34981116	13.9	Target=4.61	91.7	9426	
699.10 > 98.80	8.429	8.424	0.005	1.241	7577384		4.62(2.30-6.91)	91.7	6922	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.629	0.003	1.002	9208741	139.0		89.0	1216	M
75 NMeFOSA										M
511.90 > 219.00	8.744	8.741	0.003	1.001	8251102	13.9	Target=0.70	88.7	897	M
511.90 > 169.00	8.735	8.741	-0.006	1.000	11712374		0.70(0.35-1.05)	88.7	1923	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.883	8.880	0.003	1.003	9713191	136.2		87.2	1343	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.960	8.957	0.003	1.001	8601448	14.5	Target=0.71	92.6	669	M
526.00 > 169.00	8.960	8.957	0.003	1.001	12001009		0.72(0.35-1.06)	92.6	925	M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Reagents:

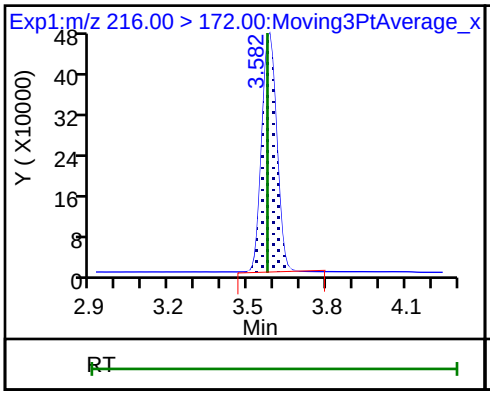
CAL 7_00013 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:04:32 Chrom Revision: 2.3 26-Aug-2024 17:14:48

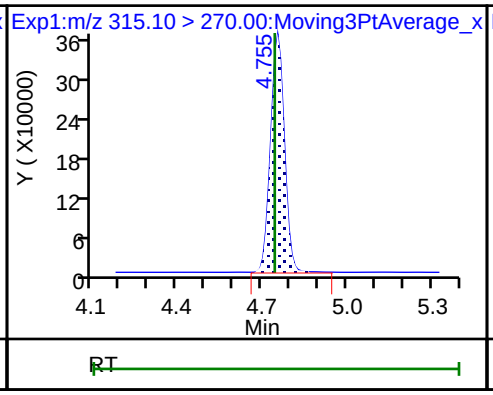
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

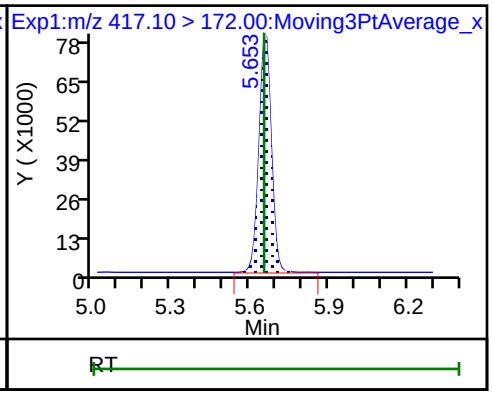
* 1 13C3-PFBA



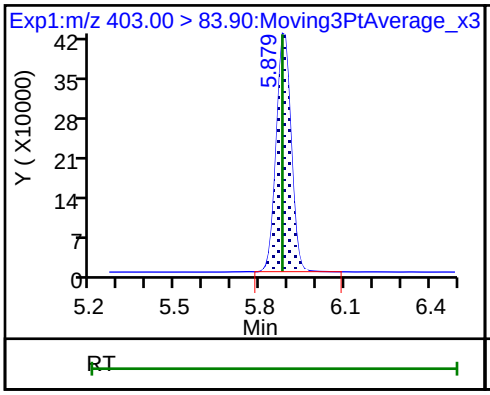
* 2 13C2 PFHxA



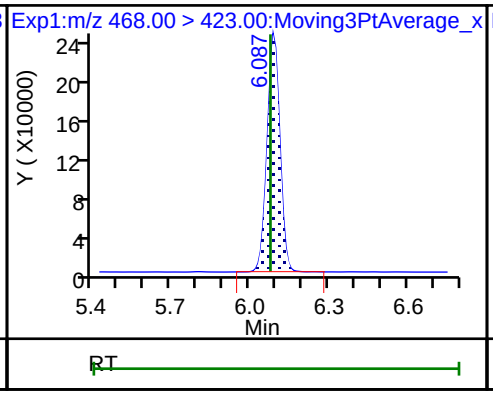
* 3 13C4 PFOA



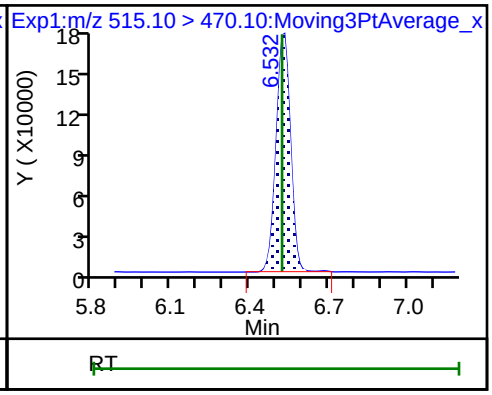
* 4 18O2 PFHxS



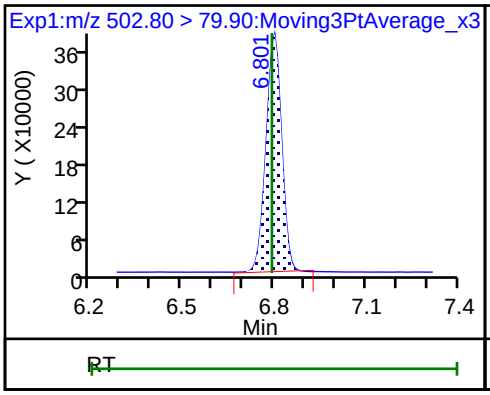
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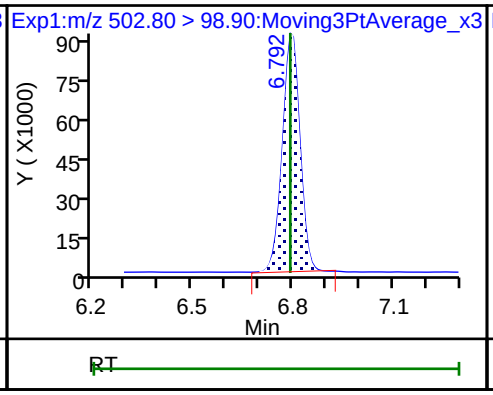
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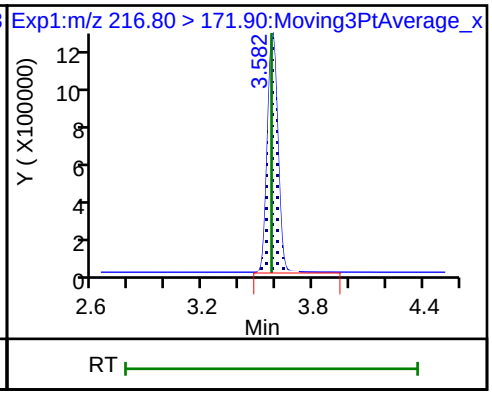
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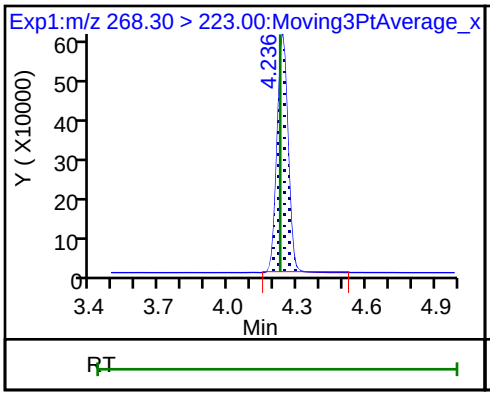
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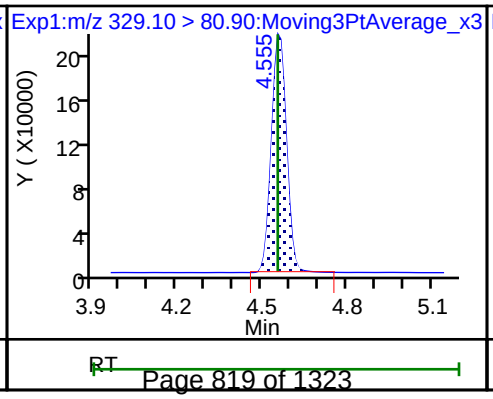
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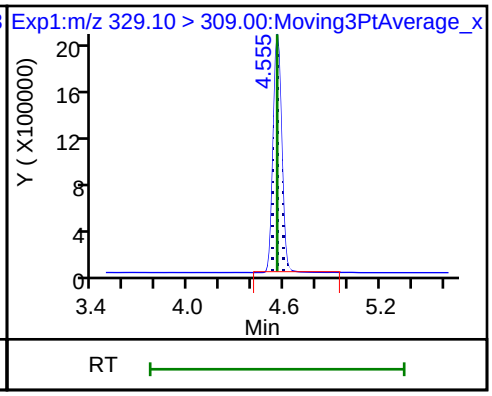
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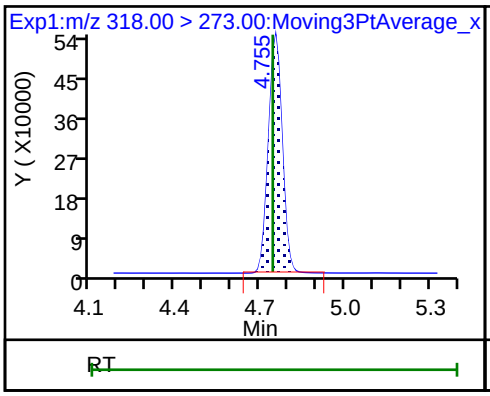
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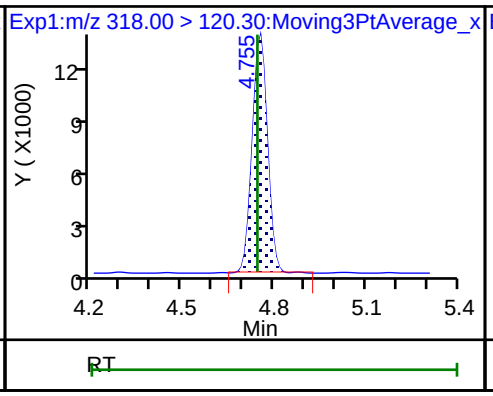
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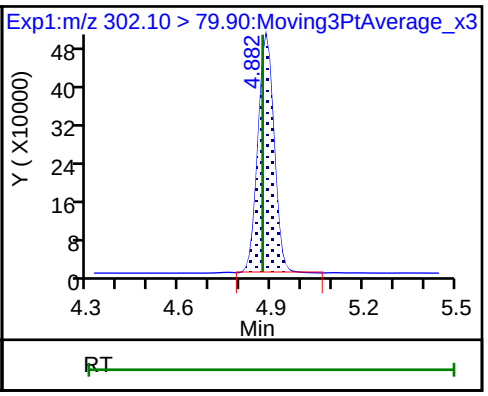
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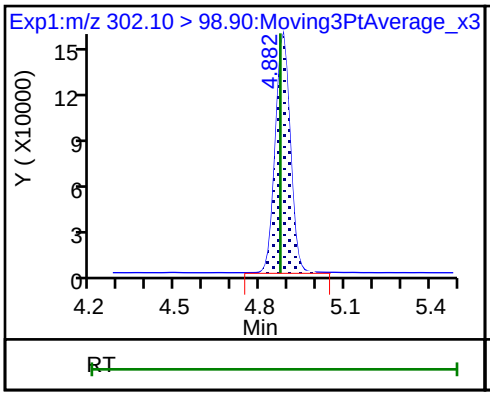
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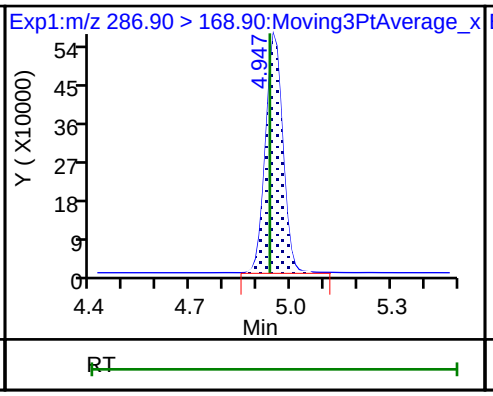
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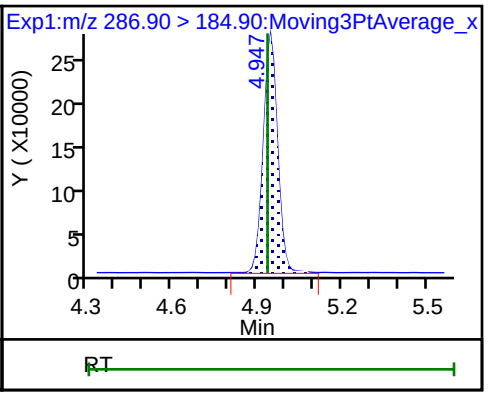
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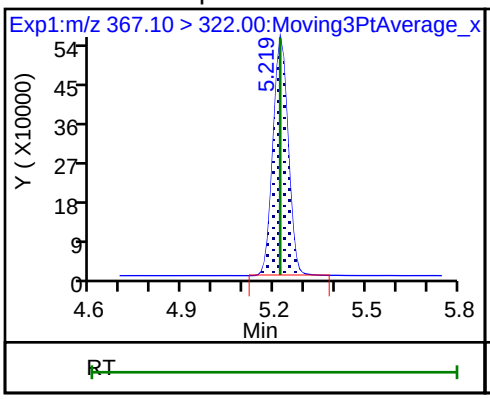
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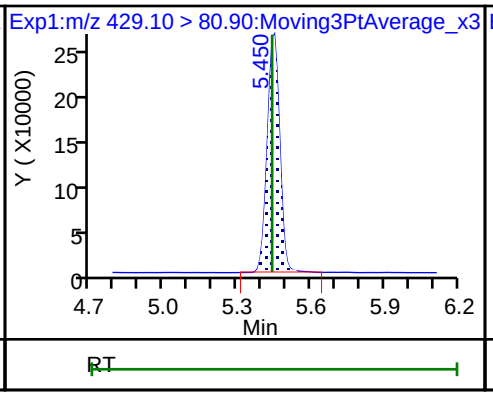
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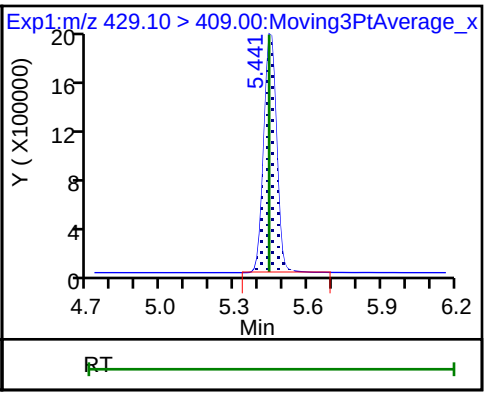
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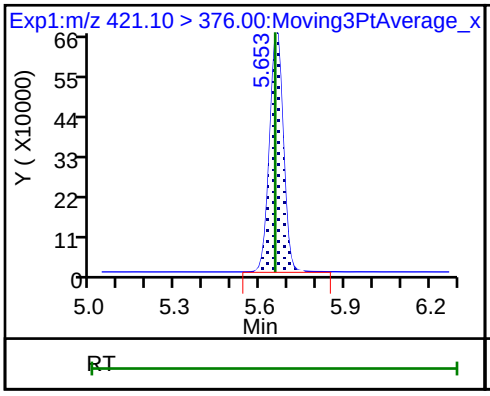
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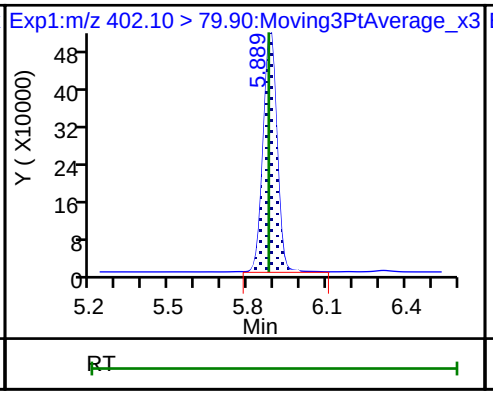
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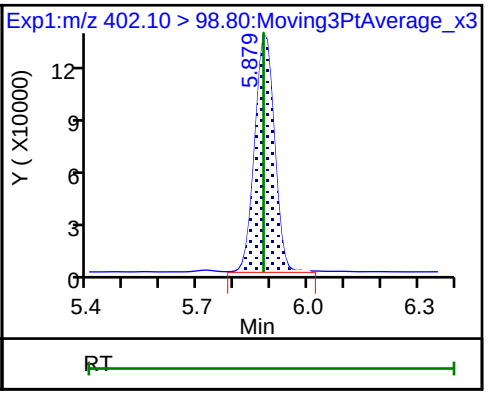
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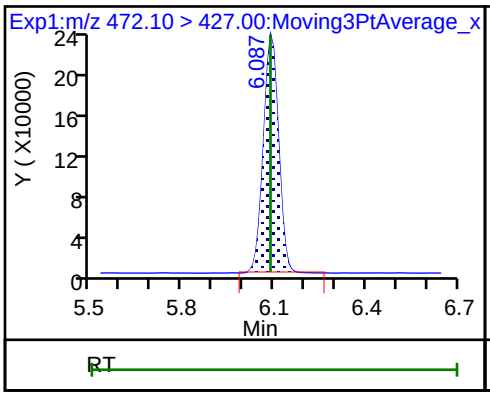
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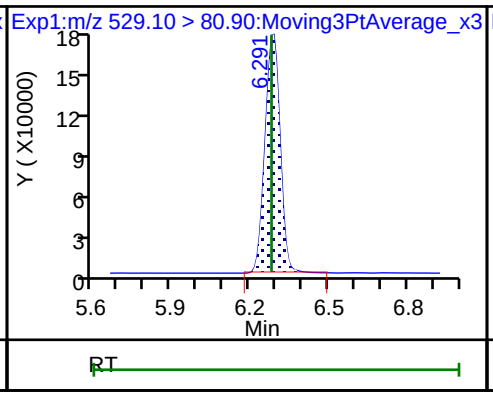
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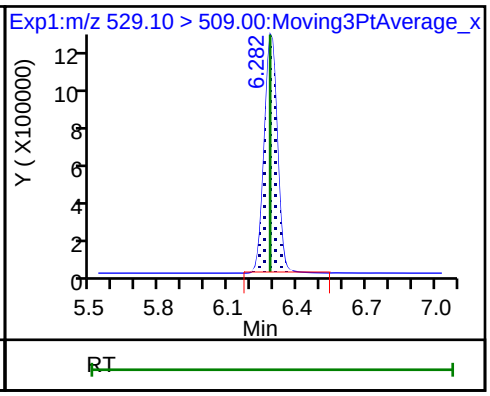
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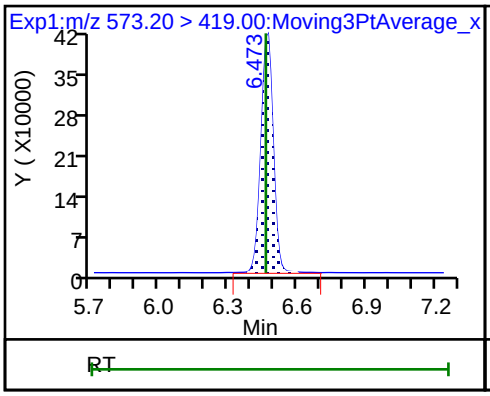
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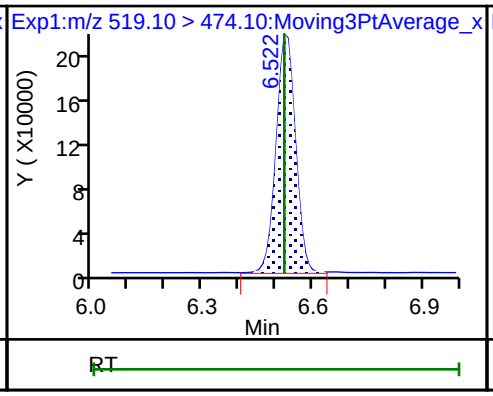
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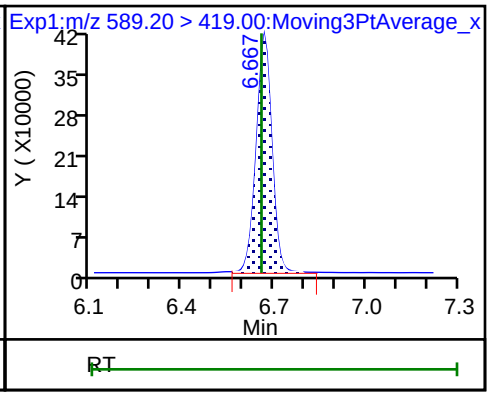
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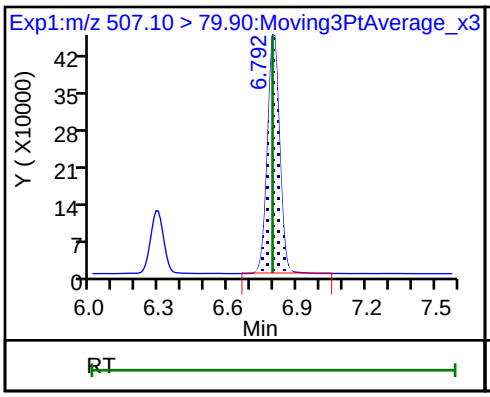
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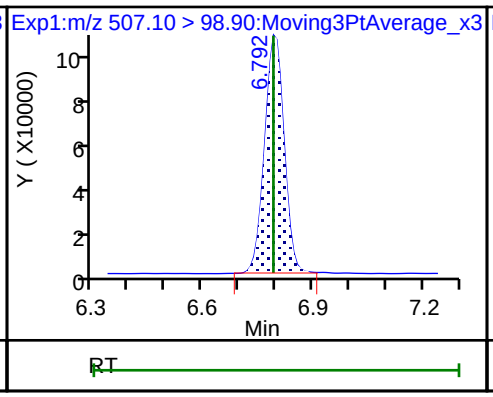
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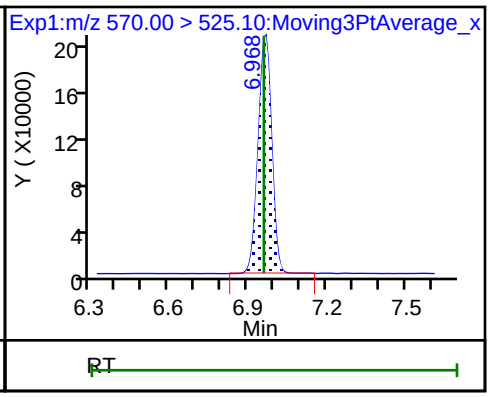
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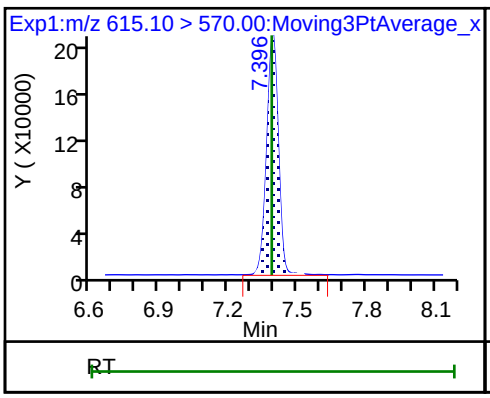
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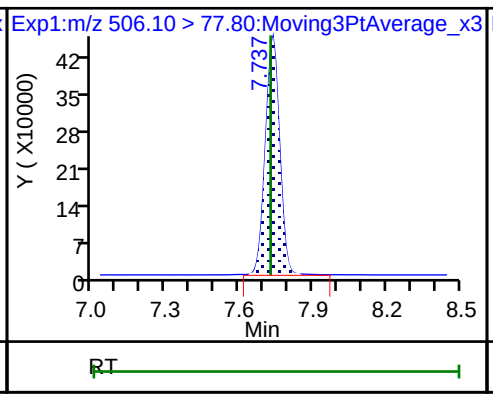
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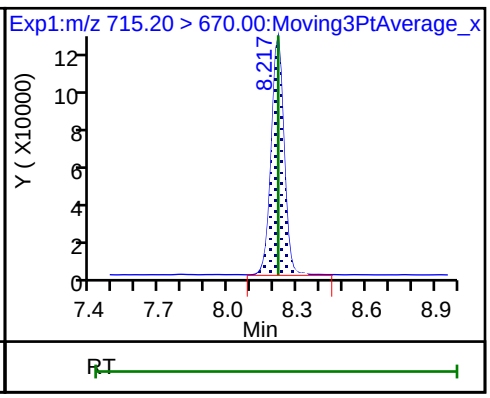
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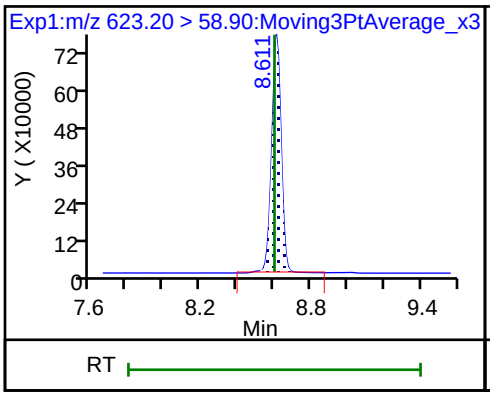
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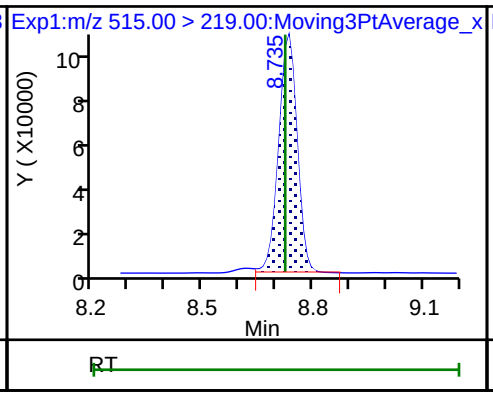
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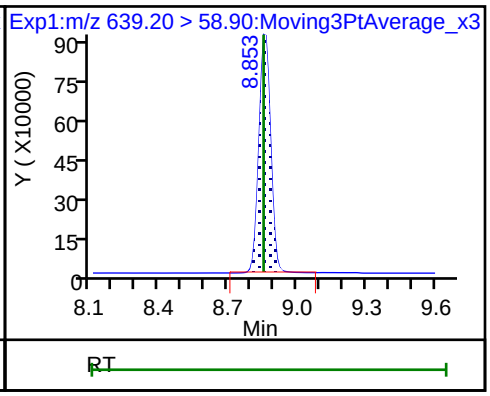
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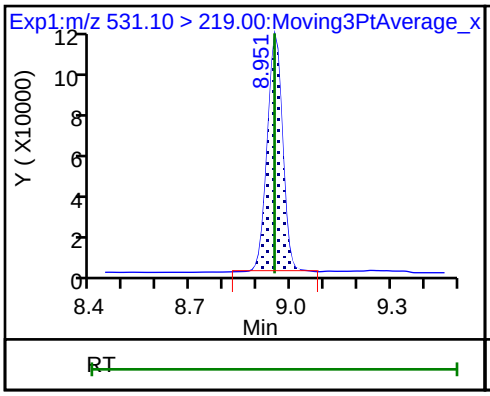
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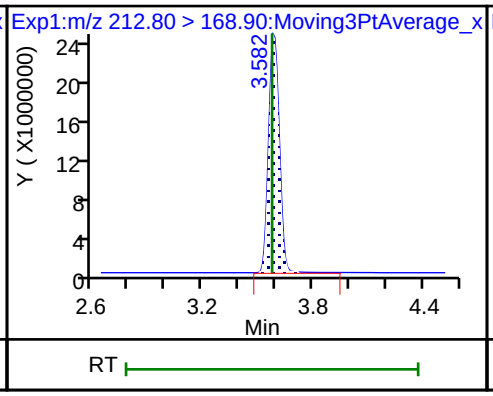
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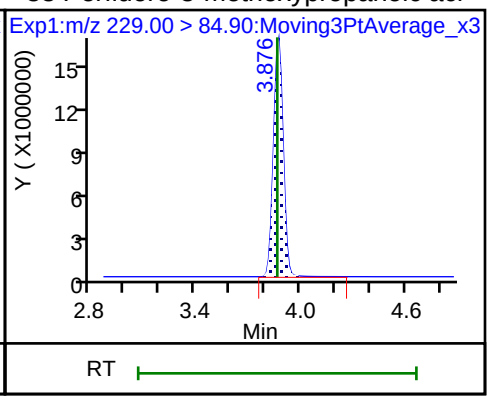
D 31 d5-NEtPFOSA



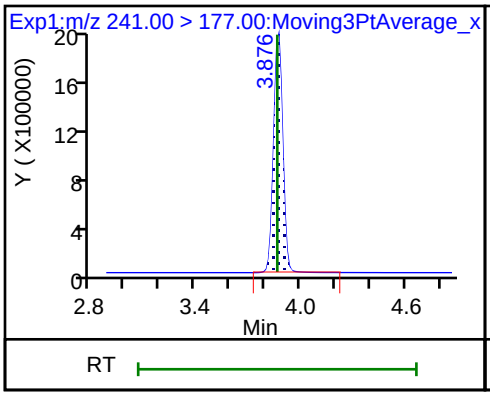
32 Perfluorobutanoic acid



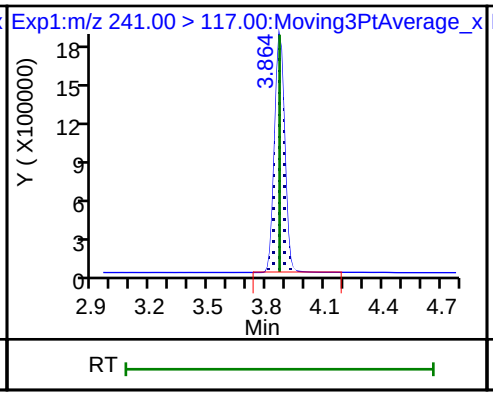
33 Perfluoro-3-methoxypropanoic aci



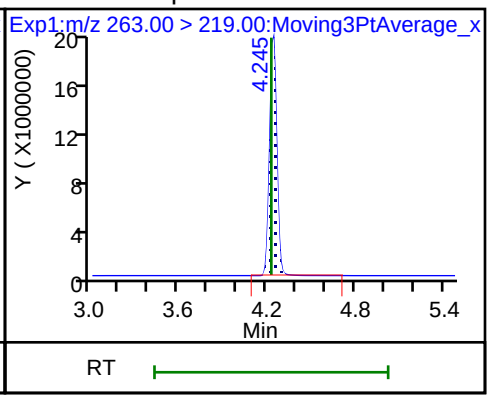
34 3:3 FTCA



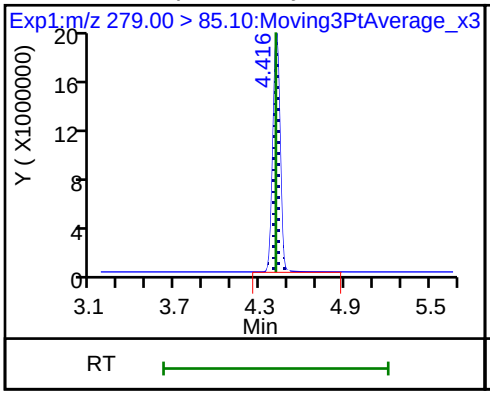
34 3:3 FTCA



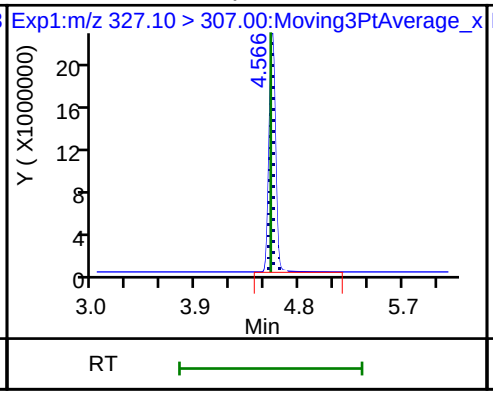
35 Perfluoropentanoic acid



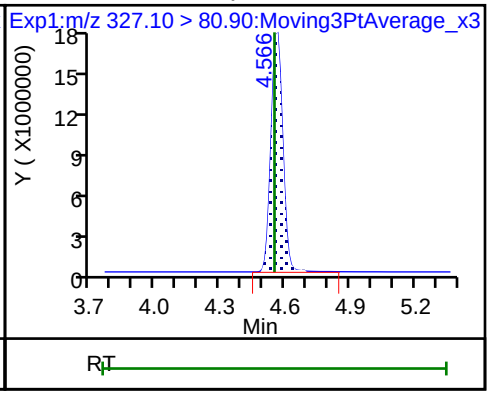
36 Perfluoro(4-methoxybutanoic acid



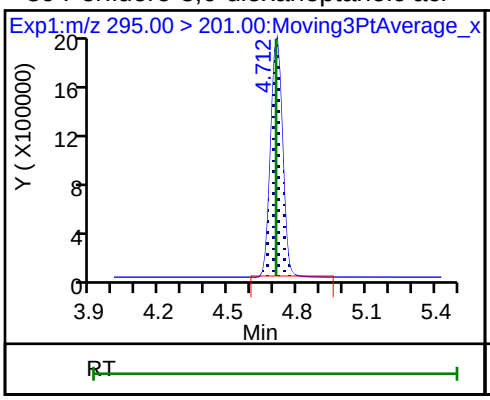
38 1H,1H,2H,2H-perfluorohexanesulfo



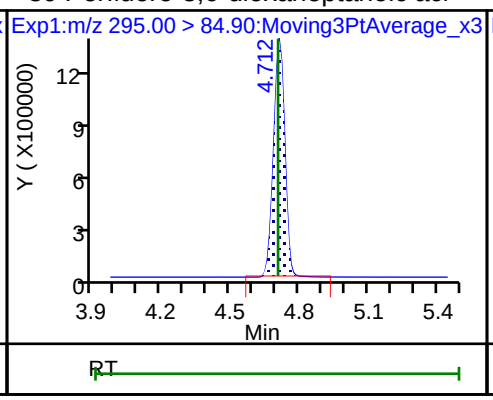
38 1H,1H,2H,2H-perfluorohexanesulfo



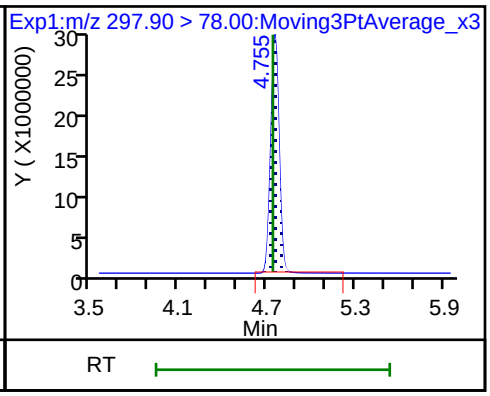
39 Perfluoro-3,6-dioxaheptanoic aci



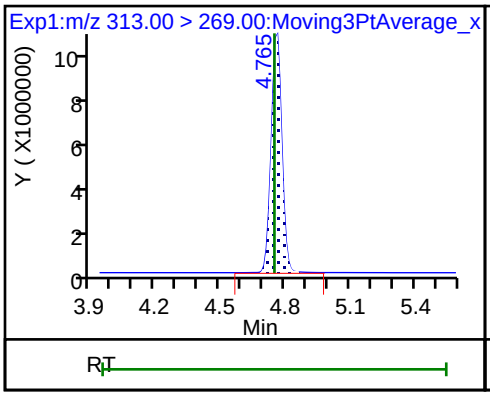
39 Perfluoro-3,6-dioxaheptanoic aci



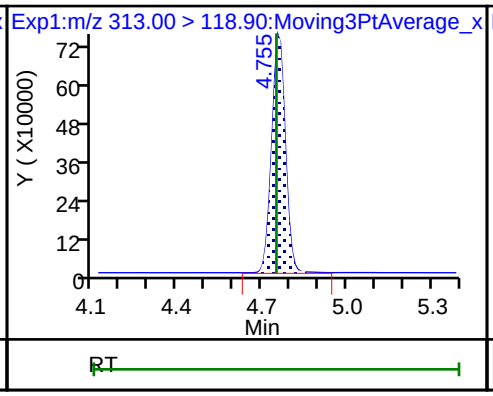
48 FBSA



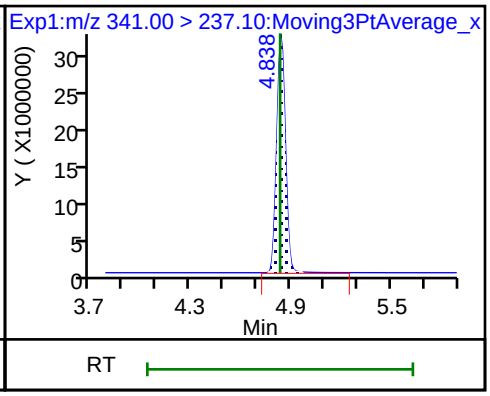
40 Perfluorohexanoic acid



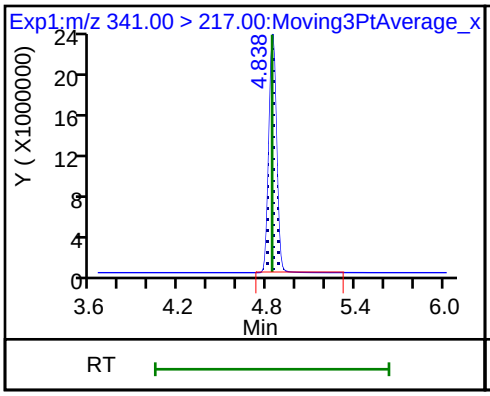
40 Perfluorohexanoic acid



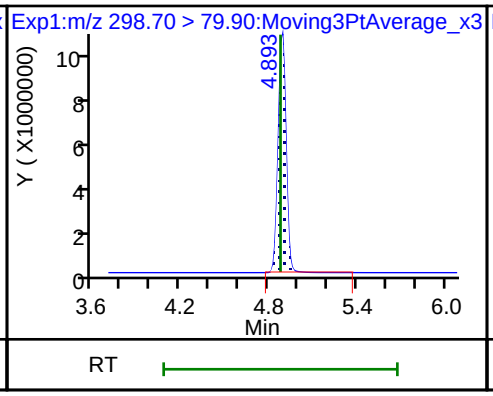
41 5:3 FTCA



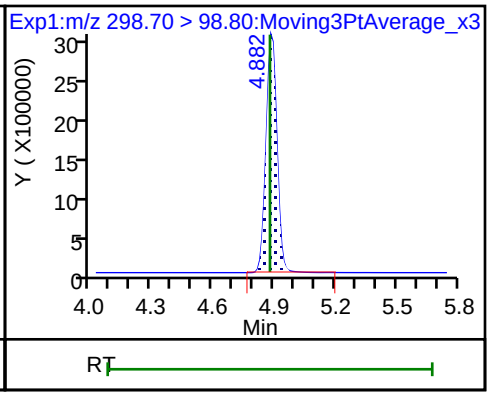
41 5:3 FTCA



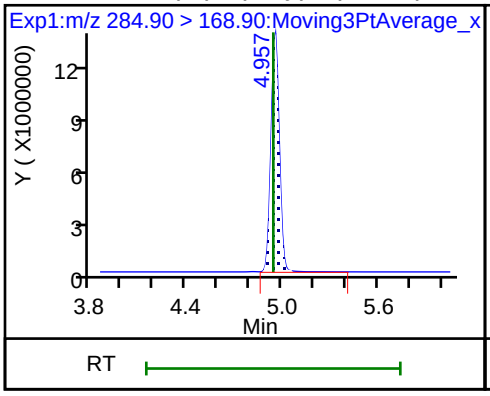
42 Perfluorobutanesulfonic acid



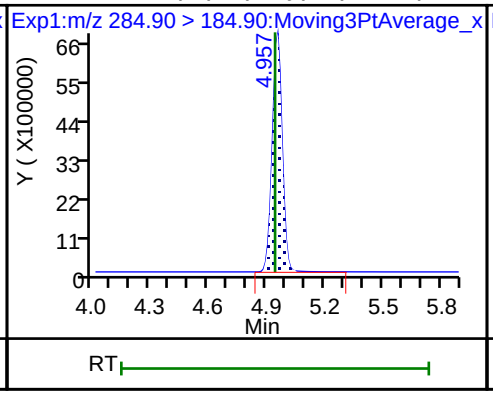
42 Perfluorobutanesulfonic acid



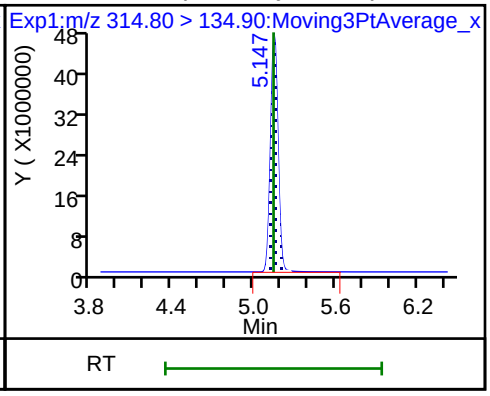
43 Perfluoro(2-propoxypropanoic) ac



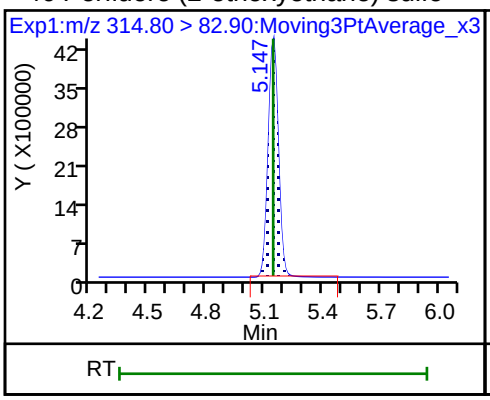
43 Perfluoro(2-propoxypropanoic) ac



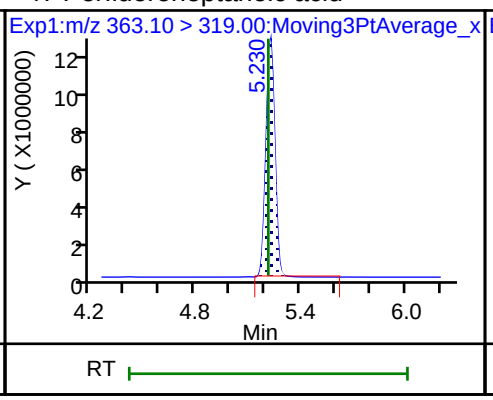
46 Perfluoro (2-ethoxyethane) sulfo



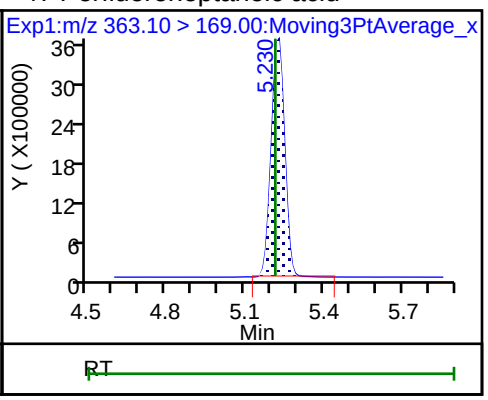
46 Perfluoro (2-ethoxyethane) sulfo



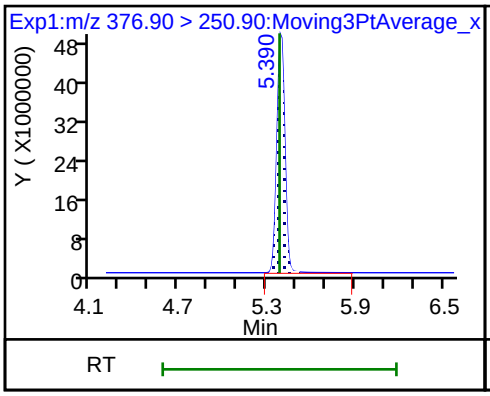
47 Perfluoroheptanoic acid



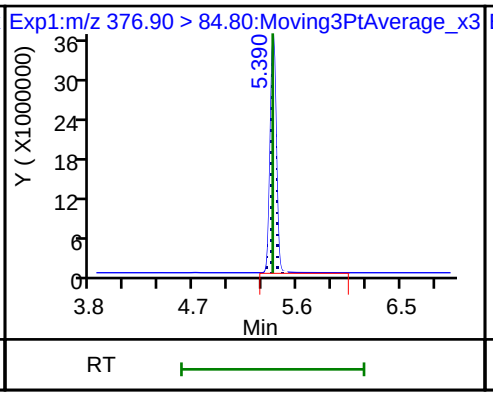
47 Perfluoroheptanoic acid



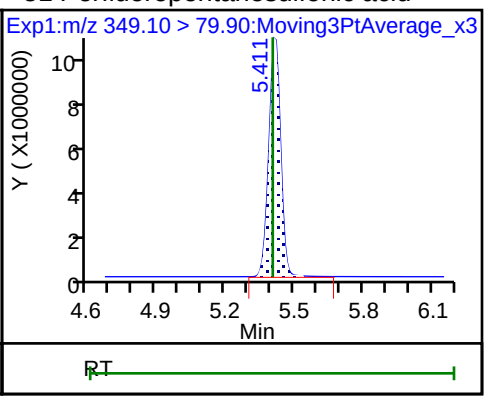
49 DONA



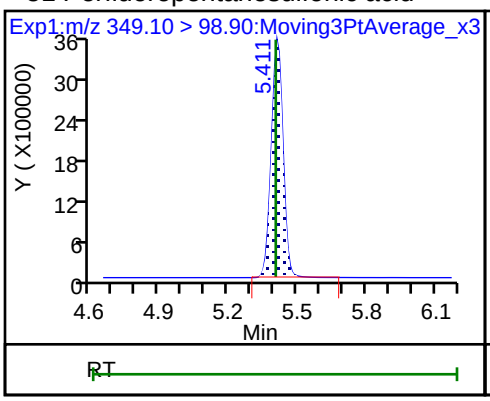
49 DONA



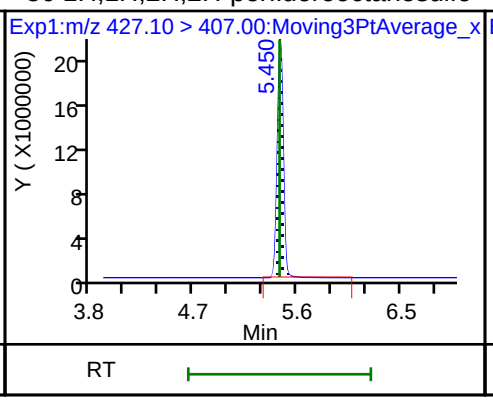
51 Perfluoropentanesulfonic acid



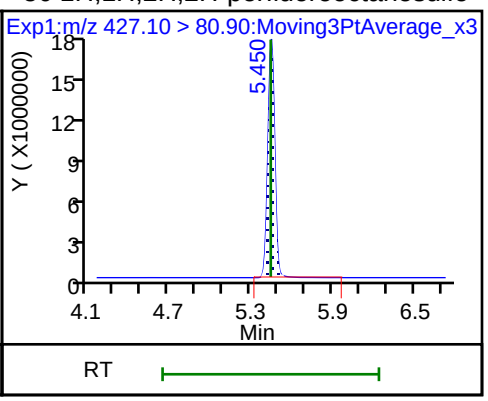
51 Perfluoropentanesulfonic acid



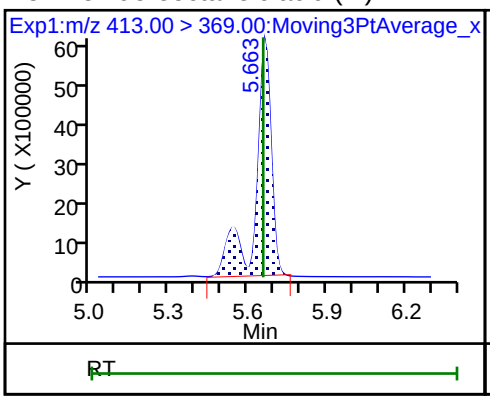
50 1H,1H,2H,2H-perfluorooctanesulfo



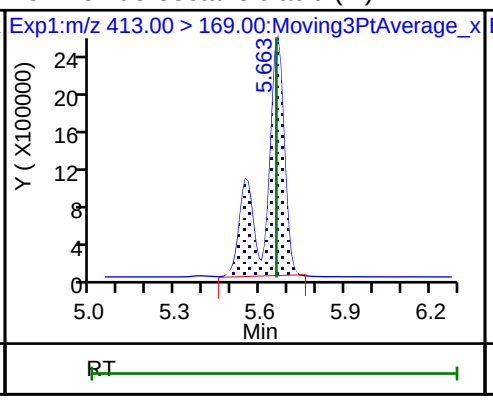
50 1H,1H,2H,2H-perfluorooctanesulfo



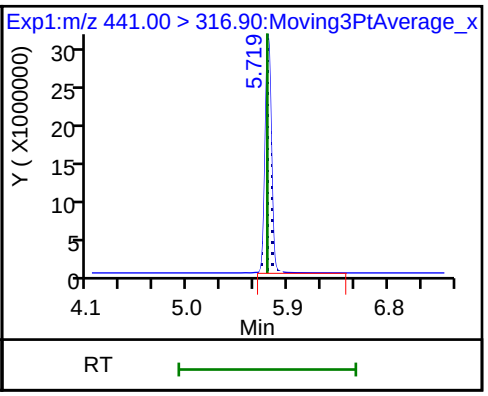
52 Perfluorooctanoic acid (M)



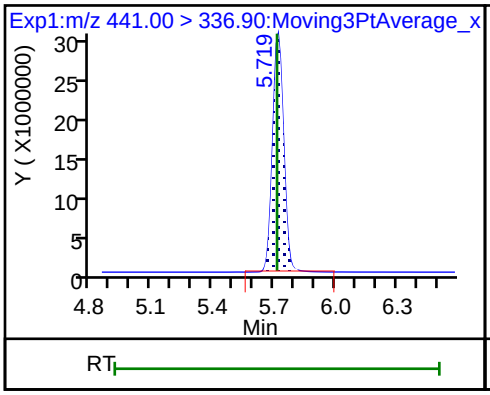
52 Perfluorooctanoic acid (M)



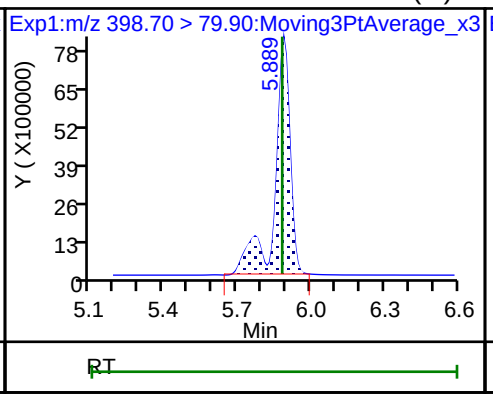
54 7:3 FTCA



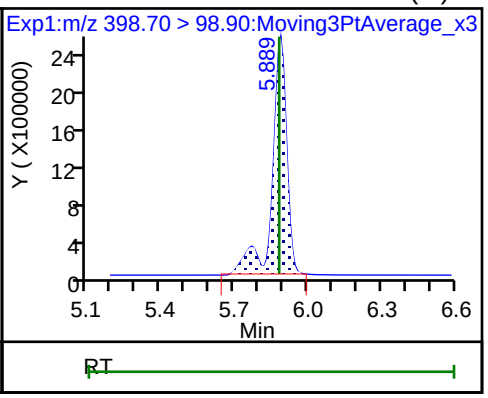
54 7:3 FTCA



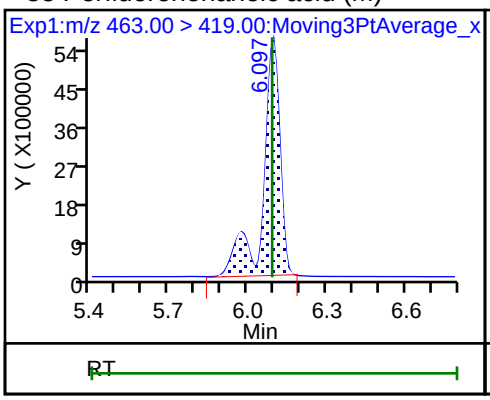
53 Perfluorohexanesulfonic acid (M)



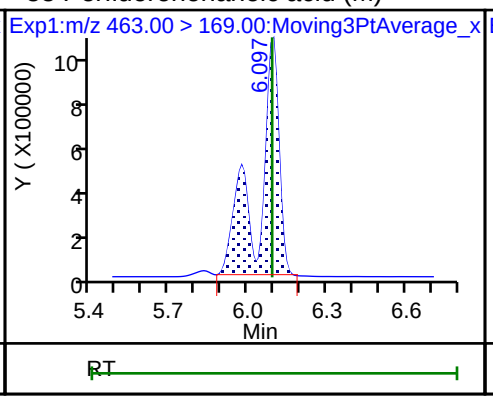
53 Perfluorohexanesulfonic acid (M)



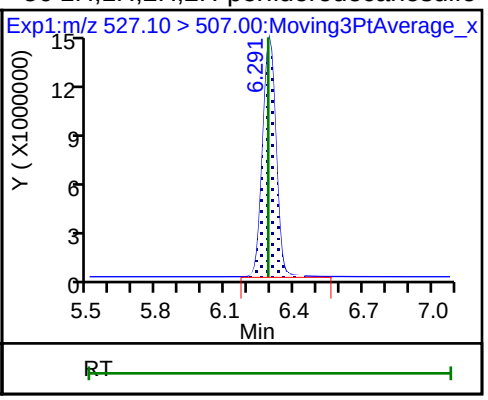
55 Perfluorononanoic acid (M)



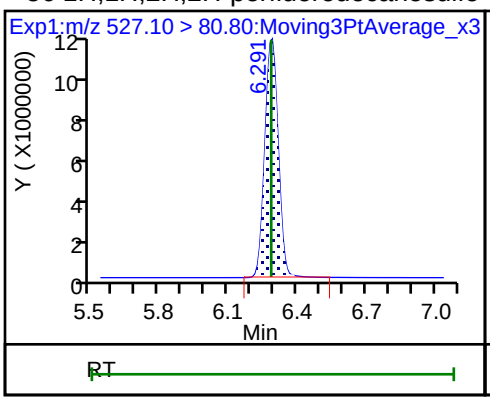
55 Perfluorononanoic acid (M)



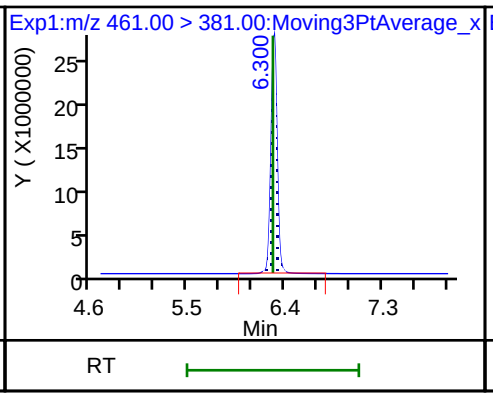
56 1H,1H,2H,2H-perfluorodecanesulfo



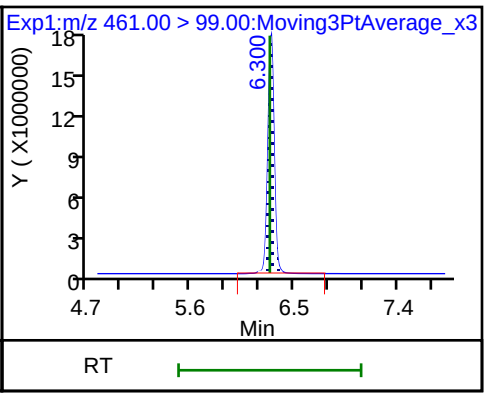
56 1H,1H,2H,2H-perfluorodecanesulfo



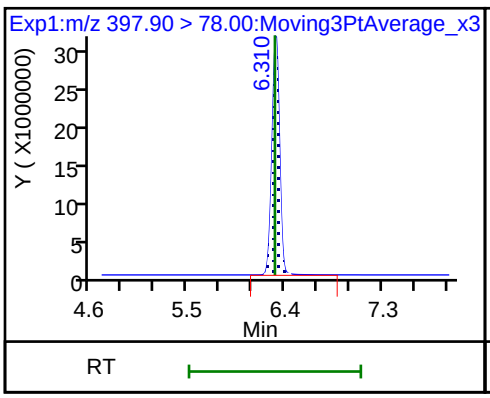
57 PFECHS



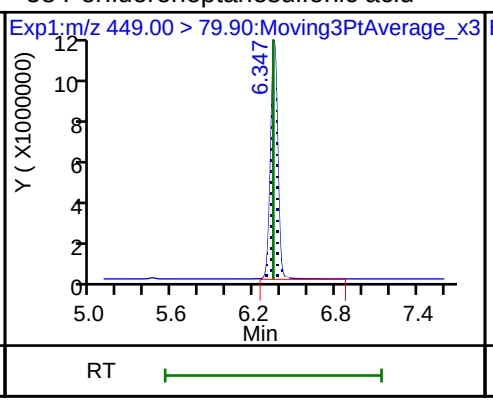
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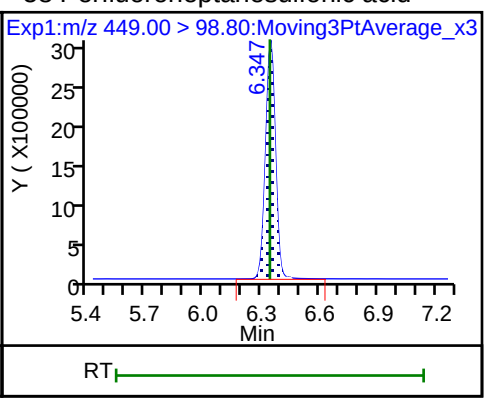
62 FHxSA



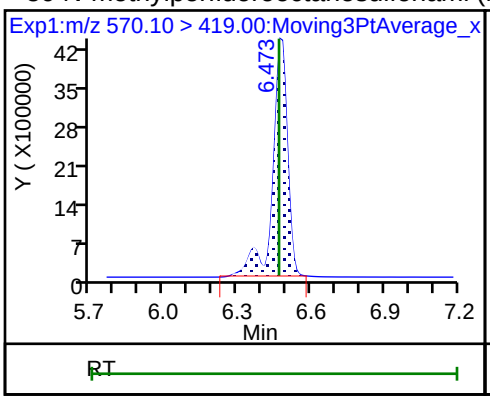
58 Perfluoroheptanesulfonic acid



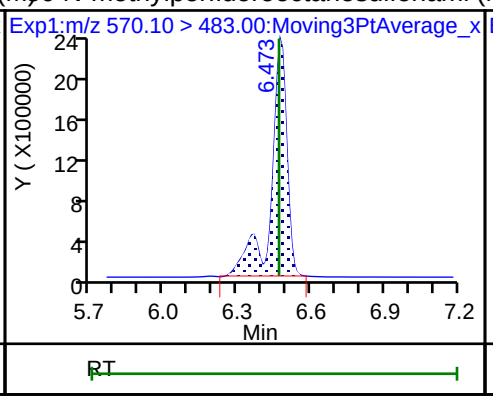
58 Perfluoroheptanesulfonic acid



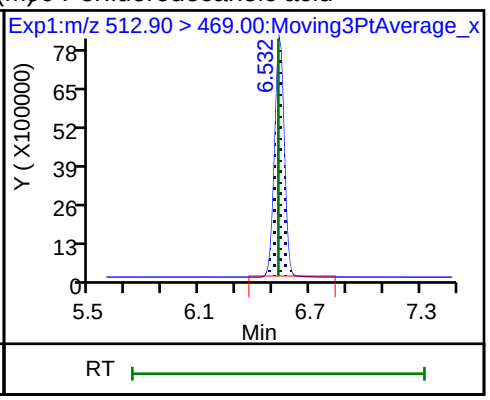
59 N-methylperfluorooctanesulfonami (M)



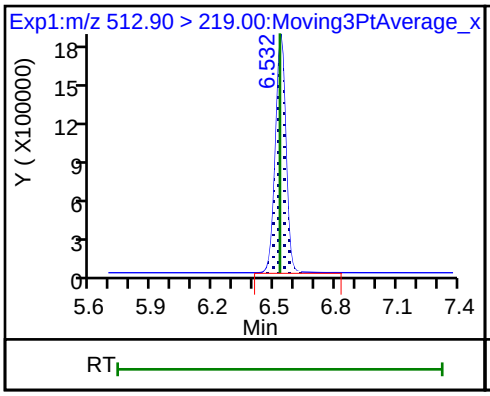
59 N-methylperfluorooctanesulfonami (M)



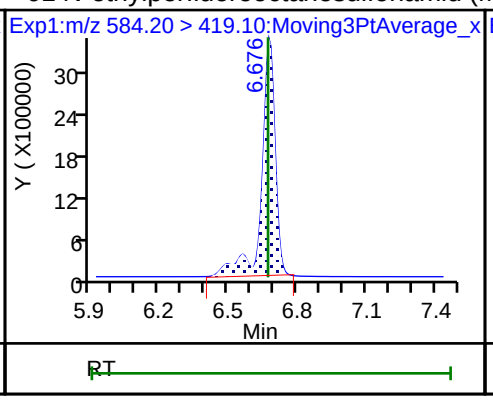
60 Perfluorodecanoic acid



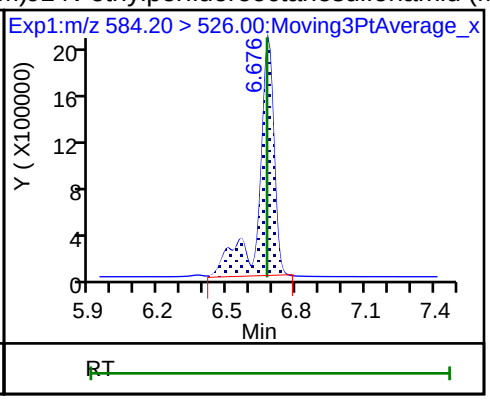
60 Perfluorodecanoic acid



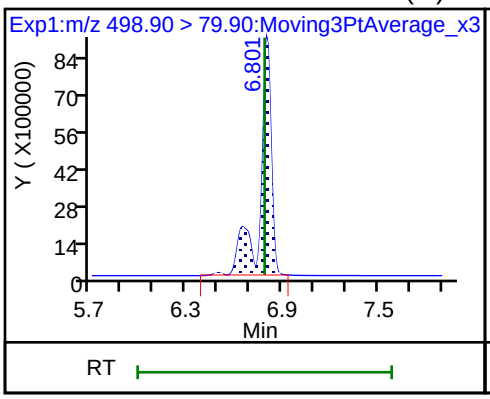
61 N-ethylperfluorooctanesulfonamid (M)



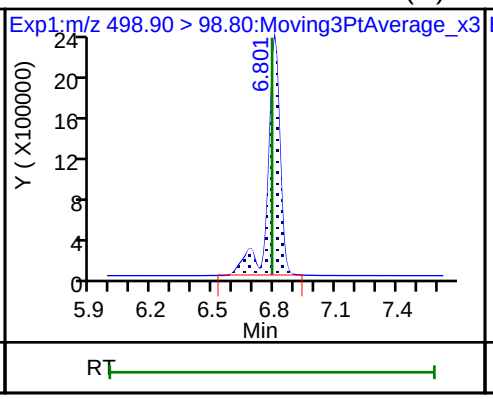
61 N-ethylperfluorooctanesulfonamid (M)



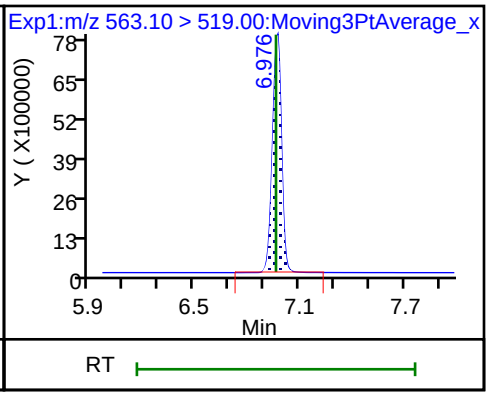
63 Perfluorooctanesulfonic acid (M)



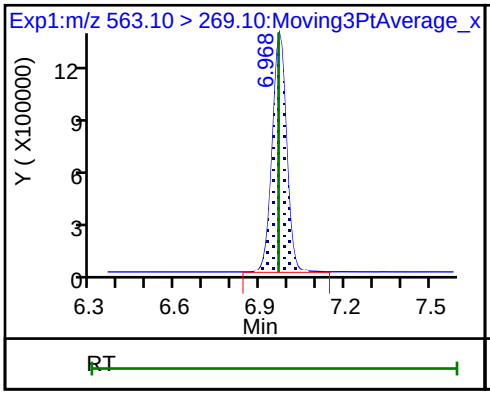
63 Perfluorooctanesulfonic acid (M)



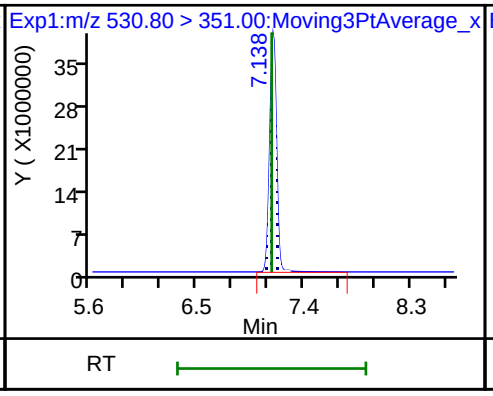
64 Perfluoroundecanoic acid



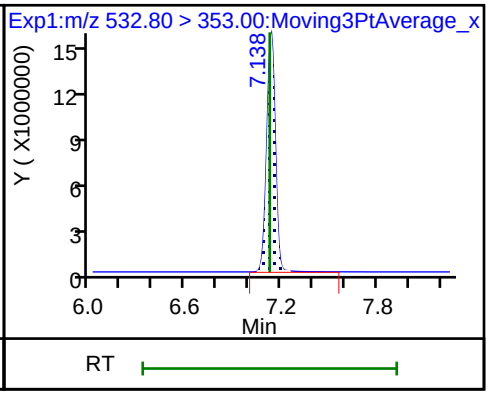
64 Perfluoroundecanoic acid



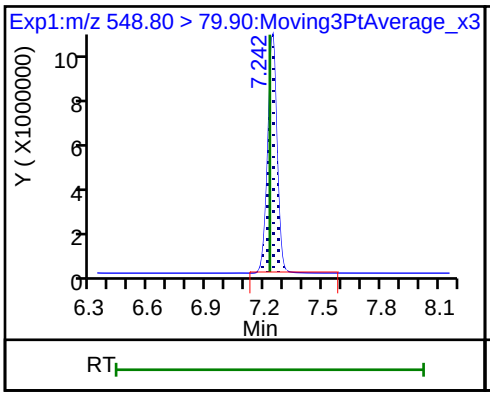
65 9-Chlorohexadecafluoro-3-oxanona



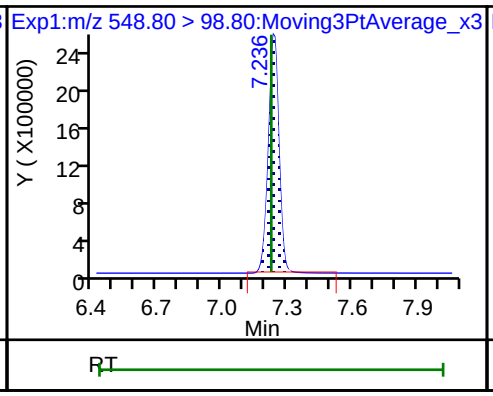
65 9-Chlorohexadecafluoro-3-oxanona



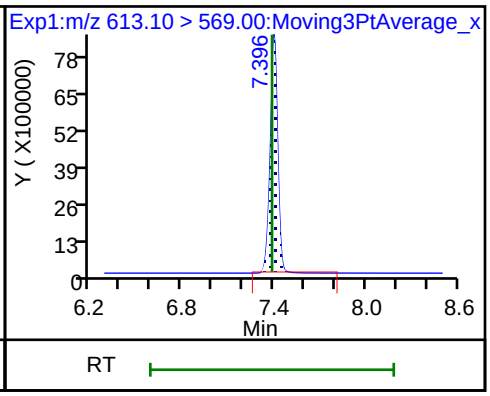
66 Perfluorononanesulfonic acid



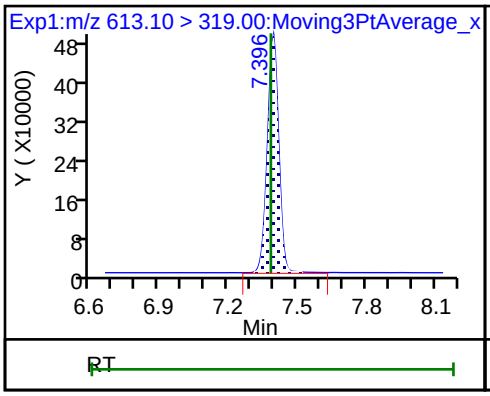
66 Perfluorononanesulfonic acid



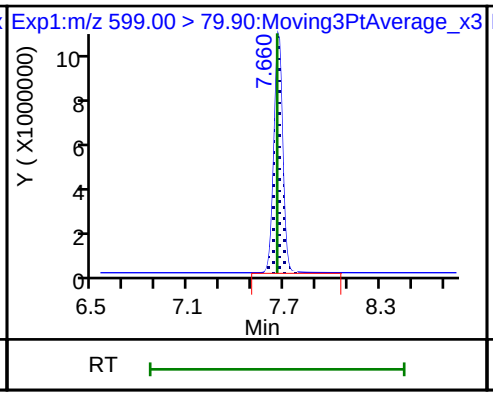
67 Perfluorododecanoic acid



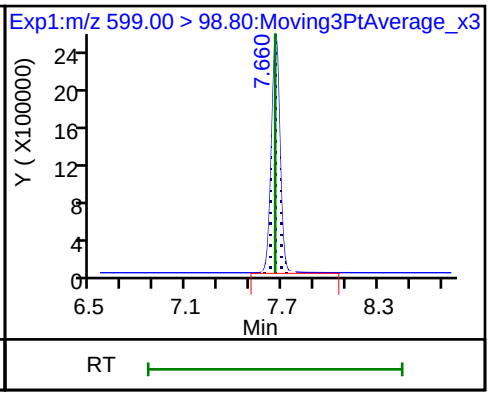
67 Perfluorododecanoic acid



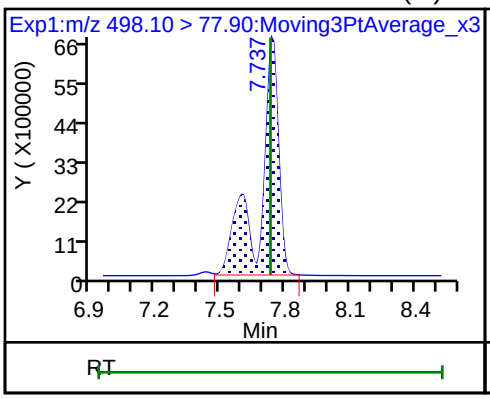
68 Perfluorodecanesulfonic acid



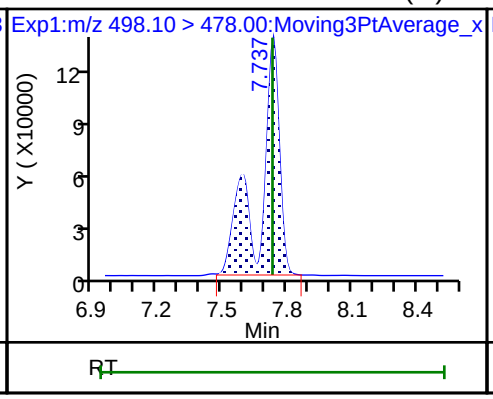
68 Perfluorodecanesulfonic acid



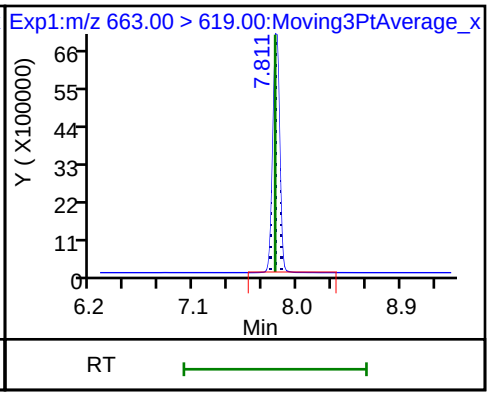
69 Perfluorooctanesulfonamide (M)



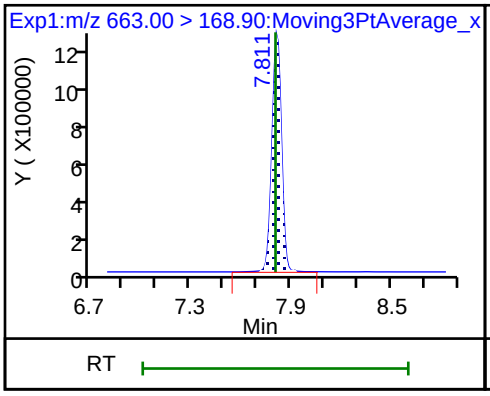
69 Perfluorooctanesulfonamide (M)



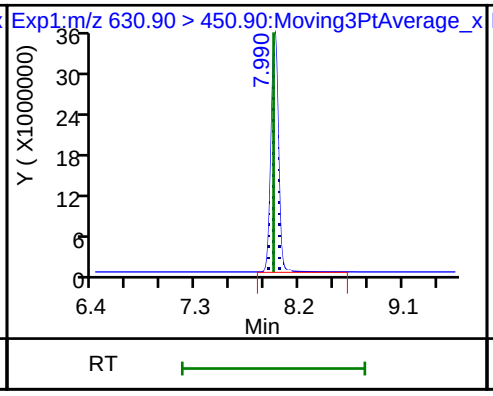
70 Perfluorotridecanoic acid



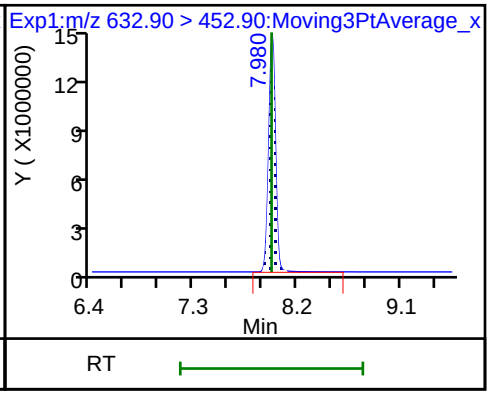
70 Perfluorotridecanoic acid



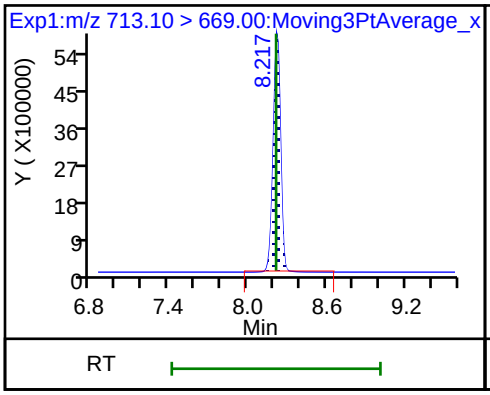
71 11-Chloroeicosafluoro-3-oxaundec



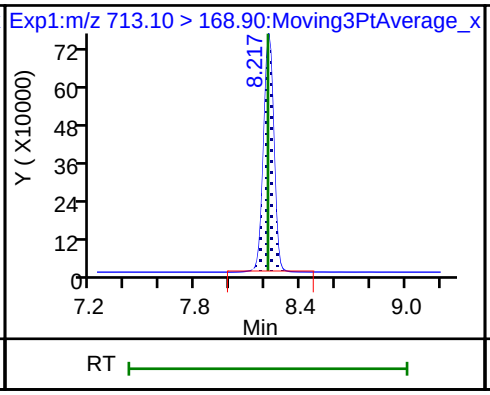
71 11-Chloroeicosafluoro-3-oxaundec



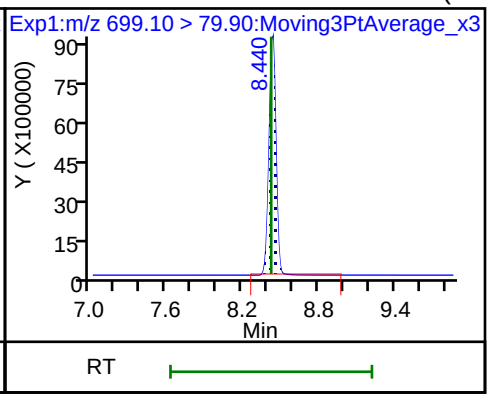
72 Perfluorotetradecanoic acid



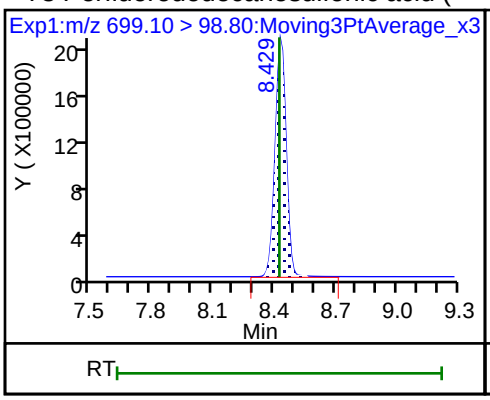
72 Perfluorotetradecanoic acid



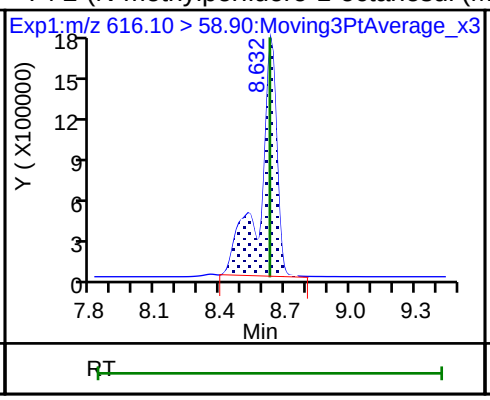
73 Perfluorododecanesulfonic acid (



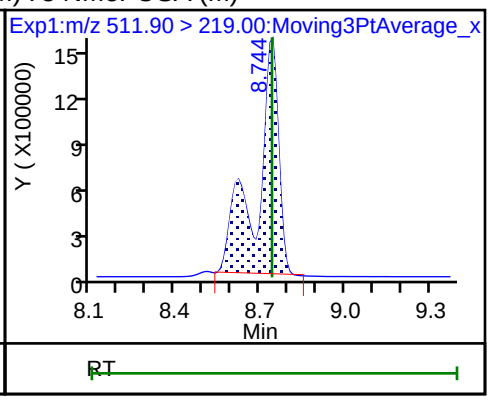
73 Perfluorododecanesulfonic acid (



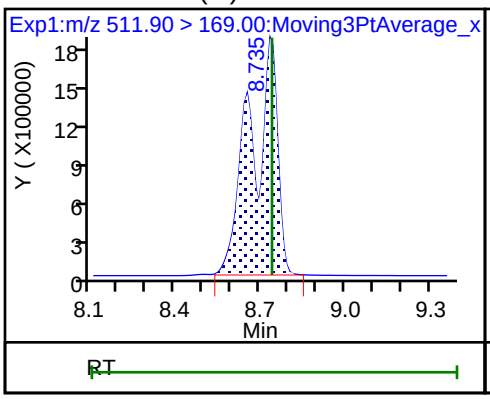
74 2-(N-methylperfluoro-1-octanesul (M)



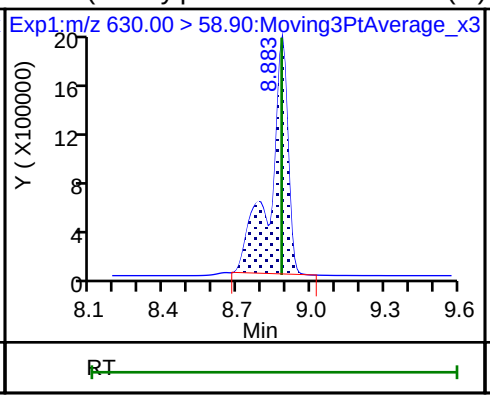
75 NMeFOSA (M)



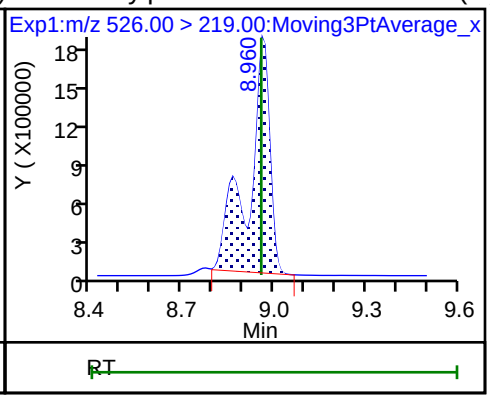
75 NMeFOSA (M)



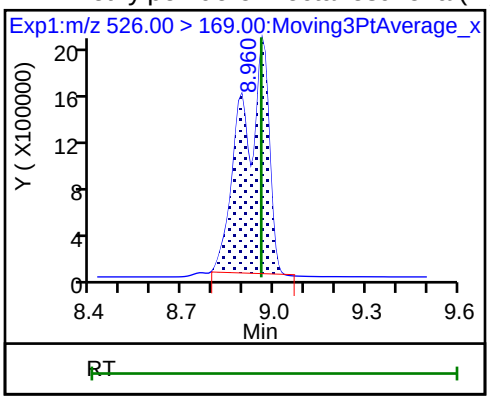
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

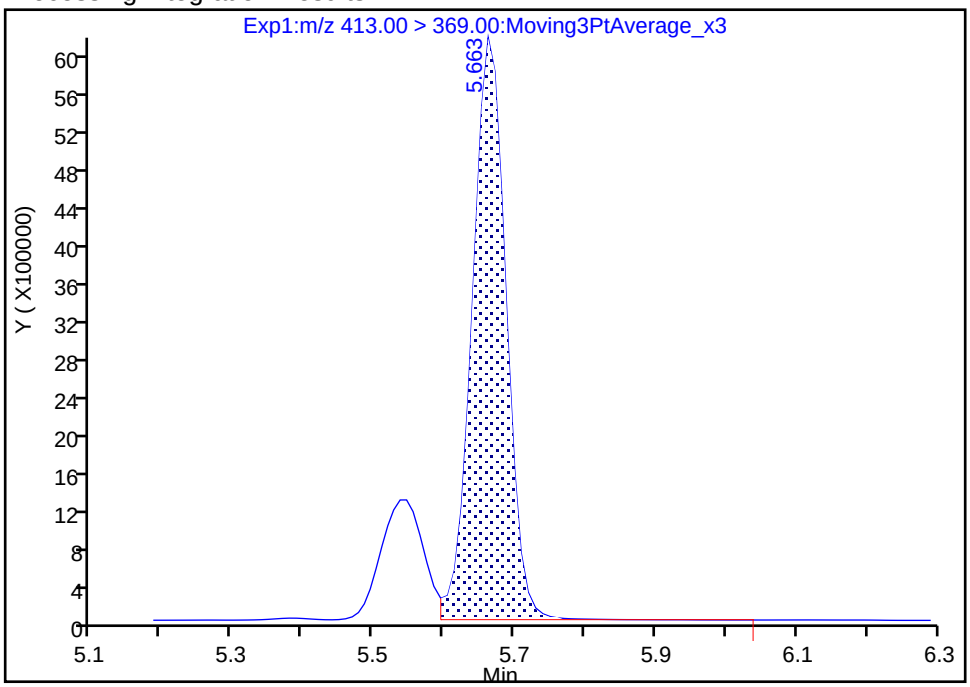
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d				
Injection Date:	10-Sep-2024 18:34:24	Instrument ID:	LCMS04		
Lims ID:	IC CAL 7				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	7
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

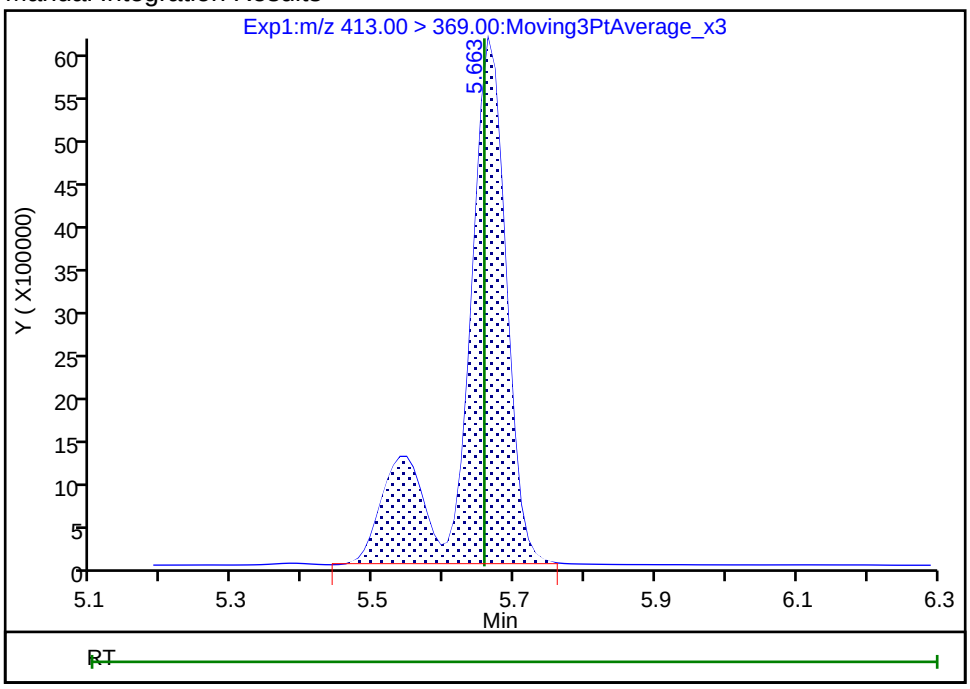
Processing Integration Results

RT: 5.66
Area: 20707801
Amount: 12.408566
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 25684345
Amount: 14.982139
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:40:35 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

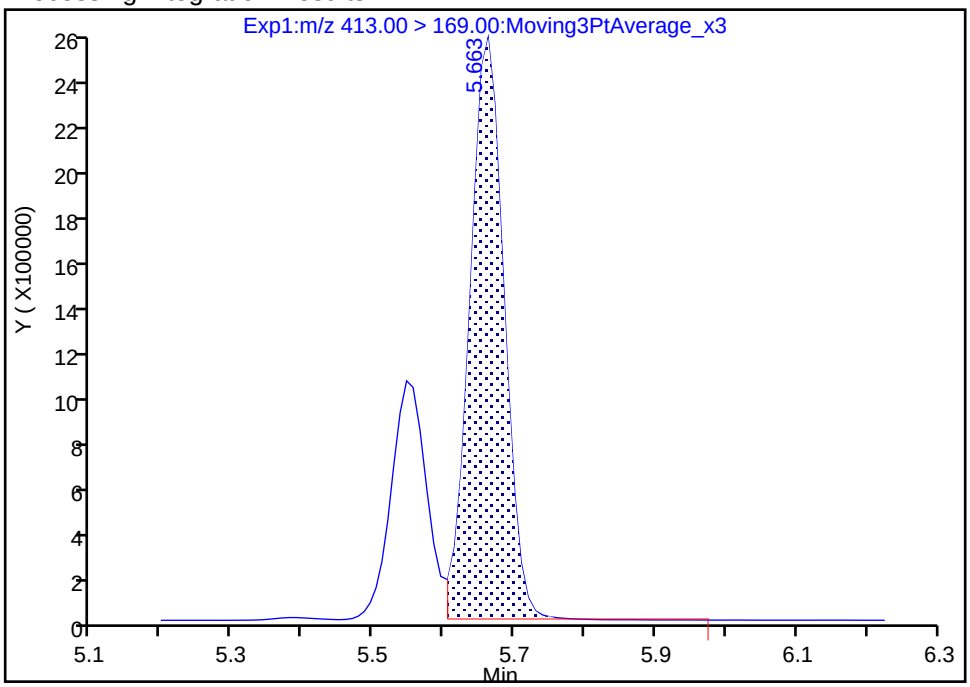
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

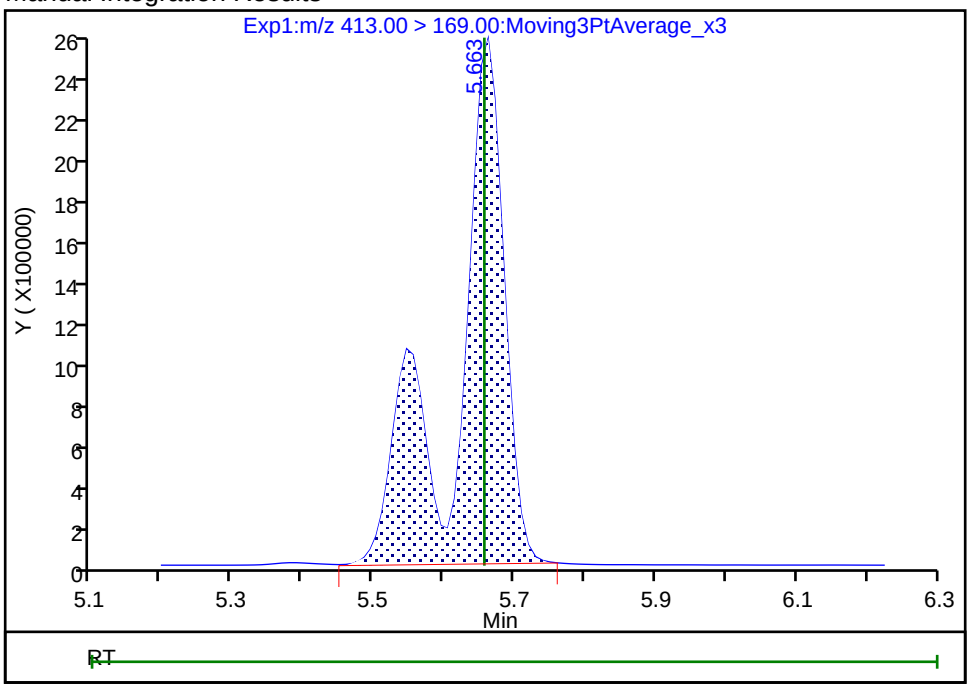
Processing Integration Results

RT: 5.66
Area: 8674563
Amount: 12.408566
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 12231125
Amount: 14.982139
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:40:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

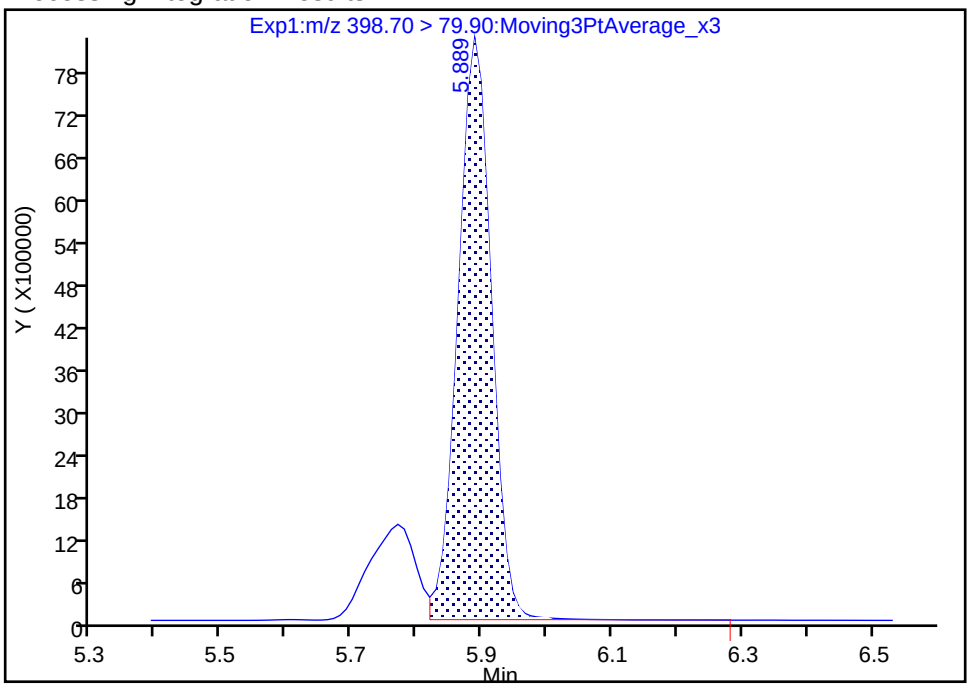
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d				
Injection Date:	10-Sep-2024 18:34:24	Instrument ID:	LCMS04		
Lims ID:	IC CAL 7				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	7
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

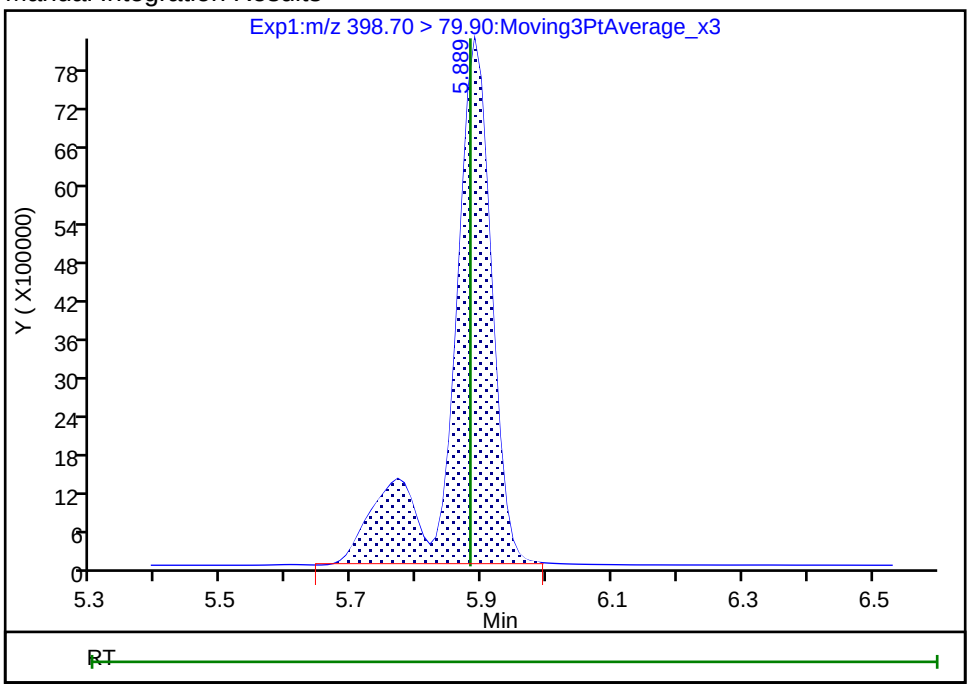
Processing Integration Results

RT: 5.89
Area: 29309573
Amount: 11.021510
Amount Units: ng/ml



Manual Integration Results

RT: 5.89
Area: 35333086
Amount: 12.990940
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:40:56 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

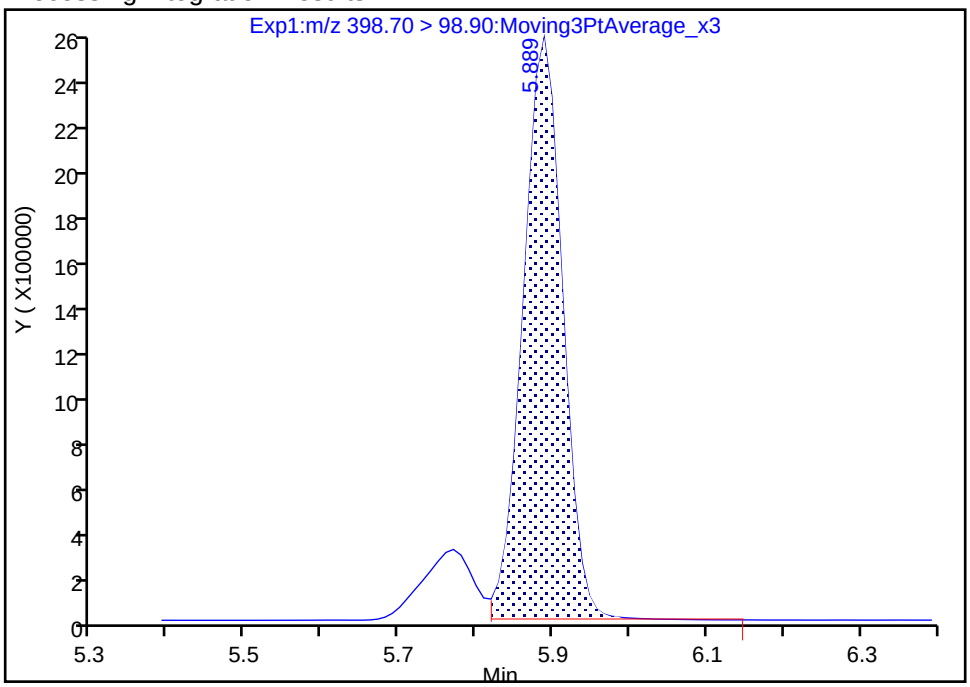
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

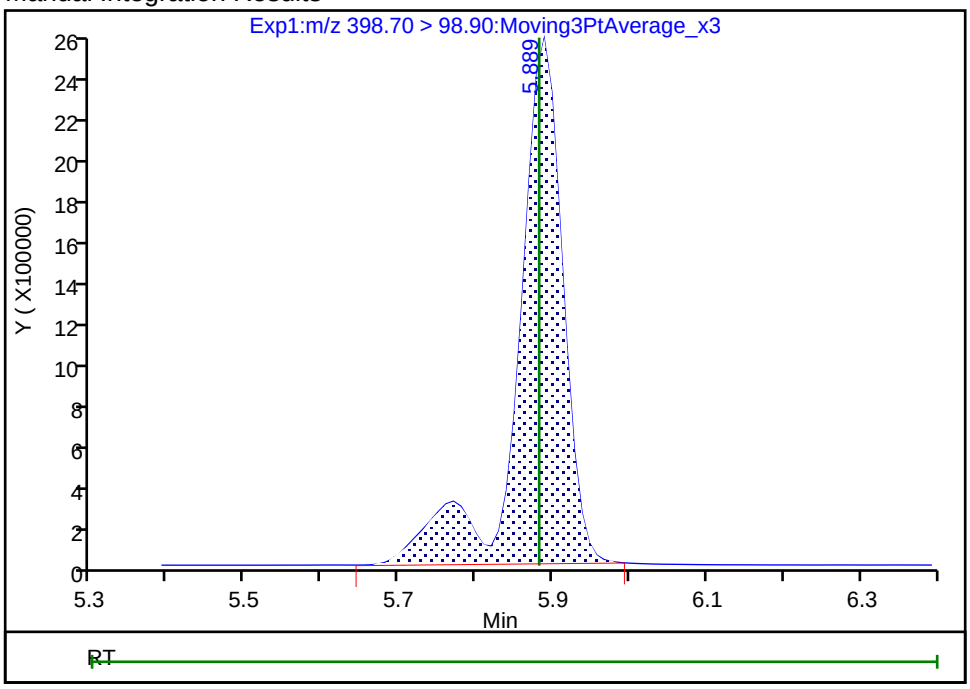
Processing Integration Results

RT: 5.89
Area: 8964800
Amount: 11.021510
Amount Units: ng/ml



Manual Integration Results

RT: 5.89
Area: 10232417
Amount: 12.990940
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:41:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

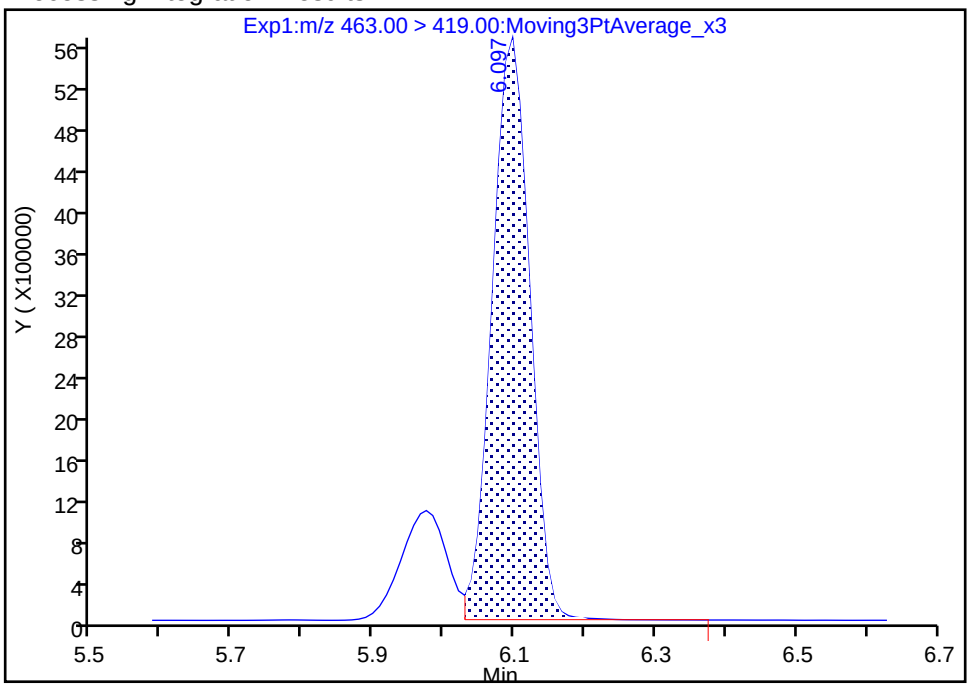
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

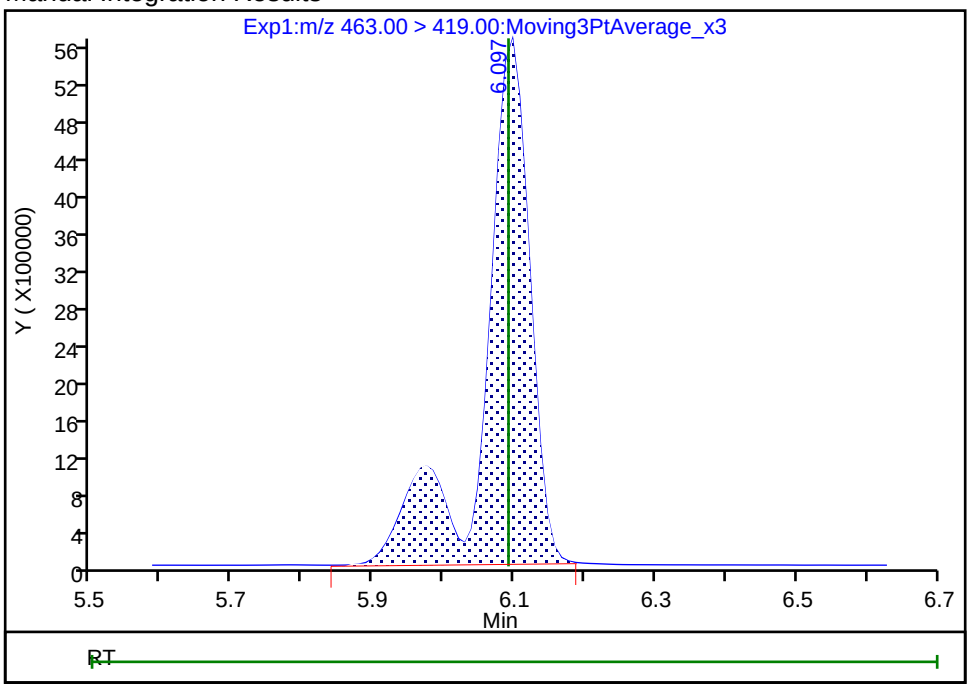
Processing Integration Results

RT: 6.10
Area: 20742145
Amount: 14.939099
Amount Units: ng/ml



Manual Integration Results

RT: 6.10
Area: 25156100
Amount: 12.574204
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:41:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

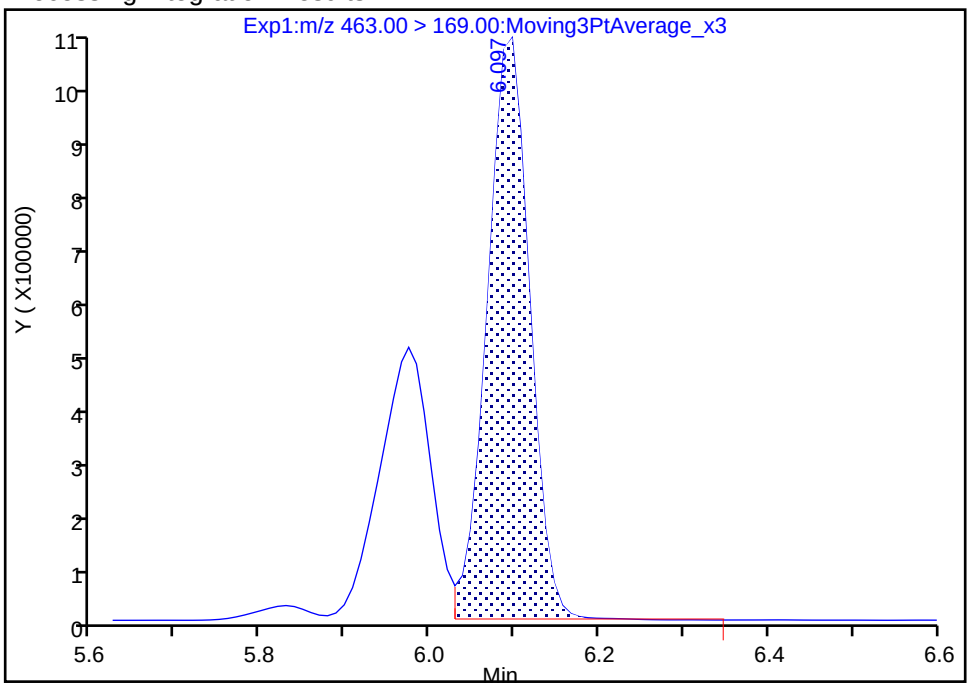
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

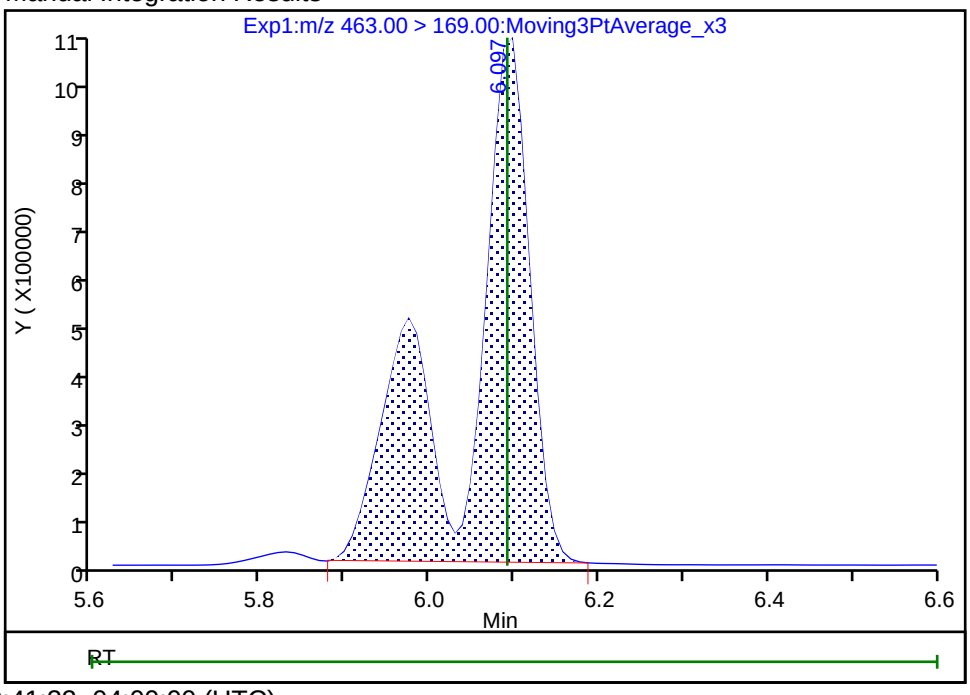
Processing Integration Results

RT: 6.10
Area: 3673574
Amount: 14.939099
Amount Units: ng/ml



Manual Integration Results

RT: 6.10
Area: 5603176
Amount: 12.574204
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:41:32 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

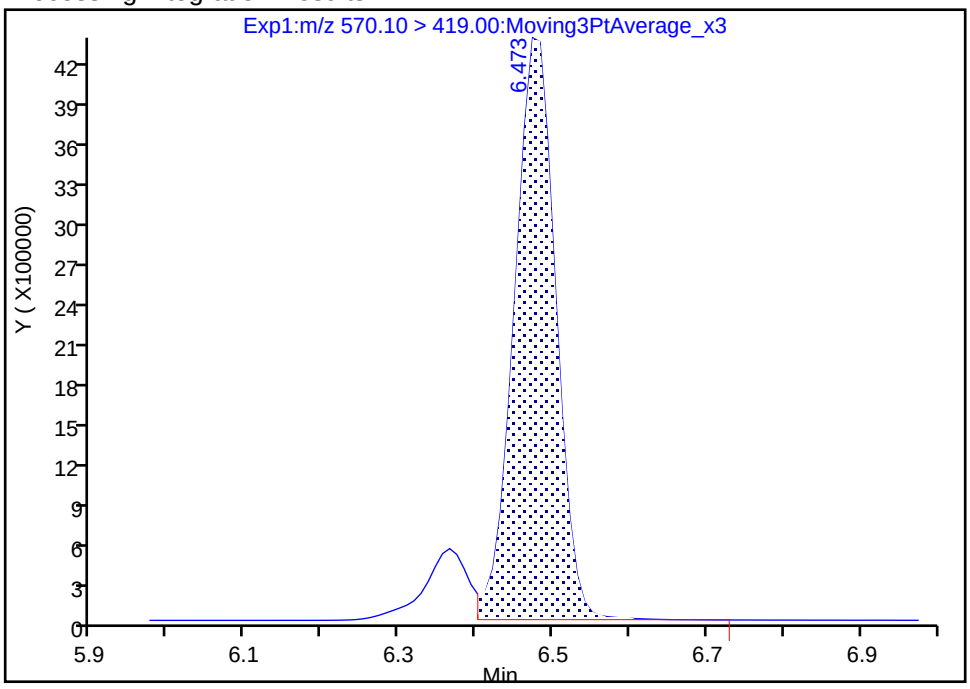
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

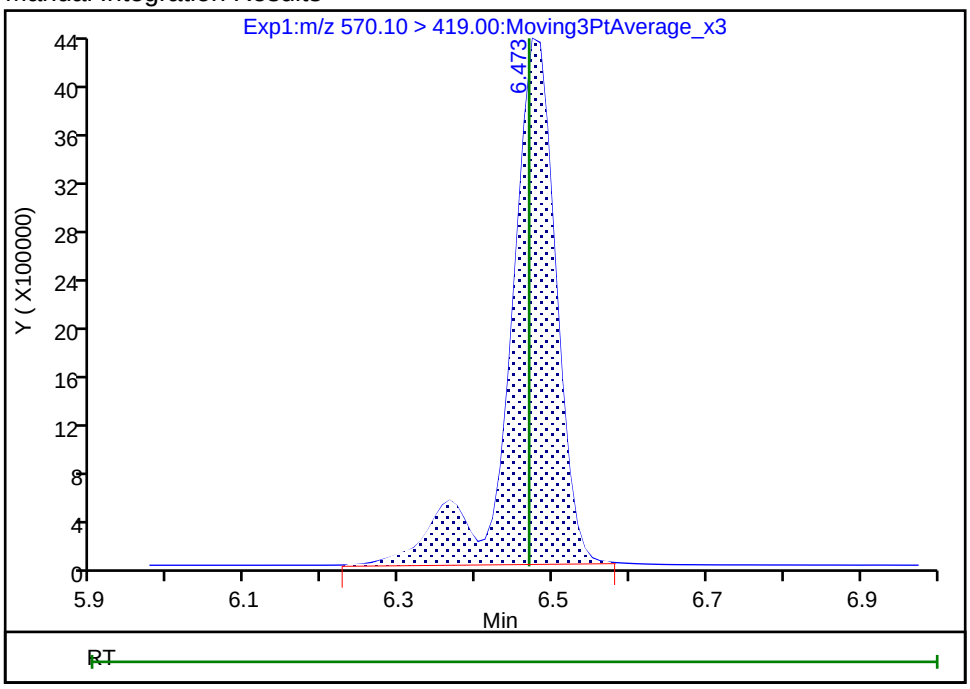
Processing Integration Results

RT: 6.47
Area: 16298551
Amount: 12.240574
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 18080483
Amount: 13.414707
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:41:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

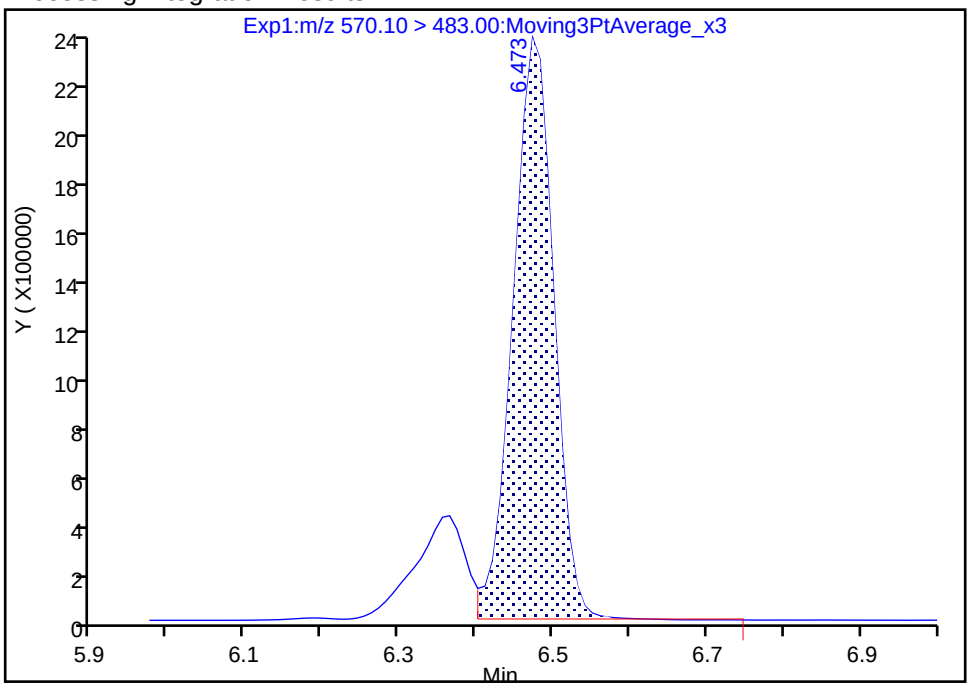
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

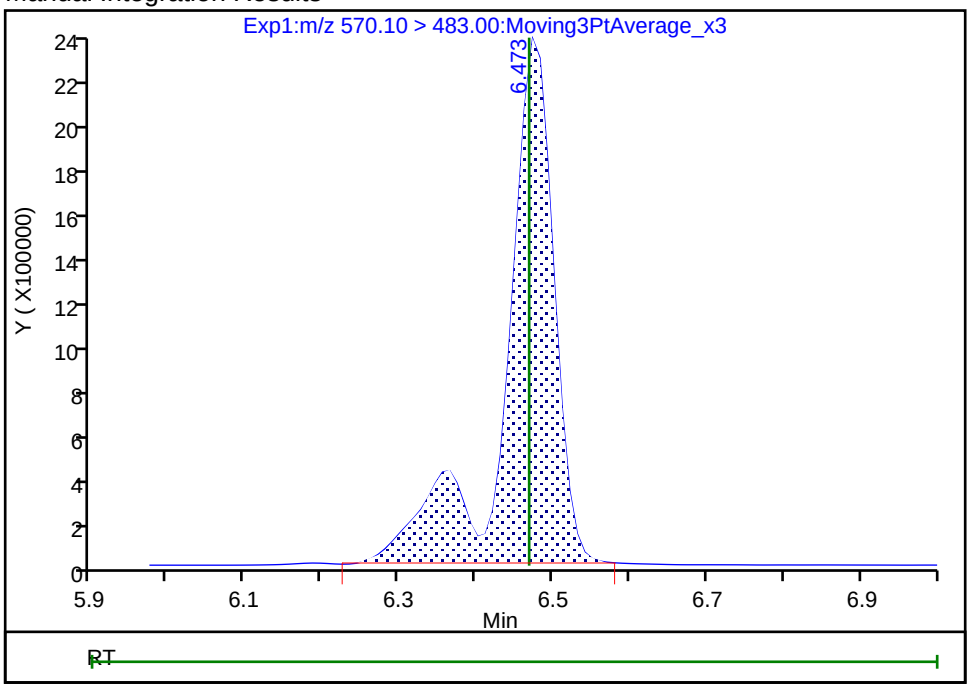
Processing Integration Results

RT: 6.47
Area: 8794728
Amount: 12.240574
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 10579557
Amount: 13.414707
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:41:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

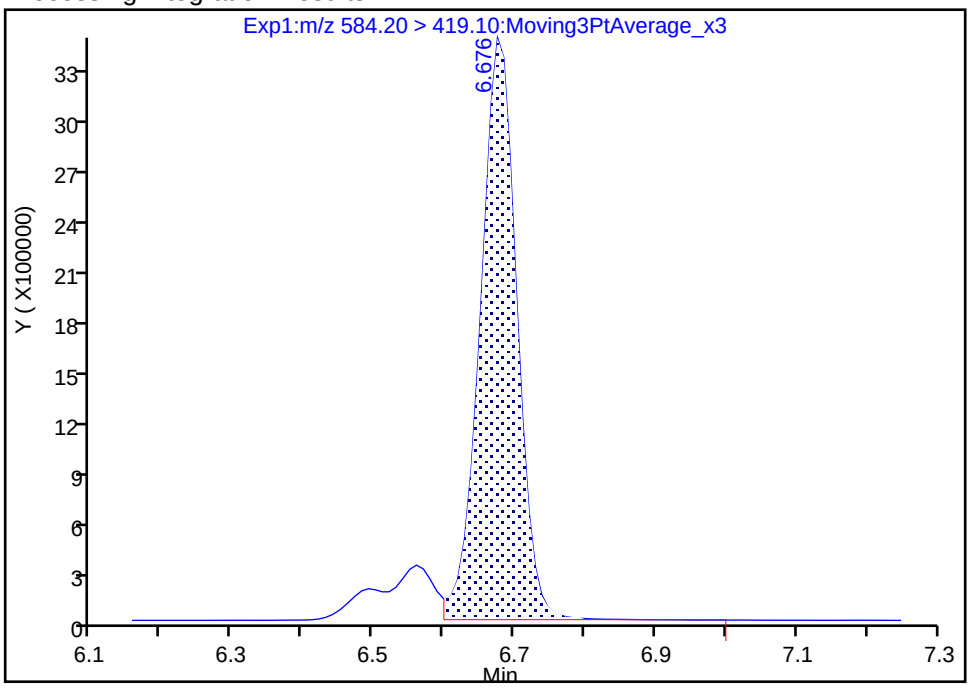
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d				
Injection Date:	10-Sep-2024 18:34:24	Instrument ID:	LCMS04		
Lims ID:	IC CAL 7				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	34	Worklist Smp#:	7
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

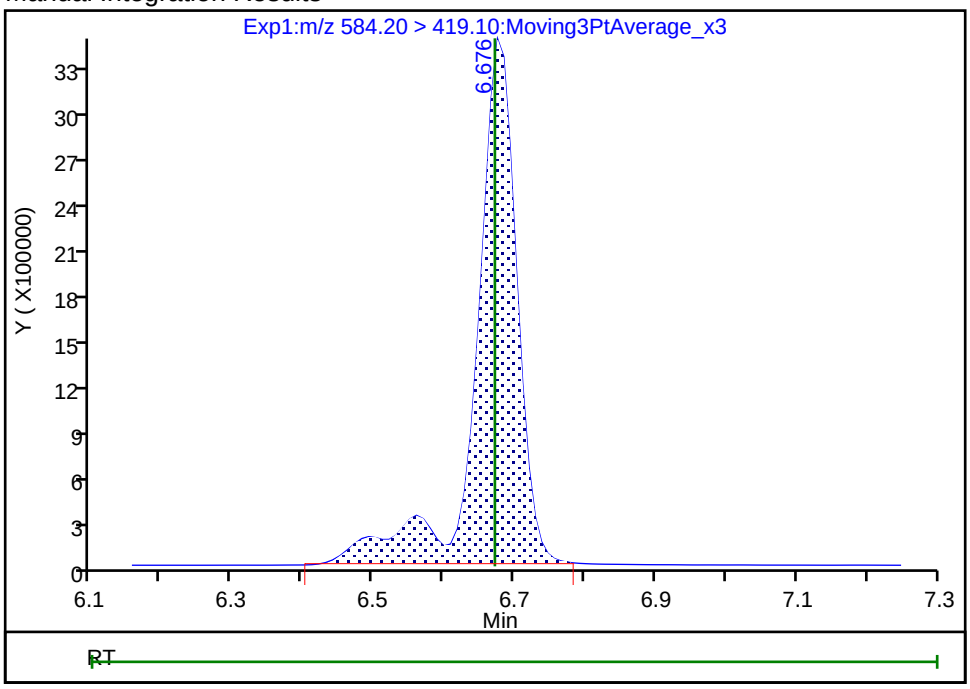
Processing Integration Results

RT: 6.68
Area: 12371482
Amount: 12.794989
Amount Units: ng/ml



Manual Integration Results

RT: 6.68
Area: 13951983
Amount: 14.217120
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:42:15 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

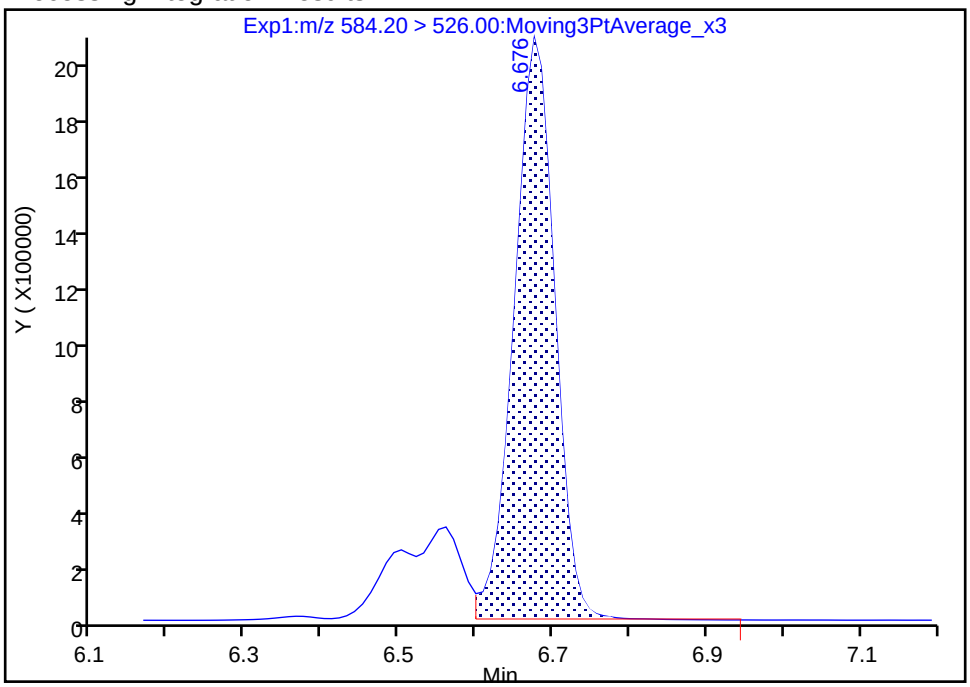
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

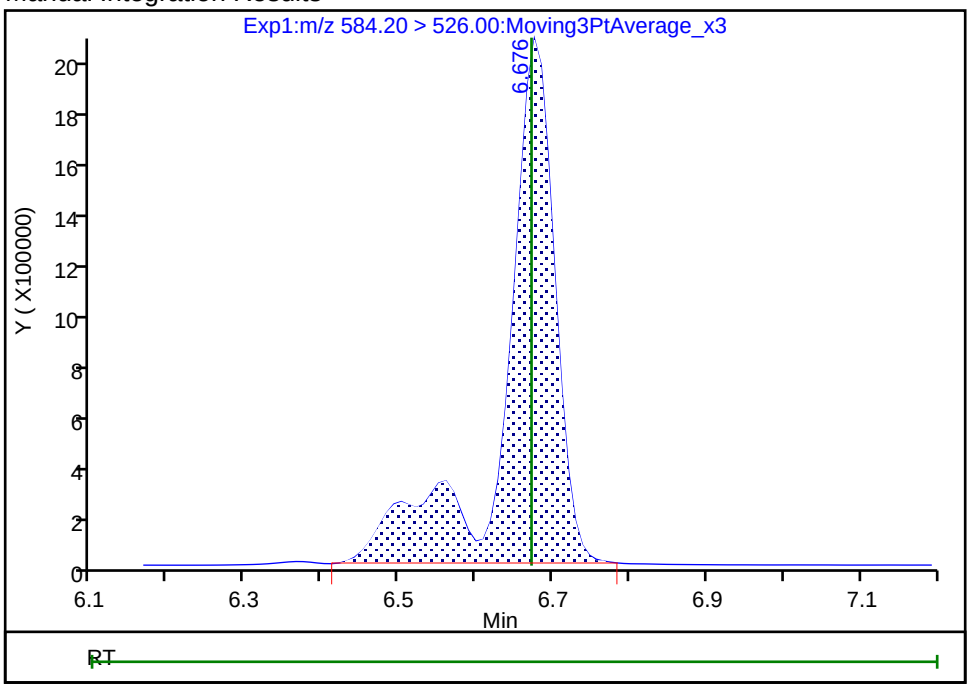
Processing Integration Results

RT: 6.68
Area: 7404476
Amount: 12.794989
Amount Units: ng/ml



Manual Integration Results

RT: 6.68
Area: 9160924
Amount: 14.217120
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:42:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

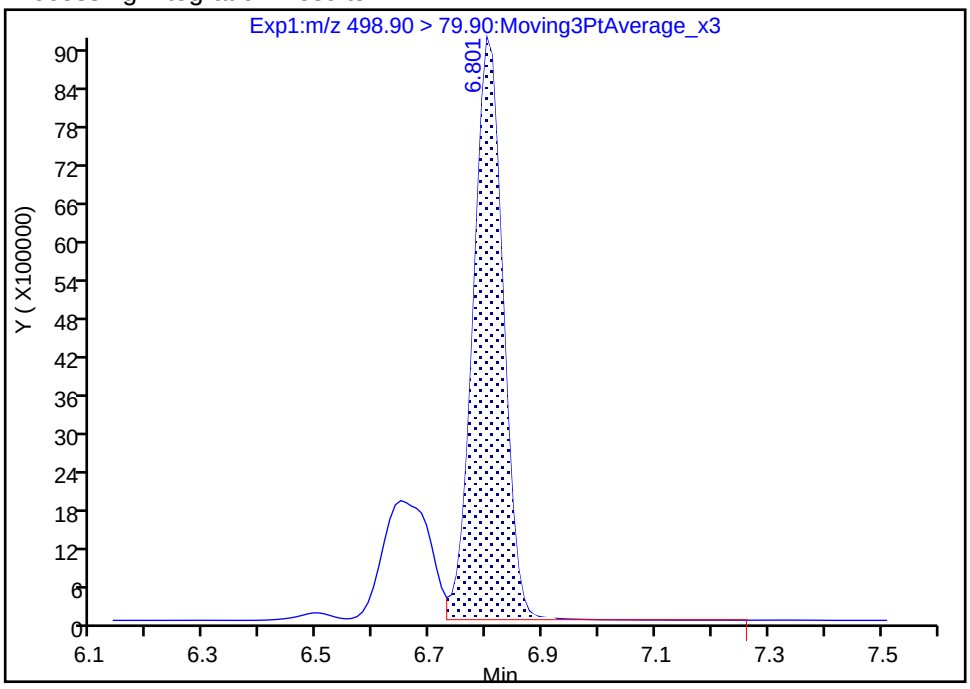
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

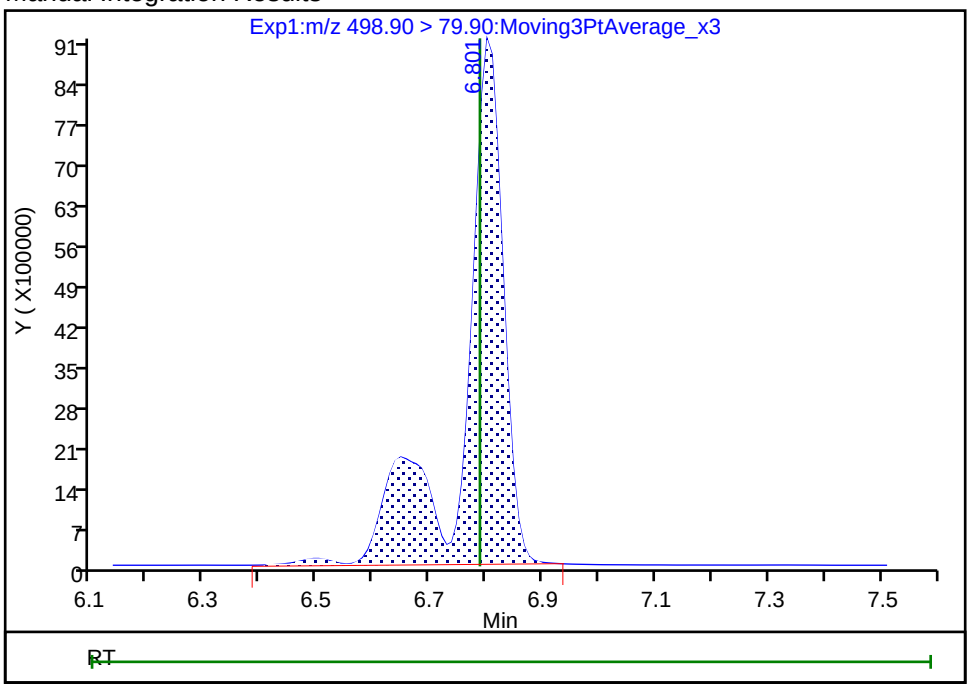
Processing Integration Results

RT: 6.80
Area: 33787420
Amount: 13.712886
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 44696558
Amount: 12.853286
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:42:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

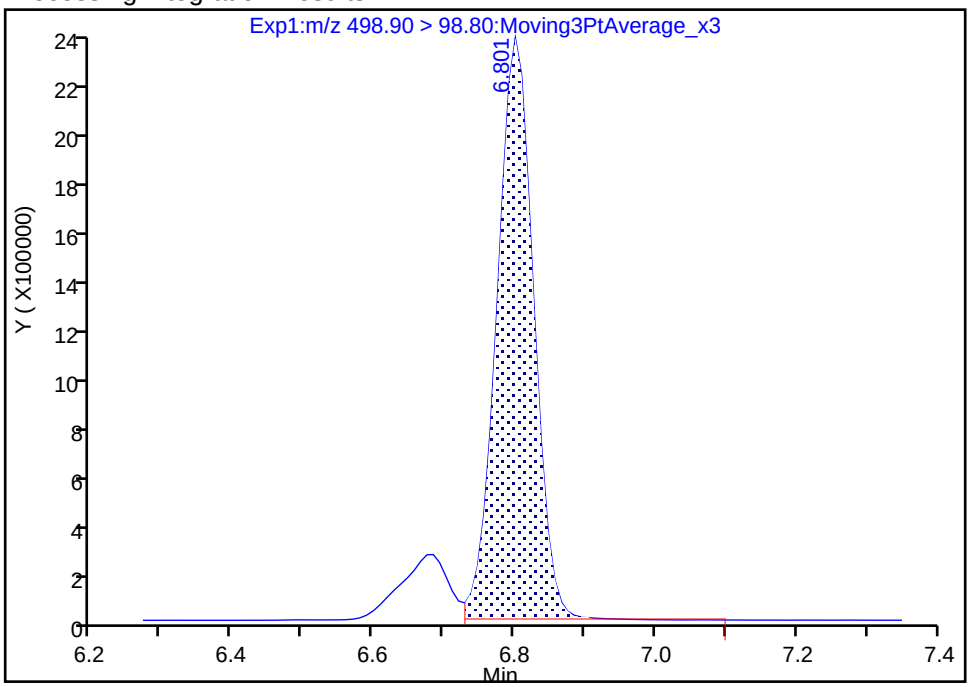
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

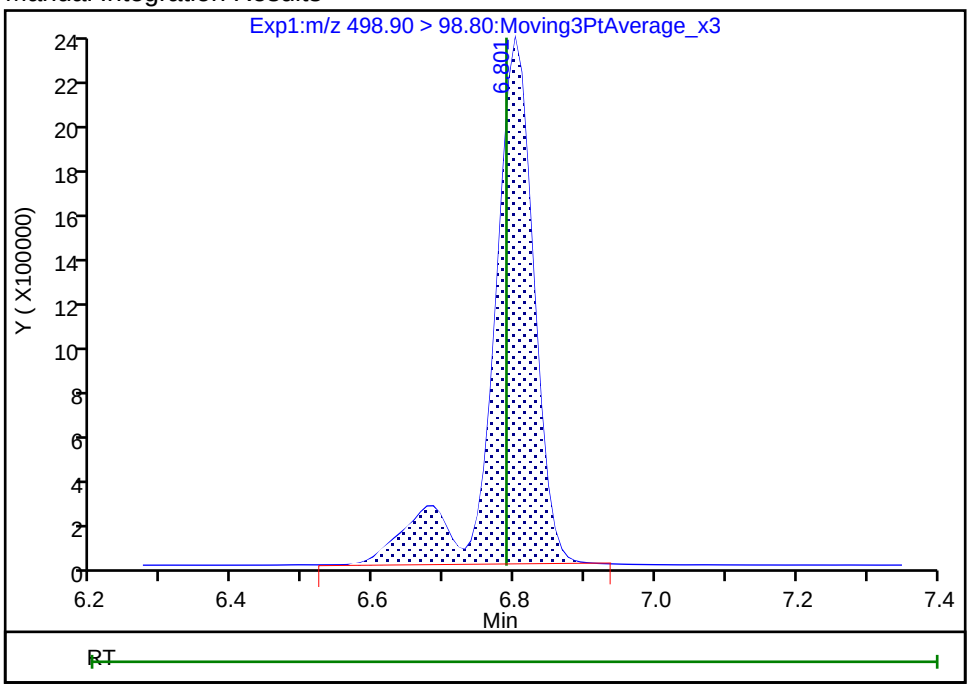
Processing Integration Results

RT: 6.80
Area: 8490406
Amount: 13.712886
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 9651315
Amount: 12.853286
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:42:47 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

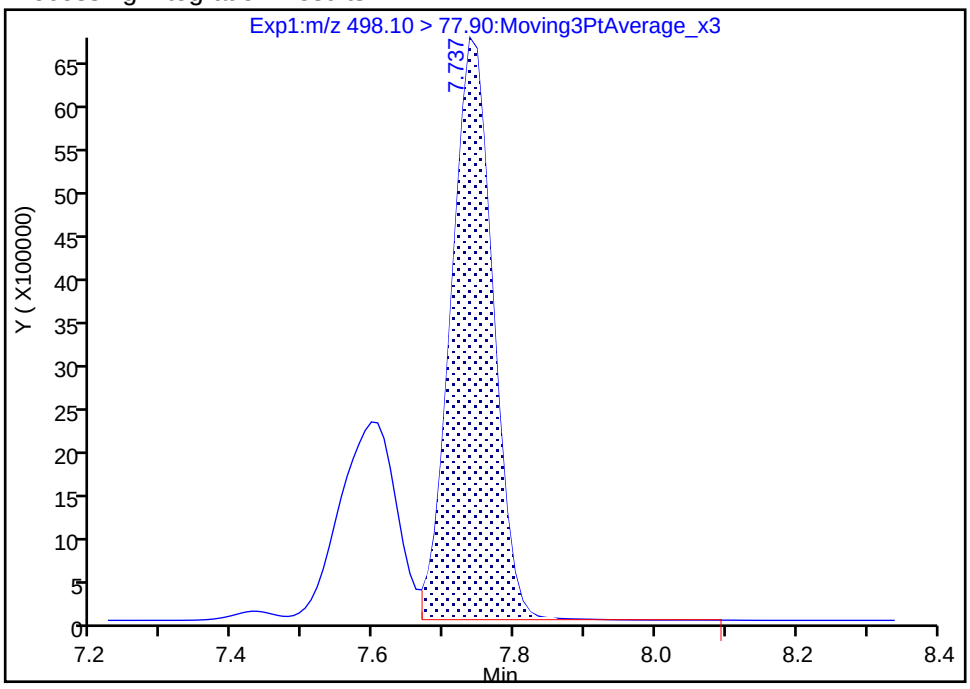
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

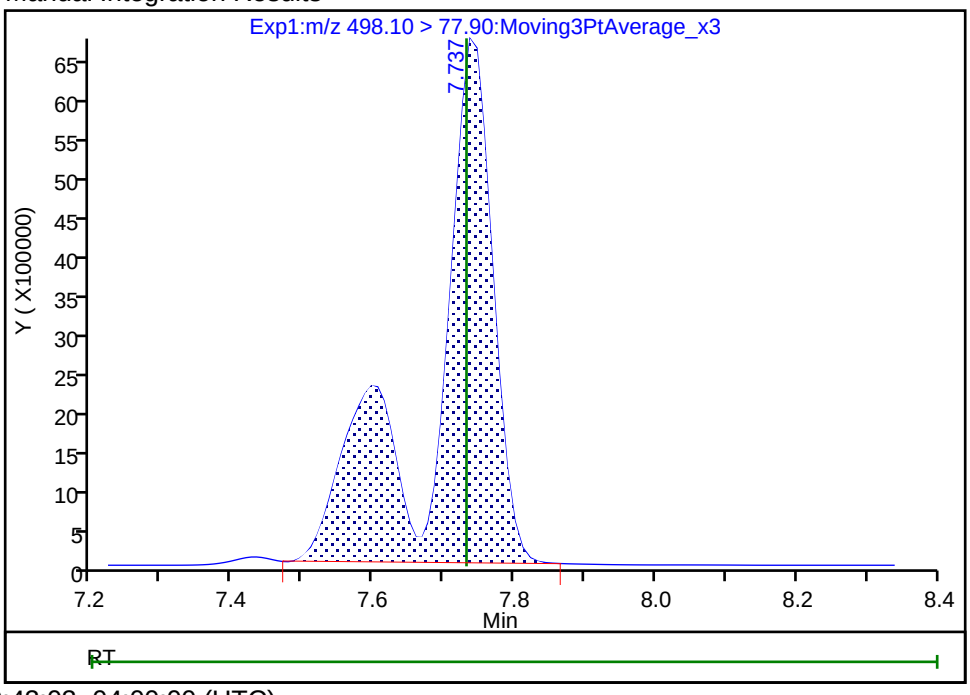
Processing Integration Results

RT: 7.74
Area: 27969760
Amount: 14.483177
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 40044834
Amount: 14.436215
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:43:03 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

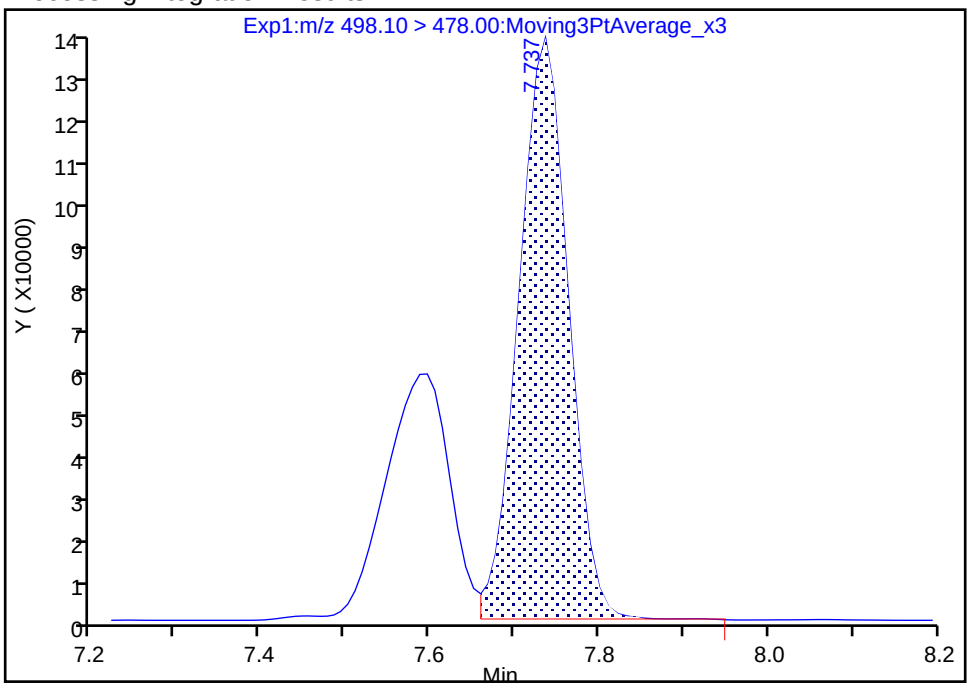
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

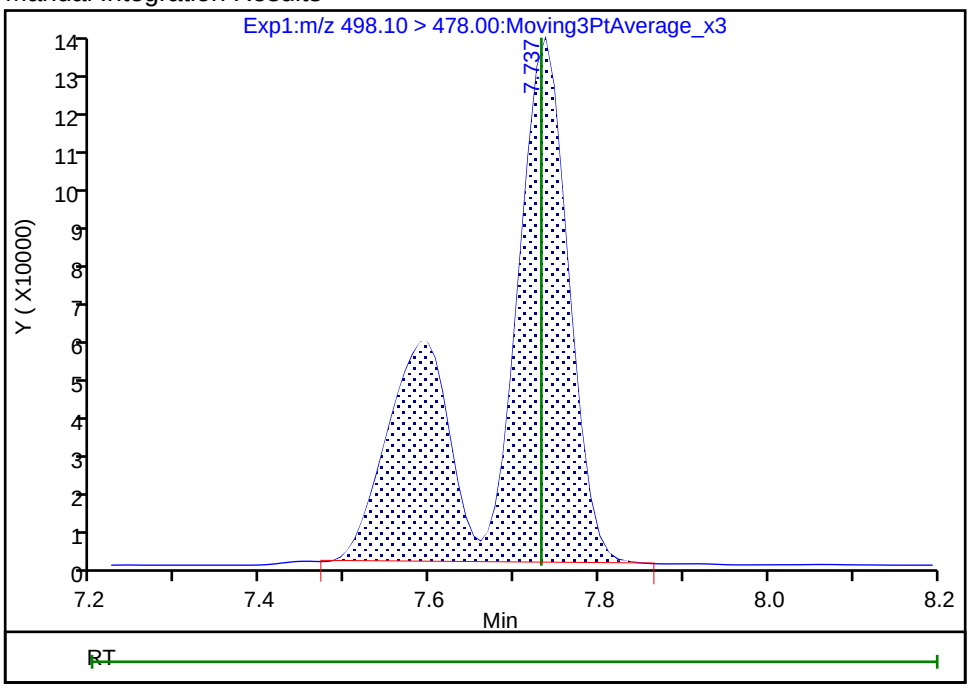
Processing Integration Results

RT: 7.74
Area: 559992
Amount: 14.483177
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 848322
Amount: 14.436215
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:43:11 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

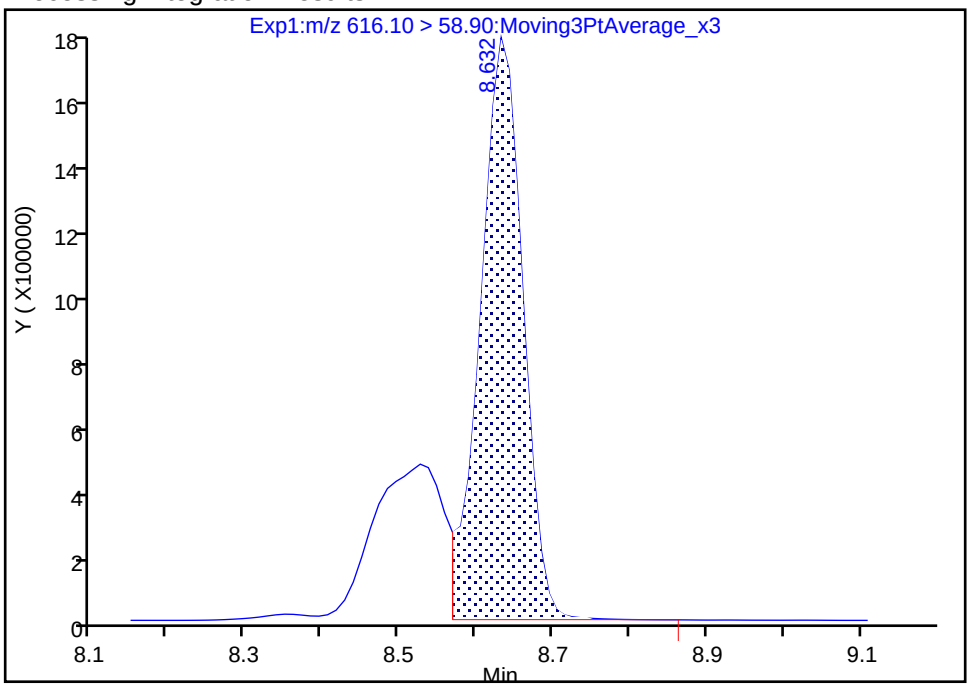
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

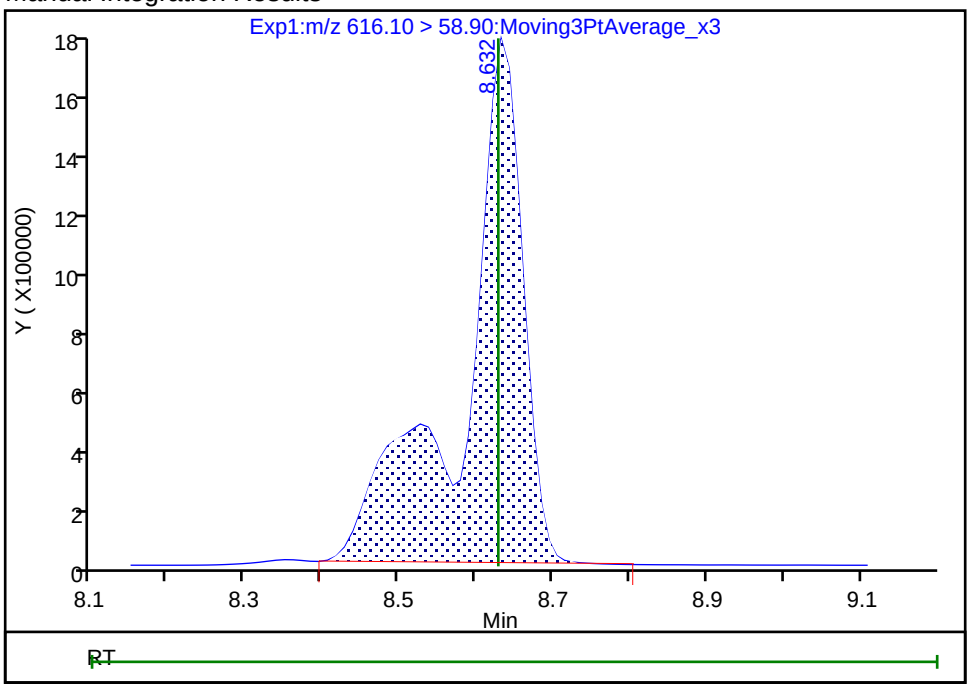
Processing Integration Results

RT: 8.63
Area: 6530062
Amount: 141.4876
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 9208741
Amount: 139.0312
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:43:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

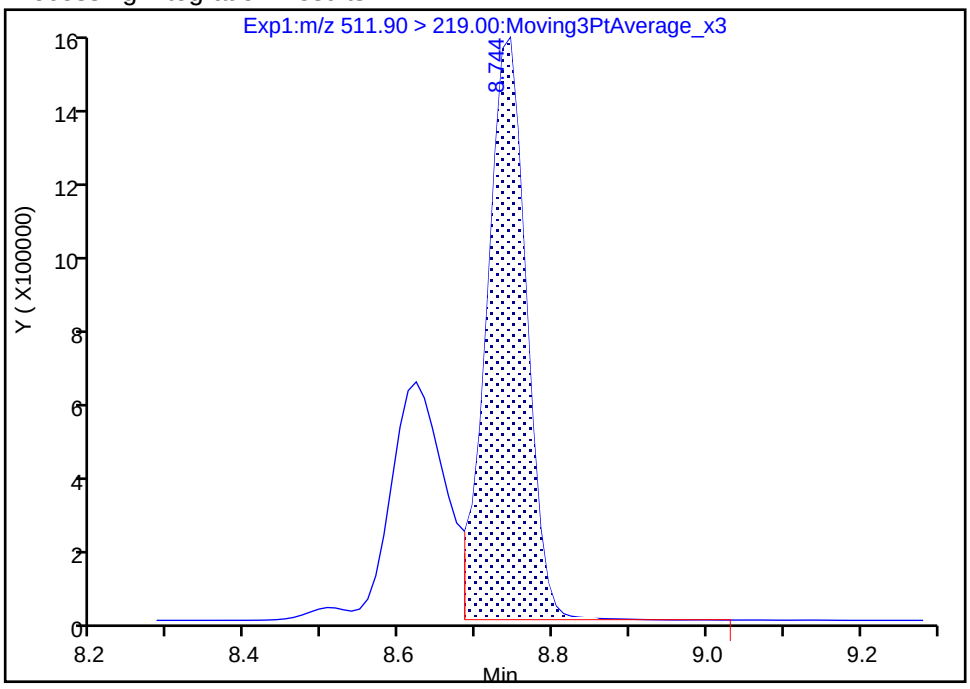
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

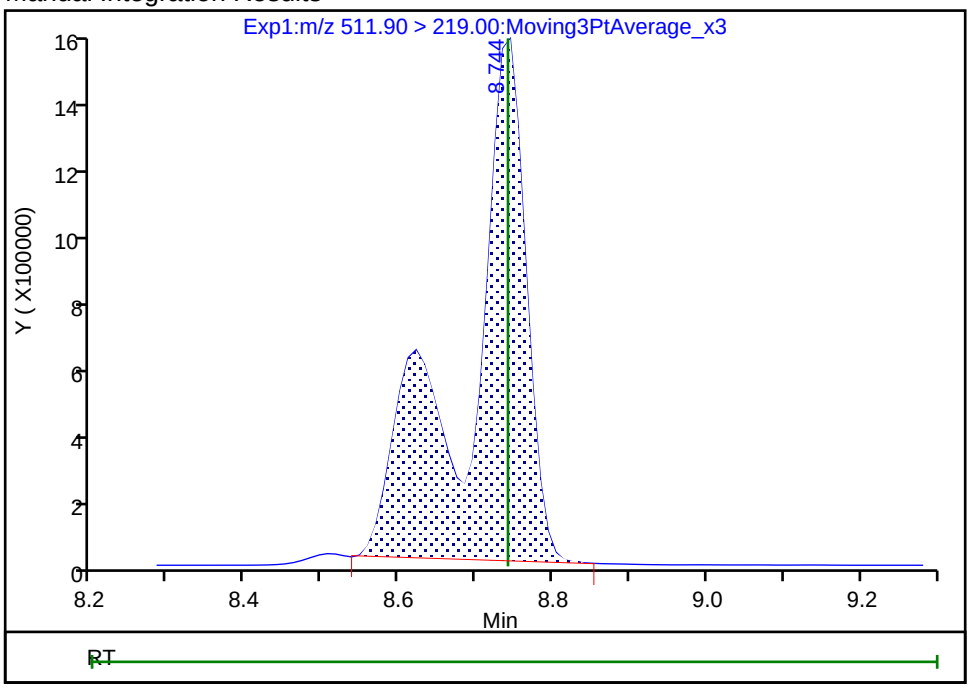
Processing Integration Results

RT: 8.74
Area: 5511666
Amount: 9.663379
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 8251102
Amount: 13.857789
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:43:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

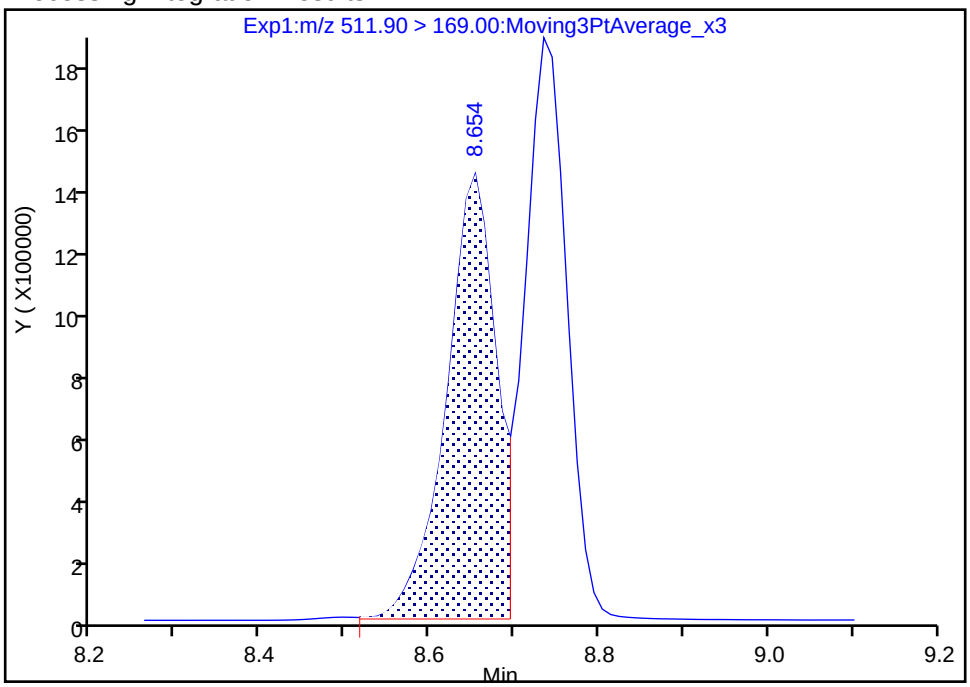
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

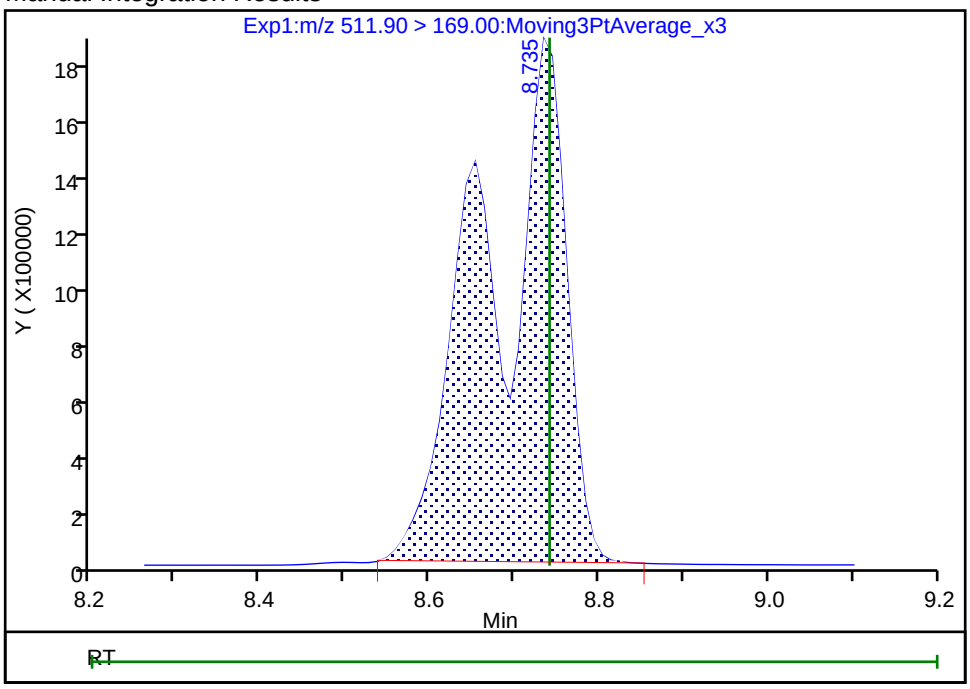
Processing Integration Results

RT: 8.65
Area: 5676976
Amount: 9.663379
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 11712374
Amount: 13.857789
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:43:52 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

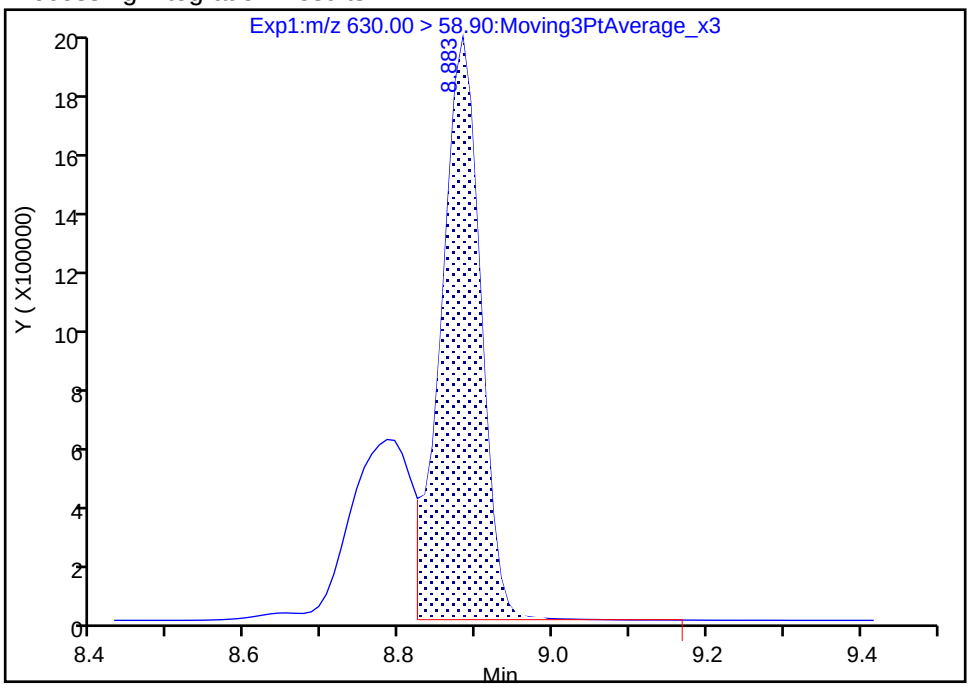
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

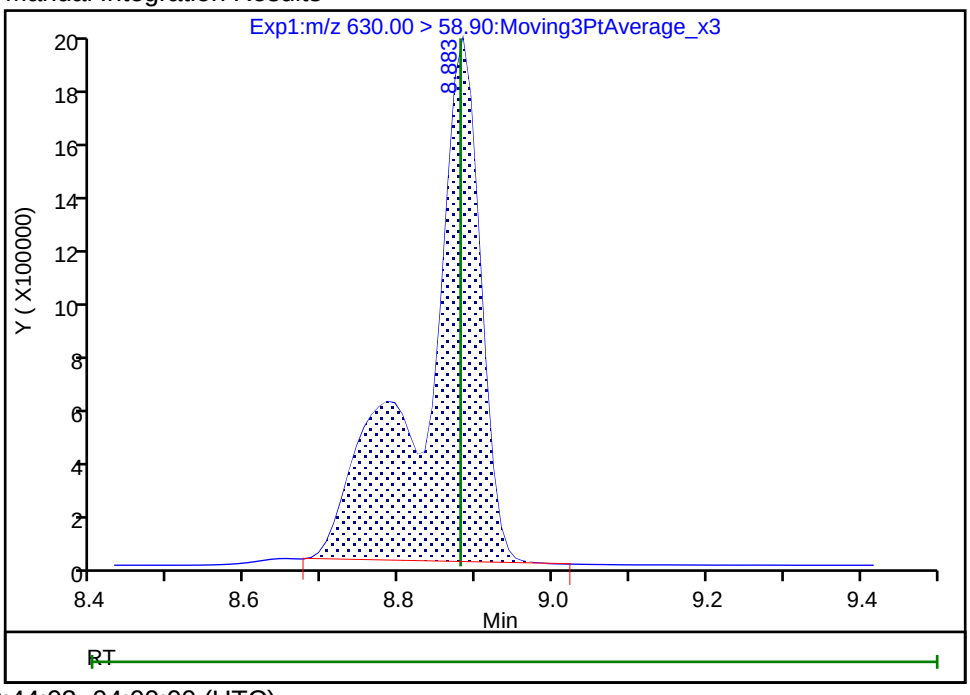
Processing Integration Results

RT: 8.88
Area: 6810671
Amount: 141.7328
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 9713191
Amount: 136.2026
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:44:03 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

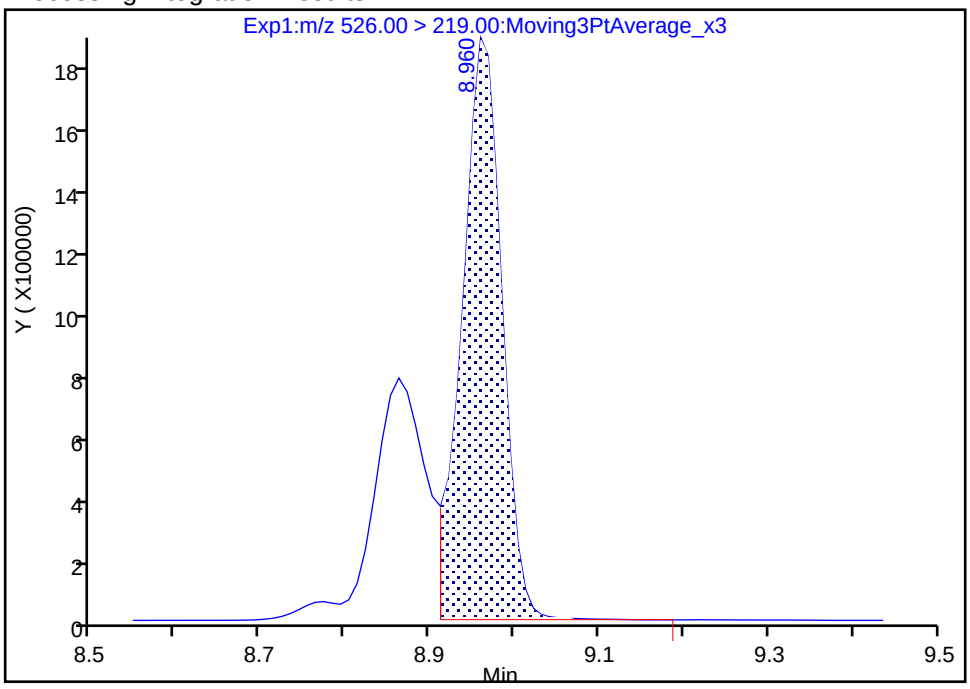
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

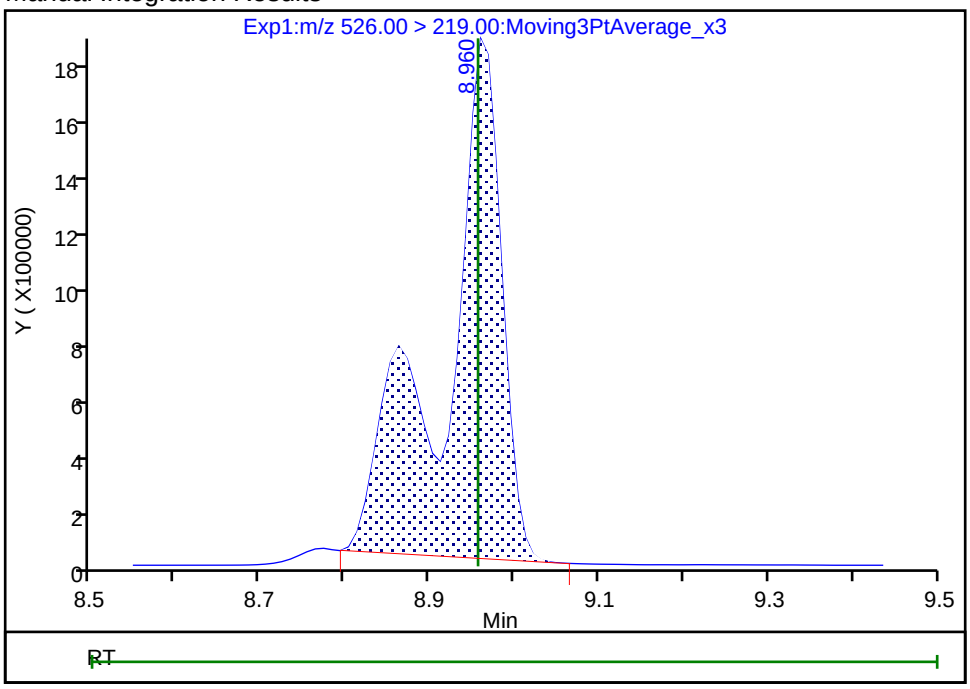
Processing Integration Results

RT: 8.96
Area: 5966947
Amount: 10.458930
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 8601448
Amount: 14.465964
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:44:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

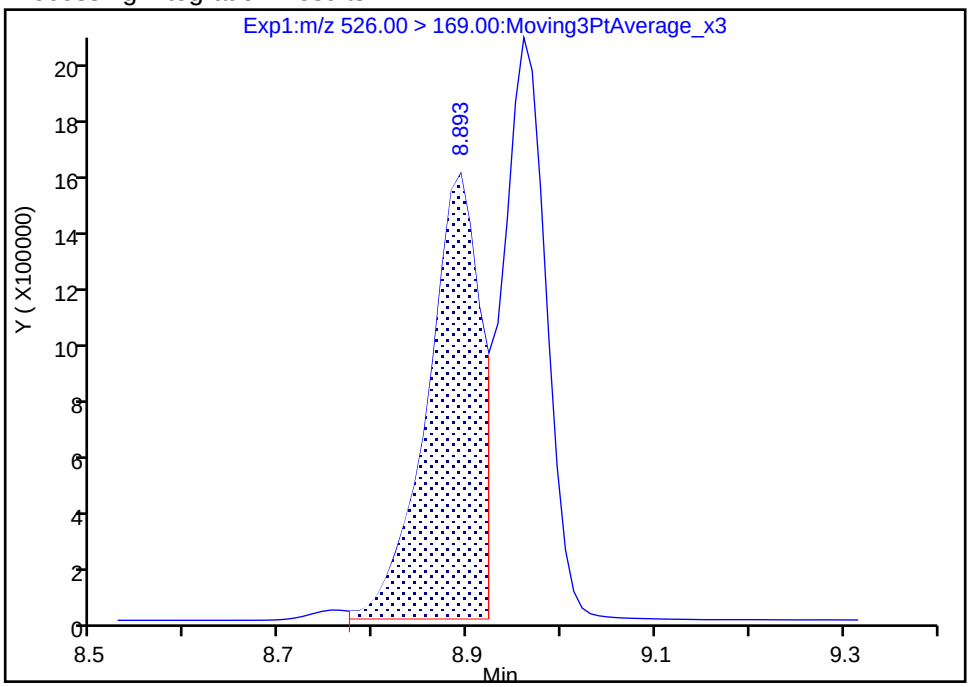
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d
Injection Date: 10-Sep-2024 18:34:24 Instrument ID: LCMS04
Lims ID: IC CAL 7
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 34 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

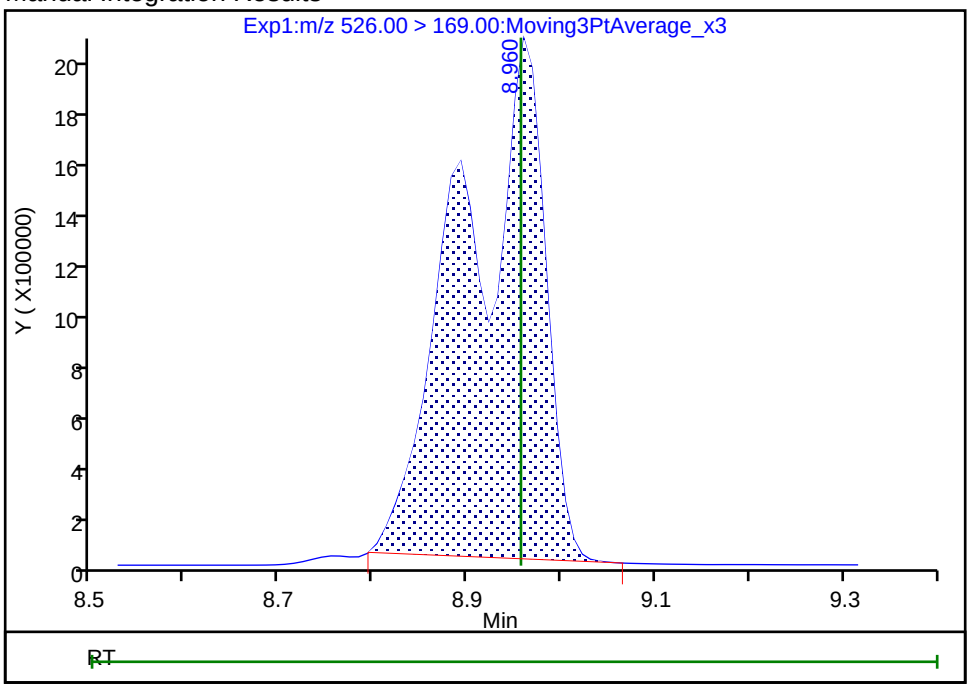
Processing Integration Results

RT: 8.89
Area: 5958560
Amount: 10.458930
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 12001009
Amount: 14.465964
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:44:23 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Calibration / Perfluorobutanoic acid

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

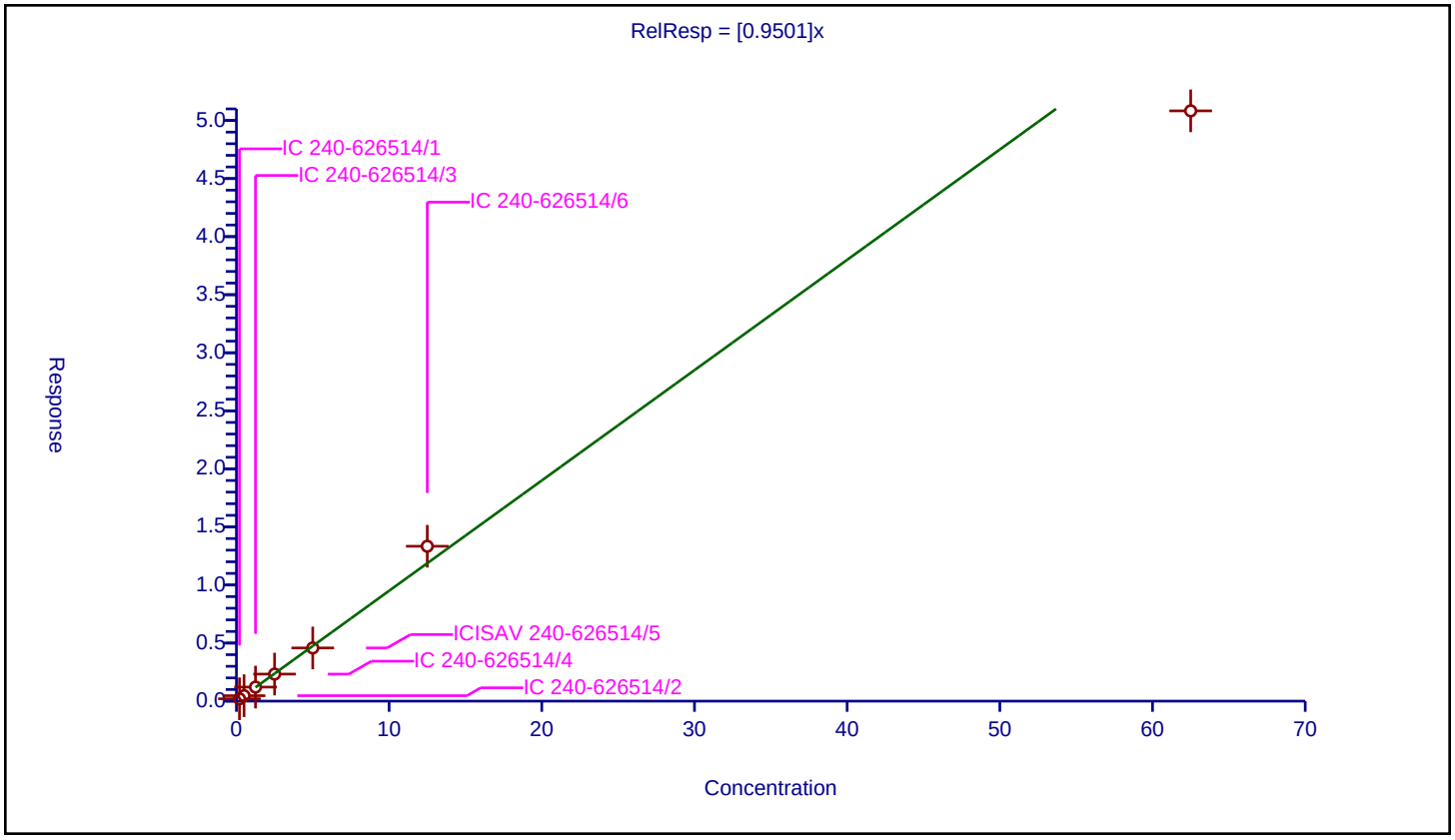
Curve Coefficients

Intercept:	0
Slope:	0.9501

Error Coefficients

Relative Standard Deviation:	8.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.2	0.203012	2.5	5088055.0	1.015059	Y
2	IC 240-626514/2	0.5	0.469944	2.5	4563594.0	0.939888	Y
3	IC 240-626514/3	1.25	1.208883	2.5	4600618.0	0.967107	Y
4	IC 240-626514/4	2.5	2.330192	2.5	4402976.0	0.932077	Y
5	ICISAV 240-626514/5	5.0	4.580047	2.5	4679461.0	0.916009	Y
6	IC 240-626514/6	12.5	13.337993	2.5	3900808.0	1.067039	Y
7	IC 240-626514/7	62.5	50.829481	2.5	4863257.0	0.813272	Y



Calibration / 3:3 FTCA

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

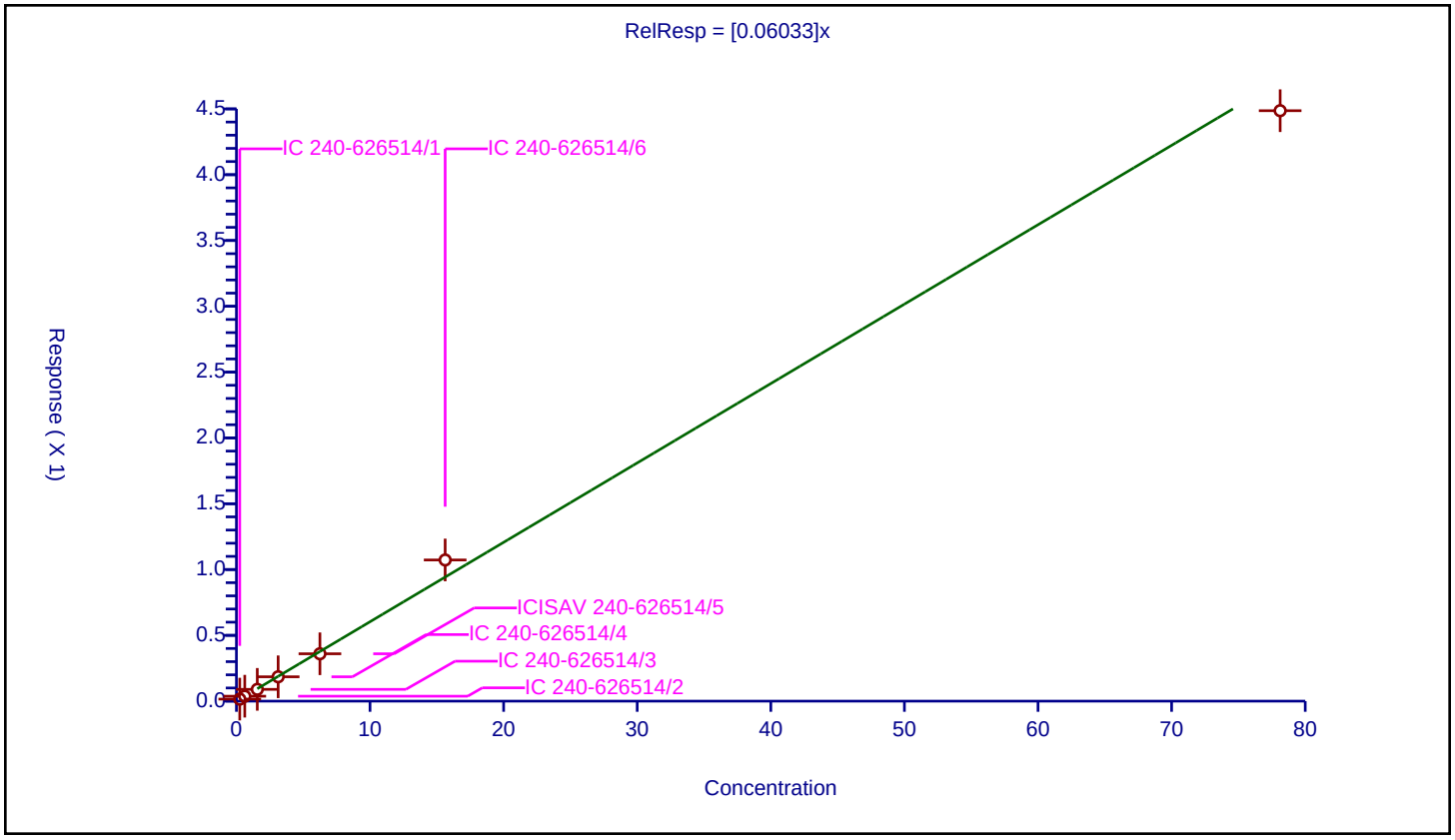
Curve Coefficients

Intercept:	0
Slope:	0.06033

Error Coefficients

Relative Standard Deviation:	6.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.25	0.015553	1.25	2047884.0	0.062211	Y
2	IC 240-626514/2	0.625	0.037477	1.25	1849822.0	0.059963	Y
3	IC 240-626514/3	1.5625	0.089458	1.25	1923029.0	0.057253	Y
4	IC 240-626514/4	3.125	0.185081	1.25	1784173.0	0.059226	Y
5	ICISAV 240-626514/5	6.25	0.35982	1.25	1947559.0	0.057571	Y
6	IC 240-626514/6	15.625	1.072614	1.25	1572834.0	0.068647	Y
7	IC 240-626514/7	78.125	4.486159	1.25	2029785.0	0.057423	Y



Calibration / Perfluoro-3-methoxypropanoic acid

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

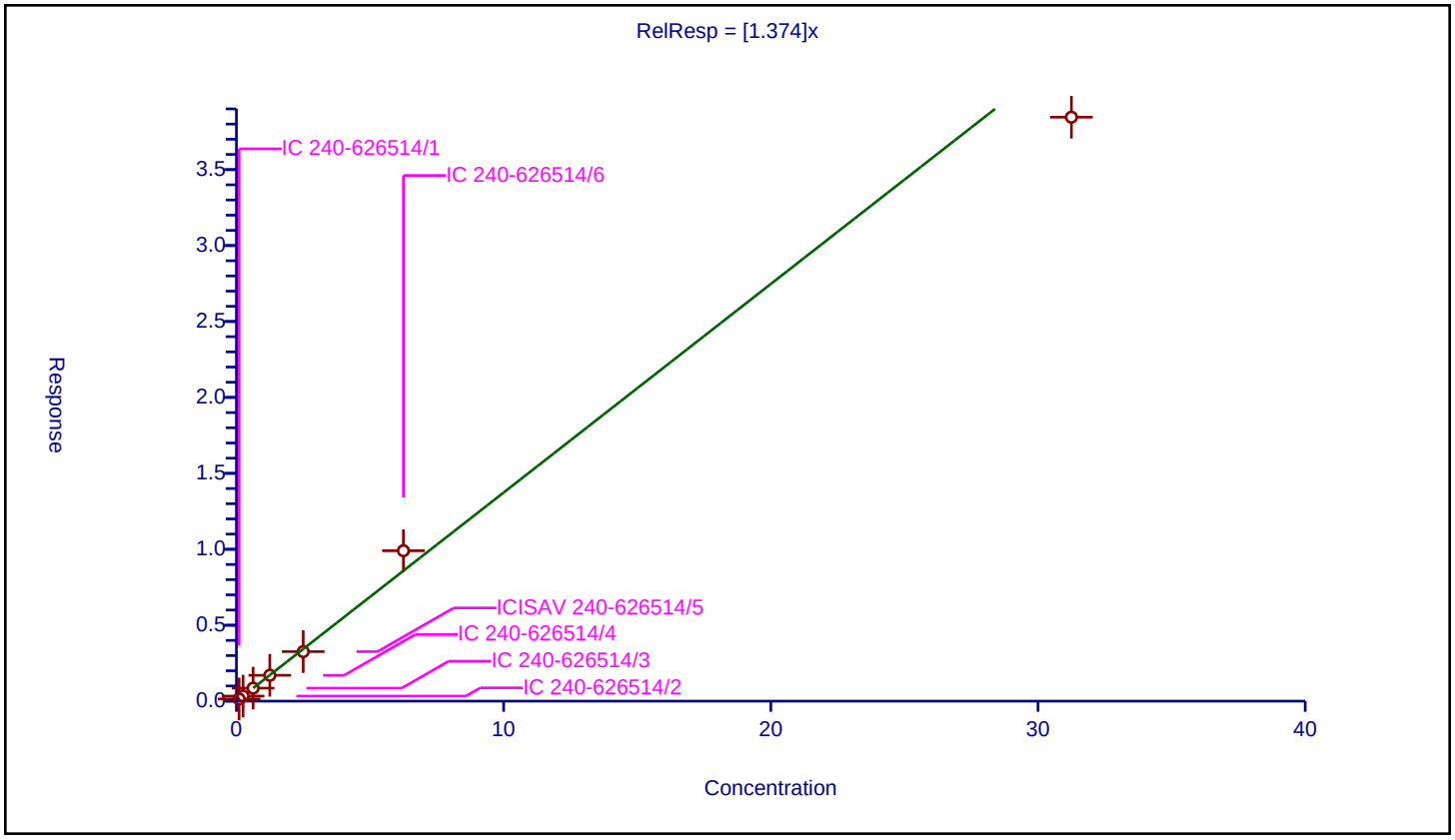
Curve Coefficients

Intercept:	0
Slope:	1.374

Error Coefficients

Relative Standard Deviation:	8.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1	0.142459	1.25	2047884.0	1.424592	Y
2	IC 240-626514/2	0.25	0.334684	1.25	1849822.0	1.338734	Y
3	IC 240-626514/3	0.625	0.856738	1.25	1923029.0	1.37078	Y
4	IC 240-626514/4	1.25	1.701449	1.25	1784173.0	1.361159	Y
5	ICISAV 240-626514/5	2.5	3.26075	1.25	1947559.0	1.3043	Y
6	IC 240-626514/6	6.25	9.905215	1.25	1572834.0	1.584834	Y
7	IC 240-626514/7	31.25	38.453037	1.25	2029785.0	1.230497	Y



Calibration / Perfluoropentanoic acid

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

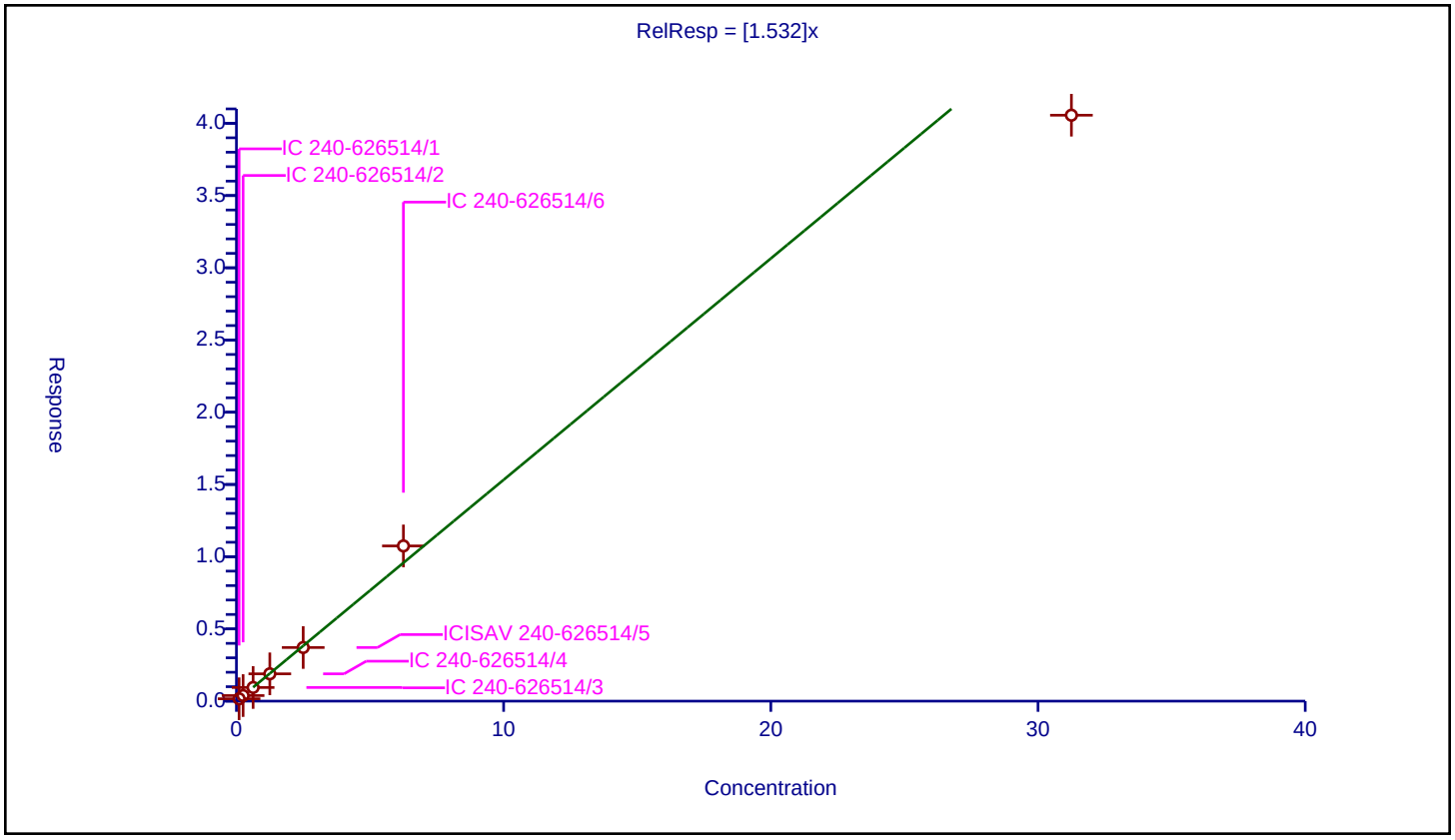
Curve Coefficients

Intercept:	0
Slope:	1.532

Error Coefficients

Relative Standard Deviation:	8.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1	0.165504	1.25	2047884.0	1.655038	Y
2	IC 240-626514/2	0.25	0.385712	1.25	1849822.0	1.542848	Y
3	IC 240-626514/3	0.625	0.945113	1.25	1923029.0	1.51218	Y
4	IC 240-626514/4	1.25	1.891196	1.25	1784173.0	1.512956	Y
5	ICISAV 240-626514/5	2.5	3.712788	1.25	1947559.0	1.485115	Y
6	IC 240-626514/6	6.25	10.745269	1.25	1572834.0	1.719243	Y
7	IC 240-626514/7	31.25	40.562809	1.25	2029785.0	1.29801	Y



Calibration / Perfluoro(4-methoxybutanoic acid)

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

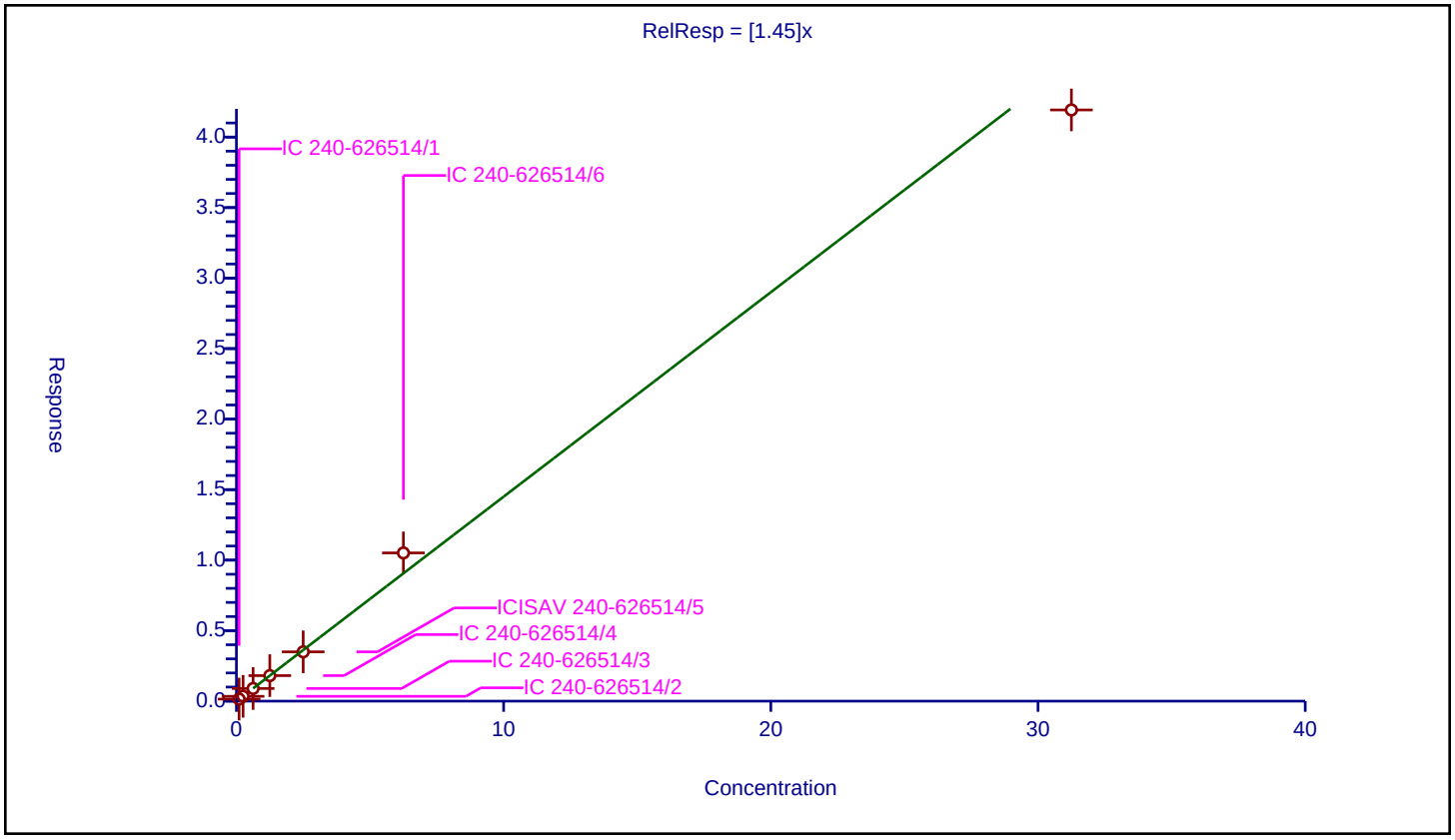
Curve Coefficients

Intercept:	0
Slope:	1.45

Error Coefficients

Relative Standard Deviation:	7.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1	0.14701	1.25	2047884.0	1.470097	Y
2	IC 240-626514/2	0.25	0.342965	1.25	1849822.0	1.371859	Y
3	IC 240-626514/3	0.625	0.898595	1.25	1923029.0	1.437753	Y
4	IC 240-626514/4	1.25	1.809489	1.25	1784173.0	1.447591	Y
5	ICISAV 240-626514/5	2.5	3.496858	1.25	1947559.0	1.398743	Y
6	IC 240-626514/6	6.25	10.511092	1.25	1572834.0	1.681775	Y
7	IC 240-626514/7	31.25	41.925027	1.25	2029785.0	1.341601	Y



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

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

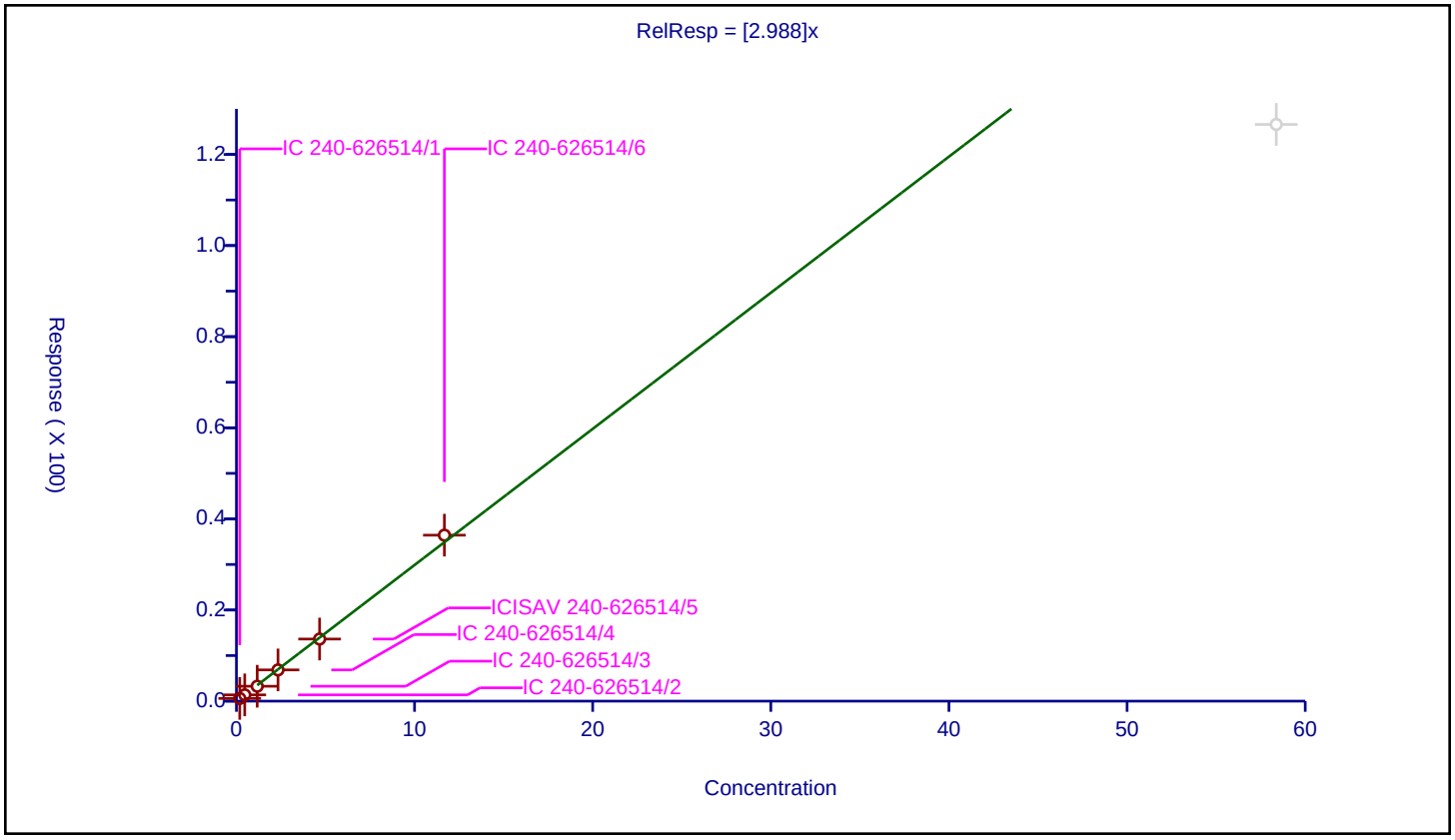
Curve Coefficients

Intercept:	0
Slope:	2.988

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1868	0.599604	1.1675	1213338.0	3.209869	Y
2	IC 240-626514/2	0.467	1.374046	1.1675	1082419.0	2.942283	Y
3	IC 240-626514/3	1.1675	3.270509	1.1675	1129810.0	2.801292	Y
4	IC 240-626514/4	2.335	6.851829	1.1675	1021345.0	2.934402	Y
5	ICISAV 240-626514/5	4.67	13.631882	1.1675	1027151.0	2.919033	Y
6	IC 240-626514/6	11.675	36.431553	1.1675	828359.0	3.120476	Y
7	IC 240-626514/7	58.375	126.585972	1.1675	780608.0	2.168496	N



Calibration / Perfluoro-3,6-dioxaheptanoic acid

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

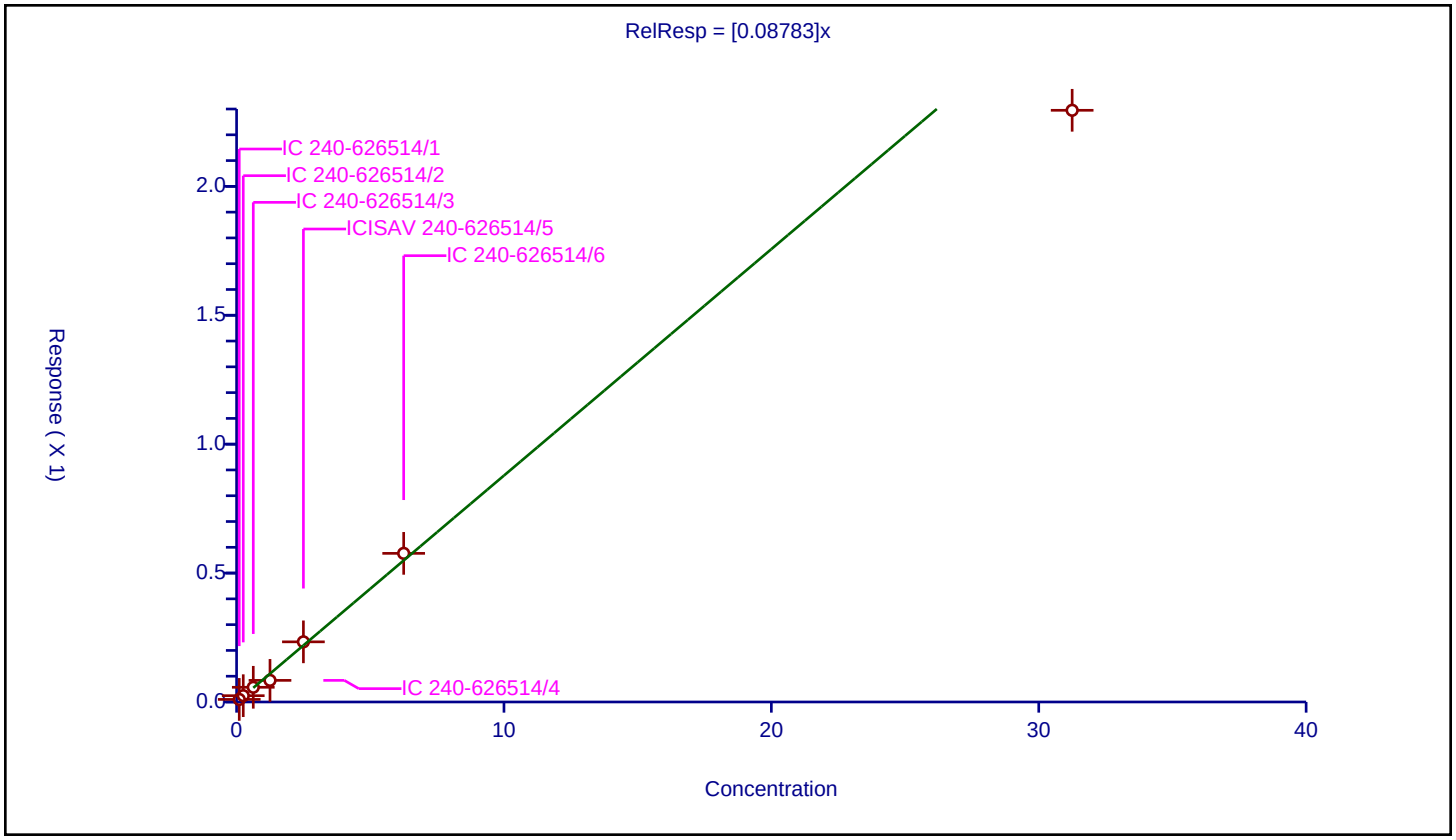
Curve Coefficients

Intercept:	0
Slope:	0.08783

Error Coefficients

Relative Standard Deviation:	14.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1	0.009945	0.625	1816714.0	0.099455	Y
2	IC 240-626514/2	0.25	0.0245	0.625	1643728.0	0.098	Y
3	IC 240-626514/3	0.625	0.057068	0.625	1660671.0	0.091309	Y
4	IC 240-626514/4	1.25	0.083809	0.625	1615415.0	0.067047	Y
5	ICISAV 240-626514/5	2.5	0.233273	0.625	1763152.0	0.093309	Y
6	IC 240-626514/6	6.25	0.576452	0.625	1418415.0	0.092232	Y
7	IC 240-626514/7	31.25	2.295	0.625	1857971.0	0.07344	Y



Calibration / FBSA

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

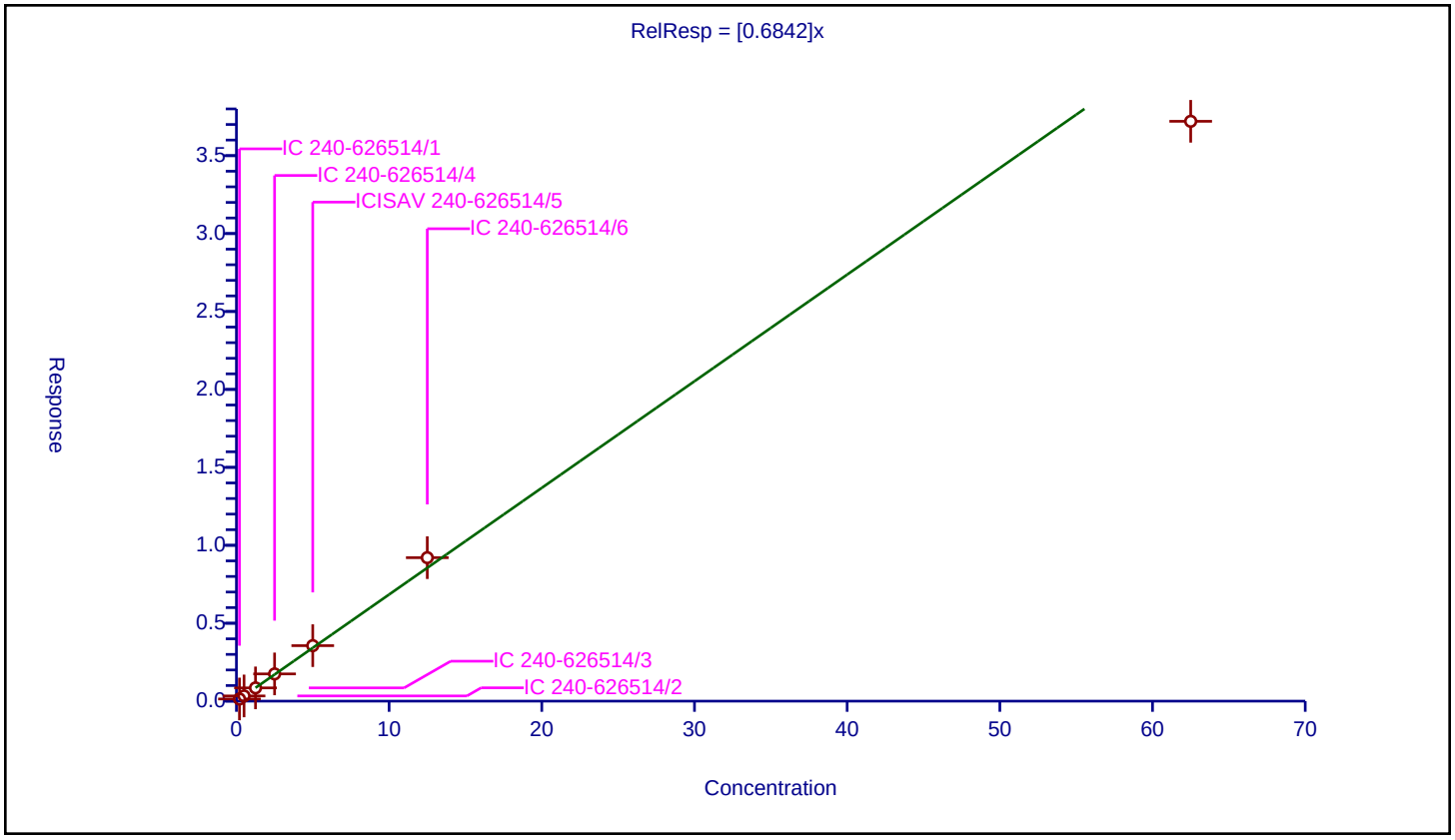
Curve Coefficients

Intercept:	0
Slope:	0.6842

Error Coefficients

Relative Standard Deviation:	6.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.2	0.139696	0.58125	1840624.0	0.698478	Y
2	IC 240-626514/2	0.5	0.334235	0.58125	1637869.0	0.66847	Y
3	IC 240-626514/3	1.25	0.849838	0.58125	1656033.0	0.67987	Y
4	IC 240-626514/4	2.5	1.746606	0.58125	1564595.0	0.698642	Y
5	ICISAV 240-626514/5	5.0	3.560464	0.58125	1655536.0	0.712093	Y
6	IC 240-626514/6	12.5	9.205209	0.58125	1457945.0	0.736417	Y
7	IC 240-626514/7	62.5	37.203604	0.58125	1827128.0	0.595258	Y



Calibration / Perfluorohexanoic acid

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

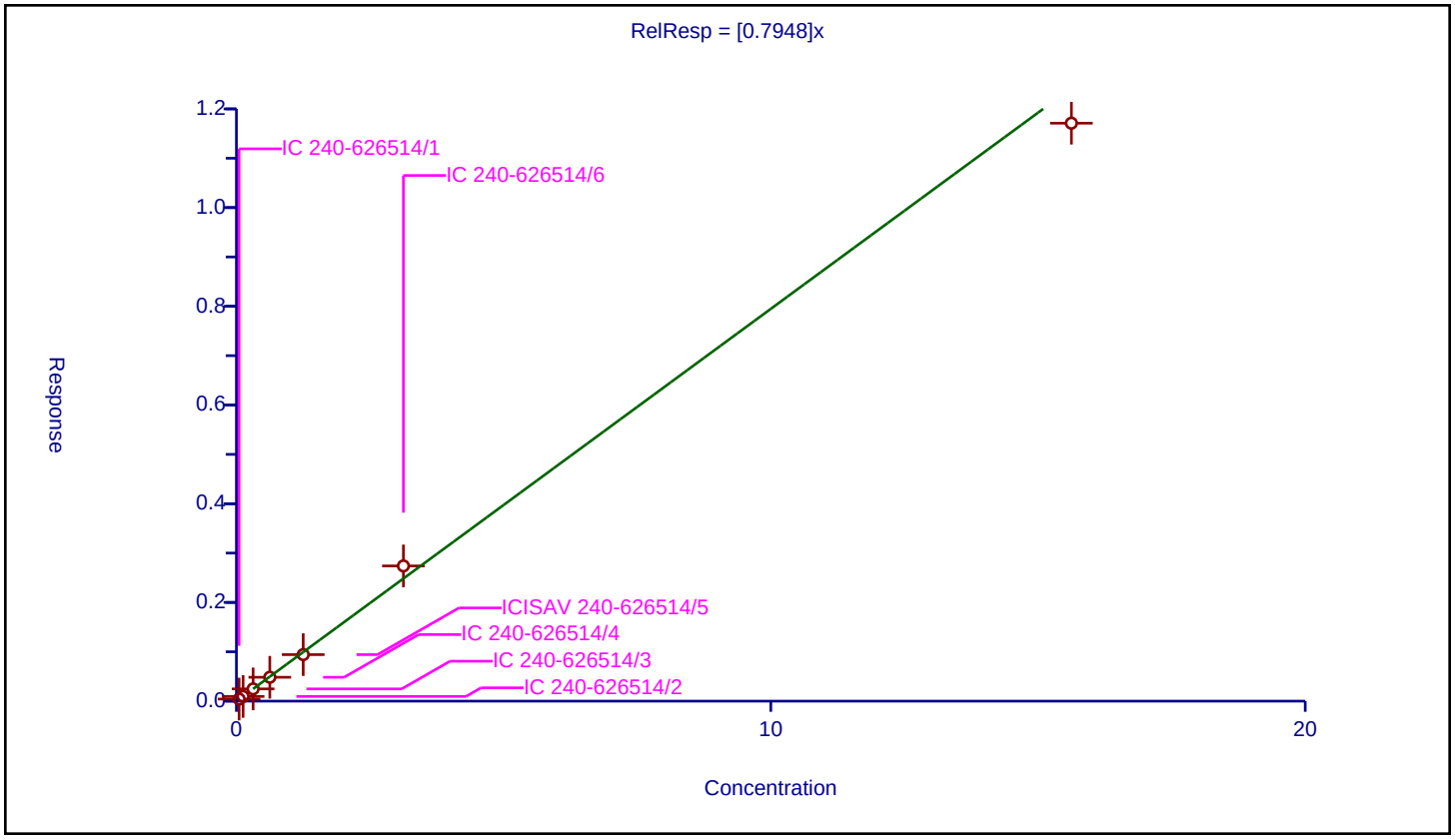
Curve Coefficients

Intercept:	0
Slope:	0.7948

Error Coefficients

Relative Standard Deviation:	6.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.042615	0.625	1816714.0	0.852301	Y
2	IC 240-626514/2	0.125	0.095388	0.625	1643728.0	0.763101	Y
3	IC 240-626514/3	0.3125	0.248068	0.625	1660671.0	0.793816	Y
4	IC 240-626514/4	0.625	0.484027	0.625	1615415.0	0.774442	Y
5	ICISAV 240-626514/5	1.25	0.942668	0.625	1763152.0	0.754134	Y
6	IC 240-626514/6	3.125	2.739573	0.625	1418415.0	0.876663	Y
7	IC 240-626514/7	15.625	11.71009	0.625	1857971.0	0.749446	Y



Calibration / 5:3 FTCA

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

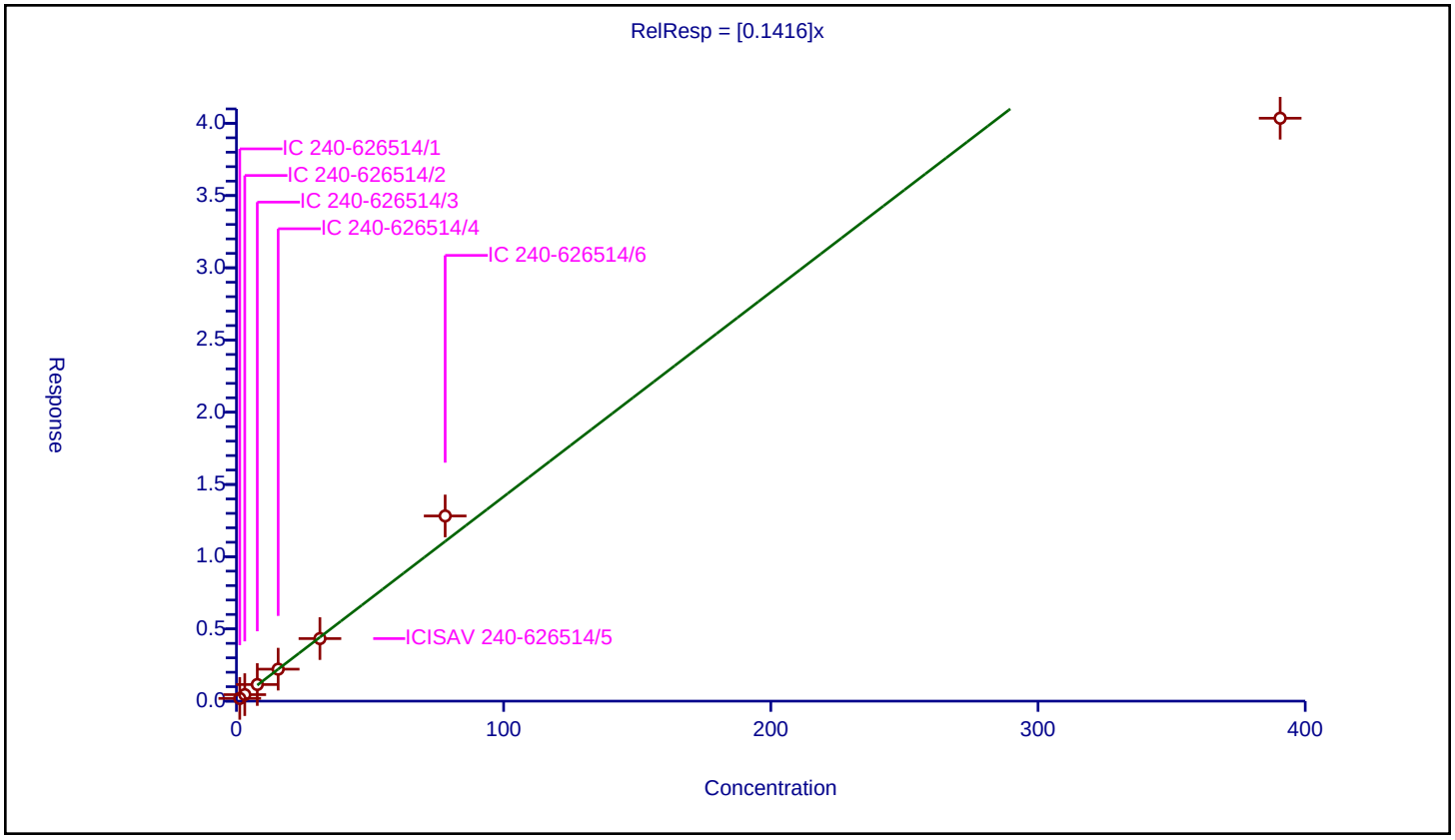
Curve Coefficients

Intercept:	0
Slope:	0.1416

Error Coefficients

Relative Standard Deviation:	13.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	1.25	0.189644	0.625	1816714.0	0.151715	Y
2	IC 240-626514/2	3.125	0.451213	0.625	1643728.0	0.144388	Y
3	IC 240-626514/3	7.8125	1.150202	0.625	1660671.0	0.147226	Y
4	IC 240-626514/4	15.625	2.213357	0.625	1615415.0	0.141655	Y
5	ICISAV 240-626514/5	31.25	4.329988	0.625	1763152.0	0.13856	Y
6	IC 240-626514/6	78.125	12.820094	0.625	1418415.0	0.164097	Y
7	IC 240-626514/7	390.625	40.355051	0.625	1857971.0	0.103309	Y



Calibration / Perfluorobutanesulfonic acid

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

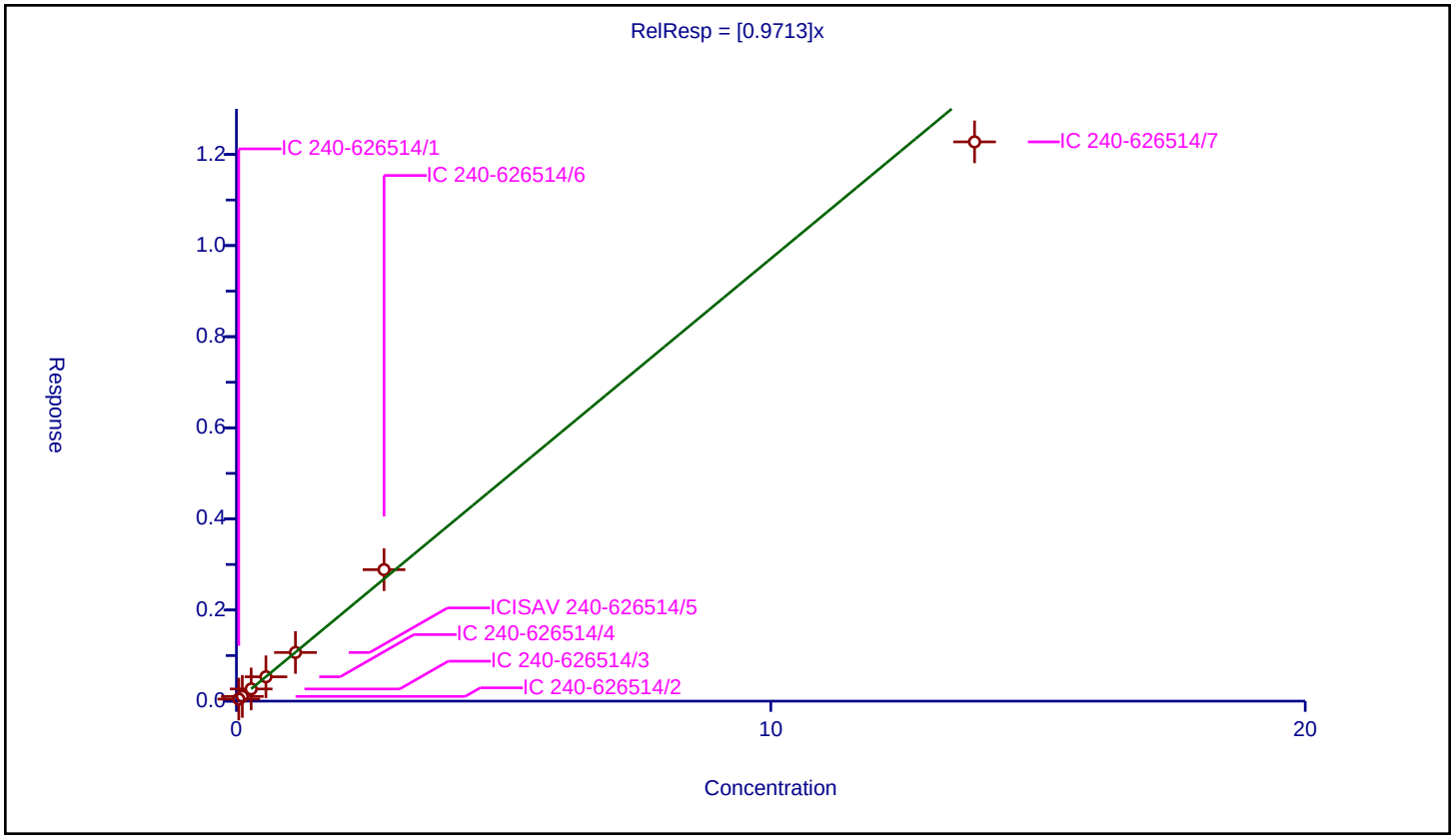
Curve Coefficients

Intercept:	0
Slope:	0.9713

Error Coefficients

Relative Standard Deviation:	5.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0442	0.045345	0.58125	1840624.0	1.025895	Y
2	IC 240-626514/2	0.1105	0.103544	0.58125	1637869.0	0.937052	Y
3	IC 240-626514/3	0.27625	0.267298	0.58125	1656033.0	0.967594	Y
4	IC 240-626514/4	0.5525	0.534839	0.58125	1564595.0	0.968035	Y
5	ICISAV 240-626514/5	1.105	1.068356	0.58125	1655536.0	0.966838	Y
6	IC 240-626514/6	2.7625	2.885726	0.58125	1457945.0	1.044607	Y
7	IC 240-626514/7	13.8125	12.276098	0.58125	1827128.0	0.888767	Y



Calibration / Perfluoro(2-propoxypropanoic) acid

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

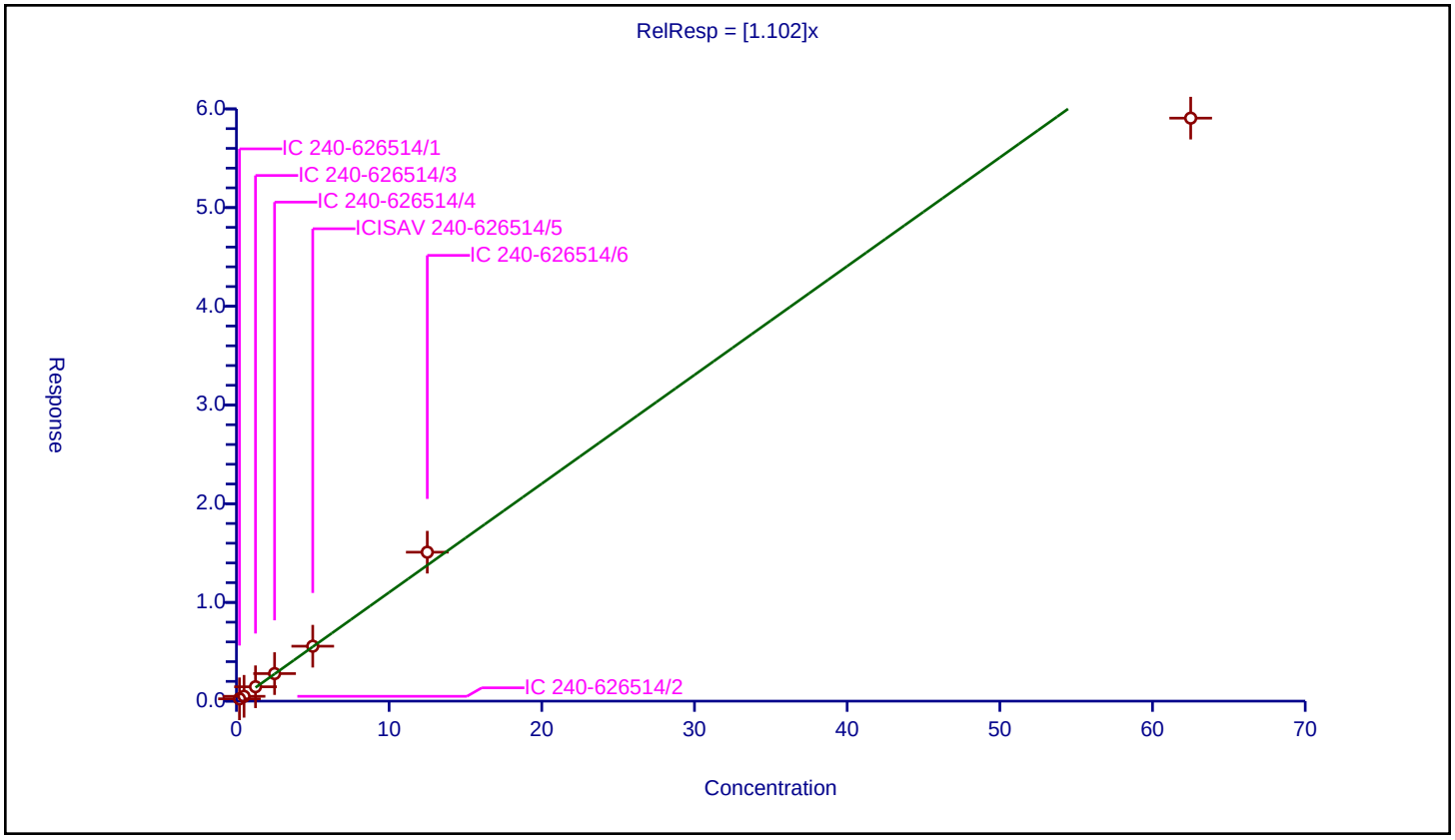
Curve Coefficients

Intercept:	0
Slope:	1.102

Error Coefficients

Relative Standard Deviation:	9.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.2	0.237262	2.5	2214826.0	1.186312	Y
2	IC 240-626514/2	0.5	0.489237	2.5	1989967.0	0.978474	Y
3	IC 240-626514/3	1.25	1.455182	2.5	1961686.0	1.164146	Y
4	IC 240-626514/4	2.5	2.790643	2.5	1851815.0	1.116257	Y
5	ICISAV 240-626514/5	5.0	5.566266	2.5	1907384.0	1.113253	Y
6	IC 240-626514/6	12.5	15.091058	2.5	1646590.0	1.207285	Y
7	IC 240-626514/7	62.5	59.062664	2.5	2020886.0	0.945003	Y



Calibration / Perfluoro (2-ethoxyethane) sulfonic acid

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

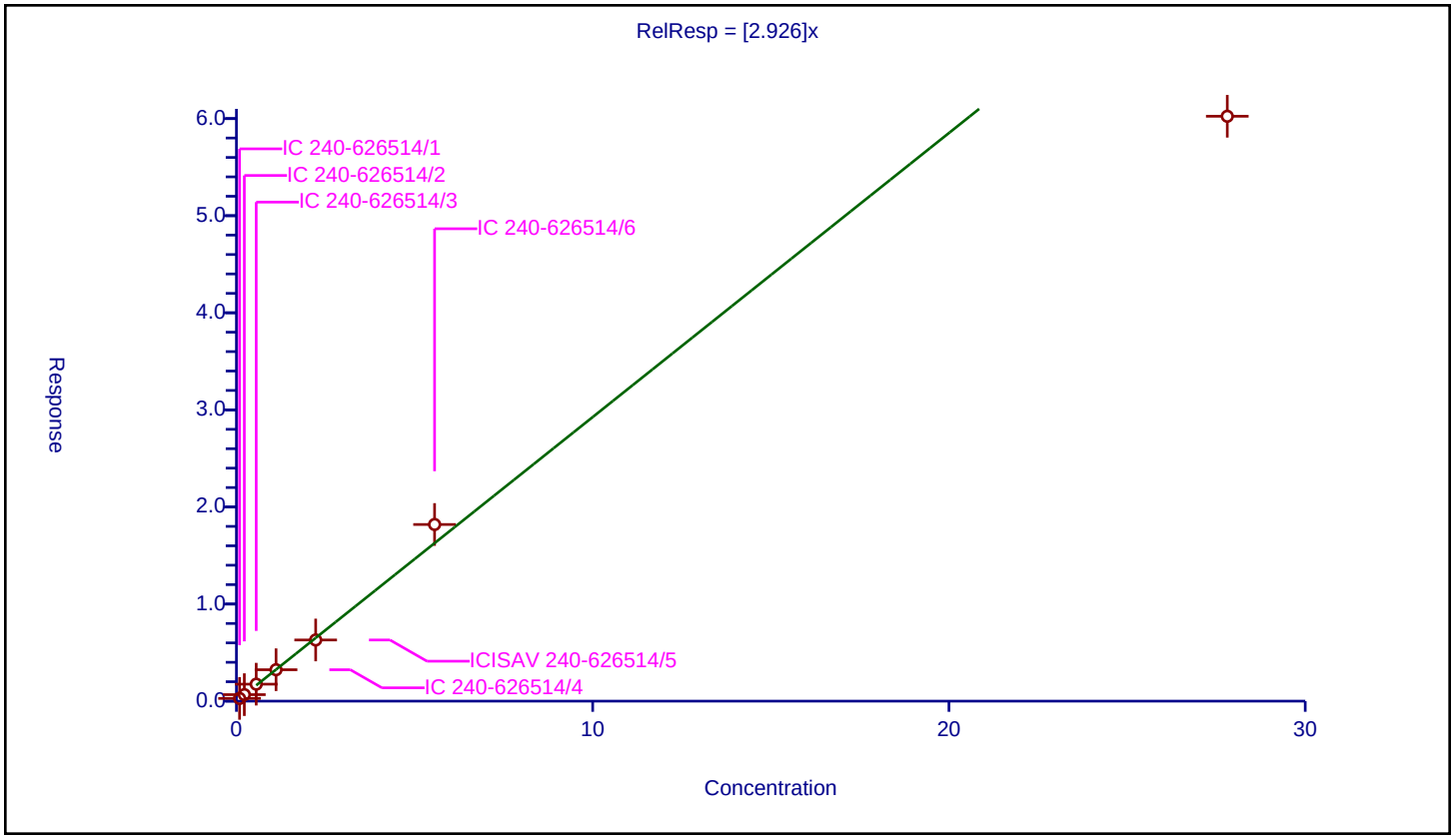
Curve Coefficients

Intercept:	0
Slope:	2.926

Error Coefficients

Relative Standard Deviation:	12.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.089	0.280231	0.625	1816714.0	3.148658	Y
2	IC 240-626514/2	0.2225	0.670065	0.625	1643728.0	3.011527	Y
3	IC 240-626514/3	0.55625	1.747861	0.625	1660671.0	3.142222	Y
4	IC 240-626514/4	1.1125	3.236605	0.625	1615415.0	2.909308	Y
5	ICISAV 240-626514/5	2.225	6.301101	0.625	1763152.0	2.831956	Y
6	IC 240-626514/6	5.5625	18.193994	0.625	1418415.0	3.27083	Y
7	IC 240-626514/7	27.8125	60.239564	0.625	1857971.0	2.165917	Y



Calibration / Perfluoroheptanoic acid

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

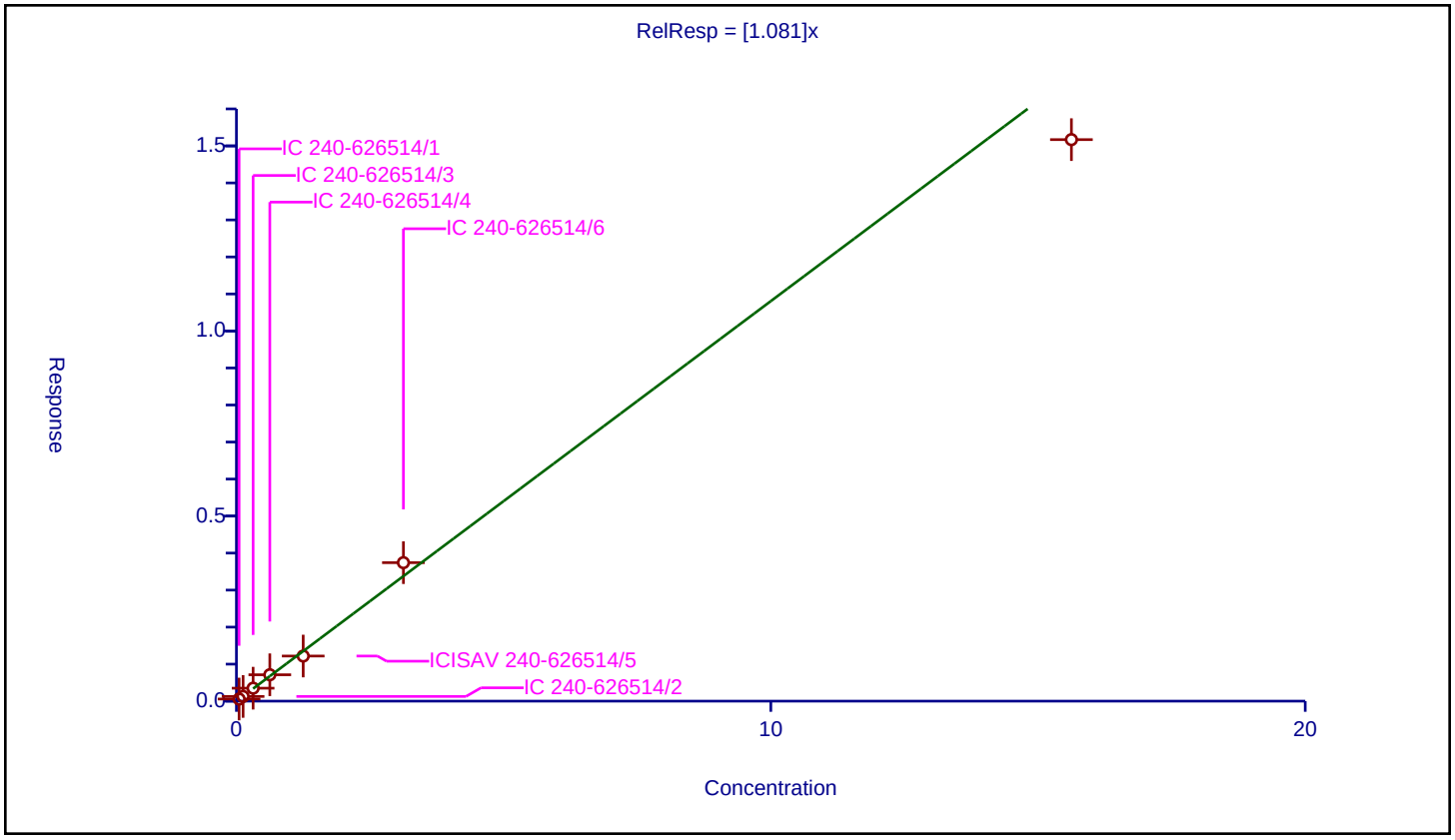
Curve Coefficients

Intercept:	0
Slope:	1.081

Error Coefficients

Relative Standard Deviation:	8.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.057166	0.625	1911673.0	1.143318	Y
2	IC 240-626514/2	0.125	0.127337	0.625	1754335.0	1.018699	Y
3	IC 240-626514/3	0.3125	0.349949	0.625	1747486.0	1.119837	Y
4	IC 240-626514/4	0.625	0.712389	0.625	1607756.0	1.139822	Y
5	ICISAV 240-626514/5	1.25	1.218841	0.625	1817163.0	0.975073	Y
6	IC 240-626514/6	3.125	3.740992	0.625	1560836.0	1.197117	Y
7	IC 240-626514/7	15.625	15.169512	0.625	1911597.0	0.970849	Y



Calibration / DONA

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

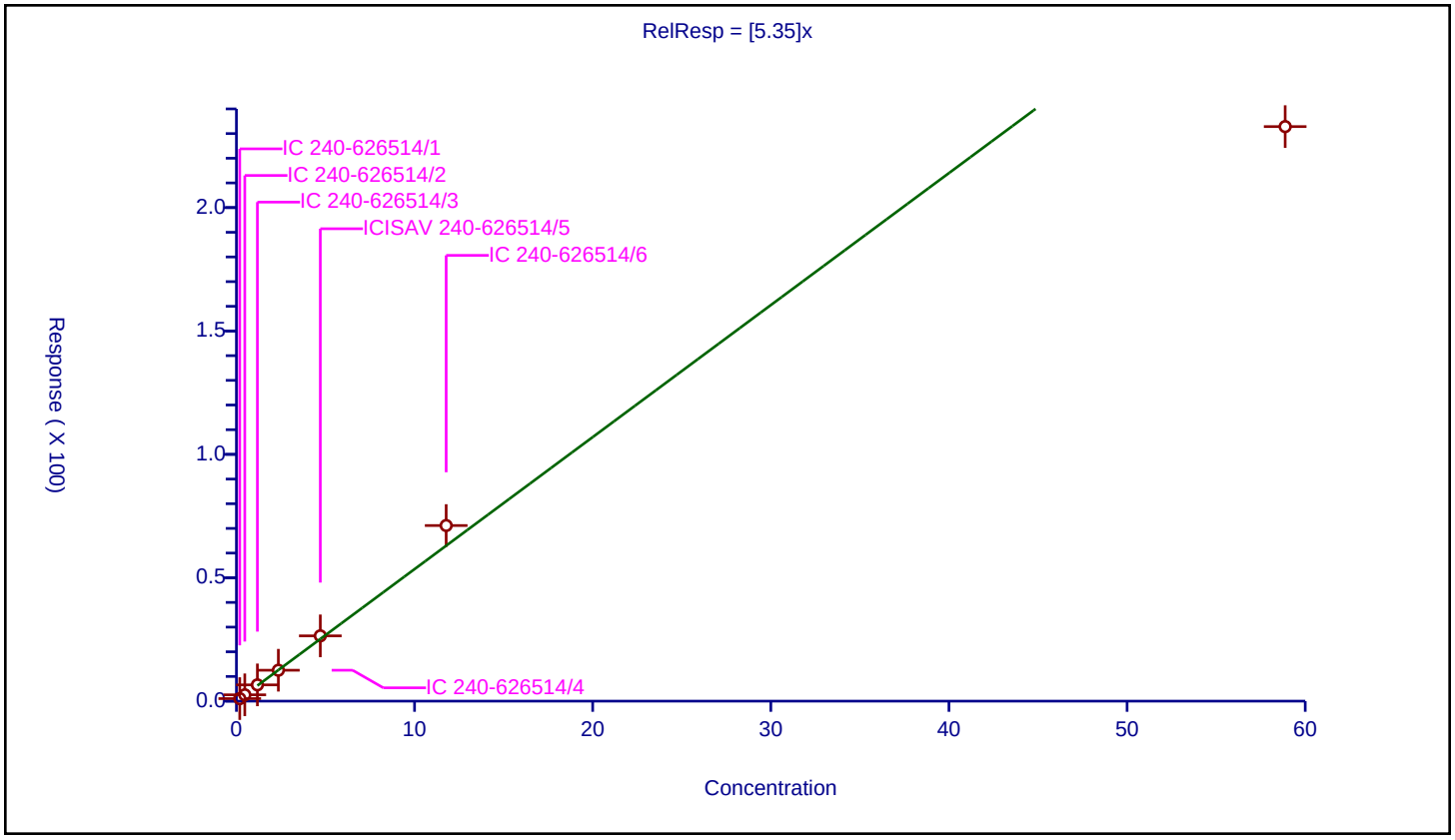
Curve Coefficients

Intercept:	0
Slope:	5.35

Error Coefficients

Relative Standard Deviation:	12.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1884	1.033446	2.5	2214826.0	5.485381	Y
2	IC 240-626514/2	0.471	2.558456	2.5	1989967.0	5.431965	Y
3	IC 240-626514/3	1.1775	6.589676	2.5	1961686.0	5.596328	Y
4	IC 240-626514/4	2.355	12.522019	2.5	1851815.0	5.317205	Y
5	ICISAV 240-626514/5	4.71	26.463093	2.5	1907384.0	5.618491	Y
6	IC 240-626514/6	11.775	71.168662	2.5	1646590.0	6.044048	Y
7	IC 240-626514/7	58.875	232.823734	2.5	2020886.0	3.954543	Y



Calibration / Perfluoropentanesulfonic acid

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

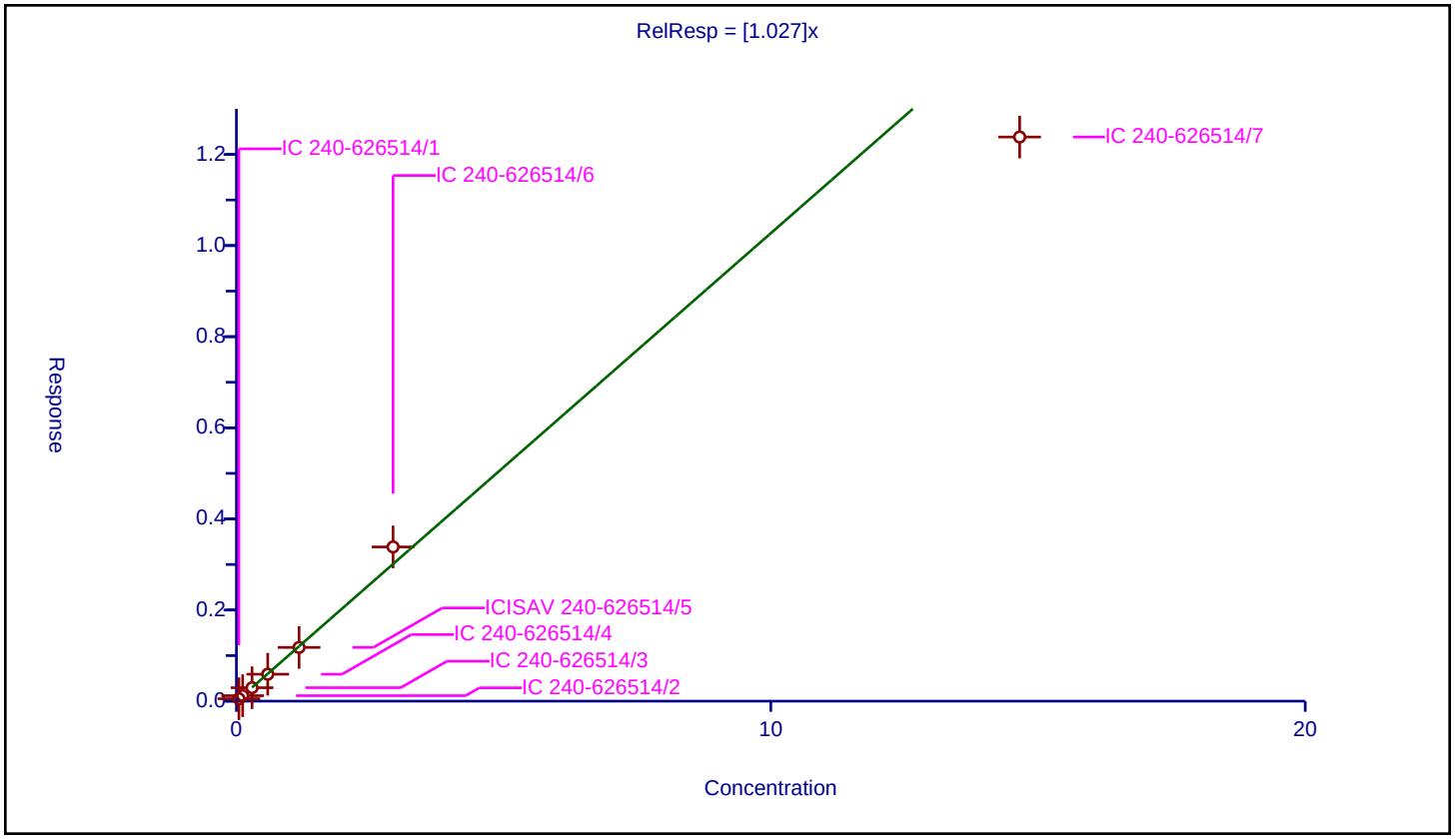
Curve Coefficients

Intercept:	0
Slope:	1.027

Error Coefficients

Relative Standard Deviation:	10.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0469	0.053751	0.59125	1777824.0	1.146074	Y
2	IC 240-626514/2	0.11725	0.12007	0.59125	1620956.0	1.024055	Y
3	IC 240-626514/3	0.293125	0.294883	0.59125	1661989.0	1.005997	Y
4	IC 240-626514/4	0.58625	0.591322	0.59125	1594321.0	1.008652	Y
5	ICISAV 240-626514/5	1.1725	1.179009	0.59125	1669872.0	1.005551	Y
6	IC 240-626514/6	2.93125	3.384569	0.59125	1403826.0	1.15465	Y
7	IC 240-626514/7	14.65625	12.382468	0.59125	1883477.0	0.844859	Y



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

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

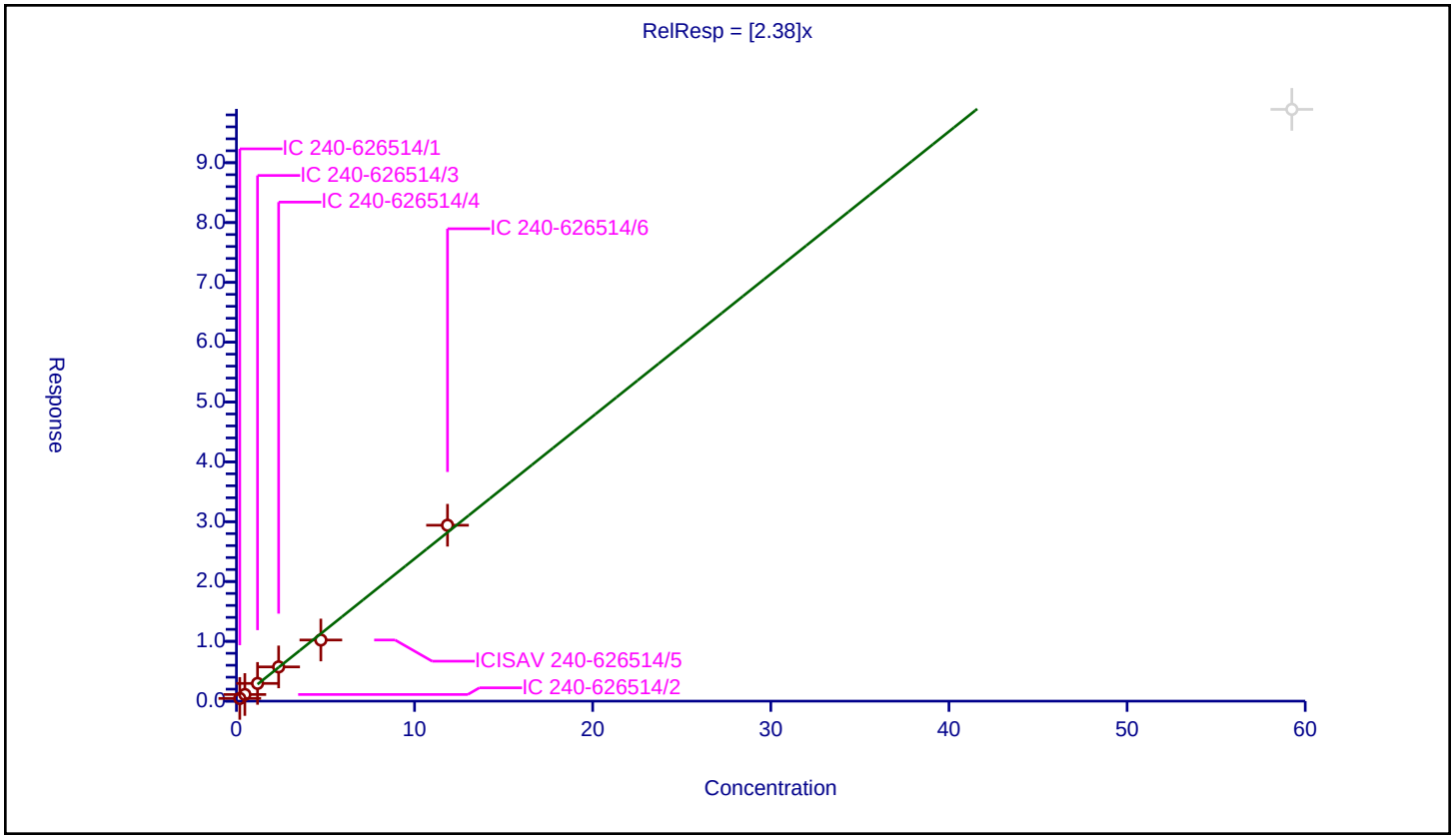
Curve Coefficients

Intercept:	0
Slope:	2.38

Error Coefficients

Relative Standard Deviation:	5.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1896	0.451412	1.1875	1448535.0	2.380865	Y
2	IC 240-626514/2	0.474	1.112788	1.1875	1256071.0	2.347654	Y
3	IC 240-626514/3	1.185	2.963808	1.1875	1222116.0	2.501104	Y
4	IC 240-626514/4	2.37	5.723667	1.1875	1172565.0	2.415049	Y
5	ICISAV 240-626514/5	4.74	10.221127	1.1875	1280353.0	2.156356	Y
6	IC 240-626514/6	11.85	29.406249	1.1875	965108.0	2.48154	Y
7	IC 240-626514/7	59.25	98.918831	1.1875	946447.0	1.669516	N



Calibration / Perfluorooctanoic acid

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

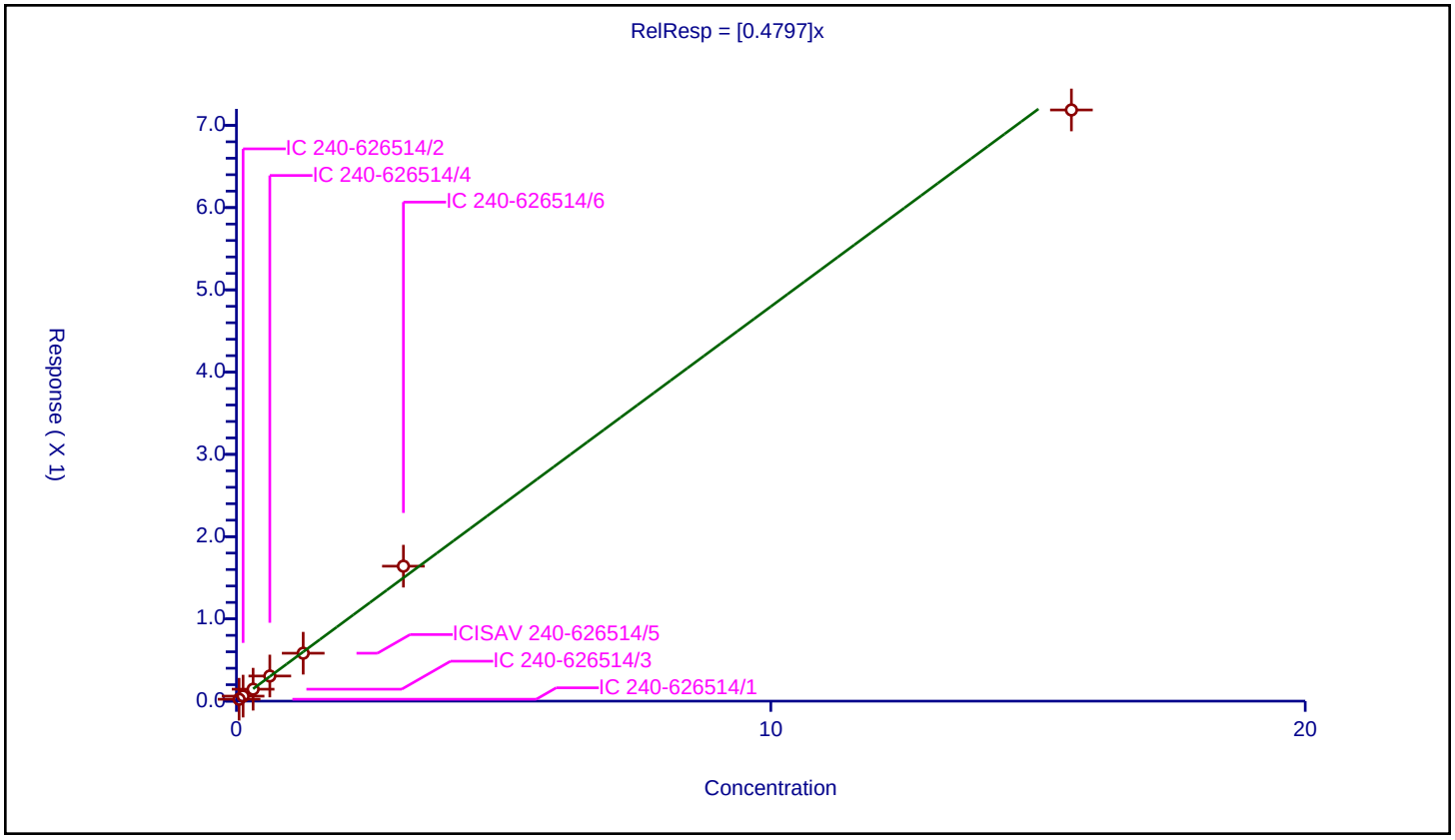
Curve Coefficients

Intercept:	0
Slope:	0.4797

Error Coefficients

Relative Standard Deviation:	4.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.023297	0.625	1939090.0	0.465947	Y
2	IC 240-626514/2	0.125	0.06091	0.625	1828665.0	0.487279	Y
3	IC 240-626514/3	0.3125	0.145288	0.625	1840625.0	0.464921	Y
4	IC 240-626514/4	0.625	0.30537	0.625	1738544.0	0.488593	Y
5	ICISAV 240-626514/5	1.25	0.582678	0.625	1839135.0	0.466142	Y
6	IC 240-626514/6	3.125	1.640867	0.625	1576389.0	0.525077	Y
7	IC 240-626514/7	15.625	7.186989	0.625	2233580.0	0.459967	Y



Calibration / 7:3 FTCA

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

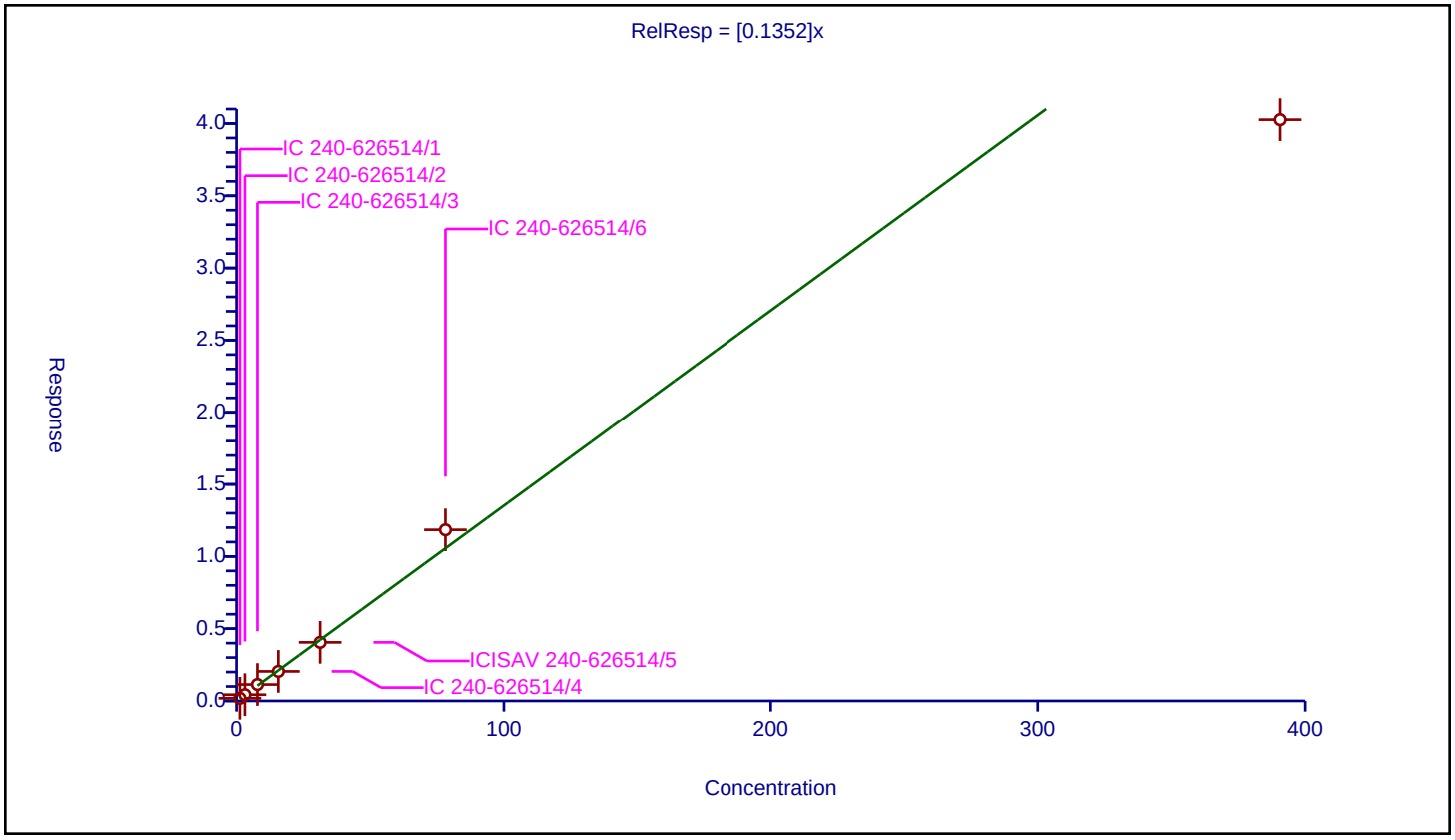
Curve Coefficients

Intercept:	0
Slope:	0.1352

Error Coefficients

Relative Standard Deviation:	12.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	1.25	0.184717	0.625	1816714.0	0.147773	Y
2	IC 240-626514/2	3.125	0.432359	0.625	1643728.0	0.138355	Y
3	IC 240-626514/3	7.8125	1.135744	0.625	1660671.0	0.145375	Y
4	IC 240-626514/4	15.625	2.042955	0.625	1615415.0	0.130749	Y
5	ICISAV 240-626514/5	31.25	4.052792	0.625	1763152.0	0.129689	Y
6	IC 240-626514/6	78.125	11.846819	0.625	1418415.0	0.151639	Y
7	IC 240-626514/7	390.625	40.265317	0.625	1857971.0	0.103079	Y



Calibration / Perfluorohexanesulfonic acid

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

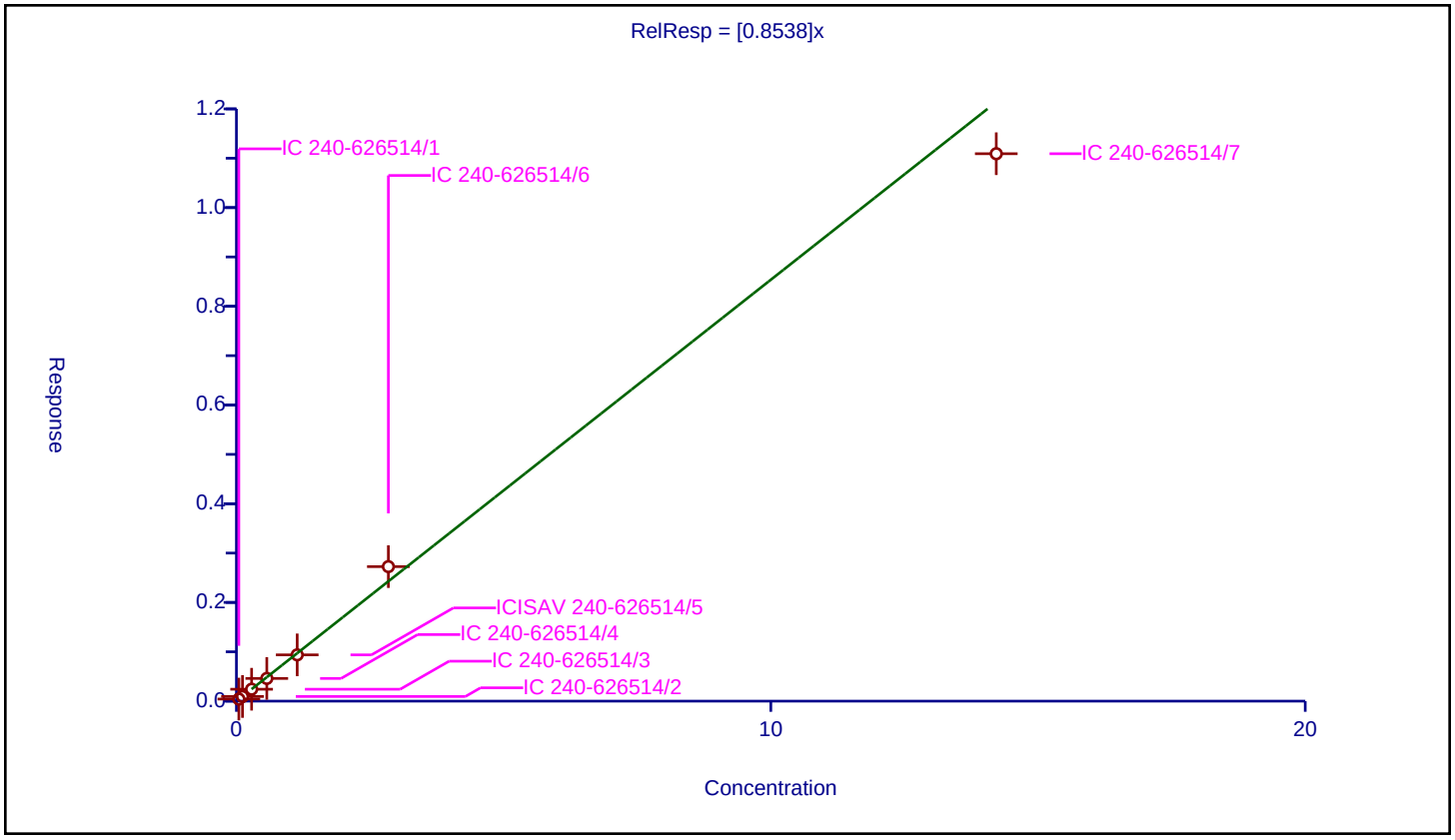
Curve Coefficients

Intercept:	0
Slope:	0.8538

Error Coefficients

Relative Standard Deviation:	7.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0455	0.042183	0.59125	1777824.0	0.927101	Y
2	IC 240-626514/2	0.11375	0.094103	0.59125	1620956.0	0.827281	Y
3	IC 240-626514/3	0.284375	0.241668	0.59125	1661989.0	0.849822	Y
4	IC 240-626514/4	0.56875	0.460276	0.59125	1594321.0	0.809277	Y
5	ICISAV 240-626514/5	1.1375	0.937897	0.59125	1669872.0	0.824525	Y
6	IC 240-626514/6	2.84375	2.725647	0.59125	1403826.0	0.958469	Y
7	IC 240-626514/7	14.21875	11.091554	0.59125	1883477.0	0.780065	Y



Calibration / Perfluorononanoic acid

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

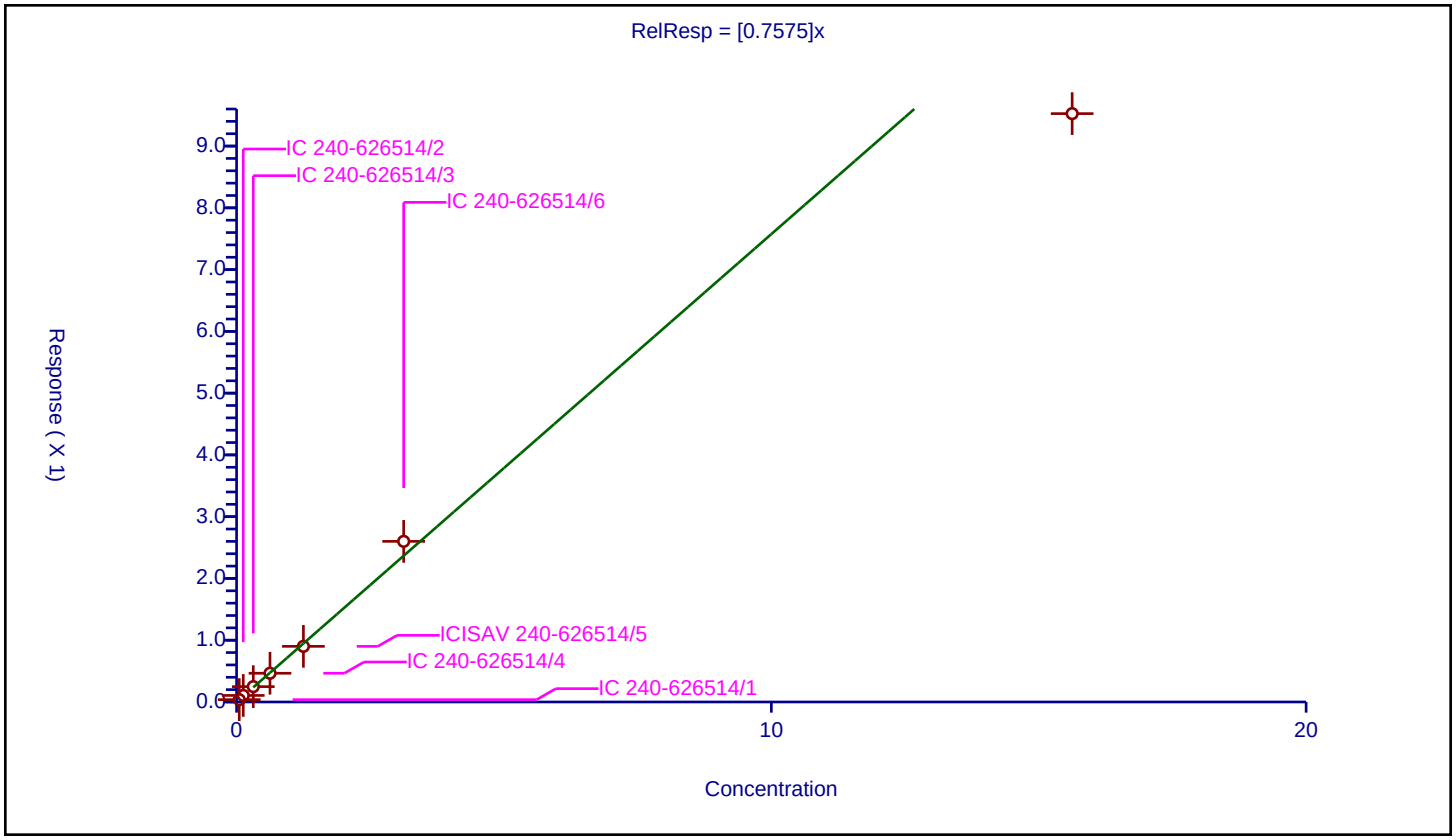
Curve Coefficients

Intercept:	0
Slope:	0.7575

Error Coefficients

Relative Standard Deviation:	10.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.037639	0.3125	764480.0	0.752783	Y
2	IC 240-626514/2	0.125	0.106036	0.3125	618553.0	0.848286	Y
3	IC 240-626514/3	0.3125	0.248508	0.3125	611120.0	0.795227	Y
4	IC 240-626514/4	0.625	0.465026	0.3125	611214.0	0.744042	Y
5	ICISAV 240-626514/5	1.25	0.900609	0.3125	663051.0	0.720487	Y
6	IC 240-626514/6	3.125	2.600577	0.3125	565828.0	0.832185	Y
7	IC 240-626514/7	15.625	9.525177	0.3125	825316.0	0.609611	Y



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

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

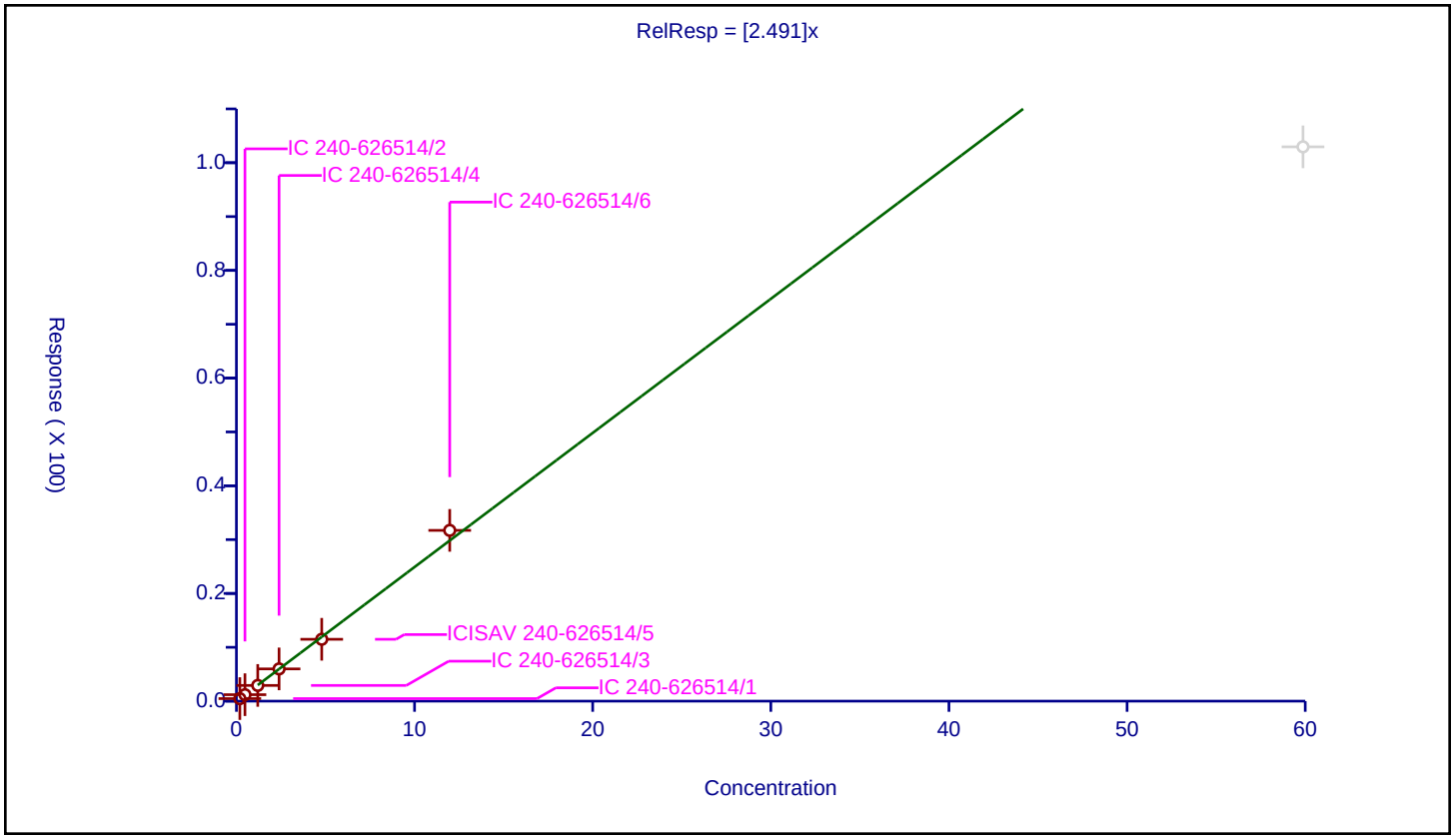
Curve Coefficients

Intercept:	0
Slope:	2.491

Error Coefficients

Relative Standard Deviation:	3.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1916	0.471505	1.1975	997090.0	2.46088	Y
2	IC 240-626514/2	0.479	1.198253	1.1975	844452.0	2.501572	Y
3	IC 240-626514/3	1.1975	2.915297	1.1975	890678.0	2.434486	Y
4	IC 240-626514/4	2.395	5.987368	1.1975	828393.0	2.499945	Y
5	ICISAV 240-626514/5	4.79	11.487917	1.1975	849267.0	2.398313	Y
6	IC 240-626514/6	11.975	31.714273	1.1975	662557.0	2.648373	Y
7	IC 240-626514/7	59.875	102.949064	1.1975	689281.0	1.7194	N



Calibration / PFECHS

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

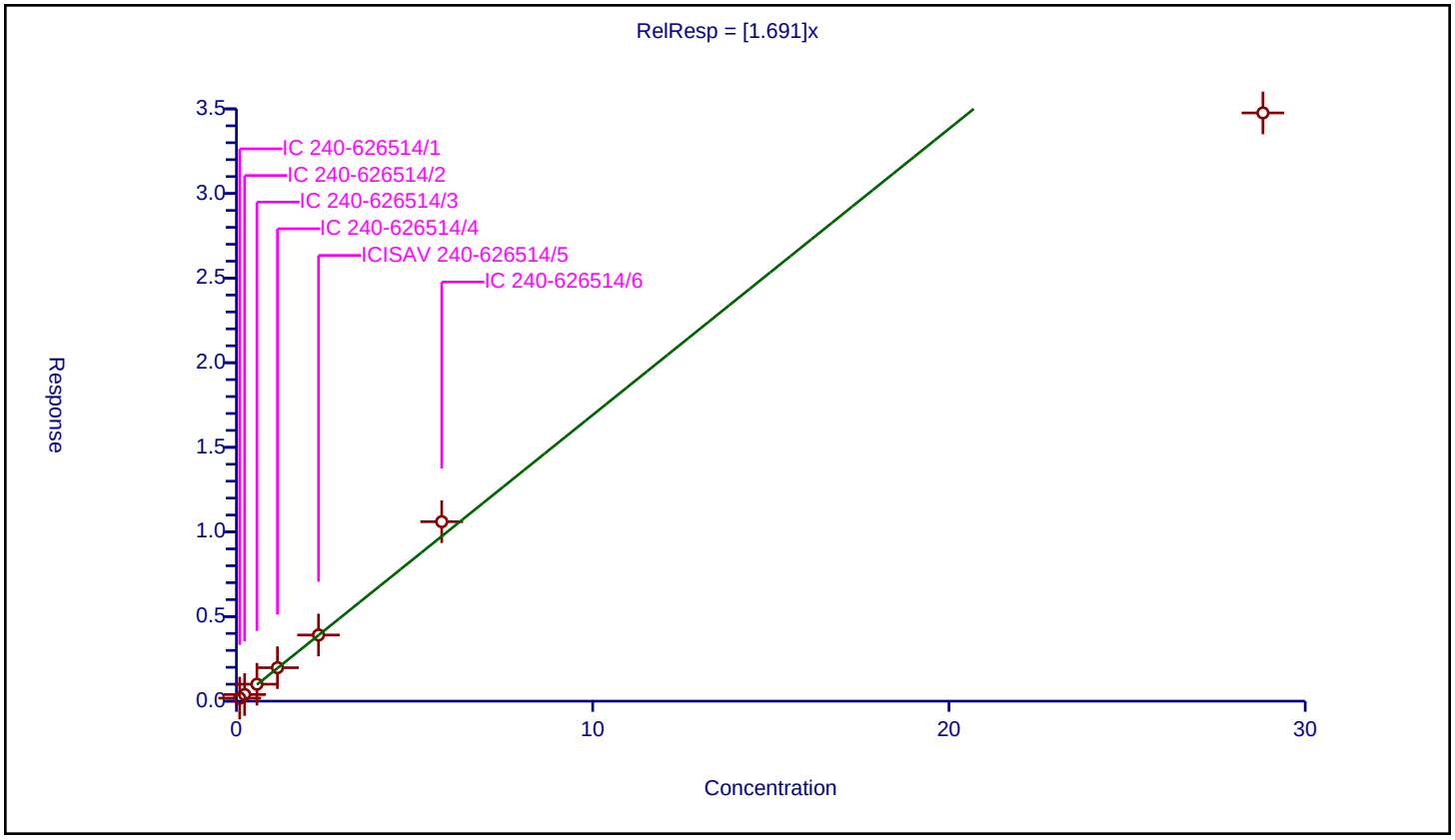
Curve Coefficients

Intercept:	0
Slope:	1.691

Error Coefficients

Relative Standard Deviation:	13.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0922	0.179109	0.59125	1777824.0	1.942617	Y
2	IC 240-626514/2	0.2305	0.391584	0.59125	1620956.0	1.698848	Y
3	IC 240-626514/3	0.57625	1.001824	0.59125	1661989.0	1.738522	Y
4	IC 240-626514/4	1.1525	1.975999	0.59125	1594321.0	1.714533	Y
5	ICISAV 240-626514/5	2.305	3.908893	0.59125	1669872.0	1.695832	Y
6	IC 240-626514/6	5.7625	10.604266	0.59125	1403826.0	1.84022	Y
7	IC 240-626514/7	28.8125	34.760911	0.59125	1883477.0	1.206452	Y



Calibration / FHxSA

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

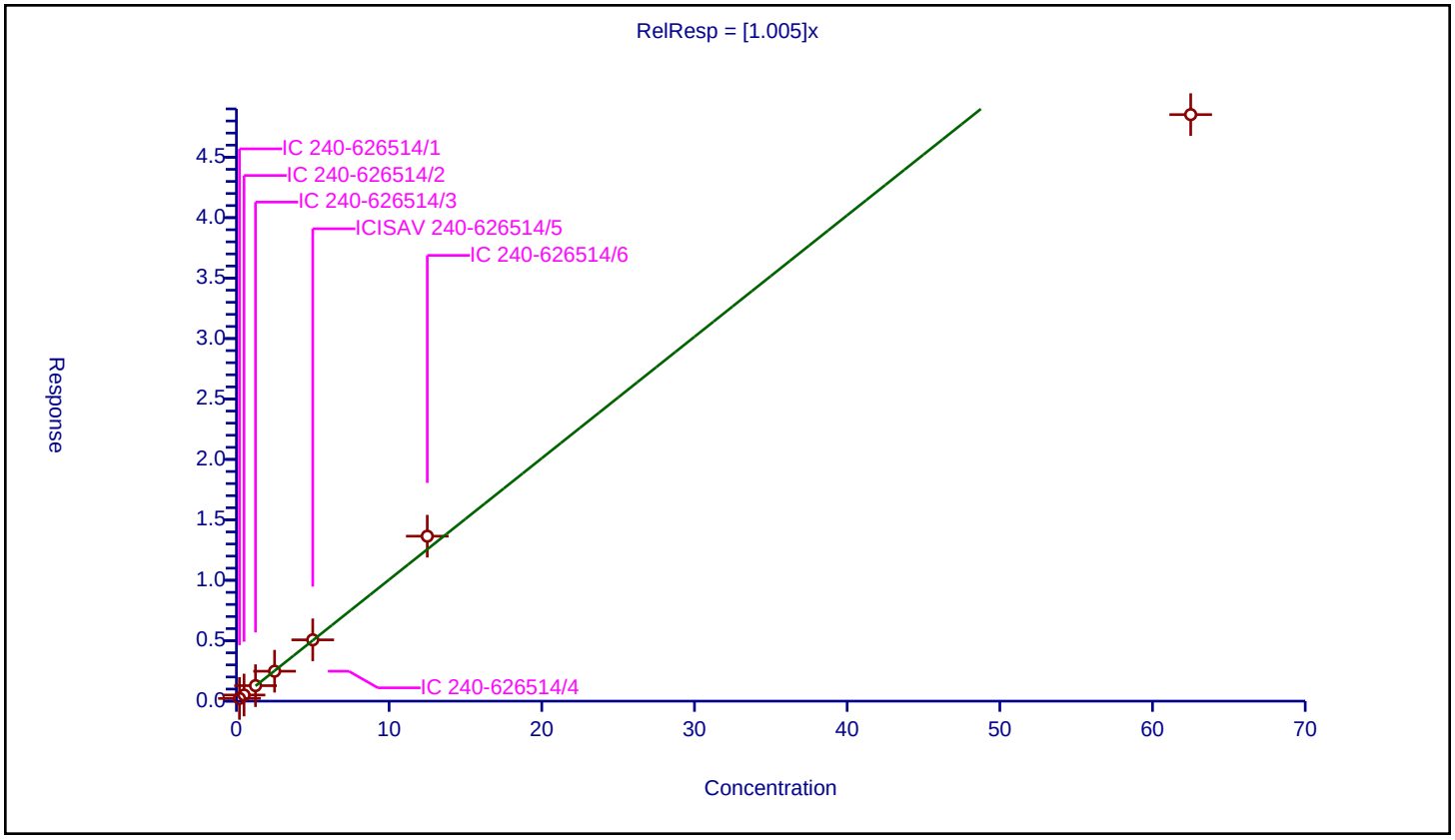
Curve Coefficients

Intercept:	0
Slope:	1.005

Error Coefficients

Relative Standard Deviation:	11.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.2	0.223551	0.59125	1777824.0	1.117753	Y
2	IC 240-626514/2	0.5	0.508839	0.59125	1620956.0	1.017677	Y
3	IC 240-626514/3	1.25	1.281936	0.59125	1661989.0	1.025549	Y
4	IC 240-626514/4	2.5	2.47638	0.59125	1594321.0	0.990552	Y
5	ICISAV 240-626514/5	5.0	5.07067	0.59125	1669872.0	1.014134	Y
6	IC 240-626514/6	12.5	13.64853	0.59125	1403826.0	1.091882	Y
7	IC 240-626514/7	62.5	48.526573	0.59125	1883477.0	0.776425	Y



Calibration / Perfluoroheptanesulfonic acid

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

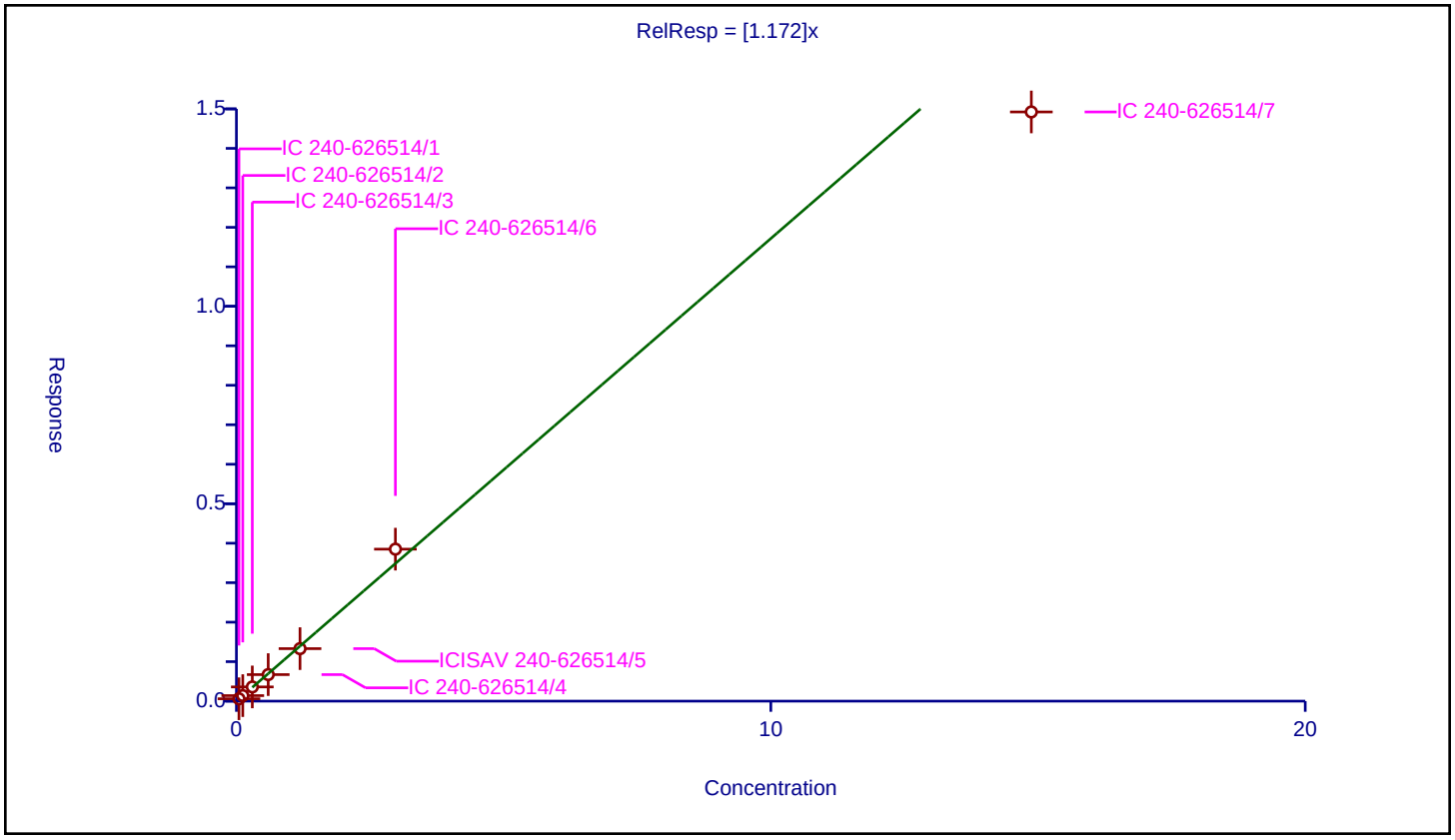
Curve Coefficients

Intercept:	0
Slope:	1.172

Error Coefficients

Relative Standard Deviation:	8.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0476	0.060423	0.5975	1568798.0	1.269392	Y
2	IC 240-626514/2	0.119	0.140218	0.5975	1371737.0	1.178304	Y
3	IC 240-626514/3	0.2975	0.359833	0.5975	1398374.0	1.209521	Y
4	IC 240-626514/4	0.595	0.672211	0.5975	1365622.0	1.129767	Y
5	ICISAV 240-626514/5	1.19	1.329873	0.5975	1478665.0	1.117541	Y
6	IC 240-626514/6	2.975	3.849077	0.5975	1221723.0	1.293807	Y
7	IC 240-626514/7	14.875	14.922334	0.5975	1651633.0	1.003182	Y



Calibration / N-methylperfluorooctanesulfonamidoacetic acid

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

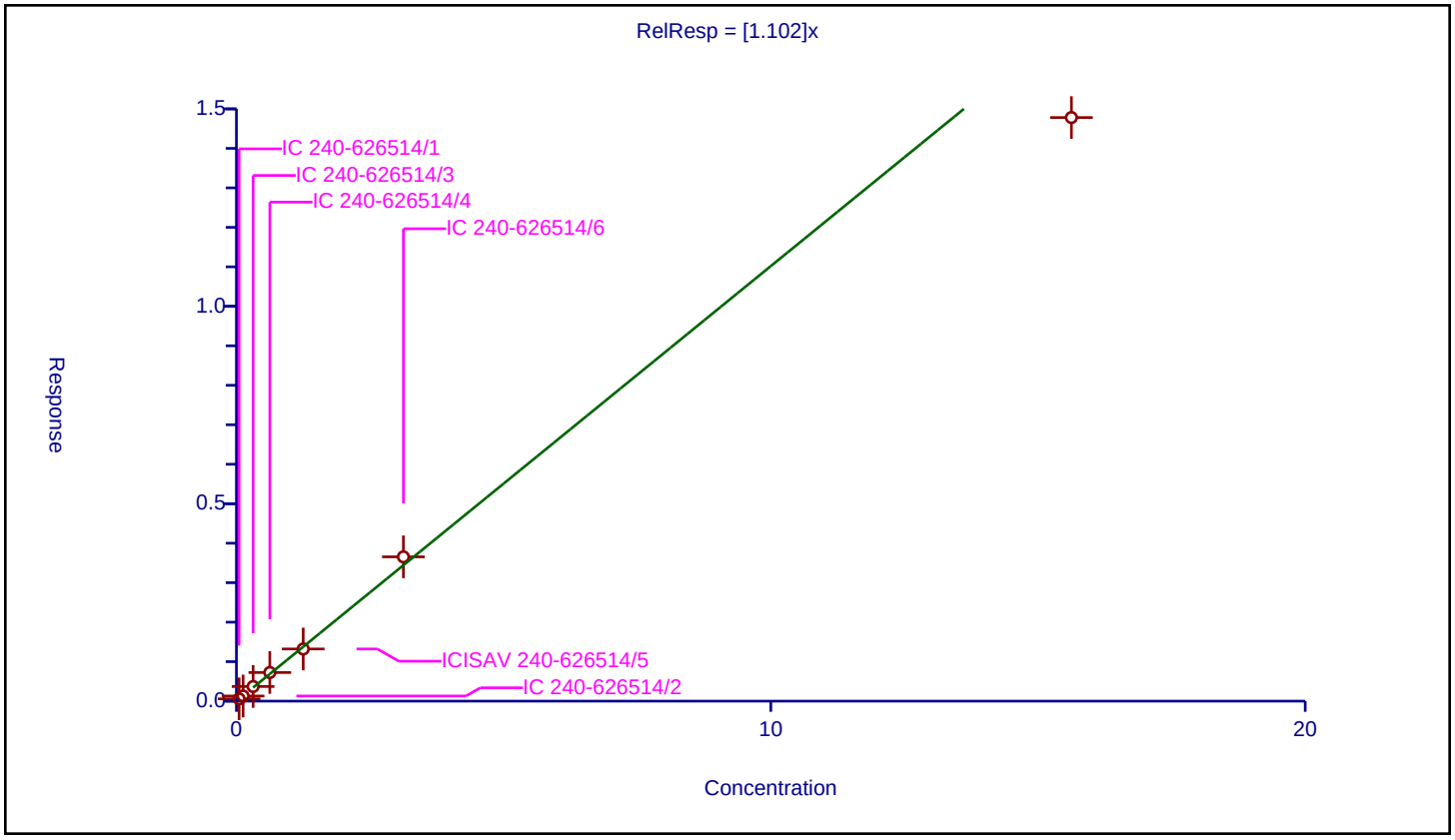
Curve Coefficients

Intercept:	0
Slope:	1.102

Error Coefficients

Relative Standard Deviation:	8.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.057866	1.25	1515586.0	1.157325	Y
2	IC 240-626514/2	0.125	0.129707	1.25	1321629.0	1.037659	Y
3	IC 240-626514/3	0.3125	0.370484	1.25	1279074.0	1.185548	Y
4	IC 240-626514/4	0.625	0.725113	1.25	1252522.0	1.160181	Y
5	ICISAV 240-626514/5	1.25	1.320875	1.25	1395914.0	1.0567	Y
6	IC 240-626514/6	3.125	3.654681	1.25	1168426.0	1.169498	Y
7	IC 240-626514/7	15.625	14.780872	1.25	1529044.0	0.945976	Y



Calibration / Perfluorodecanoic acid

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

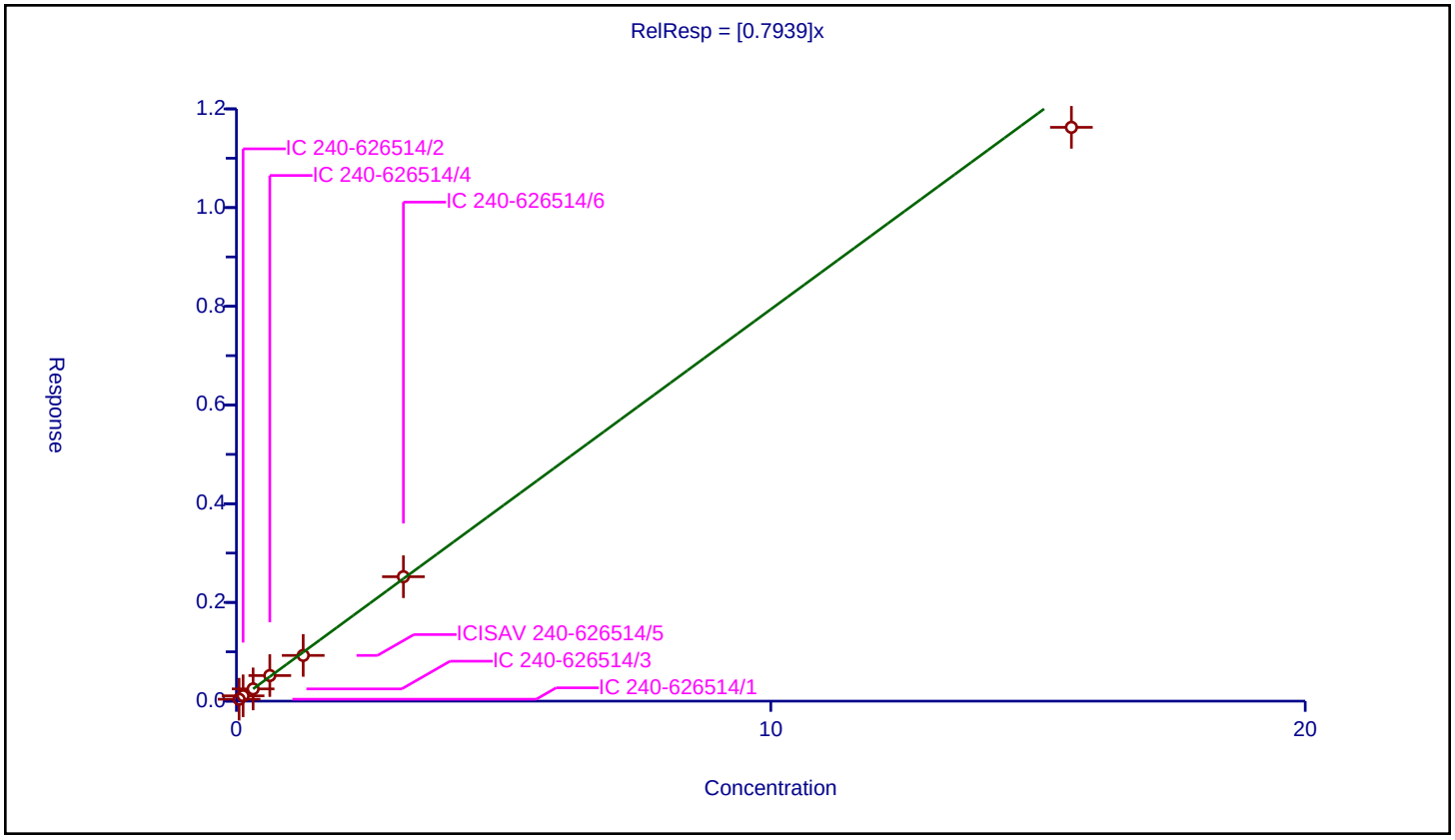
Curve Coefficients

Intercept:	0
Slope:	0.7939

Error Coefficients

Relative Standard Deviation:	5.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.039131	0.3125	705486.0	0.782617	Y
2	IC 240-626514/2	0.125	0.107454	0.3125	623649.0	0.859634	Y
3	IC 240-626514/3	0.3125	0.24803	0.3125	642375.0	0.793697	Y
4	IC 240-626514/4	0.625	0.518557	0.3125	576241.0	0.829692	Y
5	ICISAV 240-626514/5	1.25	0.92648	0.3125	670866.0	0.741184	Y
6	IC 240-626514/6	3.125	2.520764	0.3125	587530.0	0.806644	Y
7	IC 240-626514/7	15.625	11.626544	0.3125	783597.0	0.744099	Y



Calibration / N-ethylperfluorooctanesulfonamidoacetic acid

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

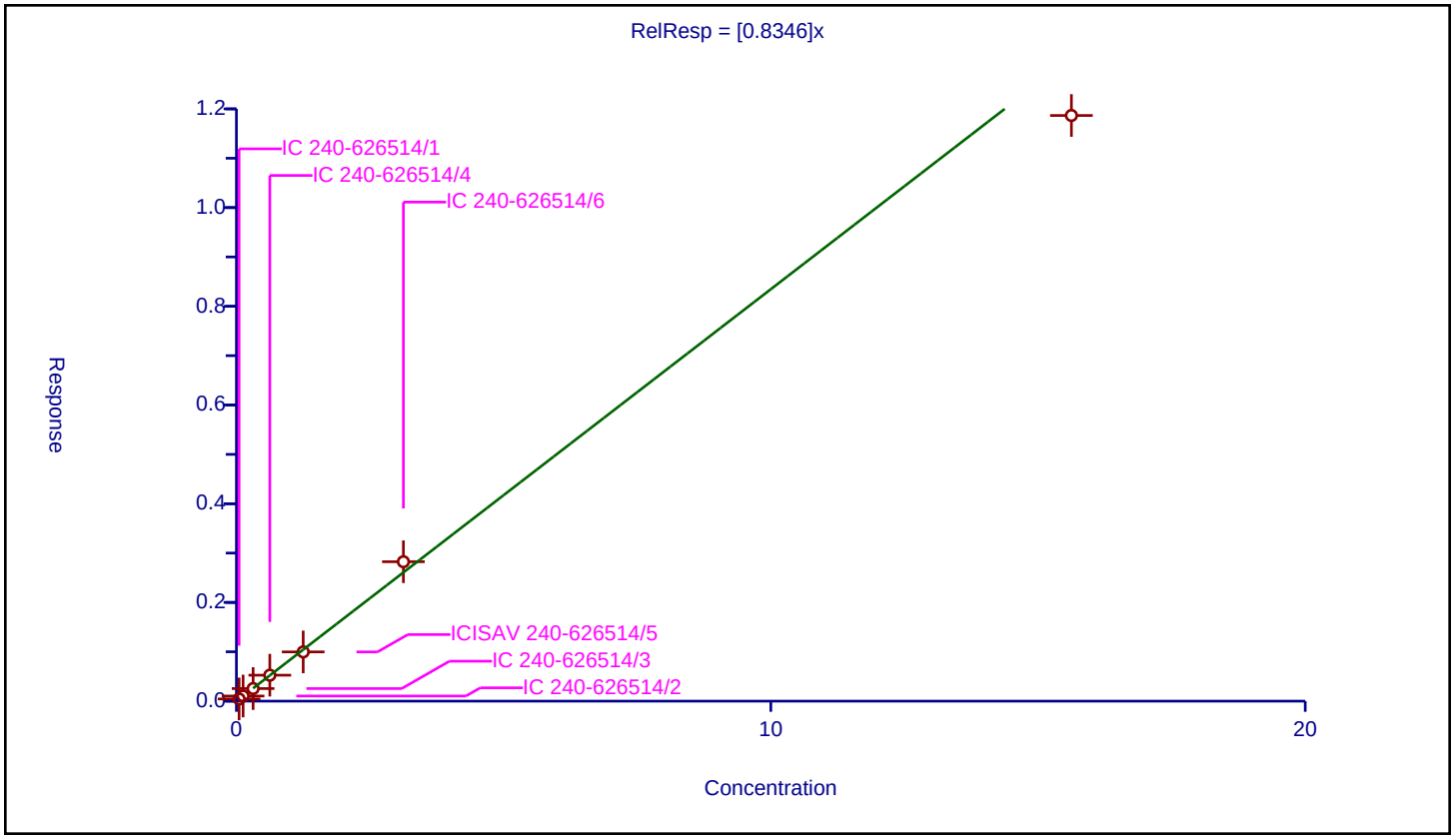
Curve Coefficients

Intercept:	0
Slope:	0.8346

Error Coefficients

Relative Standard Deviation:	6.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.044508	1.25	1465874.0	0.890152	Y
2	IC 240-626514/2	0.125	0.104102	1.25	1293541.0	0.832815	Y
3	IC 240-626514/3	0.3125	0.255209	1.25	1316588.0	0.816669	Y
4	IC 240-626514/4	0.625	0.525817	1.25	1253212.0	0.841307	Y
5	ICISAV 240-626514/5	1.25	0.997581	1.25	1355154.0	0.798065	Y
6	IC 240-626514/6	3.125	2.825019	1.25	1152029.0	0.904006	Y
7	IC 240-626514/7	15.625	11.866103	1.25	1469731.0	0.759431	Y



Calibration / Perfluorooctanesulfonic acid

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

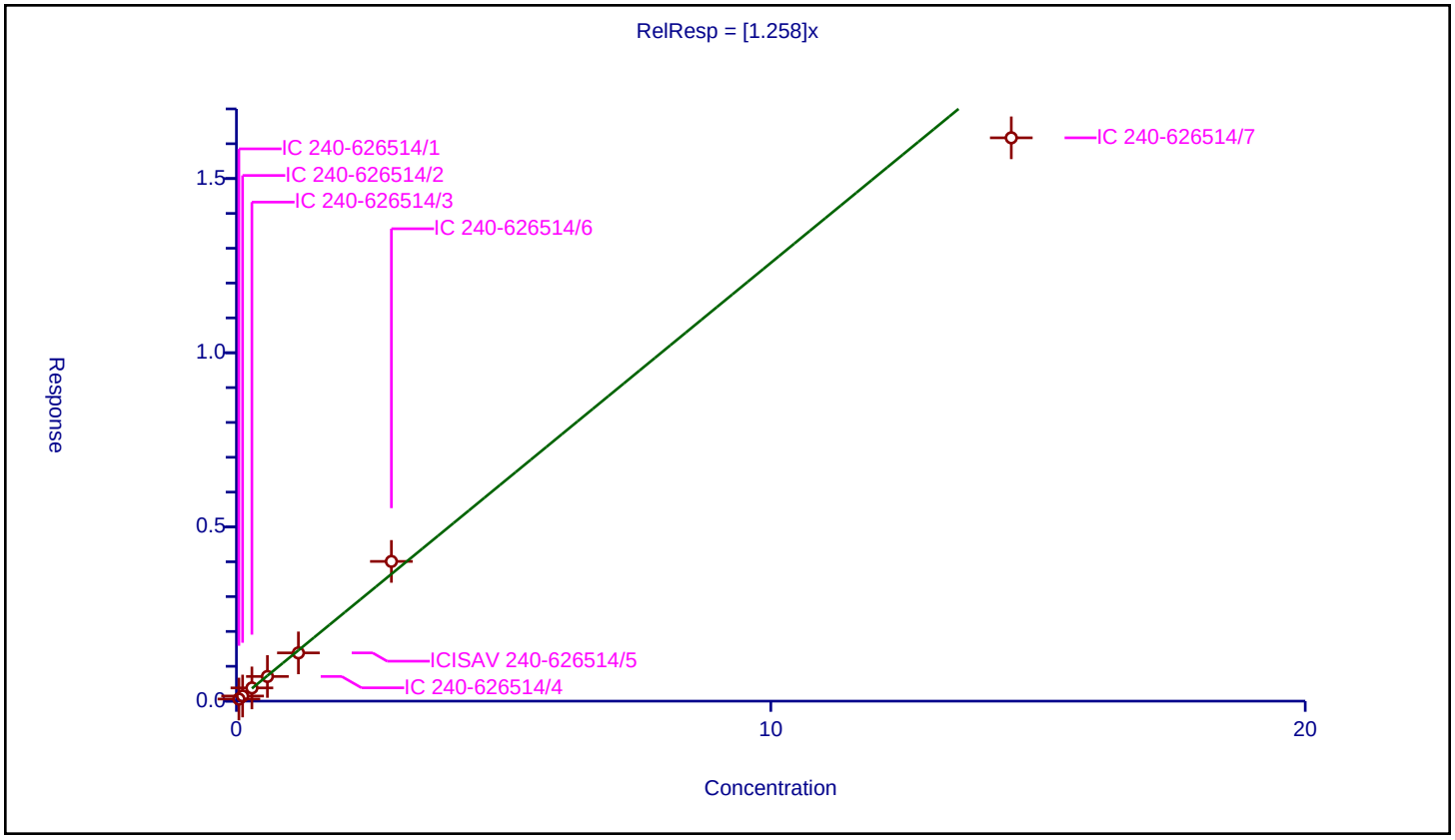
Curve Coefficients

Intercept:	0
Slope:	1.258

Error Coefficients

Relative Standard Deviation:	7.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0464	0.061033	0.5975	1568798.0	1.315371	Y
2	IC 240-626514/2	0.116	0.147355	0.5975	1371737.0	1.270299	Y
3	IC 240-626514/3	0.29	0.379324	0.5975	1398374.0	1.308013	Y
4	IC 240-626514/4	0.58	0.707977	0.5975	1365622.0	1.220649	Y
5	ICISAV 240-626514/5	1.16	1.38455	0.5975	1478665.0	1.193577	Y
6	IC 240-626514/6	2.9	4.010761	0.5975	1221723.0	1.383021	Y
7	IC 240-626514/7	14.5	16.169569	0.5975	1651633.0	1.115143	Y



Calibration / Perfluoroundecanoic acid

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

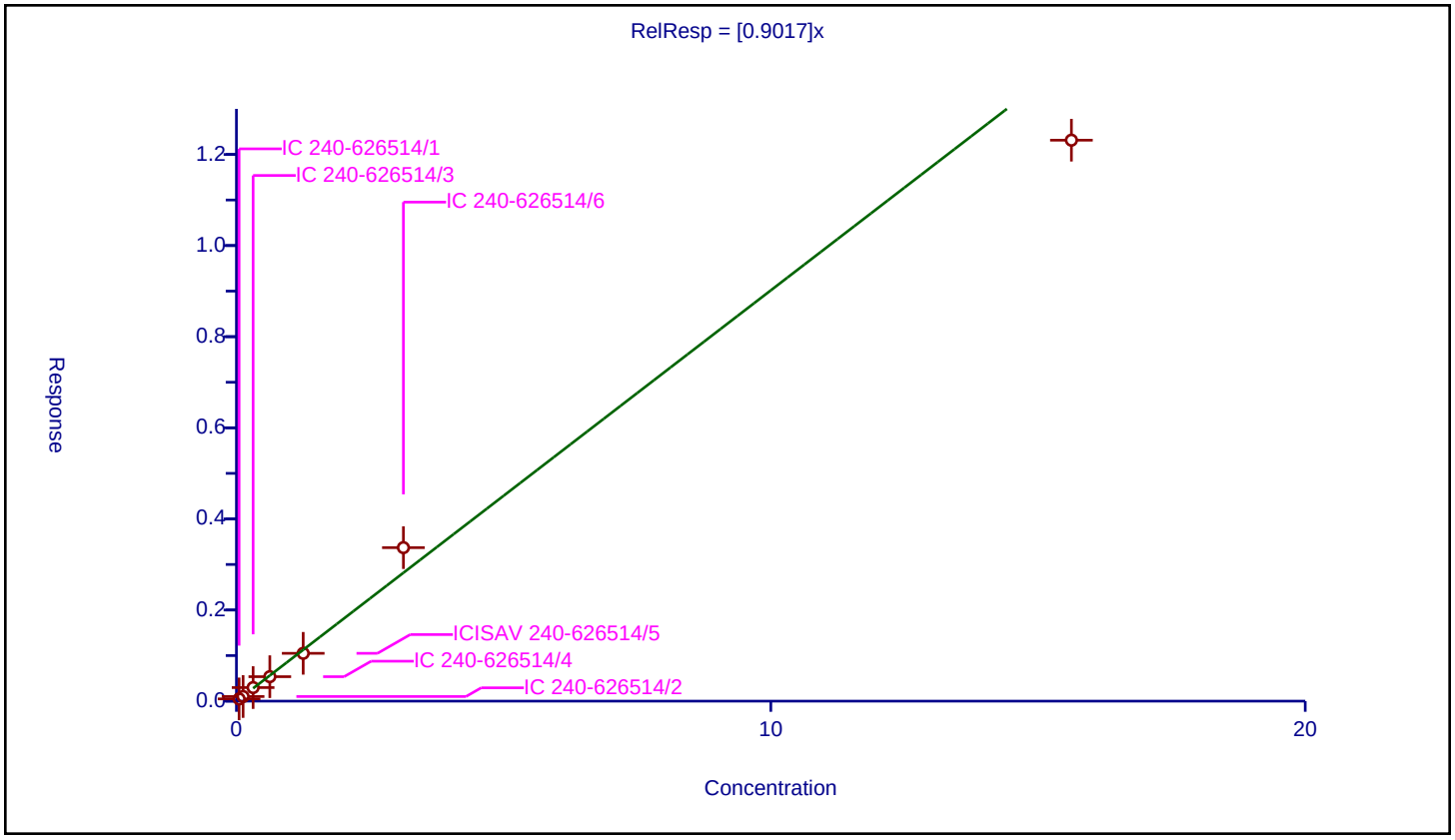
Curve Coefficients

Intercept:	0
Slope:	0.9017

Error Coefficients

Relative Standard Deviation:	11.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.049173	0.3125	704631.0	0.983458	Y
2	IC 240-626514/2	0.125	0.101266	0.3125	670600.0	0.810129	Y
3	IC 240-626514/3	0.3125	0.297809	0.3125	596945.0	0.952987	Y
4	IC 240-626514/4	0.625	0.536973	0.3125	642273.0	0.859156	Y
5	ICISAV 240-626514/5	1.25	1.049974	0.3125	666537.0	0.839979	Y
6	IC 240-626514/6	3.125	3.369313	0.3125	506698.0	1.07818	Y
7	IC 240-626514/7	15.625	12.313202	0.3125	727401.0	0.788045	Y



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

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

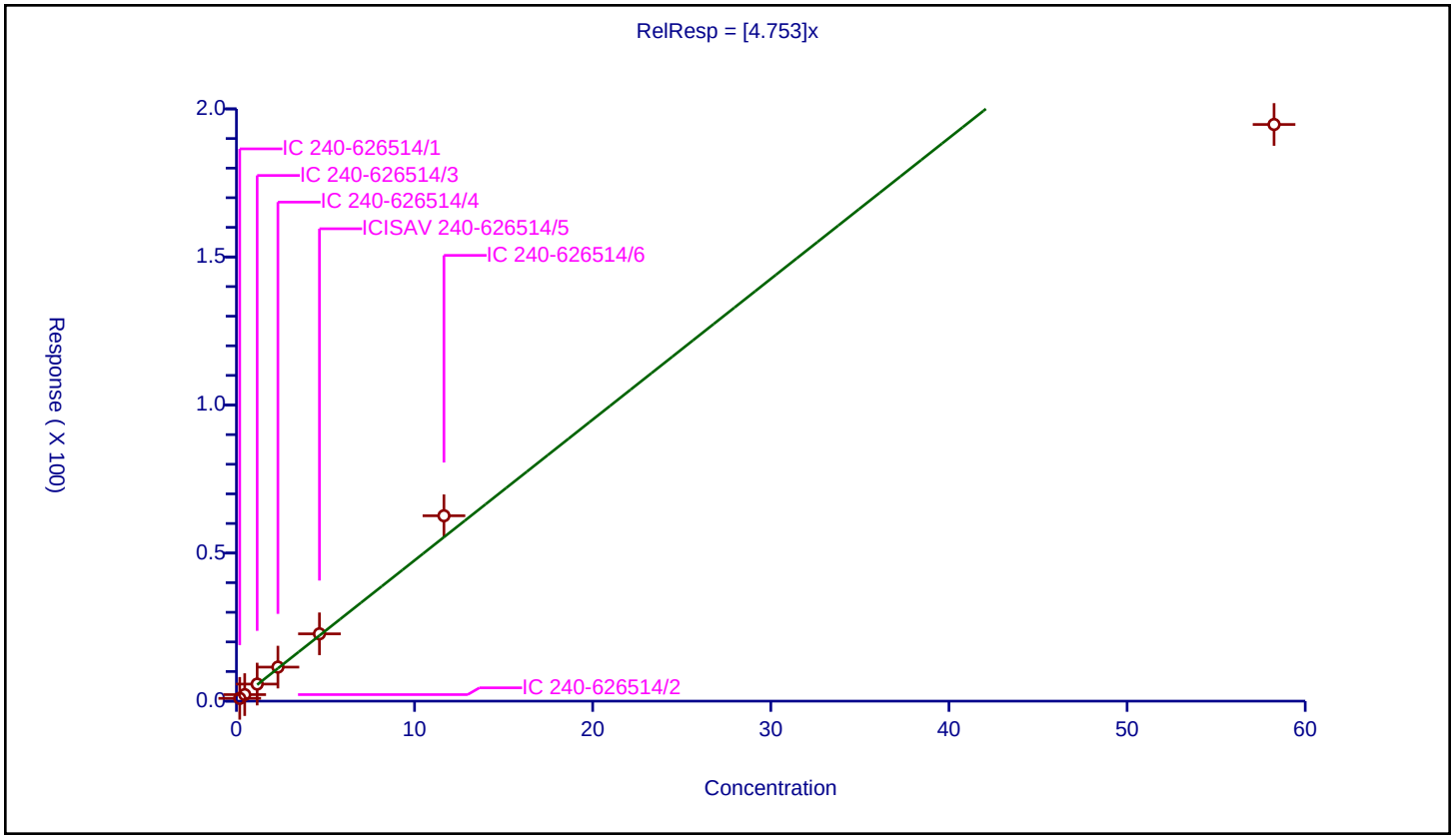
Curve Coefficients

Intercept:	0
Slope:	4.753

Error Coefficients

Relative Standard Deviation:	13.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1864	0.942354	2.5	2214826.0	5.055547	Y
2	IC 240-626514/2	0.466	2.211316	2.5	1989967.0	4.745312	Y
3	IC 240-626514/3	1.165	5.761912	2.5	1961686.0	4.945847	Y
4	IC 240-626514/4	2.33	11.491923	2.5	1851815.0	4.932156	Y
5	ICISAV 240-626514/5	4.66	22.733116	2.5	1907384.0	4.878351	Y
6	IC 240-626514/6	11.65	62.607015	2.5	1646590.0	5.373993	Y
7	IC 240-626514/7	58.25	194.738023	2.5	2020886.0	3.343142	Y



Calibration / Perfluorononanesulfonic acid

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

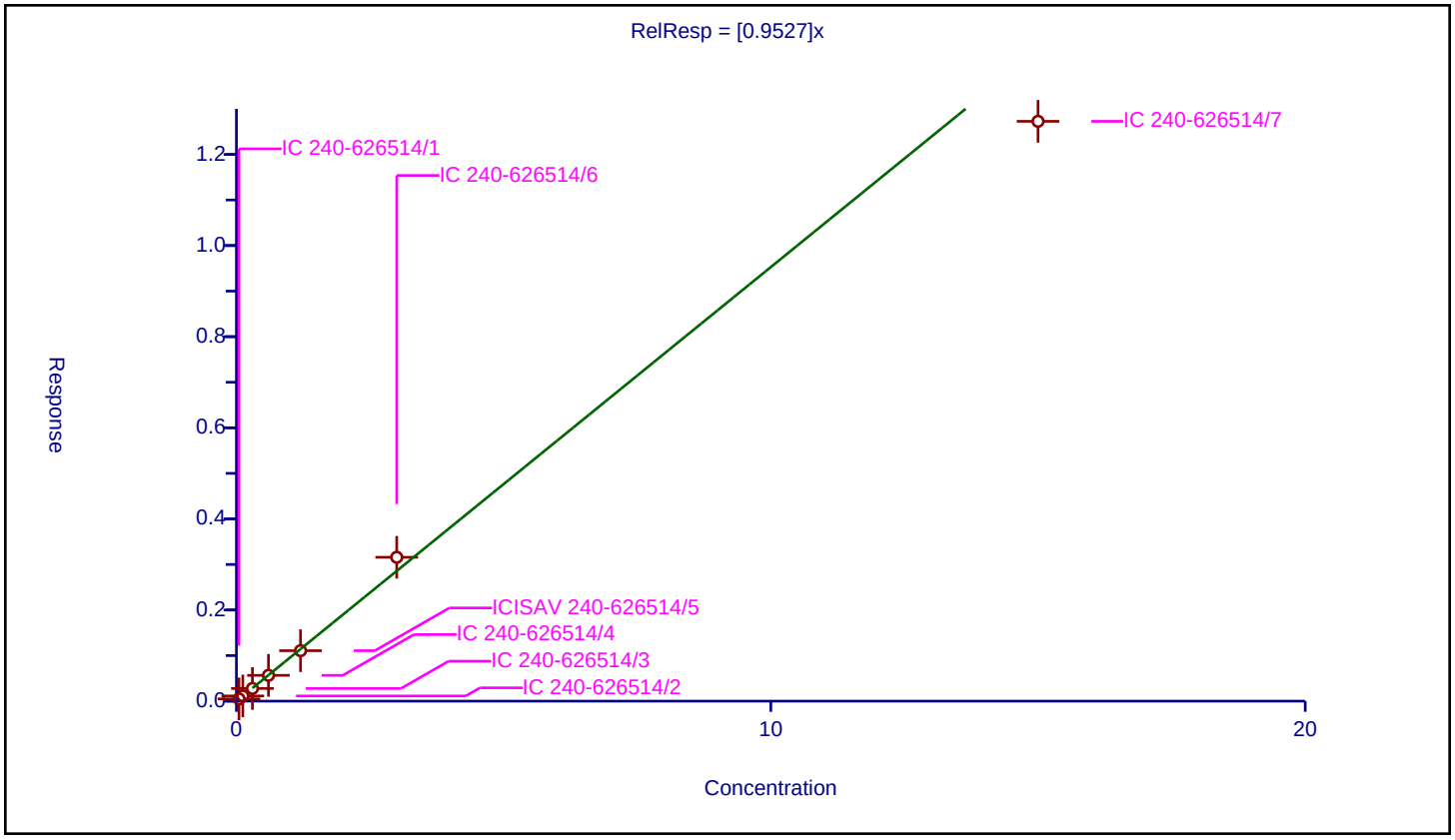
Curve Coefficients

Intercept:	0
Slope:	0.9527

Error Coefficients

Relative Standard Deviation:	7.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.048	0.049207	0.5975	1568798.0	1.025153	Y
2	IC 240-626514/2	0.12	0.113752	0.5975	1371737.0	0.947936	Y
3	IC 240-626514/3	0.3	0.278375	0.5975	1398374.0	0.927917	Y
4	IC 240-626514/4	0.6	0.566295	0.5975	1365622.0	0.943824	Y
5	ICISAV 240-626514/5	1.2	1.107846	0.5975	1478665.0	0.923205	Y
6	IC 240-626514/6	3.0	3.157876	0.5975	1221723.0	1.052625	Y
7	IC 240-626514/7	15.0	12.727243	0.5975	1651633.0	0.848483	Y



Calibration / Perfluorododecanoic acid

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

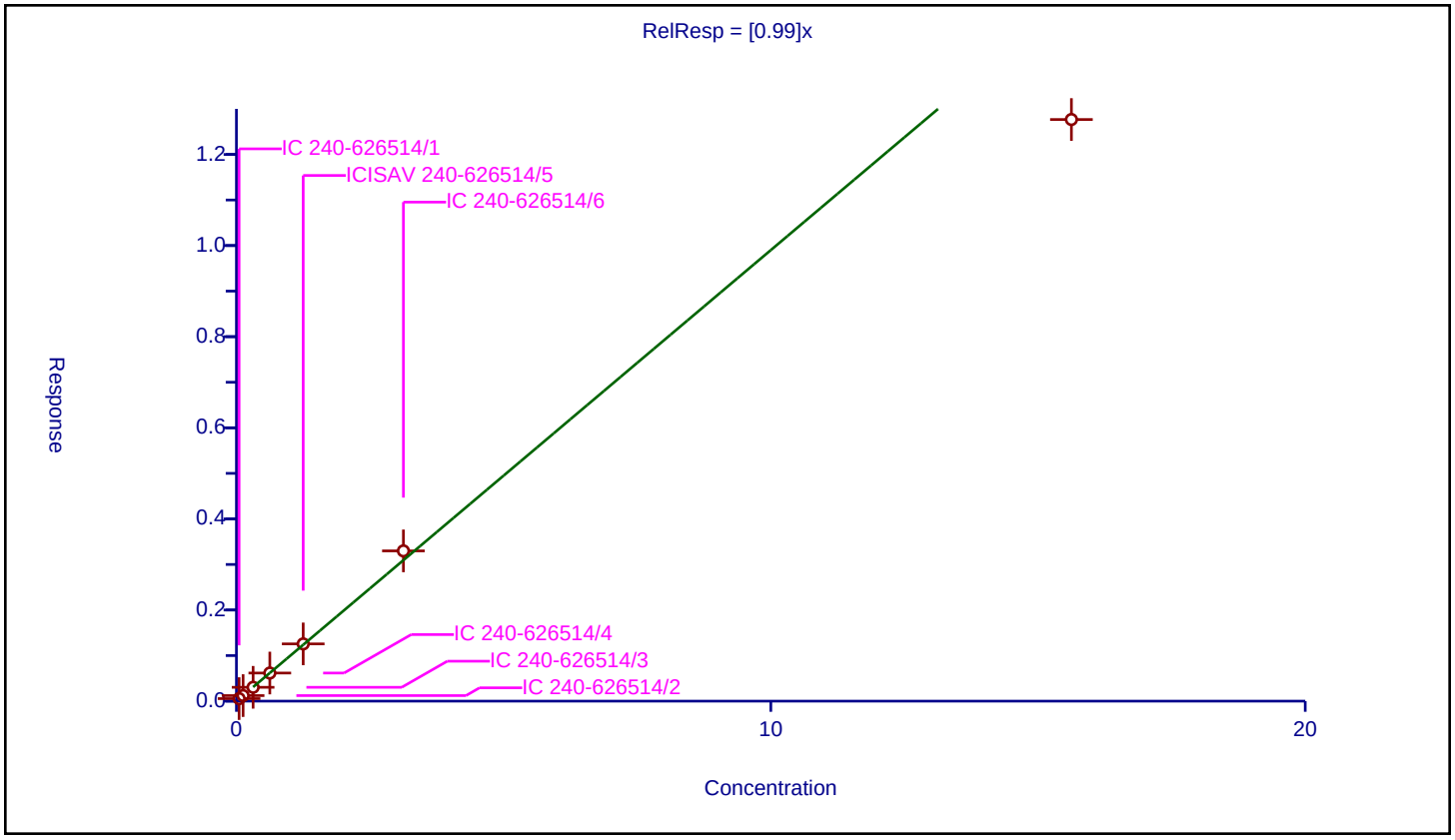
Curve Coefficients

Intercept:	0
Slope:	0.99

Error Coefficients

Relative Standard Deviation:	9.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.055932	0.3125	663892.0	1.11865	Y
2	IC 240-626514/2	0.125	0.121886	0.3125	574398.0	0.975086	Y
3	IC 240-626514/3	0.3125	0.303667	0.3125	588907.0	0.971734	Y
4	IC 240-626514/4	0.625	0.616845	0.3125	575554.0	0.986953	Y
5	ICISAV 240-626514/5	1.25	1.256732	0.3125	611610.0	1.005385	Y
6	IC 240-626514/6	3.125	3.298182	0.3125	539982.0	1.055418	Y
7	IC 240-626514/7	15.625	12.766668	0.3125	710877.0	0.817067	Y



Calibration / Perfluorodecanesulfonic acid

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

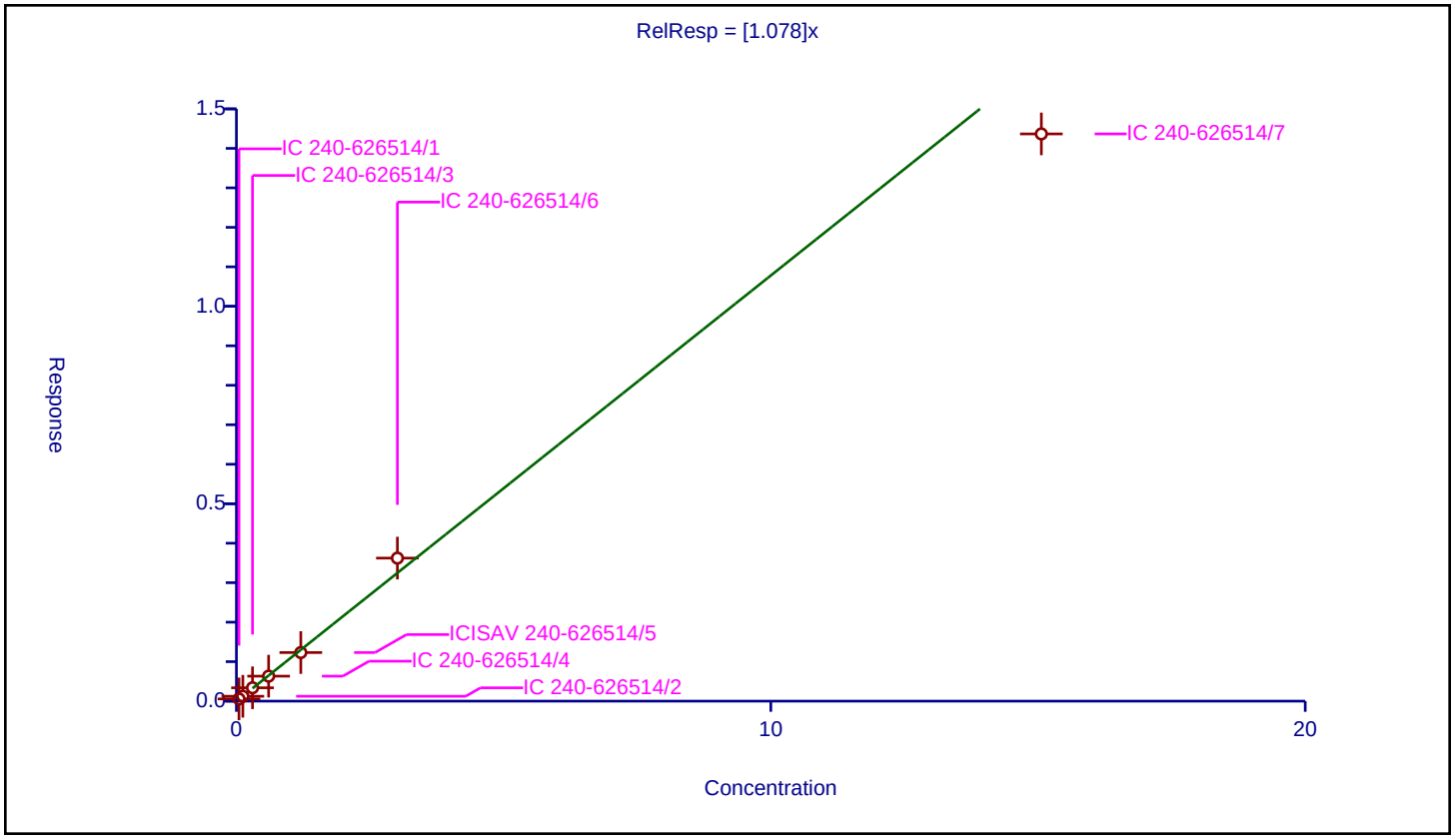
Curve Coefficients

Intercept:	0
Slope:	1.078

Error Coefficients

Relative Standard Deviation:	8.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0482	0.0562	0.5975	1568798.0	1.165976	Y
2	IC 240-626514/2	0.1205	0.12395	0.5975	1371737.0	1.028628	Y
3	IC 240-626514/3	0.30125	0.338321	0.5975	1398374.0	1.123059	Y
4	IC 240-626514/4	0.6025	0.633044	0.5975	1365622.0	1.050695	Y
5	ICISAV 240-626514/5	1.205	1.23099	0.5975	1478665.0	1.021569	Y
6	IC 240-626514/6	3.0125	3.622687	0.5975	1221723.0	1.202552	Y
7	IC 240-626514/7	15.0625	14.3656	0.5975	1651633.0	0.953733	Y



Calibration / Perfluorooctanesulfonamide

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

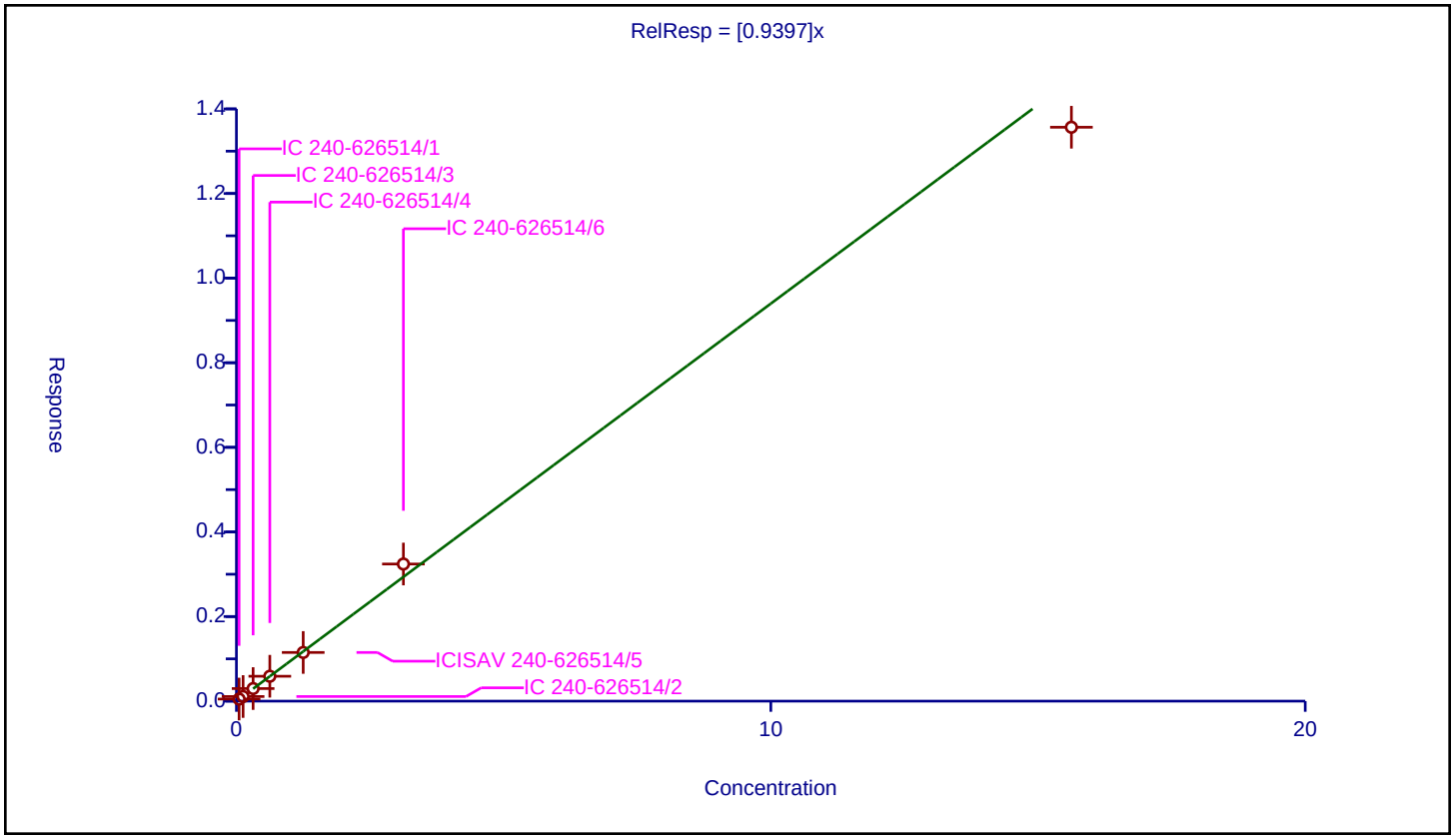
Curve Coefficients

Intercept:	0
Slope:	0.9397

Error Coefficients

Relative Standard Deviation:	6.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.049195	0.625	1765085.0	0.983897	Y
2	IC 240-626514/2	0.125	0.10942	0.625	1595296.0	0.875361	Y
3	IC 240-626514/3	0.3125	0.297292	0.625	1577585.0	0.951335	Y
4	IC 240-626514/4	0.625	0.588492	0.625	1500309.0	0.941587	Y
5	ICISAV 240-626514/5	1.25	1.150403	0.625	1642793.0	0.920322	Y
6	IC 240-626514/6	3.125	3.241662	0.625	1367477.0	1.037332	Y
7	IC 240-626514/7	15.625	13.566044	0.625	1844902.0	0.868227	Y



Calibration / Perfluorotridecanoic acid

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

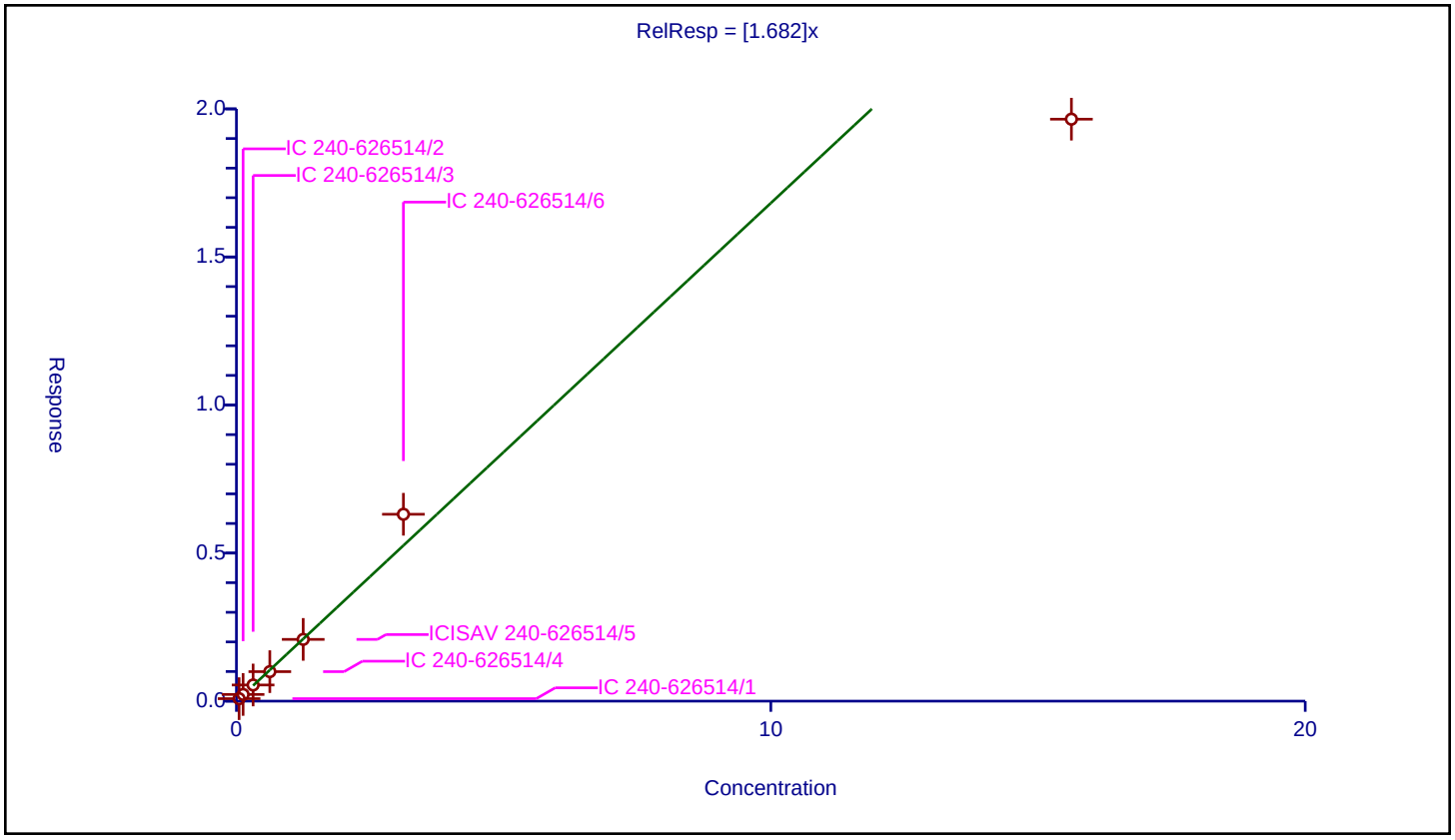
Curve Coefficients

Intercept:	0
Slope:	1.682

Error Coefficients

Relative Standard Deviation:	13.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.083899	0.3125	387986.0	1.677976	Y
2	IC 240-626514/2	0.125	0.226413	0.3125	329275.0	1.811305	Y
3	IC 240-626514/3	0.3125	0.545207	0.3125	340479.0	1.744663	Y
4	IC 240-626514/4	0.625	0.996131	0.3125	314200.0	1.59381	Y
5	ICISAV 240-626514/5	1.25	2.085097	0.3125	337999.0	1.668077	Y
6	IC 240-626514/6	3.125	6.311077	0.3125	271362.0	2.019545	Y
7	IC 240-626514/7	15.625	19.652893	0.3125	458692.0	1.257785	Y



Calibration / 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid

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

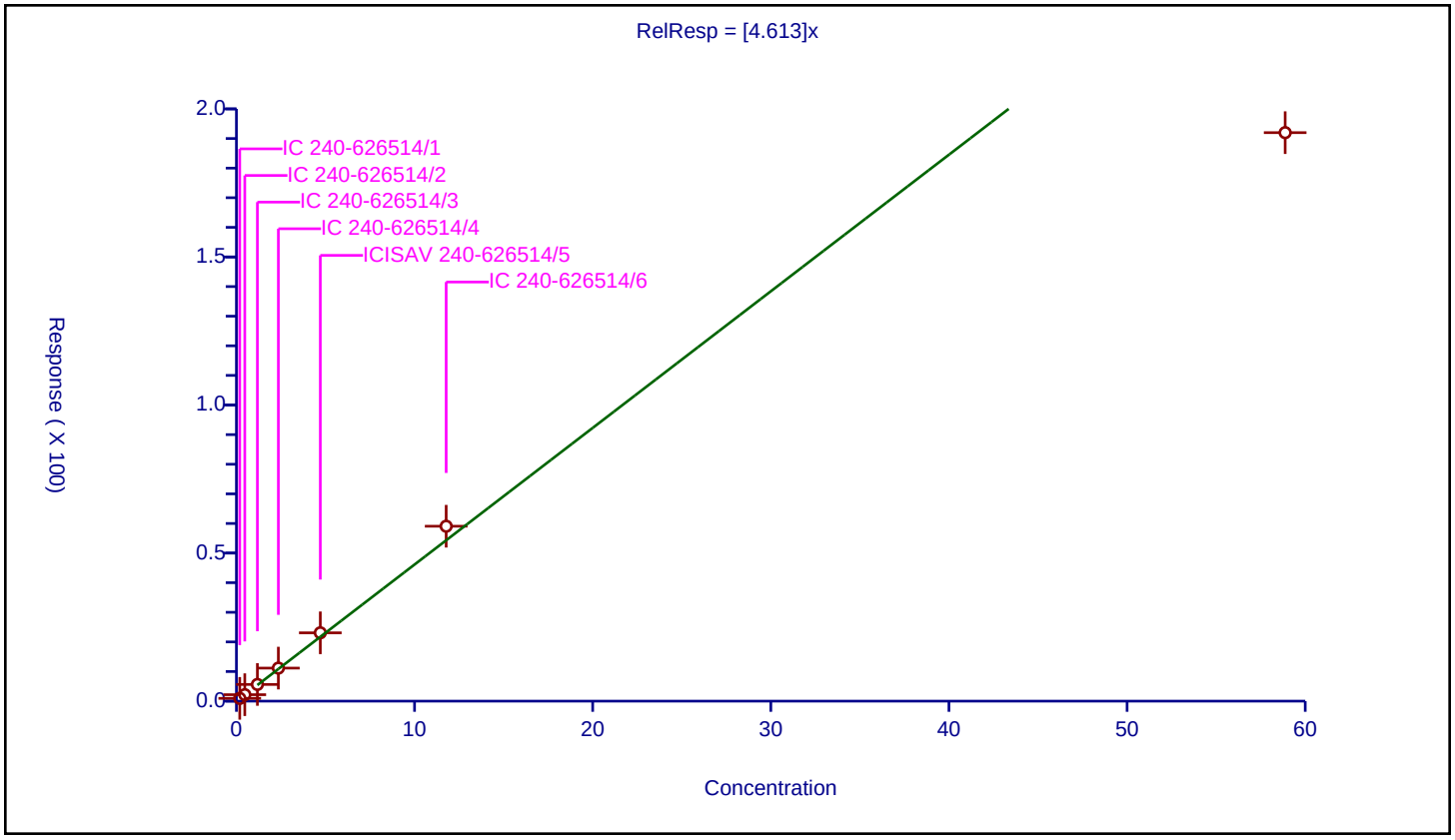
Curve Coefficients

Intercept:	0
Slope:	4.613

Error Coefficients

Relative Standard Deviation:	13.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.1884	0.936234	2.5	2214826.0	4.969394	Y
2	IC 240-626514/2	0.471	2.176858	2.5	1989967.0	4.621779	Y
3	IC 240-626514/3	1.1775	5.635822	2.5	1961686.0	4.78626	Y
4	IC 240-626514/4	2.355	11.160457	2.5	1851815.0	4.739048	Y
5	ICISAV 240-626514/5	4.71	23.074735	2.5	1907384.0	4.899094	Y
6	IC 240-626514/6	11.775	59.073687	2.5	1646590.0	5.016874	Y
7	IC 240-626514/7	58.875	191.980287	2.5	2020886.0	3.260812	Y



Calibration / Perfluorotetradecanoic acid

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

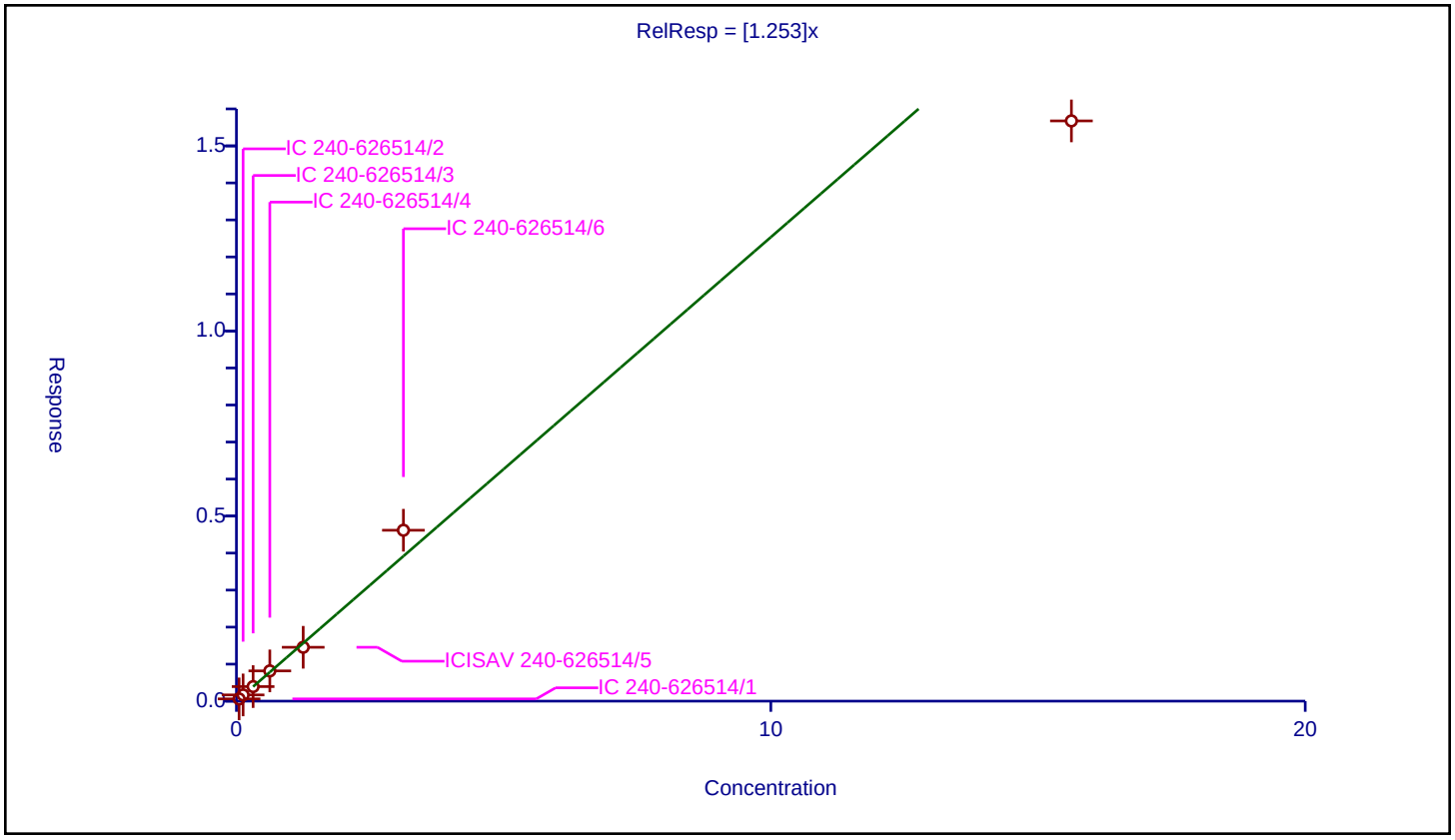
Curve Coefficients

Intercept:	0
Slope:	1.253

Error Coefficients

Relative Standard Deviation:	11.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.06109	0.3125	387986.0	1.22179	Y
2	IC 240-626514/2	0.125	0.167762	0.3125	329275.0	1.342092	Y
3	IC 240-626514/3	0.3125	0.393103	0.3125	340479.0	1.257931	Y
4	IC 240-626514/4	0.625	0.816758	0.3125	314200.0	1.306813	Y
5	ICISAV 240-626514/5	1.25	1.455472	0.3125	337999.0	1.164378	Y
6	IC 240-626514/6	3.125	4.61725	0.3125	271362.0	1.47752	Y
7	IC 240-626514/7	15.625	15.6758	0.3125	458692.0	1.003251	Y



Calibration / Perfluorododecanesulfonic acid (PFDoS)

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

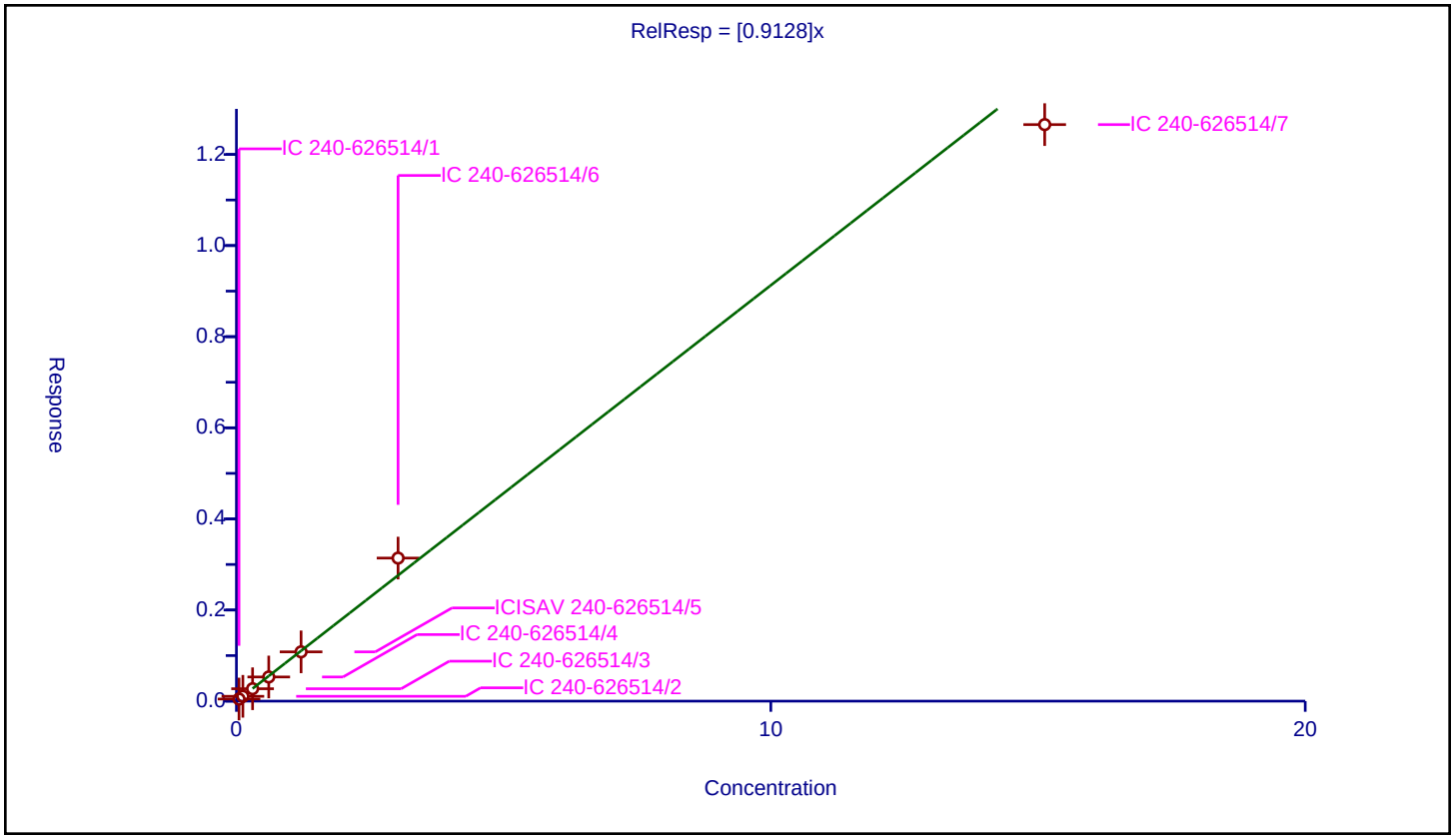
Curve Coefficients

Intercept:	0
Slope:	0.9128

Error Coefficients

Relative Standard Deviation:	7.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.0484	0.046719	0.5975	1568798.0	0.965272	Y
2	IC 240-626514/2	0.121	0.106191	0.5975	1371737.0	0.877613	Y
3	IC 240-626514/3	0.3025	0.272386	0.5975	1398374.0	0.900449	Y
4	IC 240-626514/4	0.605	0.530632	0.5975	1365622.0	0.877078	Y
5	ICISAV 240-626514/5	1.21	1.081891	0.5975	1478665.0	0.894125	Y
6	IC 240-626514/6	3.025	3.140133	0.5975	1221723.0	1.038061	Y
7	IC 240-626514/7	15.125	12.65488	0.5975	1651633.0	0.836686	Y



Calibration / 2-(N-methylperfluoro-1-octanesulfonamido) ethanol

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

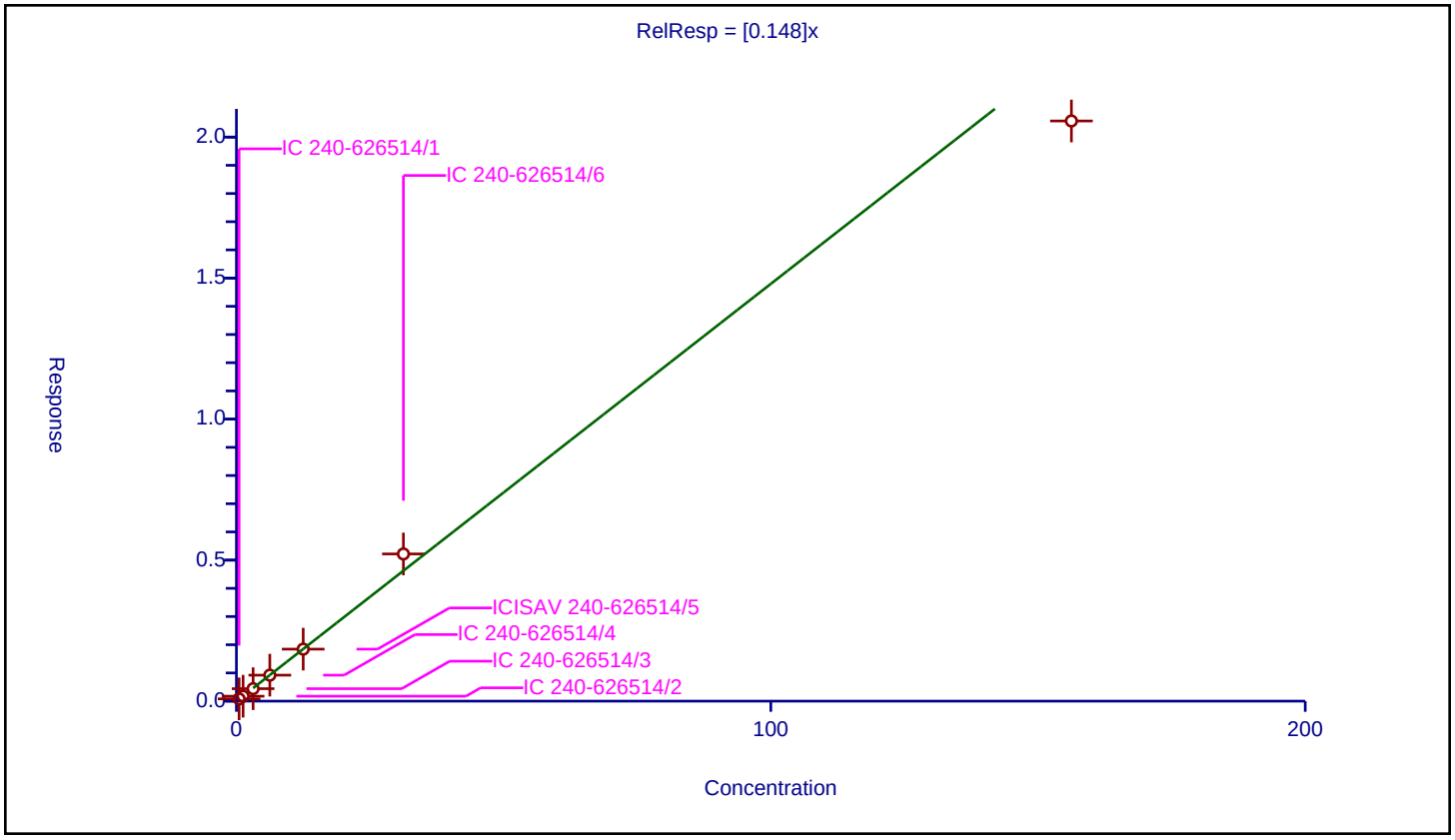
Curve Coefficients

Intercept:	0
Slope:	0.148

Error Coefficients

Relative Standard Deviation:	8.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.5	0.080456	6.25	2562188.0	0.160912	Y
2	IC 240-626514/2	1.25	0.174948	6.25	2319228.0	0.139958	Y
3	IC 240-626514/3	3.125	0.441529	6.25	2369620.0	0.141289	Y
4	IC 240-626514/4	6.25	0.921283	6.25	2236135.0	0.147405	Y
5	ICISAV 240-626514/5	12.5	1.843697	6.25	2422015.0	0.147496	Y
6	IC 240-626514/6	31.25	5.219044	6.25	2015962.0	0.167009	Y
7	IC 240-626514/7	156.25	20.571175	6.25	2797829.0	0.131656	Y



Calibration / NMeFOSA

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

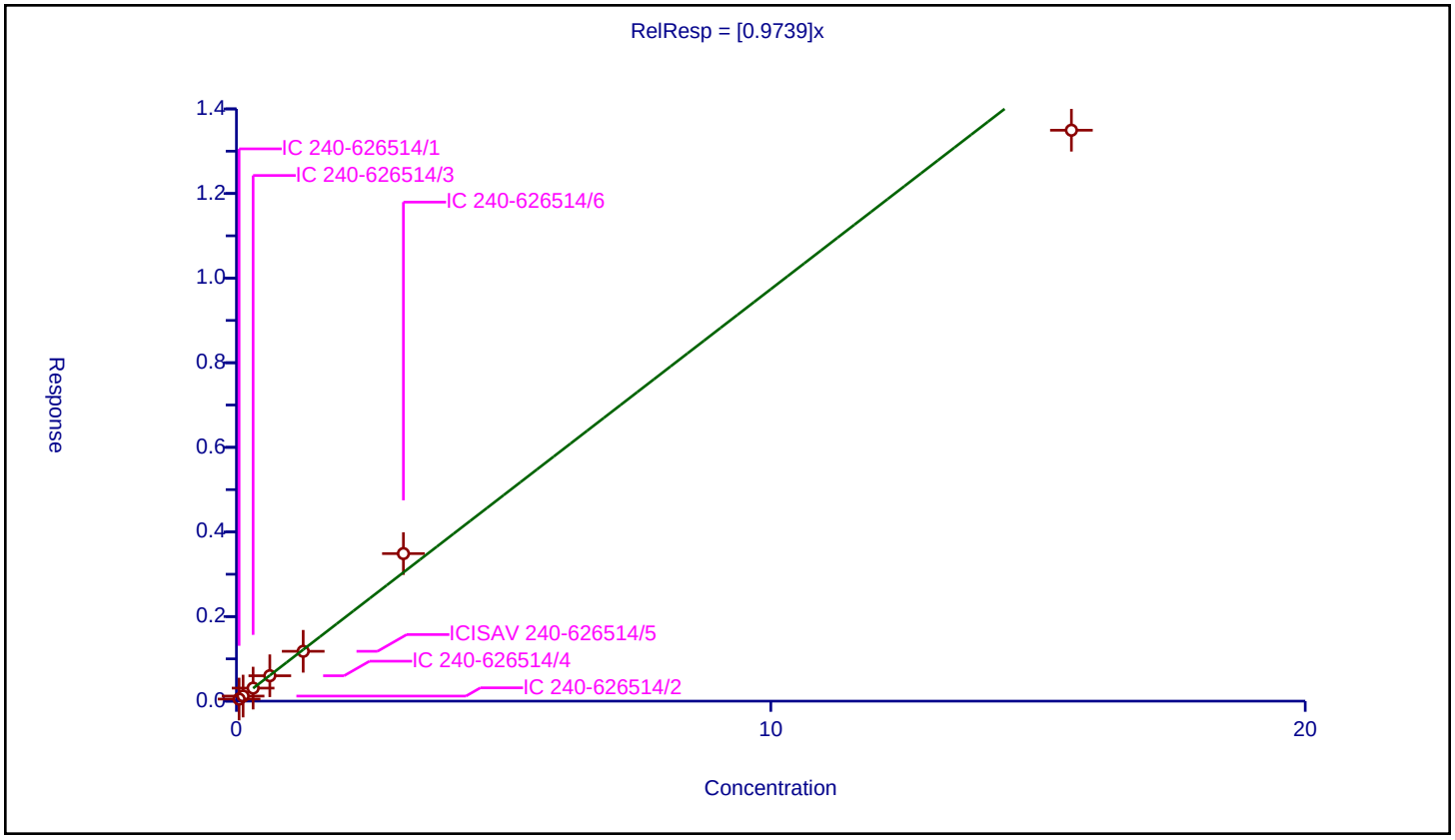
Curve Coefficients

Intercept:	0
Slope:	0.9739

Error Coefficients

Relative Standard Deviation:	7.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.049383	0.625	341783.0	0.987652	Y
2	IC 240-626514/2	0.125	0.120025	0.625	312618.0	0.960197	Y
3	IC 240-626514/3	0.3125	0.308131	0.625	311594.0	0.98602	Y
4	IC 240-626514/4	0.625	0.600547	0.625	297482.0	0.960875	Y
5	ICISAV 240-626514/5	1.25	1.178237	0.625	315746.0	0.94259	Y
6	IC 240-626514/6	3.125	3.487971	0.625	264806.0	1.116151	Y
7	IC 240-626514/7	15.625	13.495953	0.625	382110.0	0.863741	Y



Calibration / 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol

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

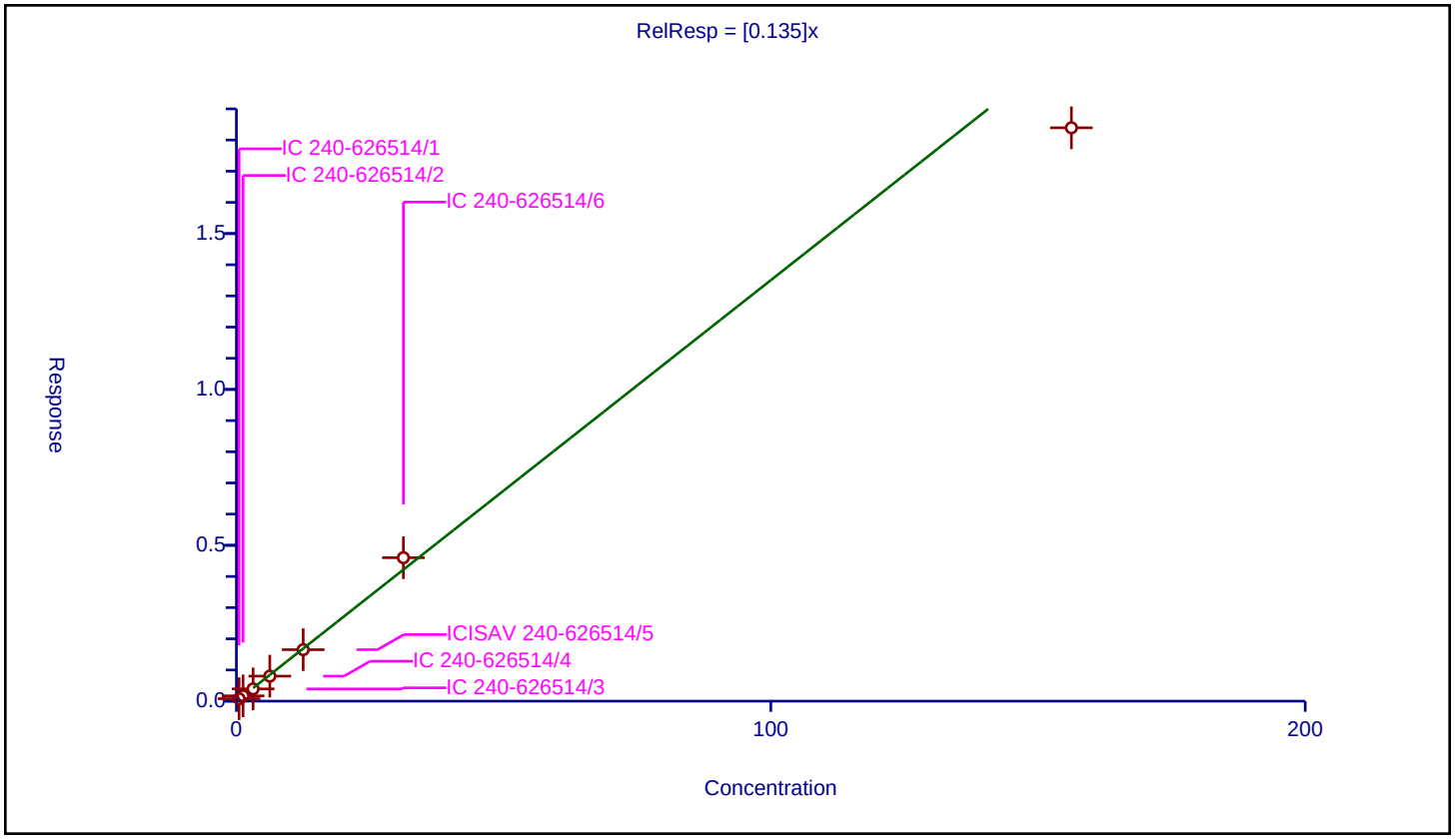
Curve Coefficients

Intercept:	0
Slope:	0.135

Error Coefficients

Relative Standard Deviation:	10.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.5	0.079367	6.25	2998242.0	0.158735	Y
2	IC 240-626514/2	1.25	0.169466	6.25	2782009.0	0.135573	Y
3	IC 240-626514/3	3.125	0.392232	6.25	3140982.0	0.125514	Y
4	IC 240-626514/4	6.25	0.802554	6.25	2746016.0	0.128409	Y
5	ICISAV 240-626514/5	12.5	1.65121	6.25	2976245.0	0.132097	Y
6	IC 240-626514/6	31.25	4.602029	6.25	2547576.0	0.147265	Y
7	IC 240-626514/7	156.25	18.393386	6.25	3300504.0	0.117718	Y



Calibration / N-ethylperfluoro-1-octanesulfonamide

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

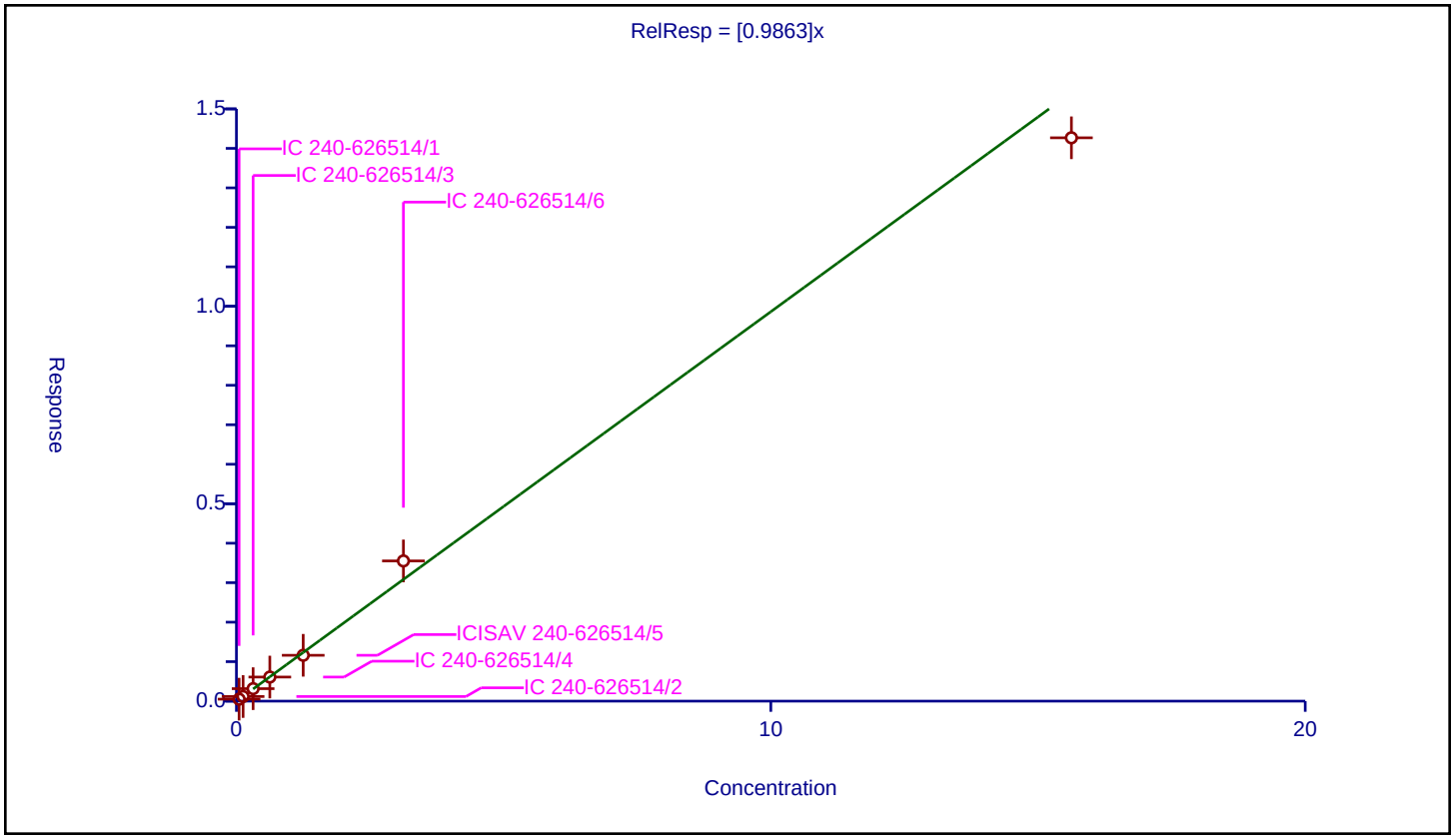
Curve Coefficients

Intercept:	0
Slope:	0.9863

Error Coefficients

Relative Standard Deviation:	7.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 240-626514/1	0.05	0.049996	0.625	351688.0	0.999927	Y
2	IC 240-626514/2	0.125	0.117222	0.625	313092.0	0.937775	Y
3	IC 240-626514/3	0.3125	0.316298	0.625	306776.0	1.012152	Y
4	IC 240-626514/4	0.625	0.610097	0.625	307110.0	0.976155	Y
5	ICISAV 240-626514/5	1.25	1.161037	0.625	330637.0	0.92883	Y
6	IC 240-626514/6	3.125	3.550946	0.625	258526.0	1.136303	Y
7	IC 240-626514/7	15.625	14.26821	0.625	376775.0	0.913165	Y



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: ICV 240-626514/9 Calibration Date: 09/10/2024 19:01

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_10ICALinj09.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9501	0.9349		2.46	2.50	-1.6	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0603	0.0564		2.92	3.13	-6.5	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.374	1.393		1.27	1.25	1.4	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.532	1.552		1.27	1.25	1.3	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.450	1.435		1.24	1.25	-1.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	2.988	2.684		2.10	2.34	-10.2	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.0878	0.0814		1.16	1.25	-7.3	30.0
FBSA	AveID	0.6842	0.6324		2.31	2.50	-7.6	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7948	0.8160		0.642	0.625	2.7	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1416	0.1074		11.9	15.6	-24.2	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.9713	0.9061		0.515	0.553	-6.7	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.102	0.9597		2.18	2.50	-12.9	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.926	2.934		1.12	1.11	0.3	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.081	1.054		0.610	0.625	-2.5	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	5.350	4.801		2.11	2.36	-10.3	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.027	0.9483		0.541	0.586	-7.7	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	2.380	2.210		2.20	2.37	-7.2	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.4797	0.4770		0.621	0.625	-0.6	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.1352	0.1284		14.8	15.6	-5.1	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8538	0.7921		0.528	0.569	-7.2	30.0
Perfluorononanoic acid (PFNA)	AveID	0.7575	0.7978		0.658	0.625	5.3	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	2.491	2.268		2.18	2.40	-8.9	30.0
PFECHS	AveID	1.691	1.610		1.10	1.15	-4.8	30.0
FHxSA	AveID	1.005	0.8681		2.16	2.50	-13.6	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.172	0.9697		0.492	0.595	-17.2	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.102	1.167		0.662	0.625	5.9	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.7939	0.7518		0.592	0.625	-5.3	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8346	0.8090		0.606	0.625	-3.1	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.258	1.008		0.465	0.580	-19.9	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: ICV 240-626514/9 Calibration Date: 09/10/2024 19:01

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_10ICALinj09.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoroundecanoic acid (PFUnA)	AveID	0.9017	0.8263		0.573	0.625	-8.4	30.0
9-Chlorohexadecafluoro-3-oxa nonane-1-sulfonic acid	AveID	4.753	4.292		2.10	2.33	-9.7	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9527	0.8033		0.506	0.600	-15.7	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9900	0.9471		0.598	0.625	-4.3	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.078	0.9365		0.523	0.603	-13.1	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9397	0.9044		0.601	0.625	-3.8	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.212	1.187		0.612	0.625	-2.1	30.0
11-Chloroeicosafluoro-3-oxau ndecane-1-sulfonic acid	AveID	4.613	4.166		2.13	2.36	-9.7	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	1.253	1.224		0.611	0.625	-2.3	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9128	0.7544		0.500	0.605	-17.3	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	0.1480	0.1462		6.17	6.25	-1.2	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9739	0.8852		0.568	0.625	-9.1	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	0.1350	0.1130		5.23	6.25	-16.3	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.9863	0.8323		0.527	0.625	-15.6	30.0
13C4 PFBA	Ave	1.135	0.9893		2.18	2.50	-12.8	30.0
13C5 PFPeA	Ave	0.7848	0.6437		1.03	1.25	-18.0	30.0
M2-4:2 FTS	Ave	0.3348	0.3604		1.26	1.17	7.6	30.0
13C5 PFHxA	Ave	1.405	1.172		0.521	0.625	-16.6	30.0
13C3 PFBS	Ave	1.069	1.054		0.573	0.581	-1.4	30.0
13C3 HFPO-DA	Ave	0.4045	0.3800		2.35	2.50	-6.0	30.0
13C4 PFHpA	Ave	1.467	1.273		0.542	0.625	-13.3	30.0
M2-6:2 FTS	Ave	0.3833	0.3906		1.21	1.19	1.9	30.0
13C8 PFOA	Ave	7.888	7.608		0.603	0.625	-3.6	30.0
13C3 PFHxS	Ave	1.050	1.096		0.617	0.591	4.4	30.0
13C9 PFNA	Ave	0.7843	0.6369		0.254	0.313	-18.8	30.0
M2-8:2 FTS	Ave	0.2626	0.2673		1.22	1.20	1.8	30.0
d3-NMeFOSAA	Ave	0.4628	0.4156		1.12	1.25	-10.2	30.0
13C6 PFDA	Ave	0.9624	0.9869		0.320	0.313	2.5	30.0
d5-NEtFOSAA	Ave	0.4555	0.4297		1.18	1.25	-5.7	30.0
13C8 PFOS	Ave	1.030	1.093		0.634	0.598	6.1	30.0
13C7 PFUnA	Ave	0.9471	0.8200		0.271	0.313	-13.4	30.0
13C2-PFDoDA	Ave	0.8939	0.8183		0.286	0.313	-8.5	30.0
13C8 FOSA	Ave	1.106	1.029		0.582	0.625	-6.9	30.0
13C2 PFTeDA	Ave	0.5110	0.4266		0.261	0.313	-16.5	30.0
d7-N-MeFOSE-M	Ave	0.1639	0.1510		5.76	6.25	-7.8	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: ICV 240-626514/9 Calibration Date: 09/10/2024 19:01

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_10ICALinj09.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMePFOSA	Ave	0.2181	0.2182		0.625	0.625	0.0	30.0
d9-N-EtFOSE-M	Ave	0.2012	0.2197		6.83	6.25	9.2	30.0
d5-NEtPFOSA	Ave	0.2198	0.2300		0.654	0.625	4.6	30.0

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Sep-2024 19:01:36 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: Plate: 2 Rack: 1 240-0146069-009
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist:

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:03:48 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:56:36
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.576	-0.003		2374121	1.25			861	
* 2 13C2 PFHxA										
315.10 > 270.00	4.755	4.750	0.005		1486971	0.6250			7430	
* 3 13C4 PFOA										
417.10 > 172.00	5.653	5.648	0.005		241159	0.6250			1441	
* 4 18O2 PFHxS										
403.00 > 83.90	5.879	5.872	0.007		1690125	0.5913			2762	
* 5 13C5 PFNA										
468.00 > 423.00	6.087	6.081	0.006		1018574	0.3125			1947	
* 6 13C2 PFDA										
515.10 > 470.10	6.522	6.517	0.005		801193	0.3125			2297	
* 7 13C4 PFOS										
502.80 > 79.90	6.793	6.788	0.005		1575282	0.5975	Target=4.00		2810	
502.80 > 98.90	6.793	6.788	0.005		395253		3.99(2.00-6.00)		1695	
D 8 13C4 PFBA										
216.80 > 171.90	3.573	3.568	0.005	1.000	4697396	2.18		87.2	15434	
D 9 13C5 PFPeA										
268.30 > 223.00	4.235	4.229	0.006	0.891	1914273	1.03		82.0	7655	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.555	4.550	0.005	0.775	1202694	1.26	Target=0.29	108	5033	
329.10 > 309.00	4.555	4.550	0.005	0.775	3636832		0.33(0.14-0.43)	108	1158	
D 11 13C5 PFHxA										
318.00 > 273.00	4.755	4.750	0.005	1.000	1742280	0.5212	Target=40.21	83.4	5677	
318.00 > 120.30	4.744	4.750	-0.006	0.998	43368		40.17(20.11-60.32)	83.4	459	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.882	4.878	0.004	0.830	1751232	0.5731	Target=3.28	98.6	4856	
302.10 > 98.90	4.882	4.878	0.004	0.830	545943		3.21(1.64-4.92)	98.6	2648	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.947	4.943	0.004	1.040	2260244	2.35	Target=1.86	94.0	6253	
286.90 > 184.90	4.947	4.943	0.004	1.040	1042313		2.17(0.93-2.78)	94.0	1894	
D 14 13C4 PFHpA										
367.10 > 322.00	5.219	5.215	0.004	1.098	1892877	0.5422		86.7	7533	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.441	5.436	0.005	0.926	1326003	1.21	Target=0.38	102	2943	
429.10 > 409.00	5.441	5.436	0.005	0.926	3365229		0.39(0.19-0.57)	102	5042	
D 16 13C8 PFOA										
421.10 > 376.00	5.653	5.648	0.005	1.000	1834619	0.6028		96.4	2820	
D 17 13C3 PFHxS										
402.10 > 79.90	5.879	5.872	0.007	1.000	1852118	0.6172	Target=3.25	104	5778	
402.10 > 98.80	5.879	5.872	0.007	1.000	548766		3.38(1.63-4.88)	104	2485	
D 18 13C9 PFNA										
472.10 > 427.00	6.087	6.081	0.006	1.000	648714	0.2538		81.2	1735	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.282	6.277	0.005	1.069	914903	1.22	Target=0.33	102	3516	
529.10 > 509.00	6.291	6.277	0.014	1.070	2647744		0.35(0.16-0.49)	102	6968	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.474	6.458	0.016	0.953	1369679	1.12		89.8	4654	
D 21 13C6 PFDA										
519.10 > 474.10	6.522	6.517	0.005	1.000	790734	0.3205		103	2316	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.667	6.653	0.014	0.982	1416266	1.18		94.3	2772	
D 23 13C8 PFOS										
507.10 > 79.90	6.793	6.788	0.005	1.000	1722450	0.6341	Target=4.26	106	787	
507.10 > 98.90	6.793	6.788	0.005	1.000	441769		3.90(2.13-6.39)	106	1198	
D 24 13C7 PFUnA										
570.00 > 525.10	6.960	6.957	0.003	1.067	657007	0.2706		86.6	1767	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.397	7.384	0.013	1.134	655580	0.2861		91.5	1591	
D 26 13C8 FOSA										
506.10 > 77.80	7.727	7.732	-0.005	1.138	1695469	0.5816		93.1	4338	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.218	8.202	0.016	1.260	341809	0.2609		83.5	939	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.612	8.608	0.004	1.268	2488640	5.76		92.2	903	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.735	8.731	0.004	1.286	359505	0.6253		100	1401	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.854	8.860	-0.006	1.303	3620803	6.83		109	1780	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.948	0.003	1.318	379019	0.6540		105	349	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.582	3.576	0.006	1.002	4391797	2.46			49.6	M
34 3:3 FTCA										
241.00 > 177.00	3.864	3.866	-0.002	0.912	269869	2.92	Target=1.06		3019	
241.00 > 117.00	3.864	3.866	-0.002	0.912	255724		1.06(0.53-1.58)		60.7	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.864	3.866	-0.002	0.912	2667090	1.27			2464	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.235	4.229	0.006	1.000	2970273	1.27			349	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.406	4.410	-0.004	1.040	2746626	1.24			5042	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.565	4.550	0.015	1.002	6455339	2.10	Target=1.34		12488	
327.10 > 80.90	4.555	4.550	0.005	1.000	4675523		1.38(0.67-2.01)		3180	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.712	4.707	0.005	0.991	283604	1.16	Target=1.72		2358	
295.00 > 84.90	4.712	4.707	0.005	0.991	160269		1.77(0.86-2.58)		659	
48 FBSA										
297.90 > 78.00	4.744	4.740	0.004	0.972	4763402	2.31			6621	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.755	4.750	0.005	1.000	1421688	0.6416	Target=14.20		234	
313.00 > 118.90	4.755	4.750	0.005	1.000	97601		14.57(7.10-21.30)		479	
41 5:3 FTCA										
341.00 > 237.10	4.838	4.834	0.004	1.018	4675882	11.8	Target=1.54		3972	
341.00 > 217.00	4.838	4.834	0.004	1.018	3025064		1.55(0.77-2.31)		2136	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.882	4.878	0.004	1.000	1508332	0.5154	Target=3.31		3155	
298.70 > 98.80	4.882	4.878	0.004	1.000	451397		3.34(1.66-4.97)		1439	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.957	4.943	0.014	1.002	2169253	2.18	Target=1.99		3971	
284.90 > 184.90	4.947	4.943	0.004	1.000	1048597		2.07(1.00-2.99)		1898	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.147	5.144	0.003	1.082	9100515	1.12	Target=12.91		12815	
314.80 > 82.90	5.147	5.144	0.003	1.082	720158		12.64(6.46-19.37)		1781	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.230	5.215	0.015	1.002	1995032	0.6096	Target=3.56		265	
363.10 > 169.00	5.219	5.215	0.004	1.000	488285		4.09(1.78-5.34)		1472	
49 DONA										
376.90 > 250.90	5.390	5.385	0.005	1.090	10222542	2.11	Target=1.61		11745	
376.90 > 84.80	5.390	5.385	0.005	1.090	6372628		1.60(0.81-2.42)		9272	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.411	5.406	0.005	0.920	1741484	0.5413	Target=3.08		1862	
349.10 > 98.90	5.411	5.406	0.005	0.920	556809		3.13(1.54-4.63)		1528	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.450	5.445	0.005	1.002	5848339	2.20	Target=1.41		12253	
427.10 > 80.90	5.450	5.445	0.005	1.002	4160232		1.41(0.70-2.11)		12317	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.662	5.657	0.005	1.002	875099	0.6215	Target=1.93		86.1	M
413.00 > 169.00	5.662	5.657	0.005	1.002	425418		2.06(0.96-2.89)		630	M
54 7:3 FTCA										
441.00 > 316.90	5.719	5.713	0.006	1.203	5590685	14.8	Target=1.07		5871	
441.00 > 336.90	5.719	5.713	0.006	1.203	5354556		1.04(0.53-1.60)		7964	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.889	5.882	0.007	1.002	1411296	0.5277	Target=3.17		1808	M
398.70 > 98.90	5.889	5.882	0.007	1.002	433244		3.26(1.59-4.76)		911	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.097	6.091	0.006	1.002	1035097	0.6582	Target=4.77		141	M
463.00 > 169.00	6.097	6.091	0.006	1.002	189246		5.47(2.39-7.16)		285	M
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.291	6.286	0.005	1.001	4150693	2.18	Target=1.35		5823	
527.10 > 80.80	6.291	6.286	0.005	1.001	3085709		1.35(0.67-2.02)		7668	
57 PFECHS										
461.00 > 381.00	6.291	6.286	0.005	1.070	5811183	1.10	Target=1.89		891	
461.00 > 99.00	6.291	6.286	0.005	1.070	2961032		1.96(0.94-2.83)		4152	
62 FHxSA										
397.90 > 78.00	6.310	6.305	0.005	1.073	6798048	2.16			5309	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.347	6.342	0.005	0.934	1663234	0.4924	Target=3.87		1651	
449.00 > 98.80	6.347	6.342	0.005	0.934	422459		3.94(1.93-5.80)		1488	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.474	6.469	0.005	1.000	798868	0.6617	Target=1.69		2140	M
570.10 > 483.00	6.474	6.469	0.005	1.000	439345		1.82(0.85-2.54)		1102	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.532	6.527	0.005	1.001	1188908	0.5918	Target=5.10		161	
512.90 > 219.00	6.532	6.527	0.005	1.001	240720		4.94(2.55-7.66)		1034	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.676	6.672	0.004	1.001	572876	0.6058	Target=1.49		1270	M
584.20 > 526.00	6.676	6.672	0.004	1.001	357079		1.60(0.75-2.24)		510	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.802	6.788	0.014	1.001	1685409	0.4647	Target=4.80		398	M
498.90 > 98.80	6.802	6.788	0.014	1.001	365324		4.61(2.40-7.20)		1706	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.968	6.965	0.003	1.001	1085813	0.5728	Target=6.10		366	
563.10 > 269.10	6.968	6.965	0.003	1.001	207601		5.23(3.05-9.15)		1148	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.138	7.127	0.011	1.443	9041985	2.10	Target=3.10		2402	
532.80 > 353.00	7.138	7.127	0.011	1.443	2749032		3.29(1.55-4.65)		3472	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.243	7.226	0.017	1.066	1389463	0.5059	Target=4.02		2385	
548.80 > 98.80	7.236	7.226	0.010	1.065	345270		4.02(2.01-6.03)		2065	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.397	7.384	0.013	1.000	1241804	0.5979	Target=16.81		468	
613.10 > 319.00	7.397	7.384	0.013	1.000	69010		17.99(8.41-25.22)		826	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.660	7.655	0.005	1.128	1626572	0.5234	Target=4.25		2498	
599.00 > 98.80	7.660	7.655	0.005	1.128	379899		4.28(2.12-6.37)		2291	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.737	7.732	0.005	1.001	1533321	0.6015	Target=51.55		631	M
498.10 > 478.00	7.737	7.732	0.005	1.001	31584		48.55(25.77-77.32)		136	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.813	7.807	0.006	0.951	1183673	0.6118	Target=6.27		449	
663.00 > 168.90	7.813	7.807	0.006	0.951	185039		6.40(3.13-9.40)		1832	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.991	7.975	0.016	1.615	8870687	2.13	Target=3.32		8663	
632.90 > 452.90	7.980	7.975	0.005	1.613	2664014		3.33(1.66-4.97)		3273	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.218	8.213	0.005	1.000	836992	0.6105	Target=6.82		439	
713.10 > 168.90	8.218	8.213	0.005	1.000	129199		6.48(3.41-10.24)		1420	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.440	8.424	0.016	1.243	1315723	0.5000	Target=4.61		1579	
699.10 > 98.80	8.429	8.424	0.005	1.241	293305		4.49(2.30-6.91)		1541	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.633	8.629	0.004	1.002	363769	6.17			948	M
75 NMeFOSA										M
511.90 > 219.00	8.735	8.741	-0.006	1.000	318229	0.5681	Target=0.70		556	M
511.90 > 169.00	8.735	8.741	-0.006	1.000	443490		0.72(0.35-1.05)		1248	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.883	8.880	0.003	1.003	409176	5.23			1098	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.960	8.957	0.003	1.001	315457	0.5274	Target=0.71		493	M
526.00 > 169.00	8.960	8.957	0.003	1.001	443898		0.71(0.35-1.06)		660	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

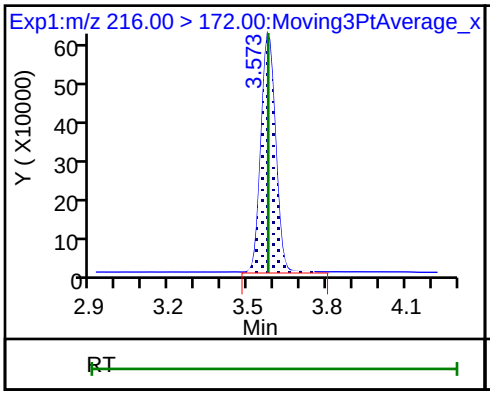
ICV CAL4_00033 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:03:50 Chrom Revision: 2.3 26-Aug-2024 17:14:48

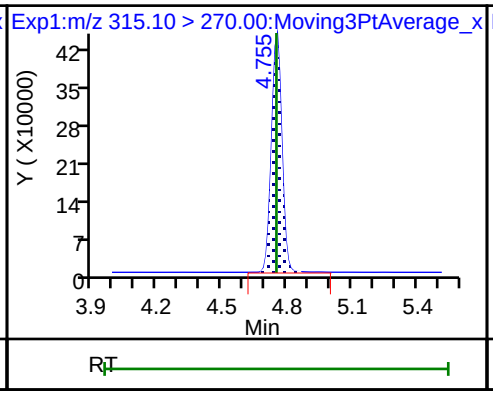
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

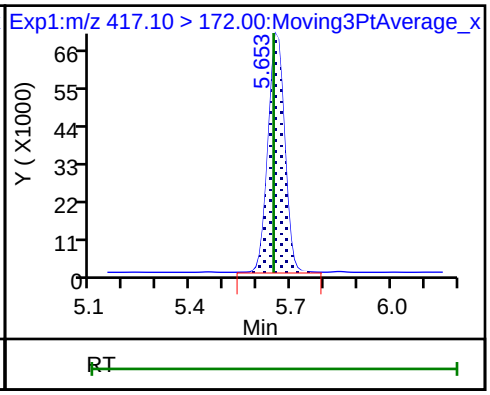
* 1 13C3-PFBA



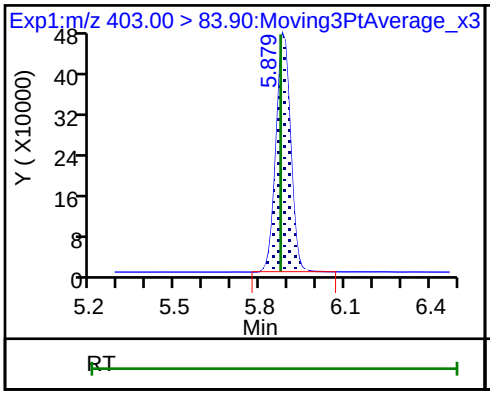
* 2 13C2 PFHxA



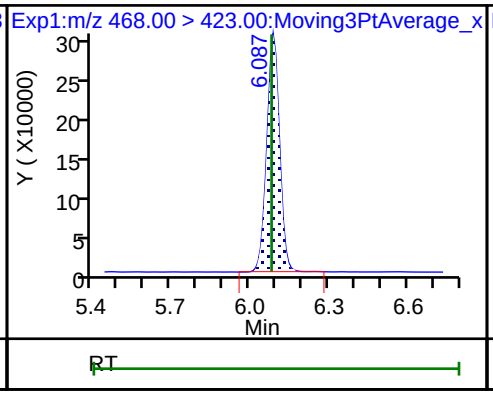
* 3 13C4 PFOA



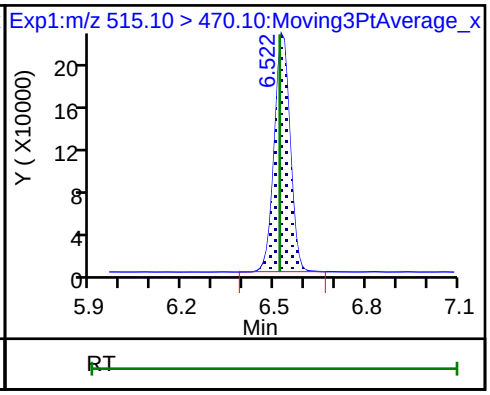
* 4 18O2 PFHxS



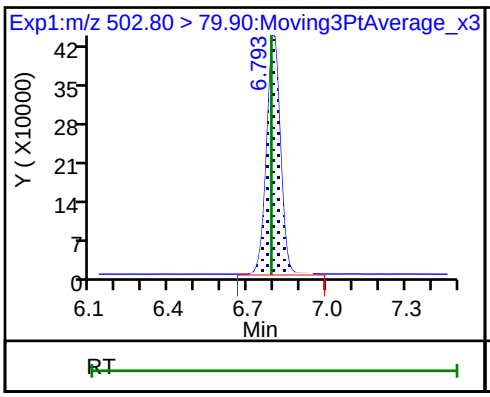
* 5 13C5 PFNA



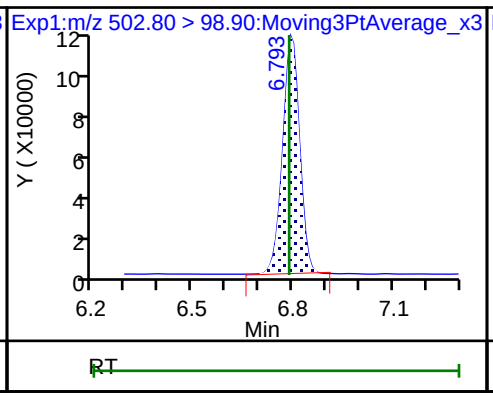
* 6 13C2 PFDA



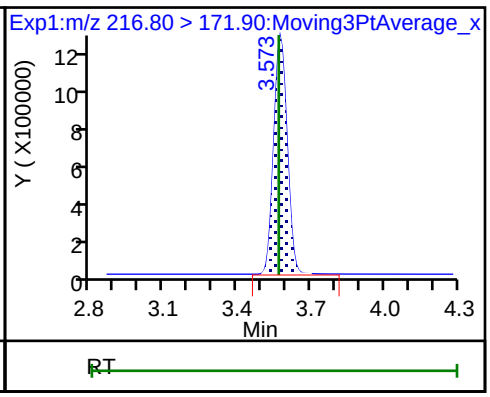
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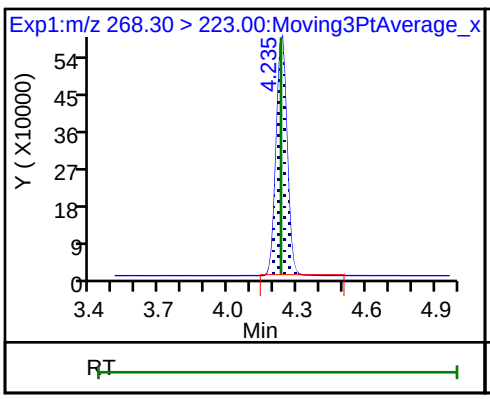
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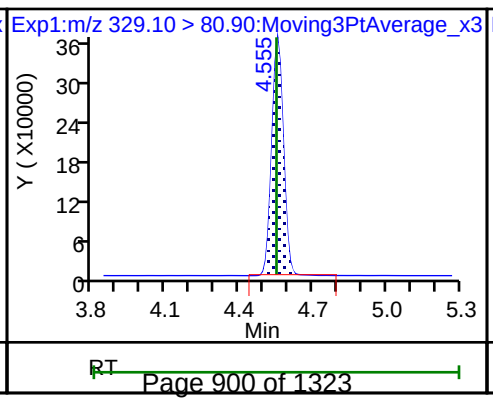
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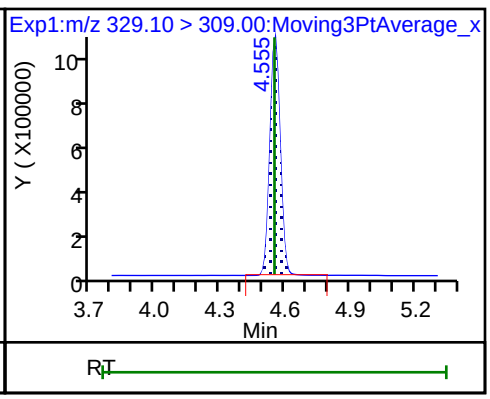
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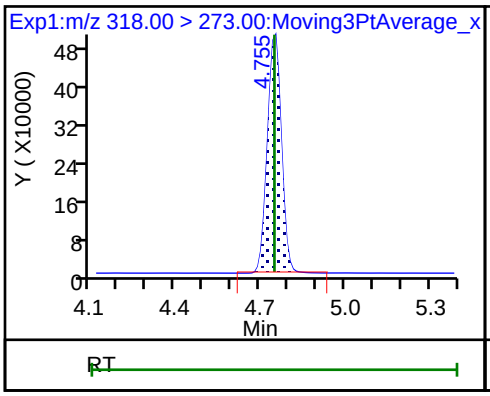
D 10 M2-4:2 FTS



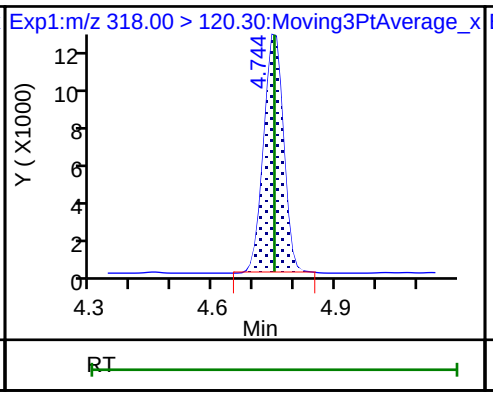
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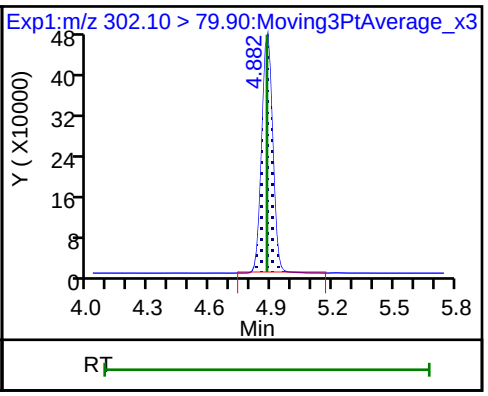
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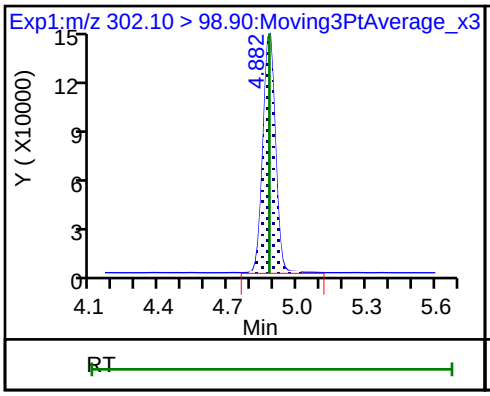
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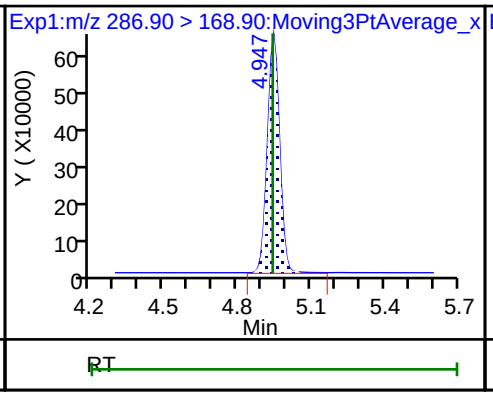
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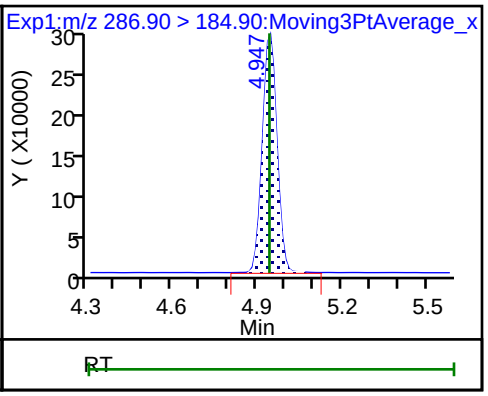
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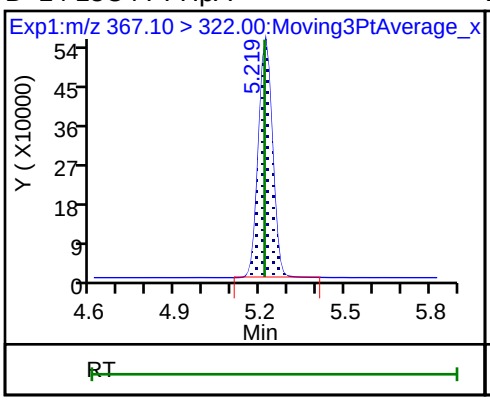
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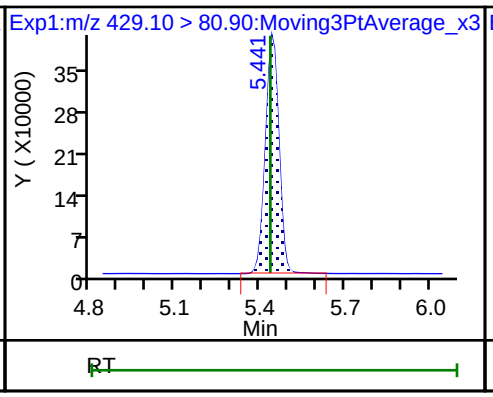
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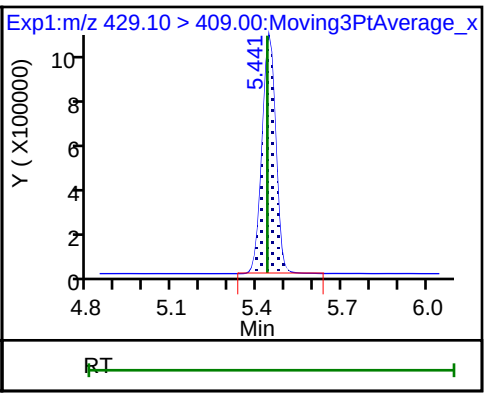
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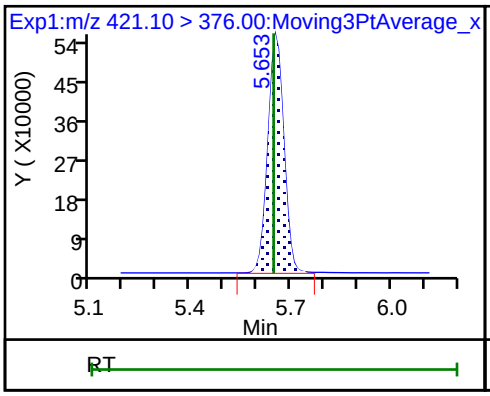
D 15 M2-6:2 FTS



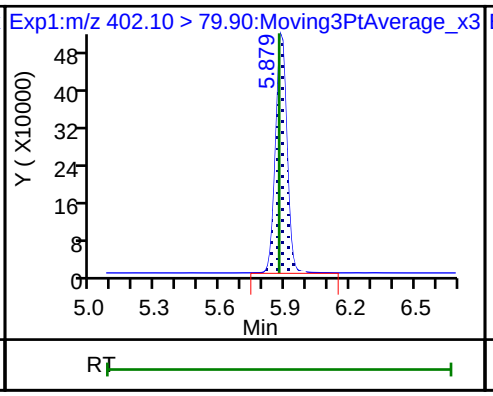
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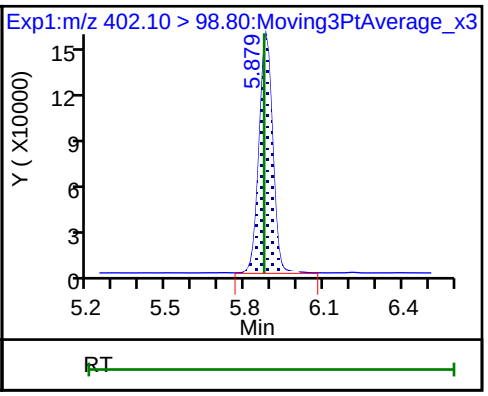
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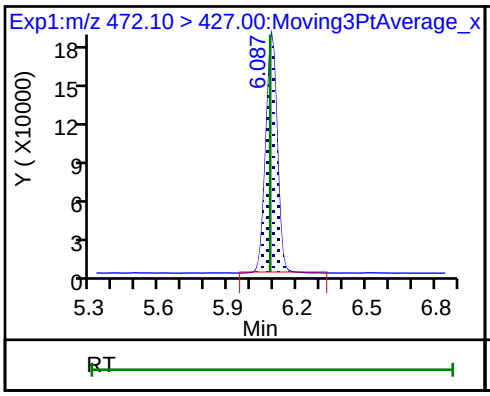
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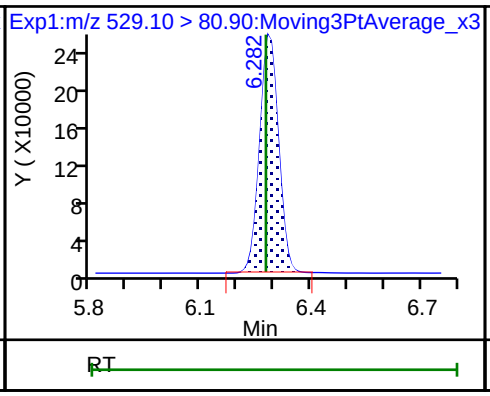
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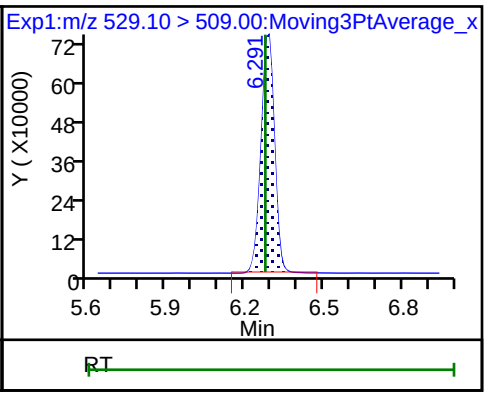
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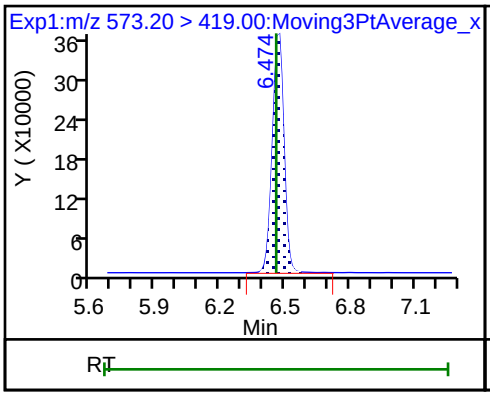
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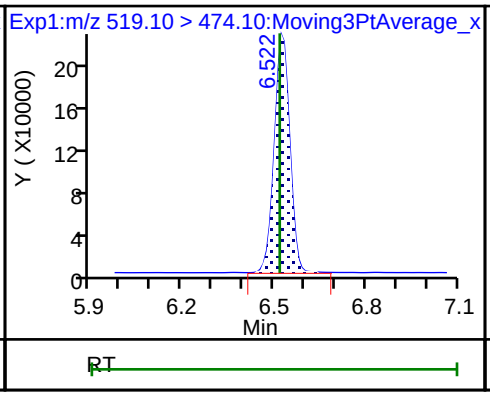
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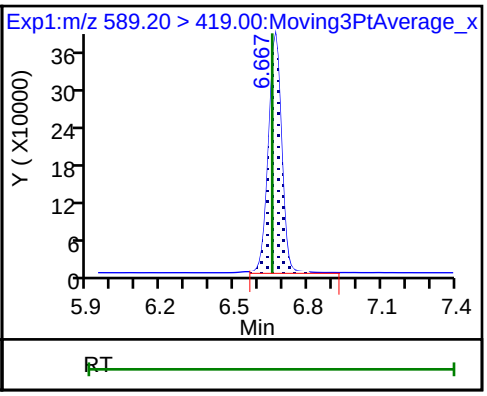
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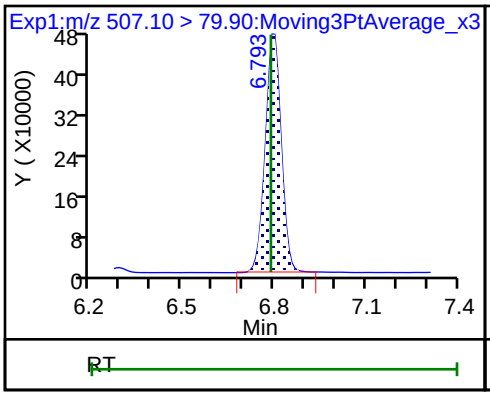
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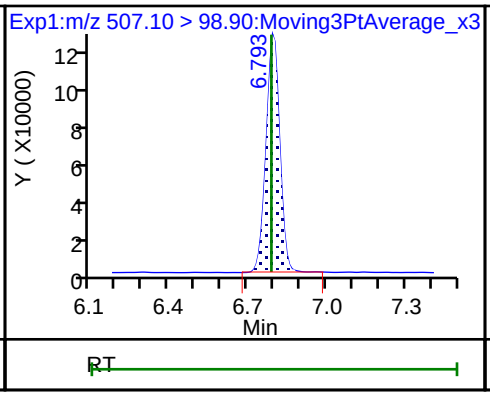
D 22 d5-NEtFOSAA



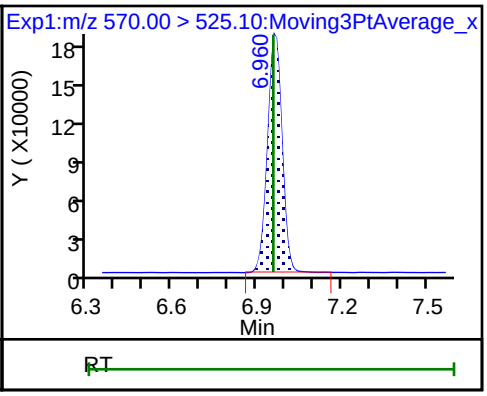
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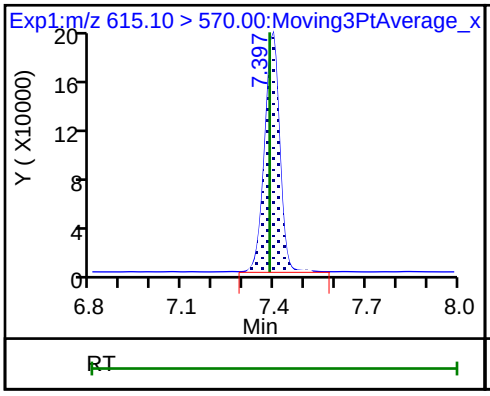
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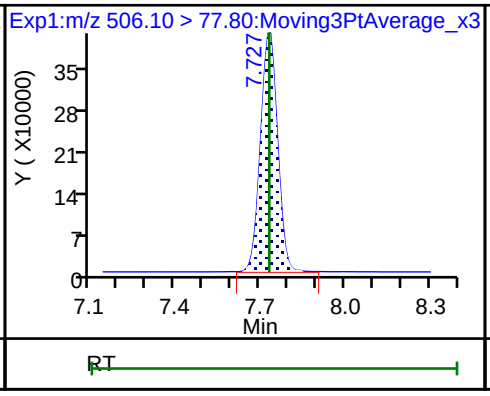
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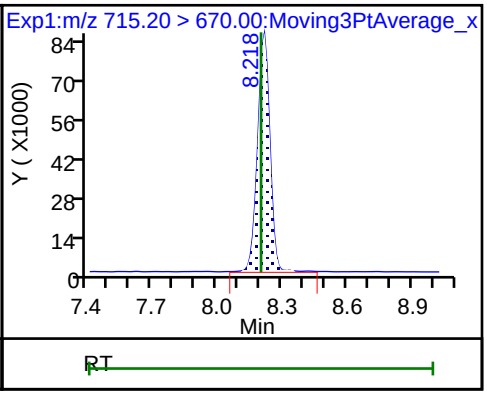
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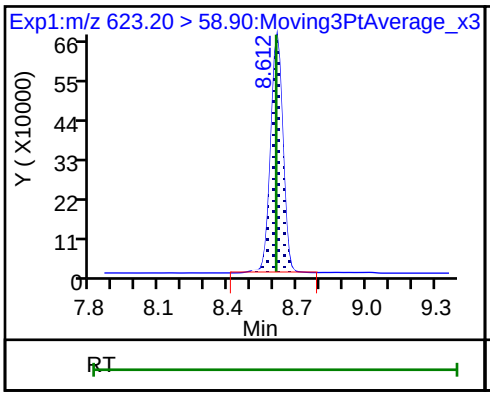
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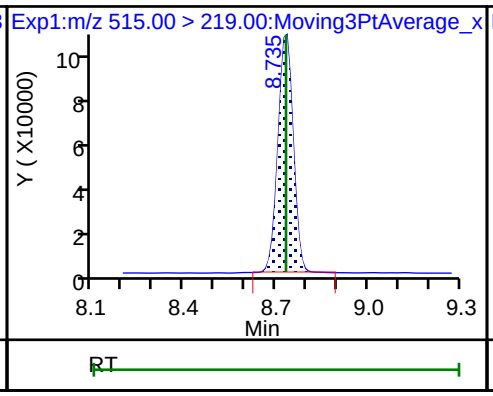
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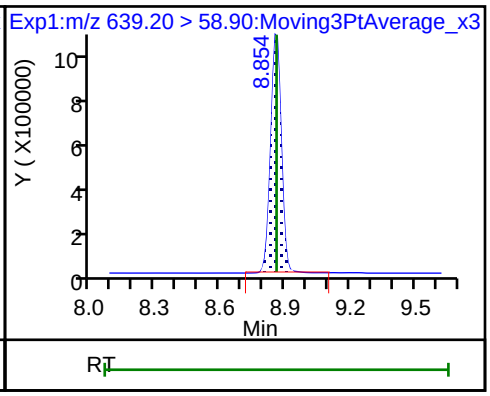
D 28 d7-N-MeFOSE-M



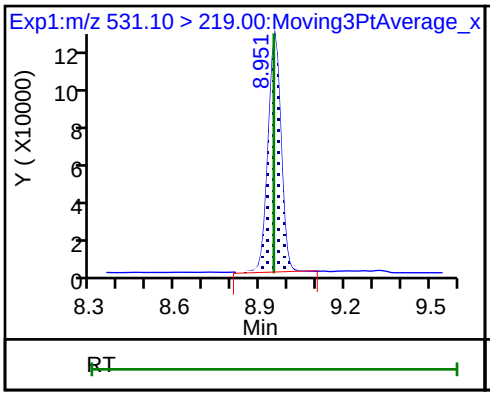
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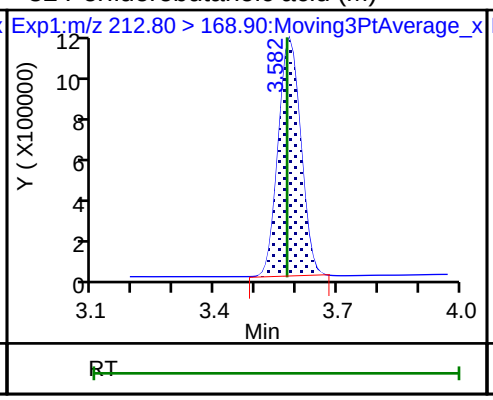
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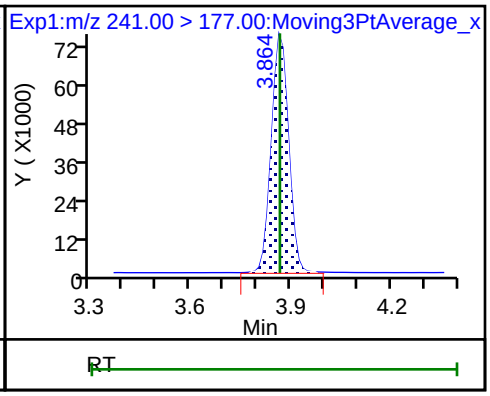
D 31 d5-NEtPFOSA



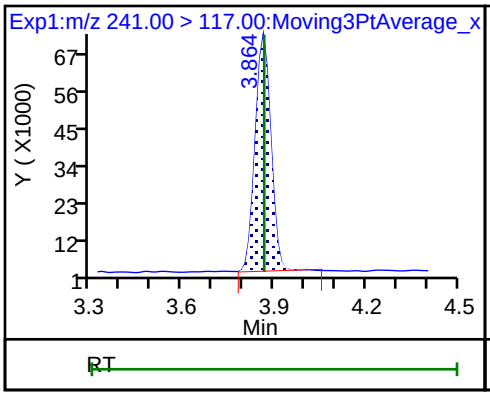
32 Perfluorobutanoic acid (M)



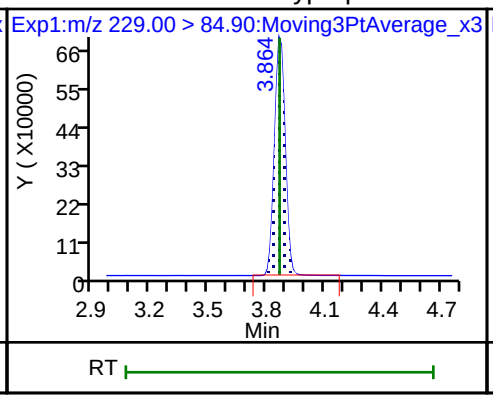
34 3:3 FTCA



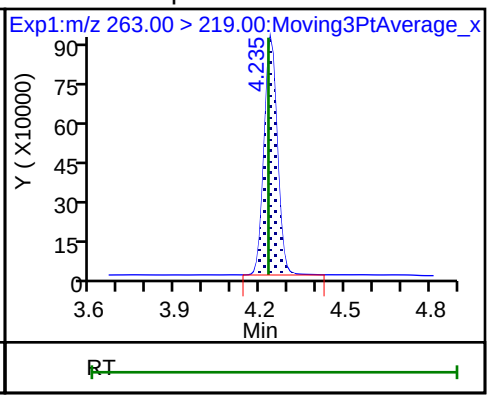
34 3:3 FTCA



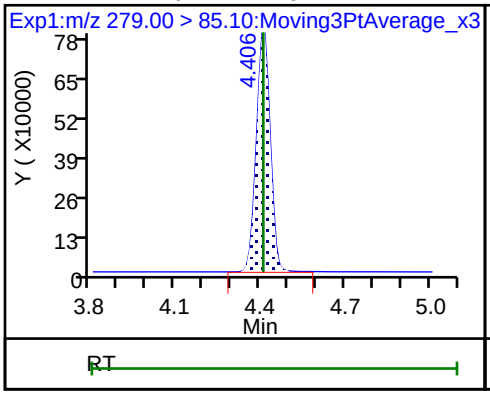
33 Perfluoro-3-methoxypropanoic aci



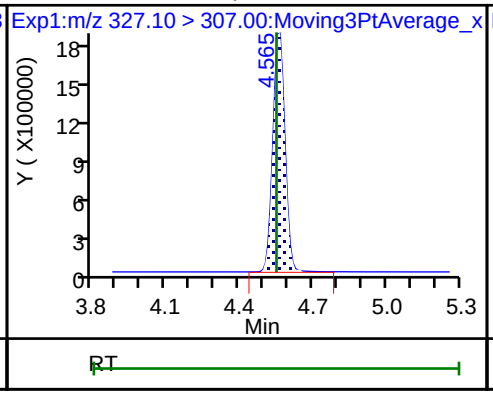
35 Perfluoropentanoic acid



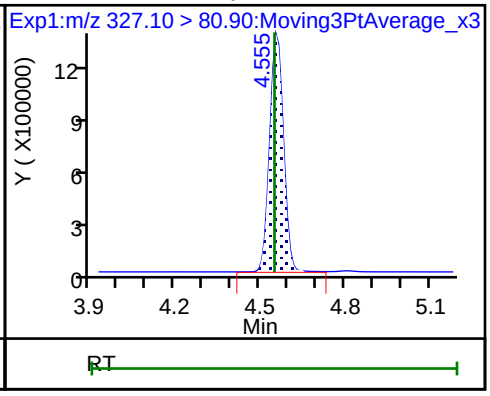
36 Perfluoro(4-methoxybutanoic acid



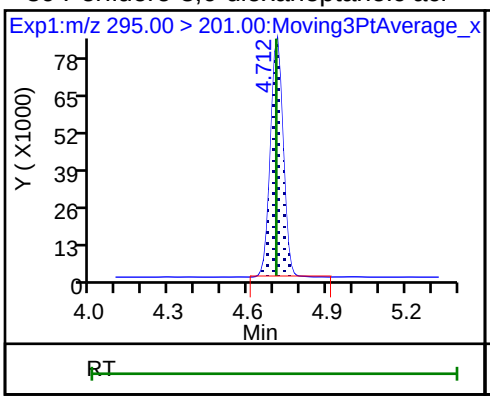
38 1H,1H,2H,2H-perfluorohexanesulfo



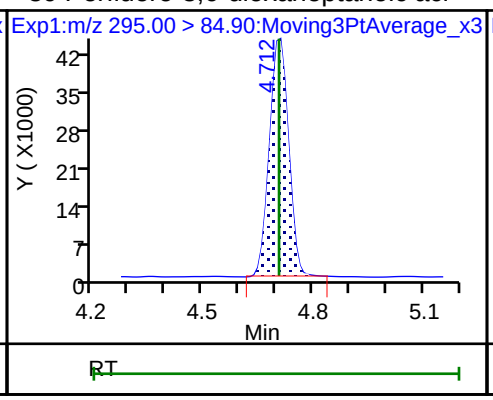
38 1H,1H,2H,2H-perfluorohexanesulfo



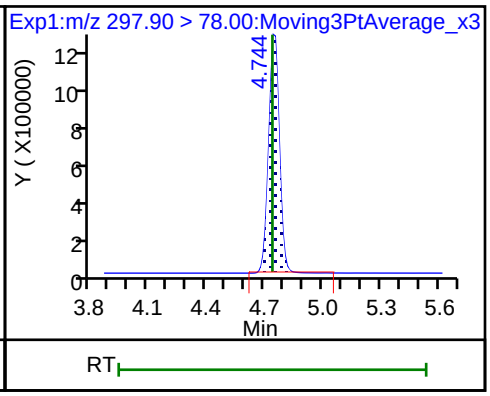
39 Perfluoro-3,6-dioxaheptanoic aci



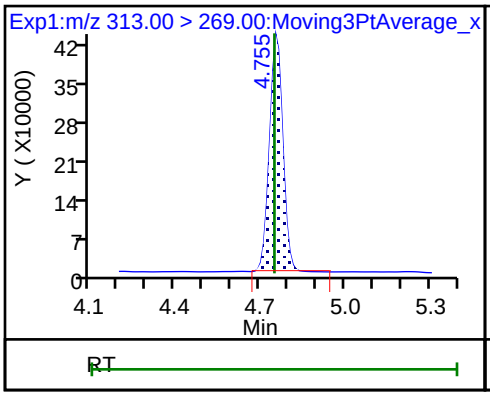
39 Perfluoro-3,6-dioxaheptanoic aci



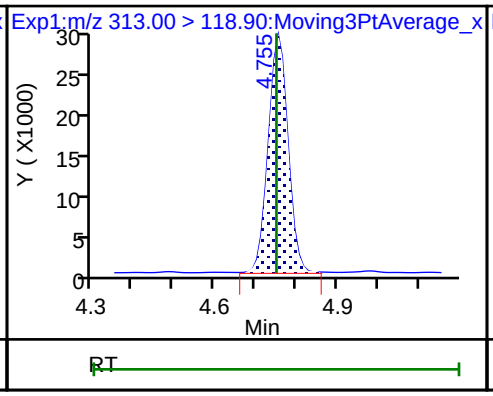
48 FBSA



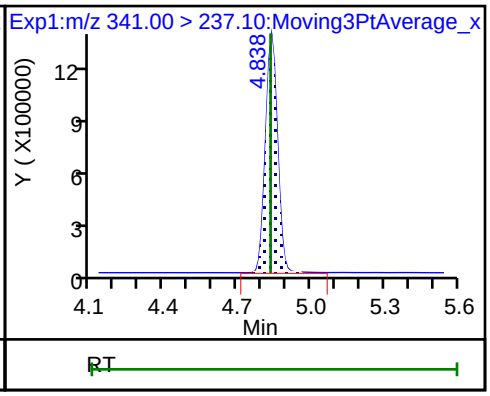
40 Perfluorohexanoic acid



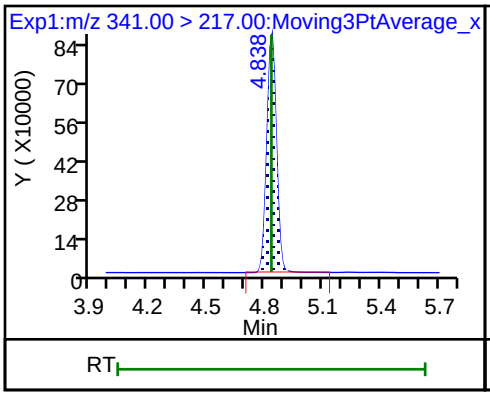
40 Perfluorohexanoic acid



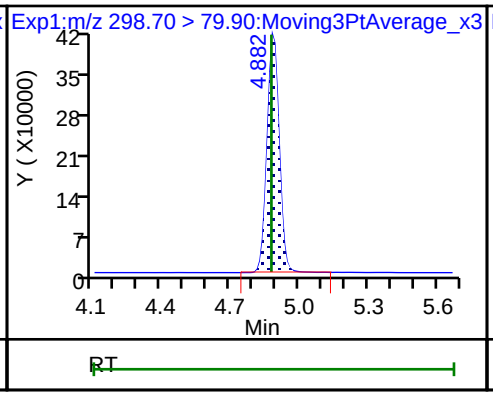
41 5:3 FTCA



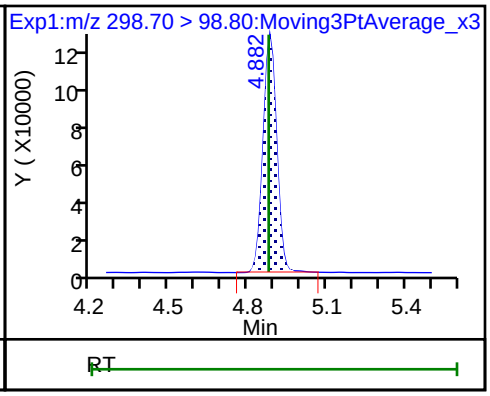
41 5:3 FTCA



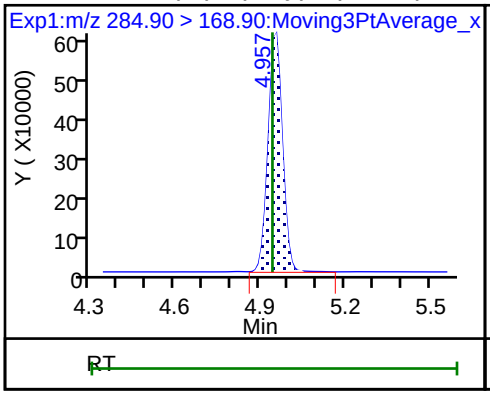
42 Perfluorobutanesulfonic acid



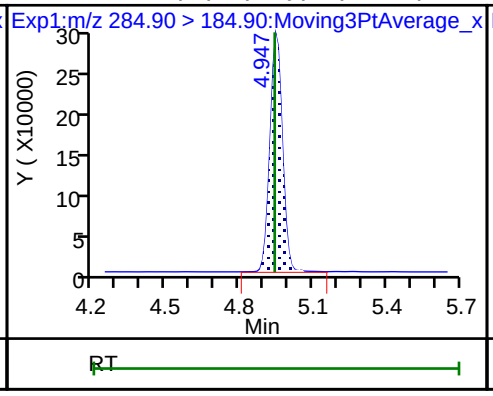
42 Perfluorobutanesulfonic acid



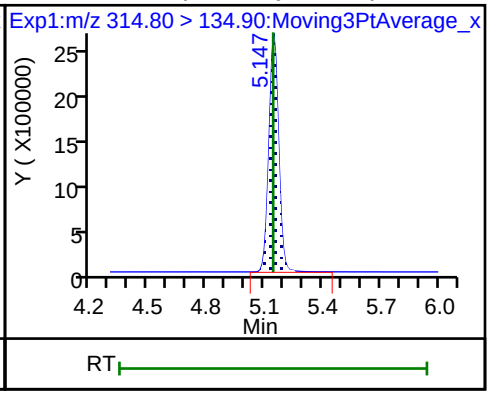
43 Perfluoro(2-propoxypropanoic) ac



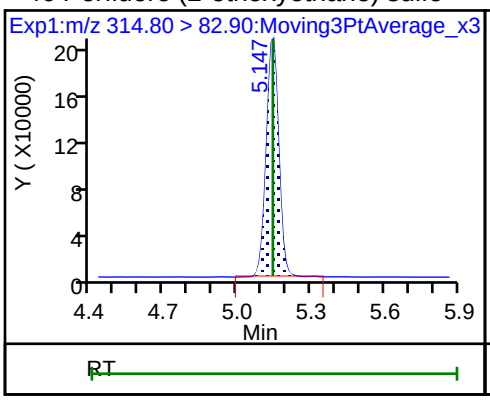
43 Perfluoro(2-propoxypropanoic) ac



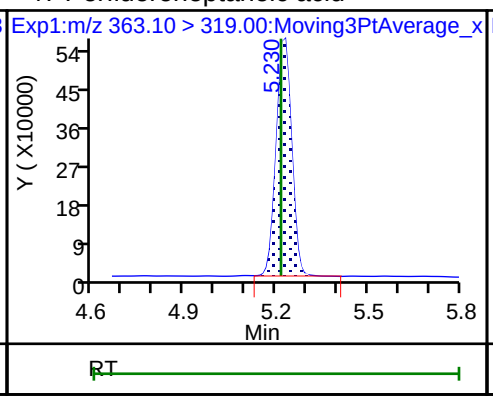
46 Perfluoro (2-ethoxyethane) sulfo



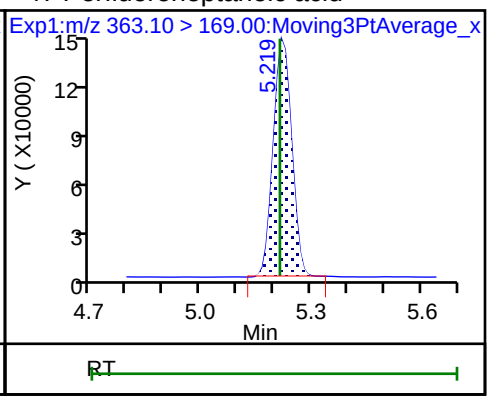
46 Perfluoro (2-ethoxyethane) sulfo



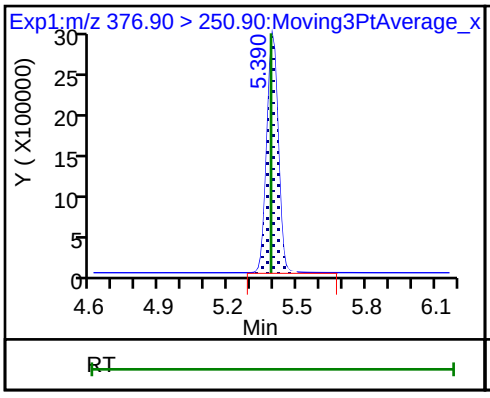
47 Perfluoroheptanoic acid



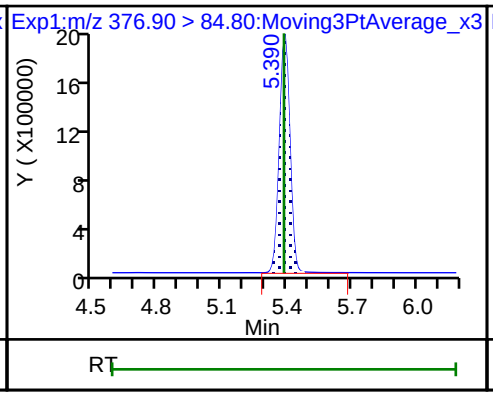
47 Perfluoroheptanoic acid



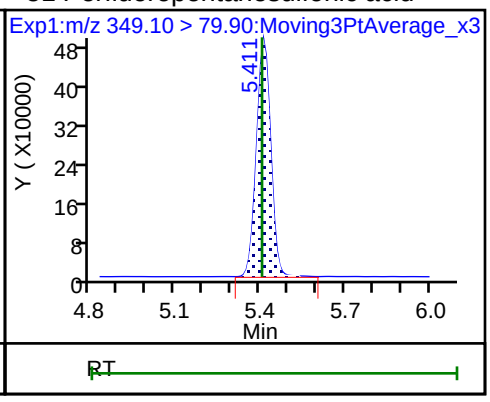
49 DONA



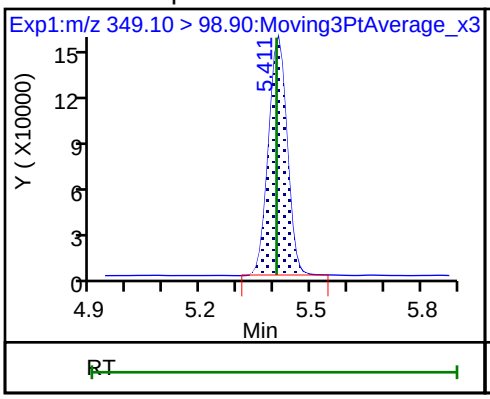
49 DONA



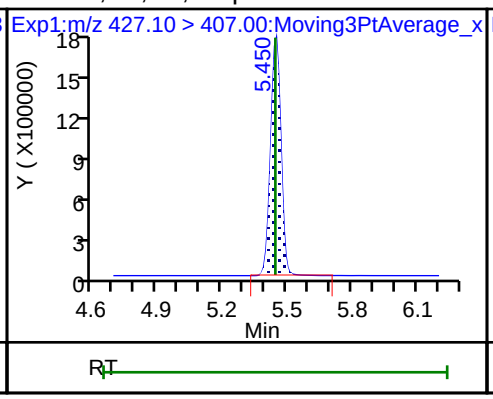
51 Perfluoropentanesulfonic acid



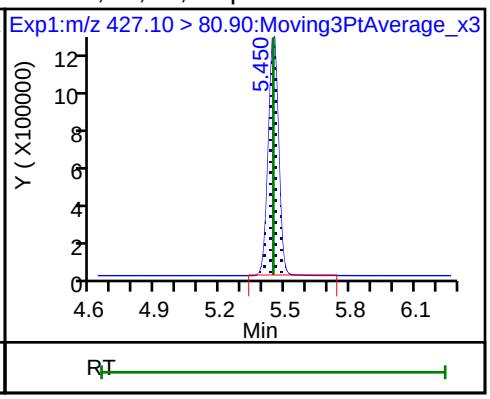
51 Perfluoropentanesulfonic acid



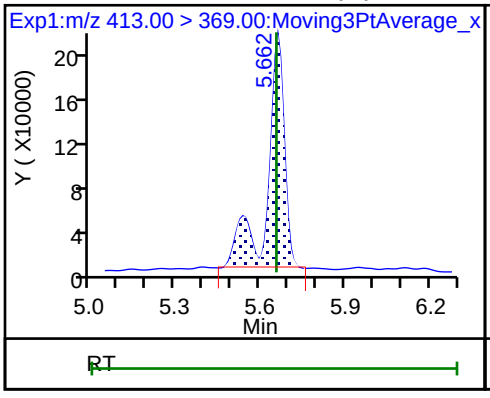
50 1H,1H,2H,2H-perfluorooctanesulfo



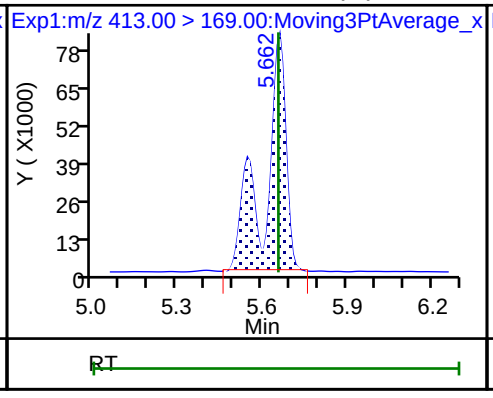
50 1H,1H,2H,2H-perfluorooctanesulfo



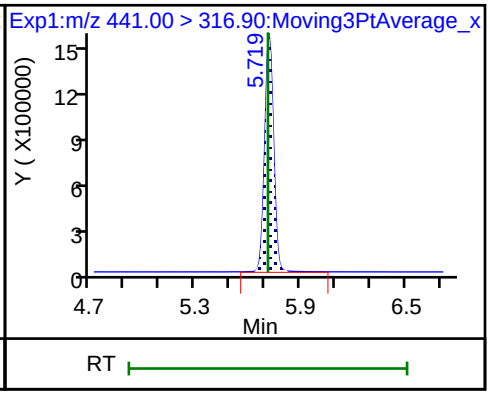
52 Perfluorooctanoic acid (M)



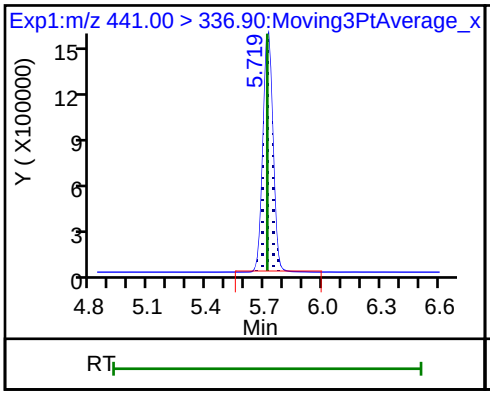
52 Perfluorooctanoic acid (M)



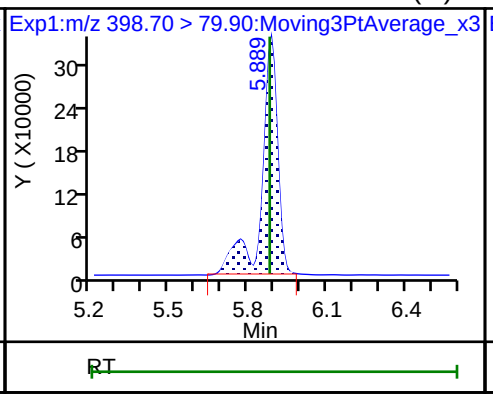
54 7:3 FTCA



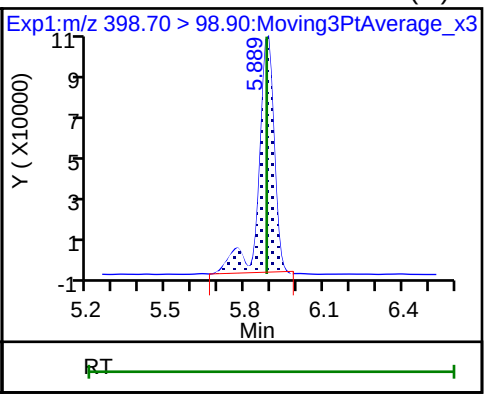
54 7:3 FTCA



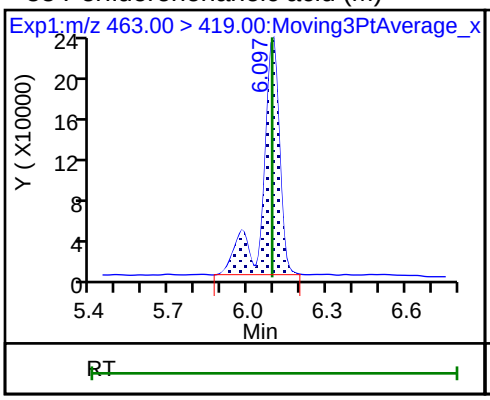
53 Perfluorohexanesulfonic acid (M)



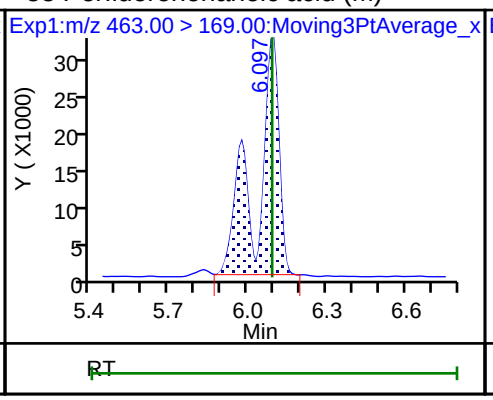
53 Perfluorohexanesulfonic acid (M)



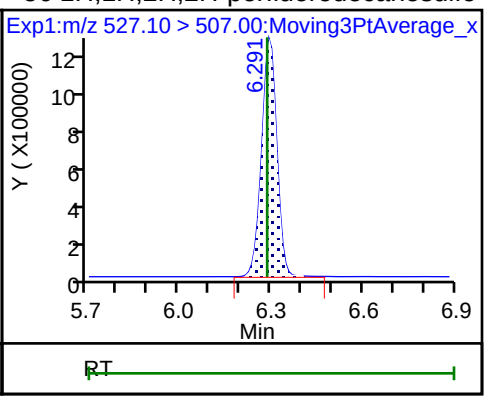
55 Perfluorononanoic acid (M)



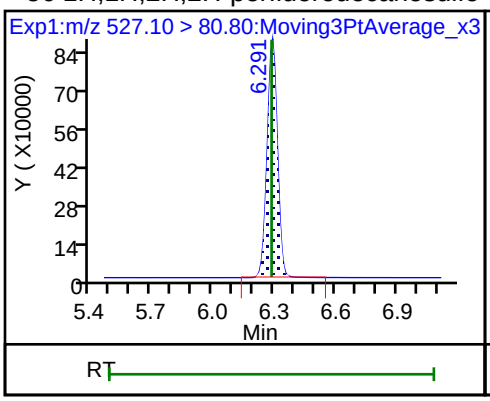
55 Perfluorononanoic acid (M)



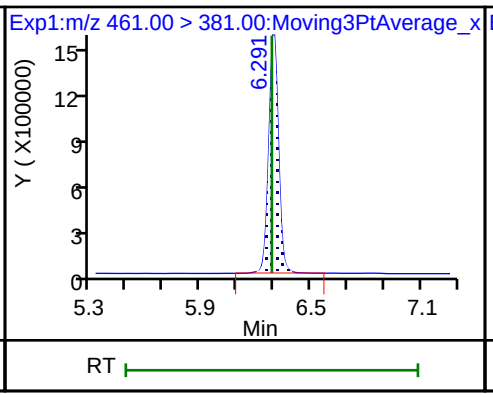
56 1H,1H,2H,2H-perfluorodecanesulfo



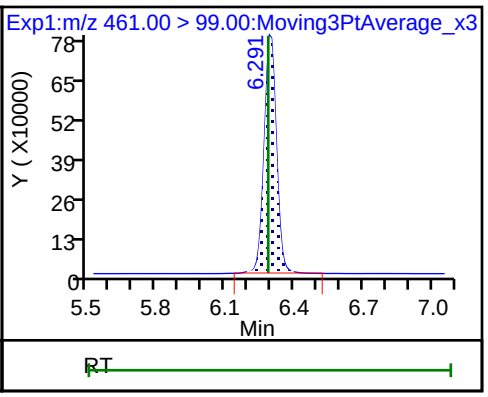
56 1H,1H,2H,2H-perfluorodecanesulfo



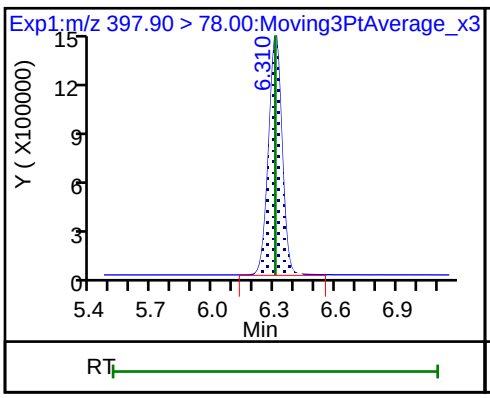
57 PFECHS



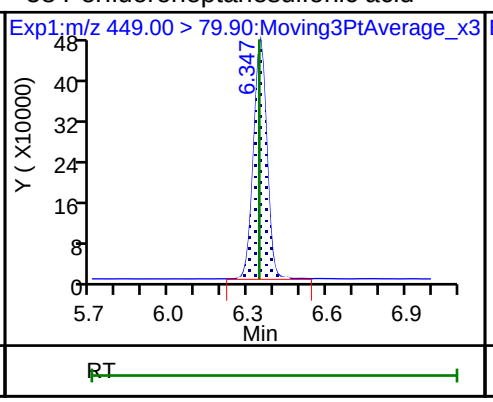
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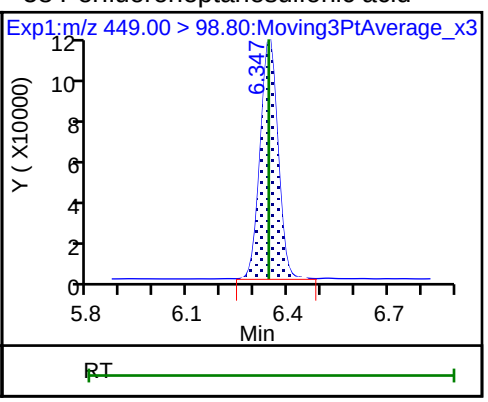
62 FHxSA



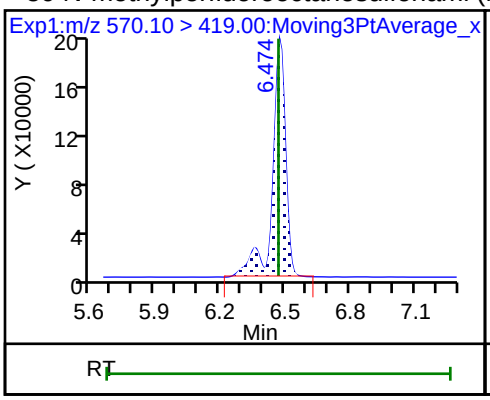
58 Perfluoroheptanesulfonic acid



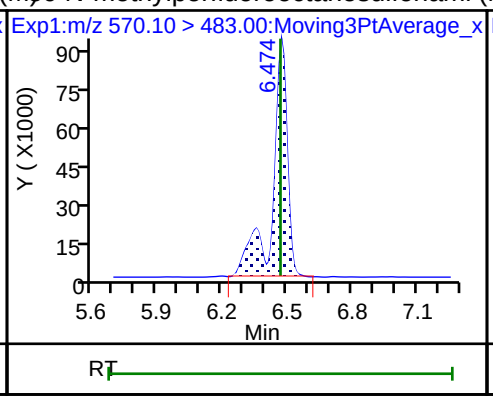
58 Perfluoroheptanesulfonic acid



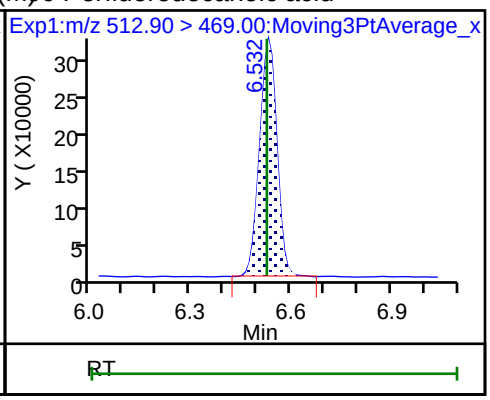
59 N-methylperfluorooctanesulfonami (M)



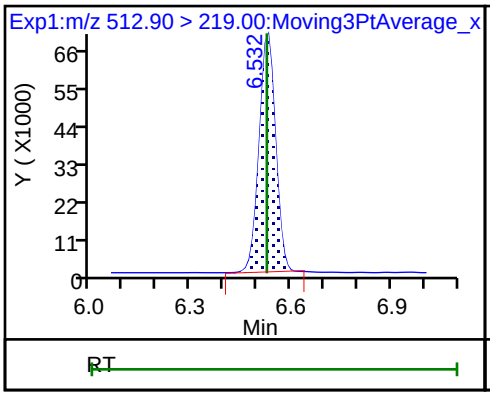
59 N-methylperfluorooctanesulfonami (M)



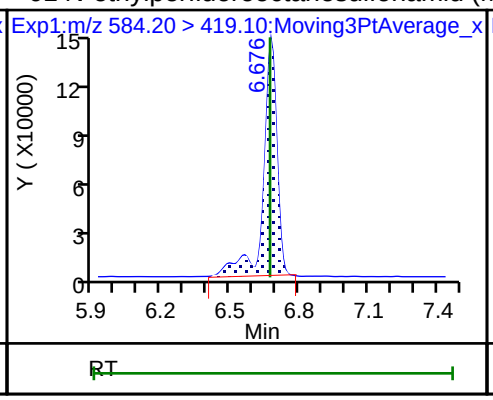
60 Perfluorodecanoic acid



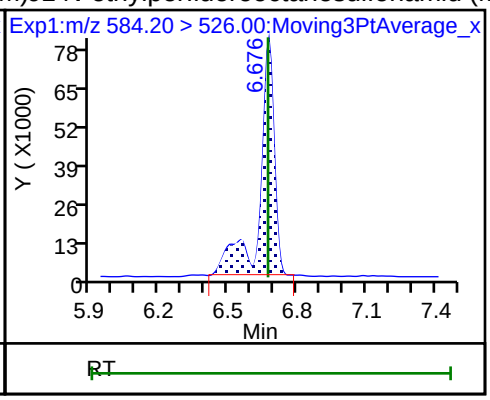
60 Perfluorodecanoic acid



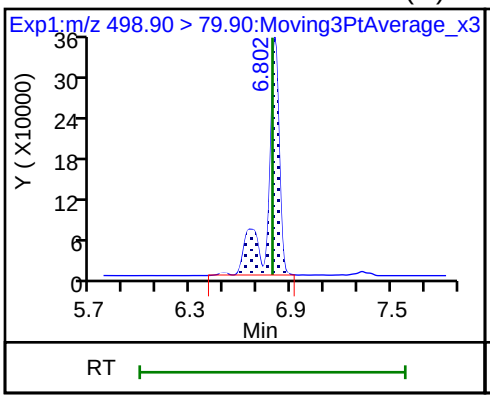
61 N-ethylperfluorooctanesulfonamid (M)



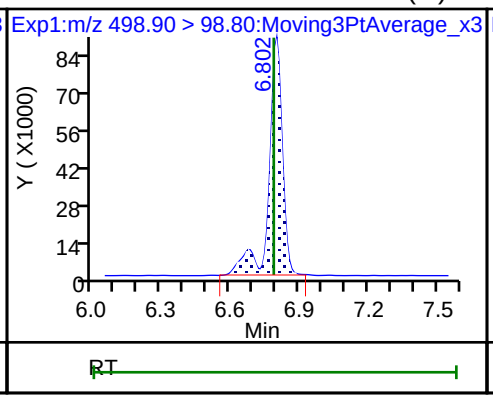
61 N-ethylperfluorooctanesulfonamid (M)



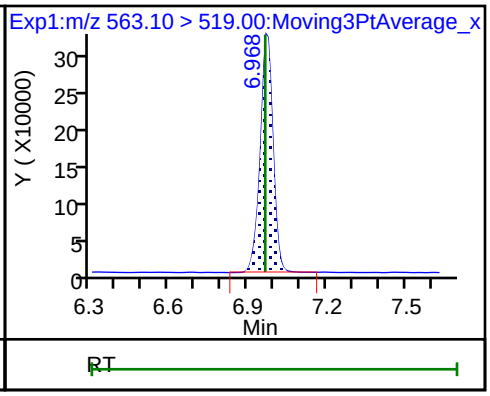
63 Perfluorooctanesulfonic acid (M)



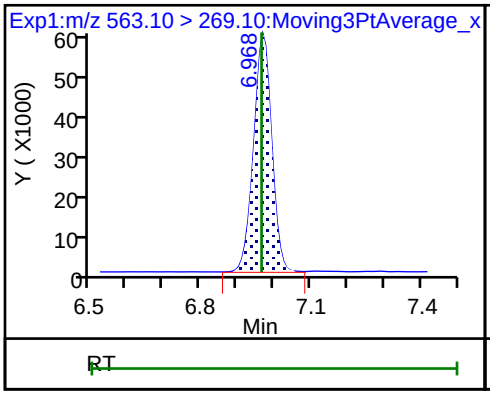
63 Perfluorooctanesulfonic acid (M)



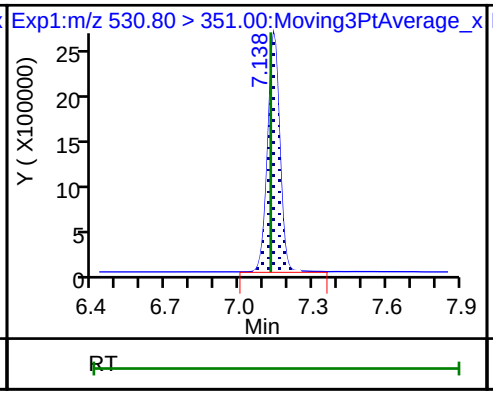
64 Perfluoroundecanoic acid



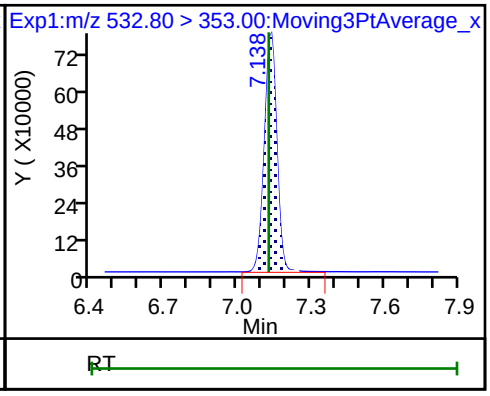
64 Perfluoroundecanoic acid



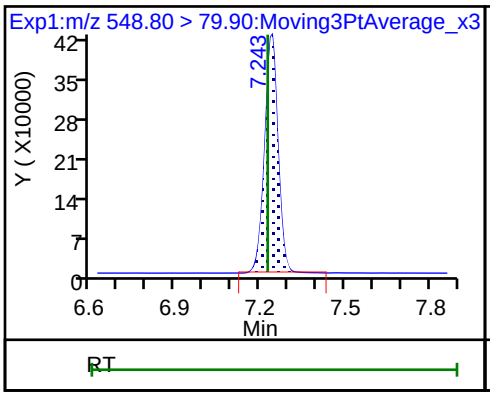
65 9-Chlorohexadecafluoro-3-oxanona



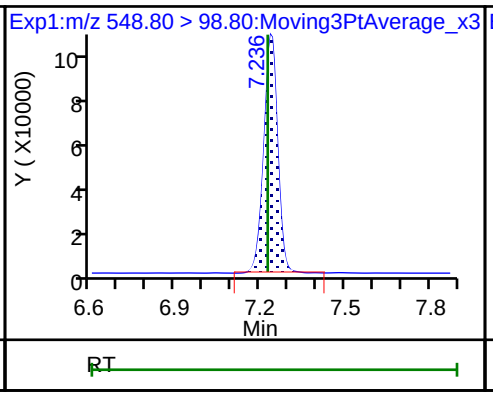
65 9-Chlorohexadecafluoro-3-oxanona



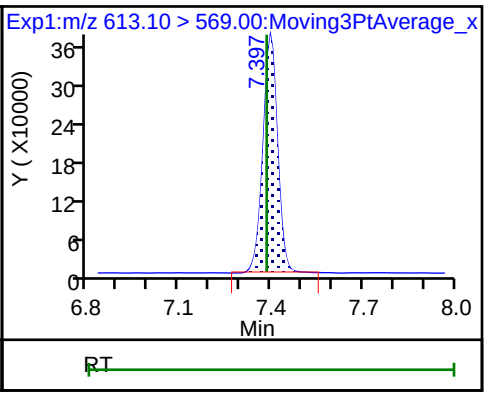
66 Perfluorononanesulfonic acid



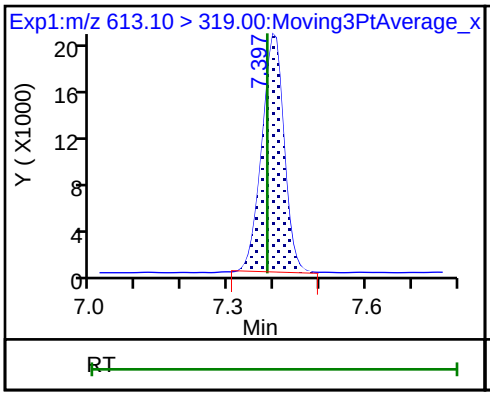
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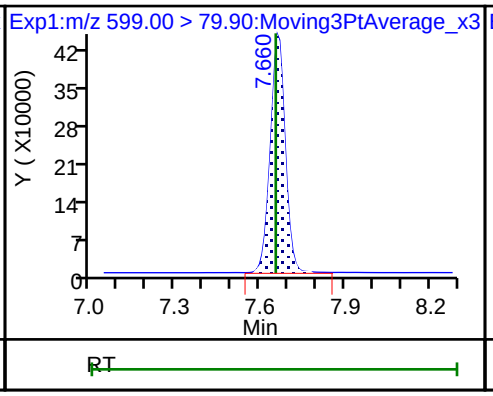
67 Perfluorododecanoic acid



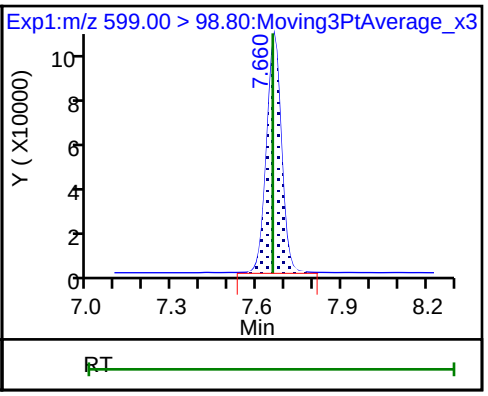
67 Perfluorododecanoic acid



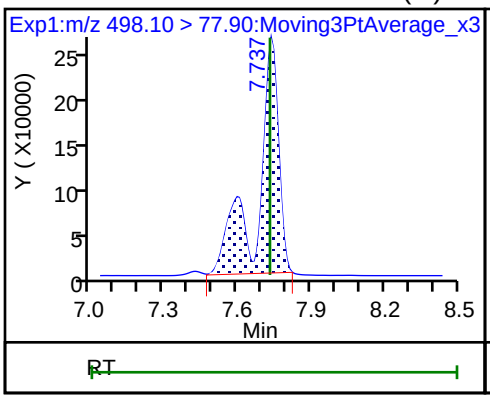
68 Perfluorodecanesulfonic acid



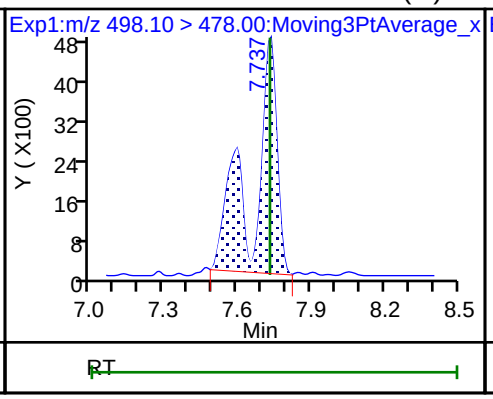
68 Perfluorodecanesulfonic acid



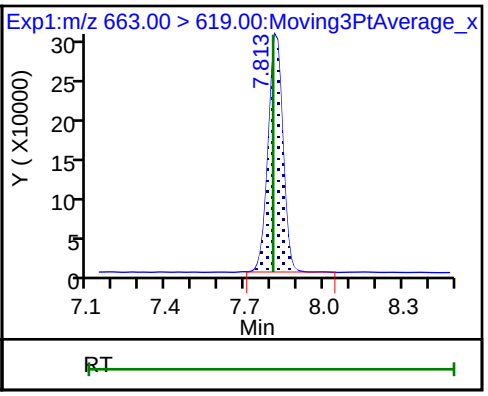
69 Perfluorooctanesulfonamide (M)



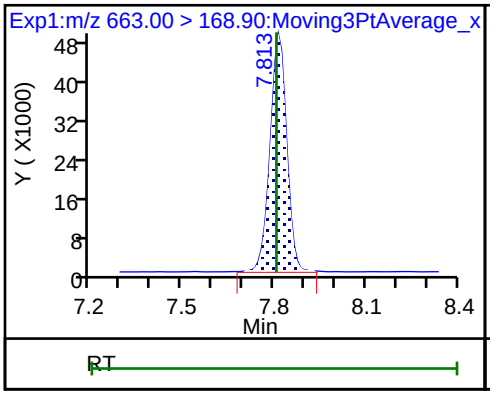
69 Perfluorooctanesulfonamide (M)



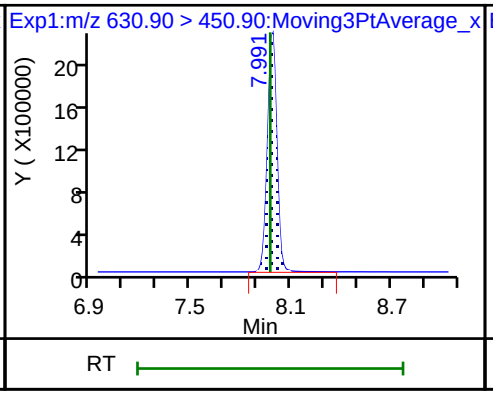
70 Perfluorotridecanoic acid



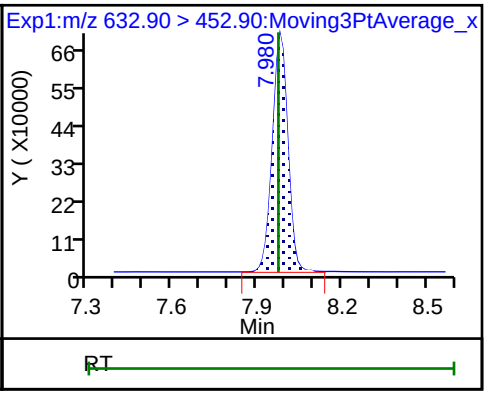
70 Perfluorotridecanoic acid



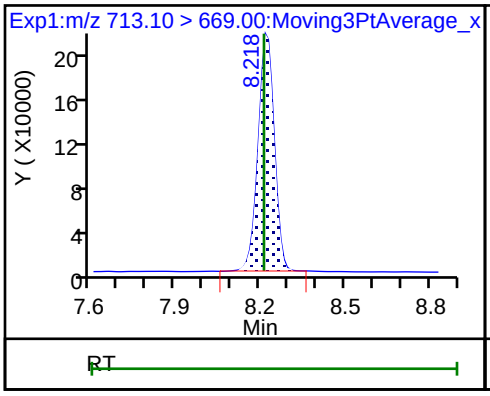
71 11-Chloroeicosafluoro-3-oxaundec



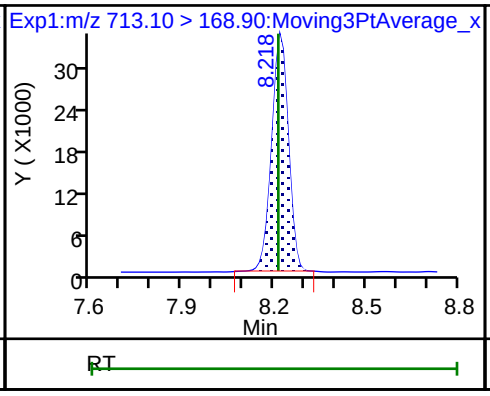
71 11-Chloroeicosafluoro-3-oxaundec



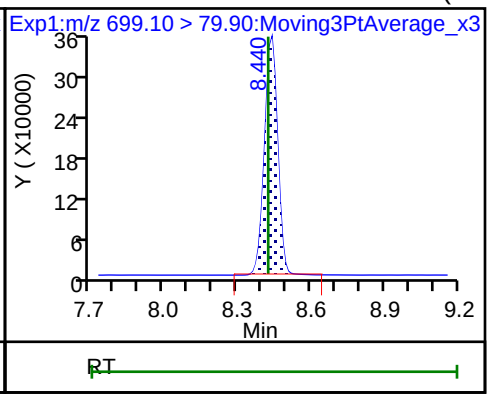
72 Perfluorotetradecanoic acid



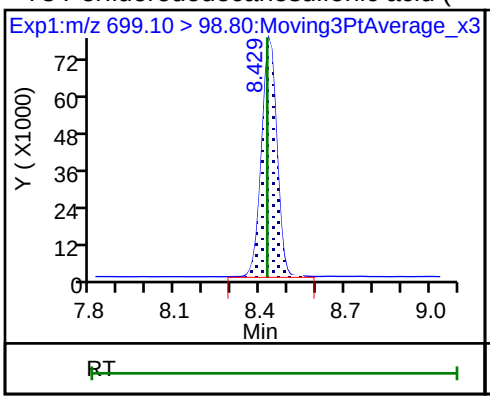
72 Perfluorotetradecanoic acid



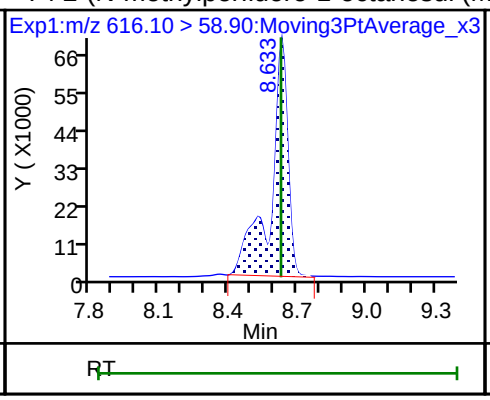
73 Perfluorododecanesulfonic acid (



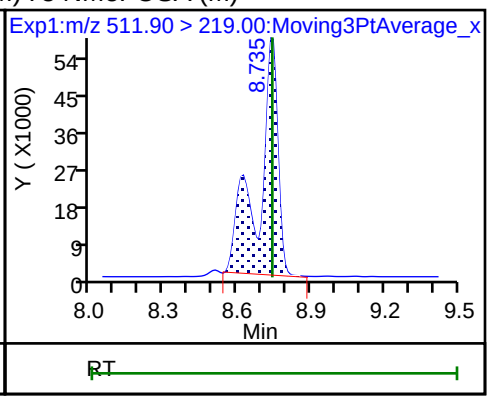
73 Perfluorododecanesulfonic acid (



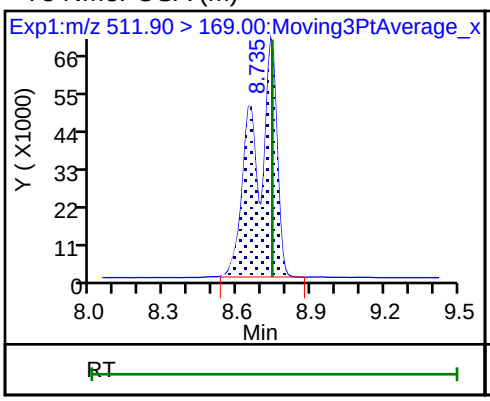
74 2-(N-methylperfluoro-1-octanesul (M)



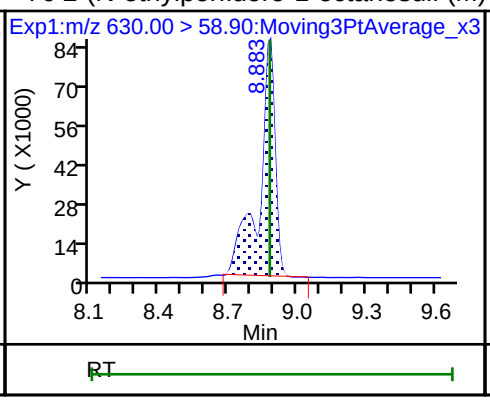
75 NMeFOSA (M)



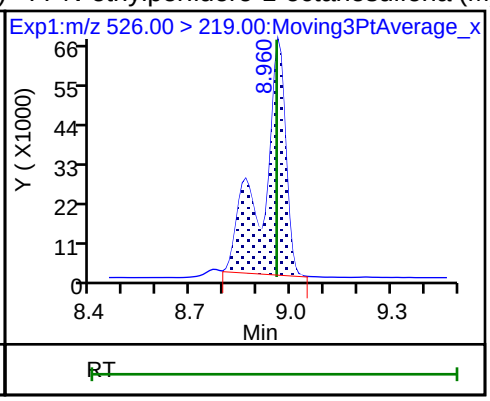
75 NMeFOSA (M)



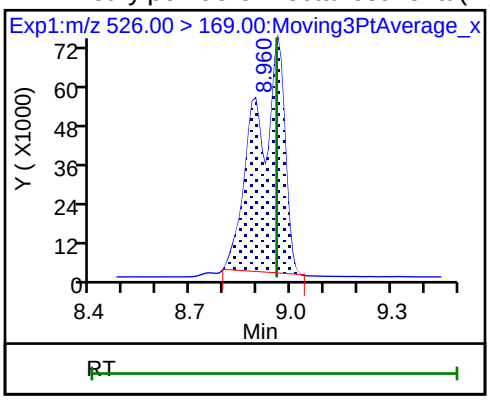
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

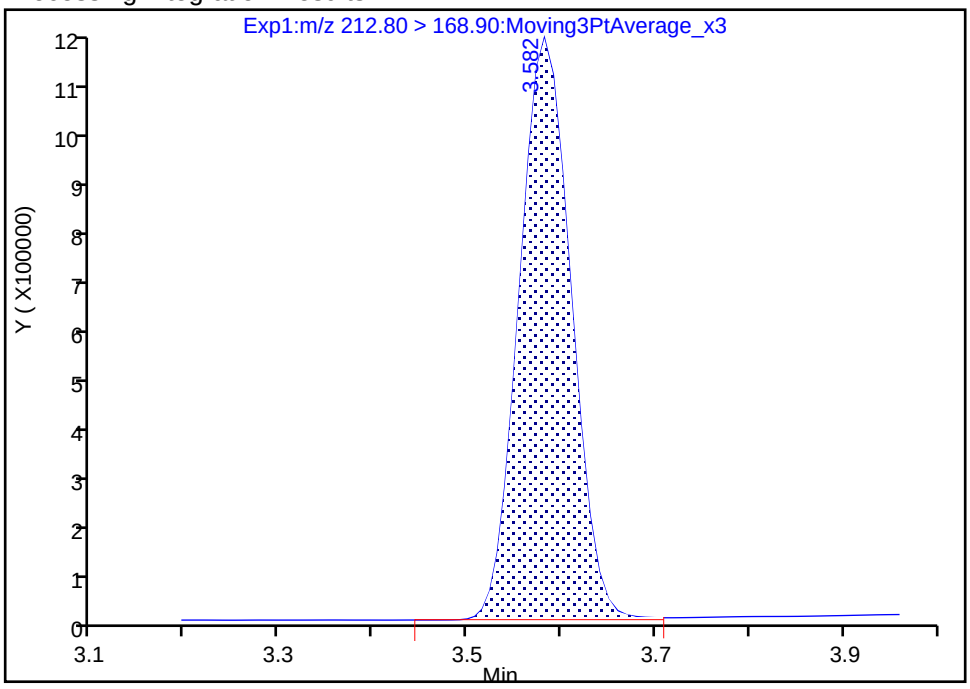
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

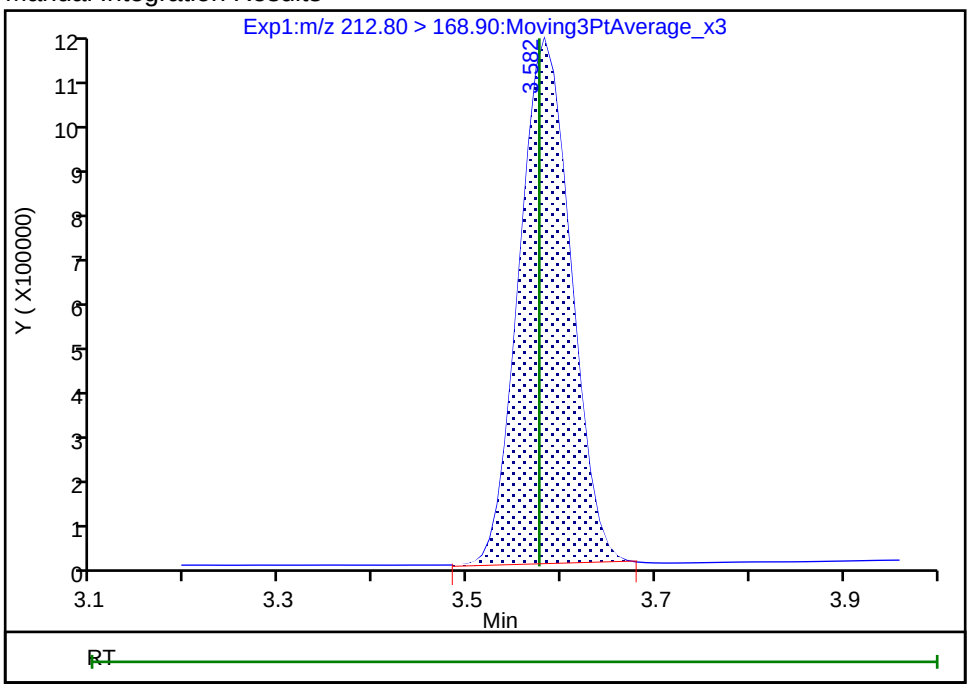
Processing Integration Results

RT: 3.58
Area: 4442007
Amount: 2.488336
Amount Units: ng/ml



Manual Integration Results

RT: 3.58
Area: 4391797
Amount: 2.460209
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:51:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

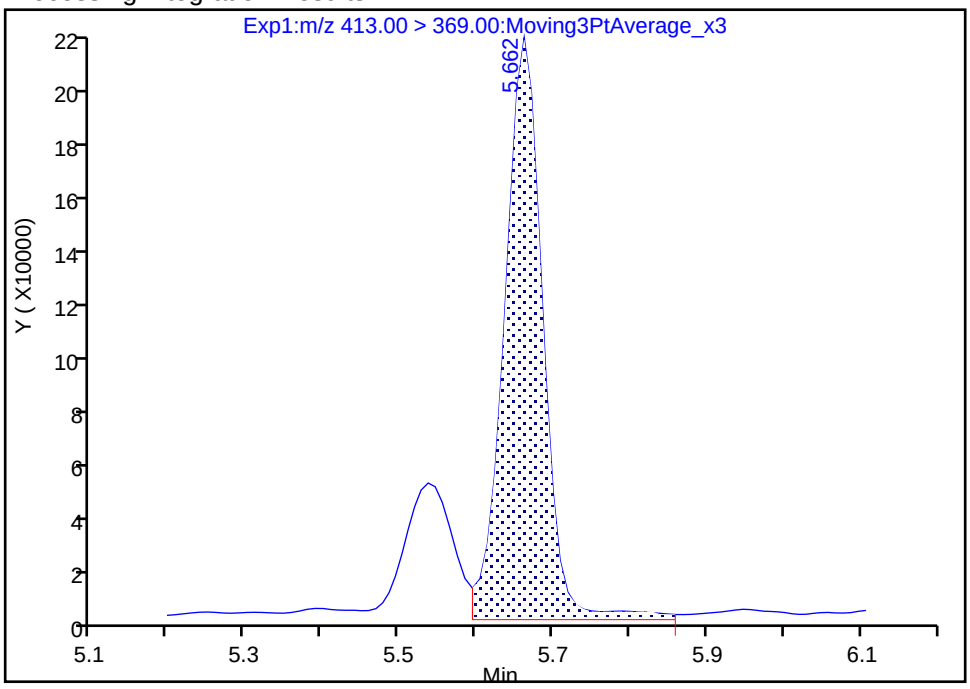
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

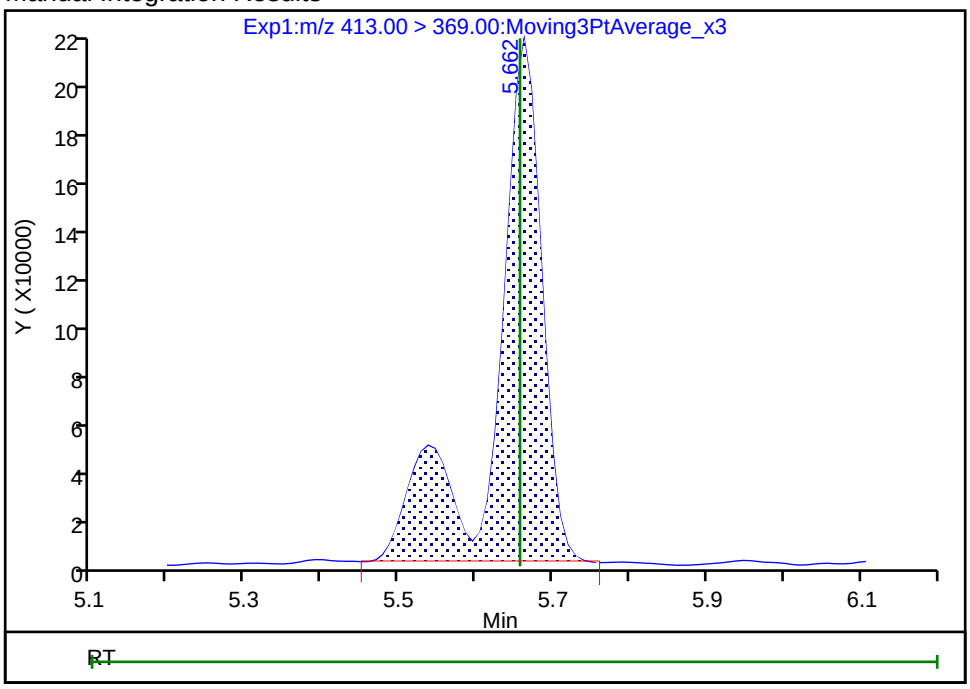
Processing Integration Results

RT: 5.66
Area: 735055
Amount: 0.522012
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 875099
Amount: 0.621467
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:52:15 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

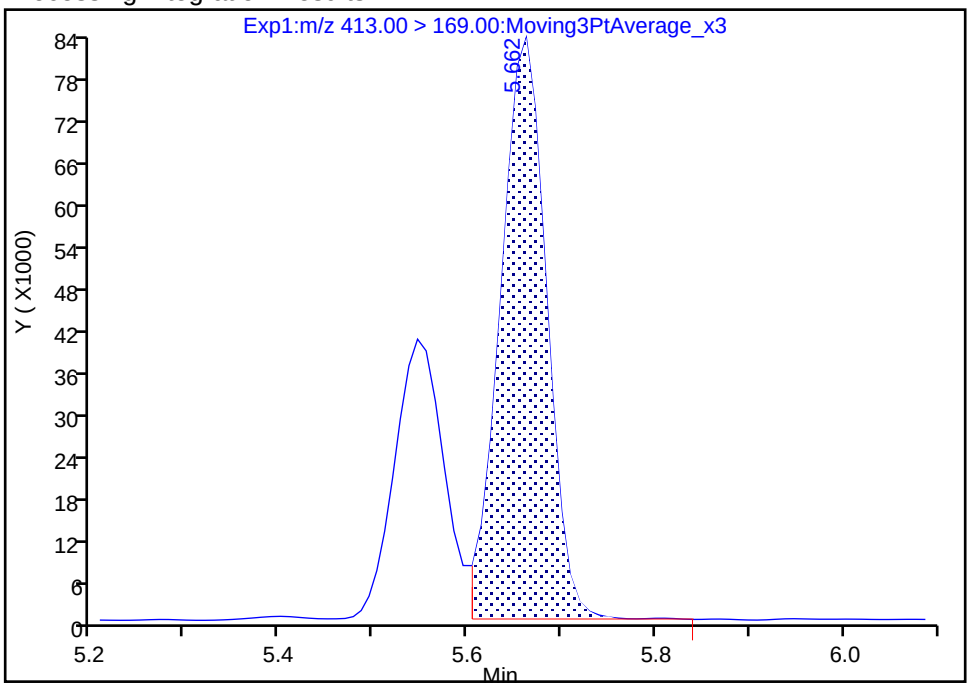
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

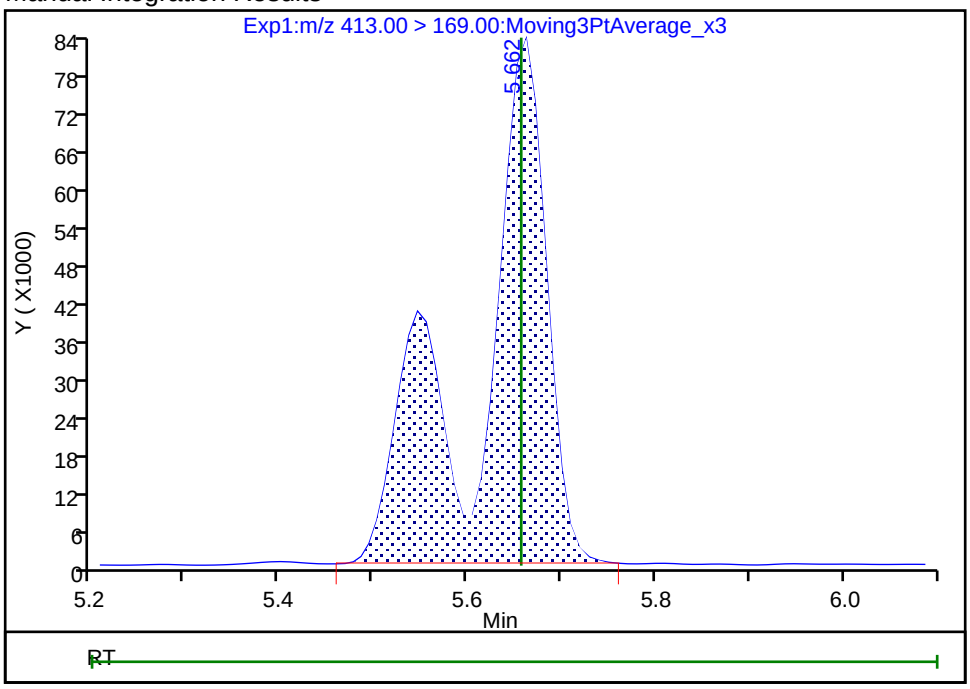
Processing Integration Results

RT: 5.66
Area: 285248
Amount: 0.522012
Amount Units: ng/ml



Manual Integration Results

RT: 5.66
Area: 425418
Amount: 0.621467
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:52:27 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

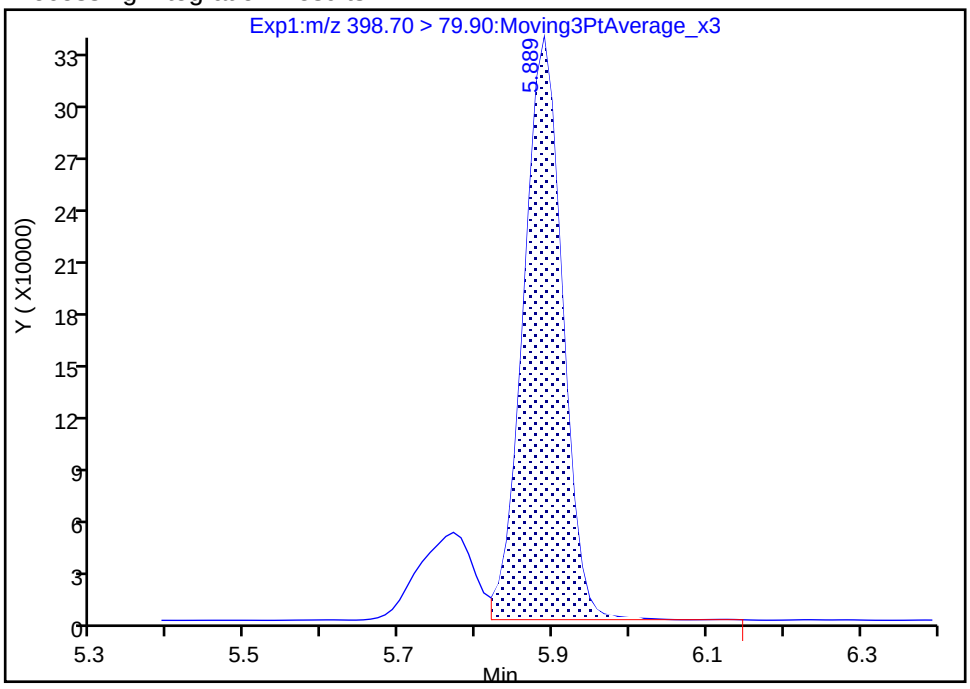
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

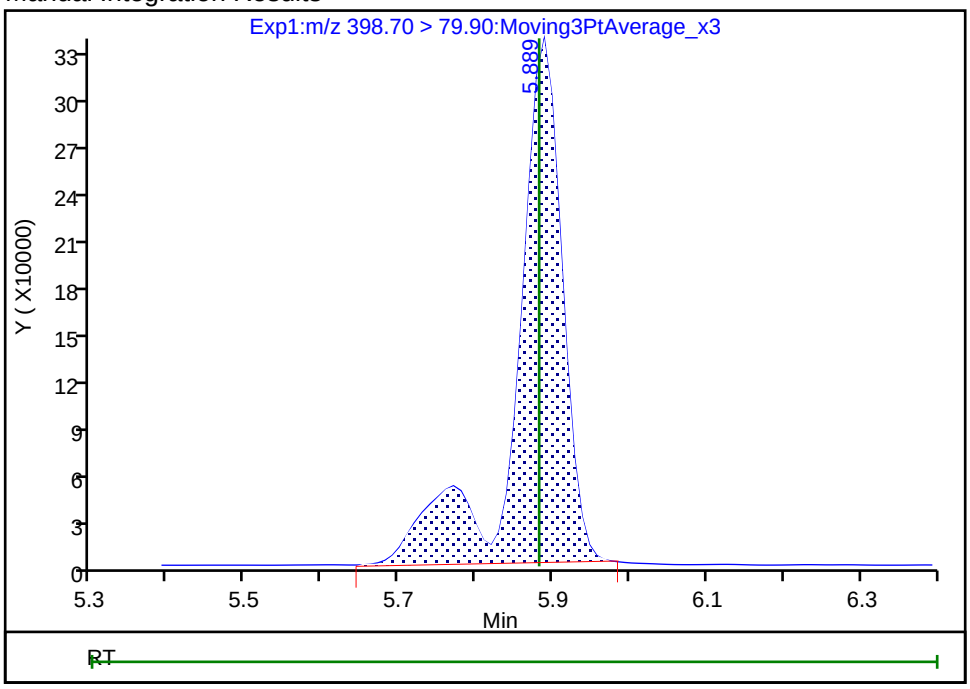
Processing Integration Results

RT: 5.89
Area: 1192227
Amount: 0.445769
Amount Units: ng/ml



Manual Integration Results

RT: 5.89
Area: 1411296
Amount: 0.527678
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:52:45 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

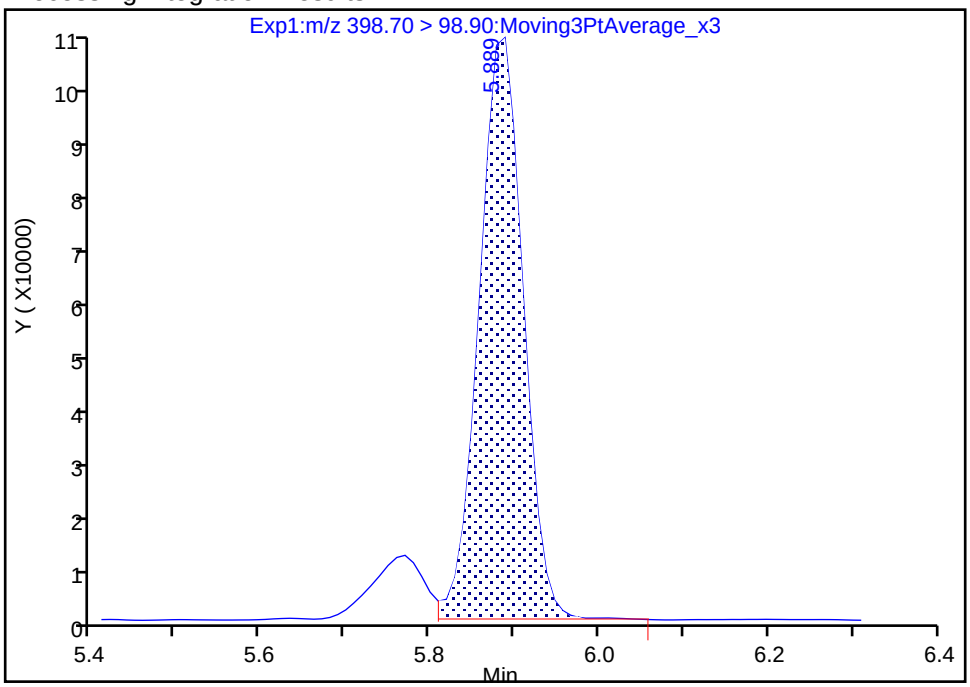
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

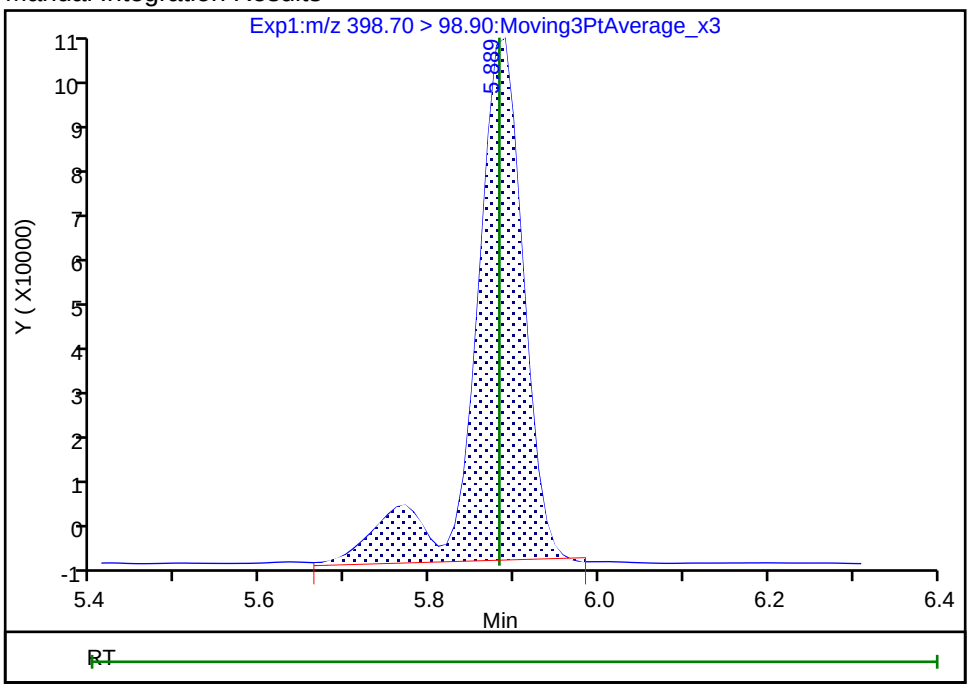
Processing Integration Results

RT: 5.89
Area: 387546
Amount: 0.445769
Amount Units: ng/ml



Manual Integration Results

RT: 5.89
Area: 433244
Amount: 0.527678
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:52:57 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

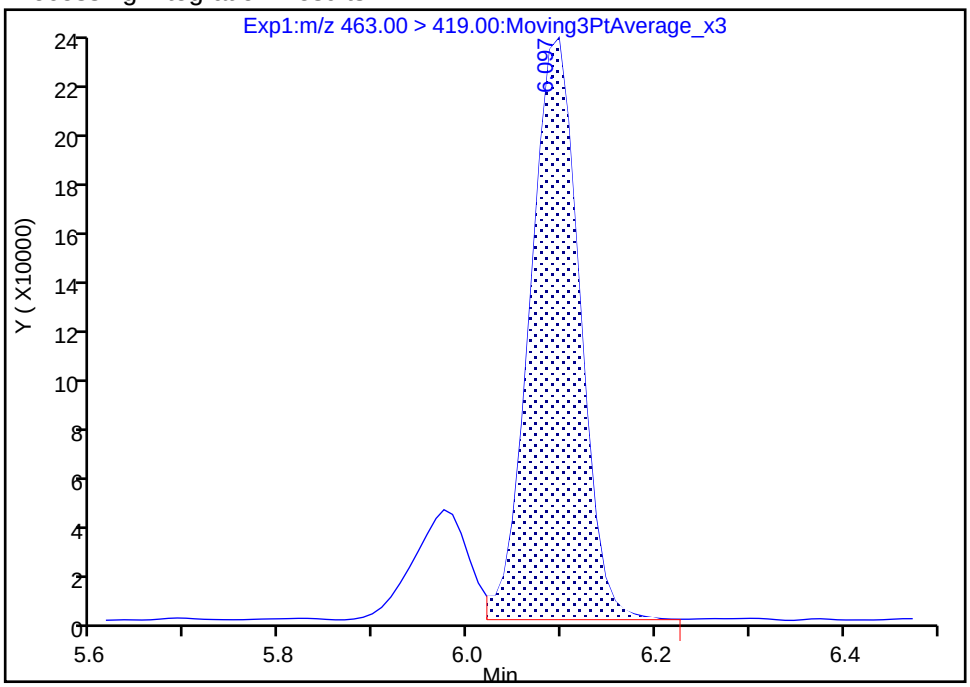
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

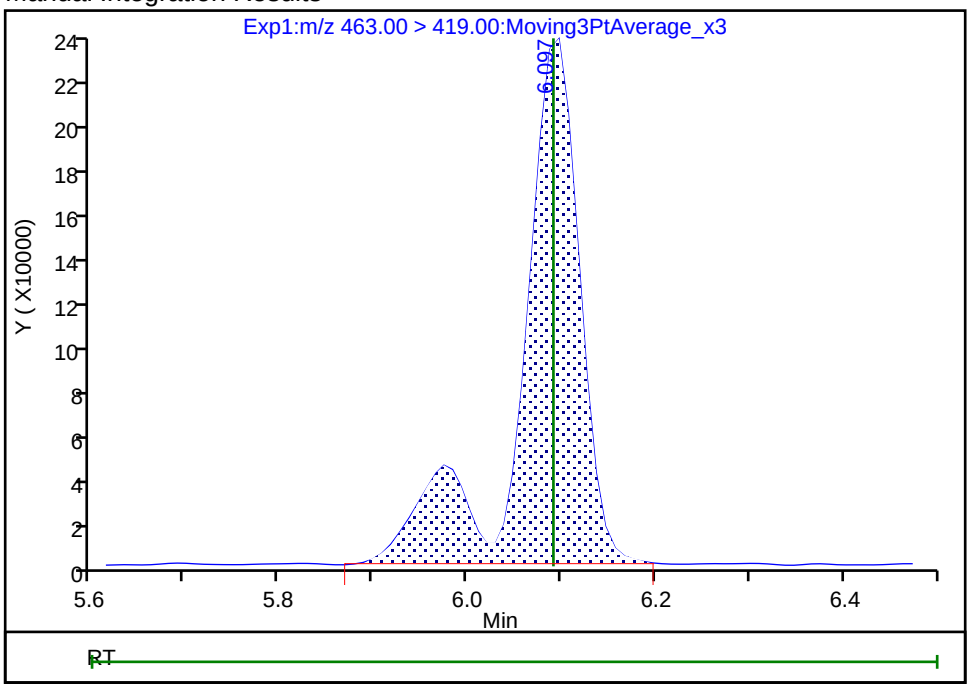
Processing Integration Results

RT: 6.10
Area: 862036
Amount: 0.548188
Amount Units: ng/ml



Manual Integration Results

RT: 6.10
Area: 1035097
Amount: 0.658241
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:53:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

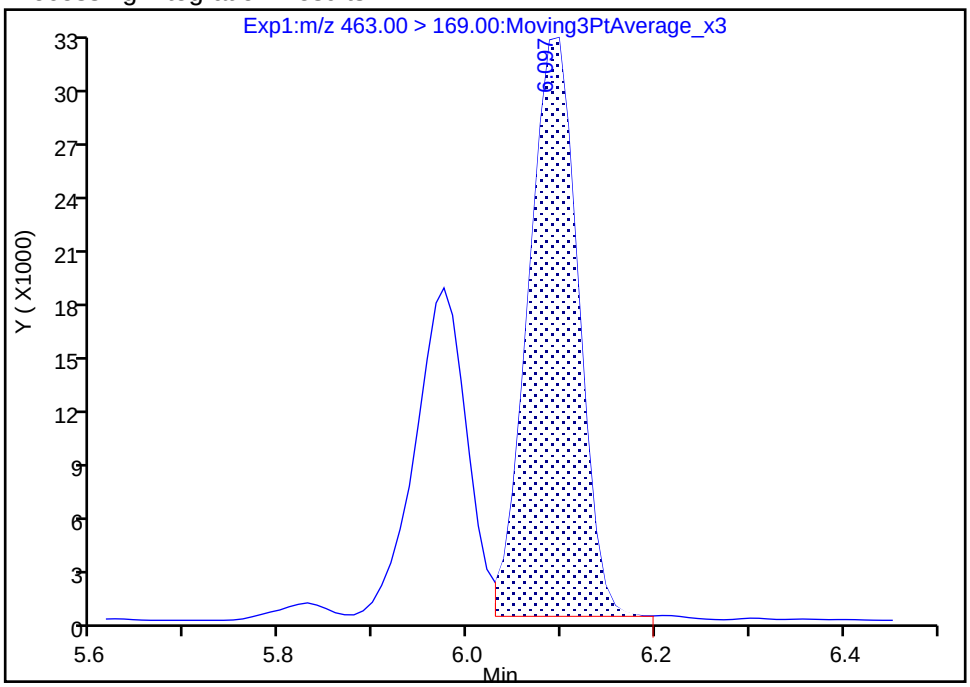
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

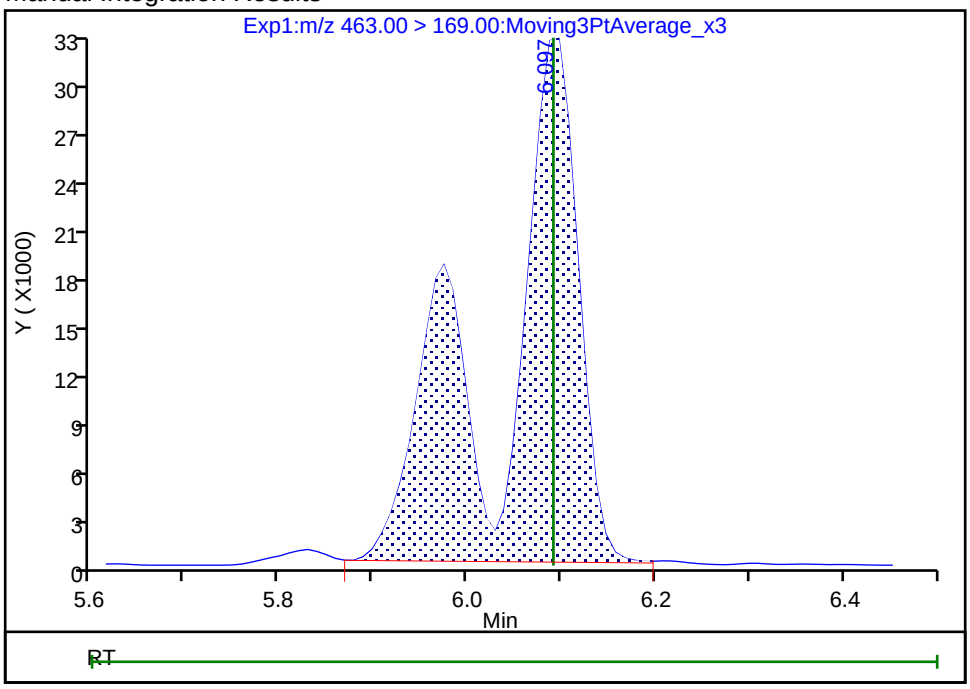
Processing Integration Results

RT: 6.10
Area: 119945
Amount: 0.548188
Amount Units: ng/ml



Manual Integration Results

RT: 6.10
Area: 189246
Amount: 0.658241
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:53:26 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

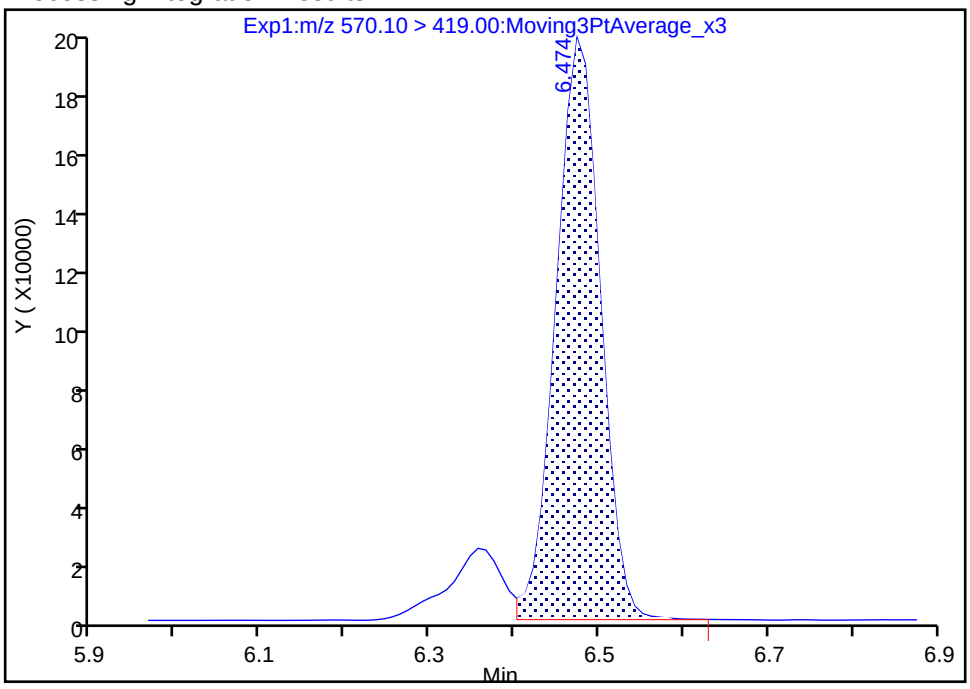
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

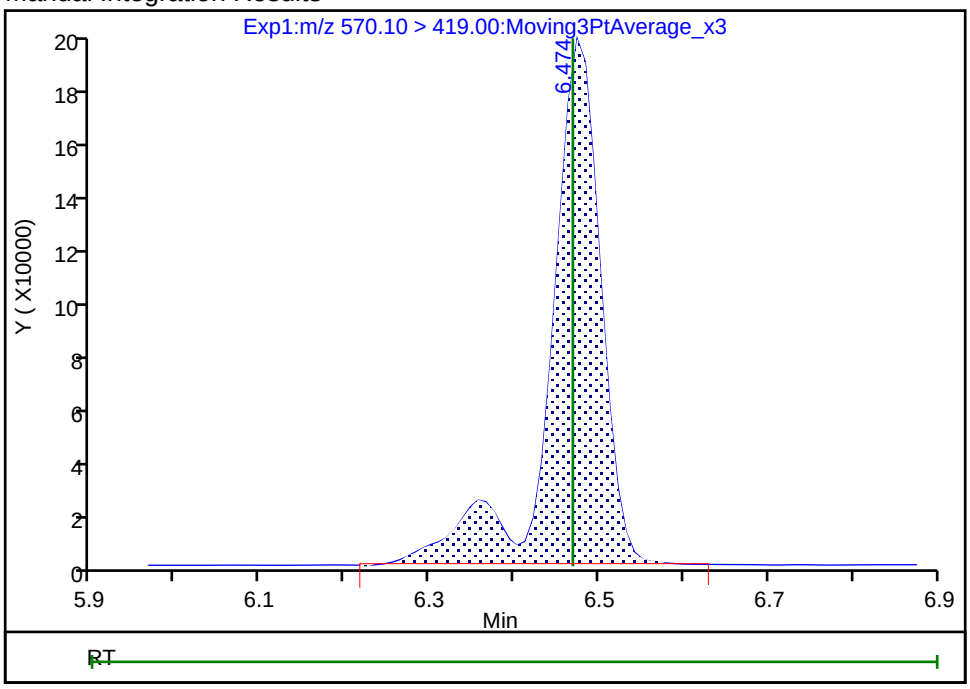
Processing Integration Results

RT: 6.47
Area: 695245
Amount: 0.575851
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 798868
Amount: 0.661679
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:53:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

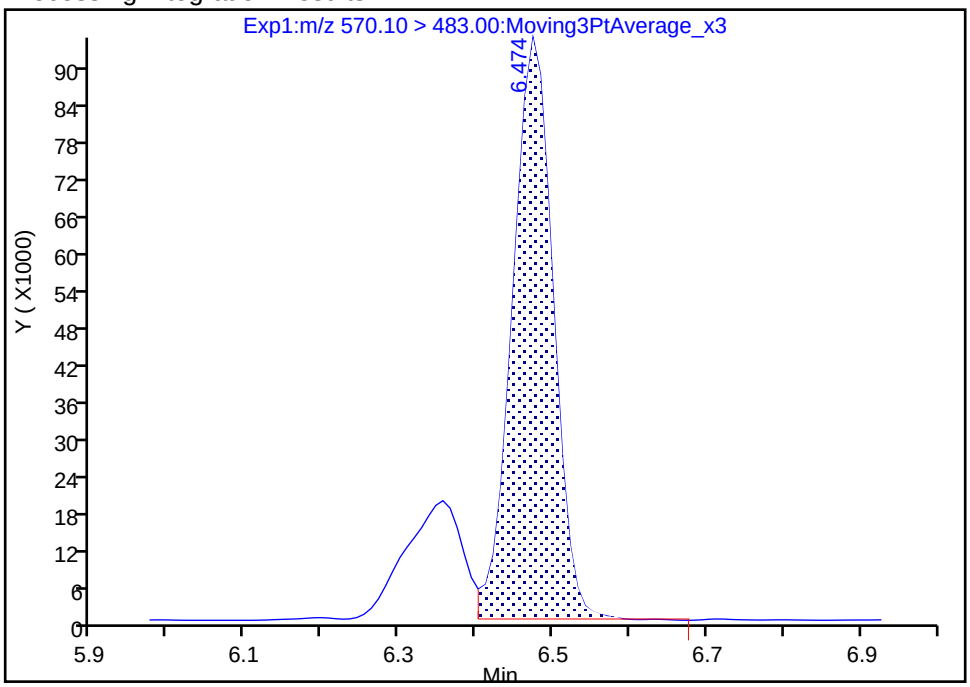
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

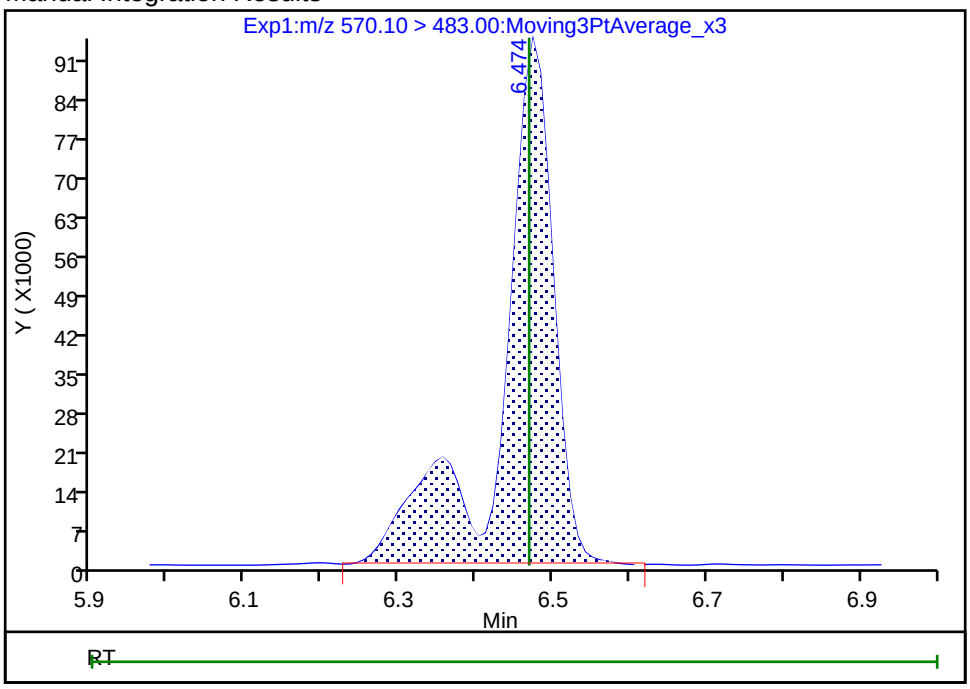
Processing Integration Results

RT: 6.47
Area: 347381
Amount: 0.575851
Amount Units: ng/ml



Manual Integration Results

RT: 6.47
Area: 439345
Amount: 0.661679
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:53:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

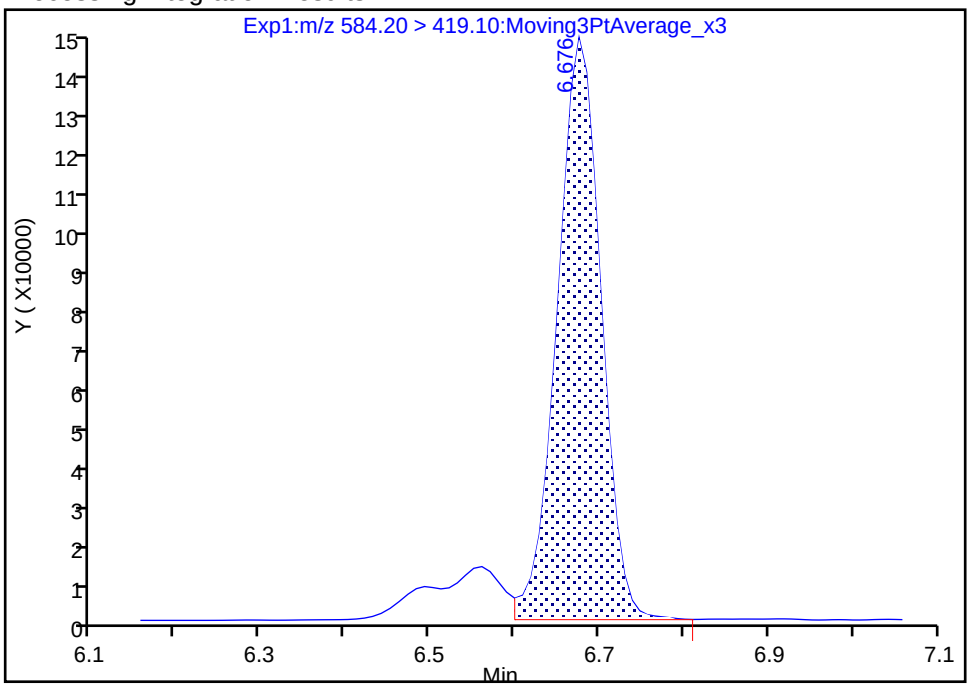
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

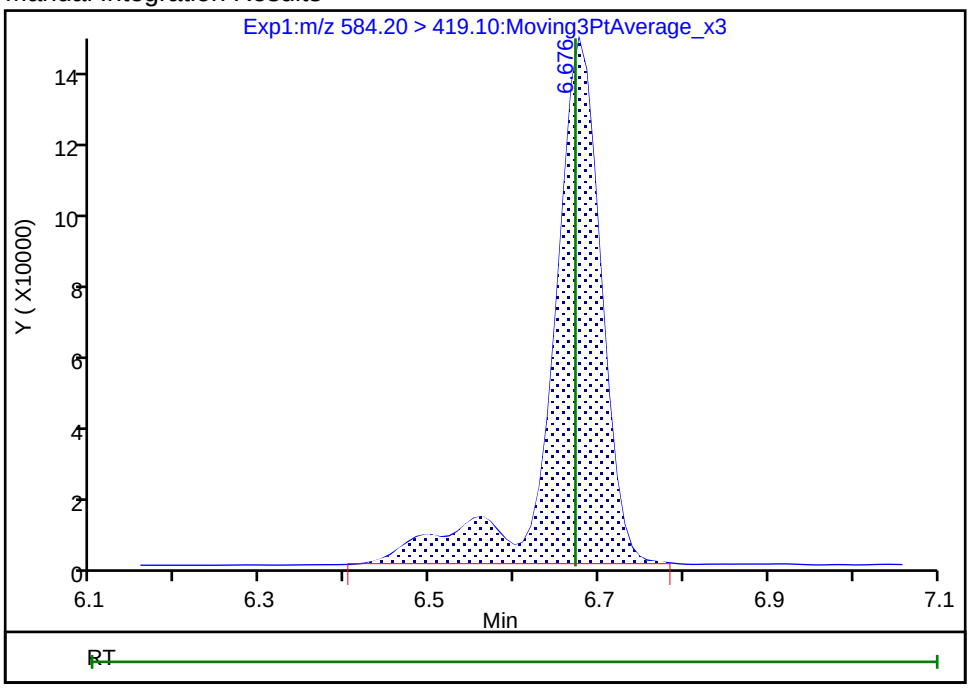
Processing Integration Results

RT: 6.68
Area: 502031
Amount: 0.530884
Amount Units: ng/ml



Manual Integration Results

RT: 6.68
Area: 572876
Amount: 0.605800
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:54:09 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

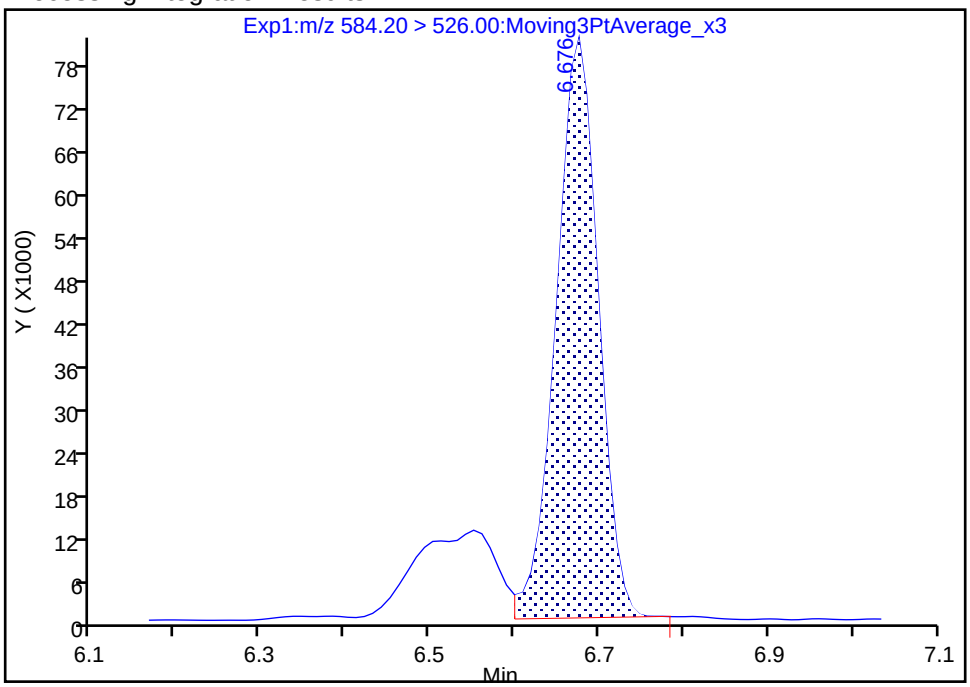
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

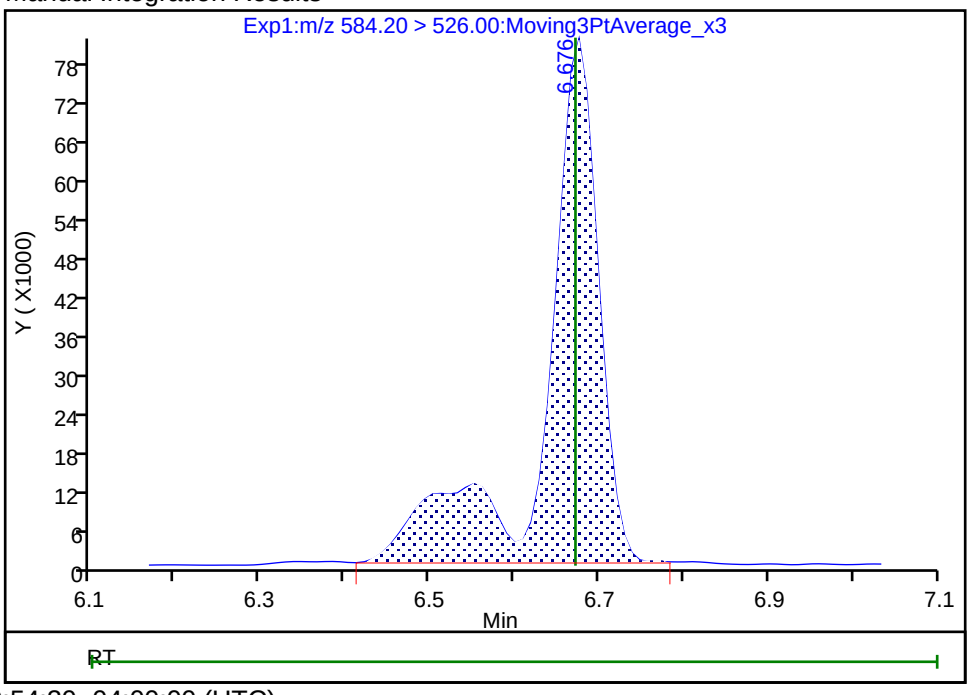
Processing Integration Results

RT: 6.68
Area: 278847
Amount: 0.530884
Amount Units: ng/ml



Manual Integration Results

RT: 6.68
Area: 357079
Amount: 0.605800
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:54:30 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

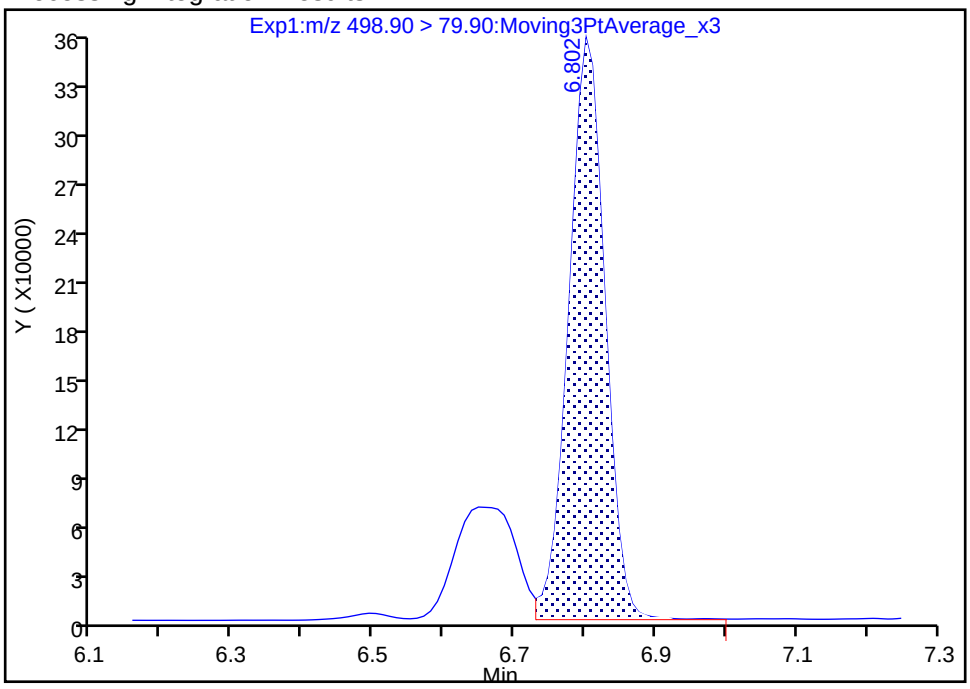
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

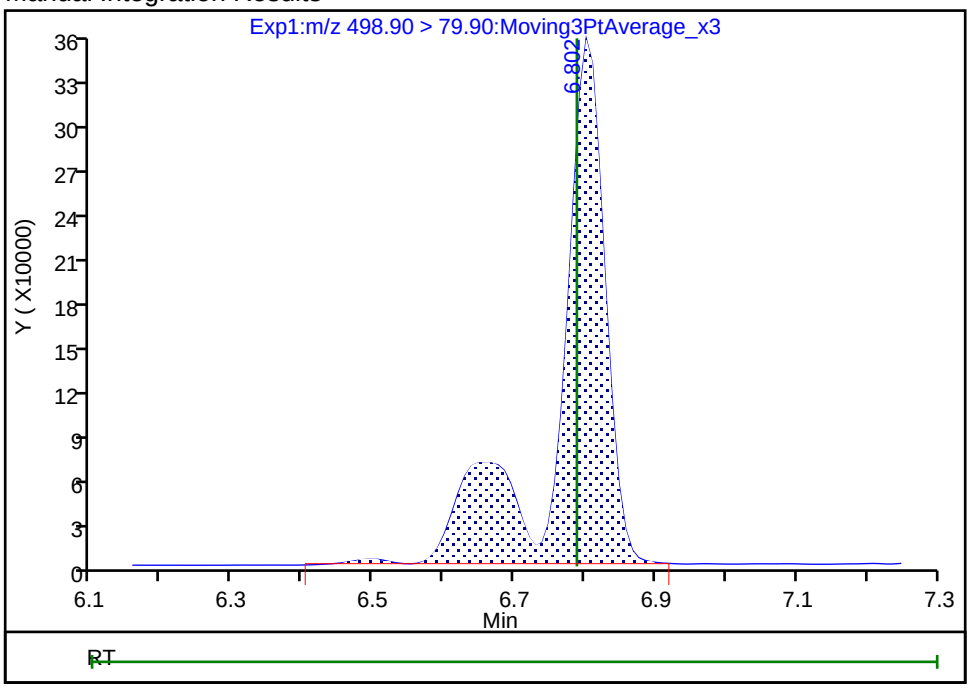
Processing Integration Results

RT: 6.80
Area: 1265995
Amount: 0.349091
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 1685409
Amount: 0.464742
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:54:41 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

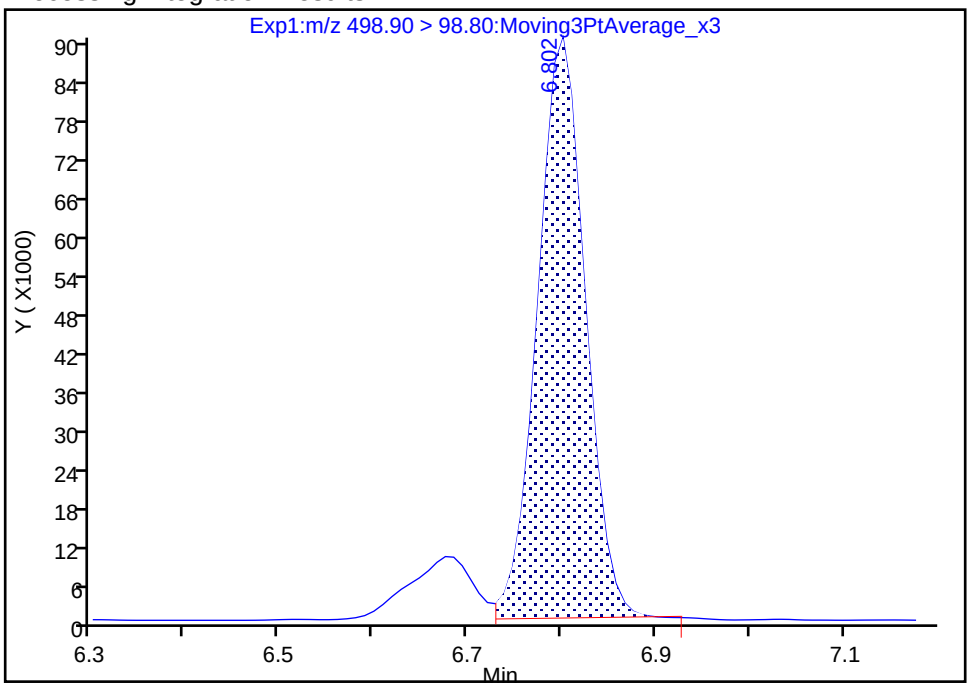
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

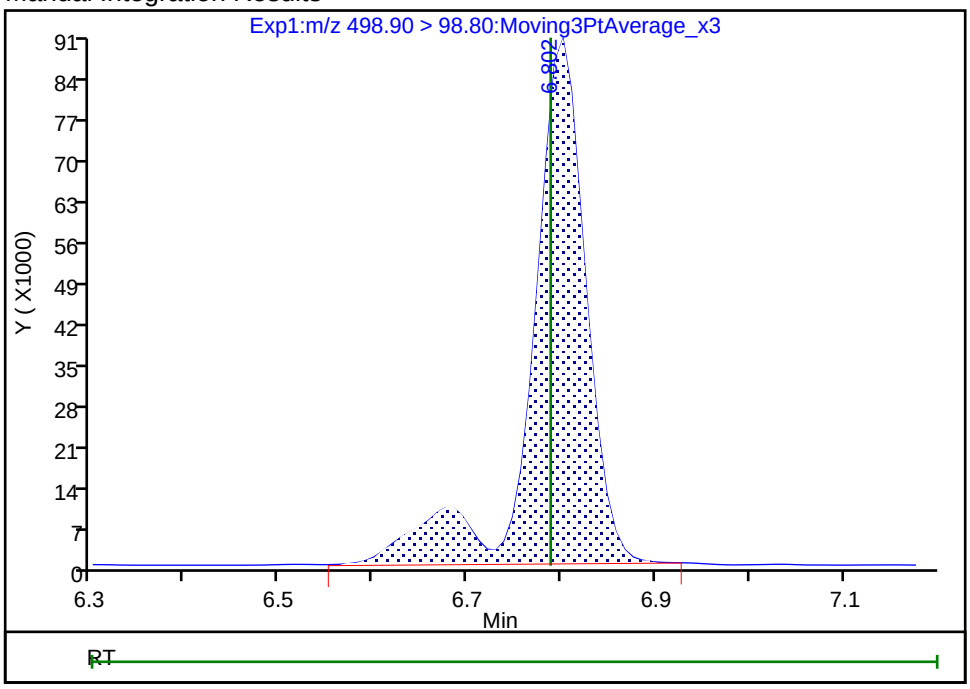
Processing Integration Results

RT: 6.80
Area: 319642
Amount: 0.349091
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 365324
Amount: 0.464742
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:54:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

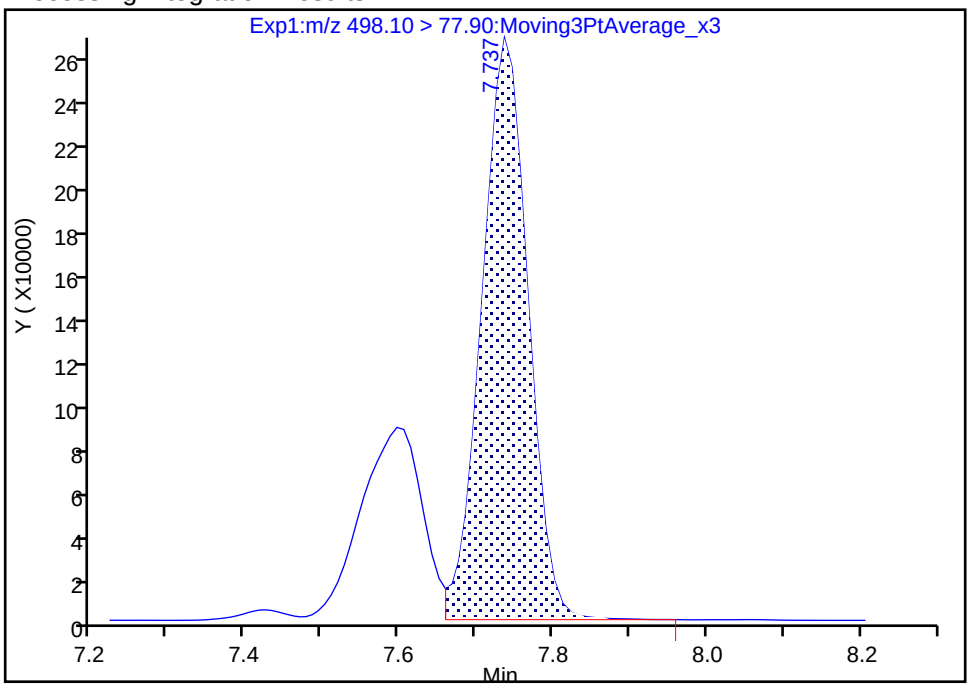
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

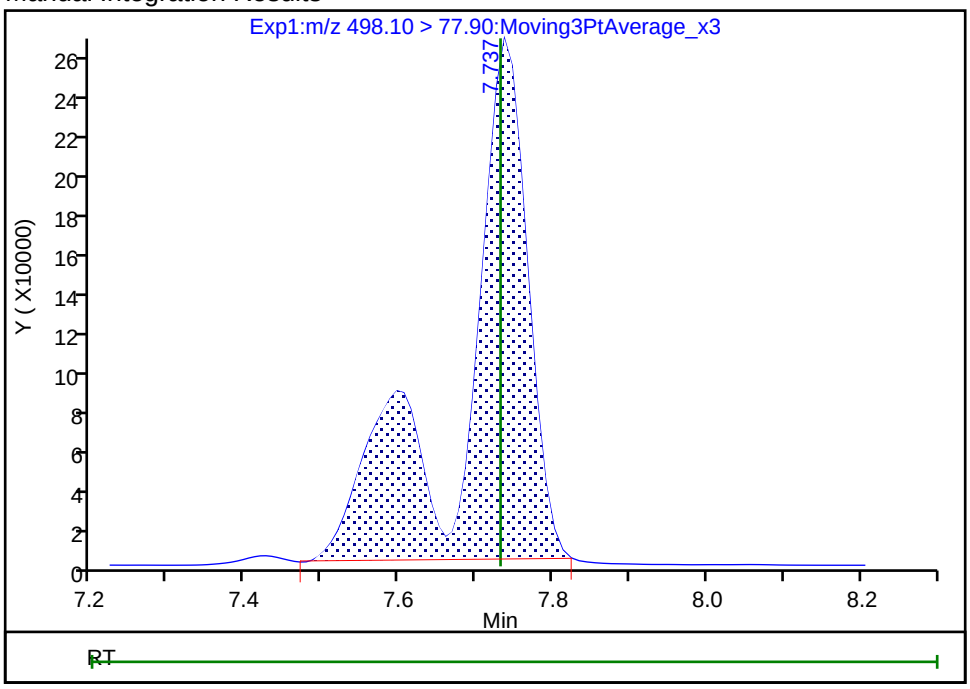
Processing Integration Results

RT: 7.74
Area: 1105453
Amount: 0.433641
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 1533321
Amount: 0.601483
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:55:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

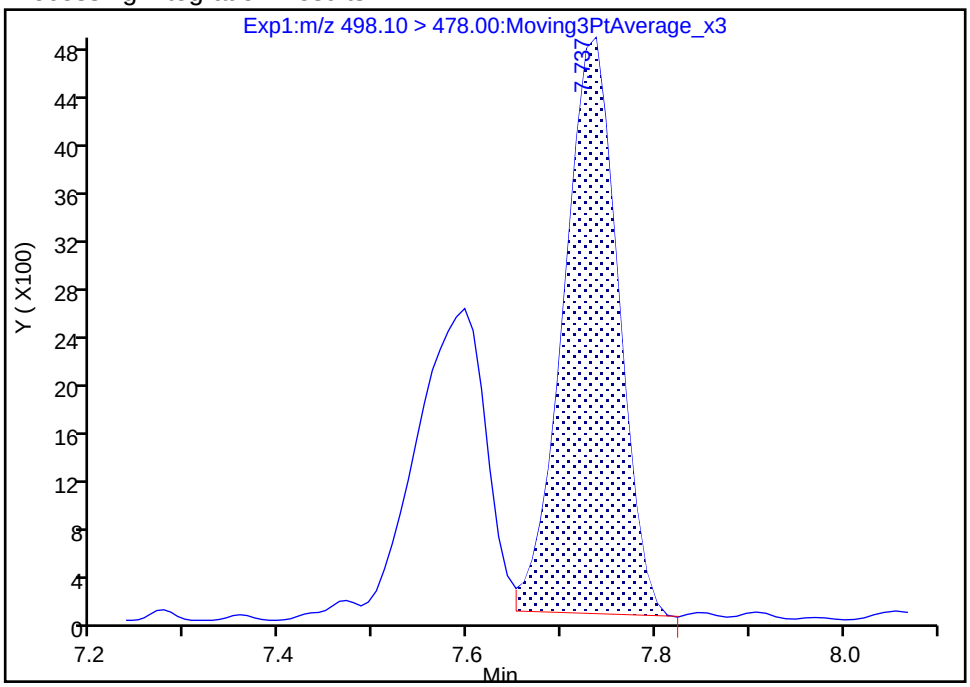
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

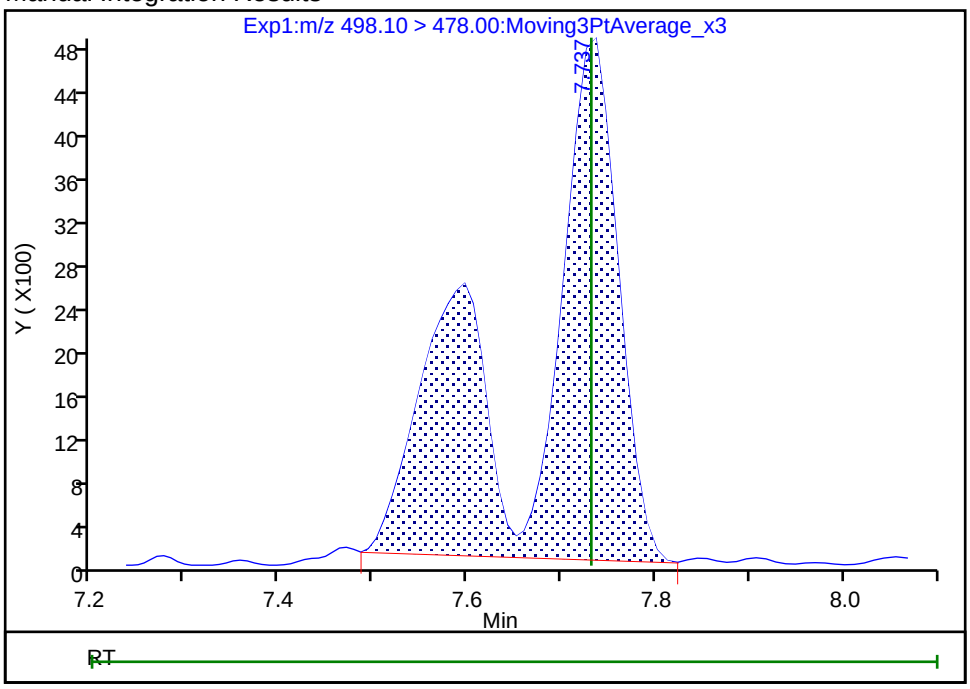
Processing Integration Results

RT: 7.74
Area: 19243
Amount: 0.433641
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 31584
Amount: 0.601483
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:55:14 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

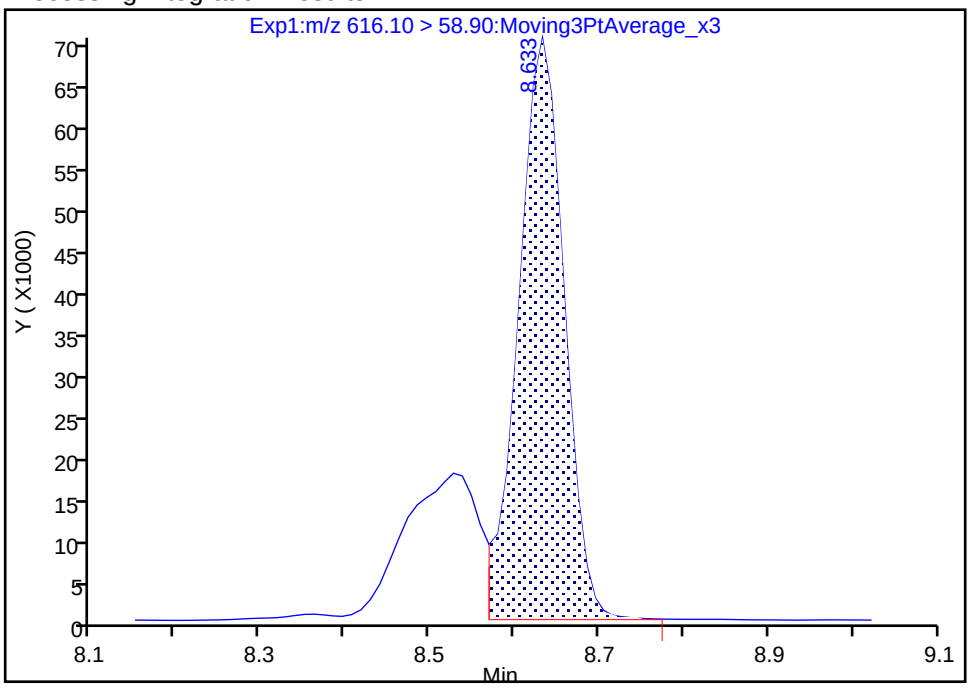
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

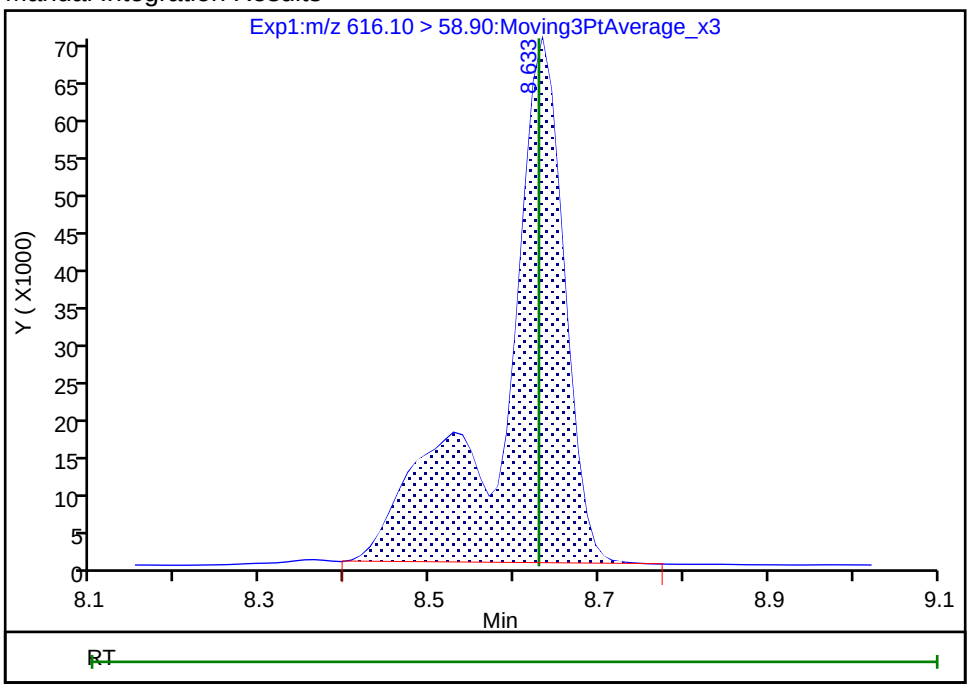
Processing Integration Results

RT: 8.63
Area: 262011
Amount: 4.447242
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 363769
Amount: 6.174430
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:55:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

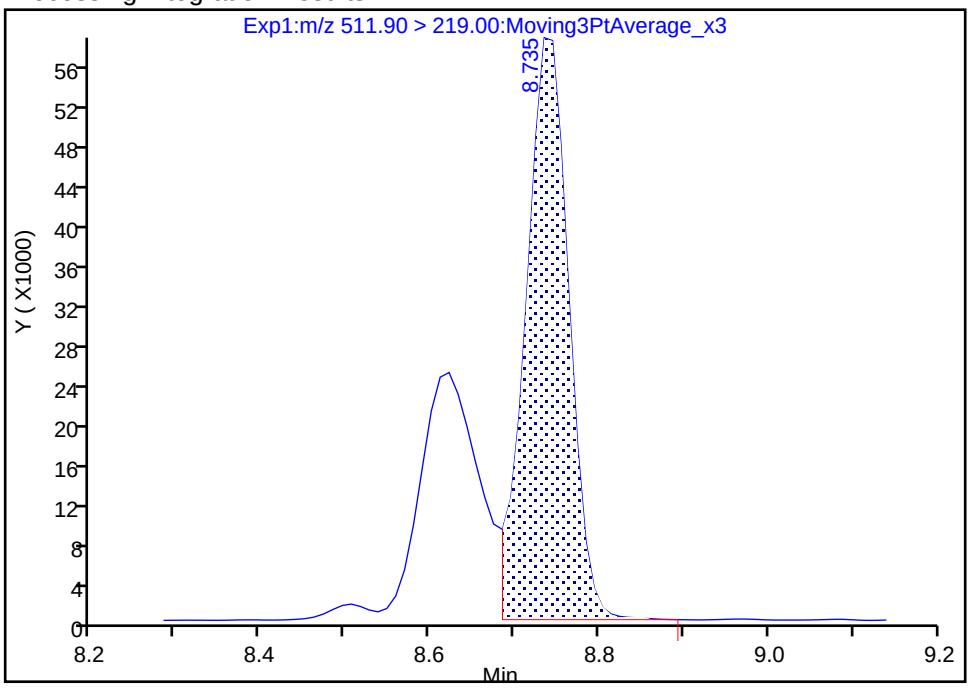
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

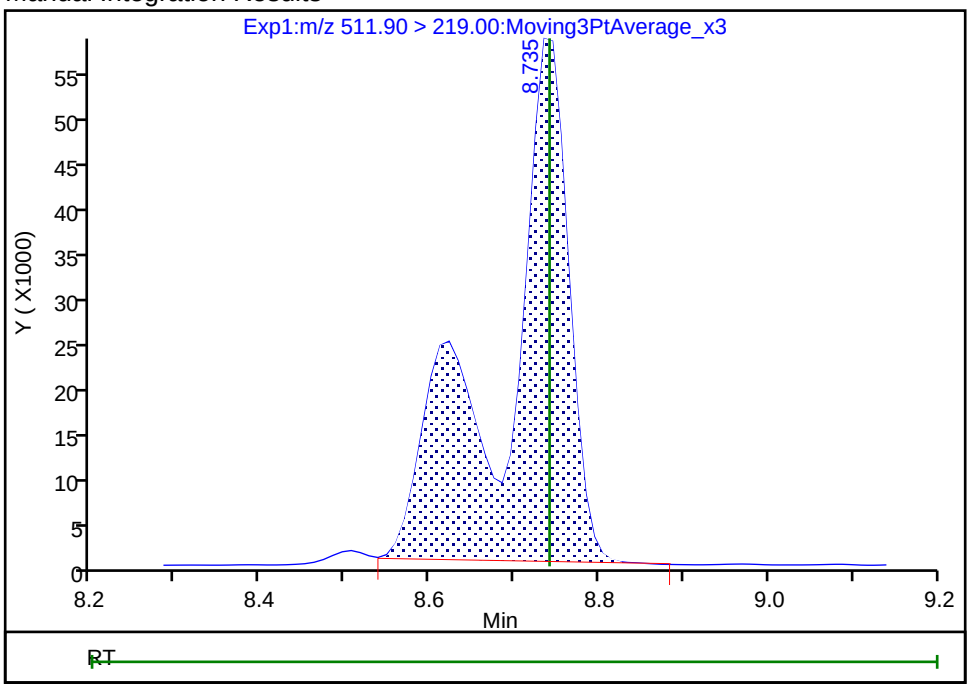
Processing Integration Results

RT: 8.74
Area: 207340
Amount: 0.370125
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 318229
Amount: 0.568074
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:55:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

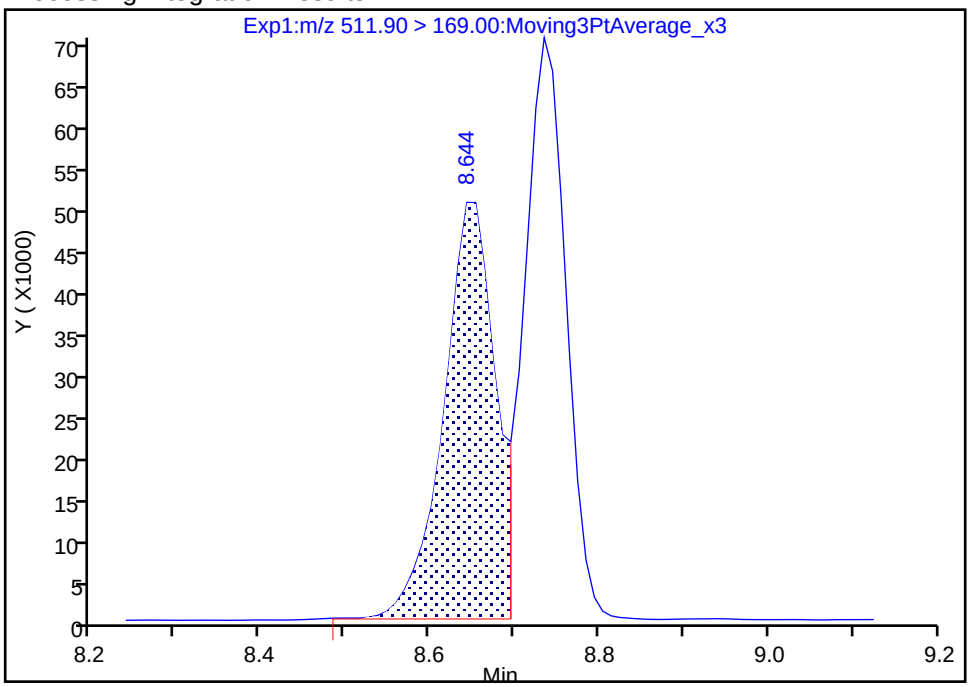
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d
Injection Date: 10-Sep-2024 19:01:36 Instrument ID: LCMS04
Lims ID: ICV
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

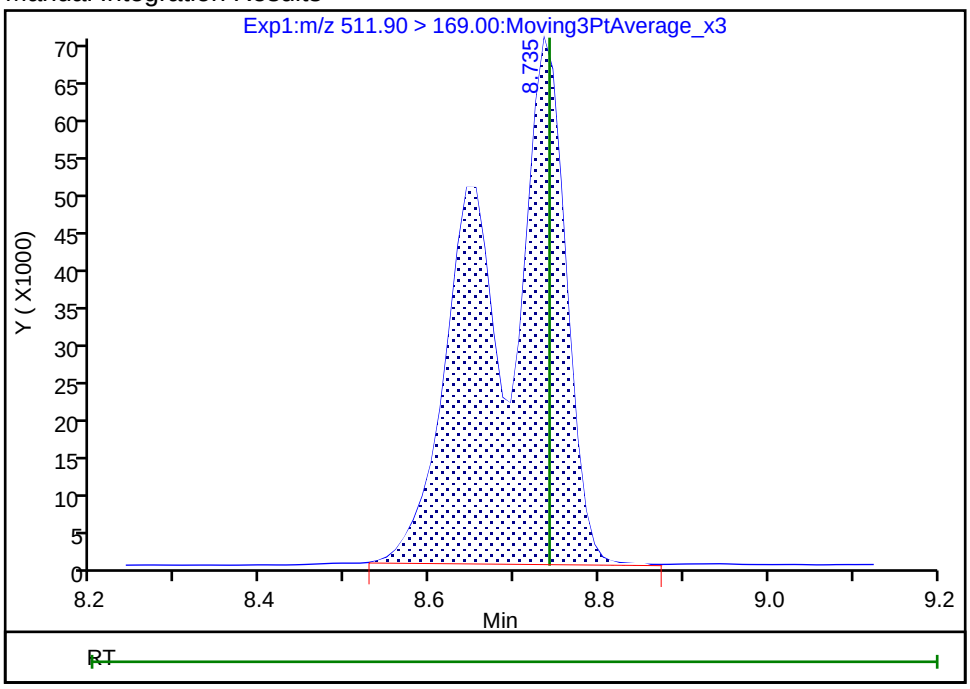
Processing Integration Results

RT: 8.64
Area: 210779
Amount: 0.370125
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 443490
Amount: 0.568074
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:55:52 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

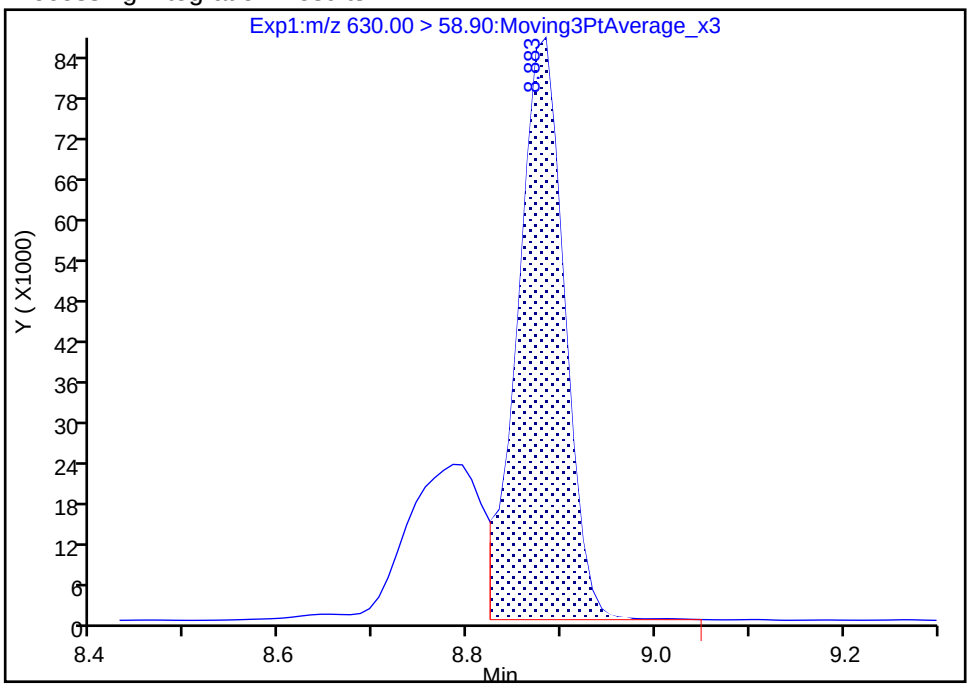
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

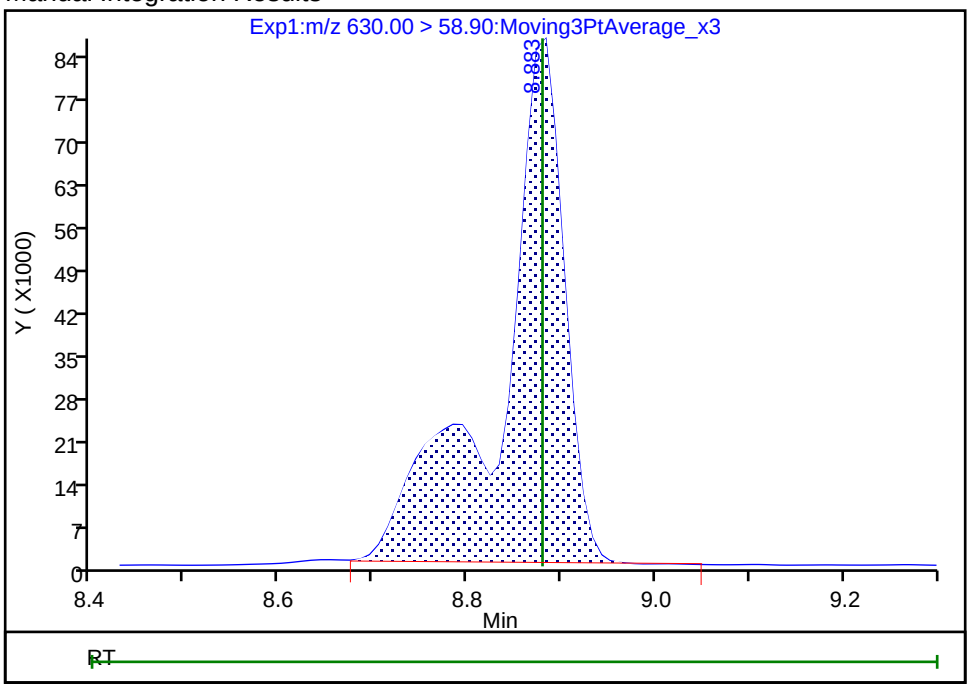
Processing Integration Results

RT: 8.88
Area: 294444
Amount: 3.763585
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 409176
Amount: 5.230090
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:56:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

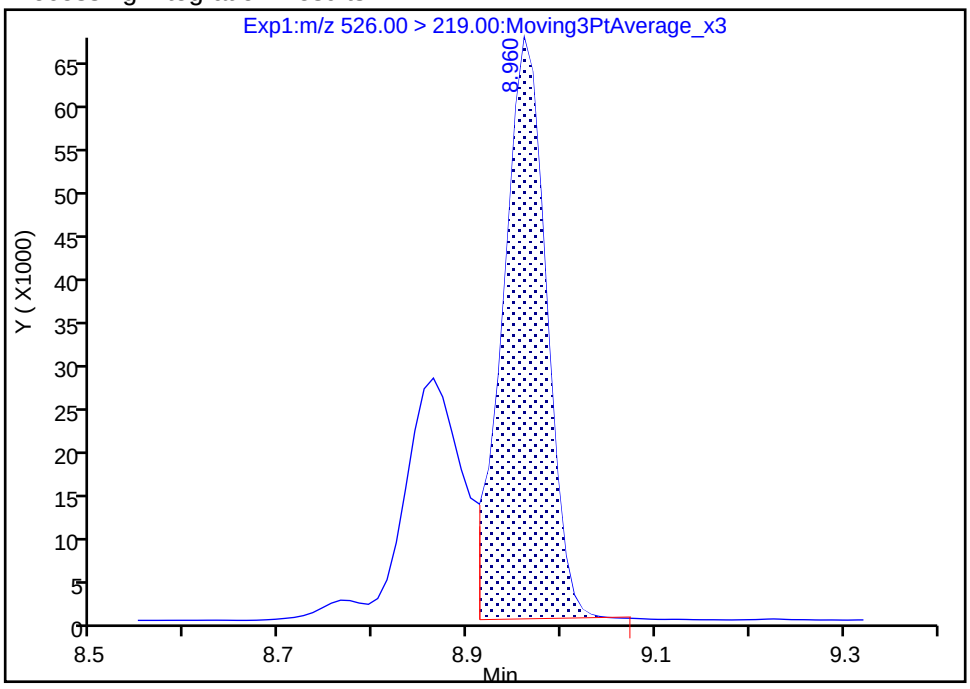
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

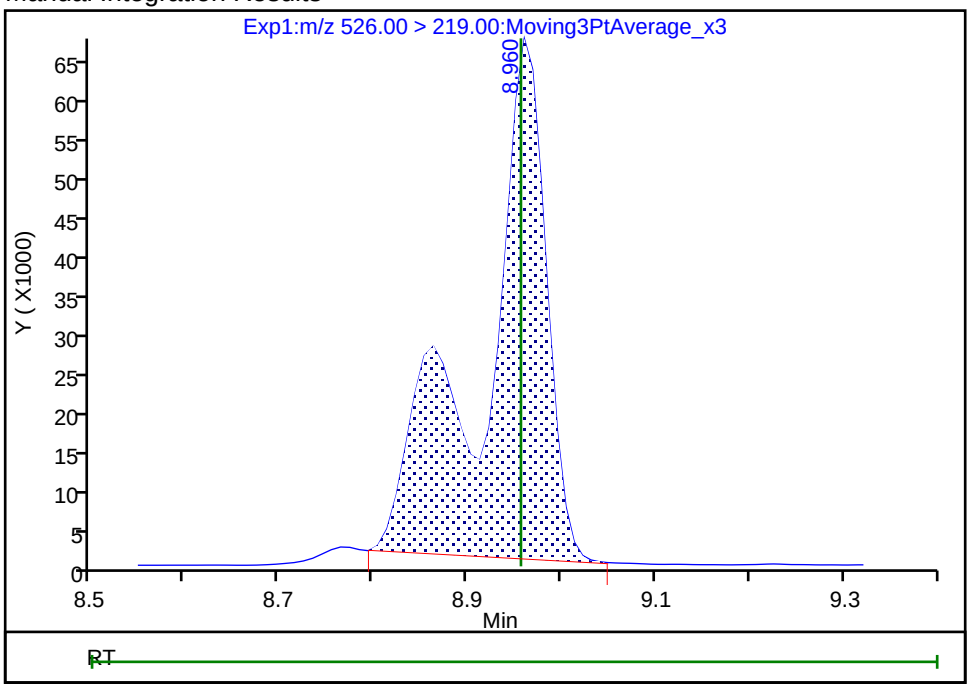
Processing Integration Results

RT: 8.96
Area: 215100
Amount: 0.359615
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 315457
Amount: 0.527396
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:56:12 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

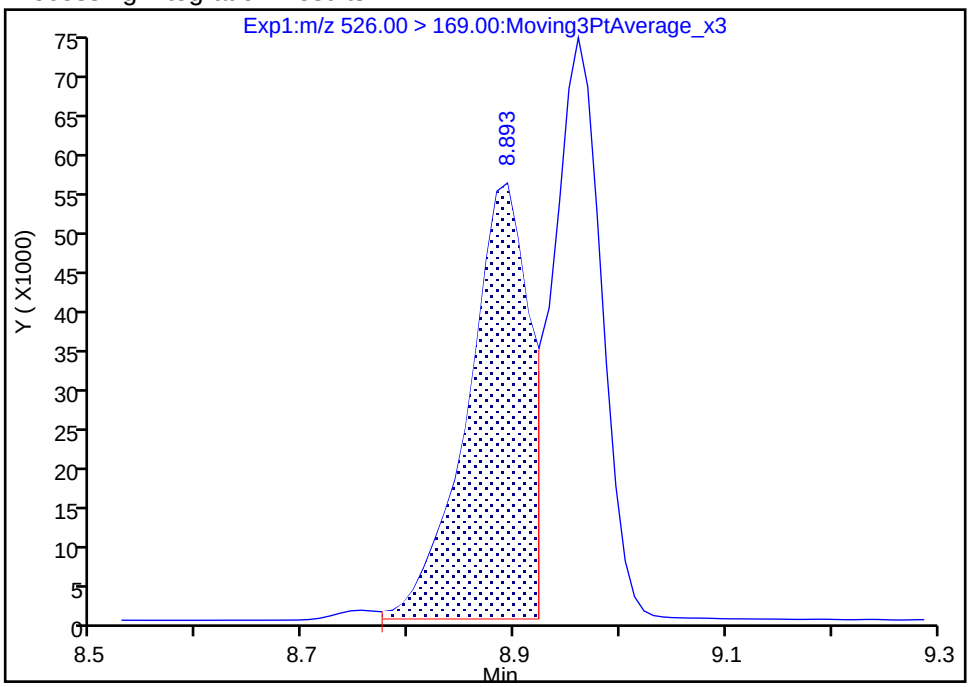
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj09.d				
Injection Date:	10-Sep-2024 19:01:36	Instrument ID:	LCMS04		
Lims ID:	ICV				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	9
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

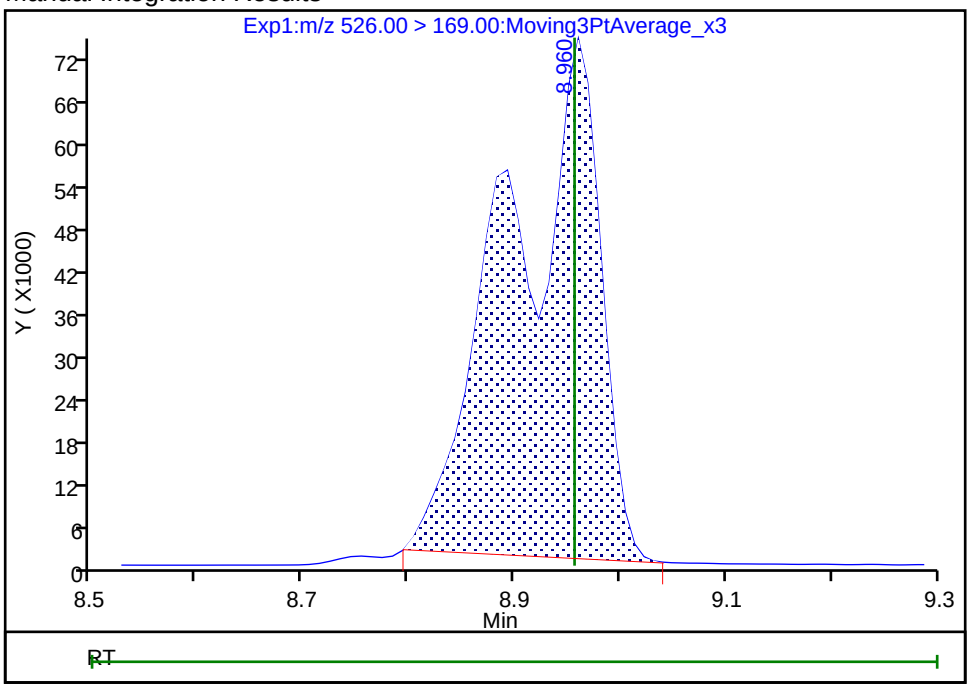
Processing Integration Results

RT: 8.89
Area: 224611
Amount: 0.359615
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 443898
Amount: 0.527396
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:56:22 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/2 Calibration Date: 09/18/2024 16:37

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj02.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9501	0.8858		0.186	0.200	-6.8	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.374	1.277		0.0930	0.100	-7.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0603	0.0533		0.221	0.250	-11.6	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.532	1.441		0.0941	0.100	-5.9	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.450	1.412		0.0974	0.100	-2.6	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	2.988	2.451		0.153	0.187	-18.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.0878	0.0838		0.0954	0.100	-4.6	30.0
FBSA	AveID	0.6842	0.5693		0.166	0.200	-16.8	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7948	0.7693		0.0484	0.0500	-3.2	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1416	0.1300		1.15	1.25	-8.2	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.9713	0.8980		0.0409	0.0442	-7.5	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.102	0.9904		0.180	0.200	-10.1	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.926	2.849		0.0867	0.0890	-2.6	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.081	1.089		0.0504	0.0500	0.7	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	5.350	5.662		0.199	0.188	5.8	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.027	0.9228		0.0421	0.0469	-10.2	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	2.380	2.068		0.165	0.190	-13.1	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.4797	0.5230		0.0545	0.0500	9.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.1352	0.1234		1.14	1.25	-8.7	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8538	0.7984		0.0425	0.0455	-6.5	30.0
Perfluorononanoic acid (PFNA)	AveID	0.7575	0.8262		0.0545	0.0500	9.1	30.0
FHxSA	AveID	1.005	0.8439		0.168	0.200	-16.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	2.491	2.147		0.165	0.192	-13.8	30.0
PFECHS	AveID	1.691	1.607		0.0876	0.0922	-5.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.172	1.017		0.0413	0.0476	-13.2	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.102	1.119		0.0508	0.0500	1.6	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.7939	0.6529		0.0411	0.0500	-17.8	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8346	0.7369		0.0441	0.0500	-11.7	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.258	1.033		0.0381	0.0464	-17.9	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/2 Calibration Date: 09/18/2024 16:37

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj02.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoroundecanoic acid (PFUnA)	AveID	0.9017	0.8244		0.0457	0.0500	-8.6	30.0
9-Chlorohexadecafluoro-3-oxa nonane-1-sulfonic acid	AveID	4.753	4.849		0.190	0.186	2.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9527	0.7738		0.0390	0.0480	-18.8	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9900	0.8501		0.0429	0.0500	-14.1	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.078	0.9007		0.0403	0.0482	-16.5	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9397	0.7838		0.0417	0.0500	-16.6	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.212	1.095		0.0452	0.0500	-9.6	30.0
11-Chloroeicosafluoro-3-oxau ndecane-1-sulfonic acid	AveID	4.613	4.796		0.196	0.188	4.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	1.253	1.278		0.0510	0.0500	1.9	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9128	0.7145		0.0379	0.0484	-21.7	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	0.1480	0.1376		0.465	0.500	-7.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9739	0.9321		0.0479	0.0500	-4.3	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	0.1350	0.1294		0.479	0.500	-4.2	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.9863	0.9370		0.0475	0.0500	-5.0	30.0
13C4 PFBA	Ave	1.135	1.039		2.29	2.50	-8.5	30.0
13C5 PFPeA	Ave	0.7848	0.6735		1.07	1.25	-14.2	30.0
M2-4:2 FTS	Ave	0.3348	0.4590		1.60	1.17	37.1*	30.0
13C5 PFHxA	Ave	1.405	1.232		0.548	0.625	-12.3	30.0
13C3 PFBS	Ave	1.069	1.144		0.622	0.581	7.0	30.0
13C3 HFPO-DA	Ave	0.4045	0.3454		2.14	2.50	-14.6	30.0
13C4 PFHpA	Ave	1.467	1.350		0.575	0.625	-8.0	30.0
M2-6:2 FTS	Ave	0.3833	0.4827		1.50	1.19	25.9	30.0
13C8 PFOA	Ave	7.888	8.027		0.636	0.625	1.8	30.0
13C3 PFHxS	Ave	1.050	1.156		0.651	0.591	10.1	30.0
13C9 PFNA	Ave	0.7843	0.7555		0.301	0.313	-3.7	30.0
M2-8:2 FTS	Ave	0.2626	0.3571		1.63	1.20	36.0*	30.0
d3-NMeFOSAA	Ave	0.4628	0.5192		1.40	1.25	12.2	30.0
13C6 PFDA	Ave	0.9624	0.9547		0.310	0.313	-0.8	30.0
d5-NEtFOSAA	Ave	0.4555	0.5352		1.47	1.25	17.5	30.0
13C8 PFOS	Ave	1.030	1.187		0.688	0.598	15.2	30.0
13C7 PFUnA	Ave	0.9471	0.9089		0.300	0.313	-4.0	30.0
13C2-PFDoDA	Ave	0.8939	0.8845		0.309	0.313	-1.1	30.0
13C8 FOSA	Ave	1.106	1.209		0.683	0.625	9.3	30.0
13C2 PFTeDA	Ave	0.5110	0.4270		0.261	0.313	-16.4	30.0
d7-N-MeFOSE-M	Ave	0.1639	0.1402		5.35	6.25	-14.4	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/2 Calibration Date: 09/18/2024 16:37

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj02.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMePFOSA	Ave	0.2181	0.1994		0.572	0.625	-8.6	30.0
d9-N-EtFOSE-M	Ave	0.2012	0.1609		5.00	6.25	-20.1	30.0
d5-NEtPFOSA	Ave	0.2198	0.2032		0.578	0.625	-7.6	30.0

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Lims ID: CCV LOW
Client ID:
Sample Type: CCVL
Inject. Date: 18-Sep-2024 16:37:31 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV LOW
Misc. Info.: Plate: 1 Rack: 1 240-0146375-002
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:34:23 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:34:23
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.548	3.544	0.004		2352716	1.25			941	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.719	0.014		1562124	0.6250			6372	
* 3 13C4 PFOA										
417.10 > 172.00	5.634	5.629	0.005		257016	0.6250			1541	
* 4 18O2 PFHxS										
403.00 > 83.90	5.849	5.843	0.006		1760750	0.5913			3434	
* 5 13C5 PFNA										
468.00 > 423.00	6.058	6.052	0.006		981704	0.3125			1716	
* 6 13C2 PFDA										
515.10 > 470.10	6.493	6.488	0.005		820266	0.3125			1662	
* 7 13C4 PFOS										
502.80 > 79.90	6.756	6.761	-0.005		1582449	0.5975	Target=4.00		2492	
502.80 > 98.90	6.756	6.761	-0.005		420112		3.77(2.00-6.00)		2024	
D 8 13C4 PFBA										
216.80 > 171.90	3.548	3.544	0.004	1.000	4889211	2.29		91.5	17292	
D 9 13C5 PFPeA										
268.30 > 223.00	4.216	4.202	0.014	0.891	2104103	1.07		85.8	6304	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.534	4.530	0.004	0.775	1595701	1.60	Target=0.29	137	4727	
329.10 > 309.00	4.534	4.530	0.004	0.775	4064928		0.39(0.14-0.43)	137	989	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.719	0.014	1.000	1924618	0.5480	Target=40.21	87.7	5583	
318.00 > 120.30	4.723	4.719	0.004	0.998	48571		39.62(20.11-60.32)	87.7	628	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.849	4.846	0.003	0.829	1979561	0.6218	Target=3.28	107	3844	
302.10 > 98.90	4.849	4.846	0.003	0.829	591873		3.34(1.64-4.92)	107	1983	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.926	4.923	0.003	1.041	2158425	2.14	Target=1.86	85.4	4851	
286.90 > 184.90	4.915	4.923	-0.008	1.038	1060418		2.04(0.93-2.78)	85.4	2359	
D 14 13C4 PFHpA										
367.10 > 322.00	5.198	5.194	0.004	1.098	2108182	0.5748		92.0	6438	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.421	5.416	0.005	0.927	1706859	1.50	Target=0.38	126	3619	
429.10 > 409.00	5.421	5.416	0.005	0.927	3923655		0.44(0.19-0.57)	126	6738	
D 16 13C8 PFOA										
421.10 > 376.00	5.634	5.619	0.015	1.000	2062946	0.6360		102	4111	
D 17 13C3 PFHxS										
402.10 > 79.90	5.849	5.843	0.006	1.000	2035126	0.6510	Target=3.25	110	4808	
402.10 > 98.80	5.849	5.843	0.006	1.000	605135		3.36(1.63-4.88)	110	2284	
D 18 13C9 PFNA										
472.10 > 427.00	6.058	6.052	0.006	1.000	741680	0.3010		96.3	1883	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.253	6.249	0.004	1.069	1273342	1.63	Target=0.33	136	3186	
529.10 > 509.00	6.253	6.249	0.004	1.069	3224906		0.39(0.16-0.49)	136	7225	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.431	6.427	0.004	0.952	1718976	1.40		112	3735	
D 21 13C6 PFDA										
519.10 > 474.10	6.493	6.488	0.005	1.000	783129	0.3100		99.2	2308	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.629	6.624	0.005	0.981	1771797	1.47		117	4184	
D 23 13C8 PFOS										
507.10 > 79.90	6.756	6.752	0.004	1.000	1877925	0.6882	Target=4.26	115	2318	
507.10 > 98.90	6.756	6.752	0.004	1.000	487903		3.85(2.13-6.39)	115	1250	
D 24 13C7 PFUnA										
570.00 > 525.10	6.927	6.923	0.004	1.067	745541	0.2999		96.0	1263	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.357	7.353	0.004	1.133	725532	0.3092		98.9	1533	
D 26 13C8 FOSA										
506.10 > 77.80	7.716	7.709	0.007	1.142	2000941	0.6832		109	5887	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.172	8.179	-0.006	1.259	350280	0.2611		83.6	815	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.607	0.004	1.275	2321489	5.35		85.6	581	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.734	8.721	0.013	1.293	330061	0.5715		91.4	1310	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.863	8.849	0.014	1.312	2662781	5.00		79.9	457	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.947	0.004	1.325	336330	0.5777		92.4	25.3	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.556	3.559	-0.003	1.002	346465	0.1865		93.2	2.1	M
34 3:3 FTCA										
241.00 > 177.00	3.852	3.842	0.010	0.914	22450	0.2211	Target=1.06	88.4	348	
241.00 > 117.00	3.840	3.842	-0.002	0.911	19524		1.15(0.53-1.58)		5.3	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.840	3.842	-0.002	0.911	214915	0.0930		93.0	275	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.216	4.219	-0.003	1.000	242637	0.0941		94.1	19.6	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.395	4.388	0.007	1.043	237639	0.0974		97.4	796	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.534	4.540	-0.006	1.000	625757	0.1532	Target=1.34	82.0	2727	
327.10 > 80.90	4.534	4.540	-0.006	1.000	446386		1.40(0.67-2.01)		346	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.691	4.696	-0.005	0.991	25808	0.0954	Target=1.72	95.4	226	
295.00 > 84.90	4.691	4.696	-0.005	0.991	15829		1.63(0.86-2.58)		69.1	
48 FBSA										
297.90 > 78.00	4.723	4.718	0.005	0.974	387766	0.1664		83.2	1188	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.733	4.739	-0.006	1.000	118446	0.0484	Target=14.20	96.8	14.7	
313.00 > 118.90	4.733	4.739	-0.006	1.000	9569		12.38(7.10-21.30)		58.5	
41 5:3 FTCA										
341.00 > 237.10	4.817	4.812	0.005	1.018	500224	1.15	Target=1.54	91.8	579	
341.00 > 217.00	4.817	4.812	0.005	1.018	319176		1.57(0.77-2.31)		148	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.860	4.856	0.004	1.002	135185	0.0409	Target=3.31	92.5	356	
298.70 > 98.80	4.860	4.856	0.004	1.002	42305		3.20(1.66-4.97)		193	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.926	4.932	-0.006	1.000	171019	0.1798	Target=1.99	89.9	529	
284.90 > 184.90	4.926	4.932	-0.006	1.000	101393		1.69(1.00-2.99)		222	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.117	5.123	-0.006	1.081	780947	0.0867	Target=12.91	97.4	1828	
314.80 > 82.90	5.117	5.123	-0.006	1.081	61892		12.62(6.46-19.37)		180	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.198	5.204	-0.006	1.000	183614	0.0504	Target=3.56	101	20.5	
363.10 > 169.00	5.198	5.204	-0.006	1.000	42235		4.35(1.78-5.34)		126	
49 DONA										
376.90 > 250.90	5.370	5.365	0.005	1.090	920980	0.1994	Target=1.61	106	1502	
376.90 > 84.80	5.360	5.365	-0.005	1.088	520461		1.77(0.81-2.42)		3198	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.380	5.385	-0.005	0.920	148974	0.0421	Target=3.08	89.8	206	
349.10 > 98.90	5.380	5.385	-0.005	0.920	44758		3.33(1.54-4.63)		154	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.421	5.425	-0.004	1.000	563553	0.1647	Target=1.41	86.9	2476	
427.10 > 80.90	5.421	5.425	-0.004	1.000	405986		1.39(0.70-2.11)		1209	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.634	5.638	-0.004	1.000	86309	0.0545	Target=1.93	109	10.5	M
413.00 > 169.00	5.634	5.638	-0.004	1.000	42991		2.01(0.96-2.89)		95.9	M
54 7:3 FTCA										
441.00 > 316.90	5.691	5.694	-0.003	1.202	475053	1.14	Target=1.07	91.3	778	
441.00 > 336.90	5.691	5.694	-0.003	1.202	459997		1.03(0.53-1.60)		1393	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.859	5.862	-0.003	1.002	125043	0.0425	Target=3.17	93.5	424	M
398.70 > 98.90	5.849	5.862	-0.013	1.000	36169		3.46(1.59-4.76)		78.6	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.067	6.061	0.006	1.002	98039	0.0545	Target=4.77	109	11.5	M
463.00 > 169.00	6.058	6.061	-0.003	1.000	19559		5.01(2.39-7.16)		87.8	M
62 FHxSA										
397.90 > 78.00	6.253	6.258	-0.005	1.069	580944	0.1680		84.0	1156	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.263	6.267	-0.004	1.001	437371	0.1651	Target=1.35	86.2	2468	
527.10 > 80.80	6.263	6.267	-0.004	1.001	318936		1.37(0.67-2.02)		1008	
57 PFECHS										
461.00 > 381.00	6.263	6.267	-0.004	1.071	510065	0.0876	Target=1.89	95.0	44.1	
461.00 > 99.00	6.263	6.267	-0.004	1.071	247756		2.06(0.94-2.83)		764	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.309	6.314	-0.005	0.934	152179	0.0413	Target=3.87	86.8	437	
449.00 > 98.80	6.309	6.314	-0.005	0.934	40445		3.76(1.93-5.80)		123	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.441	6.447	-0.006	1.002	76967	0.0508	Target=1.69	102	229	M
570.10 > 483.00	6.441	6.447	-0.006	1.002	42784		1.80(0.85-2.54)		153	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.493	6.498	-0.005	1.000	81813	0.0411	Target=5.10	82.2	13.9	
512.90 > 219.00	6.493	6.498	-0.005	1.000	20807		3.93(2.55-7.66)		115	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.638	6.643	-0.005	1.001	52226	0.0441	Target=1.49	88.3	143	M
584.20 > 526.00	6.638	6.643	-0.005	1.001	37884		1.38(0.75-2.24)		72.2	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.765	6.770	-0.005	1.001	150660	0.0381	Target=4.80	82.1	104	M
498.90 > 98.80	6.765	6.770	-0.005	1.001	35706		4.22(2.40-7.20)		168	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.936	6.940	-0.004	1.001	98338	0.0457	Target=6.10	91.4	40.1	
563.10 > 269.10	6.936	6.940	-0.004	1.001	14716		6.68(3.05-9.15)		129	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.099	7.103	-0.004	1.441	780384	0.1902	Target=3.10	102	185	
532.80 > 353.00	7.099	7.103	-0.004	1.441	240915		3.24(1.55-4.65)		344	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.201	7.205	-0.004	1.066	116739	0.0390	Target=4.02	81.2	512	
548.80 > 98.80	7.201	7.205	-0.004	1.066	26200		4.46(2.01-6.03)		241	
67 Perfluorododecanoic acid										M
613.10 > 569.00	7.365	7.361	0.004	1.001	98685	0.0429	Target=16.81	85.9	40.9	
613.10 > 319.00	7.357	7.361	-0.004	1.000	4949		19.94(8.41-25.22)		57.7	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.624	7.627	-0.003	1.128	136441	0.0403	Target=4.25	83.5	693	
599.00 > 98.80	7.615	7.627	-0.012	1.127	30473		4.48(2.12-6.37)		321	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.727	7.720	0.007	1.001	125463	0.0417	Target=51.55	83.4	250	M
498.10 > 478.00	7.716	7.720	-0.004	1.000	2974		42.19(25.77-77.32)		14.8	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.768	7.784	-0.016	0.950	94279	0.0452	Target=6.27	90.4	50.9	
663.00 > 168.90	7.779	7.784	-0.005	0.952	15403		6.12(3.13-9.40)		136	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.949	7.954	-0.005	1.614	780076	0.1959	Target=3.32	104	1213	
632.90 > 452.90	7.938	7.954	-0.016	1.612	231595		3.37(1.66-4.97)		644	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.184	8.179	0.005	1.001	71599	0.0510	Target=6.82	102	45.4	
713.10 > 168.90	8.184	8.179	0.005	1.001	9884		7.24(3.41-10.24)		165	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.395	8.402	-0.007	1.243	108694	0.0379	Target=4.61	78.3	241	
699.10 > 98.80	8.395	8.402	-0.007	1.243	23423		4.64(2.30-6.91)		145	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.628	0.004	1.002	25562	0.4651		93.0	201	M
75 NMeFOSA										M
511.90 > 219.00	8.744	8.741	0.003	1.001	24612	0.0479	Target=0.70	95.7	105	M
511.90 > 169.00	8.734	8.741	-0.007	1.000	29606		0.83(0.35-1.05)		117	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.883	8.879	0.004	1.002	27559	0.4790		95.8	156	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.960	8.965	-0.005	1.001	25212	0.0475	Target=0.71	95.0	148	M
526.00 > 169.00	8.960	8.965	-0.005	1.001	32554		0.77(0.35-1.06)		108	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

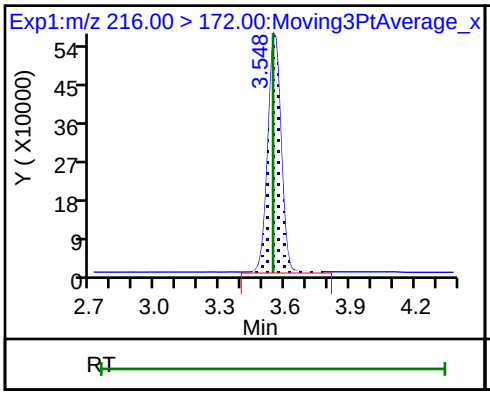
ICV CAL1_00018 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:34:26 Chrom Revision: 2.3 26-Aug-2024 17:14:48

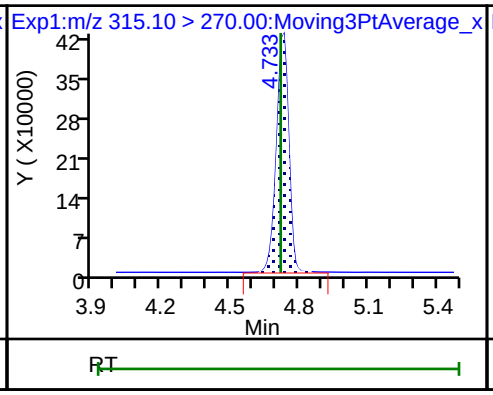
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

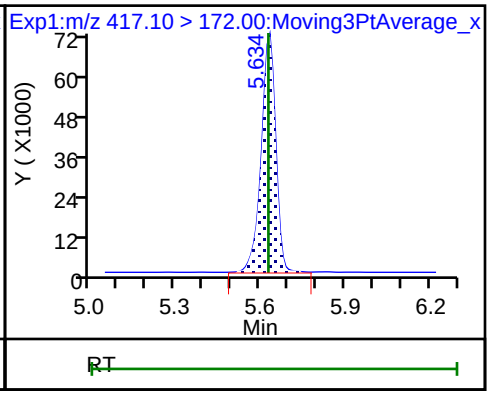
* 1 13C3-PFBA



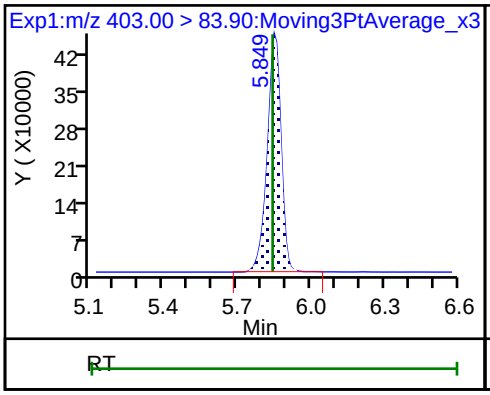
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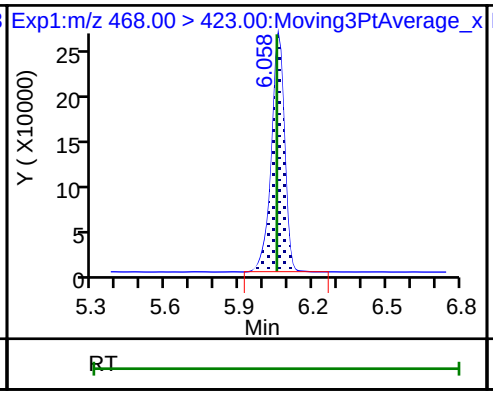
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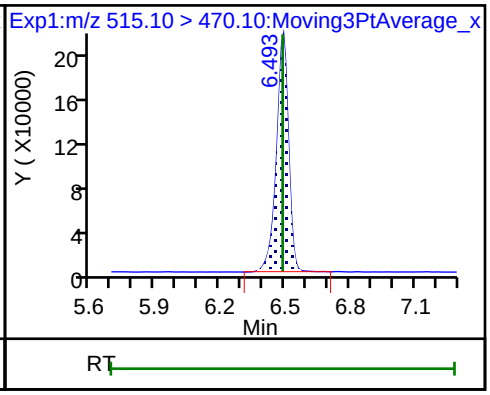
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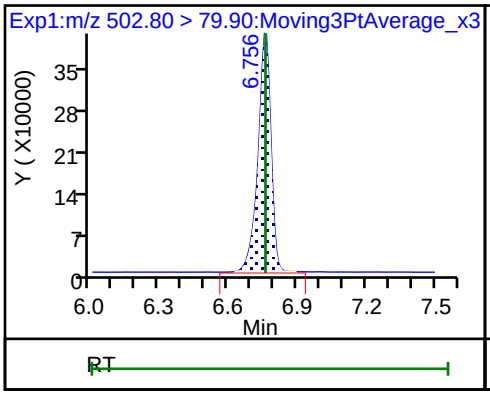
* 5 13C5 PFNA



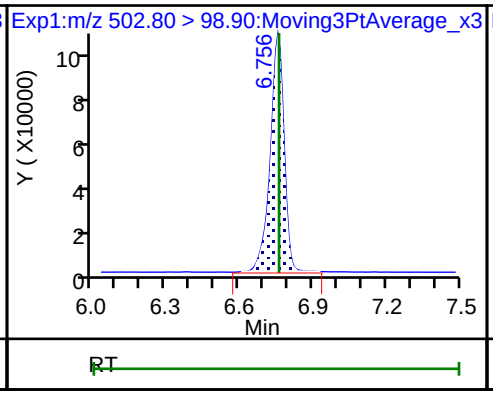
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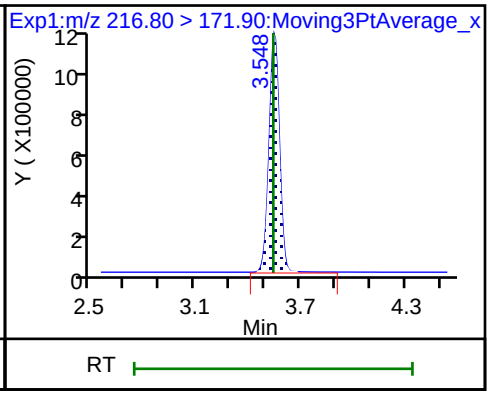
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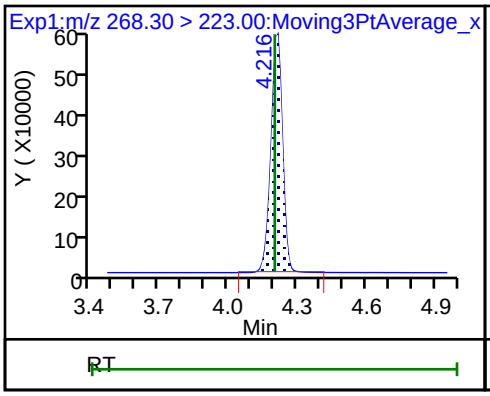
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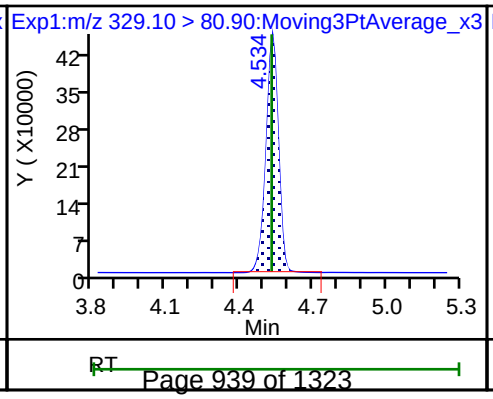
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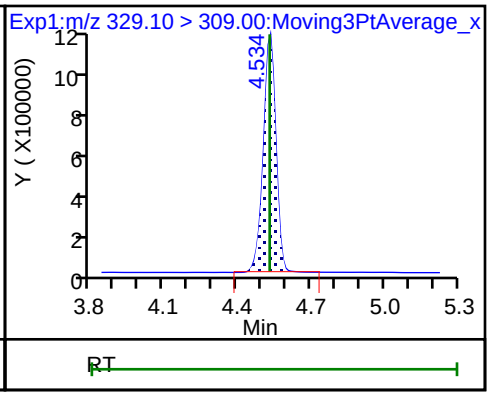
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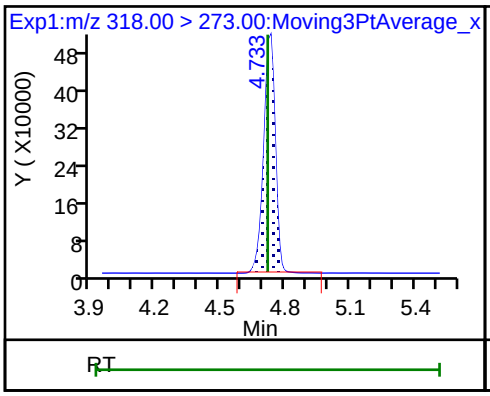
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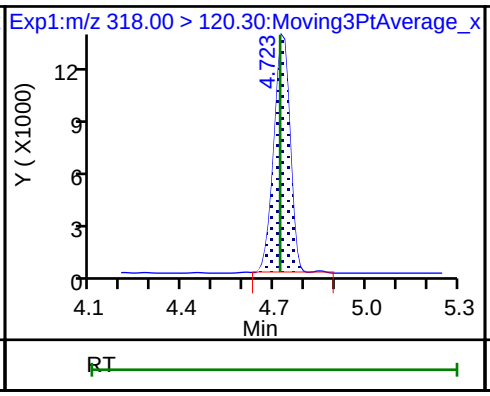
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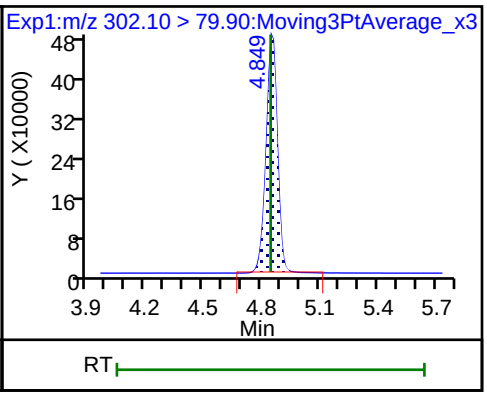
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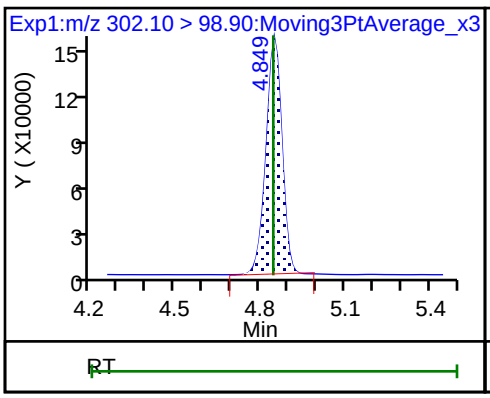
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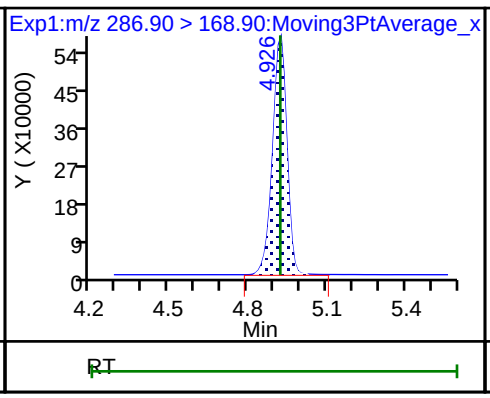
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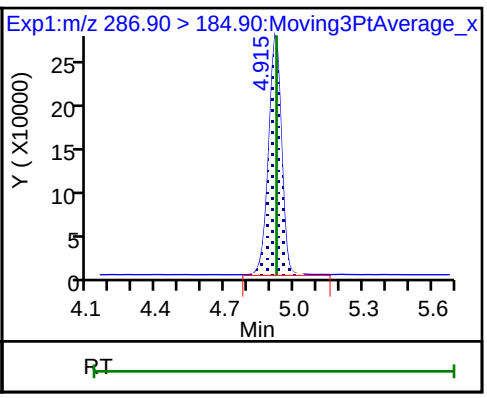
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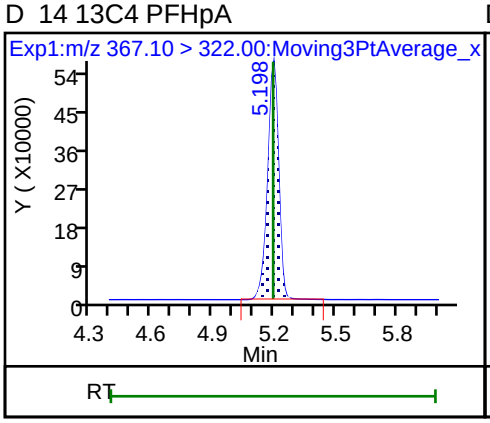
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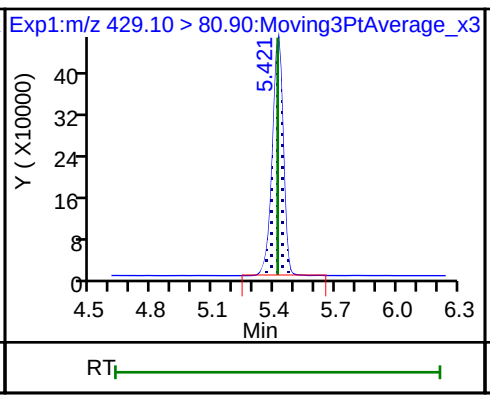
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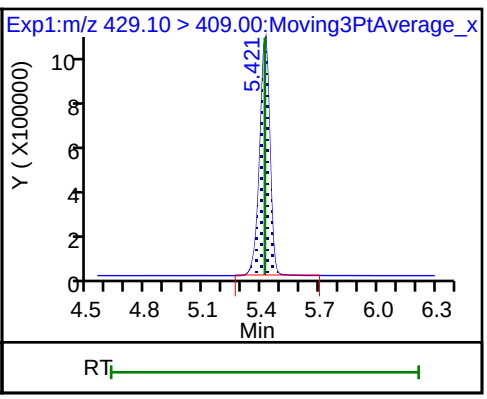
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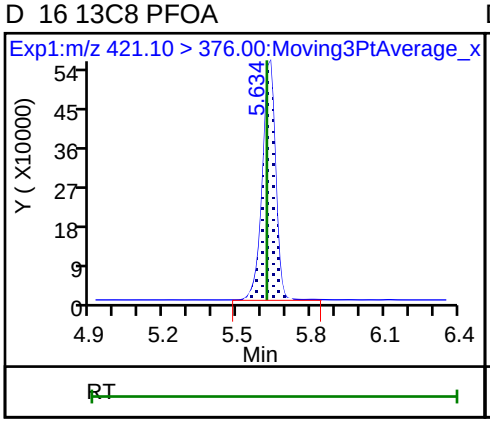
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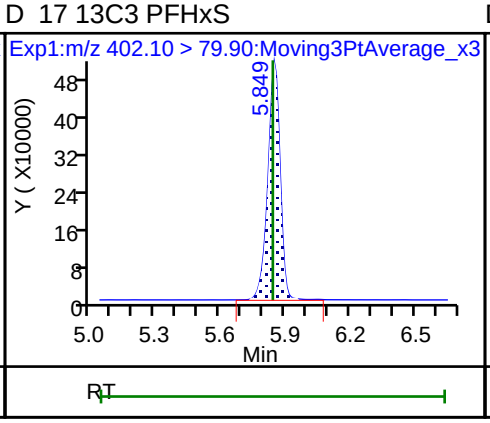
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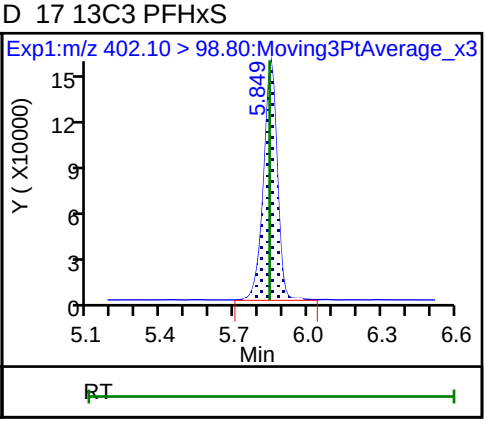
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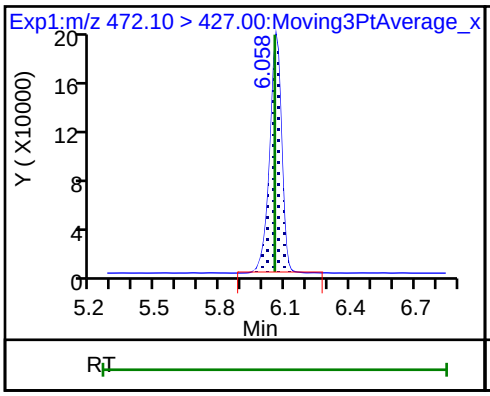
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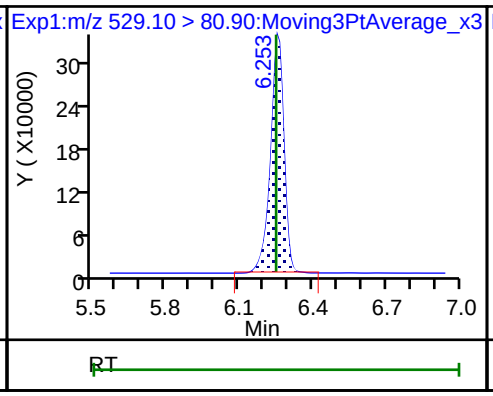
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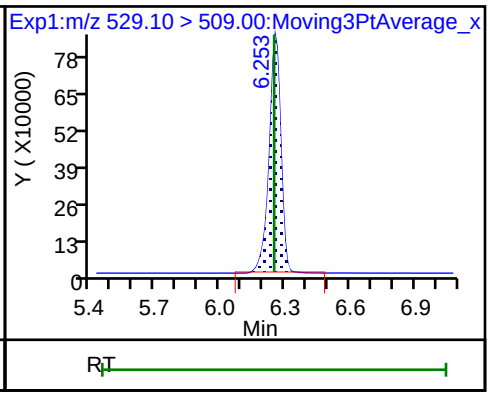
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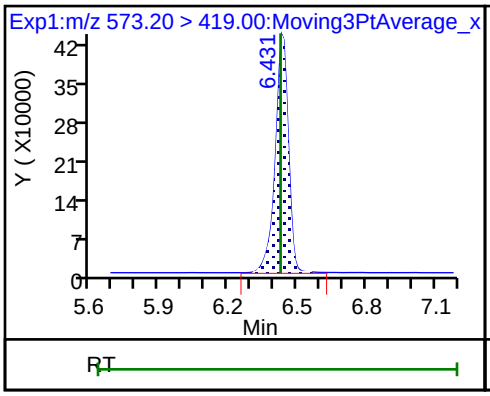
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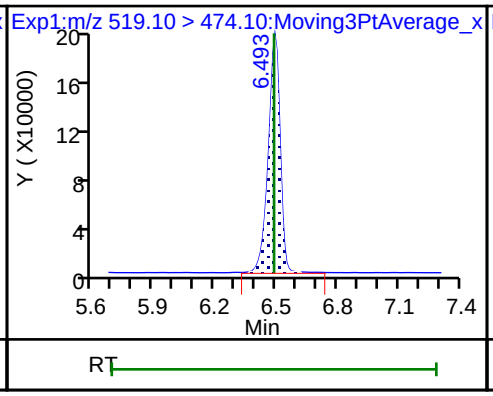
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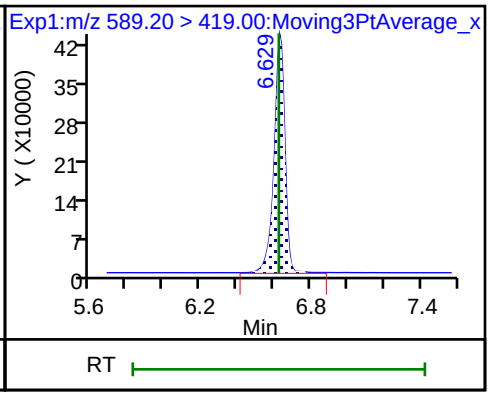
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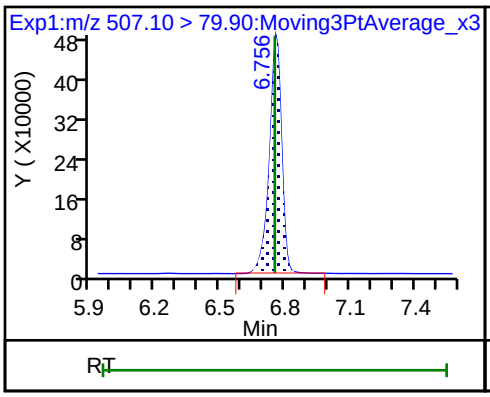
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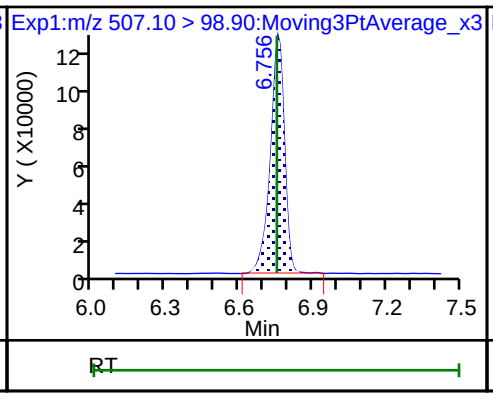
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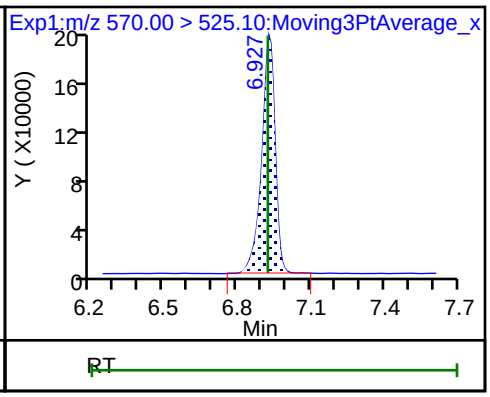
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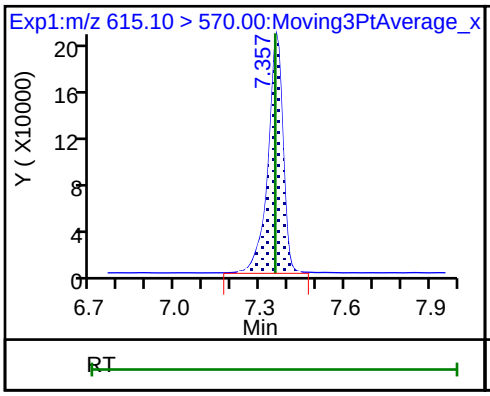
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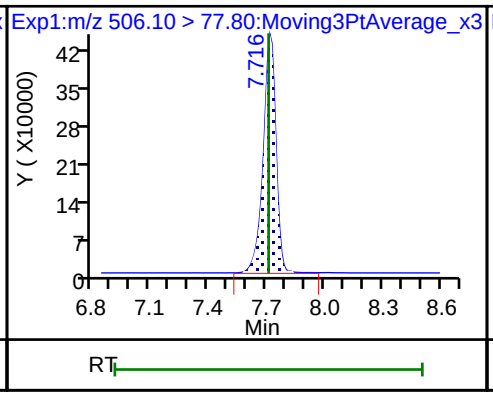
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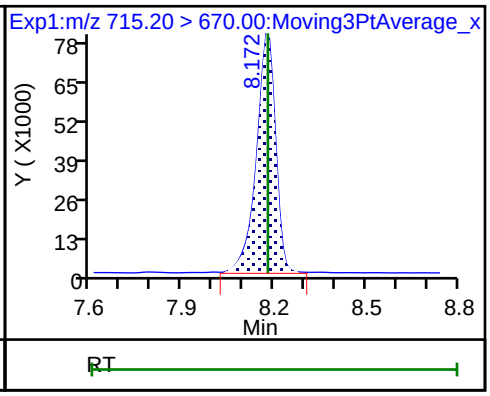
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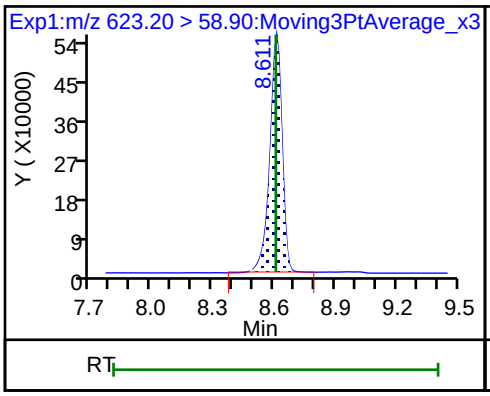
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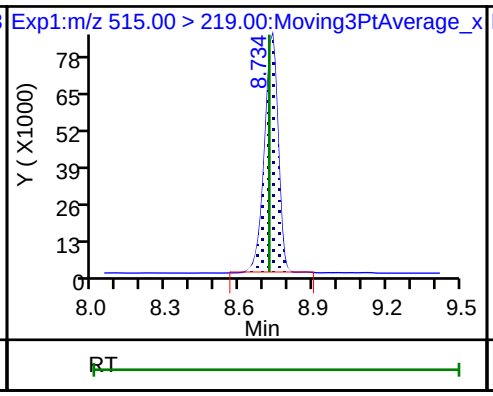
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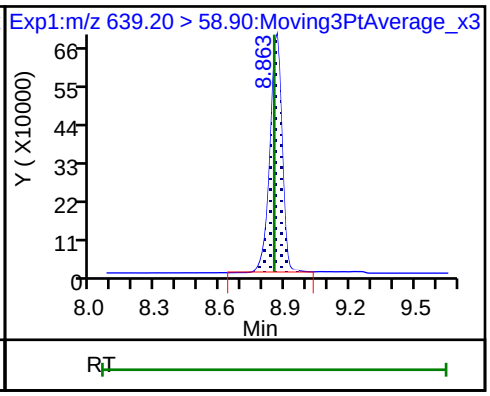
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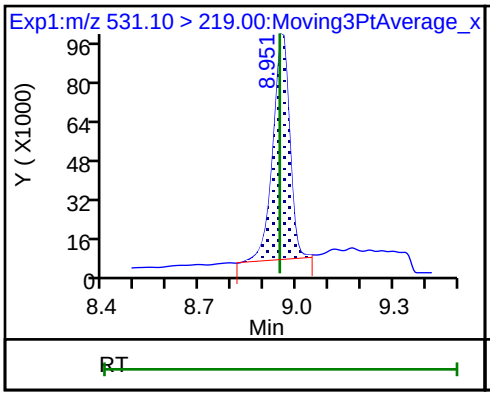
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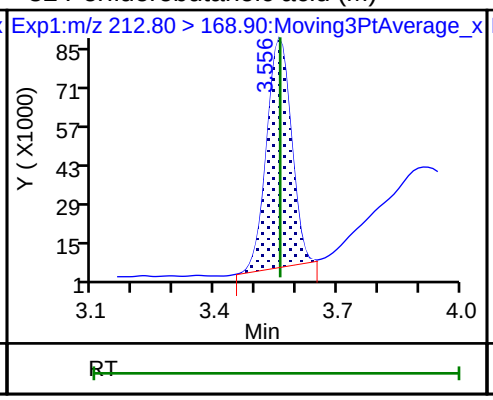
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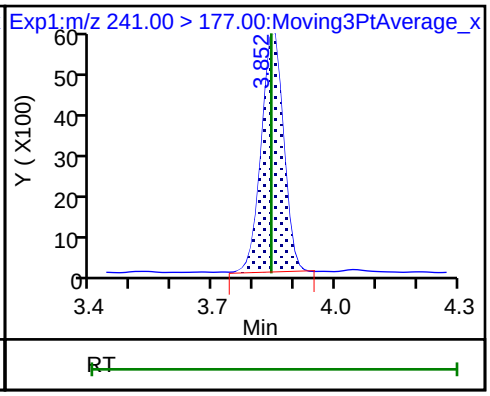
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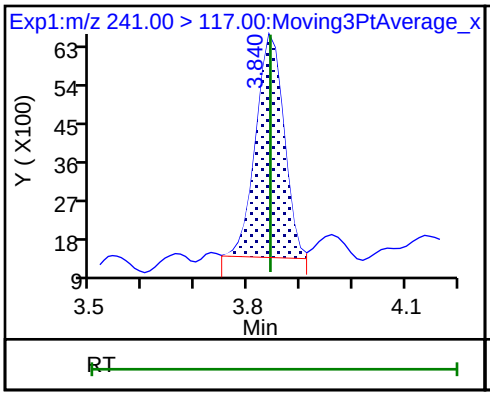
32 Perfluorobutanoic acid (M)



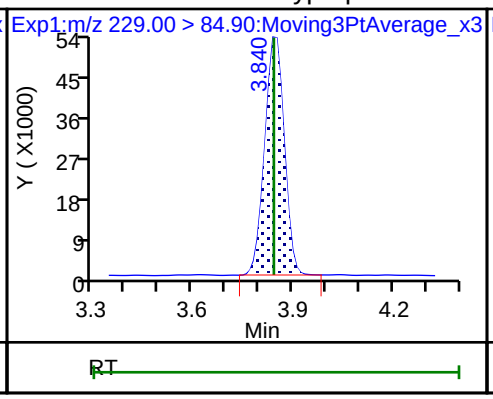
34 3:3 FTCA



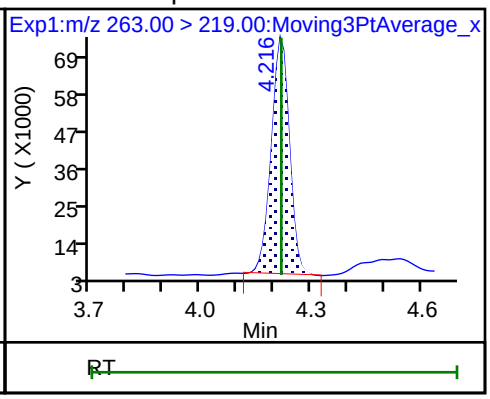
34 3:3 FTCA



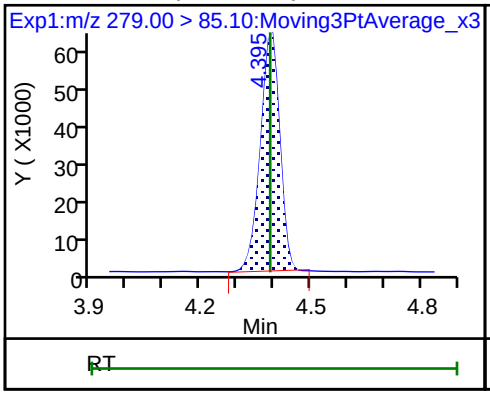
33 Perfluoro-3-methoxypropanoic aci



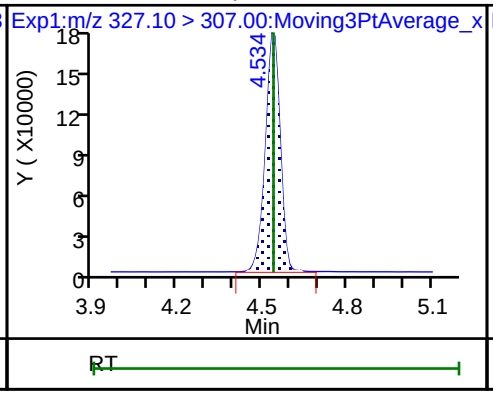
35 Perfluoropentanoic acid



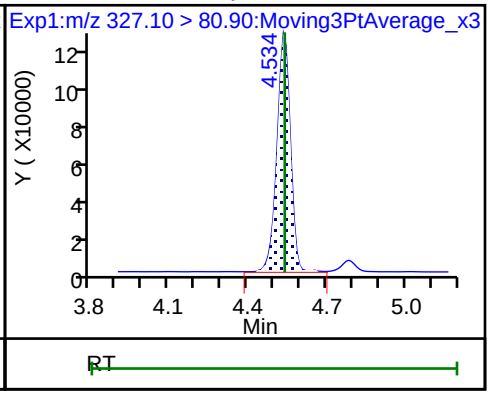
36 Perfluoro(4-methoxybutanoic acid



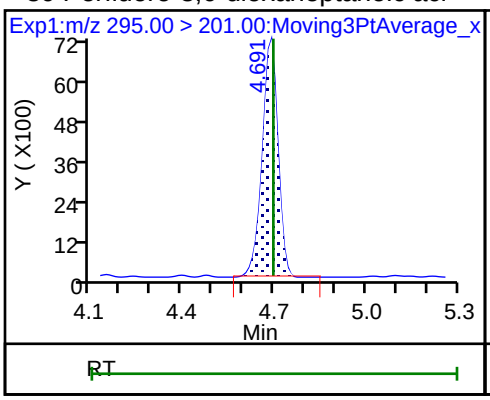
38 1H,1H,2H,2H-perfluorohexanesulfo



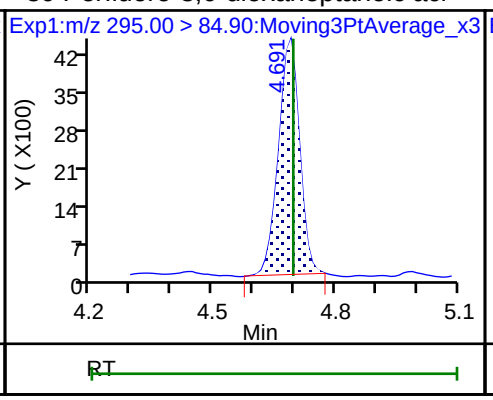
38 1H,1H,2H,2H-perfluorohexanesulfo



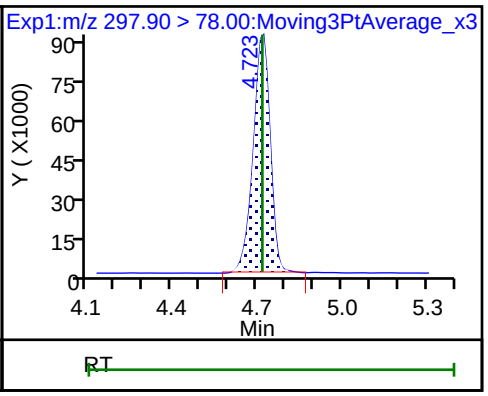
39 Perfluoro-3,6-dioxaheptanoic aci



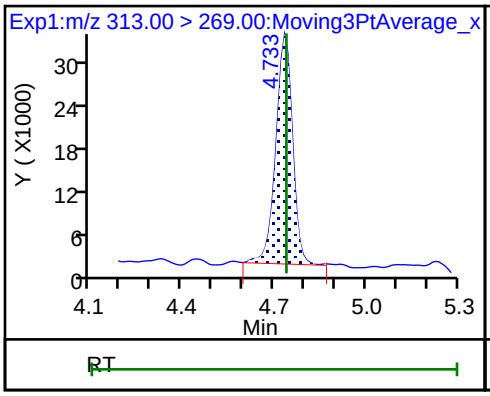
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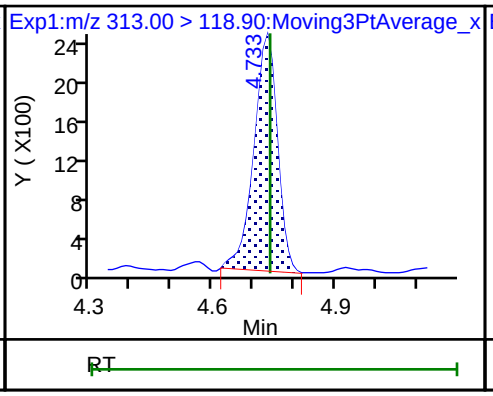
48 FBSA



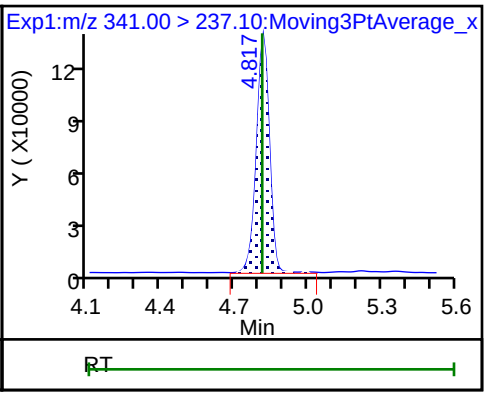
40 Perfluorohexanoic acid



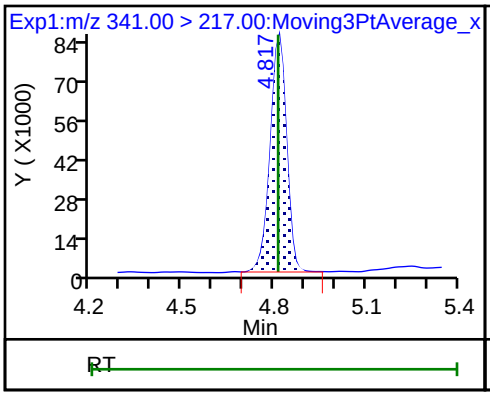
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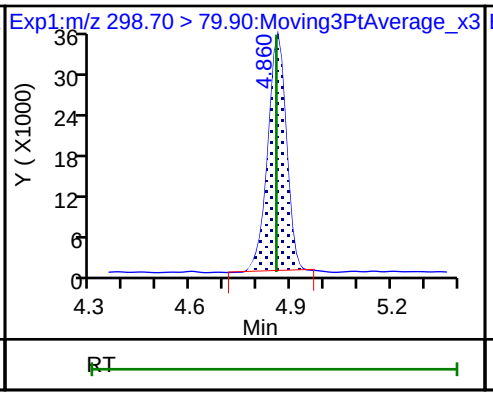
41 5:3 FTCA



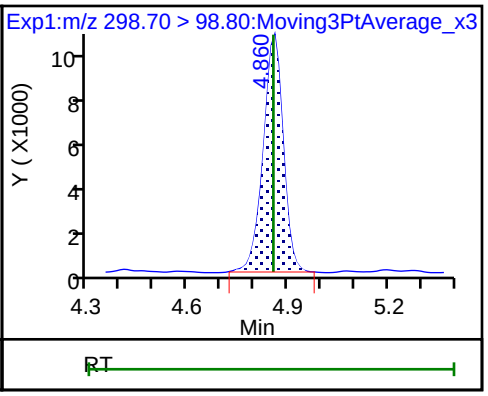
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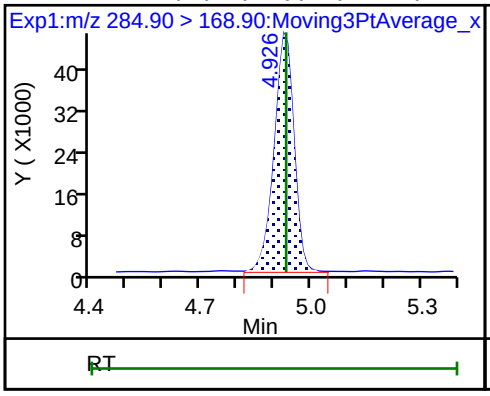
42 Perfluorobutanesulfonic acid



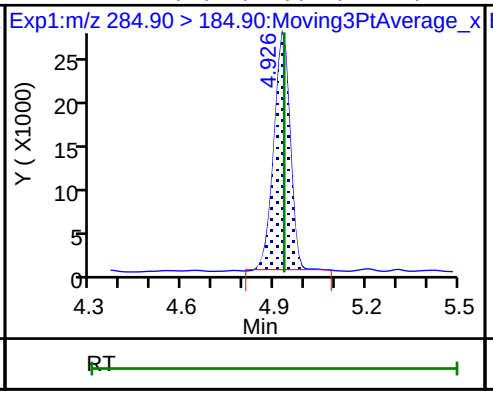
42 Perfluorobutanesulfonic acid



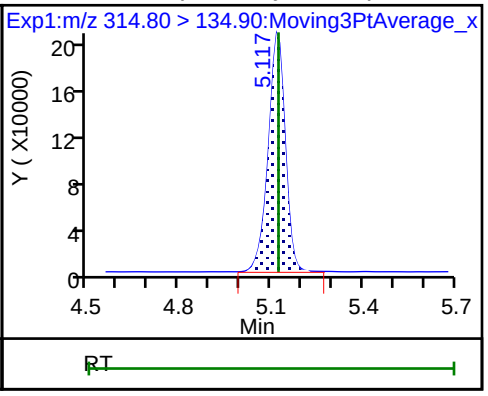
43 Perfluoro(2-propoxypropanoic) ac



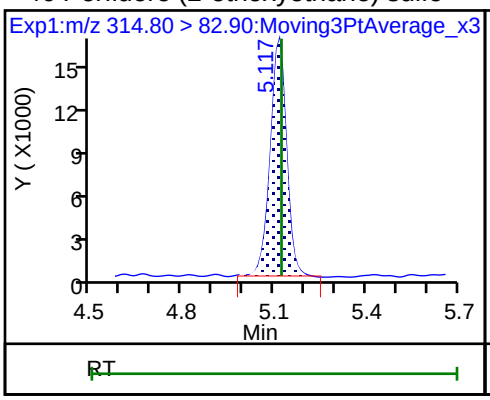
43 Perfluoro(2-propoxypropanoic) ac



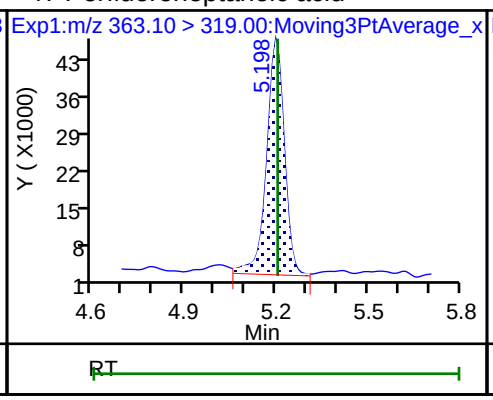
46 Perfluoro (2-ethoxyethane) sulfo



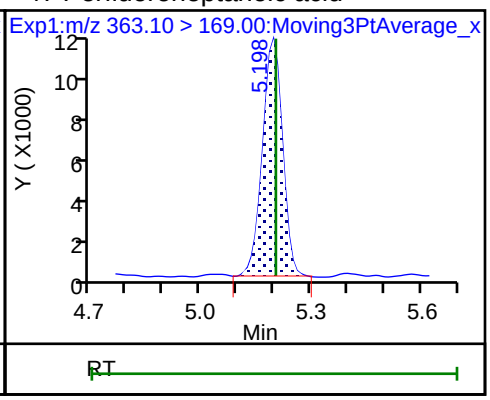
46 Perfluoro (2-ethoxyethane) sulfo



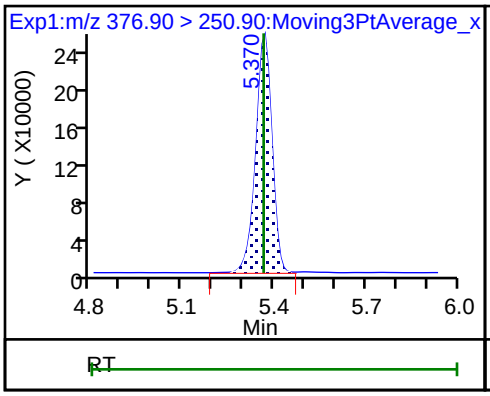
47 Perfluoroheptanoic acid



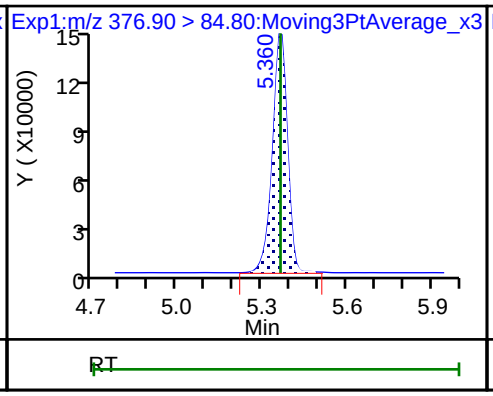
47 Perfluoroheptanoic acid



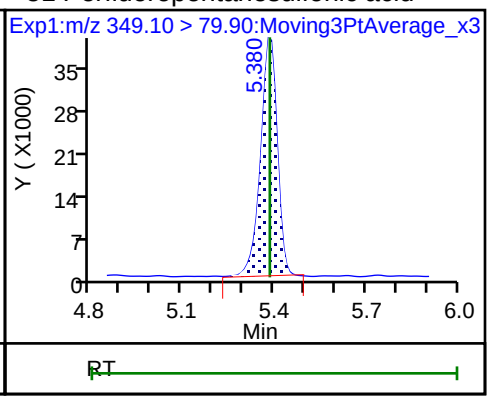
49 DONA



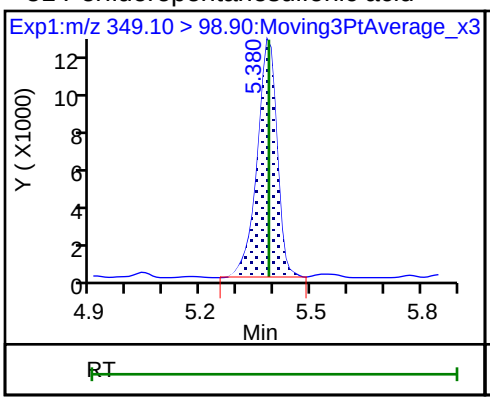
49 DONA



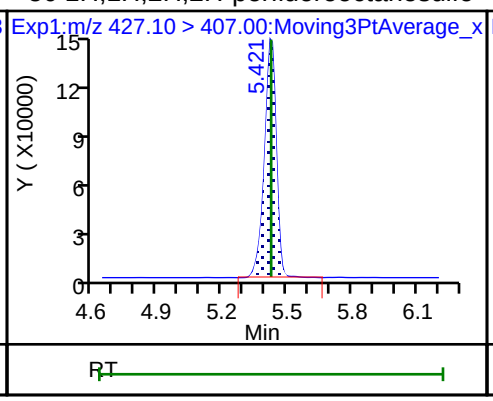
51 Perfluoropentanesulfonic acid



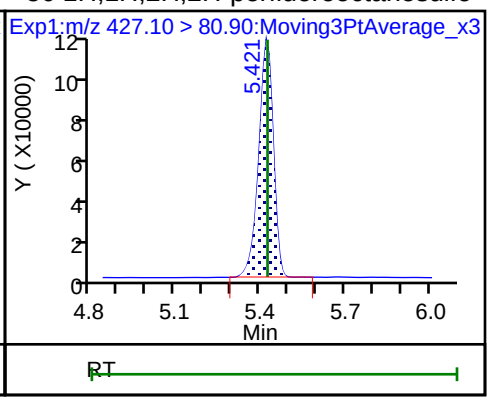
51 Perfluoropentanesulfonic acid



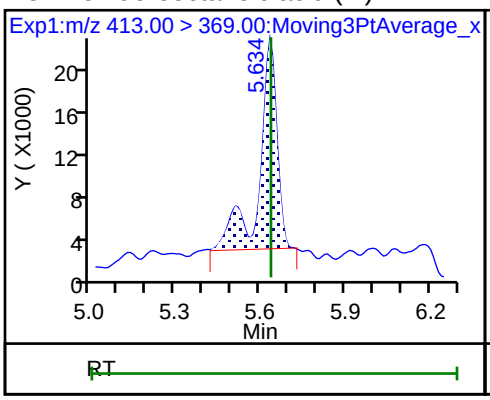
50 1H,1H,2H,2H-perfluorooctanesulfo



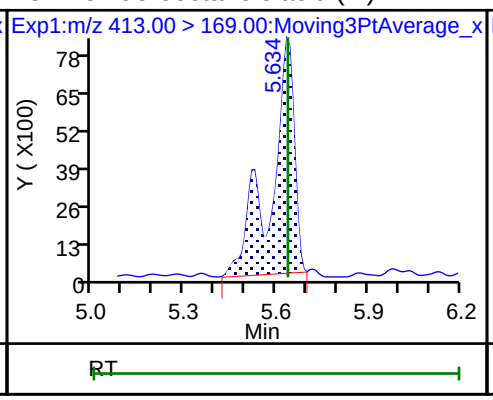
50 1H,1H,2H,2H-perfluorooctanesulfo



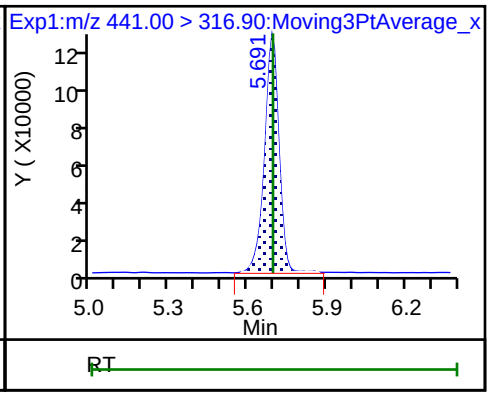
52 Perfluorooctanoic acid (M)



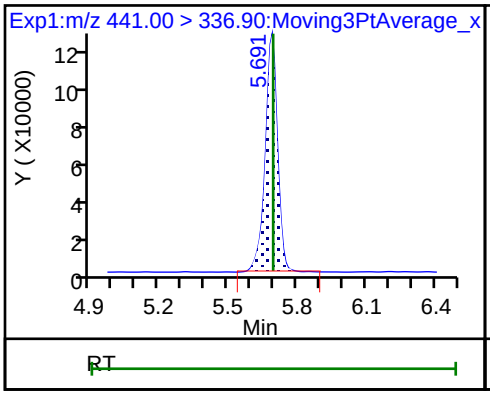
52 Perfluorooctanoic acid (M)



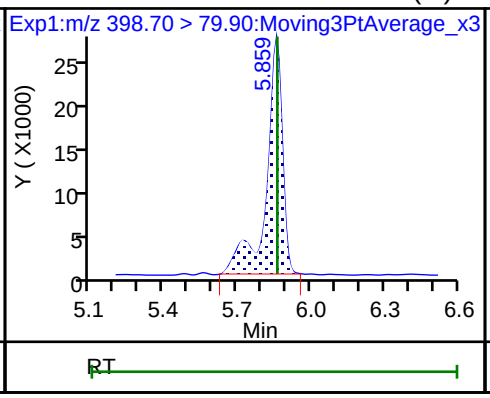
54 7:3 FTCA



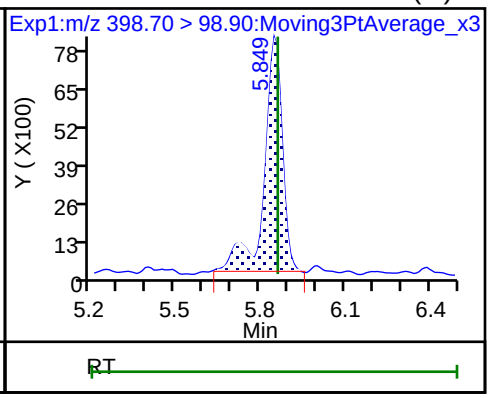
54 7:3 FTCA



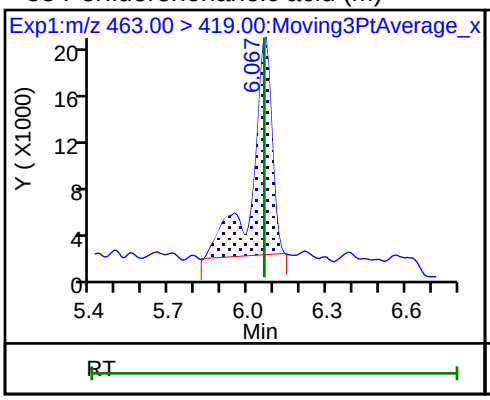
53 Perfluorohexanesulfonic acid (M)



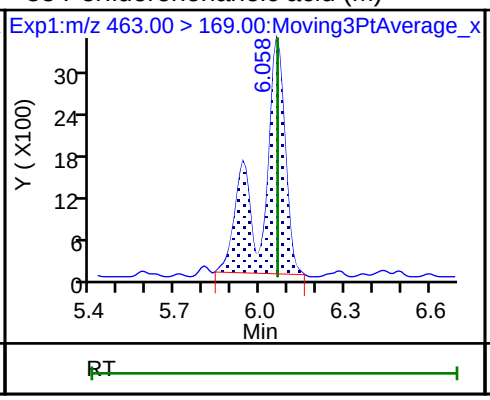
53 Perfluorohexanesulfonic acid (M)



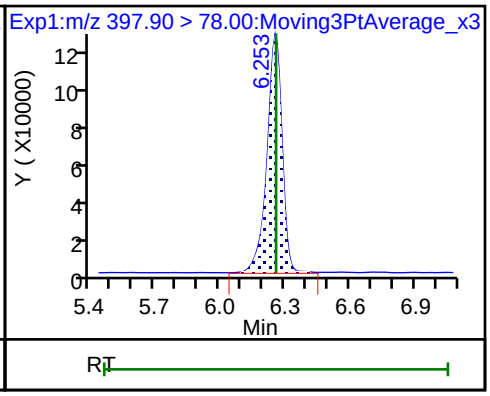
55 Perfluorononanoic acid (M)



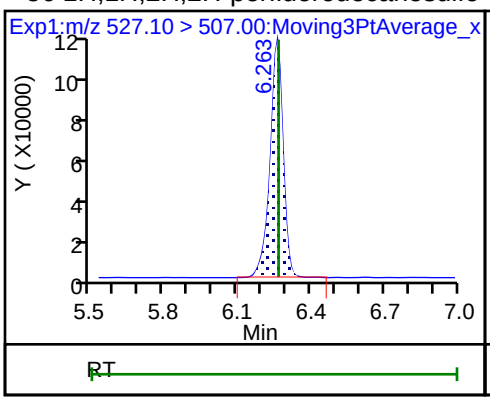
55 Perfluorononanoic acid (M)



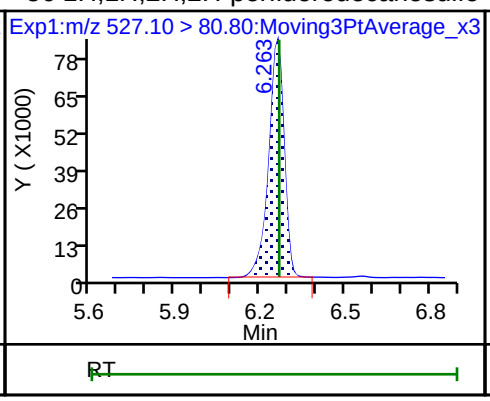
62 FHxSA



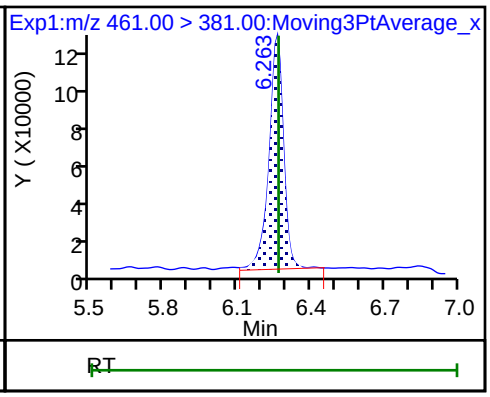
56 1H,1H,2H,2H-perfluorodecanesulfo



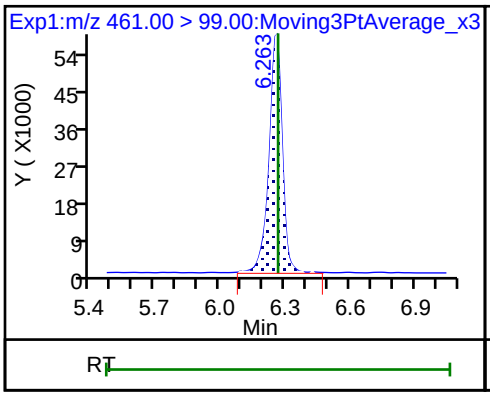
56 1H,1H,2H,2H-perfluorodecanesulfo



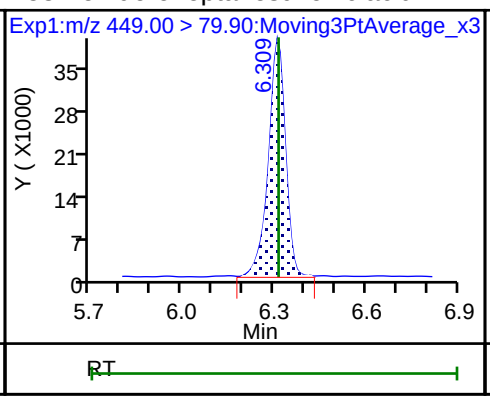
57 PFECHS



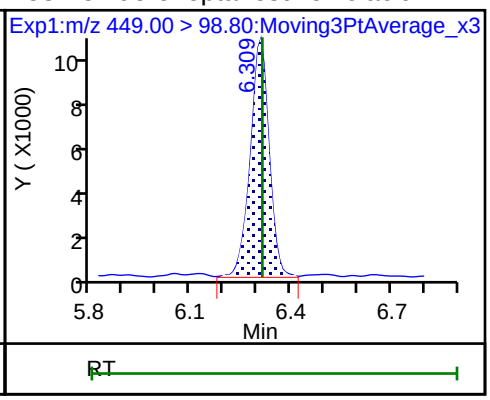
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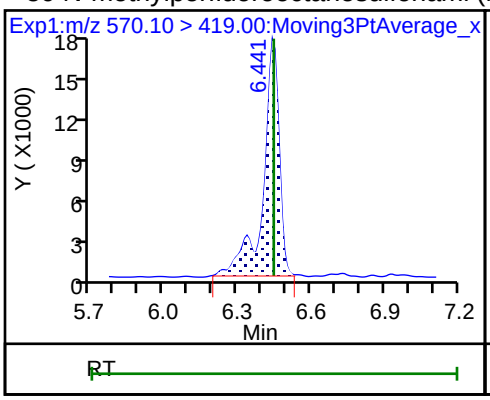
58 Perfluoroheptanesulfonic acid



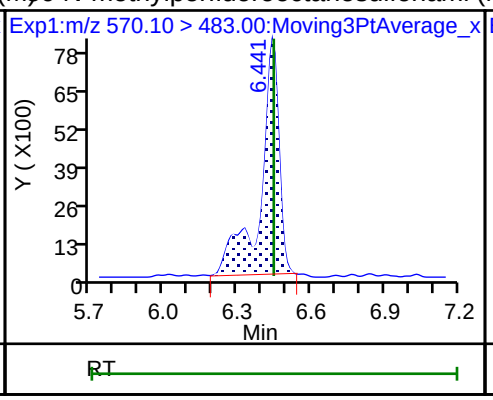
58 Perfluoroheptanesulfonic acid



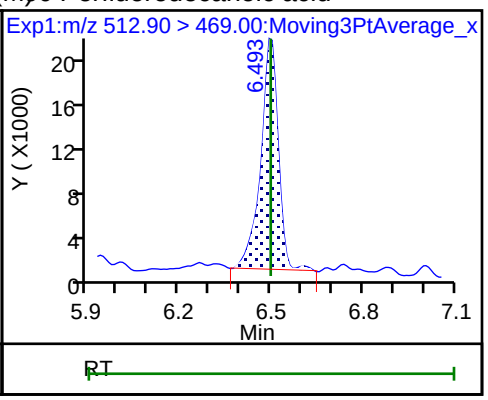
59 N-methylperfluorooctanesulfonami (M)



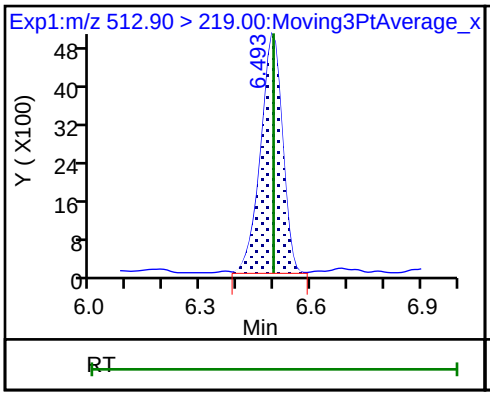
59 N-methylperfluorooctanesulfonami (M)



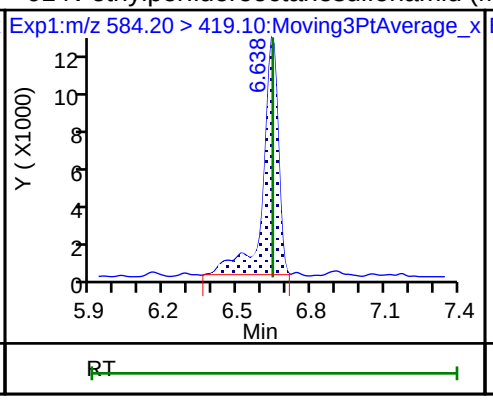
60 Perfluorodecanoic acid



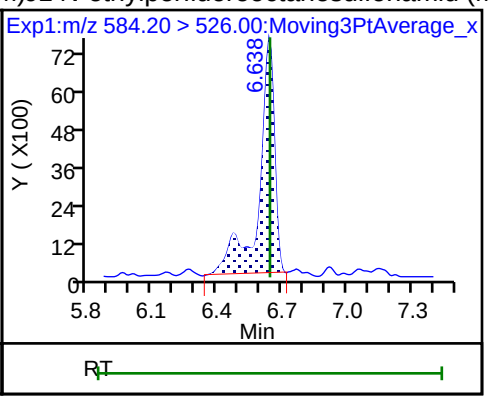
60 Perfluorodecanoic acid



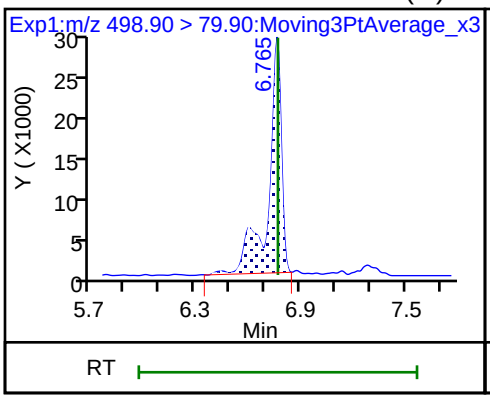
61 N-ethylperfluorooctanesulfonamid (M)



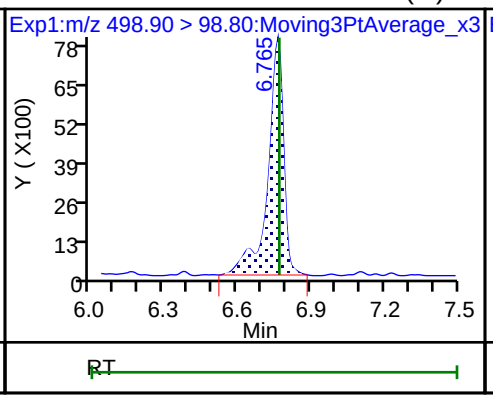
61 N-ethylperfluorooctanesulfonamid (M)



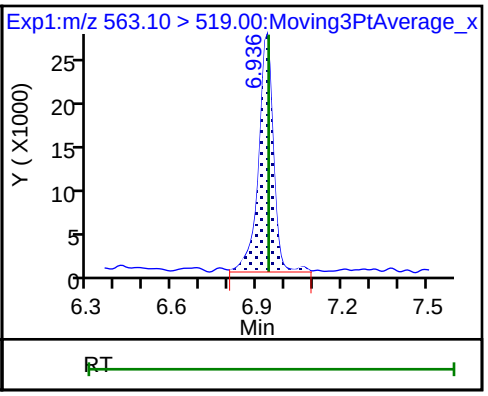
63 Perfluorooctanesulfonic acid (M)



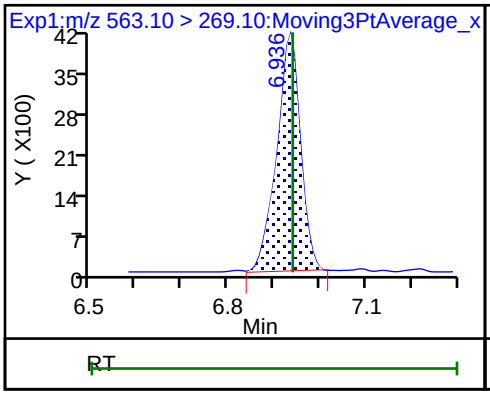
63 Perfluorooctanesulfonic acid (M)



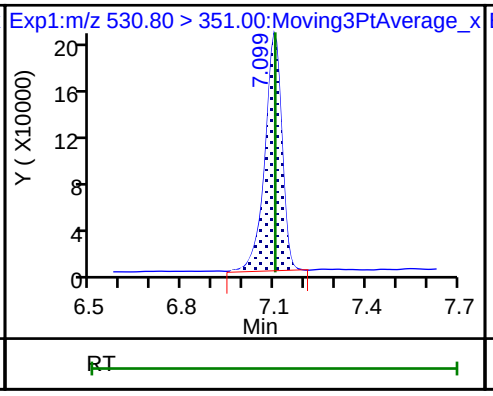
64 Perfluoroundecanoic acid



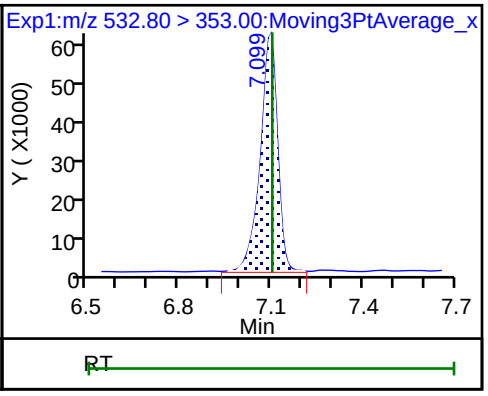
64 Perfluoroundecanoic acid



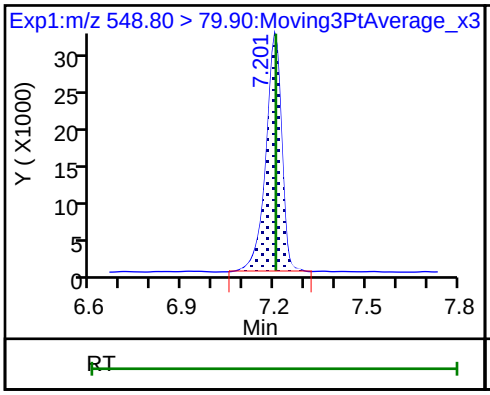
65 9-Chlorohexadecafluoro-3-oxanona



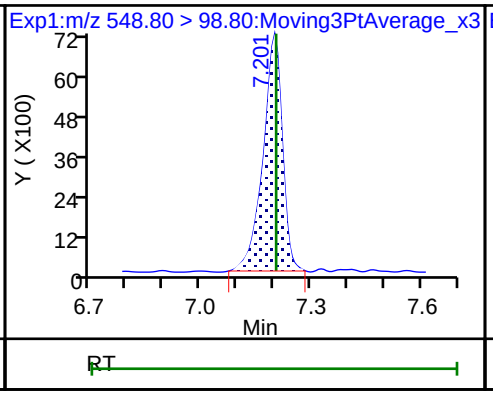
65 9-Chlorohexadecafluoro-3-oxanona



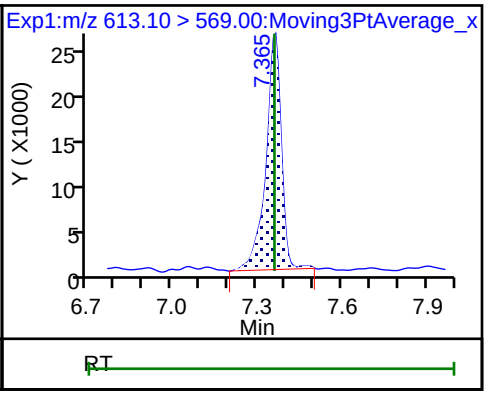
66 Perfluorononanesulfonic acid



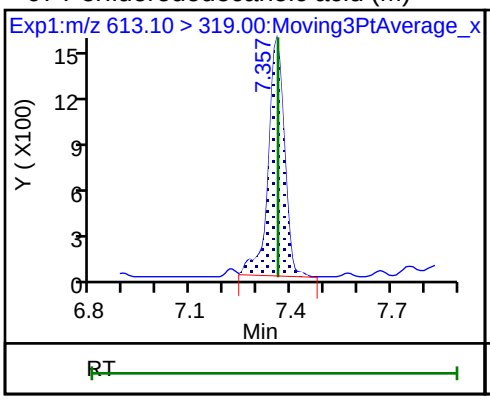
66 Perfluorononanesulfonic acid



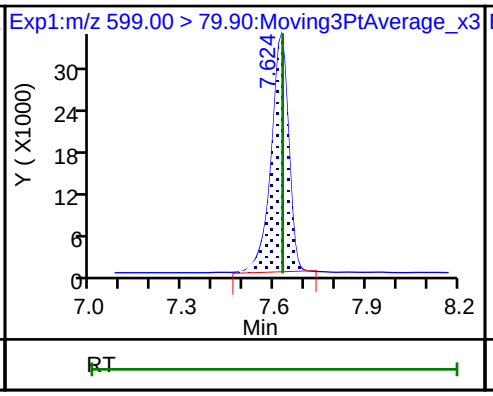
67 Perfluorododecanoic acid



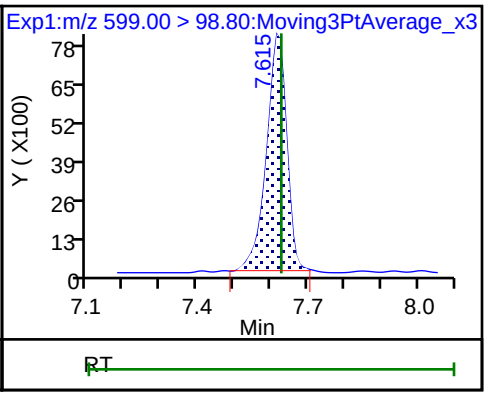
67 Perfluorododecanoic acid (M)



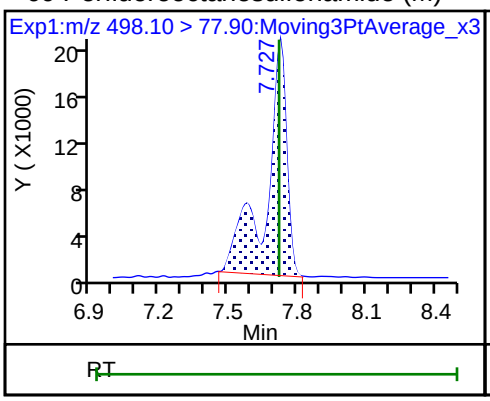
68 Perfluorodecanesulfonic acid



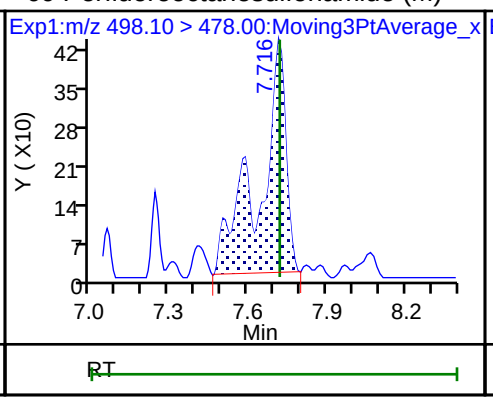
68 Perfluorodecanesulfonic acid



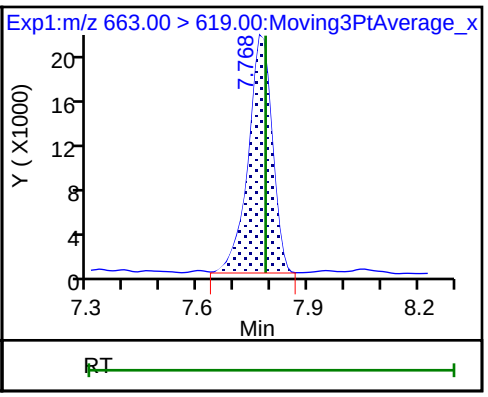
69 Perfluorooctanesulfonamide (M)



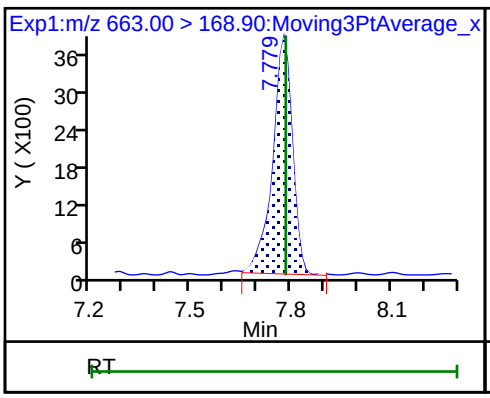
69 Perfluorooctanesulfonamide (M)



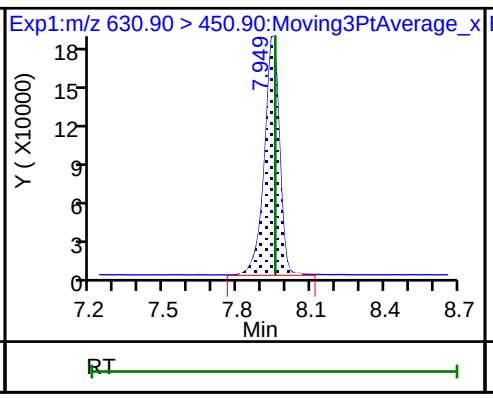
70 Perfluorotridecanoic acid



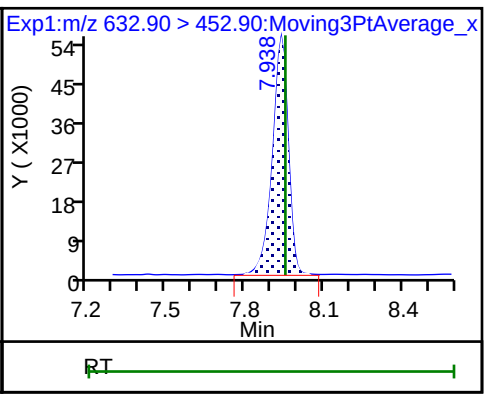
70 Perfluorotridecanoic acid



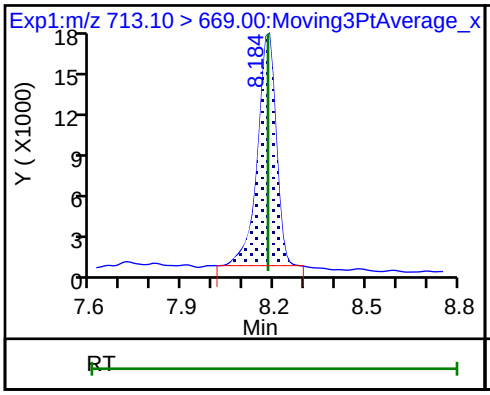
71 11-Chloroeicosafluoro-3-oxaundec



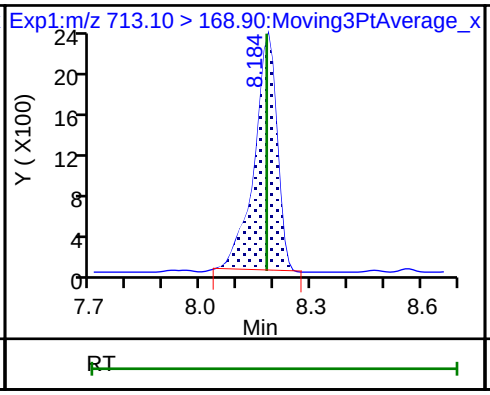
71 11-Chloroeicosafluoro-3-oxaundec



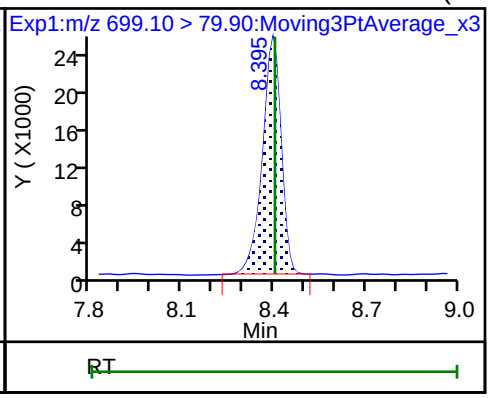
72 Perfluorotetradecanoic acid



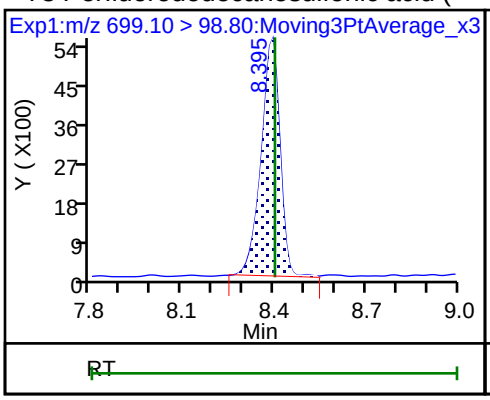
72 Perfluorotetradecanoic acid



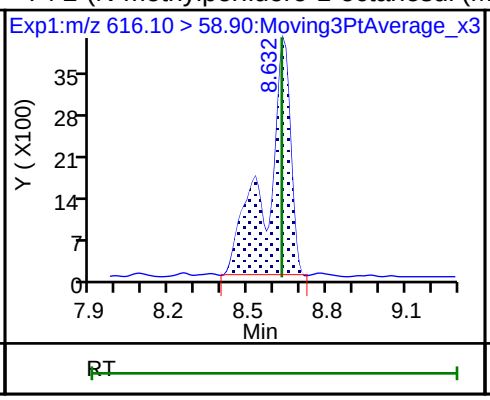
73 Perfluorododecanesulfonic acid (



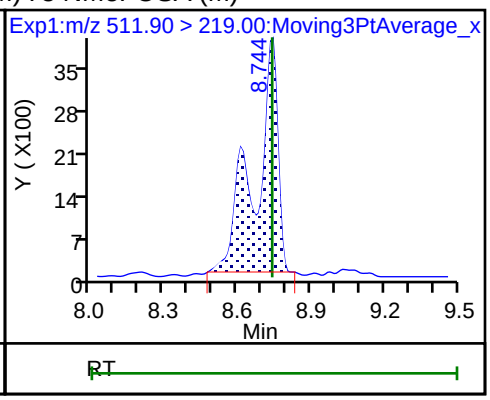
73 Perfluorododecanesulfonic acid (



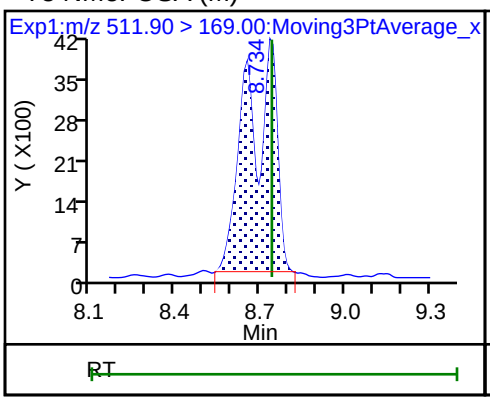
74 2-(N-methylperfluoro-1-octanesul (M)



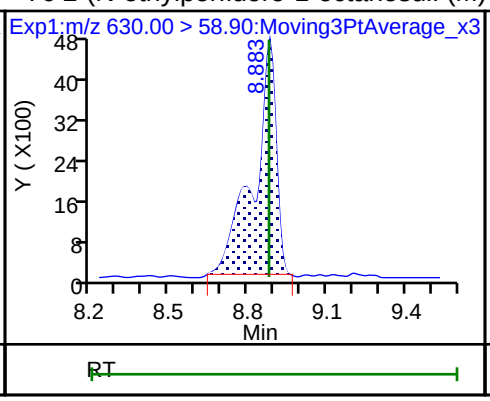
75 NMeFOSA (M)



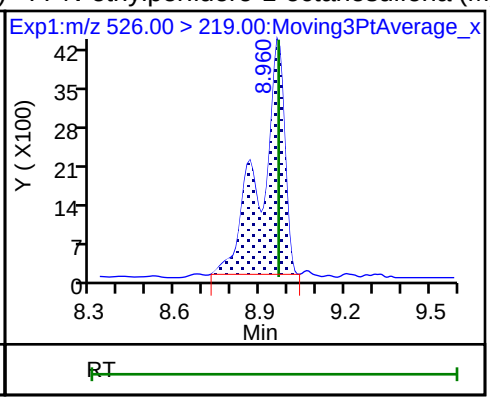
75 NMeFOSA (M)



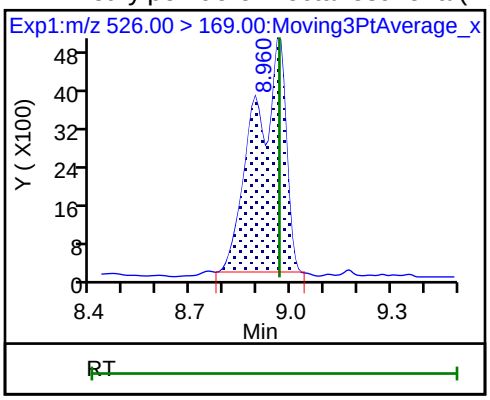
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

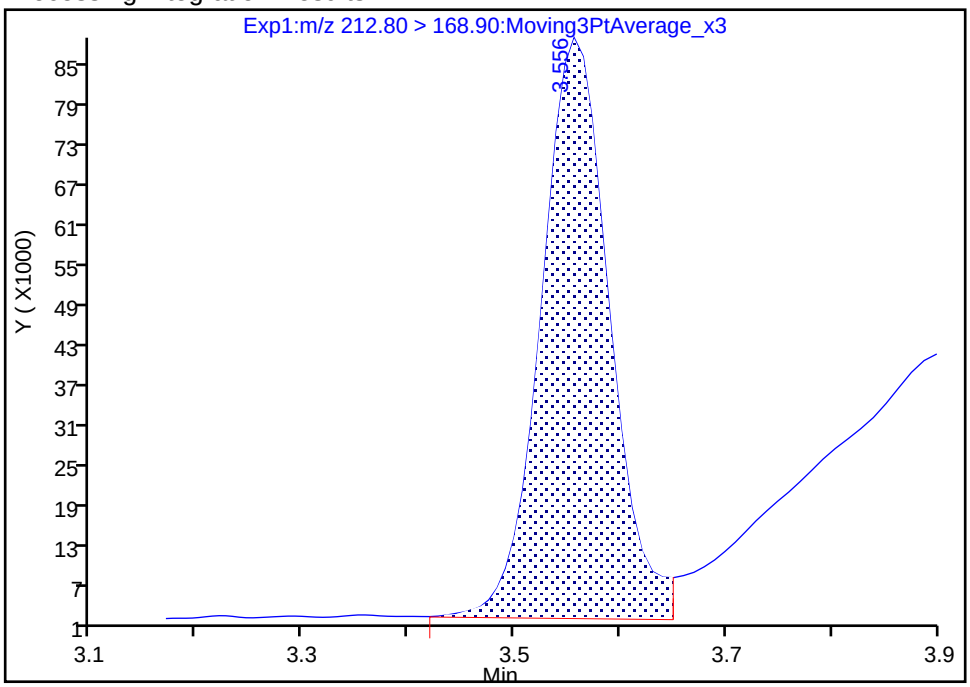
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

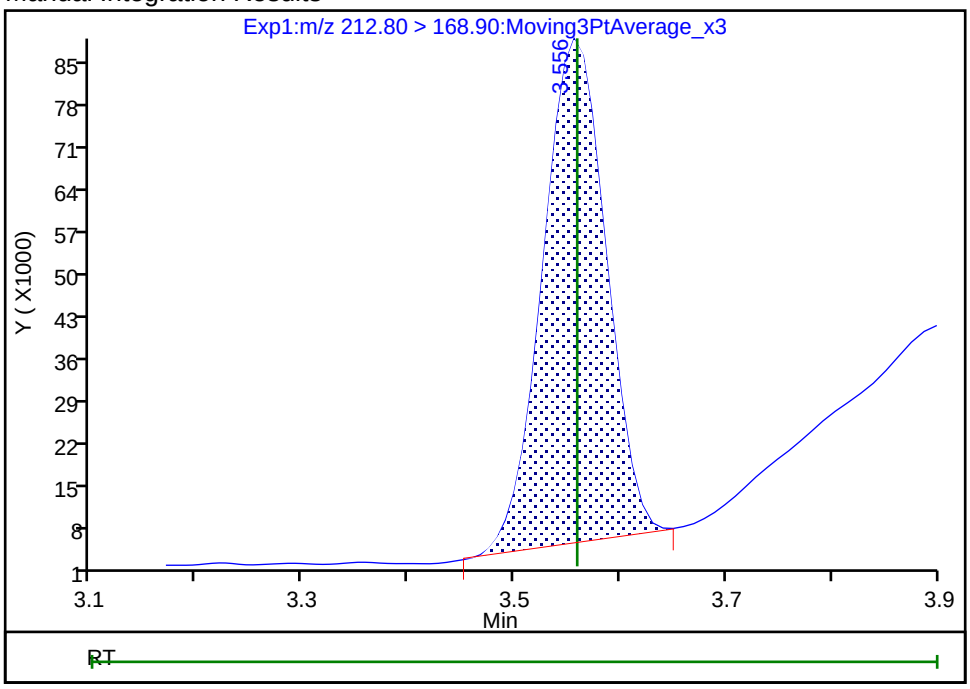
RT: 3.56
Area: 389485
Amount: 0.209623
Amount Units: ng/ml

Processing Integration Results



RT: 3.56
Area: 346465
Amount: 0.186469
Amount Units: ng/ml

Manual Integration Results



Reviewer: EBY5, 19-Sep-2024 08:30:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins Cleveland

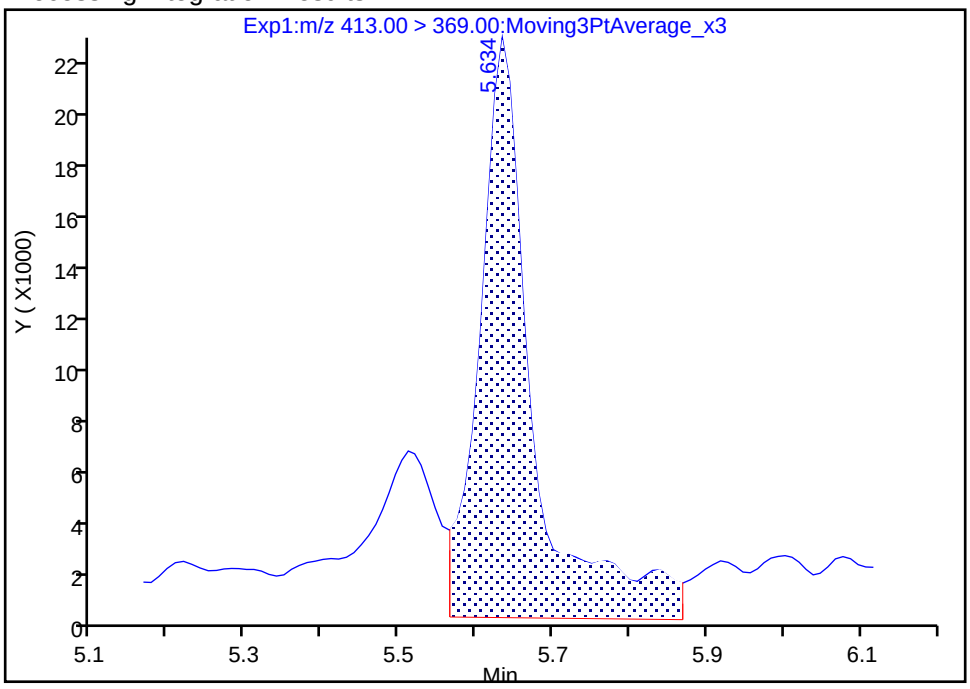
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

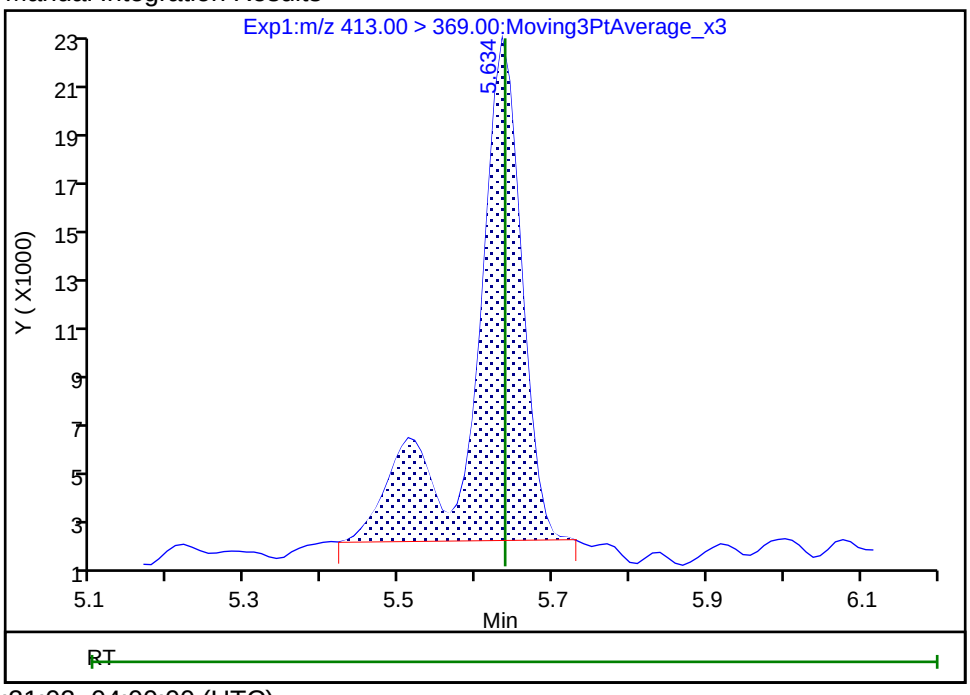
Processing Integration Results

RT: 5.63
Area: 107686
Amount: 0.068011
Amount Units: ng/ml



Manual Integration Results

RT: 5.63
Area: 86309
Amount: 0.054510
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

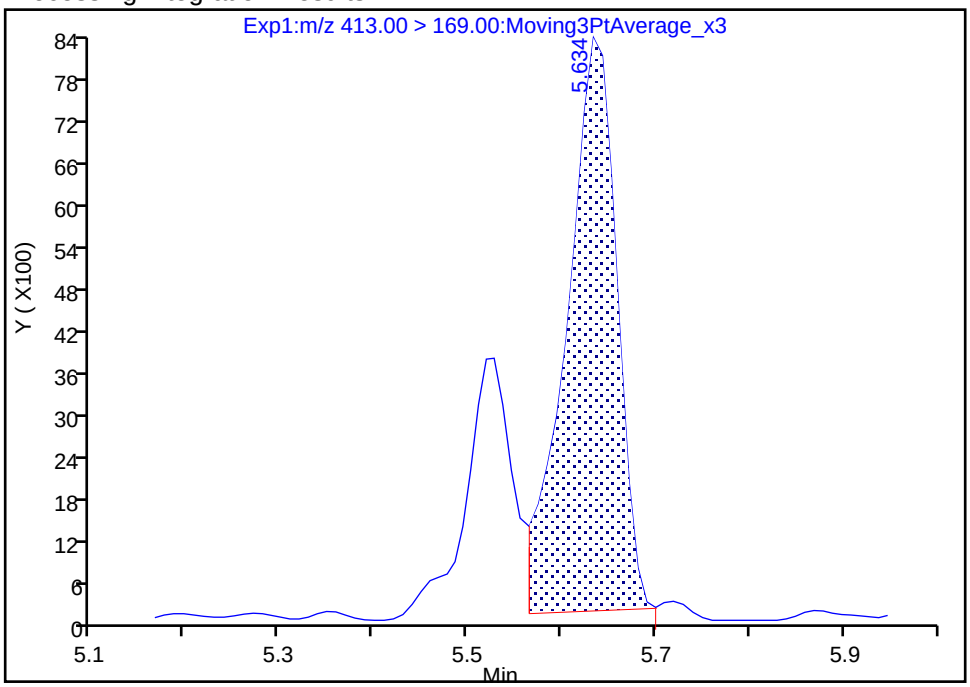
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Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

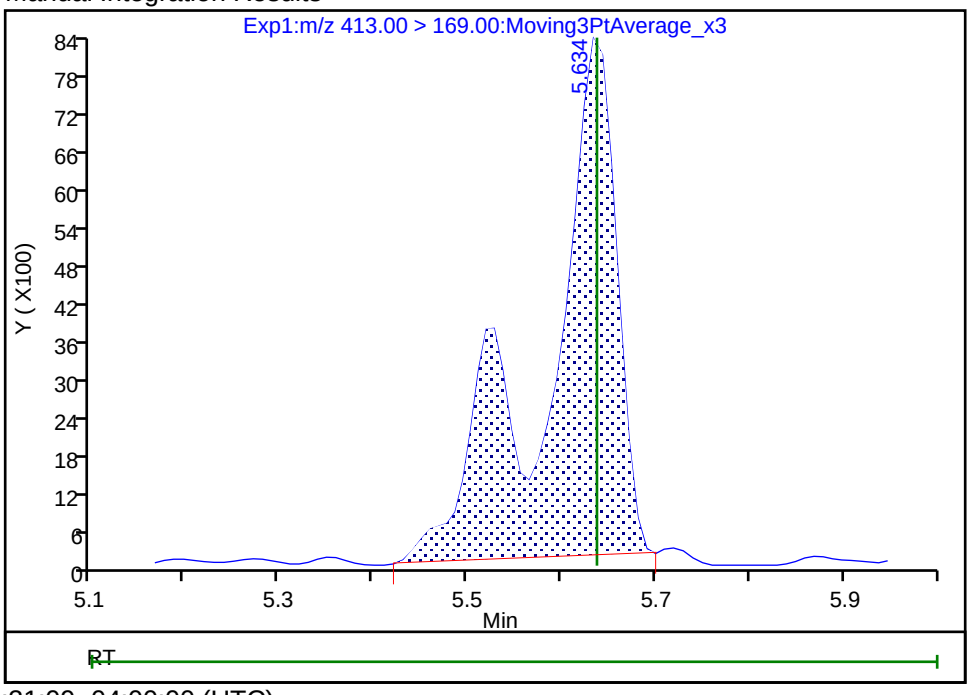
Processing Integration Results

RT: 5.63
Area: 30394
Amount: 0.068011
Amount Units: ng/ml



Manual Integration Results

RT: 5.63
Area: 42991
Amount: 0.054510
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:09 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

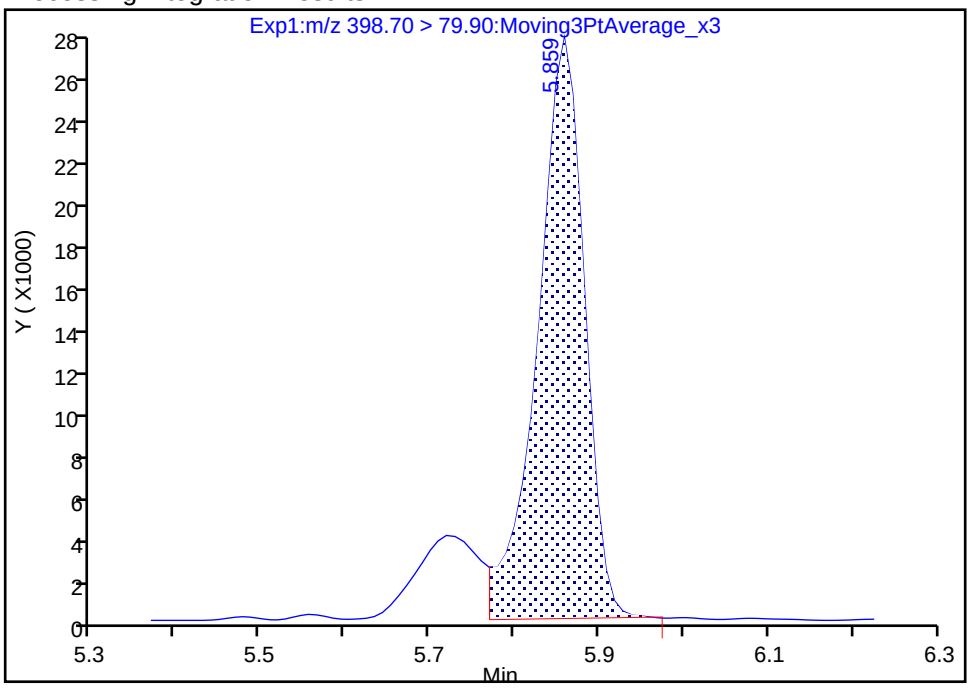
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

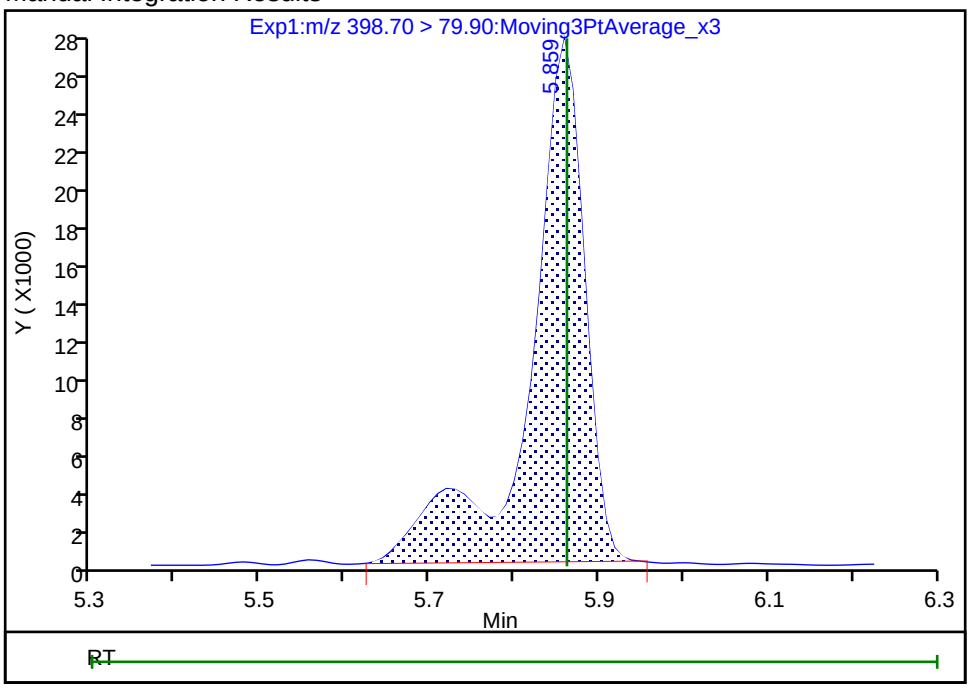
Processing Integration Results

RT: 5.86
Area: 105962
Amount: 0.036056
Amount Units: ng/ml



Manual Integration Results

RT: 5.86
Area: 125043
Amount: 0.042549
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

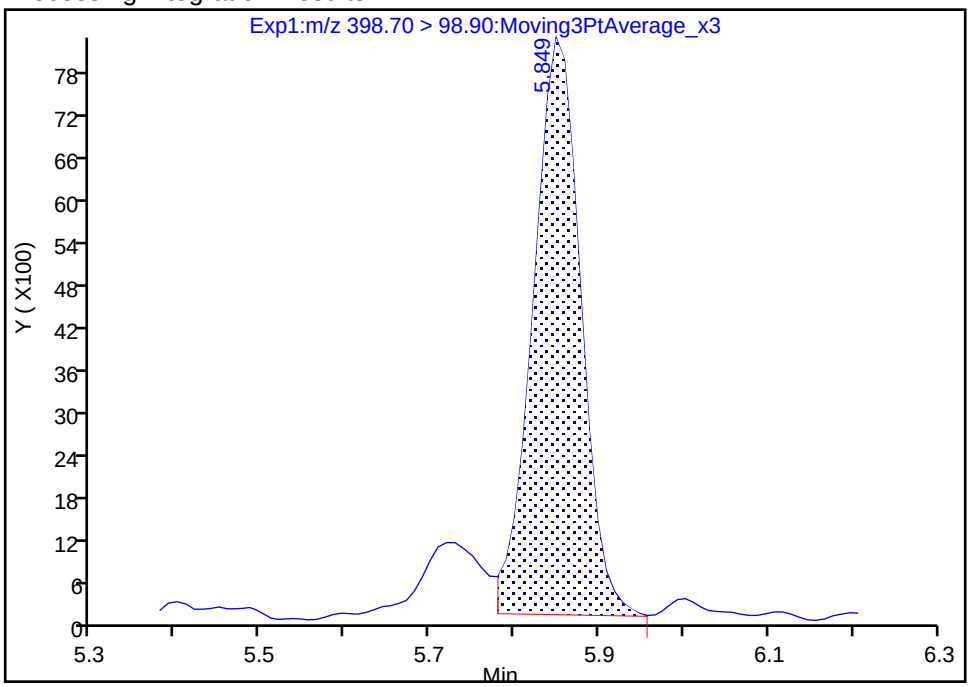
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

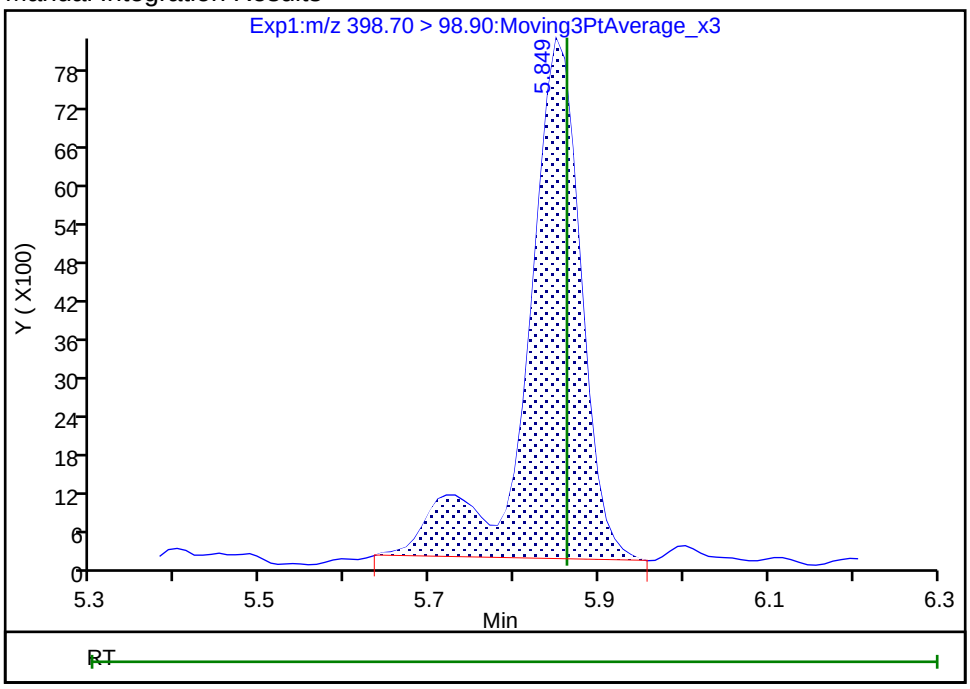
Processing Integration Results

RT: 5.85
Area: 31603
Amount: 0.036056
Amount Units: ng/ml



Manual Integration Results

RT: 5.85
Area: 36169
Amount: 0.042549
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:37 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

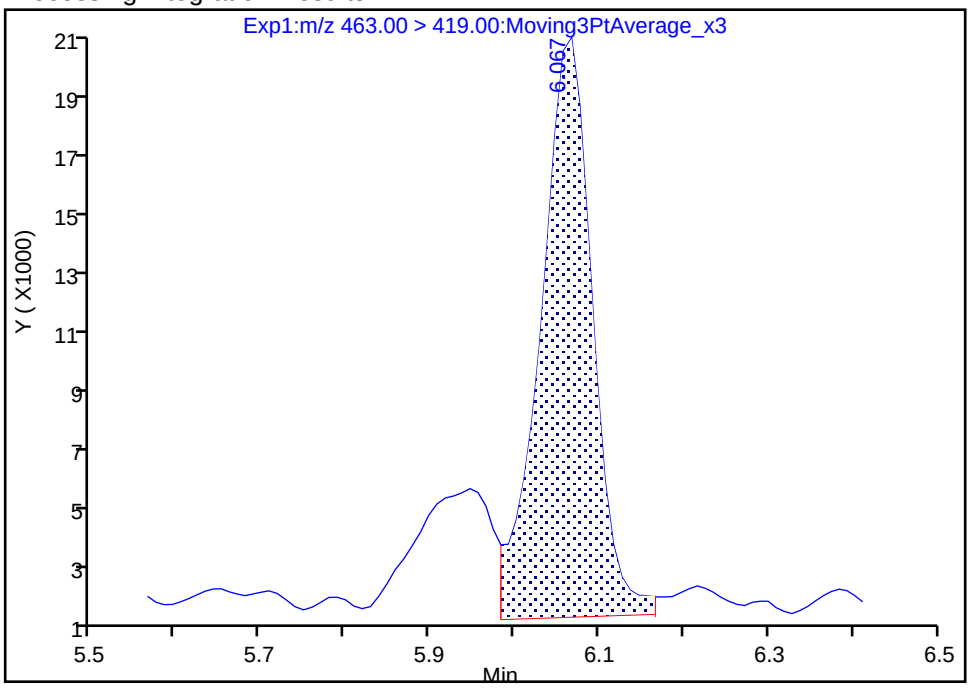
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

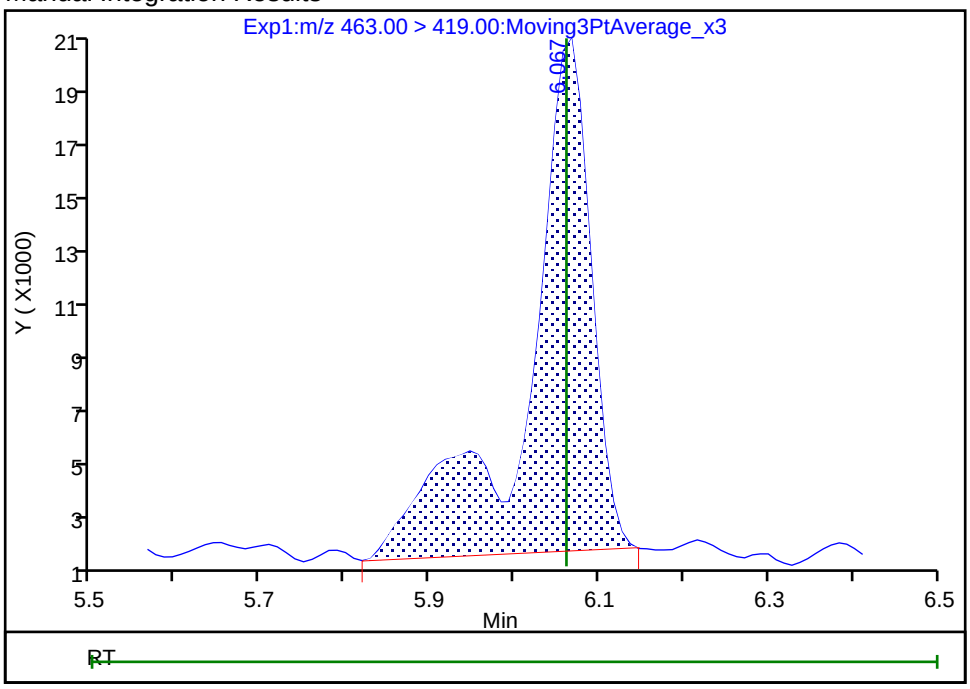
Processing Integration Results

RT: 6.07
Area: 82197
Amount: 0.045719
Amount Units: ng/ml



Manual Integration Results

RT: 6.07
Area: 98039
Amount: 0.054531
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:46 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

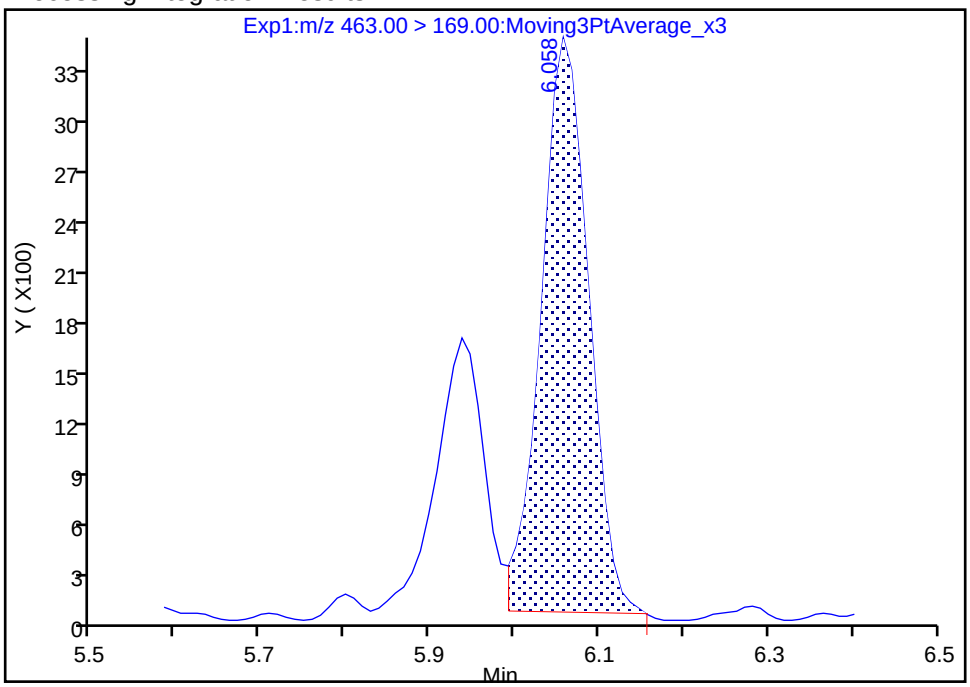
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

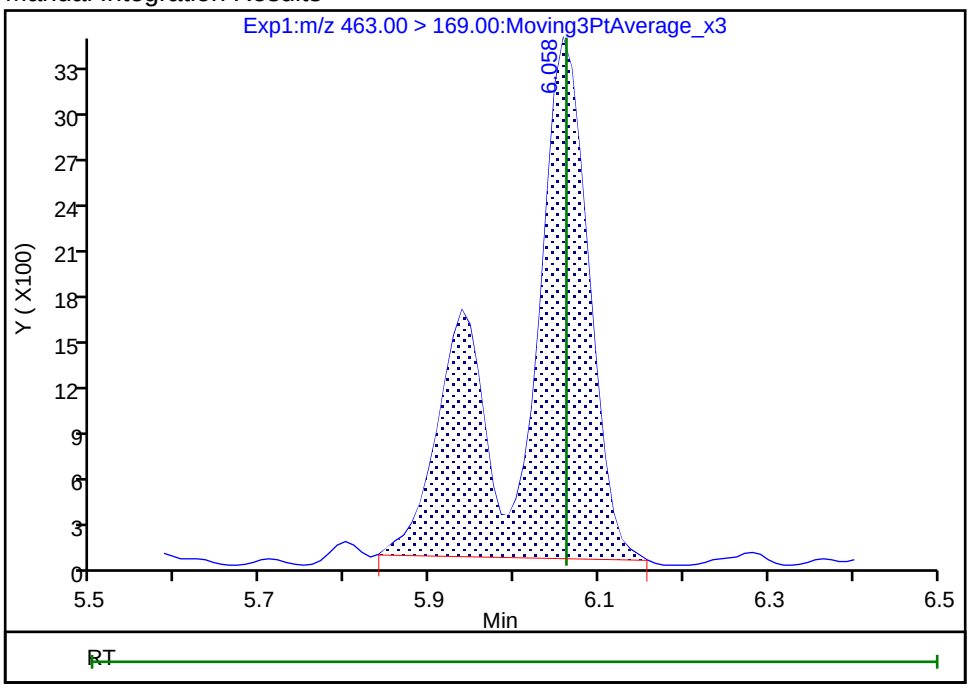
Processing Integration Results

RT: 6.06
Area: 13300
Amount: 0.045719
Amount Units: ng/ml



Manual Integration Results

RT: 6.06
Area: 19559
Amount: 0.054531
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:31:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

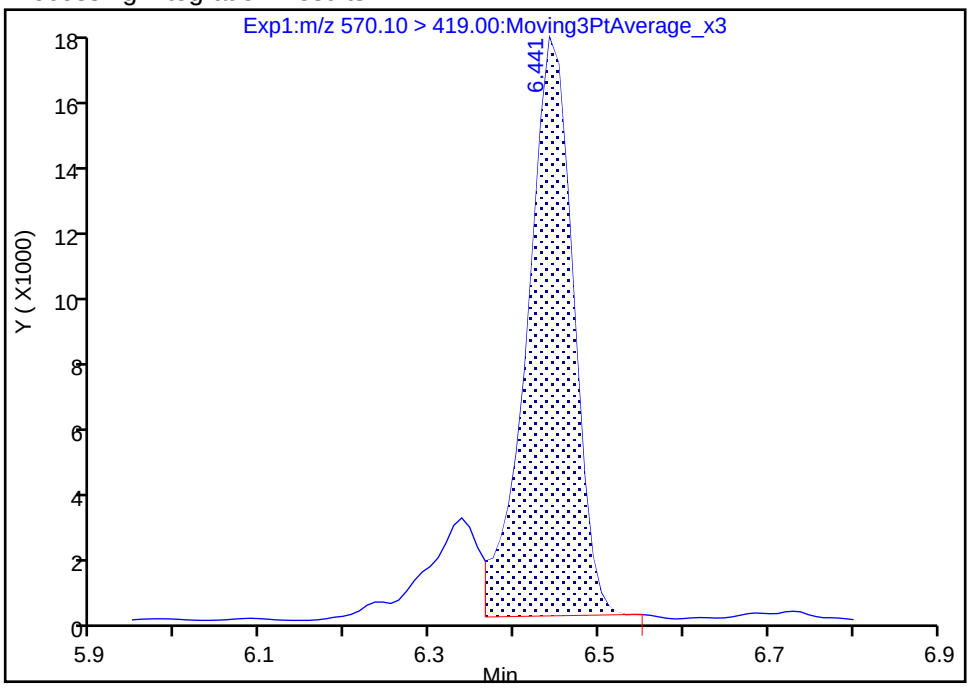
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

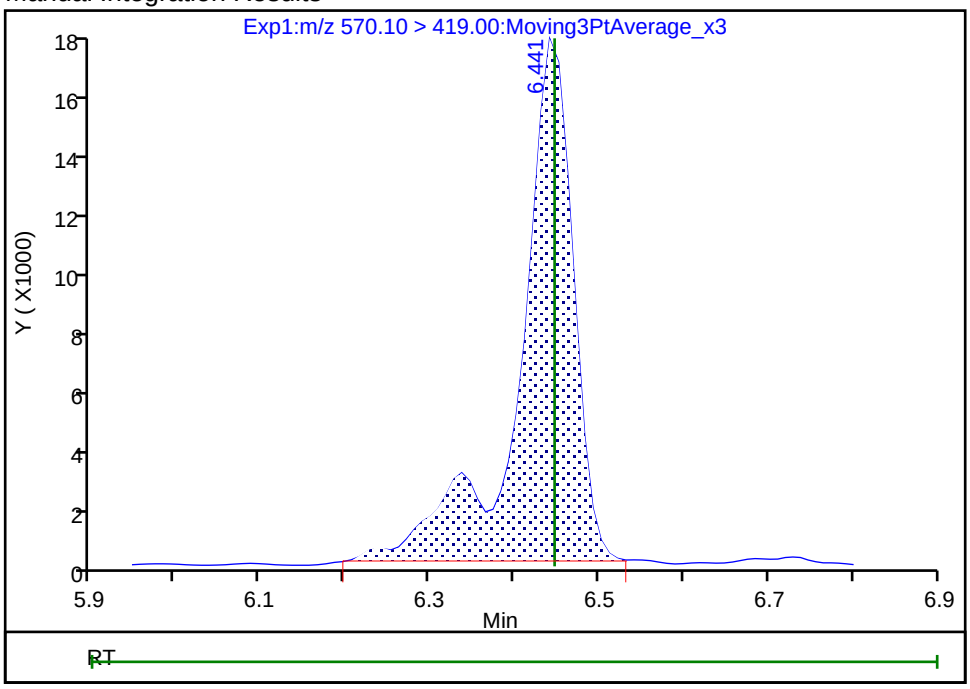
Processing Integration Results

RT: 6.44
Area: 65090
Amount: 0.042957
Amount Units: ng/ml



Manual Integration Results

RT: 6.44
Area: 76967
Amount: 0.050796
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

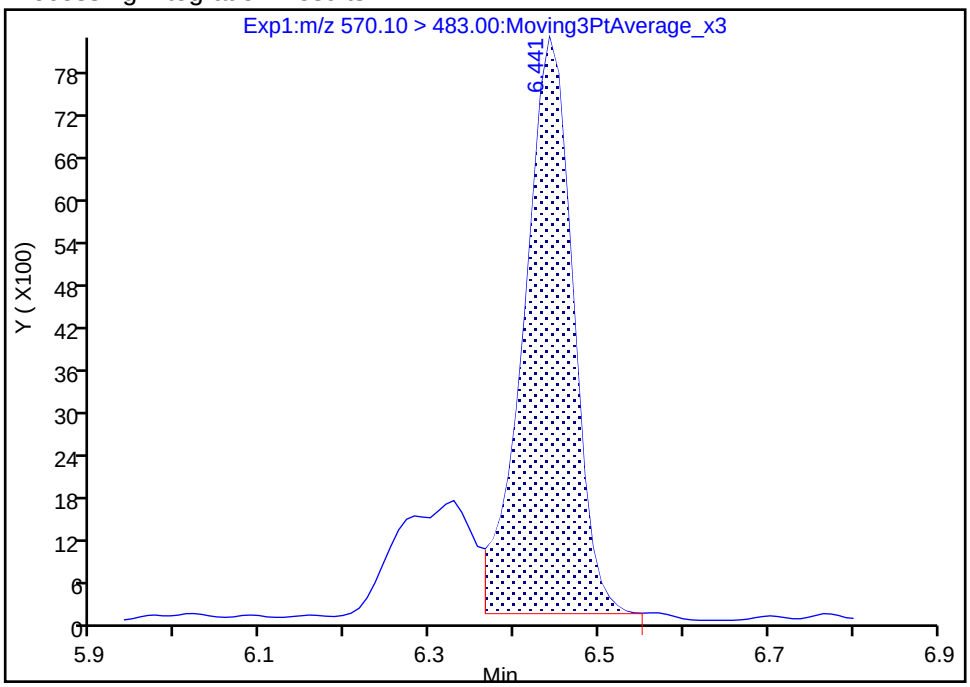
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

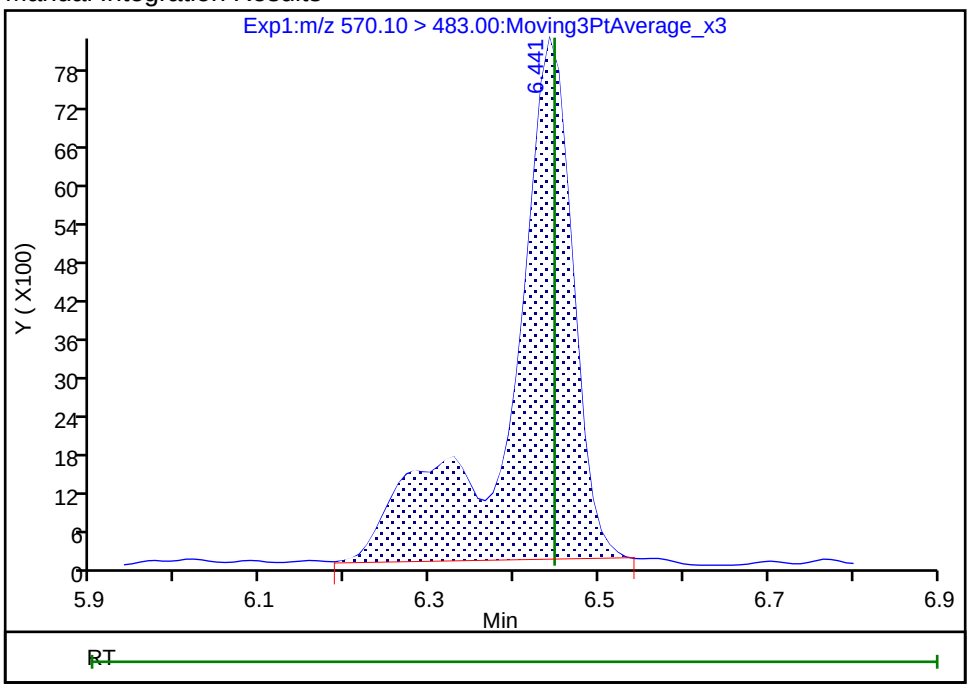
Processing Integration Results

RT: 6.44
Area: 32704
Amount: 0.042957
Amount Units: ng/ml



Manual Integration Results

RT: 6.44
Area: 42784
Amount: 0.050796
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:10 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

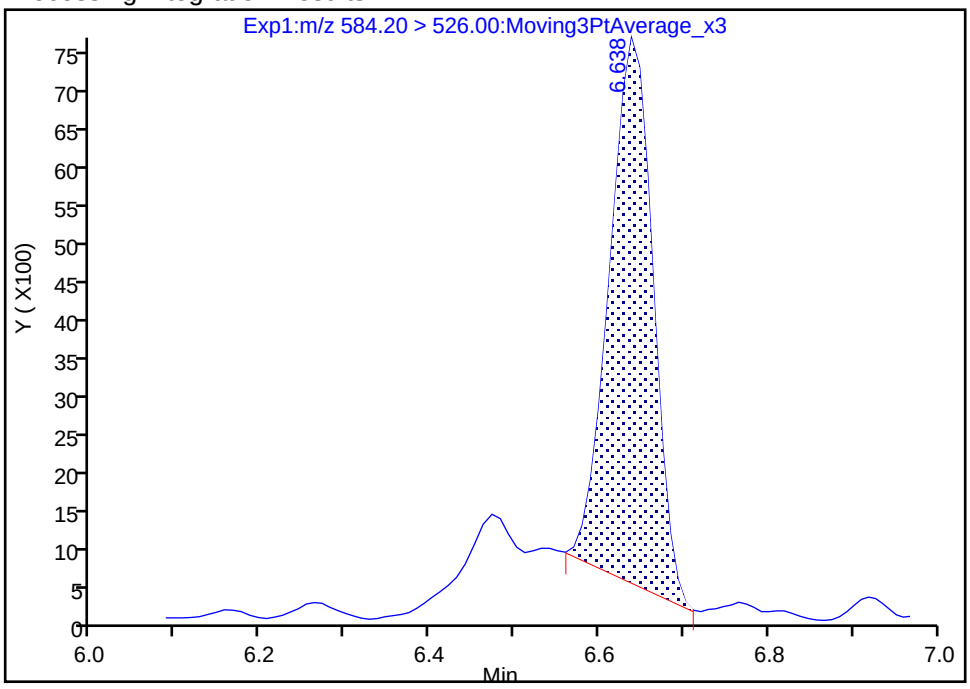
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

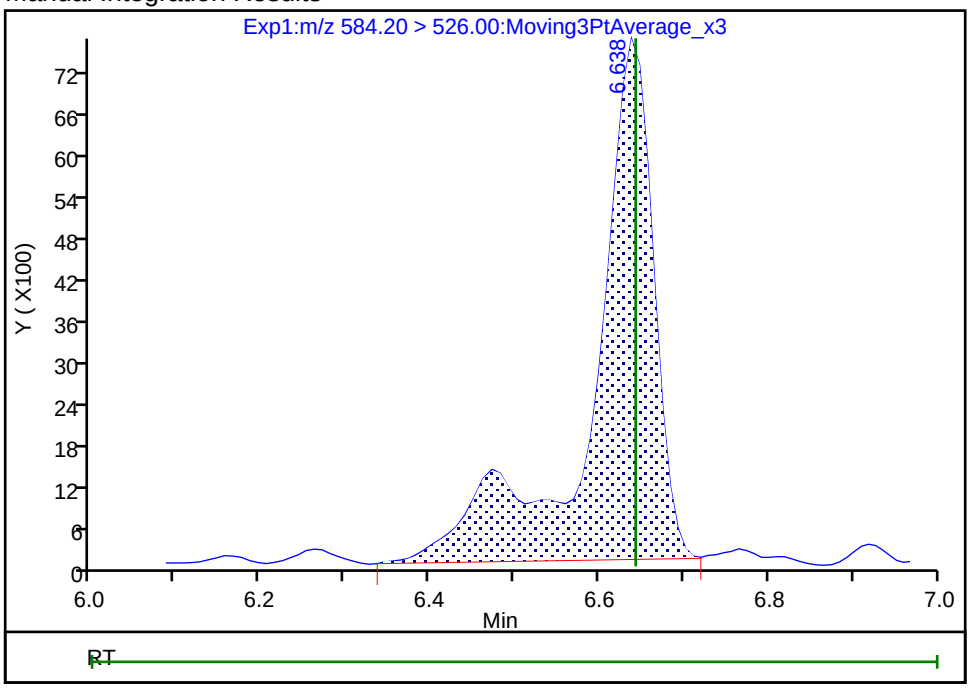
Processing Integration Results

RT: 6.64
Area: 25758
Amount: 0.038998
Amount Units: ng/ml



Manual Integration Results

RT: 6.64
Area: 37884
Amount: 0.044145
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

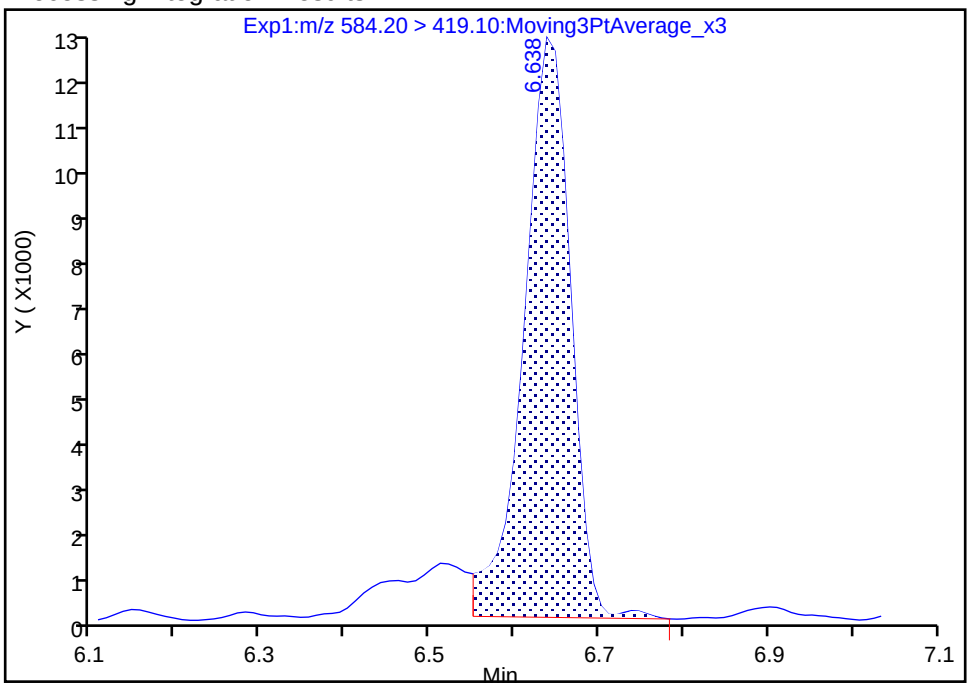
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Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

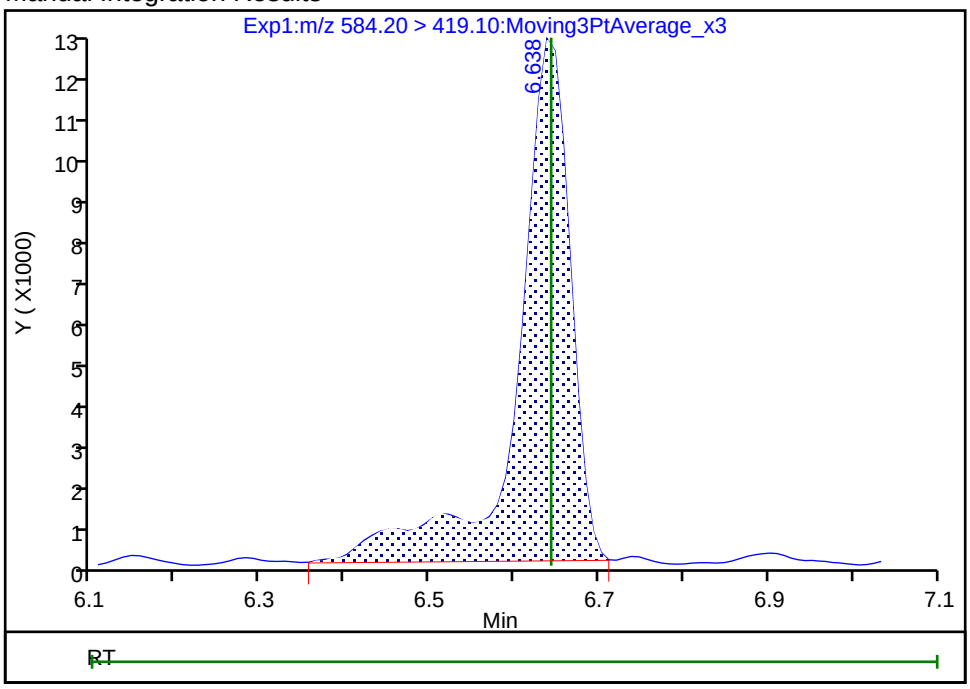
Processing Integration Results

RT: 6.64
Area: 46136
Amount: 0.038998
Amount Units: ng/ml



Manual Integration Results

RT: 6.64
Area: 52226
Amount: 0.044145
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

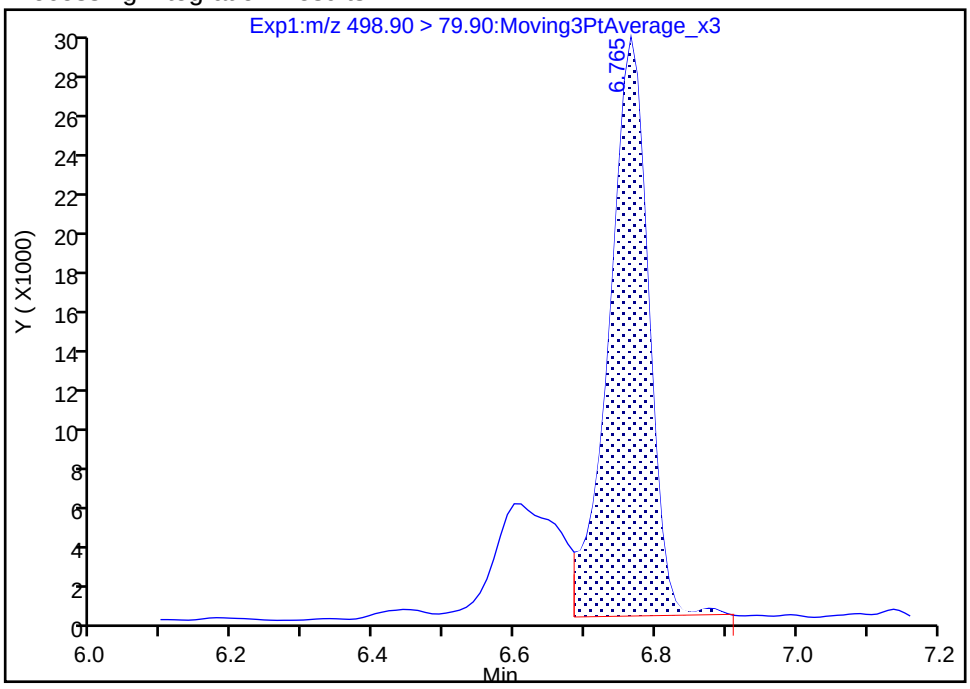
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

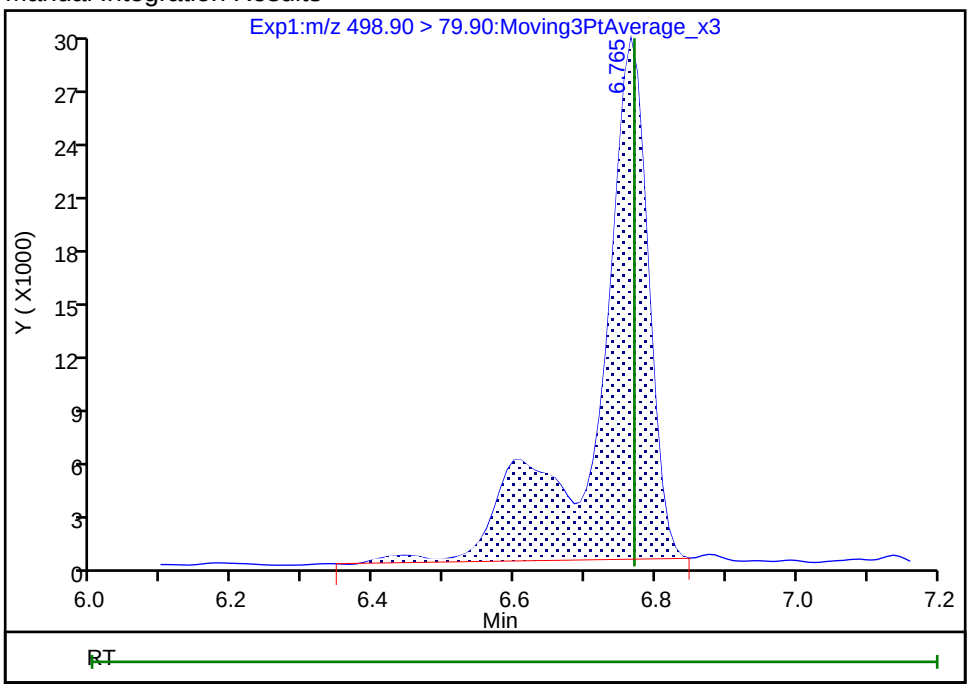
Processing Integration Results

RT: 6.77
Area: 114932
Amount: 0.029068
Amount Units: ng/ml



Manual Integration Results

RT: 6.77
Area: 150660
Amount: 0.038104
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

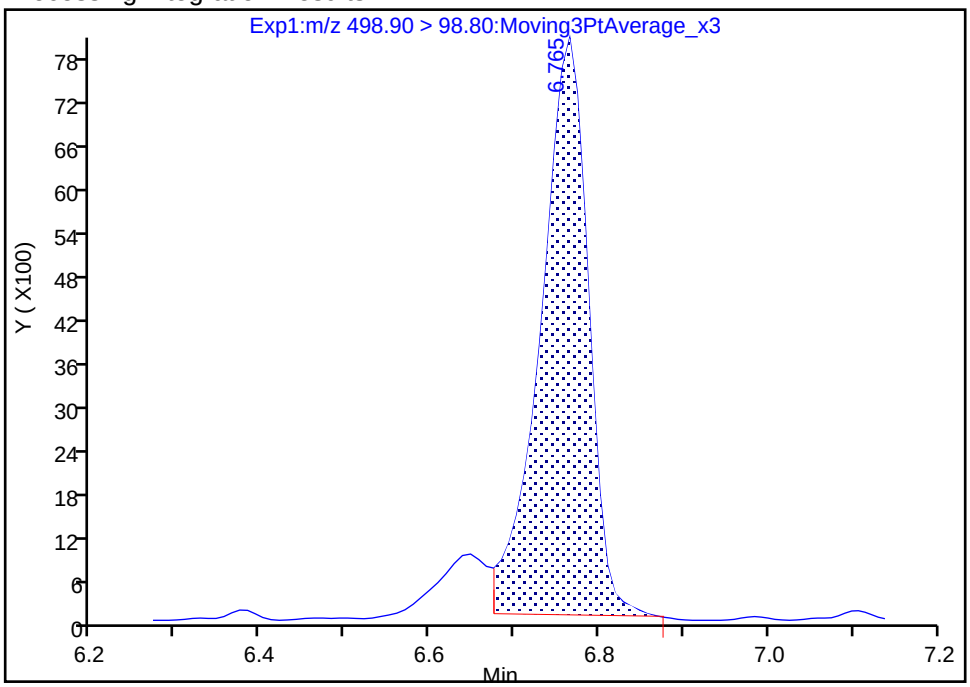
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

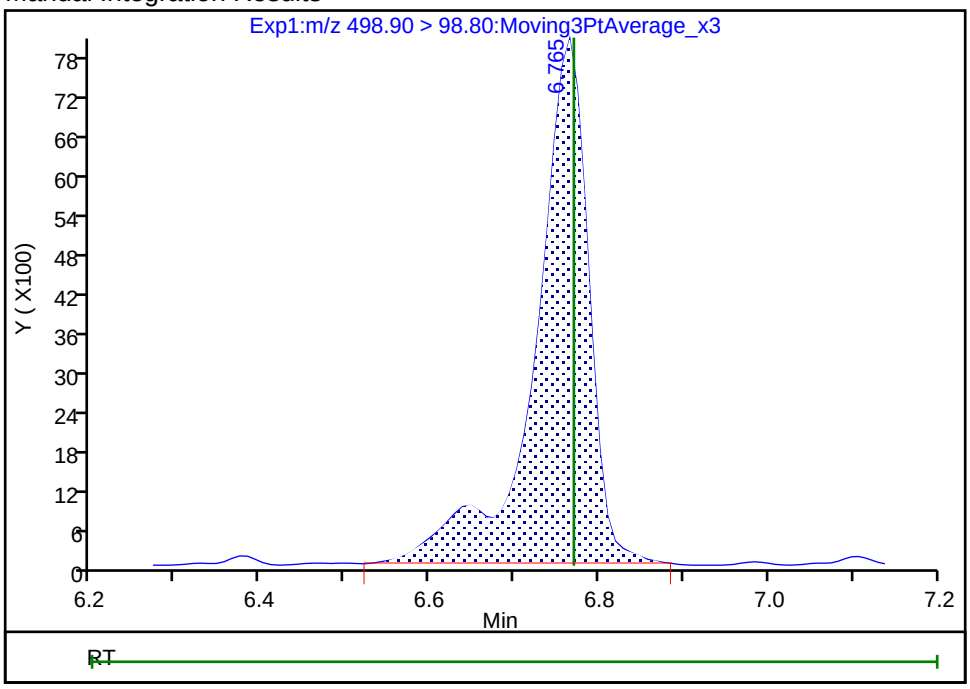
Processing Integration Results

RT: 6.77
Area: 31467
Amount: 0.029068
Amount Units: ng/ml



Manual Integration Results

RT: 6.77
Area: 35706
Amount: 0.038104
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:32:54 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

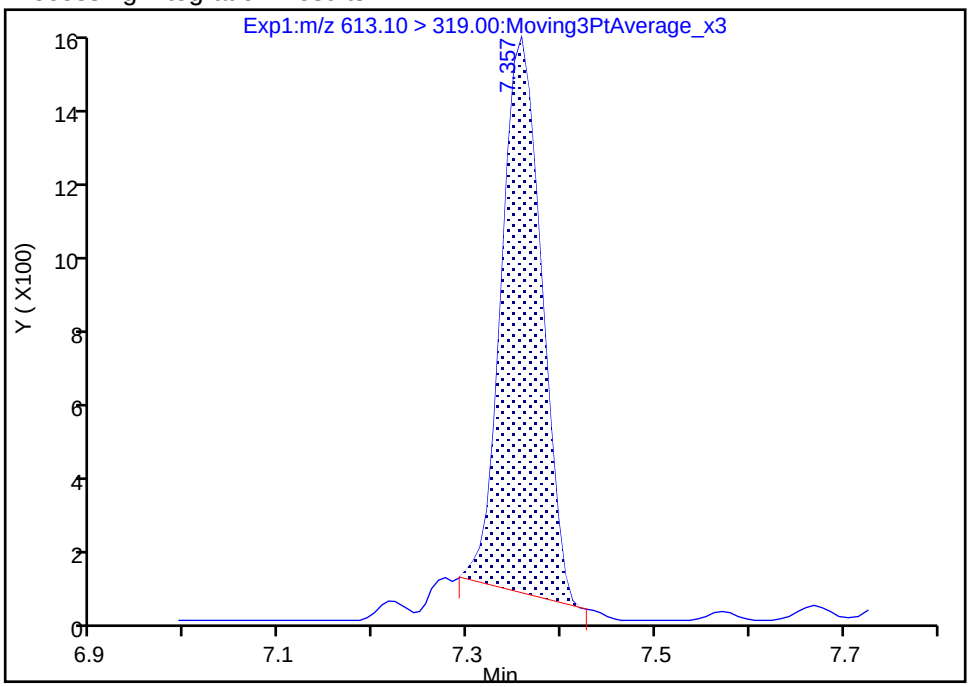
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

67 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

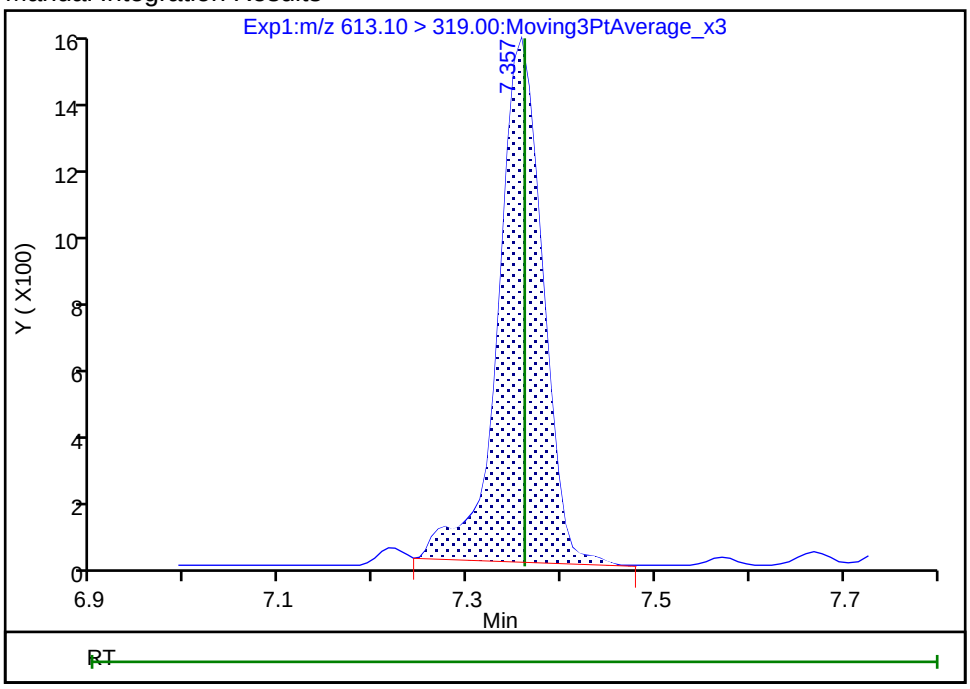
Processing Integration Results

RT: 7.36
Area: 4266
Amount: 0.042933
Amount Units: ng/ml



Manual Integration Results

RT: 7.36
Area: 4949
Amount: 0.042933
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:05 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

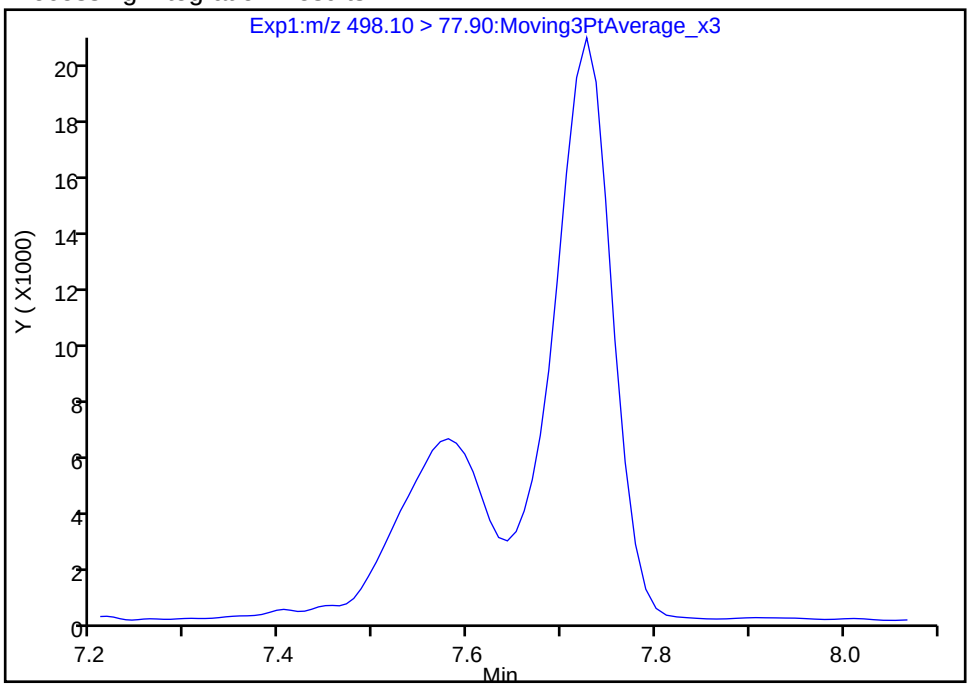
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

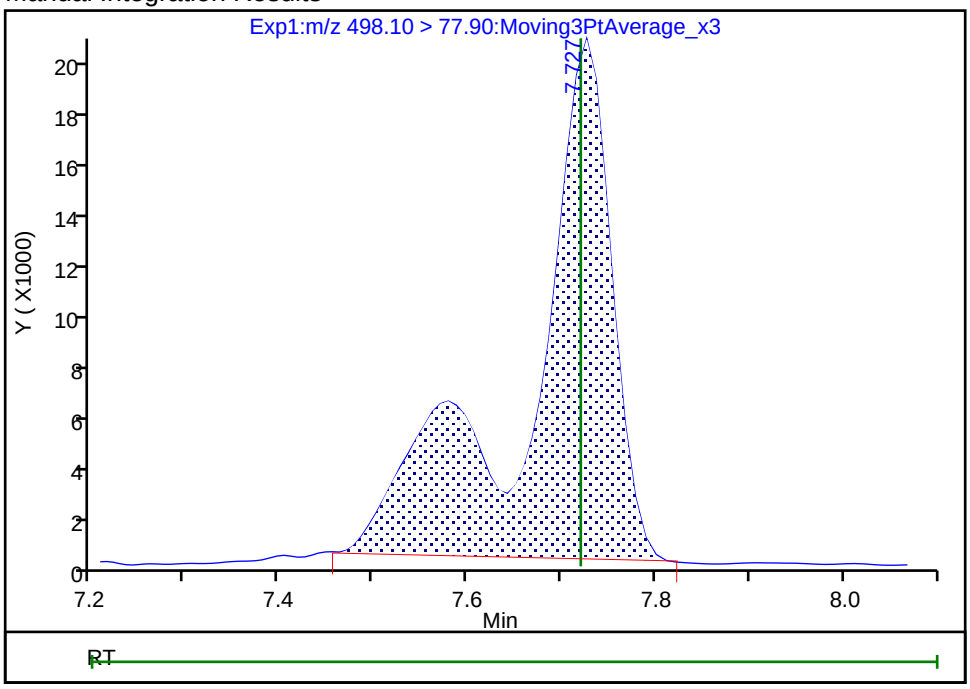
Not Detected
Expected RT: 7.72

Processing Integration Results



Manual Integration Results

RT: 7.73
Area: 125463
Amount: 0.041702
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

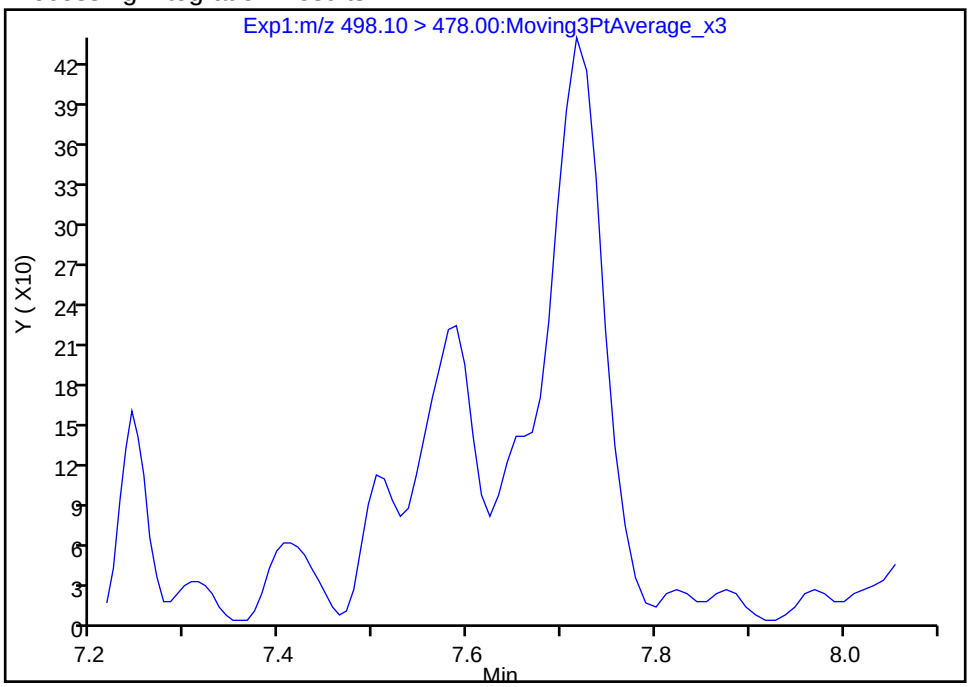
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

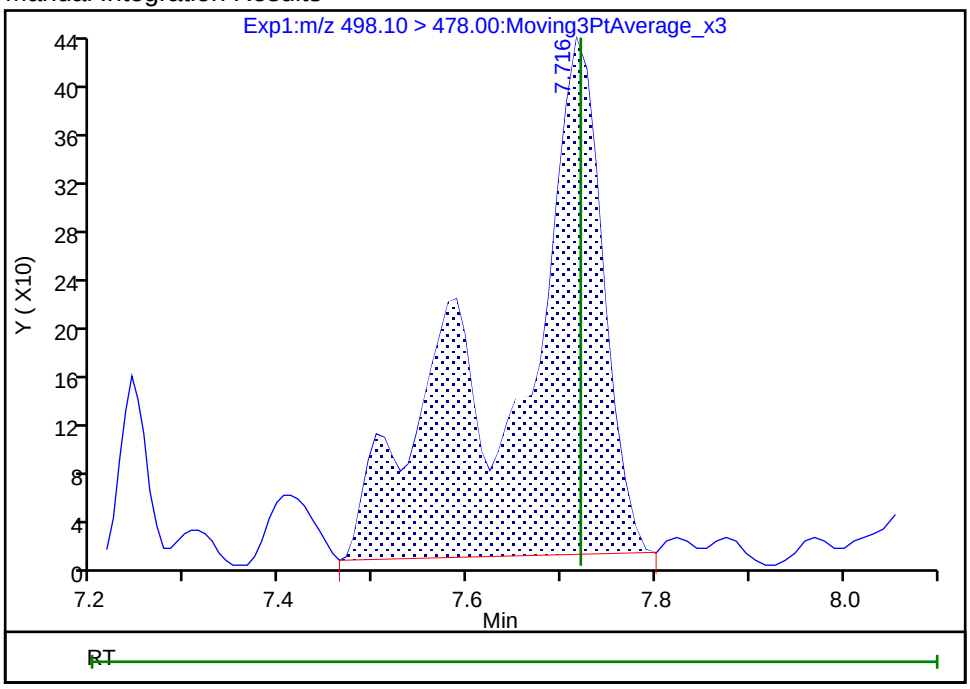
Not Detected
Expected RT: 7.72

Processing Integration Results



Manual Integration Results

RT: 7.72
Area: 2974
Amount: 0.041702
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:20 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

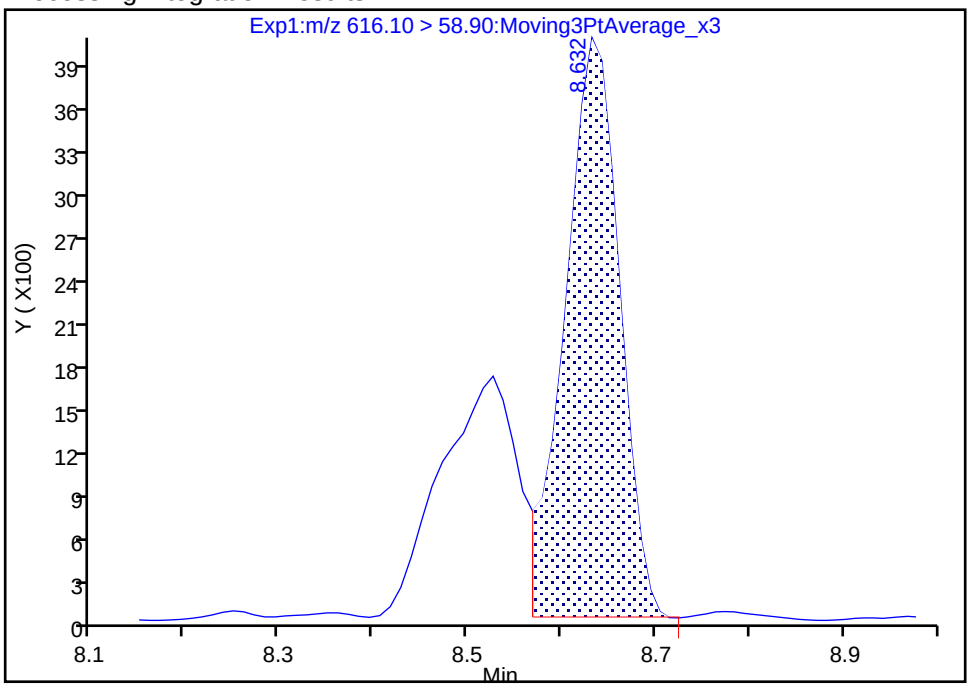
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d				
Injection Date:	18-Sep-2024 16:37:31	Instrument ID:	LCMS04		
Lims ID:	CCV LOW				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

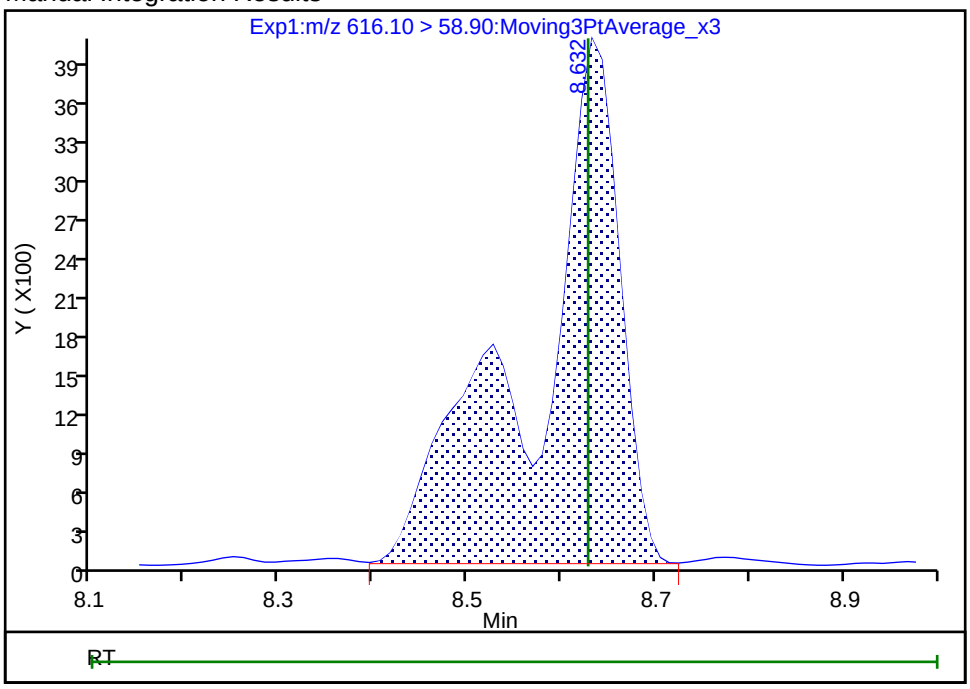
Processing Integration Results

RT: 8.63
Area: 16210
Amount: 0.294951
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 25562
Amount: 0.465116
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:32 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

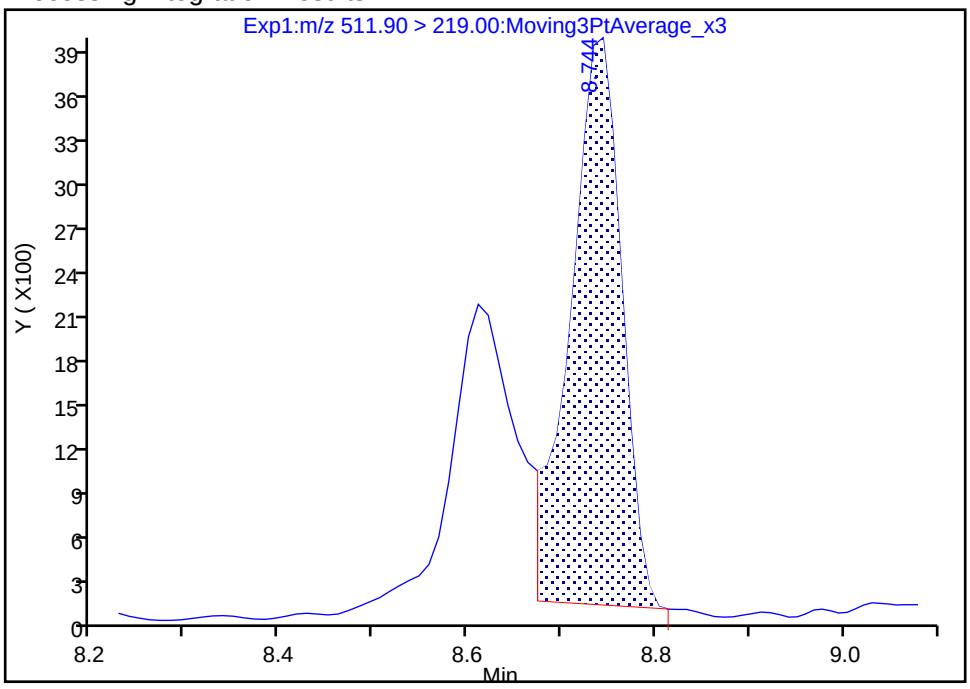
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

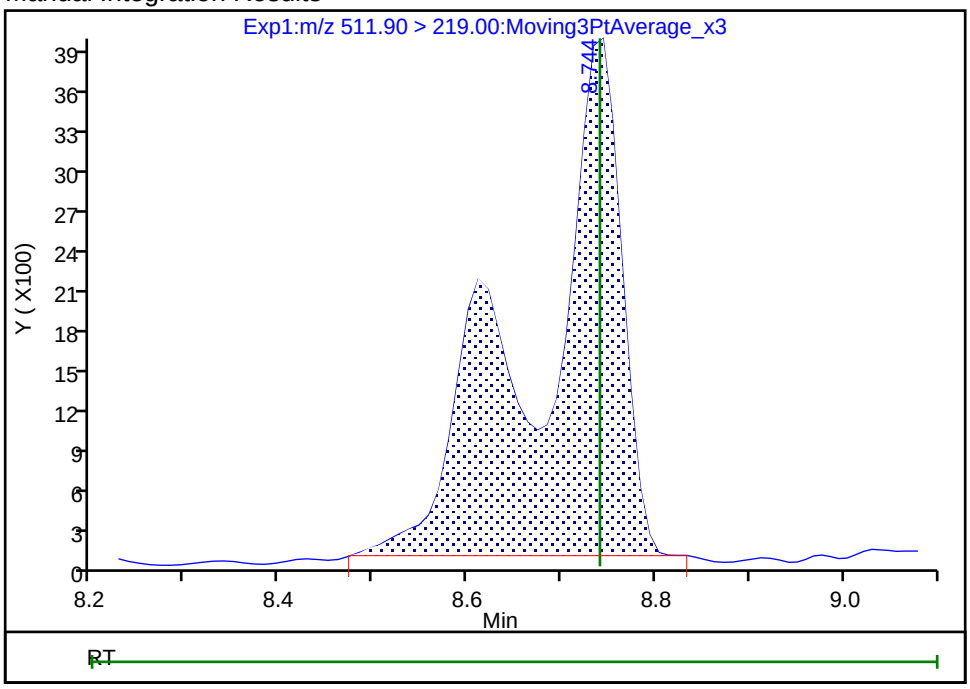
Processing Integration Results

RT: 8.74
Area: 14543
Amount: 0.028277
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 24612
Amount: 0.047855
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

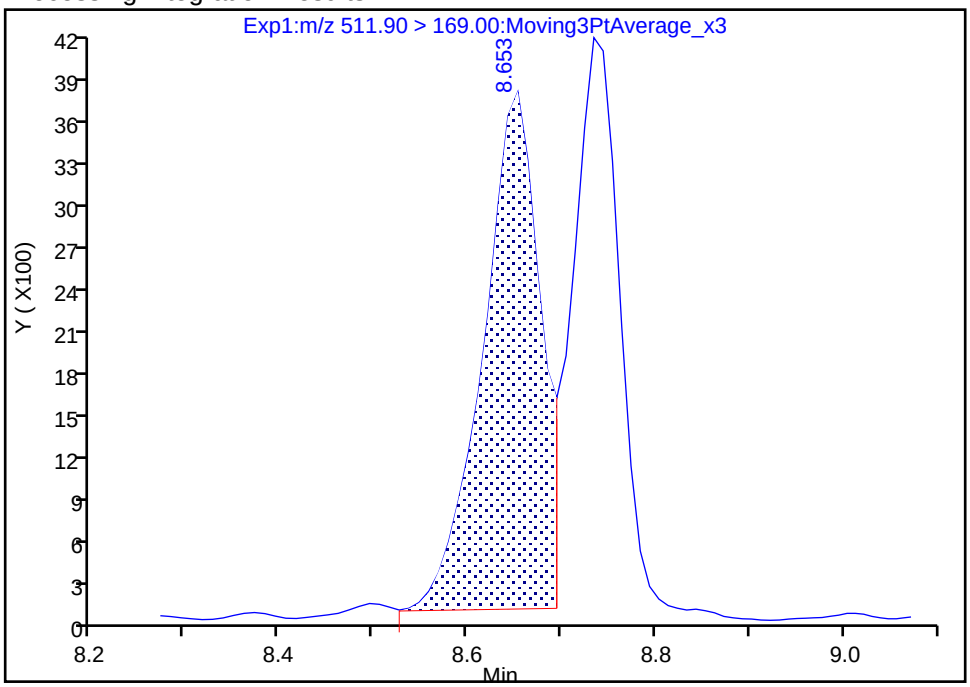
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

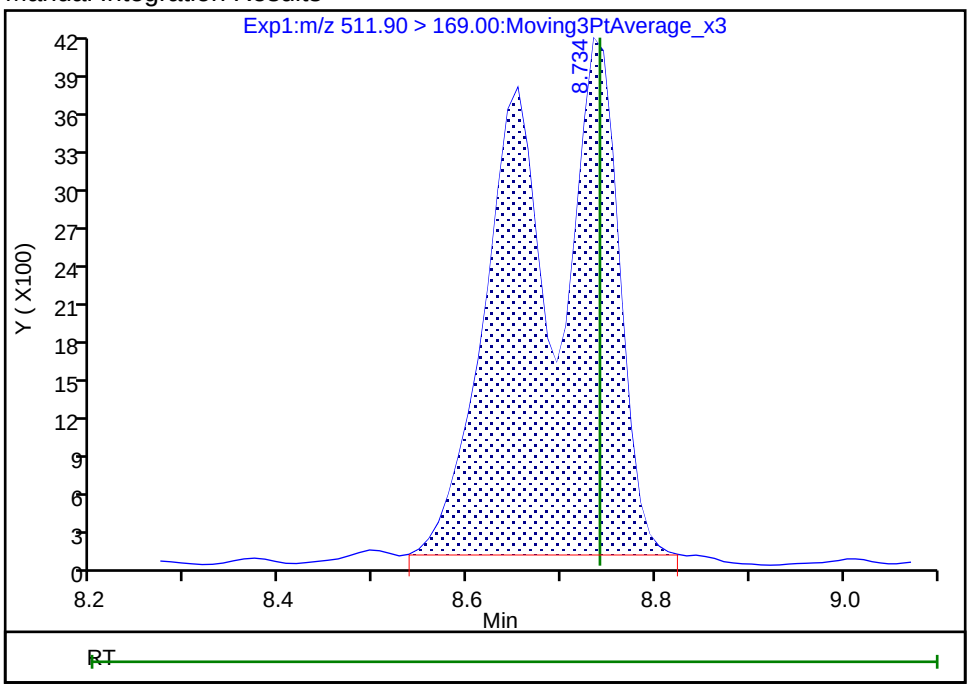
Processing Integration Results

RT: 8.65
Area: 15673
Amount: 0.028277
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 29606
Amount: 0.047855
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:46 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

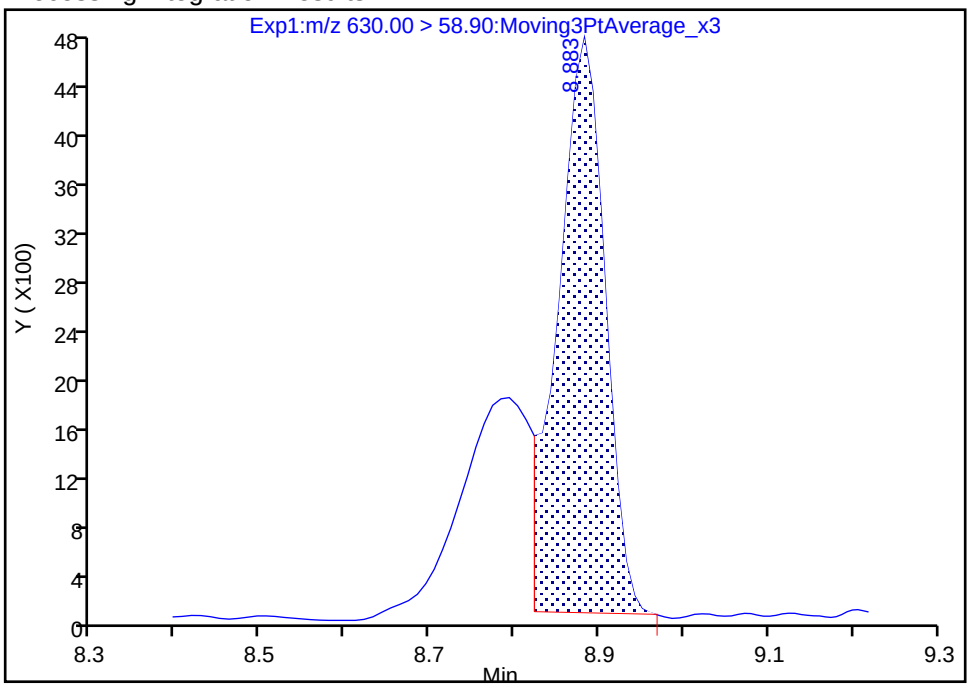
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

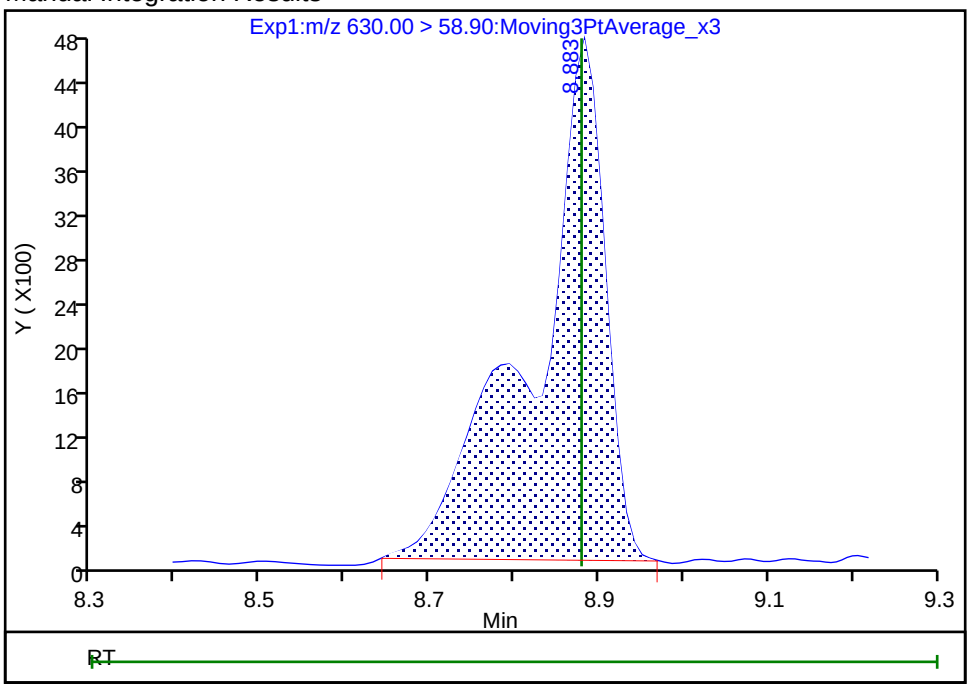
Processing Integration Results

RT: 8.88
Area: 17894
Amount: 0.311011
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 27559
Amount: 0.478996
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:33:54 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

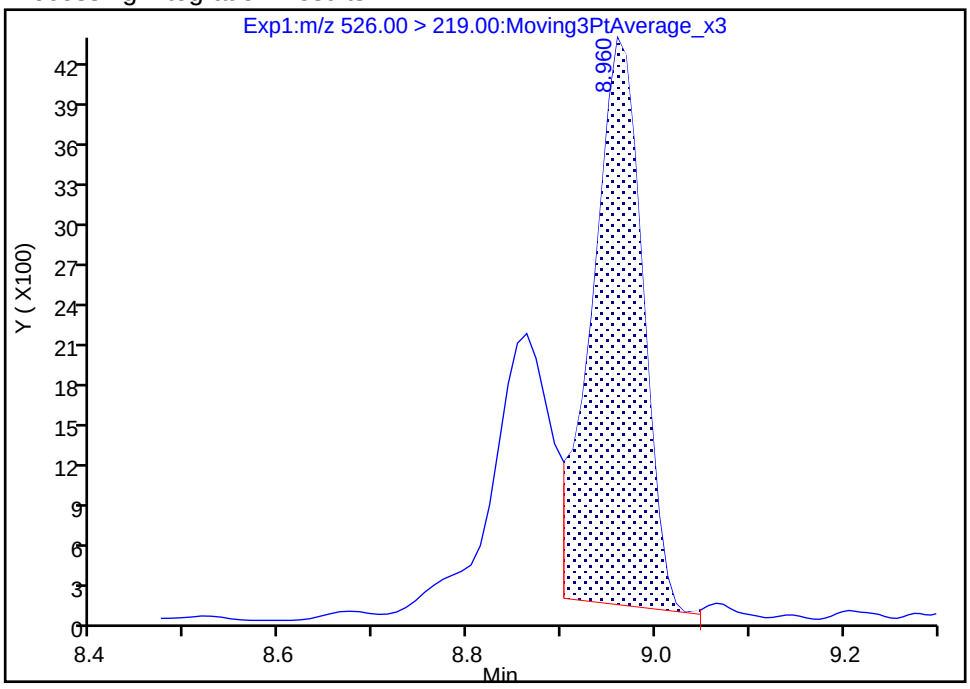
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d
Injection Date: 18-Sep-2024 16:37:31 Instrument ID: LCMS04
Lims ID: CCV LOW
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

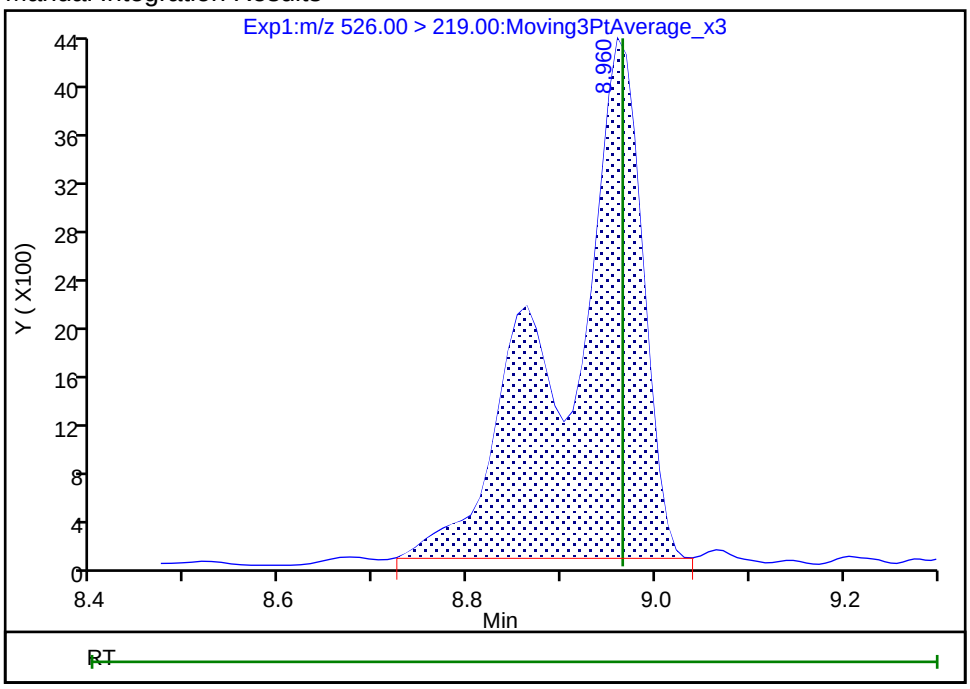
Processing Integration Results

RT: 8.96
Area: 15719
Amount: 0.029615
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 25212
Amount: 0.047501
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:34:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

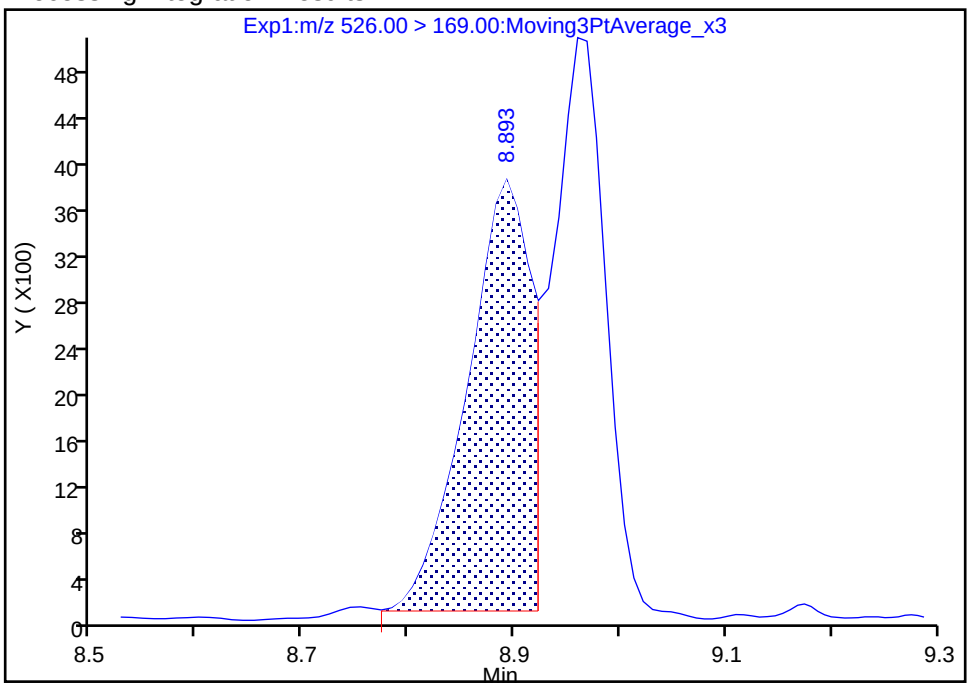
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj02.d				
Injection Date:	18-Sep-2024 16:37:31	Instrument ID:	LCMS04		
Lims ID:	CCV LOW				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

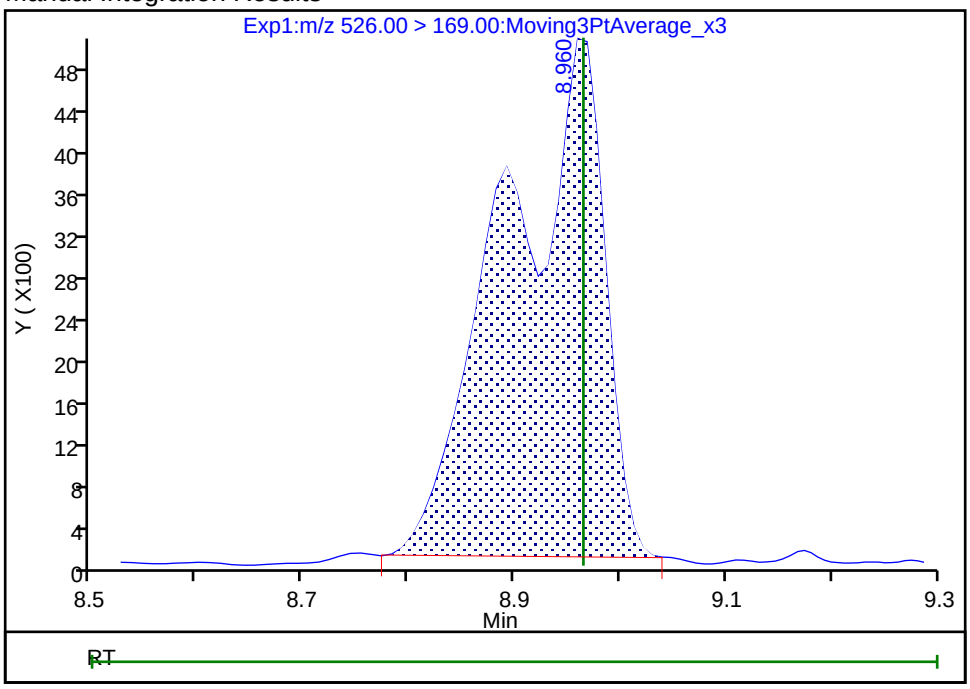
Processing Integration Results

RT: 8.89
Area: 15435
Amount: 0.029615
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 32554
Amount: 0.047501
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:34:09 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/28 Calibration Date: 09/18/2024 22:31

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj28.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9501	0.9482		2.50	2.50	-0.2	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0603	0.0506		2.62	3.13	-16.1	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.374	1.222		1.11	1.25	-11.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.532	1.394		1.14	1.25	-9.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.450	1.279		1.10	1.25	-11.8	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	2.988	2.709		2.12	2.34	-9.3	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.0878	0.0815		1.16	1.25	-7.2	30.0
FBSA	AveID	0.6842	0.6459		2.36	2.50	-5.6	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7948	0.8646		0.680	0.625	8.8	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1416	0.1070		11.8	15.6	-24.4	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.9713	0.9280		0.528	0.553	-4.5	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.102	1.032		2.34	2.50	-6.3	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.926	2.960		1.13	1.11	1.2	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.081	1.082		0.626	0.625	0.1	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	5.350	5.850		2.58	2.36	9.3	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.027	1.036		0.592	0.586	0.9	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	2.380	2.229		2.22	2.37	-6.4	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.4797	0.5377		0.701	0.625	12.1	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.1352	0.1291		14.9	15.6	-4.6	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8538	0.8980		0.598	0.569	5.2	30.0
Perfluorononanoic acid (PFNA)	AveID	0.7575	0.7068		0.583	0.625	-6.7	30.0
FHxSA	AveID	1.005	0.9211		2.29	2.50	-8.3	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	2.491	2.317		2.23	2.40	-7.0	30.0
PFECHS	AveID	1.691	1.800		1.23	1.15	6.4	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.172	1.142		0.580	0.595	-2.6	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.102	1.097		0.622	0.625	-0.5	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.7939	0.8507		0.670	0.625	7.2	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8346	0.7871		0.589	0.625	-5.7	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.258	1.175		0.542	0.580	-6.6	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/28 Calibration Date: 09/18/2024 22:31

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj28.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoroundecanoic acid (PFUnA)	AveID	0.9017	0.8316		0.576	0.625	-7.8	30.0
9-Chlorohexadecafluoro-3-oxa nonane-1-sulfonic acid	AveID	4.753	4.899		2.40	2.33	3.1	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9527	0.9021		0.568	0.600	-5.3	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9900	0.9603		0.606	0.625	-3.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.078	1.082		0.605	0.603	0.4	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9397	0.9374		0.623	0.625	-0.2	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.212	1.150		0.593	0.625	-5.1	30.0
11-Chloroeicosafluoro-3-oxau ndecane-1-sulfonic acid	AveID	4.613	4.908		2.51	2.36	6.4	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	1.253	1.059		0.528	0.625	-15.5	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9128	0.8789		0.583	0.605	-3.7	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	0.1480	0.1416		5.98	6.25	-4.3	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9739	1.066		0.684	0.625	9.4	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	0.1350	0.1268		5.87	6.25	-6.1	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.9863	1.099		0.696	0.625	11.4	30.0
13C4 PFBA	Ave	1.135	1.019		2.25	2.50	-10.2	30.0
13C5 PFPeA	Ave	0.7848	0.6533		1.04	1.25	-16.8	30.0
M2-4:2 FTS	Ave	0.3348	0.5039		1.76	1.17	50.5*	30.0
13C5 PFHxA	Ave	1.405	1.105		0.491	0.625	-21.4	30.0
13C3 PFBS	Ave	1.069	1.183		0.643	0.581	10.7	30.0
13C3 HFPO-DA	Ave	0.4045	0.3085		1.91	2.50	-23.7	30.0
13C4 PFHpA	Ave	1.467	1.183		0.504	0.625	-19.4	30.0
M2-6:2 FTS	Ave	0.3833	0.5299		1.64	1.19	38.2*	30.0
13C8 PFOA	Ave	7.888	7.064		0.560	0.625	-10.4	30.0
13C3 PFHxS	Ave	1.050	1.156		0.651	0.591	10.1	30.0
13C9 PFNA	Ave	0.7843	0.8005		0.319	0.313	2.1	30.0
M2-8:2 FTS	Ave	0.2626	0.3645		1.66	1.20	38.8*	30.0
d3-NMeFOSAA	Ave	0.4628	0.5515		1.49	1.25	19.2	30.0
13C6 PFDA	Ave	0.9624	1.010		0.328	0.313	4.9	30.0
d5-NEtFOSAA	Ave	0.4555	0.5783		1.59	1.25	27.0	30.0
13C8 PFOS	Ave	1.030	1.095		0.635	0.598	6.3	30.0
13C7 PFUnA	Ave	0.9471	1.035		0.342	0.313	9.3	30.0
13C2-PFDoDA	Ave	0.8939	0.9505		0.332	0.313	6.3	30.0
13C8 FOSA	Ave	1.106	1.217		0.688	0.625	10.0	30.0
13C2 PFTeDA	Ave	0.5110	0.5430		0.332	0.313	6.3	30.0
d7-N-MeFOSE-M	Ave	0.1639	0.1772		6.76	6.25	8.1	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/28 Calibration Date: 09/18/2024 22:31

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj28.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMePFOSA	Ave	0.2181	0.1978		0.567	0.625	-9.3	30.0
d9-N-EtFOSE-M	Ave	0.2012	0.2114		6.57	6.25	5.1	30.0
d5-NEtPFOSA	Ave	0.2198	0.1993		0.567	0.625	-9.3	30.0

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Lims ID: CCV MID
Client ID:
Sample Type: CCV
Inject. Date: 18-Sep-2024 22:31:10 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV MID
Misc. Info.: Plate: 1 Rack: 1 240-0146375-028
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:39:55 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:39:55
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.551	3.544	0.007		2087152	1.25			889	
* 2 13C2 PFHxA										
315.10 > 270.00	4.740	4.719	0.021		1582737	0.6250			3922	
* 3 13C4 PFOA										
417.10 > 172.00	5.638	5.629	0.009		269803	0.6250			1844	
* 4 18O2 PFHxS										
403.00 > 83.90	5.862	5.843	0.019		1440867	0.5913			3023	
* 5 13C5 PFNA										
468.00 > 423.00	6.071	6.052	0.019		933495	0.3125			1233	
* 6 13C2 PFDA										
515.10 > 470.10	6.507	6.488	0.019		702897	0.3125			1723	
* 7 13C4 PFOS										
502.80 > 79.90	6.779	6.761	0.018		1347017	0.5975	Target=4.00		2569	
502.80 > 98.90	6.779	6.761	0.018		334325		4.03(2.00-6.00)		1559	
D 8 13C4 PFBA										
216.80 > 171.90	3.551	3.544	0.007	1.000	4255563	2.25		89.8	11763	
D 9 13C5 PFPeA										
268.30 > 223.00	4.219	4.202	0.017	0.890	2068143	1.04		83.2	6285	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.540	4.530	0.010	0.774	1433599	1.76	Target=0.29	150	5621	
329.10 > 309.00	4.540	4.530	0.010	0.774	4178370		0.34(0.14-0.43)	150	1288	
D 11 13C5 PFHxA										
318.00 > 273.00	4.729	4.719	0.010	0.998	1748762	0.4914	Target=40.21	78.6	4100	
318.00 > 120.30	4.729	4.719	0.010	0.998	40012		43.71(20.11-60.32)	78.6	453	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.856	4.846	0.010	0.828	1676307	0.6434	Target=3.28	111	3191	
302.10 > 98.90	4.856	4.846	0.010	0.828	529475		3.17(1.64-4.92)	111	2504	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.933	4.923	0.010	1.041	1952818	1.91	Target=1.86	76.3	5191	
286.90 > 184.90	4.933	4.923	0.010	1.041	991264		1.97(0.93-2.78)	76.3	1921	
D 14 13C4 PFHpA										
367.10 > 322.00	5.204	5.194	0.010	1.098	1872155	0.5038		80.6	5567	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.425	5.416	0.009	0.926	1533384	1.64	Target=0.38	138	4268	
429.10 > 409.00	5.425	5.416	0.009	0.926	3908597		0.39(0.19-0.57)	138	4734	
D 16 13C8 PFOA										
421.10 > 376.00	5.638	5.619	0.019	1.000	1906016	0.5597		89.6	5171	
D 17 13C3 PFHxS										
402.10 > 79.90	5.862	5.843	0.019	1.000	1665945	0.6512	Target=3.25	110	3805	
402.10 > 98.80	5.862	5.843	0.019	1.000	483172		3.45(1.63-4.88)	110	1645	
D 18 13C9 PFNA										
472.10 > 427.00	6.071	6.052	0.019	1.000	747292	0.3190		102	1460	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.267	6.249	0.018	1.069	1063799	1.66	Target=0.33	139	3866	
529.10 > 509.00	6.267	6.249	0.018	1.069	2897313		0.37(0.16-0.49)	139	6504	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.447	6.427	0.020	0.951	1554067	1.49		119	5992	
D 21 13C6 PFDA										
519.10 > 474.10	6.507	6.488	0.019	1.000	709640	0.3278		105	1679	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.643	6.624	0.019	0.980	1629784	1.59		127	3857	
D 23 13C8 PFOS										
507.10 > 79.90	6.779	6.752	0.027	1.000	1474988	0.6350	Target=4.26	106	614	
507.10 > 98.90	6.779	6.752	0.027	1.000	366289		4.03(2.13-6.39)	106	1027	
D 24 13C7 PFUnA										
570.00 > 525.10	6.948	6.923	0.025	1.068	727501	0.3415		109	1372	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.384	7.353	0.031	1.135	668137	0.3323		106	1336	
D 26 13C8 FOSA										
506.10 > 77.80	7.710	7.709	0.001	1.137	1714497	0.6878		110	3721	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.212	8.179	0.034	1.262	381702	0.3321		106	944	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.607	8.607	0.0	1.270	2497124	6.76		108	668	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.731	8.721	0.010	1.288	278669	0.5669		90.7	1148	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.860	8.849	0.011	1.307	2979227	6.57		105	941	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.948	8.947	0.001	1.320	280861	0.5668		90.7	173	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										
212.80 > 168.90	3.560	3.559	0.001	1.002	4035004	2.50		99.8	22.2	
34 3:3 FTCA										
241.00 > 177.00	3.843	3.842	0.001	0.911	261575	2.62	Target=1.06	83.9	2807	
241.00 > 117.00	3.843	3.842	0.001	0.911	244585		1.07(0.53-1.58)		62.3	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.843	3.842	0.001	0.911	2527482	1.11		89.0	4461	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.219	4.219	0.0	1.000	2883596	1.14		91.0	214	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.400	4.388	0.012	1.043	2645705	1.10		88.2	6929	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.540	4.540	0.0	1.000	7765971	2.12	Target=1.34	90.7	16368	
327.10 > 80.90	4.540	4.540	0.0	1.000	5575344		1.39(0.67-2.01)		3590	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.697	4.696	0.001	0.993	285146	1.16	Target=1.72	92.8	1311	
295.00 > 84.90	4.686	4.696	-0.010	0.991	217370		1.31(0.86-2.58)		865	
48 FBSA										
297.90 > 78.00	4.718	4.718	0.0	0.972	4656962	2.36		94.4	4009	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.740	4.739	0.001	1.002	1511949	0.6798	Target=14.20	109	177	
313.00 > 118.90	4.740	4.739	0.001	1.002	103595		14.59(7.10-21.30)		651	
41 5:3 FTCA										
341.00 > 237.10	4.823	4.812	0.011	1.020	4676956	11.8	Target=1.54	75.6	3550	
341.00 > 217.00	4.813	4.812	0.001	1.018	2973104		1.57(0.77-2.31)		1184	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.867	4.856	0.011	1.002	1478659	0.5279	Target=3.31	95.5	3509	
298.70 > 98.80	4.867	4.856	0.011	1.002	434101		3.41(1.66-4.97)		1627	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.933	4.932	0.001	1.000	2015572	2.34	Target=1.99	93.7	4306	
284.90 > 184.90	4.933	4.932	0.001	1.000	1039172		1.94(1.00-2.99)		1951	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.133	5.123	0.010	1.085	9214821	1.13	Target=12.91	101	10064	
314.80 > 82.90	5.123	5.123	0.0	1.083	695134		13.26(6.46-19.37)		1593	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.204	5.204	0.0	1.000	2026025	0.6259	Target=3.56	100	224	
363.10 > 169.00	5.204	5.204	0.0	1.000	517060		3.92(1.78-5.34)		1190	
49 DONA										
376.90 > 250.90	5.375	5.365	0.009	1.090	10761053	2.58	Target=1.61	109	7910	
376.90 > 84.80	5.375	5.365	0.009	1.090	6523818		1.65(0.81-2.42)		8744	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.395	5.385	0.010	0.920	1712034	0.5916	Target=3.08	101	1254	
349.10 > 98.90	5.395	5.385	0.010	0.920	546641		3.13(1.54-4.63)		1598	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.435	5.425	0.010	1.002	6820384	2.22	Target=1.41	93.6	12719	
427.10 > 80.90	5.435	5.425	0.010	1.002	4672308		1.46(0.70-2.11)		6295	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.647	5.638	0.009	1.002	1024900	0.7006	Target=1.93	112	110	M
413.00 > 169.00	5.638	5.638	0.0	1.000	483716		2.12(0.96-2.89)		567	M
54 7:3 FTCA										
441.00 > 316.90	5.694	5.694	0.0	1.204	5642486	14.9	Target=1.07	95.4	5804	
441.00 > 336.90	5.694	5.694	0.0	1.204	5361505		1.05(0.53-1.60)		6360	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.872	5.862	0.010	1.002	1439055	0.5982	Target=3.17	105	1751	M
398.70 > 98.90	5.872	5.862	0.010	1.002	415431		3.46(1.59-4.76)		594	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.081	6.061	0.020	1.002	1056346	0.5831	Target=4.77	93.3	144	M
463.00 > 169.00	6.071	6.061	0.010	1.000	193448		5.46(2.39-7.16)		183	M
62 FHxSA										
397.90 > 78.00	6.239	6.258	-0.019	1.064	6488525	2.29		91.7	5135	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.276	6.267	0.009	1.001	4930127	2.23	Target=1.35	93.0	10909	
527.10 > 80.80	6.276	6.267	0.009	1.001	3665397		1.35(0.67-2.02)		7028	
57 PFECHS										
461.00 > 381.00	6.276	6.267	0.009	1.071	5844003	1.23	Target=1.89	106	445	
461.00 > 99.00	6.276	6.267	0.009	1.071	2950349		1.98(0.94-2.83)		4589	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.332	6.314	0.018	0.934	1676831	0.5798	Target=3.87	97.4	1839	
449.00 > 98.80	6.323	6.314	0.009	0.933	445057		3.77(1.93-5.80)		1051	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.458	6.447	0.011	1.002	852144	0.6221	Target=1.69	99.5	1408	M
570.10 > 483.00	6.458	6.447	0.011	1.002	515694		1.65(0.85-2.54)		949	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.517	6.498	0.019	1.001	1207393	0.6697	Target=5.10	107	202	
512.90 > 219.00	6.517	6.498	0.019	1.001	241287		5.00(2.55-7.66)		1176	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.663	6.643	0.020	1.003	641367	0.5894	Target=1.49	94.3	1197	M
584.20 > 526.00	6.653	6.643	0.010	1.001	431938		1.48(0.75-2.24)		532	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.788	6.770	0.018	1.001	1682010	0.5416	Target=4.80	93.4	696	M
498.90 > 98.80	6.779	6.770	0.009	1.000	360126		4.67(2.40-7.20)		1217	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.956	6.940	0.016	1.001	1209969	0.5764	Target=6.10	92.2	444	
563.10 > 269.10	6.956	6.940	0.016	1.001	209520		5.77(3.05-9.15)		1340	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.126	7.103	0.023	1.445	8916030	2.40	Target=3.10	103	1379	
532.80 > 353.00	7.118	7.103	0.015	1.443	2740832		3.25(1.55-4.65)		2364	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.226	7.205	0.021	1.066	1336182	0.5681	Target=4.02	94.7	2106	
548.80 > 98.80	7.226	7.205	0.021	1.066	320994		4.16(2.01-6.03)		1577	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.384	7.361	0.023	1.000	1283236	0.6062	Target=16.81	97.0	504	
613.10 > 319.00	7.384	7.361	0.023	1.000	65984		19.45(8.41-25.22)		418	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.654	7.627	0.027	1.129	1609280	0.6047	Target=4.25	100	2226	
599.00 > 98.80	7.646	7.627	0.019	1.128	370979		4.34(2.12-6.37)		1825	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.721	7.720	0.001	1.001	1607159	0.6235	Target=51.55	99.8	699	M
498.10 > 478.00	7.710	7.720	-0.010	1.000	33492		47.99(25.77-77.32)		188	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.806	7.784	0.022	0.951	1207388	0.5929	Target=6.27	94.9	591	
663.00 > 168.90	7.806	7.784	0.022	0.951	180931		6.67(3.13-9.40)		1615	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.975	7.954	0.021	1.617	9027674	2.51	Target=3.32	106	6432	
632.90 > 452.90	7.975	7.954	0.021	1.617	2668956		3.38(1.66-4.97)		4406	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.212	8.179	0.033	1.000	808146	0.5279	Target=6.82	84.5	496	
713.10 > 168.90	8.212	8.179	0.033	1.000	128964		6.27(3.41-10.24)		1178	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.435	8.402	0.033	1.244	1312601	0.5825	Target=4.61	96.3	1392	
699.10 > 98.80	8.424	8.402	0.022	1.243	298140		4.40(2.30-6.91)		1510	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.628	8.628	0.0	1.002	353663	5.98		95.7	1337	M
75 NMeFOSA										M
511.90 > 219.00	8.731	8.741	-0.010	1.000	296974	0.6839	Target=0.70	109	723	M
511.90 > 169.00	8.731	8.741	-0.010	1.000	407061		0.73(0.35-1.05)		1024	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.879	8.879	0.0	1.002	377903	5.87		93.9	1205	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.956	8.965	-0.009	1.001	308540	0.6961	Target=0.71	111	1133	M
526.00 > 169.00	8.956	8.965	-0.009	1.001	412801		0.75(0.35-1.06)		778	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

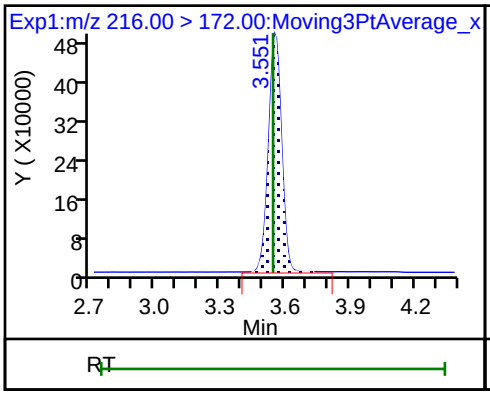
ICV CAL4_00034 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:39:56 Chrom Revision: 2.3 26-Aug-2024 17:14:48

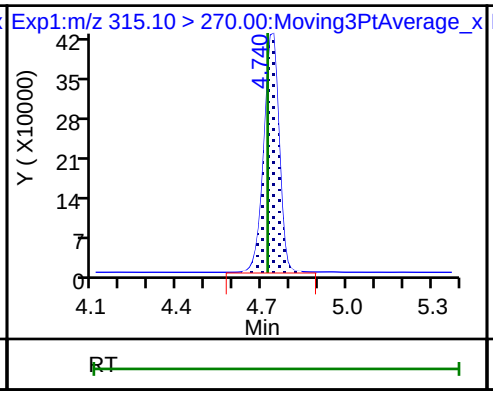
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

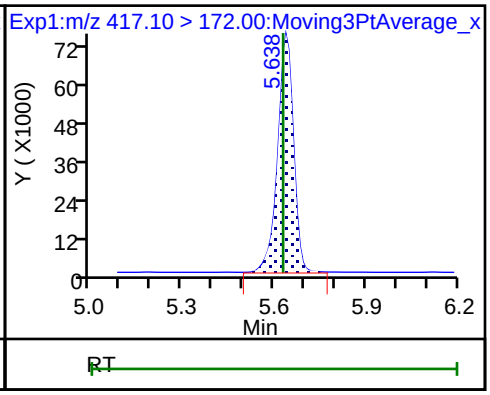
* 1 13C3-PFBA



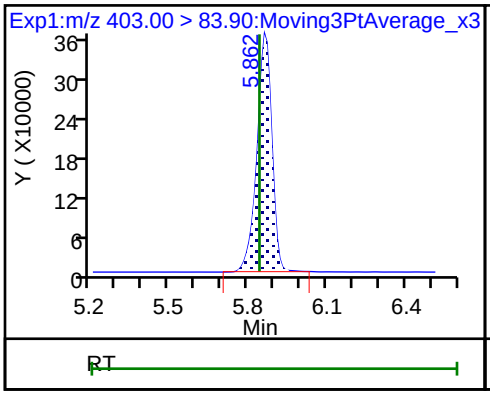
* 2 13C2 PFHxA



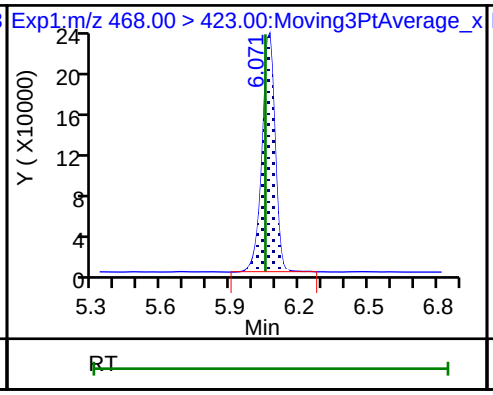
* 3 13C4 PFOA



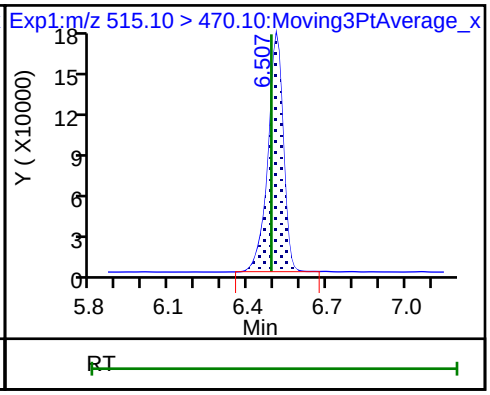
* 4 18O2 PFHxS



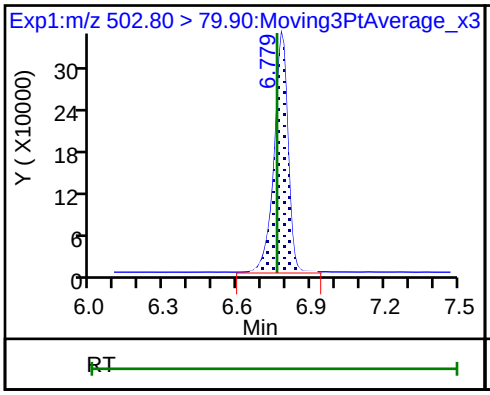
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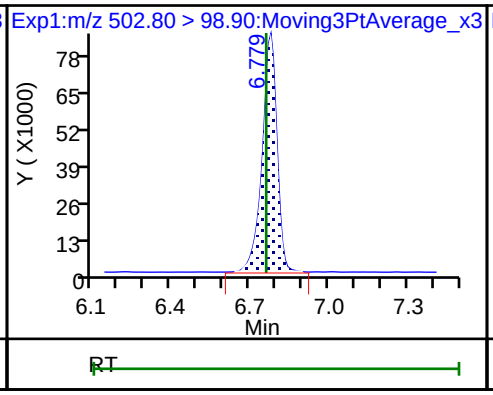
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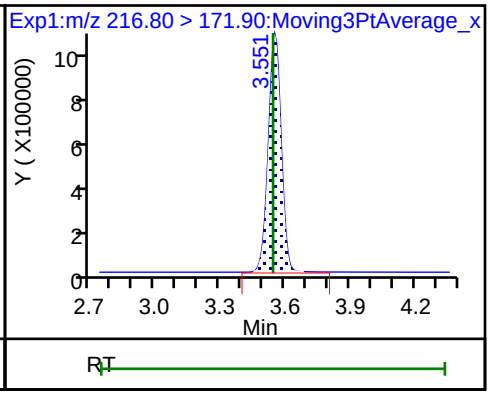
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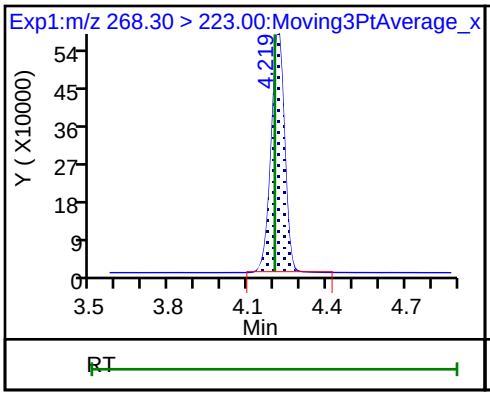
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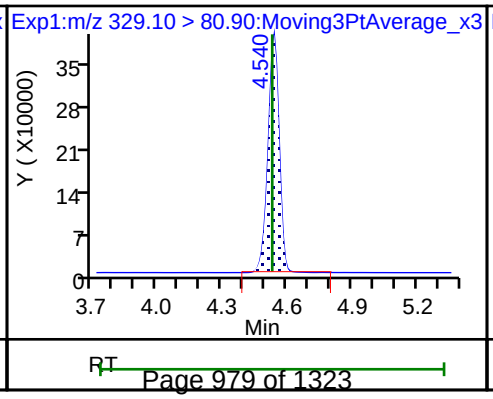
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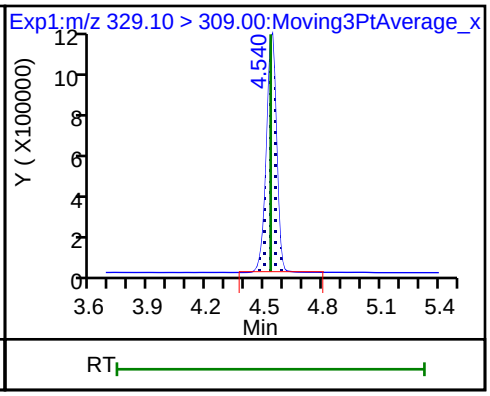
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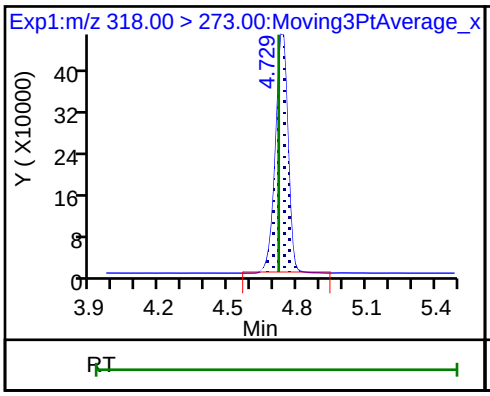
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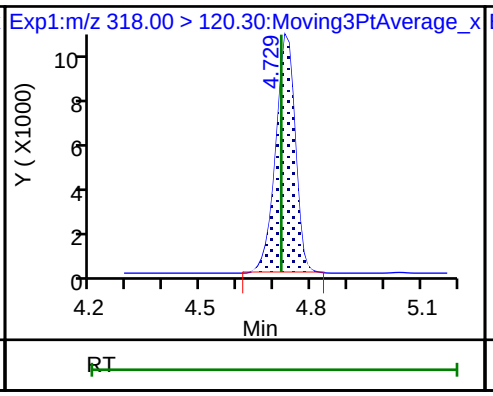
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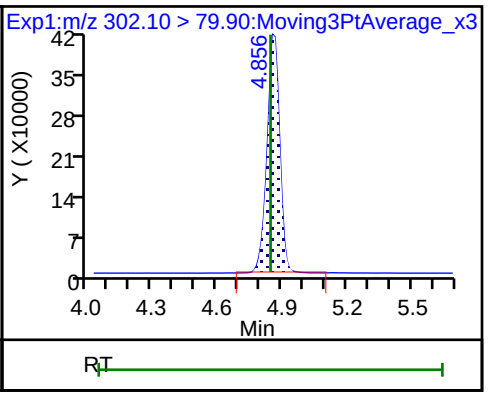
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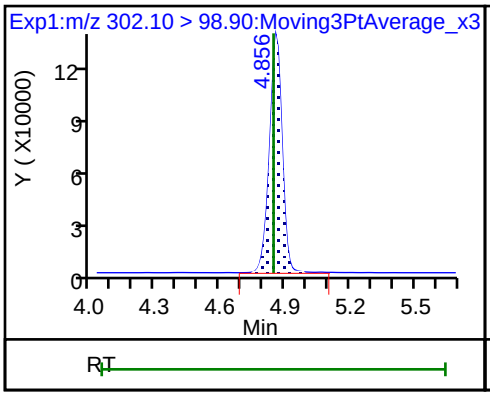
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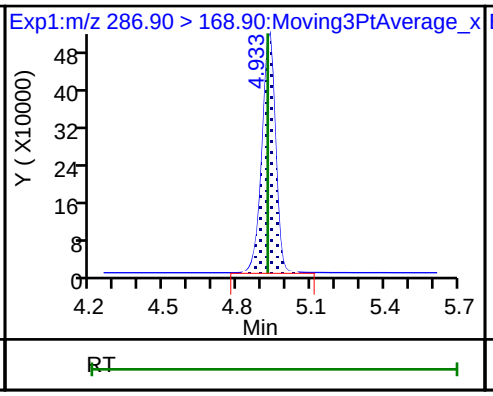
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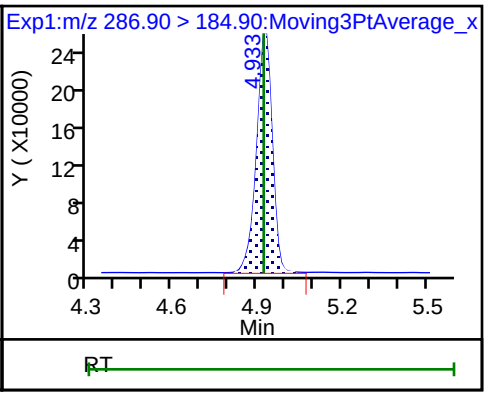
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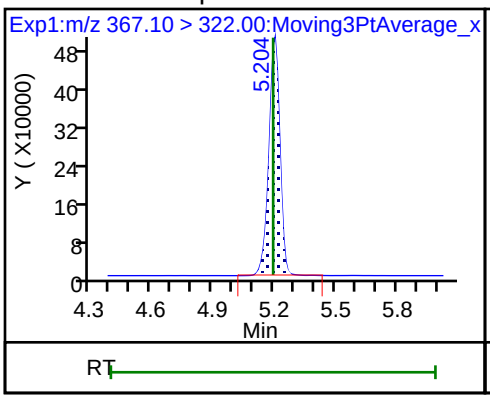
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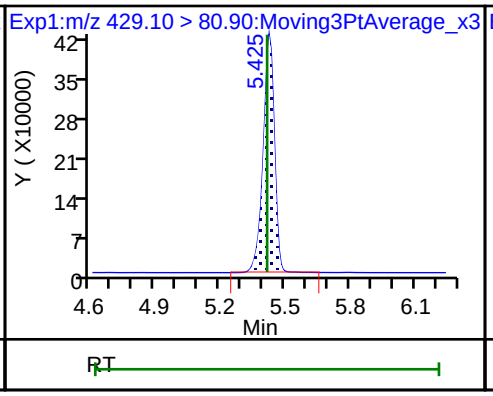
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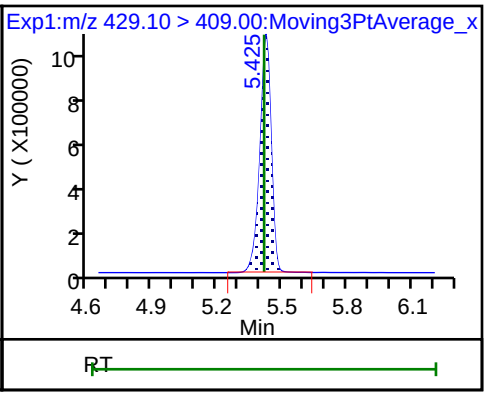
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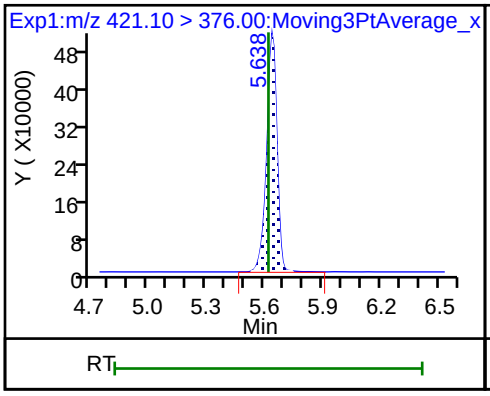
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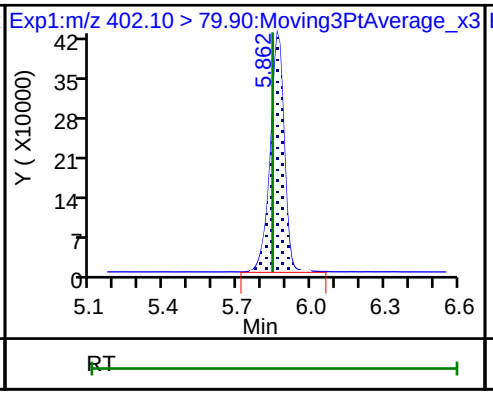
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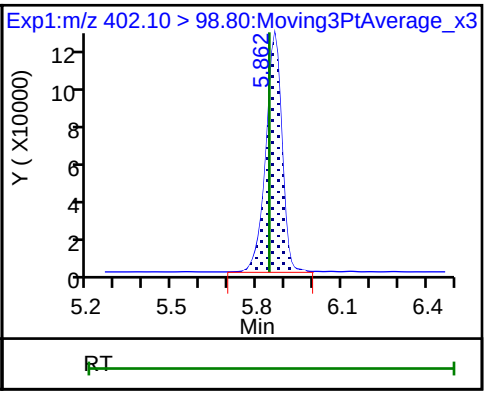
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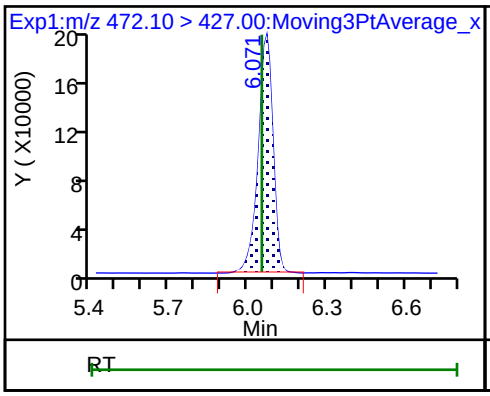
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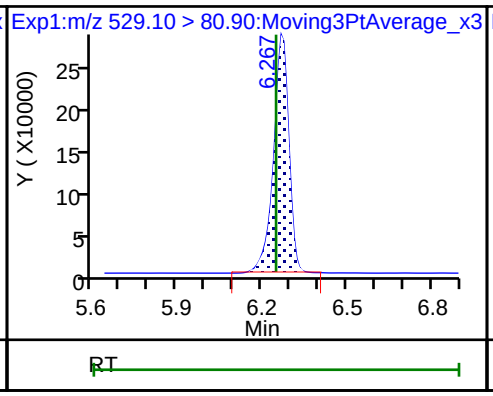
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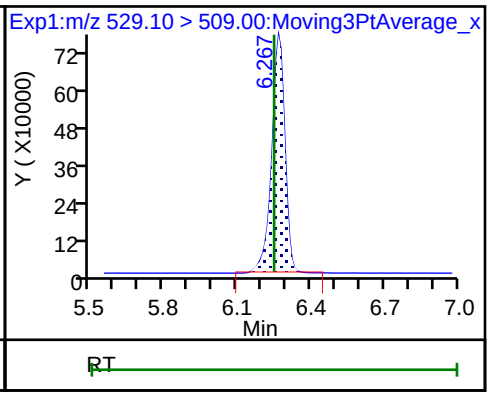
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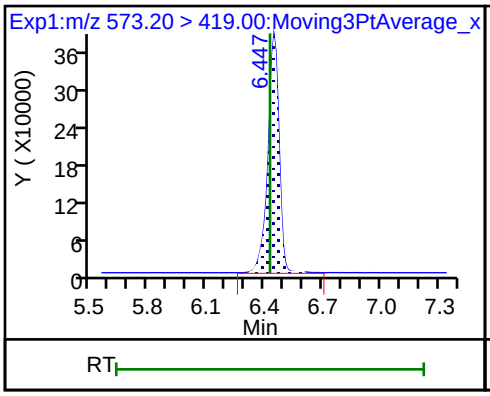
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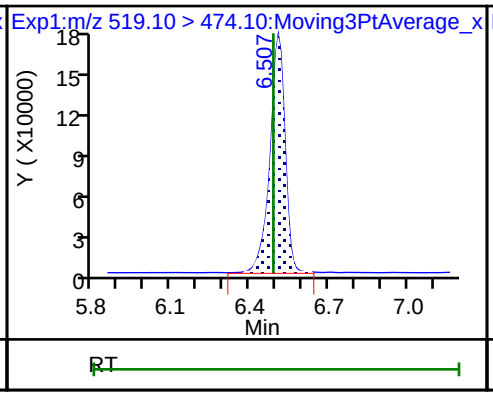
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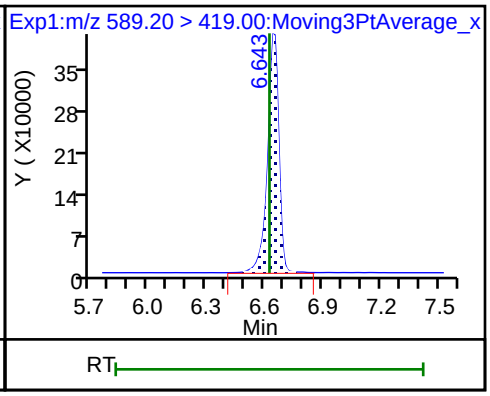
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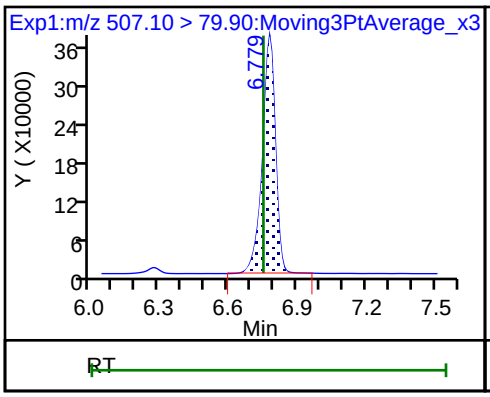
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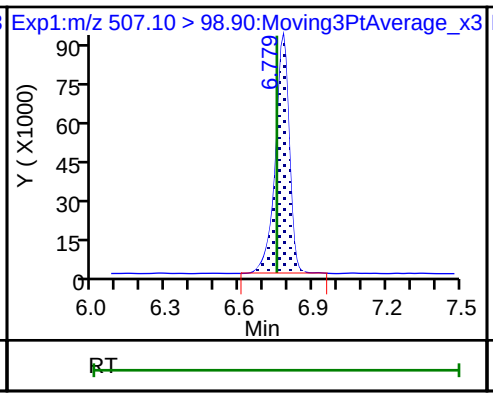
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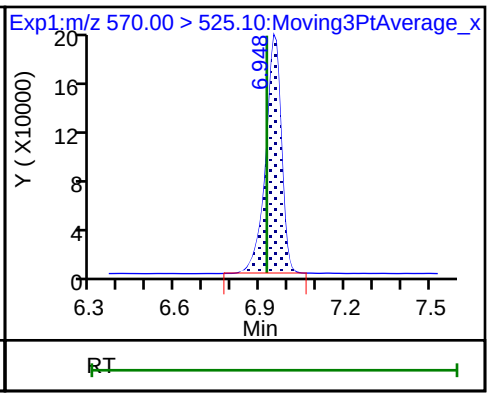
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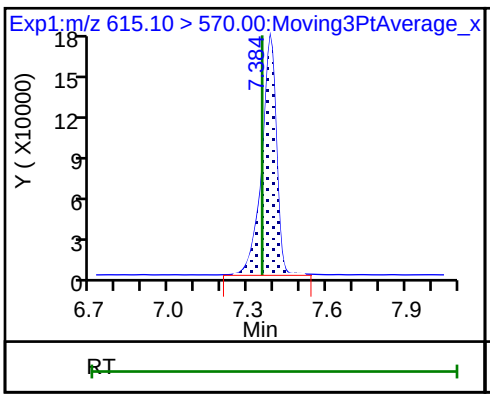
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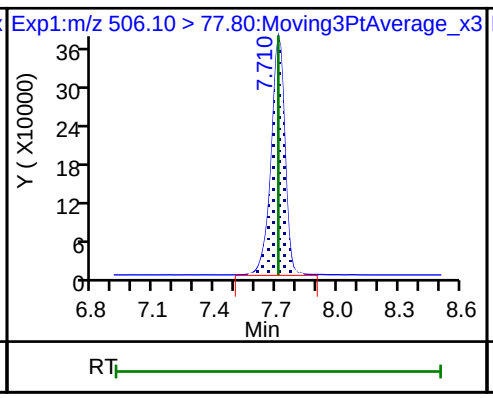
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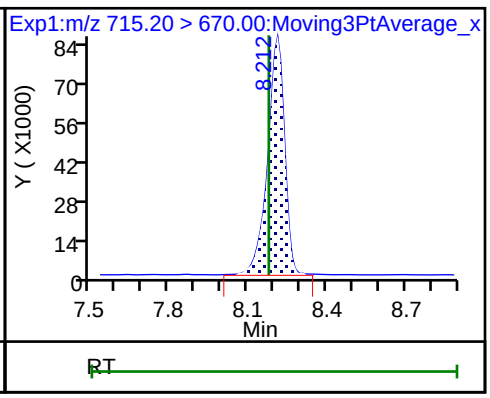
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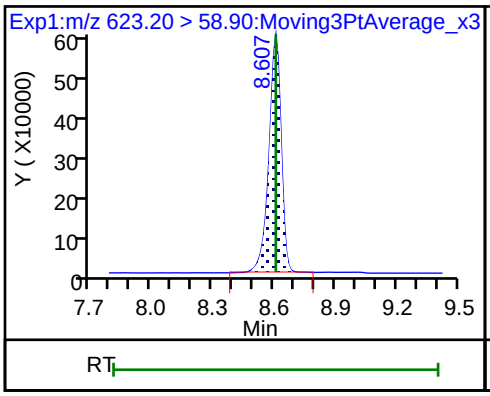
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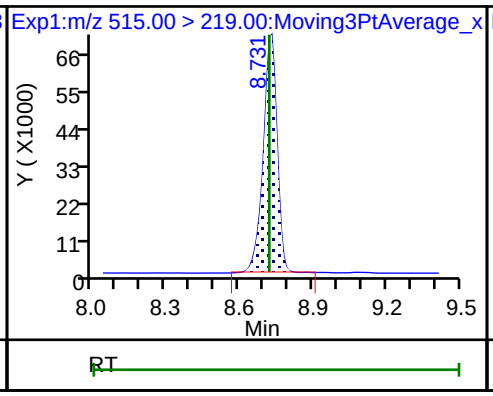
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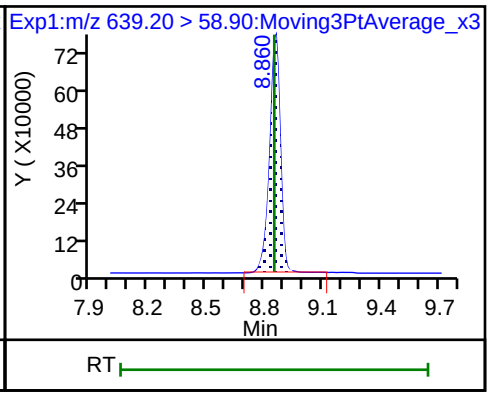
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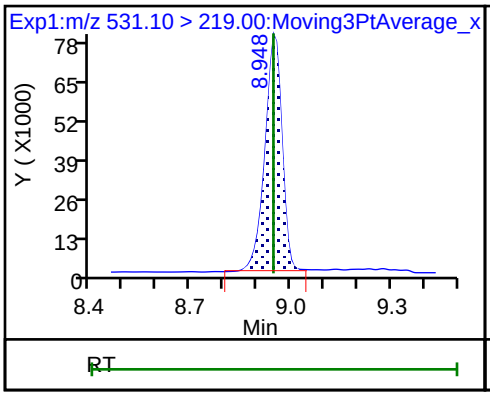
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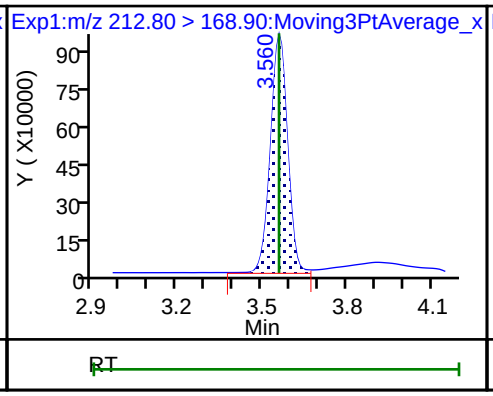
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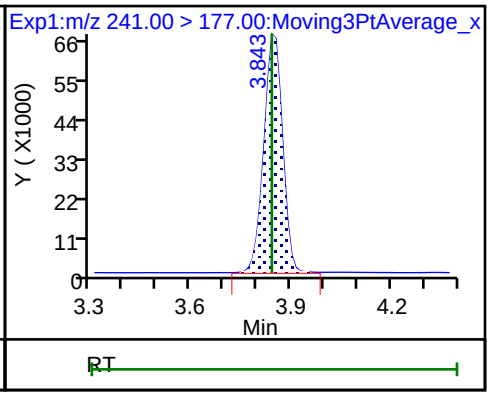
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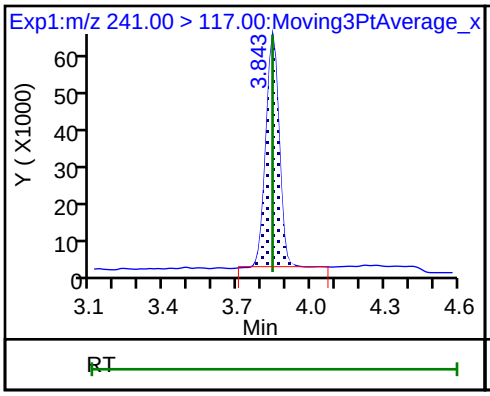
32 Perfluorobutanoic acid



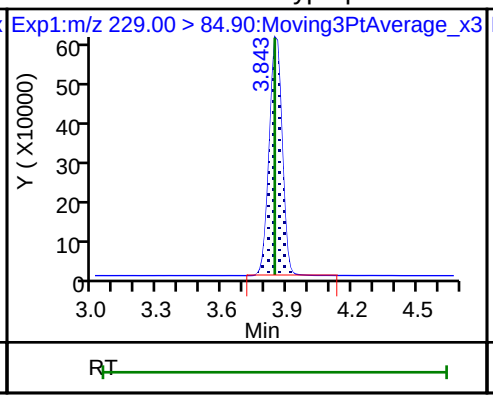
34 3:3 FTCA



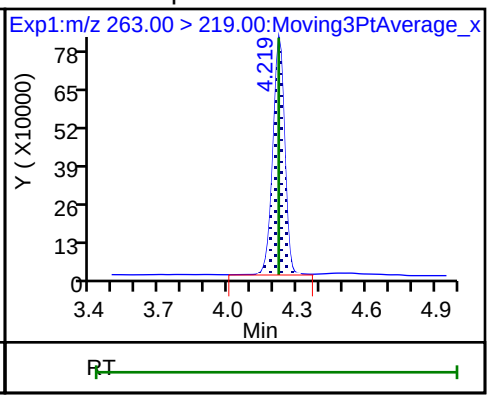
34 3:3 FTCA



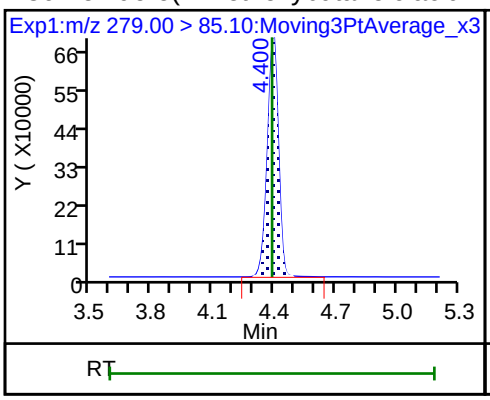
33 Perfluoro-3-methoxypropanoic aci



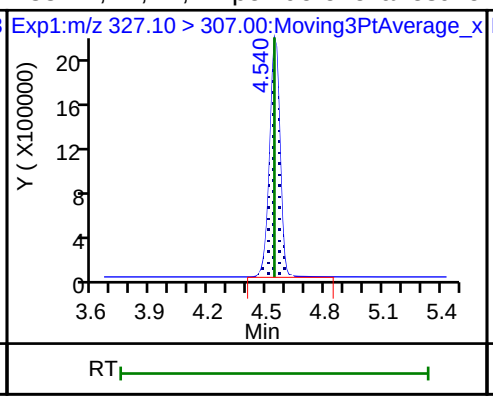
35 Perfluoropentanoic acid



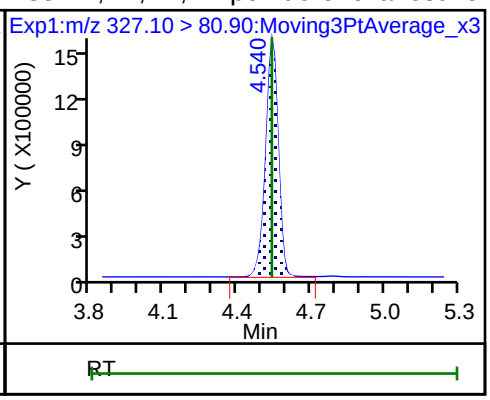
36 Perfluoro(4-methoxybutanoic acid



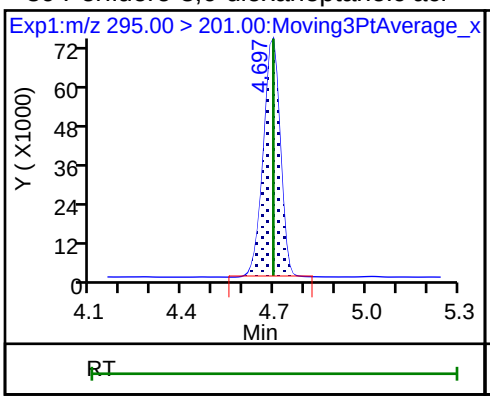
38 1H,1H,2H,2H-perfluorohexanesulfo



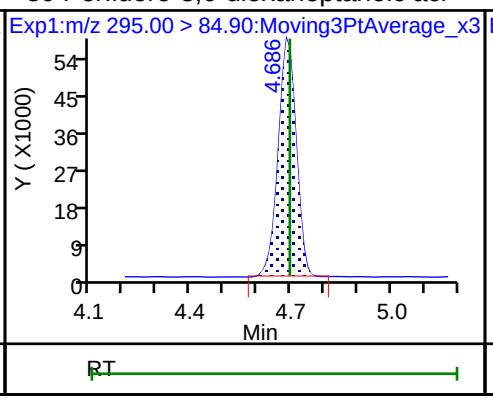
38 1H,1H,2H,2H-perfluorohexanesulfo



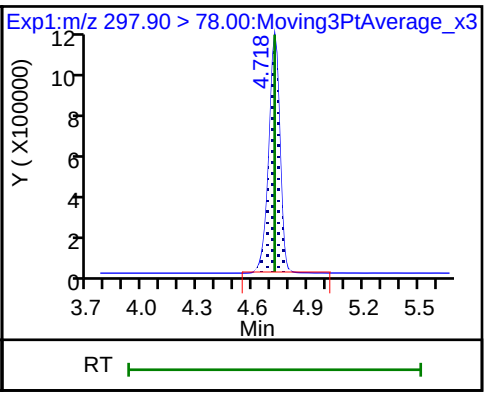
39 Perfluoro-3,6-dioxaheptanoic aci



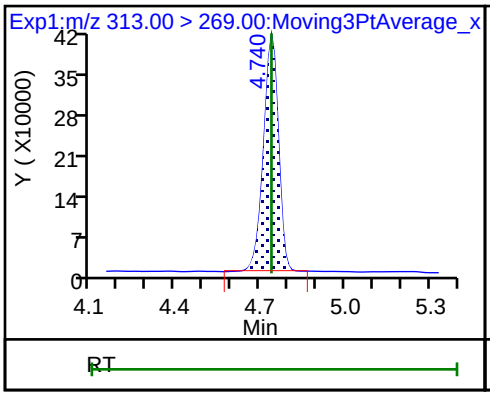
39 Perfluoro-3,6-dioxaheptanoic aci



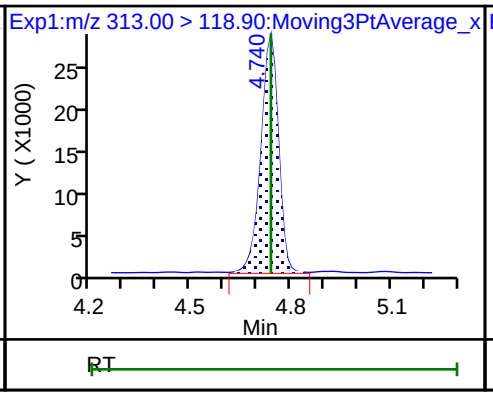
48 FBSA



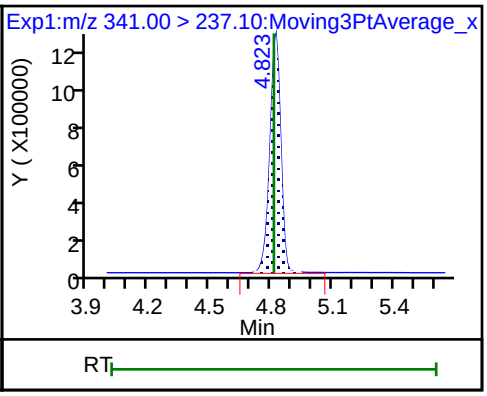
40 Perfluorohexanoic acid



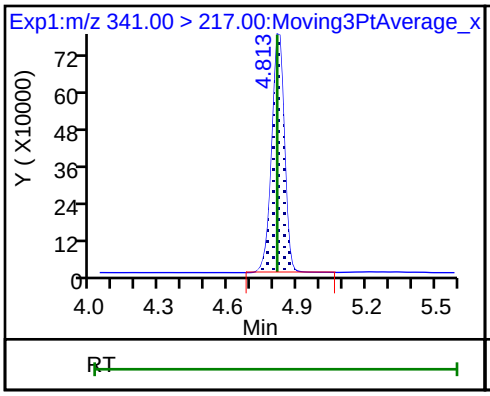
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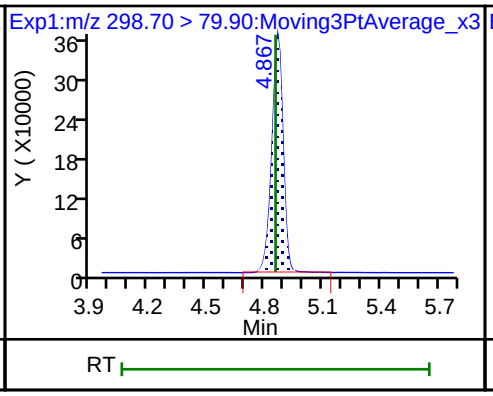
41 5:3 FTCA



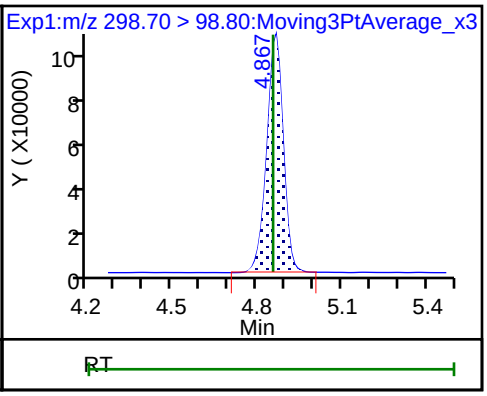
41 5:3 FTCA



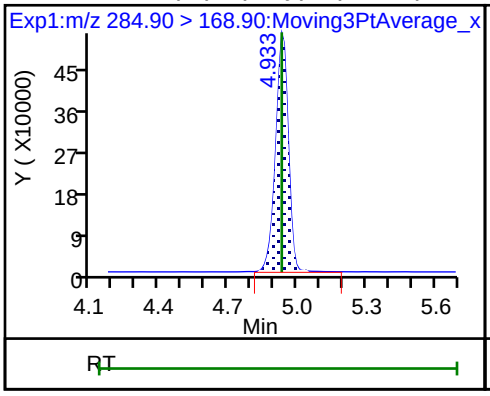
42 Perfluorobutanesulfonic acid



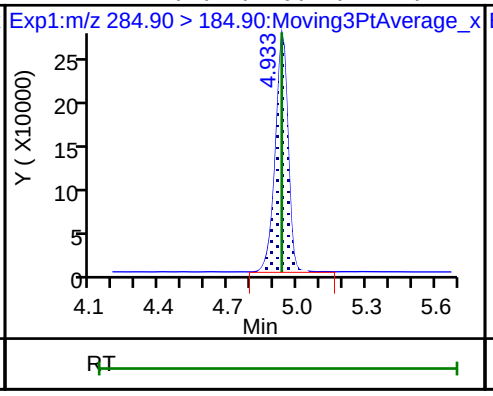
42 Perfluorobutanesulfonic acid



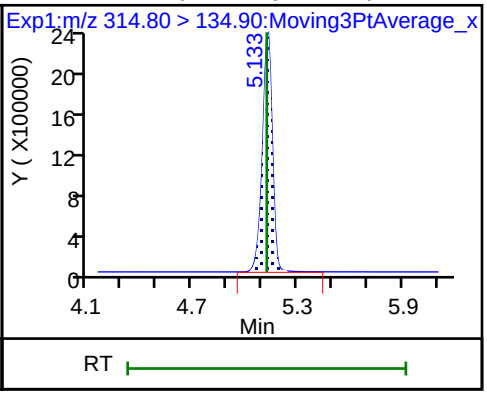
43 Perfluoro(2-propoxypropanoic) ac



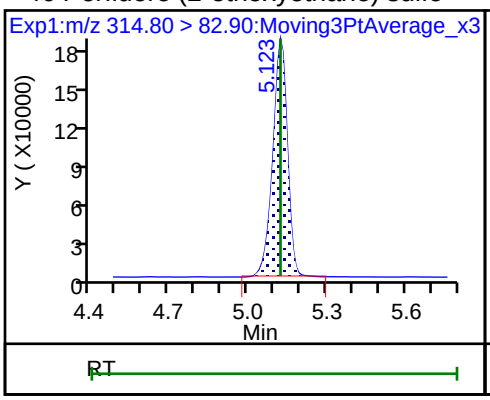
43 Perfluoro(2-propoxypropanoic) ac



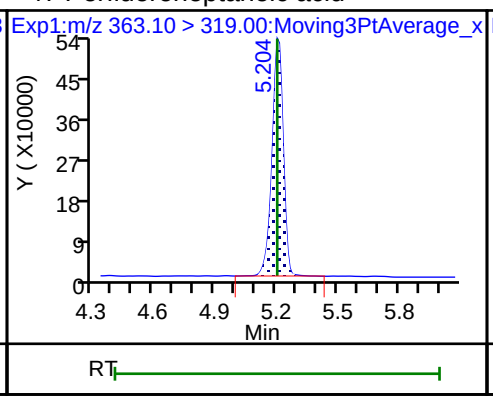
46 Perfluoro (2-ethoxyethane) sulfo



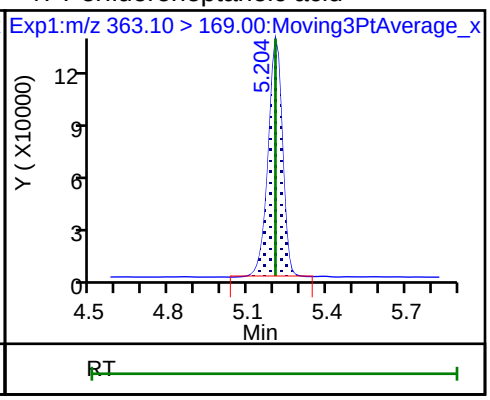
46 Perfluoro (2-ethoxyethane) sulfo



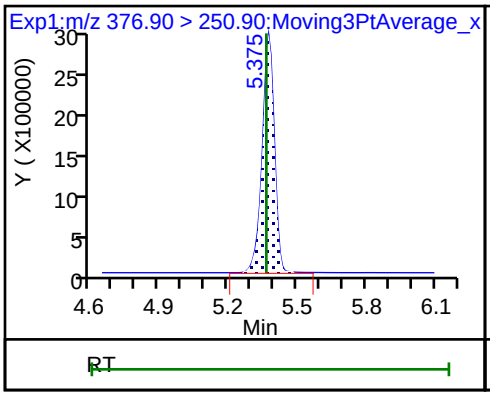
47 Perfluoroheptanoic acid



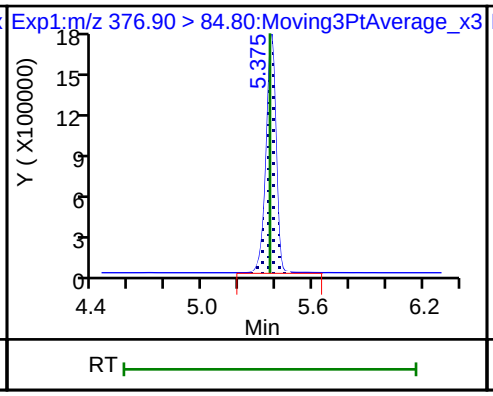
47 Perfluoroheptanoic acid



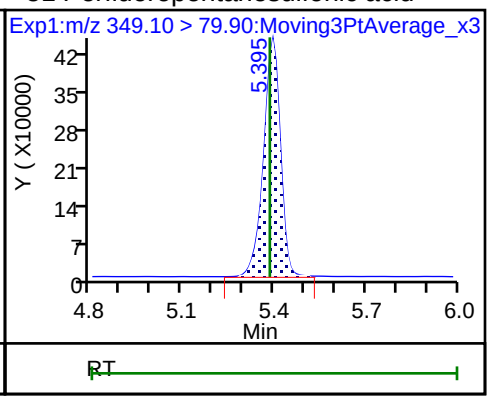
49 DONA



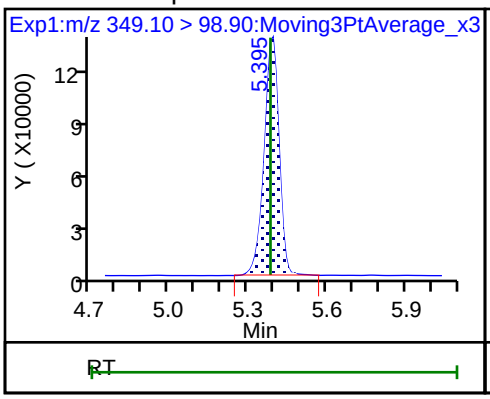
49 DONA



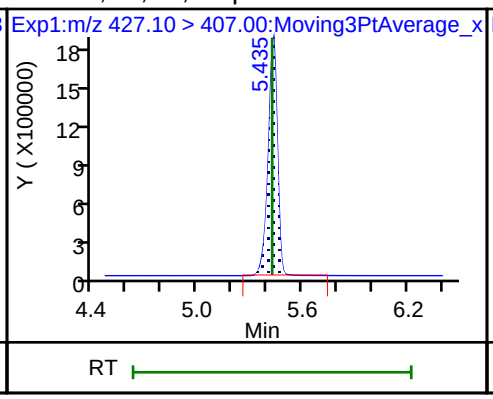
51 Perfluoropentanesulfonic acid



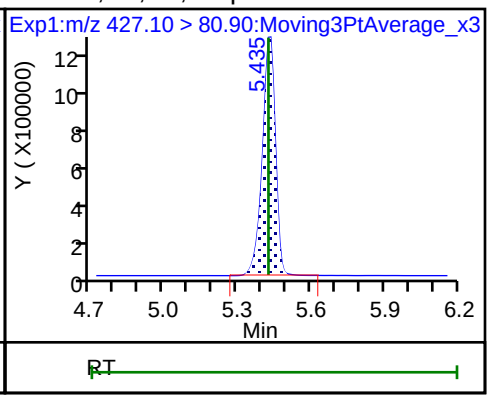
51 Perfluoropentanesulfonic acid



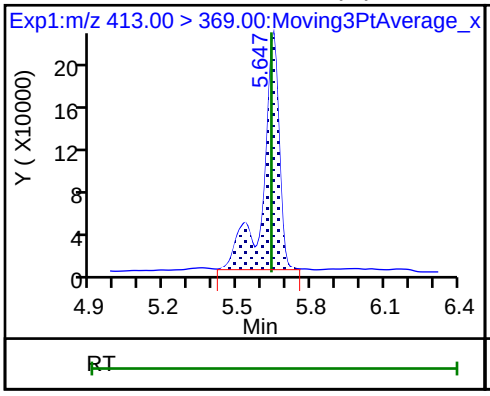
50 1H,1H,2H,2H-perfluorooctanesulfo



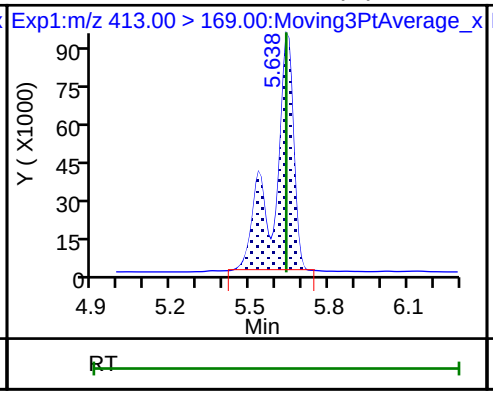
50 1H,1H,2H,2H-perfluorooctanesulfo



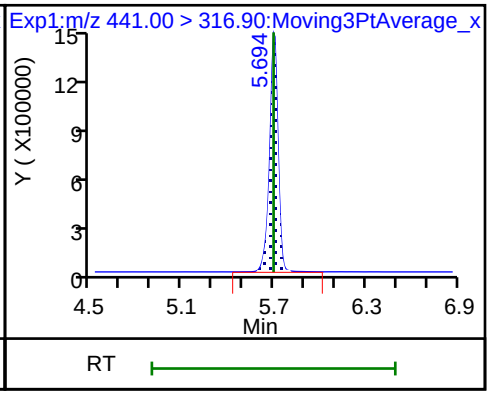
52 Perfluorooctanoic acid (M)



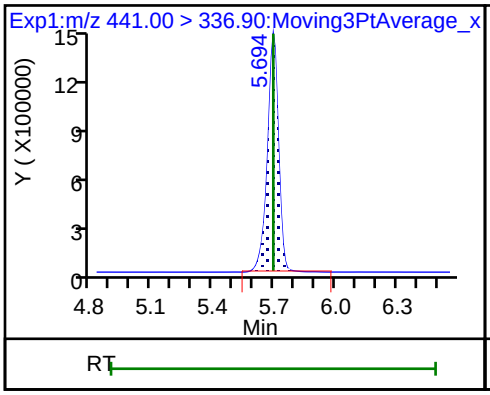
52 Perfluorooctanoic acid (M)



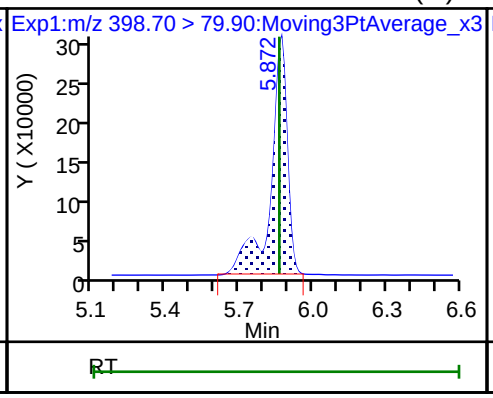
54 7:3 FTCA



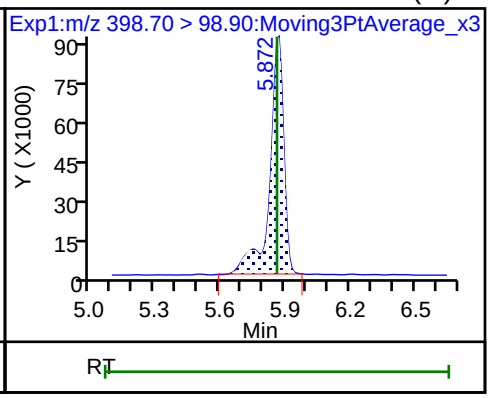
54 7:3 FTCA



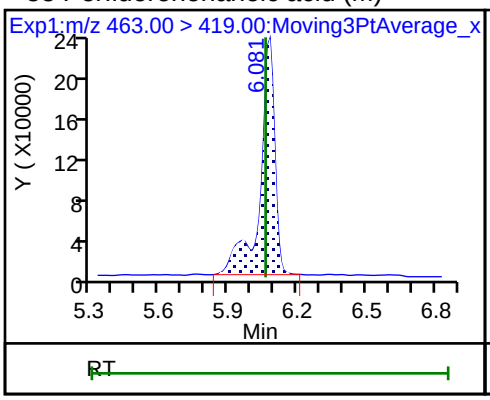
53 Perfluorohexanesulfonic acid (M)



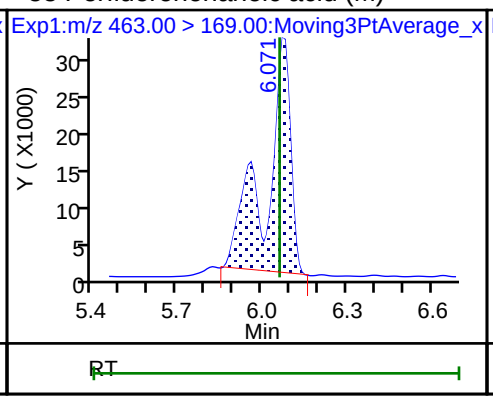
53 Perfluorohexanesulfonic acid (M)



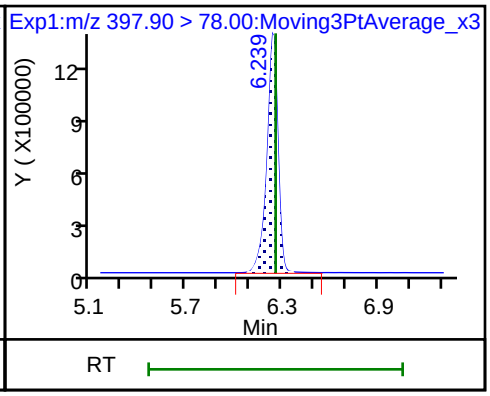
55 Perfluorononanoic acid (M)



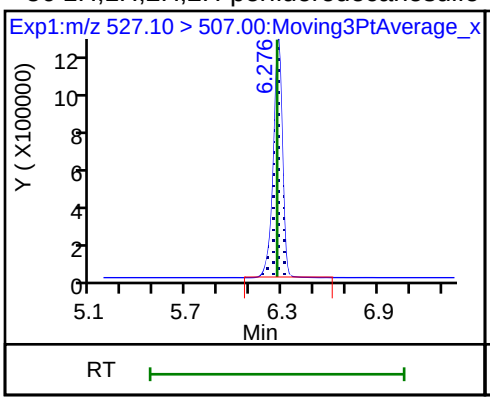
55 Perfluorononanoic acid (M)



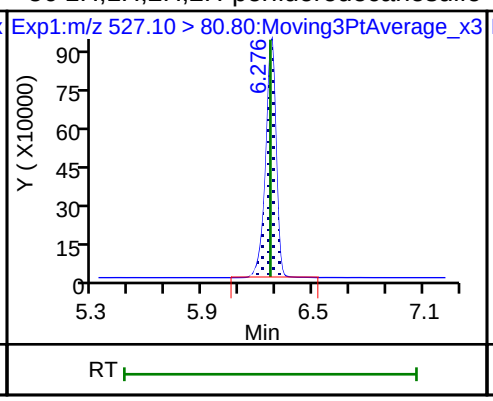
62 FHxSA



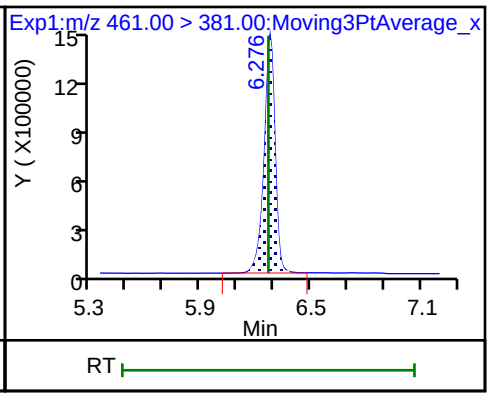
56 1H,1H,2H,2H-perfluorodecanesulfo



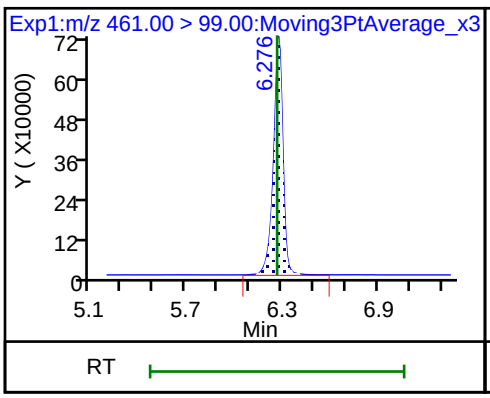
56 1H,1H,2H,2H-perfluorodecanesulfo



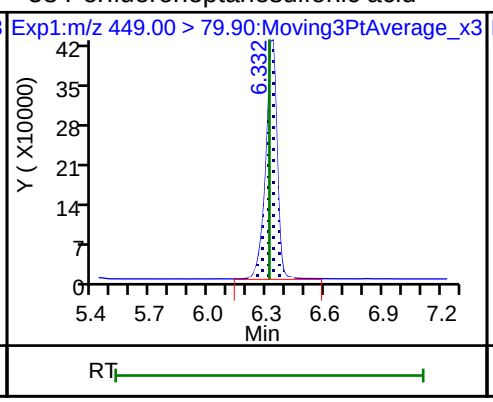
57 PFECHS



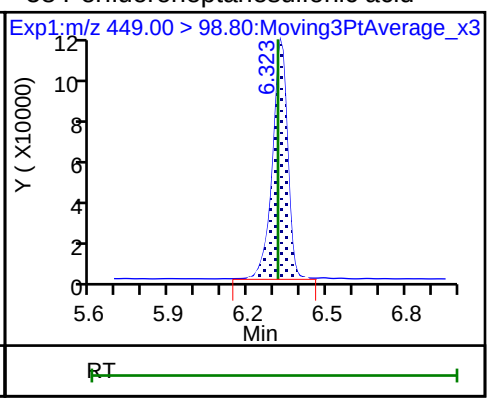
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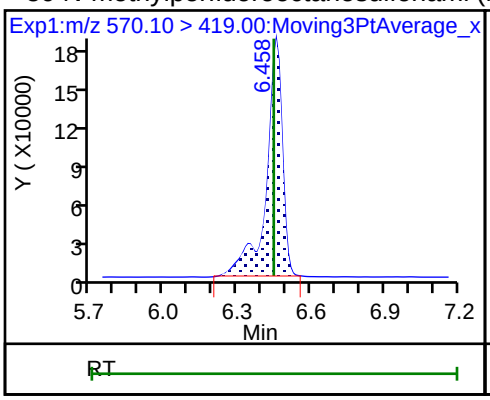
58 Perfluoroheptanesulfonic acid



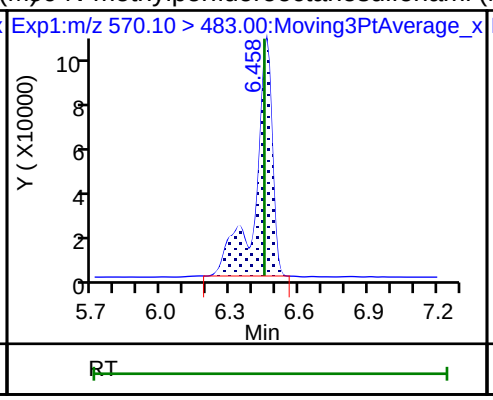
58 Perfluoroheptanesulfonic acid



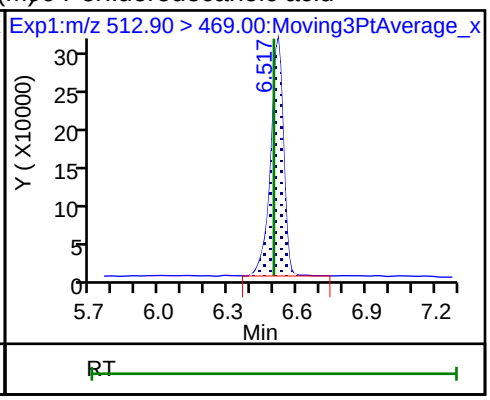
59 N-methylperfluorooctanesulfonami (M)



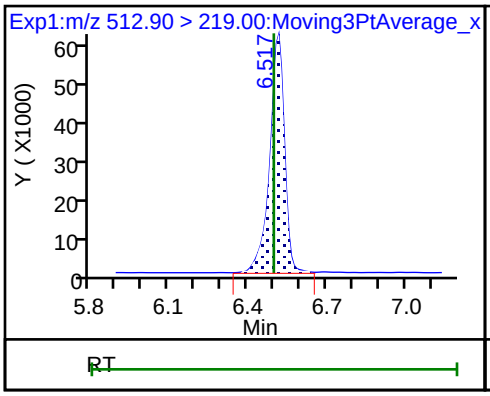
59 N-methylperfluorooctanesulfonami (M)



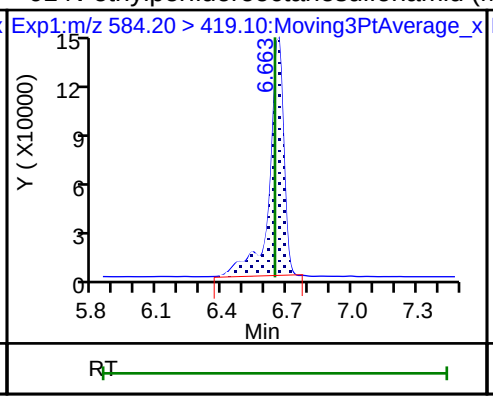
60 Perfluorodecanoic acid



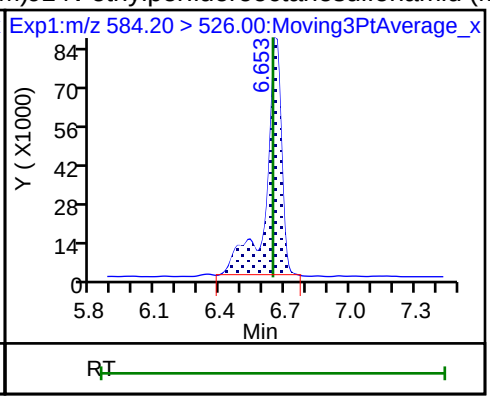
60 Perfluorodecanoic acid



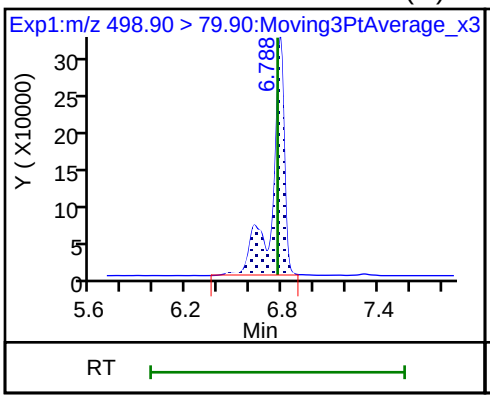
61 N-ethylperfluorooctanesulfonamid (M)



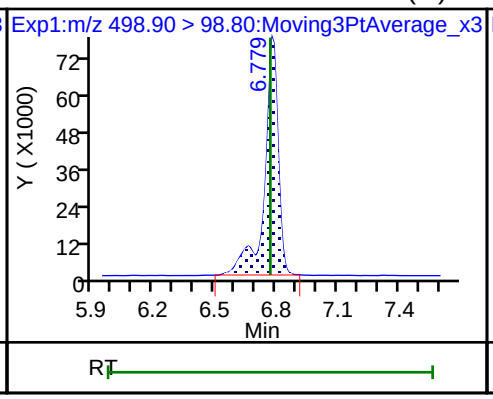
61 N-ethylperfluorooctanesulfonamid (M)



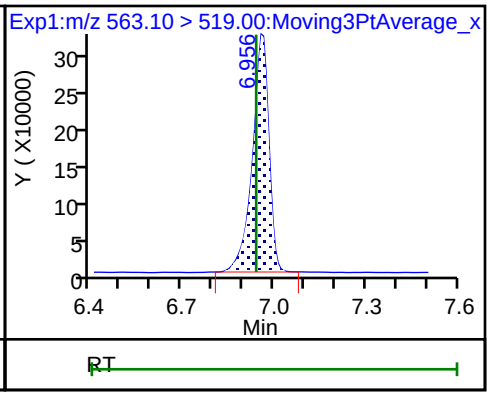
63 Perfluorooctanesulfonic acid (M)



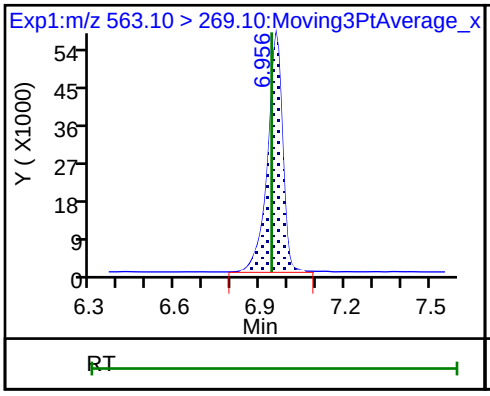
63 Perfluorooctanesulfonic acid (M)



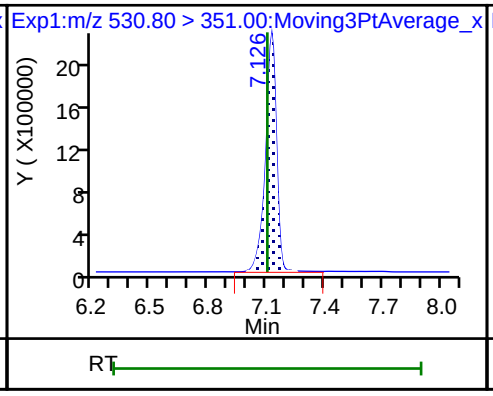
64 Perfluoroundecanoic acid



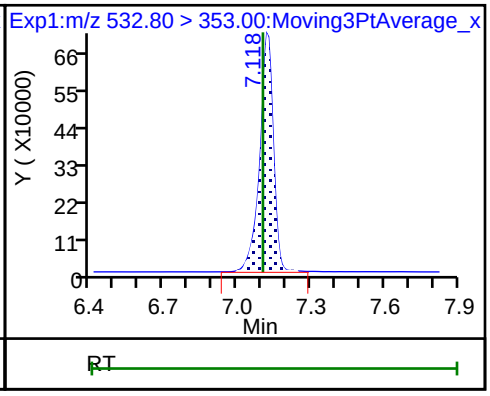
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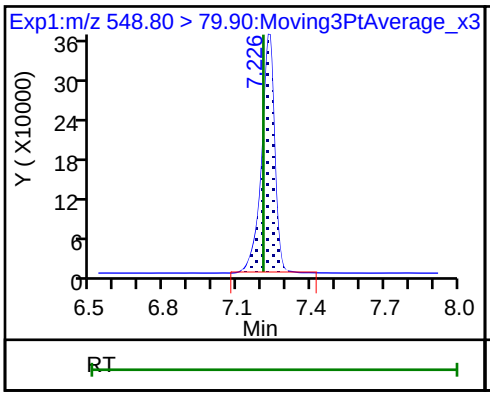
65 9-Chlorohexadecafluoro-3-oxanona



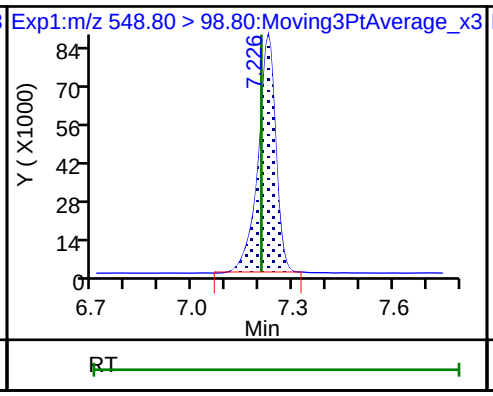
65 9-Chlorohexadecafluoro-3-oxanona



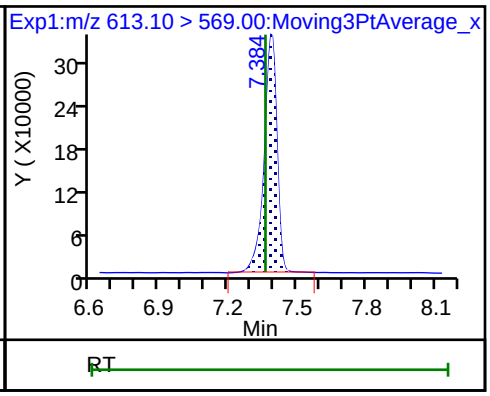
66 Perfluorononanesulfonic acid



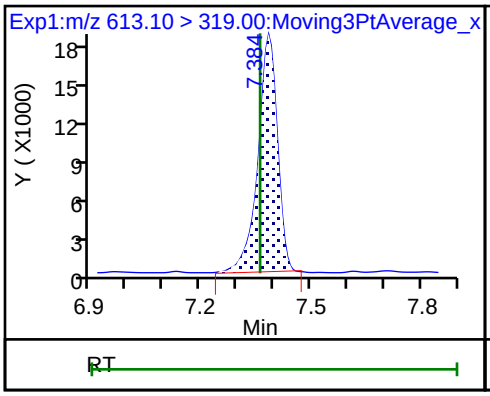
66 Perfluorononanesulfonic acid



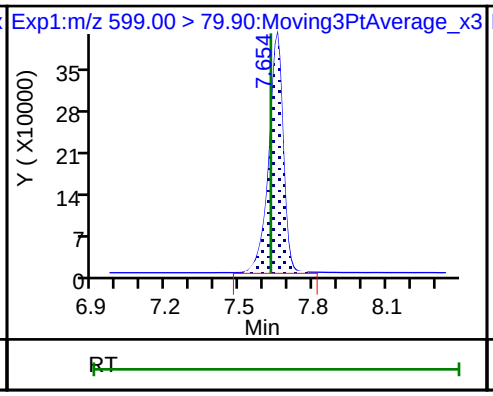
67 Perfluorododecanoic acid



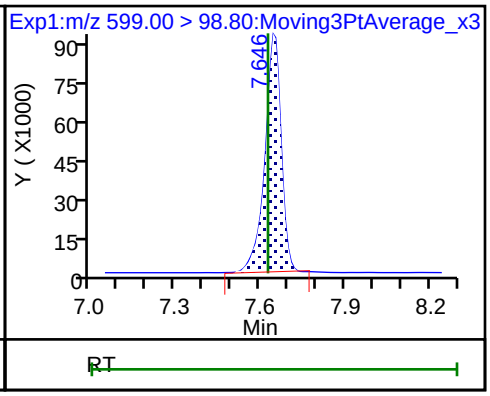
67 Perfluorododecanoic acid



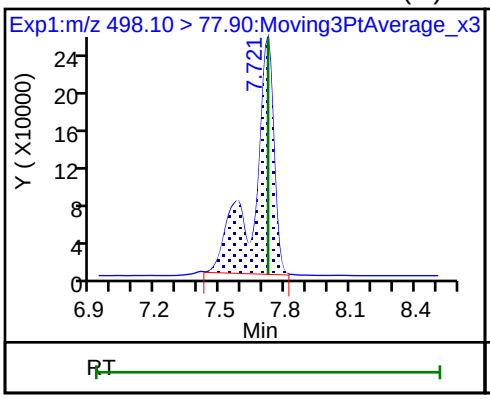
68 Perfluorodecanesulfonic acid



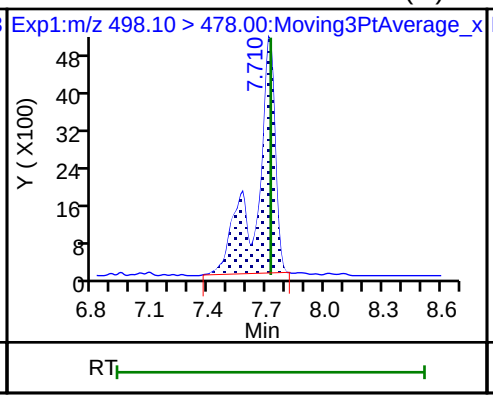
68 Perfluorodecanesulfonic acid



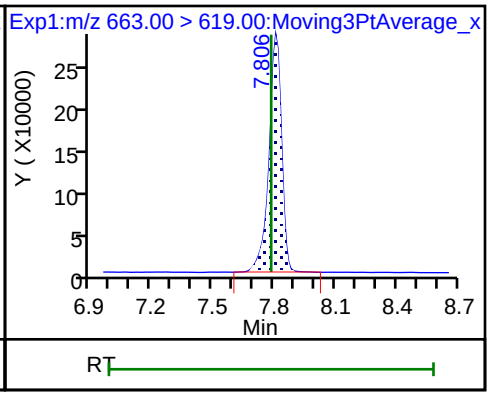
69 Perfluorooctanesulfonamide (M)



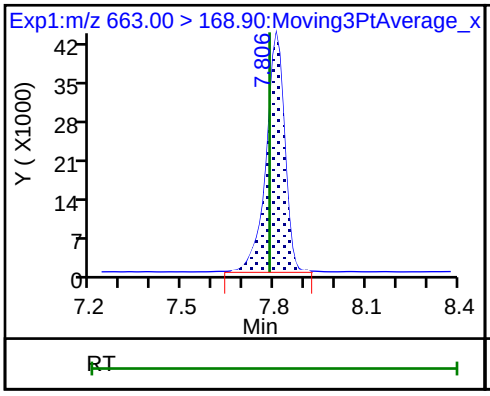
69 Perfluorooctanesulfonamide (M)



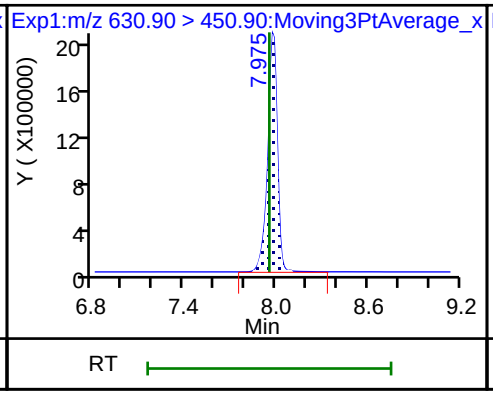
70 Perfluorotridecanoic acid



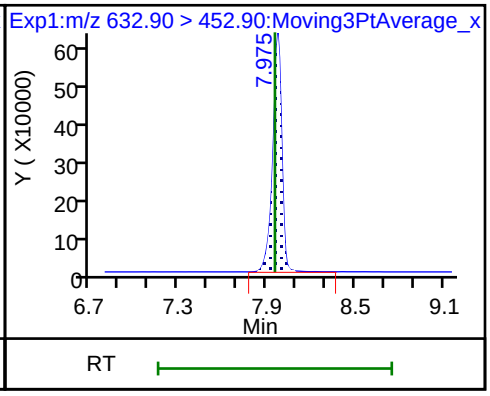
70 Perfluorotridecanoic acid



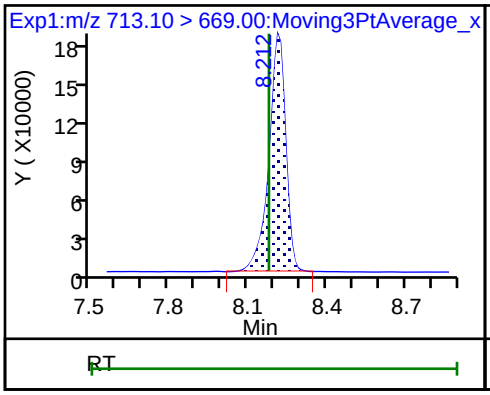
71 11-Chloroeicosafluoro-3-oxaundec



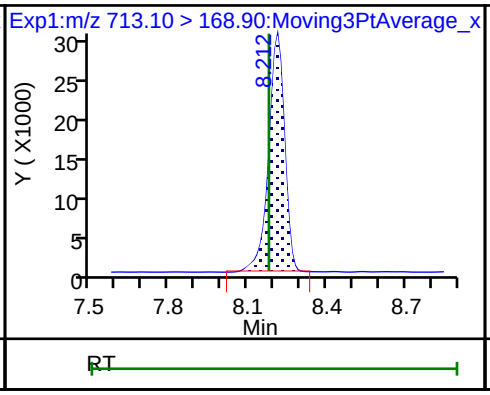
71 11-Chloroeicosafluoro-3-oxaundec



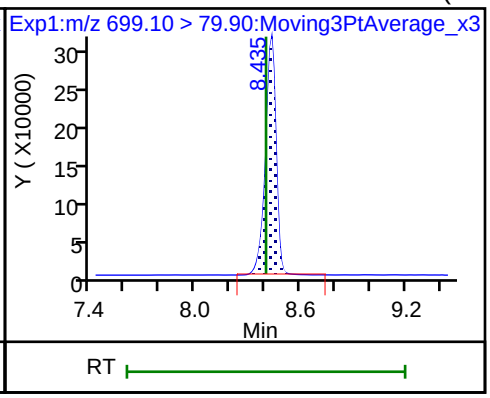
72 Perfluorotetradecanoic acid



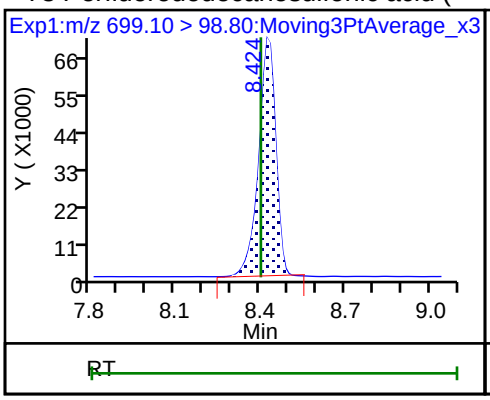
72 Perfluorotetradecanoic acid



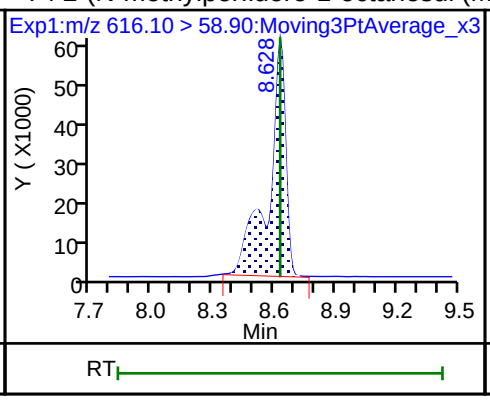
73 Perfluorododecanesulfonic acid (



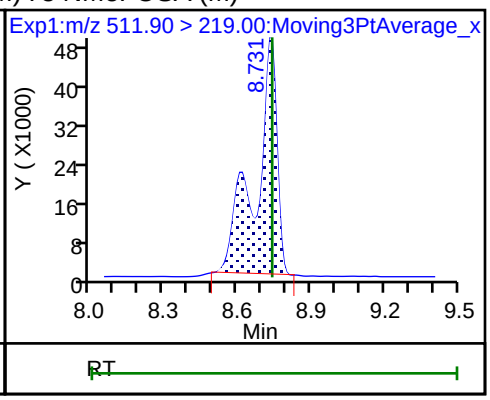
73 Perfluorododecanesulfonic acid (



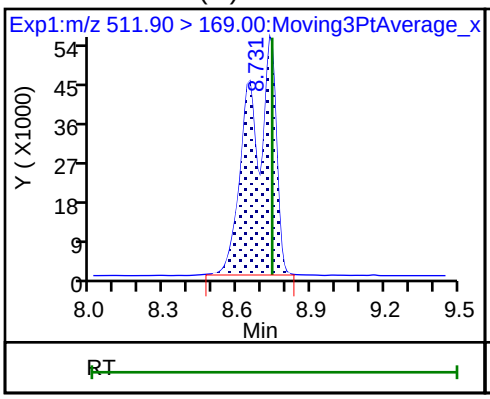
74 2-(N-methylperfluoro-1-octanesul (M)



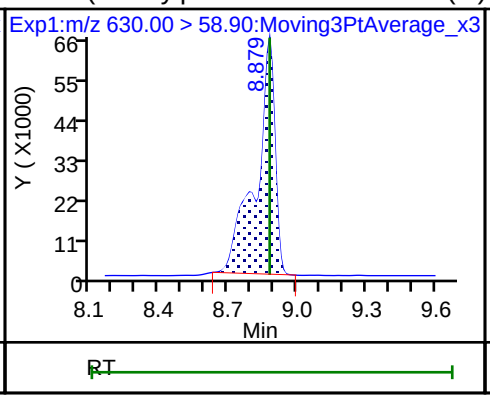
75 NMeFOSA (M)



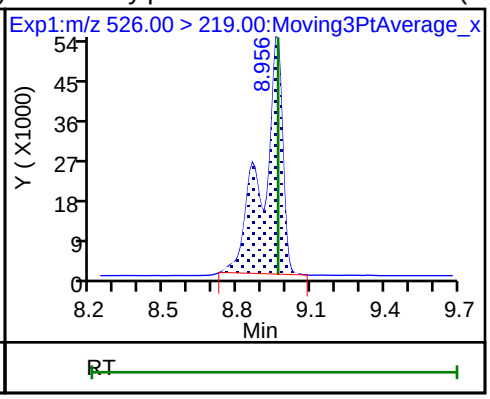
75 NMeFOSA (M)



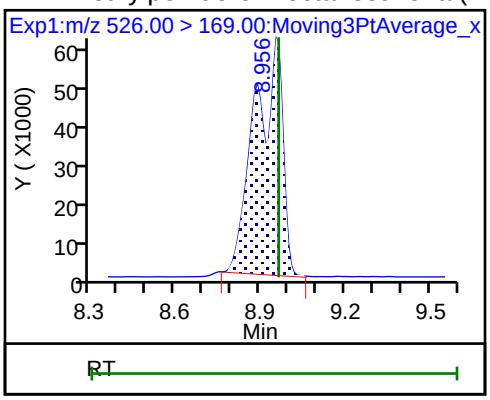
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

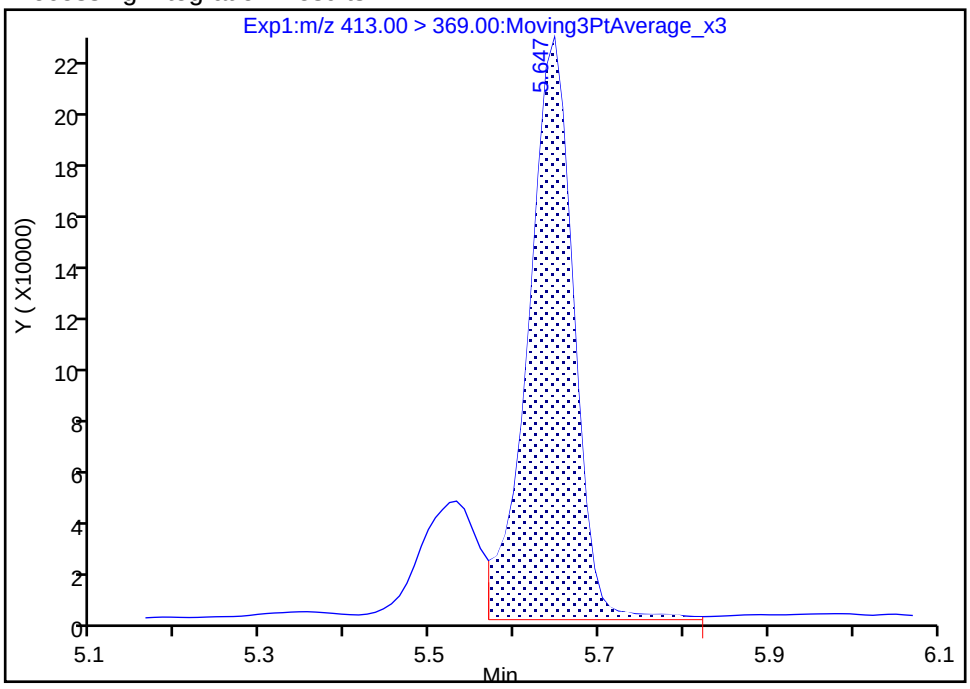
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d				
Injection Date:	18-Sep-2024 22:31:10	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	3	Worklist Smp#:	28
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

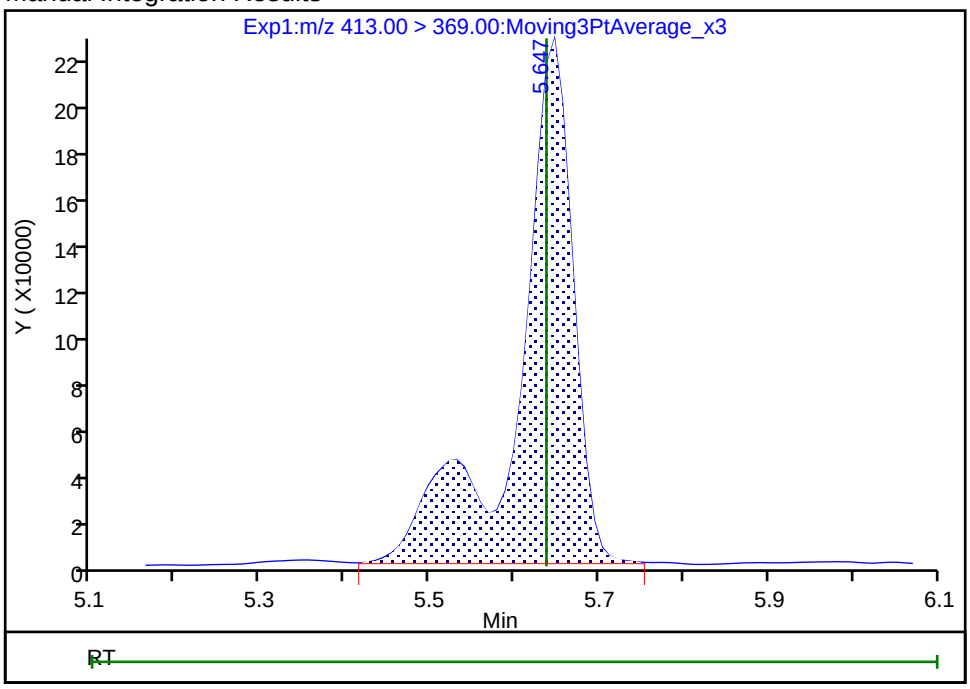
Processing Integration Results

RT: 5.65
Area: 852161
Amount: 0.582508
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 1024900
Amount: 0.700587
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:35:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

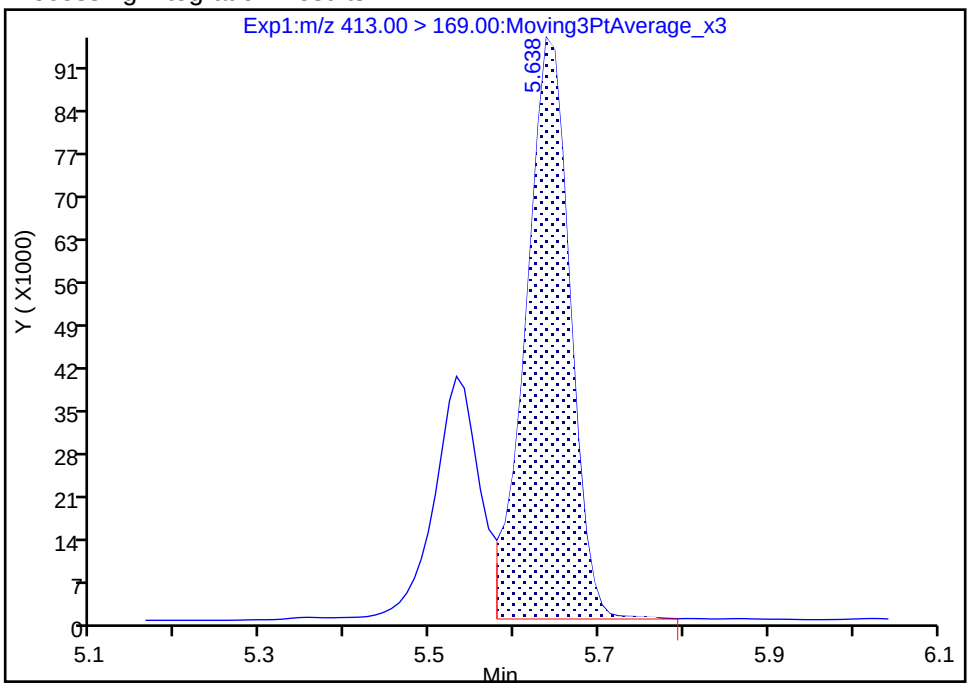
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

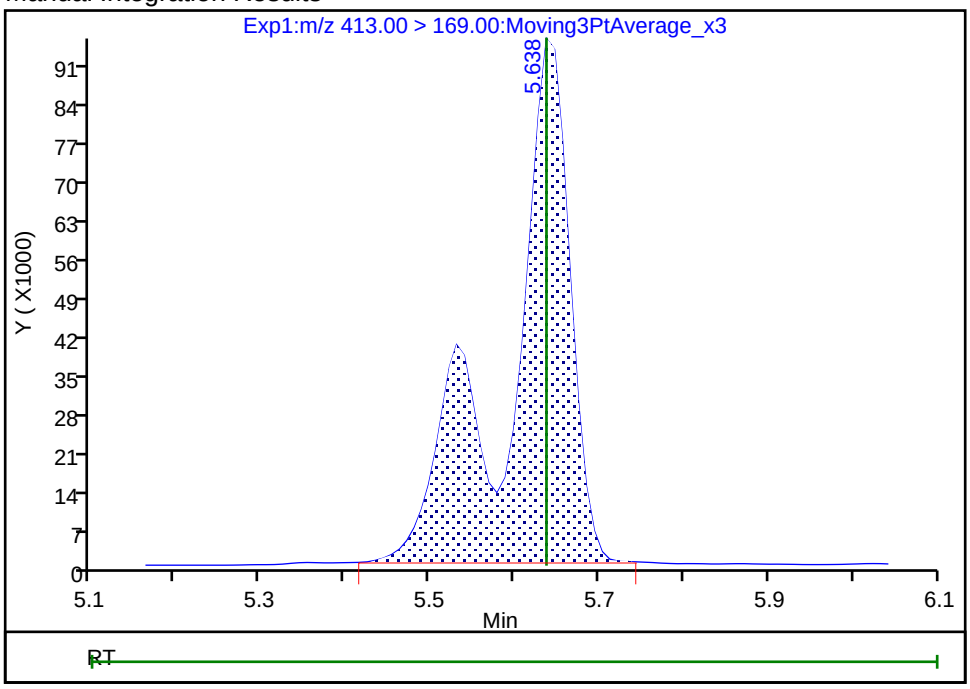
Processing Integration Results

RT: 5.64
Area: 343692
Amount: 0.582508
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 483716
Amount: 0.700587
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:37:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

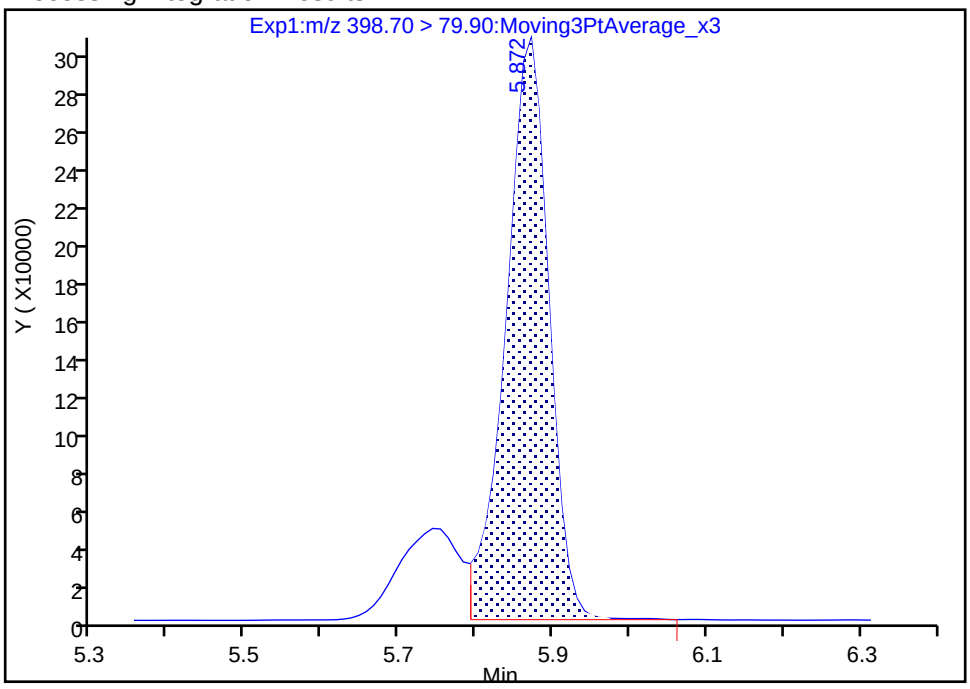
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

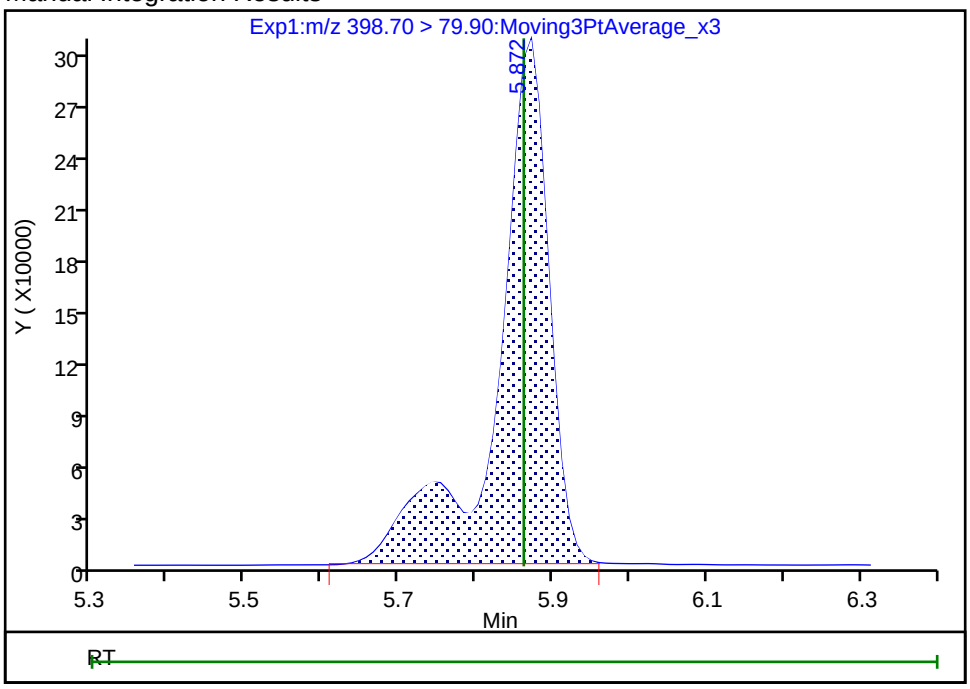
Processing Integration Results

RT: 5.87
Area: 1189846
Amount: 0.494595
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 1439055
Amount: 0.598186
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:37:10 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

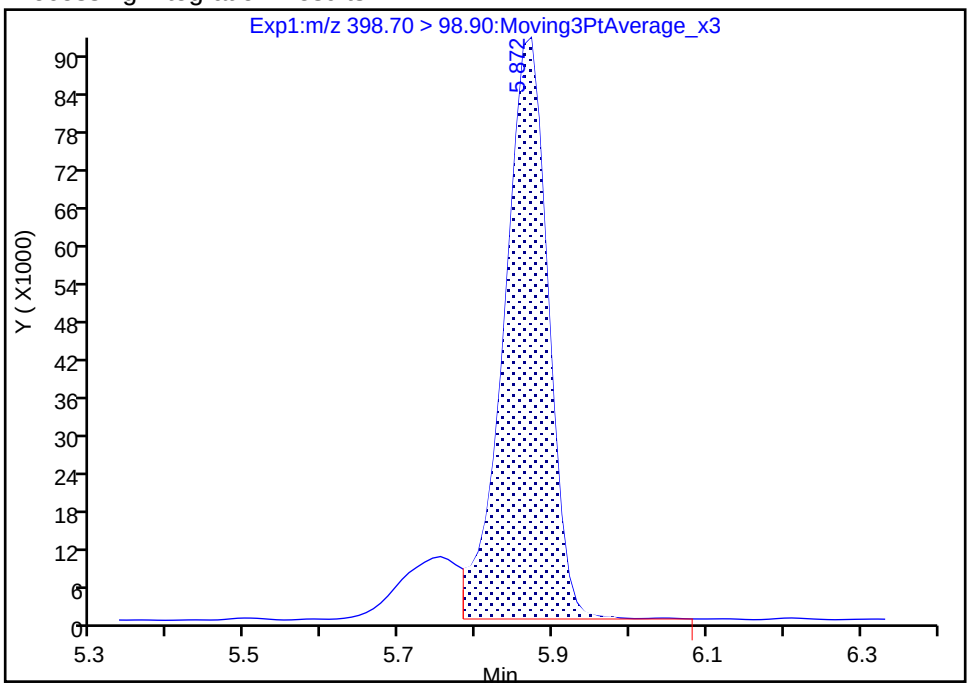
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

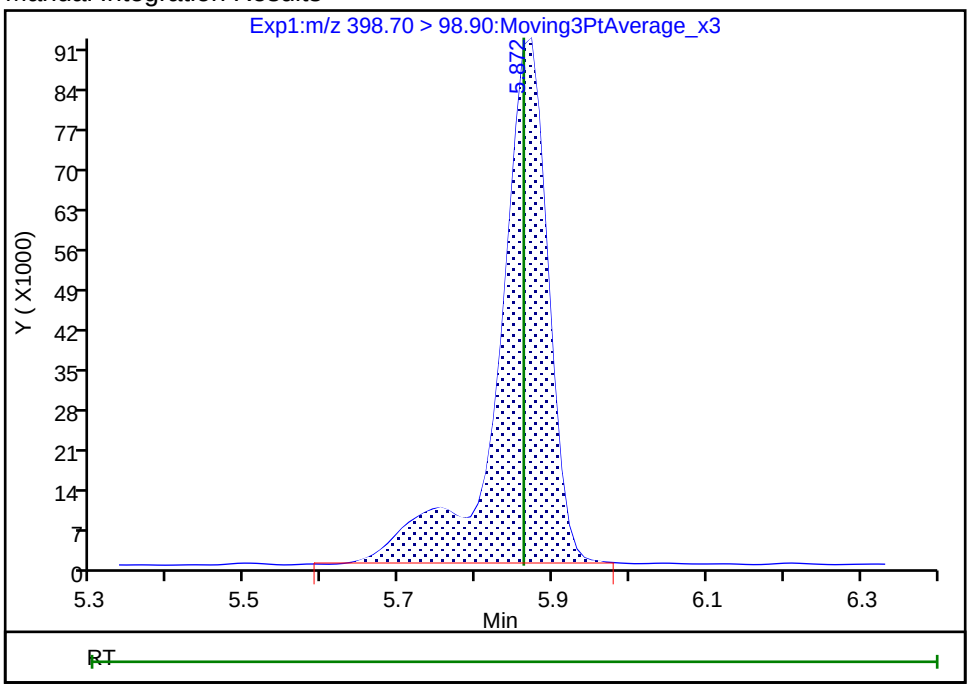
Processing Integration Results

RT: 5.87
Area: 367750
Amount: 0.494595
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 415431
Amount: 0.598186
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:37:16 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

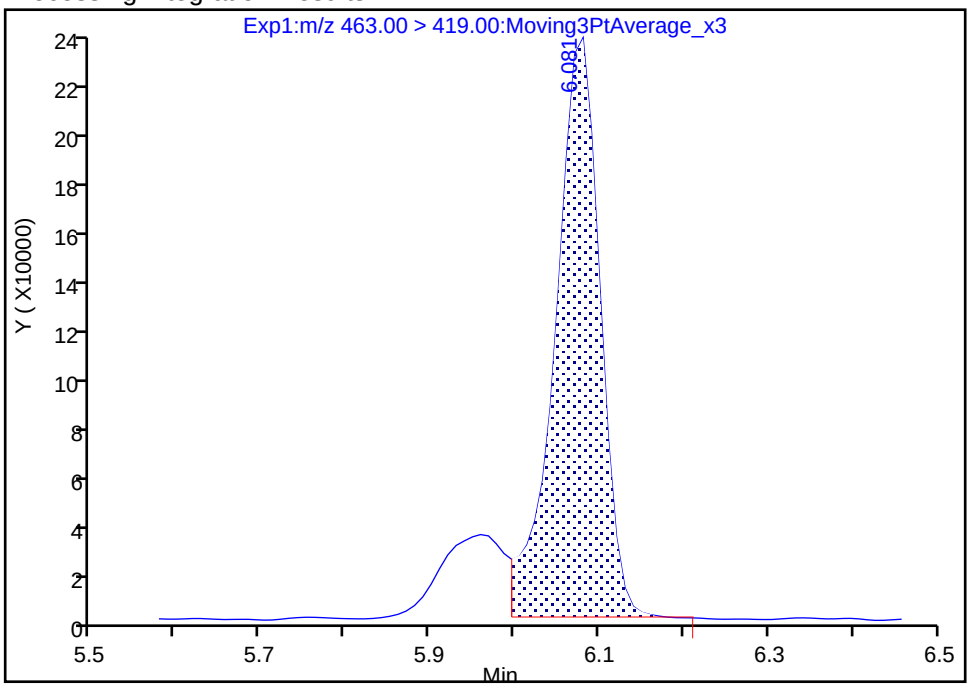
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

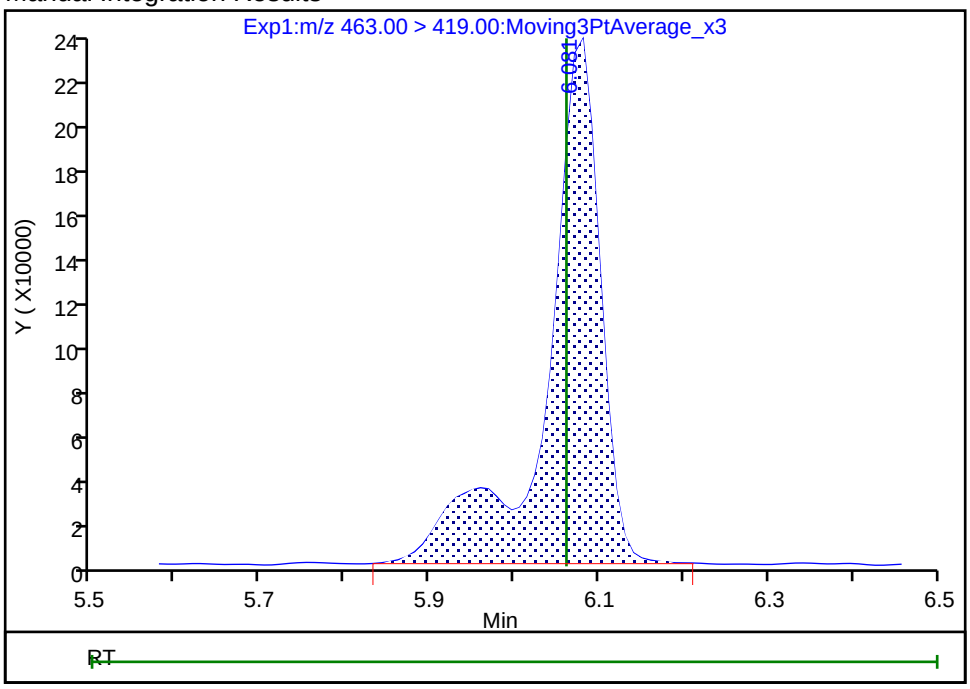
Processing Integration Results

RT: 6.08
Area: 878368
Amount: 0.484890
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 1056346
Amount: 0.583141
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:37:23 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

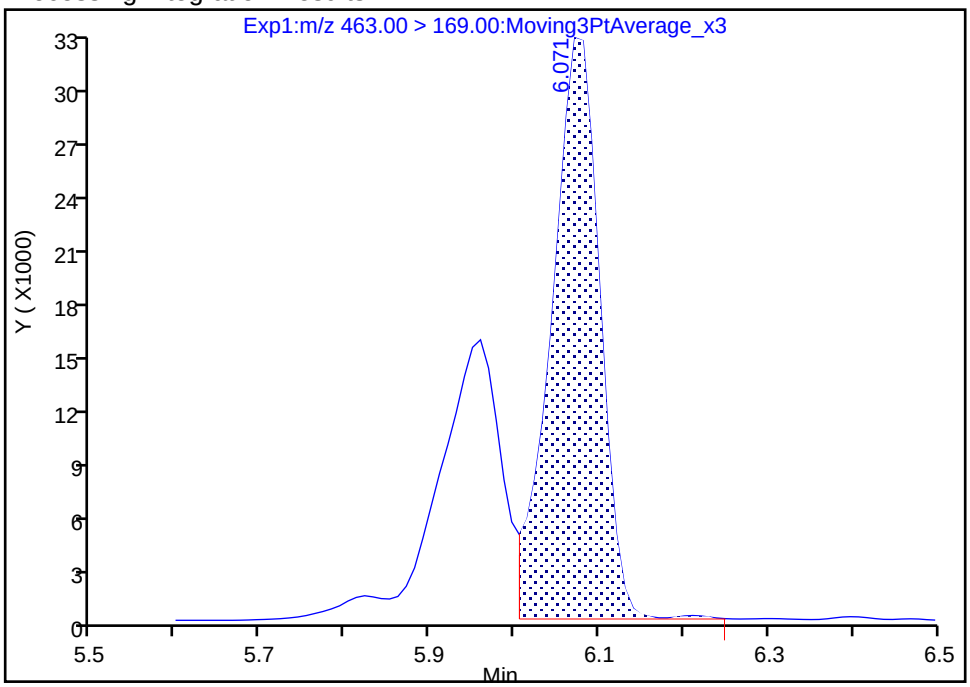
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Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

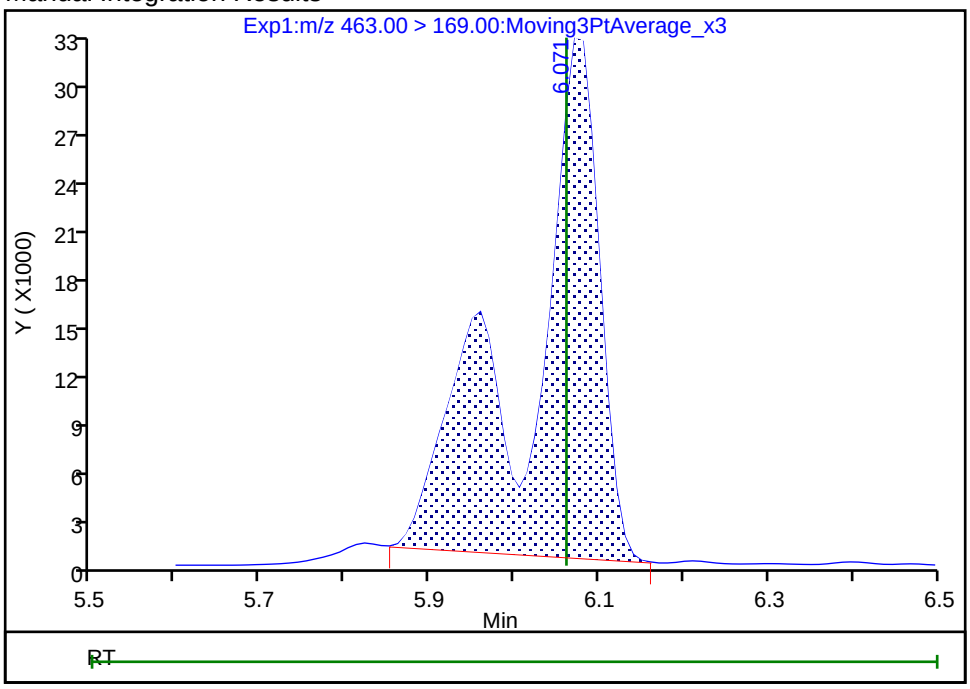
Processing Integration Results

RT: 6.07
Area: 129465
Amount: 0.484890
Amount Units: ng/ml



Manual Integration Results

RT: 6.07
Area: 193448
Amount: 0.583141
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:37:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

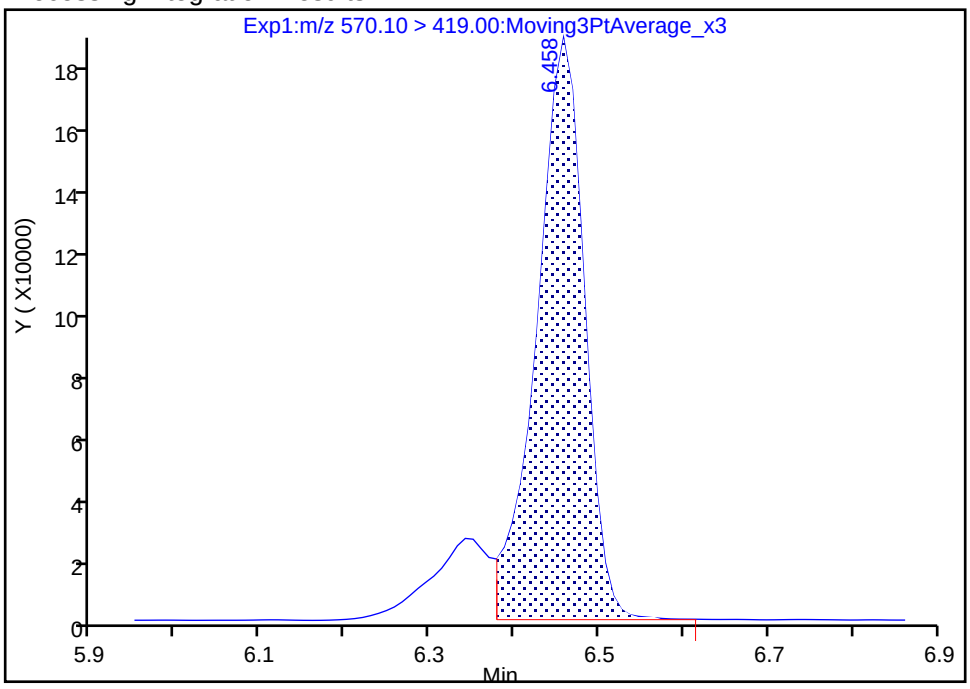
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

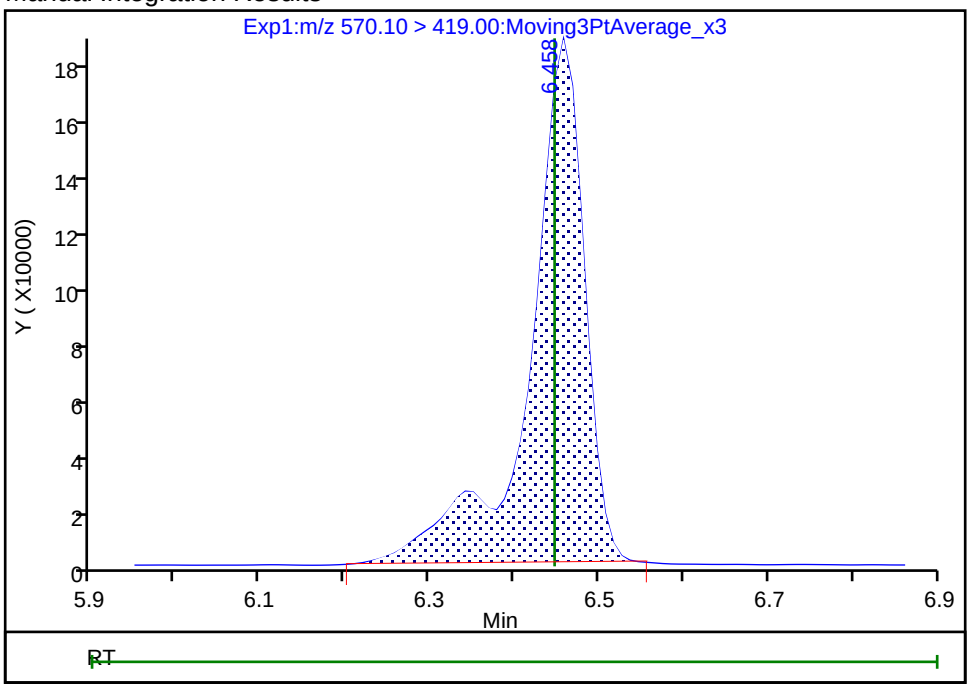
Processing Integration Results

RT: 6.46
Area: 735576
Amount: 0.536969
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 852144
Amount: 0.622063
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:06 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

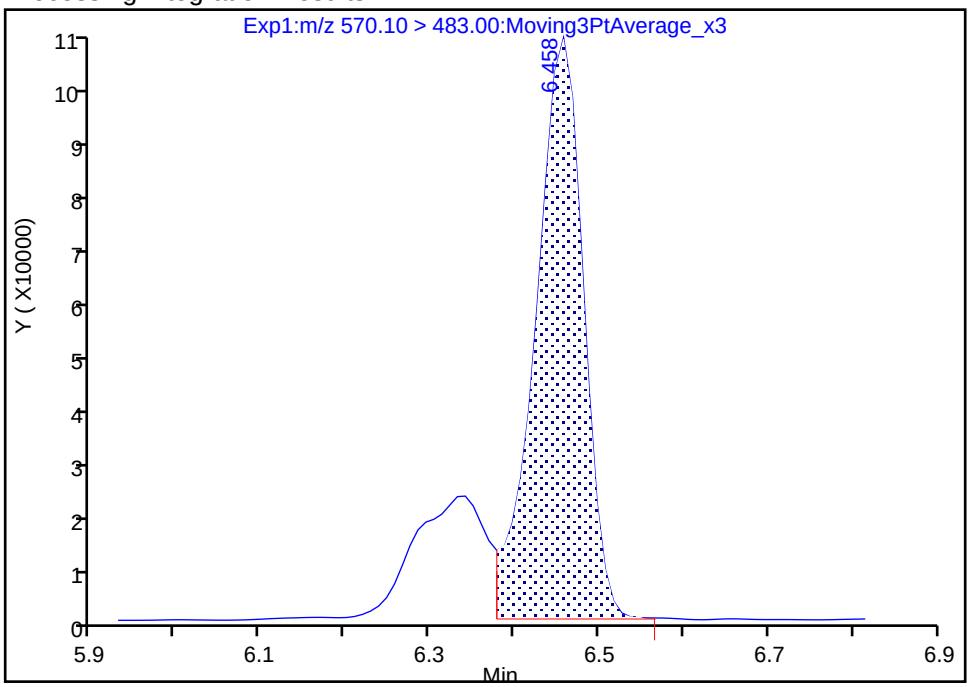
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

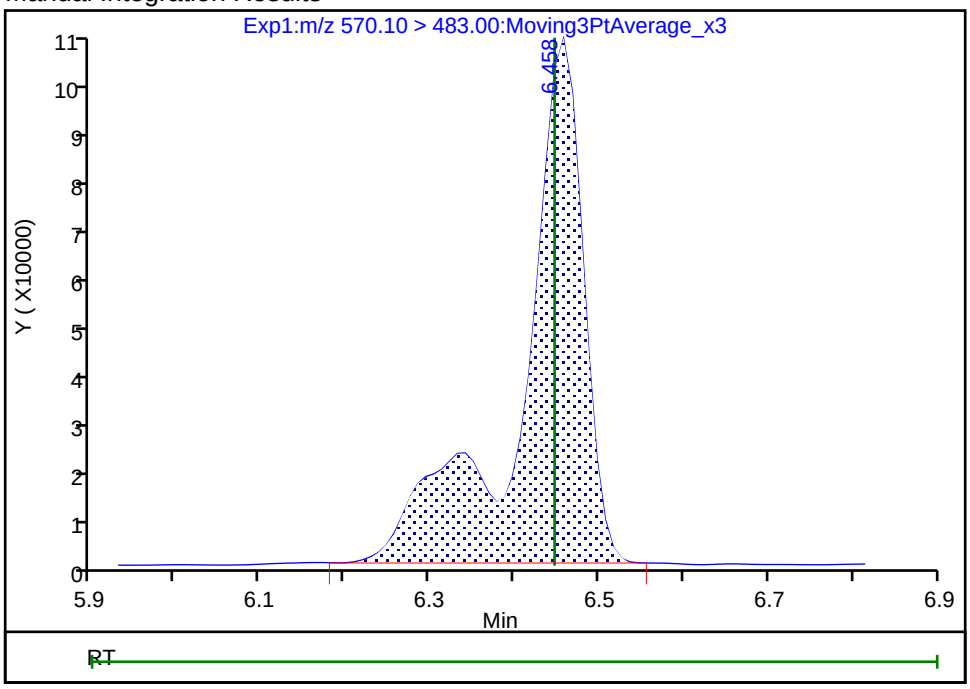
Processing Integration Results

RT: 6.46
Area: 394012
Amount: 0.536969
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 515694
Amount: 0.622063
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:12 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

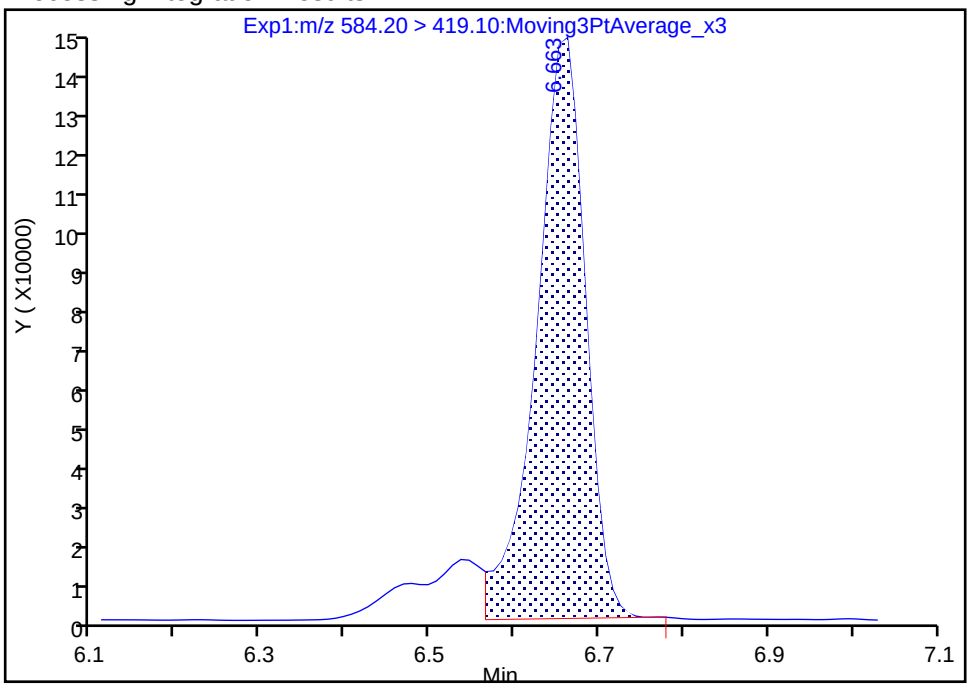
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

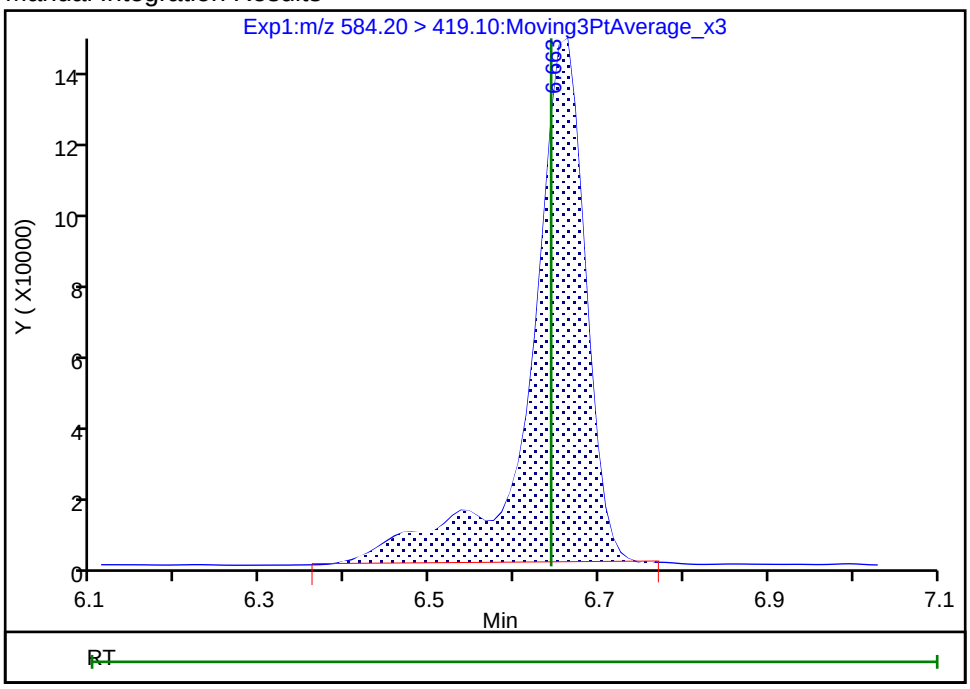
Processing Integration Results

RT: 6.66
Area: 559894
Amount: 0.514505
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 641367
Amount: 0.589373
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

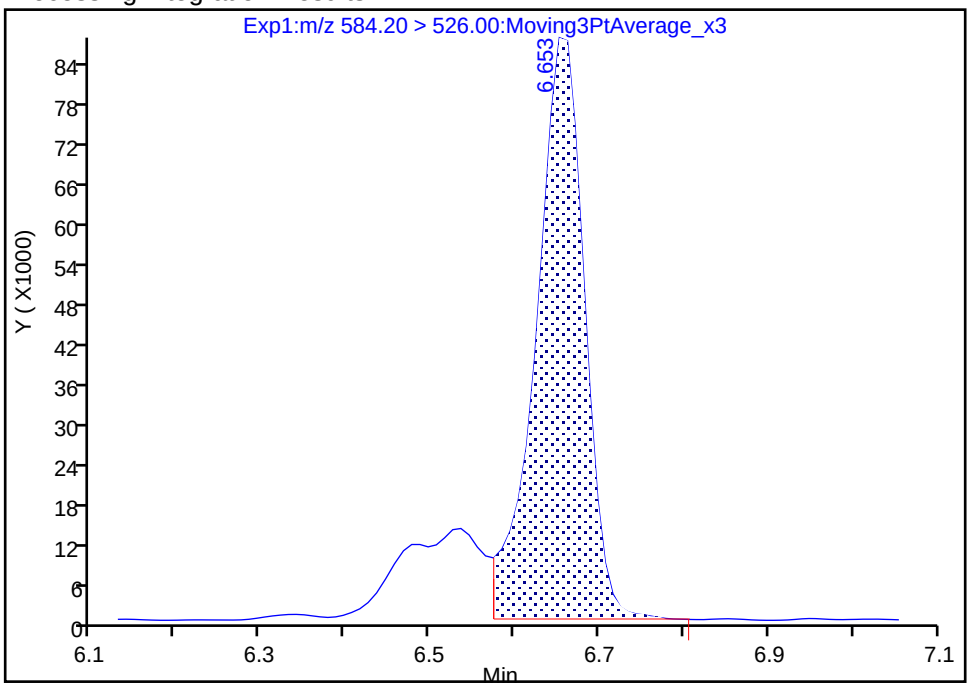
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

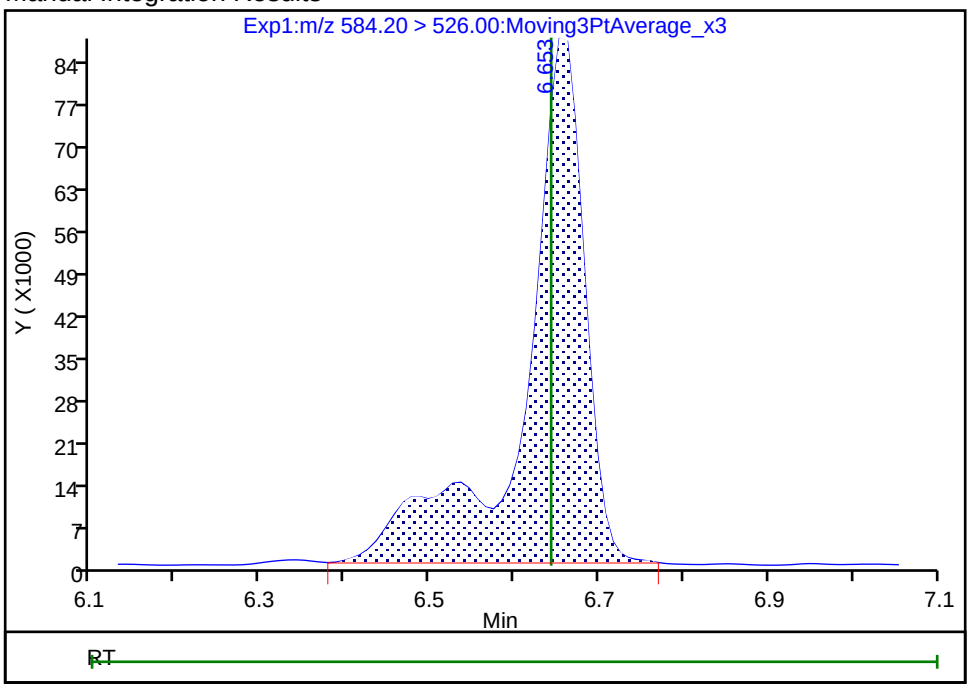
Processing Integration Results

RT: 6.65
Area: 347509
Amount: 0.514505
Amount Units: ng/ml



Manual Integration Results

RT: 6.65
Area: 431938
Amount: 0.589373
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:26 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

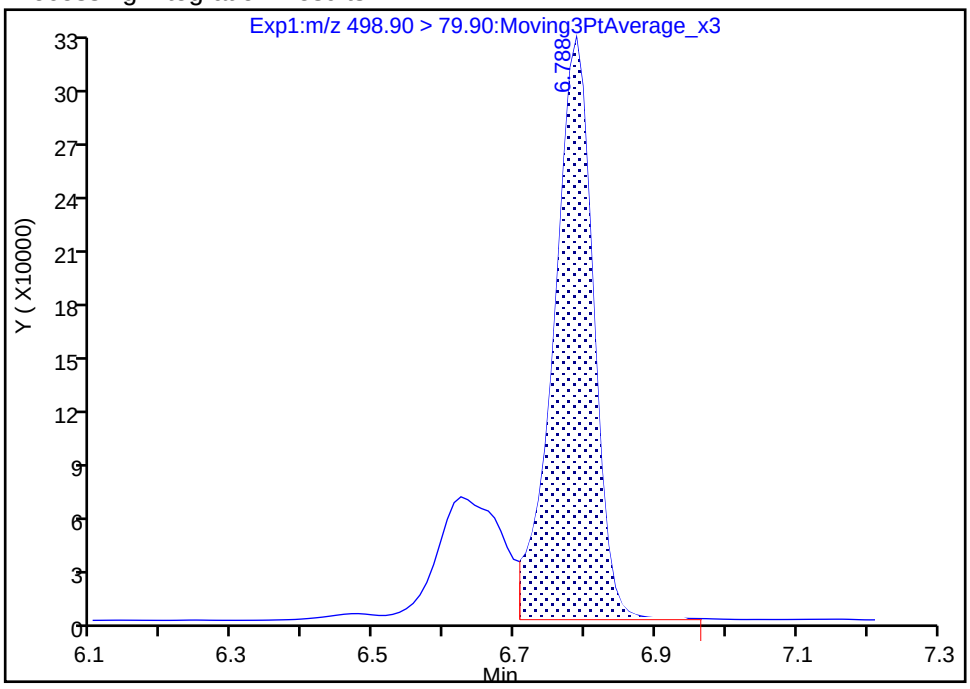
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Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

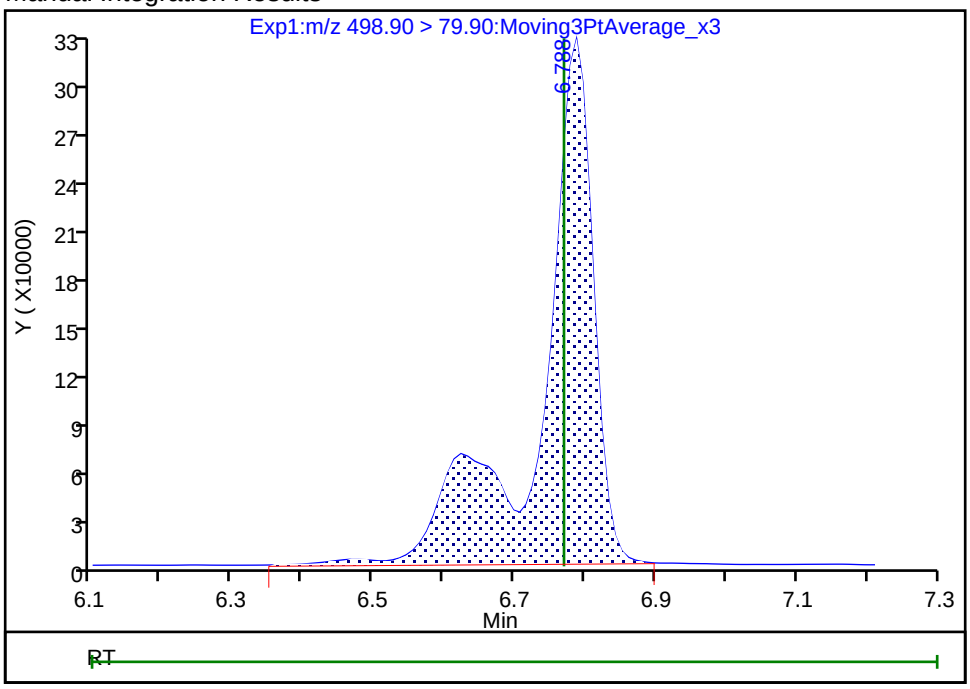
Processing Integration Results

RT: 6.79
Area: 1242287
Amount: 0.400025
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 1682010
Amount: 0.541619
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

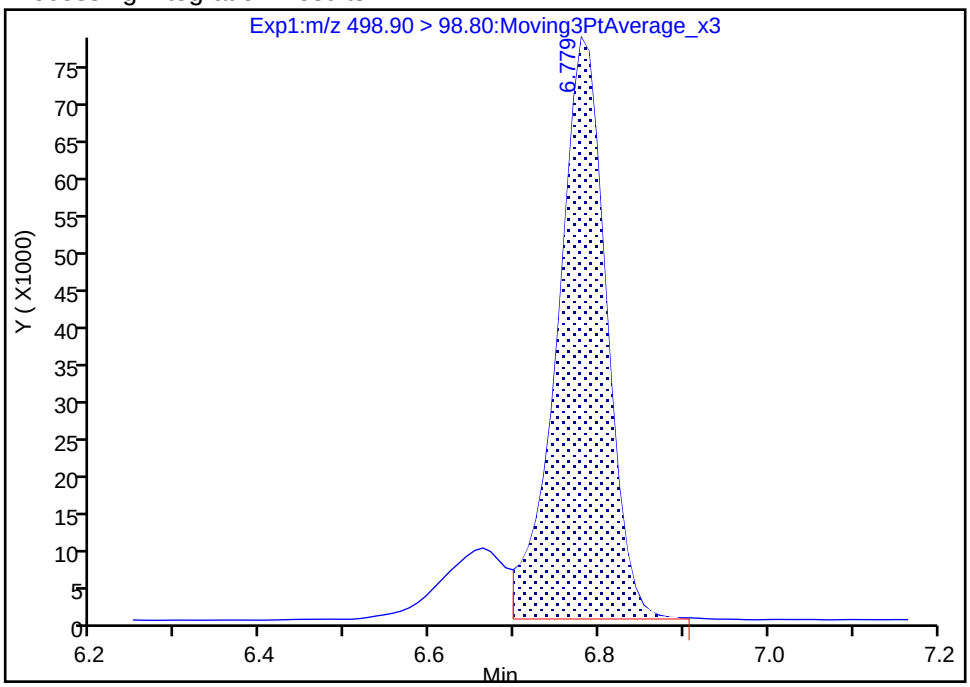
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

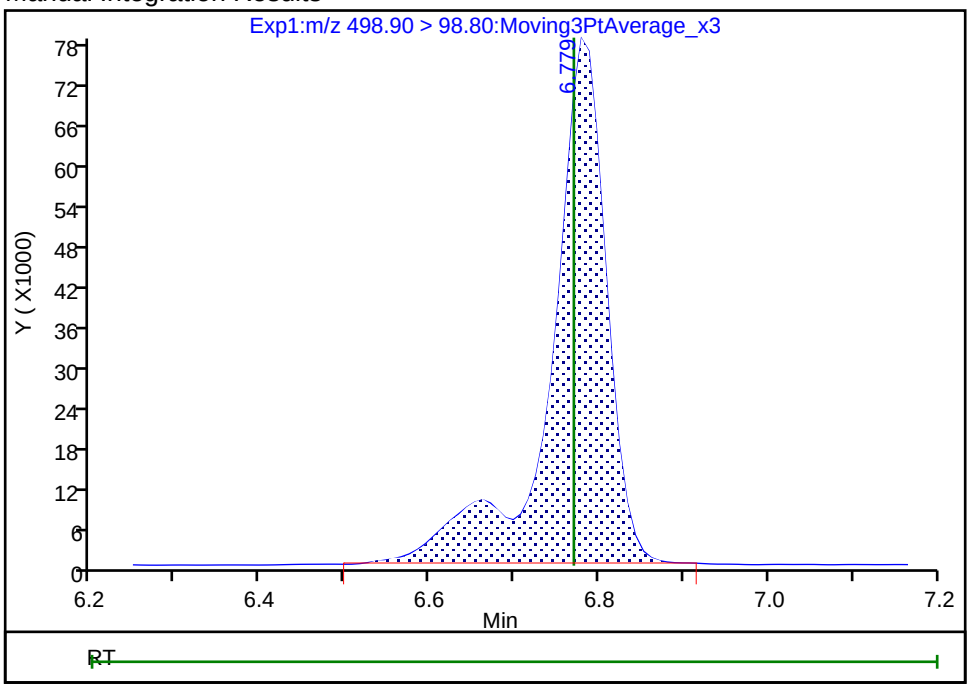
Processing Integration Results

RT: 6.78
Area: 310416
Amount: 0.400025
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 360126
Amount: 0.541619
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

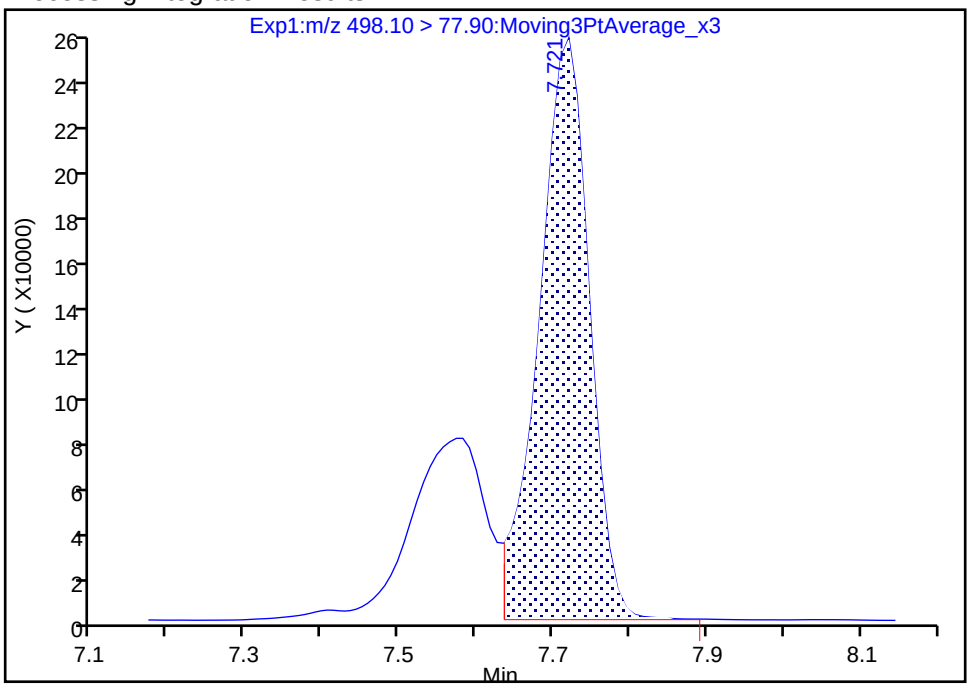
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Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

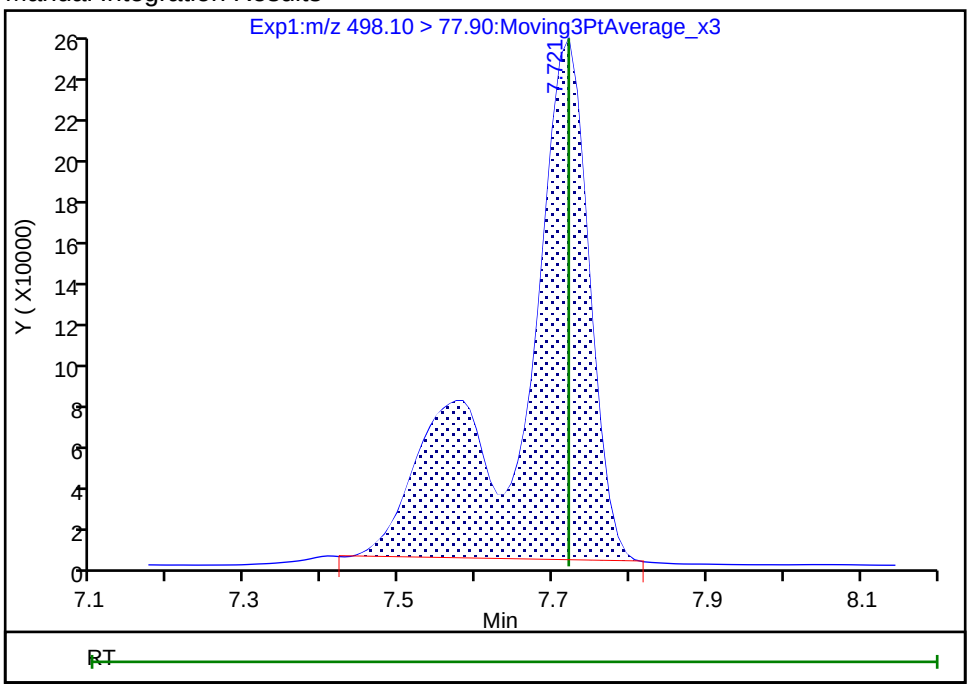
Processing Integration Results

RT: 7.72
Area: 1142480
Amount: 0.443192
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 1607159
Amount: 0.623451
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

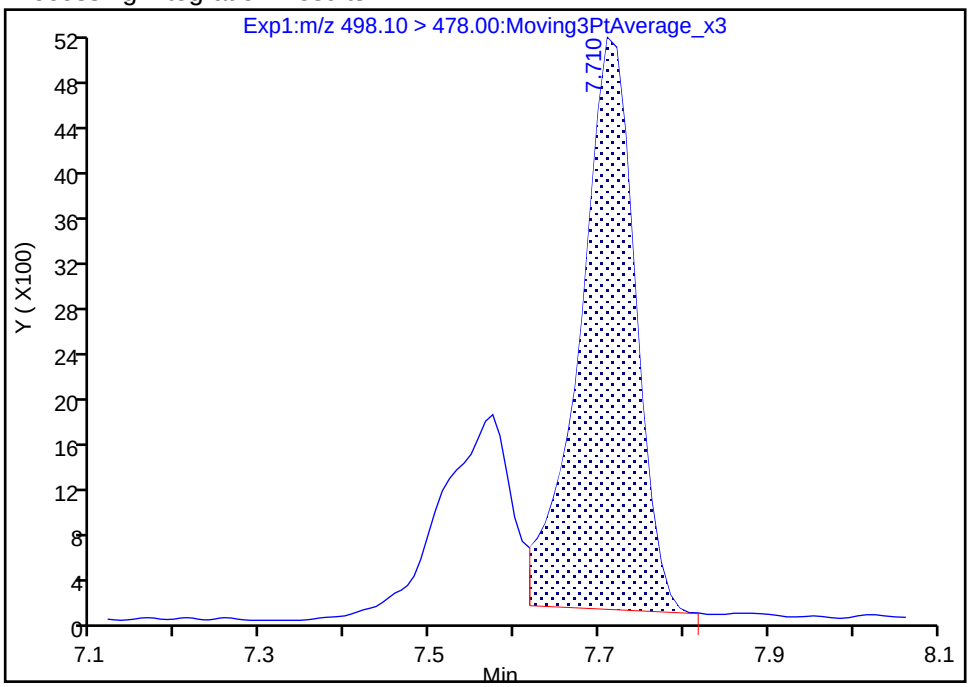
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

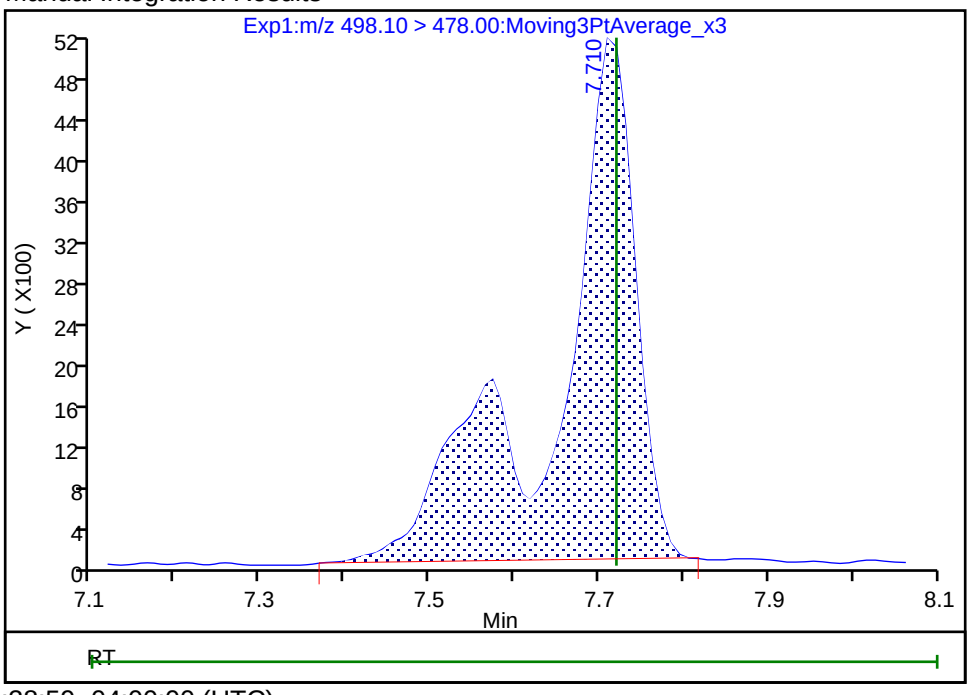
Processing Integration Results

RT: 7.71
Area: 22812
Amount: 0.443192
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 33492
Amount: 0.623451
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:38:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

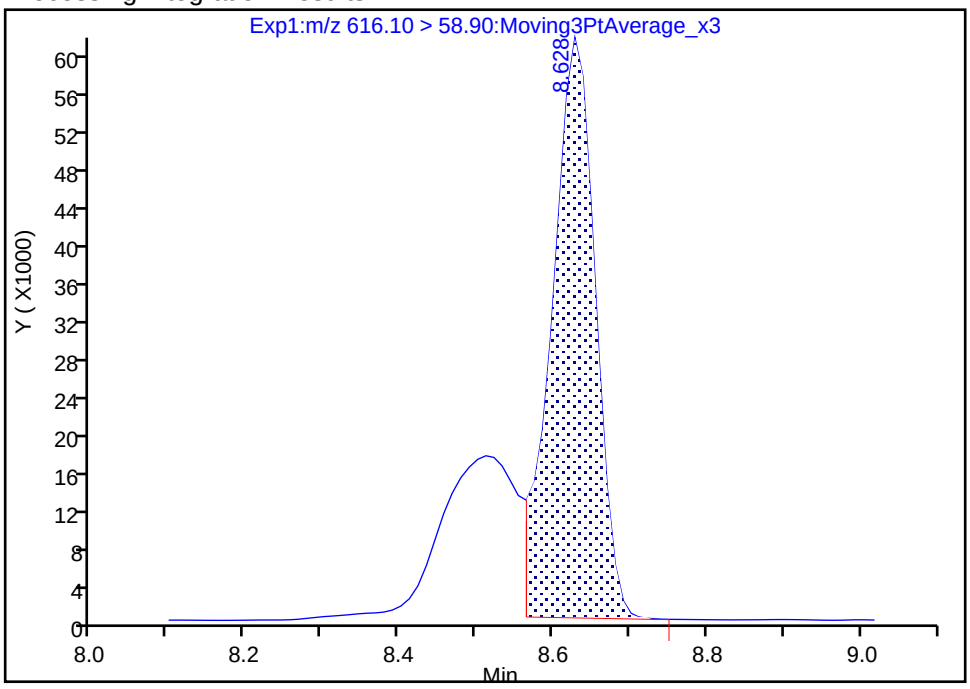
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

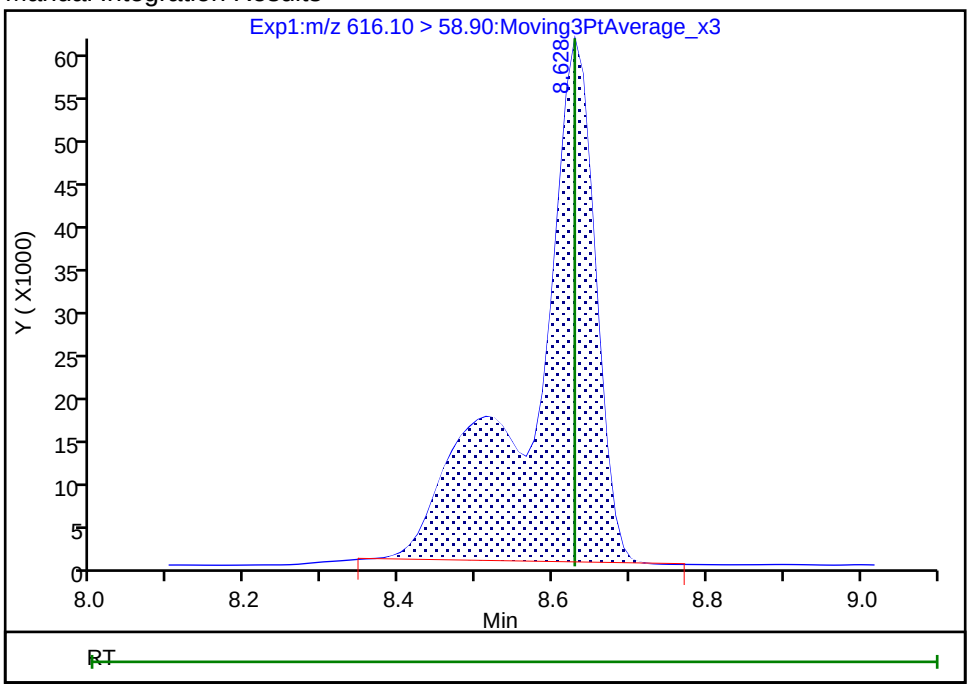
Processing Integration Results

RT: 8.63
Area: 241169
Amount: 4.079573
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 353663
Amount: 5.982501
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:08 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

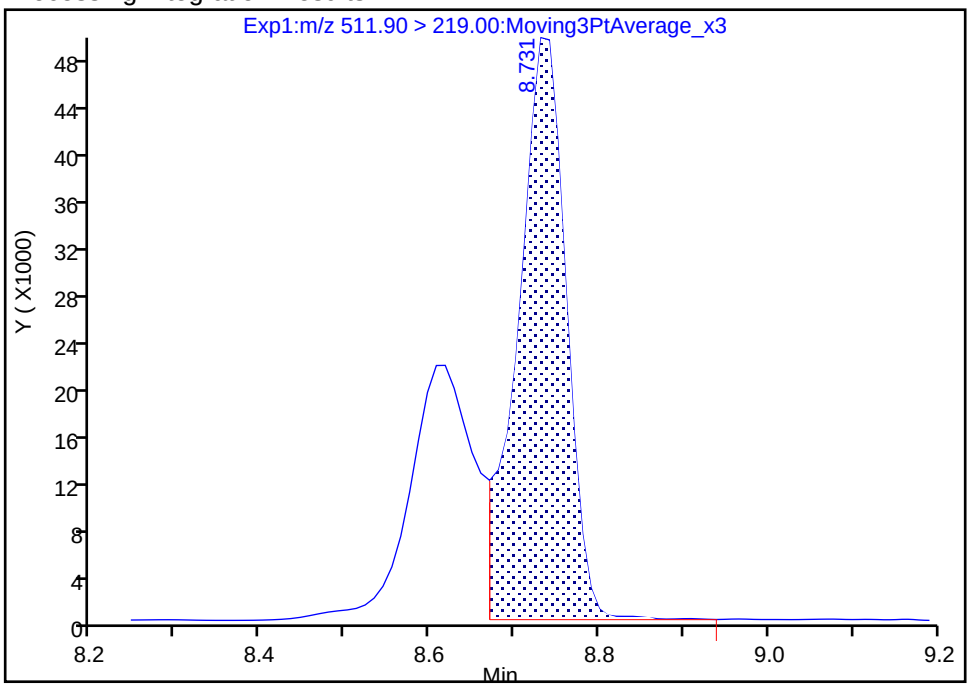
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Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

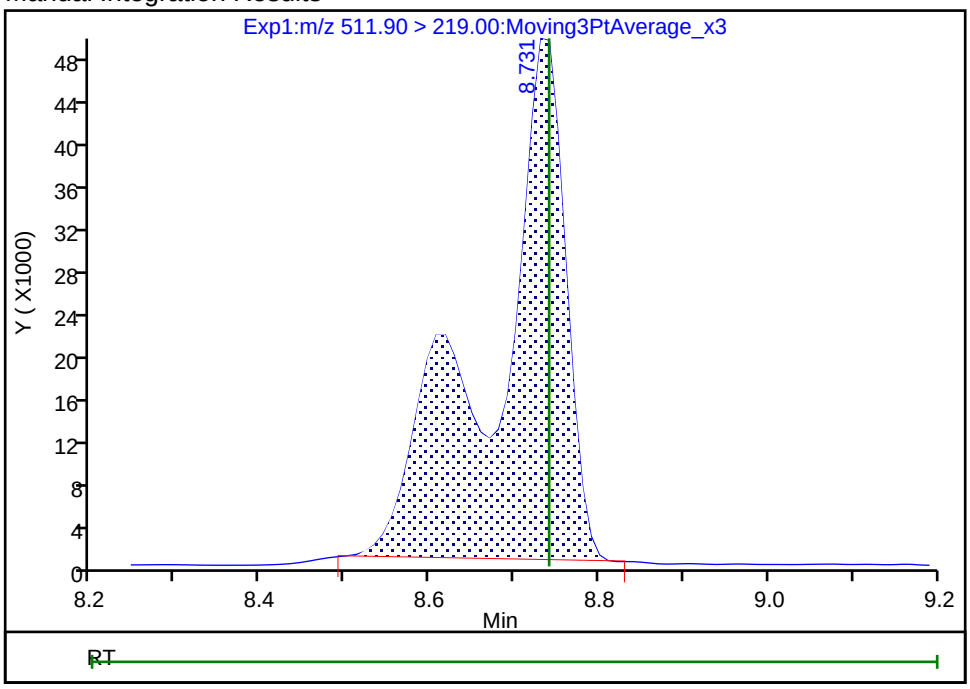
Processing Integration Results

RT: 8.73
Area: 195780
Amount: 0.450869
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 296974
Amount: 0.683912
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

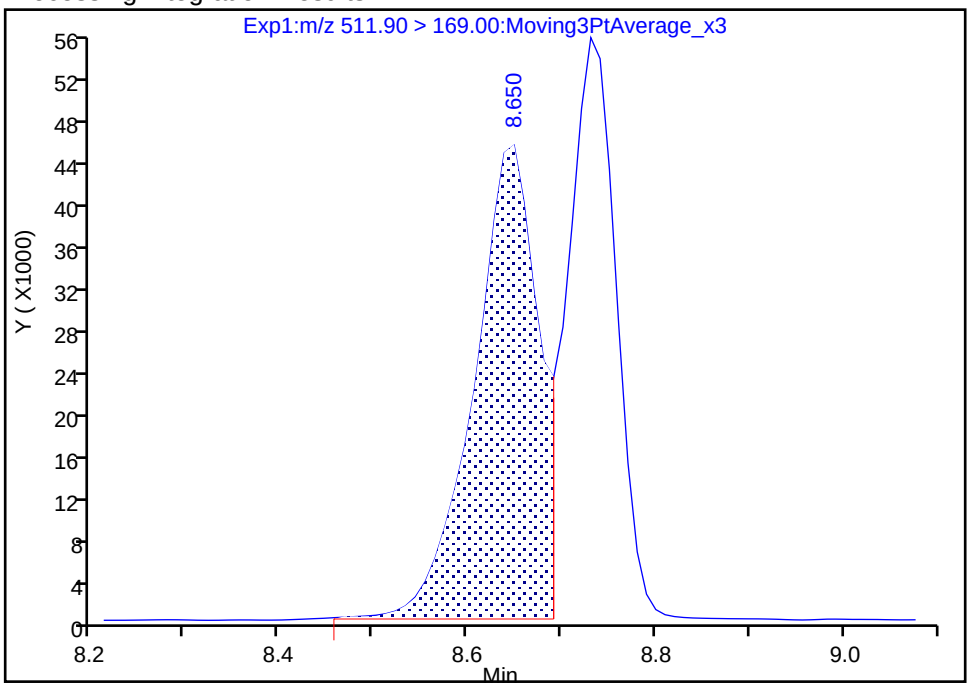
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

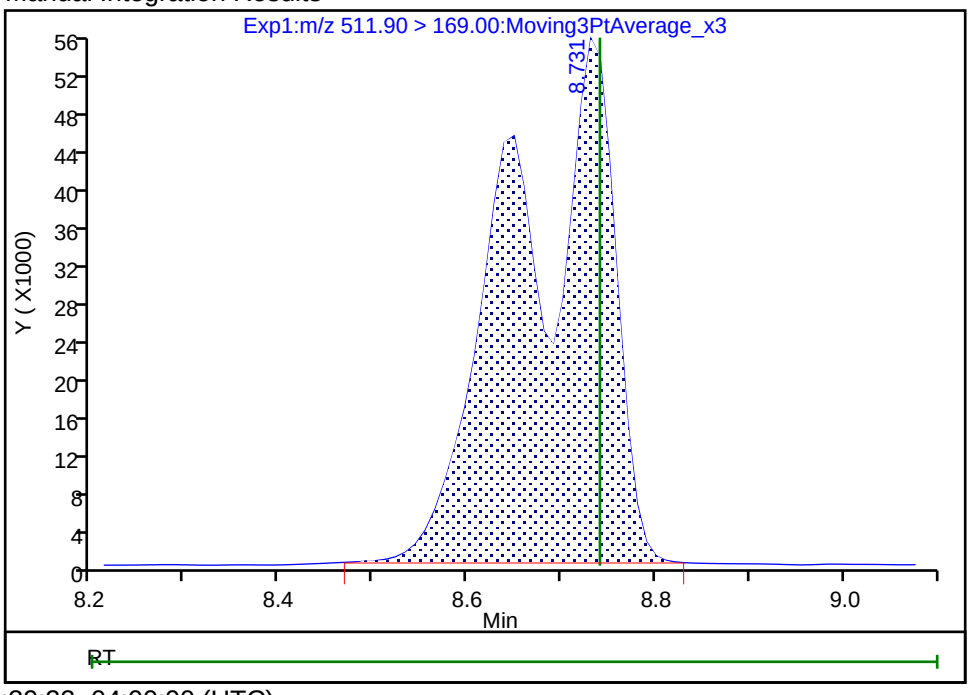
Processing Integration Results

RT: 8.65
Area: 212556
Amount: 0.450869
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 407061
Amount: 0.683912
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:22 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

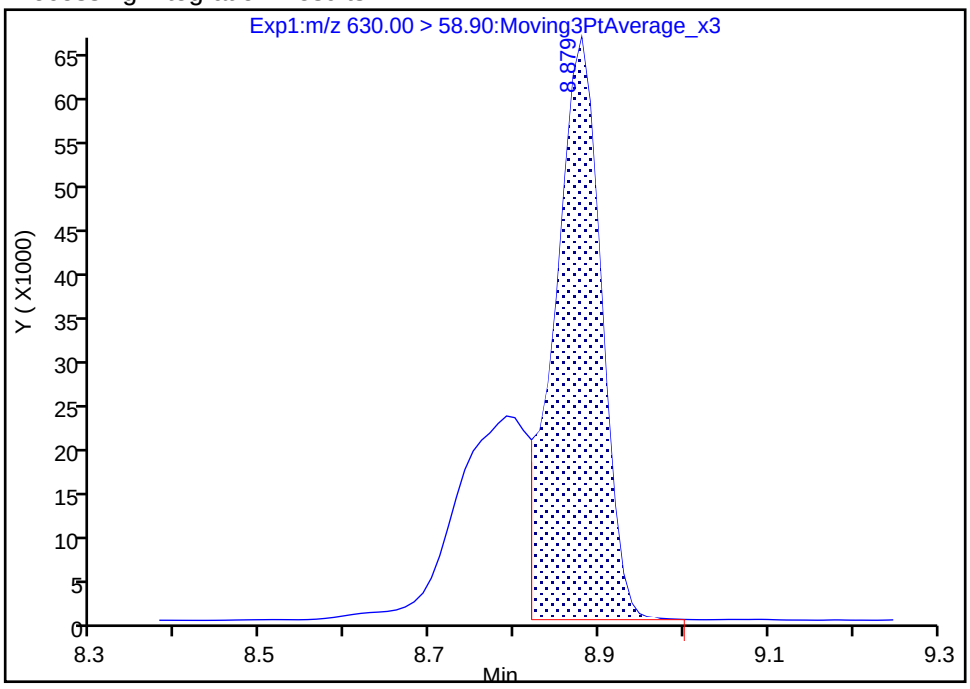
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Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

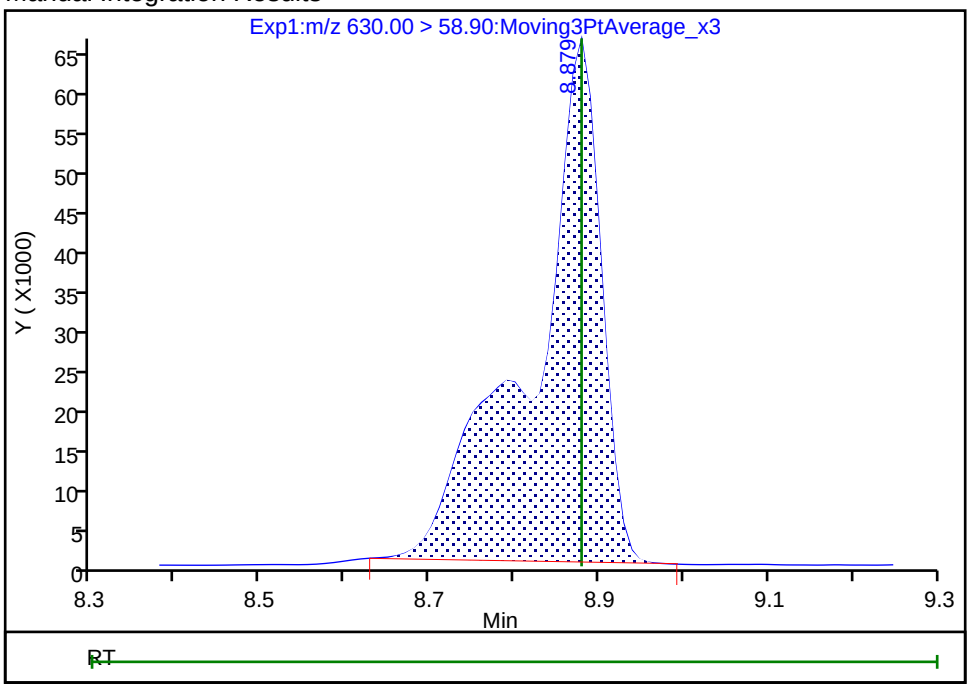
Processing Integration Results

RT: 8.88
Area: 253107
Amount: 3.931918
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 377903
Amount: 5.870575
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

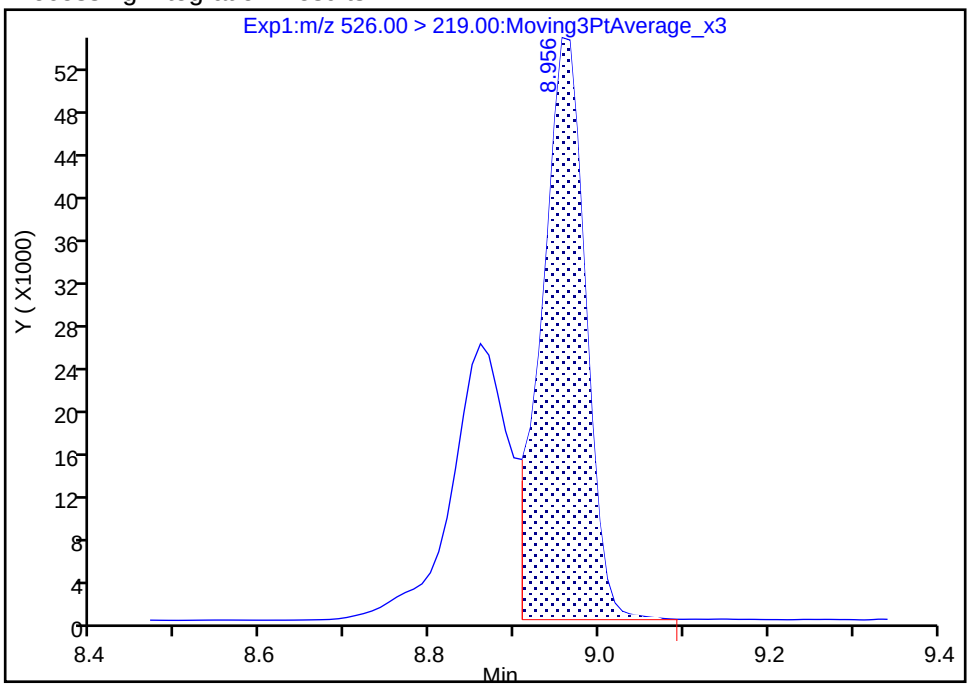
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

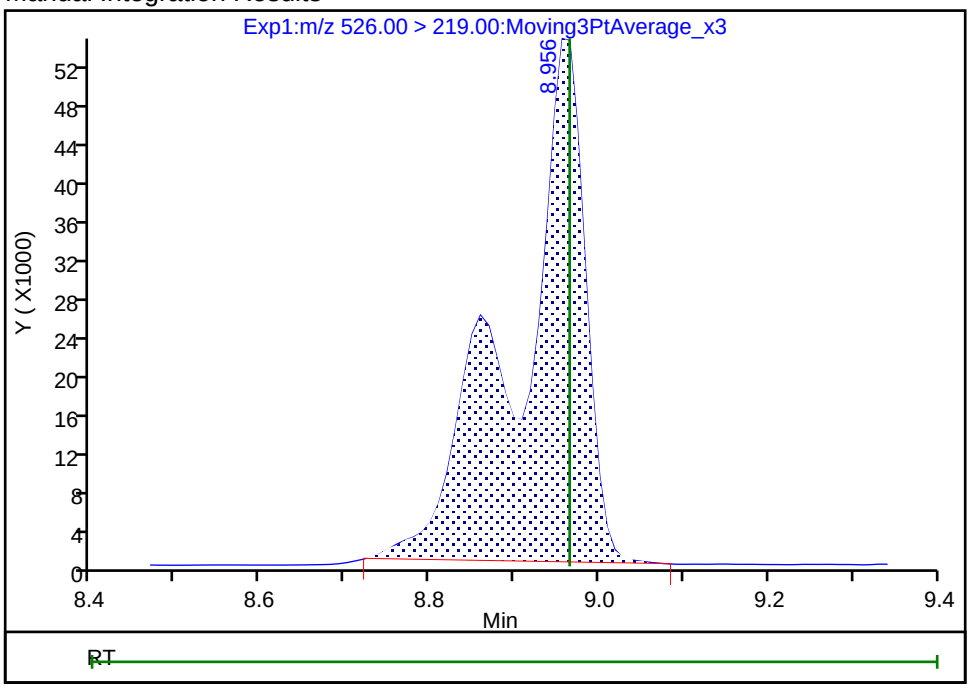
Processing Integration Results

RT: 8.96
Area: 193527
Amount: 0.436624
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 308540
Amount: 0.696110
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:36 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

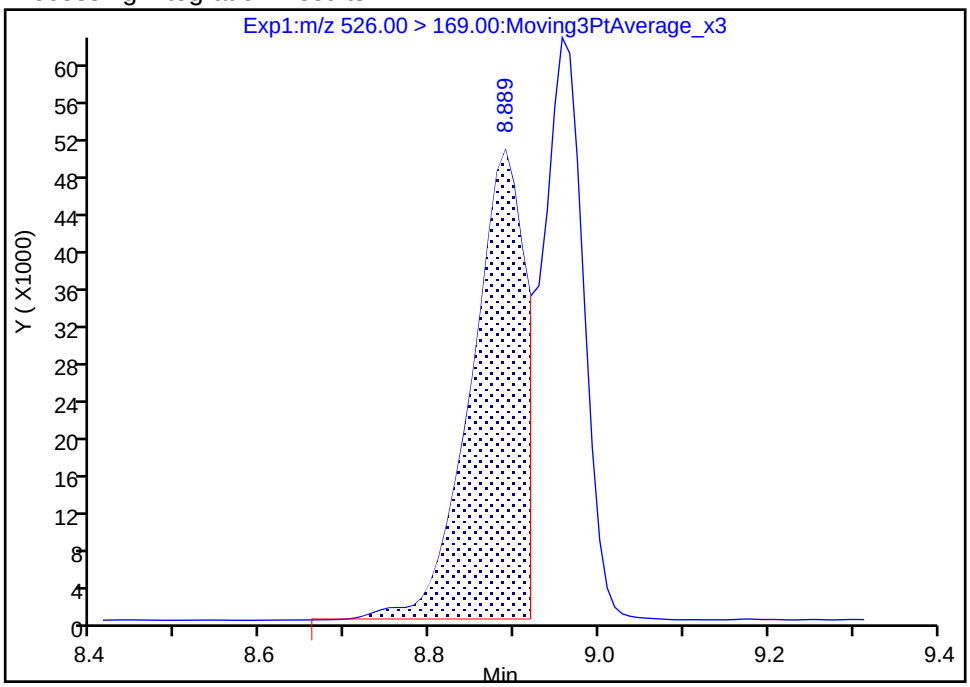
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj28.d
Injection Date: 18-Sep-2024 22:31:10 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

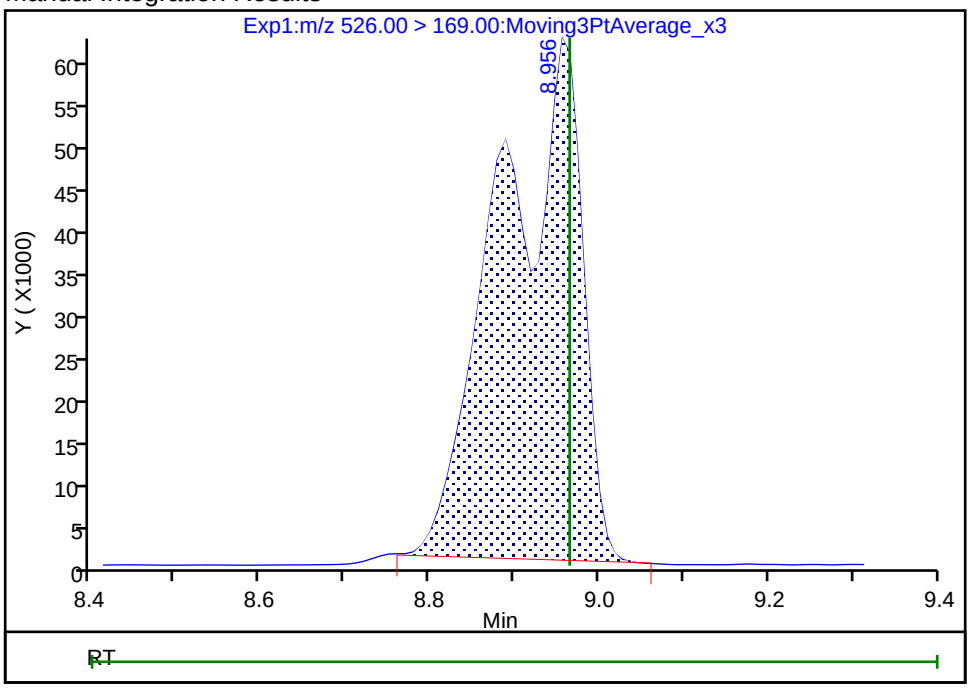
Processing Integration Results

RT: 8.89
Area: 216575
Amount: 0.436624
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 412801
Amount: 0.696110
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:39:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/40 Calibration Date: 09/19/2024 01:14

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj40.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9501	0.9570		2.52	2.50	0.7	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0603	0.0504		2.61	3.13	-16.4	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.374	1.189		1.08	1.25	-13.4	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.532	1.438		1.17	1.25	-6.1	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.450	1.311		1.13	1.25	-9.6	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	2.988	2.641		2.06	2.34	-11.6	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.0878	0.0891		1.27	1.25	1.5	30.0
FBSA	AveID	0.6842	0.6234		2.28	2.50	-8.9	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7948	0.7880		0.620	0.625	-0.9	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1416	0.1077		11.9	15.6	-23.9	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.9713	0.8893		0.506	0.553	-8.4	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.102	0.997		2.26	2.50	-9.5	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.926	2.946		1.12	1.11	0.7	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.081	1.038		0.601	0.625	-3.9	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	5.350	5.916		2.60	2.36	10.6	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.027	1.105		0.631	0.586	7.6	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	2.380	2.273		2.26	2.37	-4.5	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.4797	0.5268		0.686	0.625	9.8	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.1352	0.1277		14.8	15.6	-5.6	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8538	0.9418		0.627	0.569	10.3	30.0
Perfluorononanoic acid (PFNA)	AveID	0.7575	0.7184		0.593	0.625	-5.2	30.0
FHxSA	AveID	1.005	0.9491		2.36	2.50	-5.5	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	2.491	2.315		2.23	2.40	-7.1	30.0
PFECHS	AveID	1.691	1.891		1.29	1.15	11.9	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.172	1.143		0.580	0.595	-2.5	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.102	1.141		0.647	0.625	3.5	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.7939	0.7305		0.575	0.625	-8.0	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8346	0.8115		0.608	0.625	-2.8	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.258	1.172		0.541	0.580	-6.8	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/40 Calibration Date: 09/19/2024 01:14

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj40.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoroundecanoic acid (PFUnA)	AveID	0.9017	0.8241		0.571	0.625	-8.6	30.0
9-Chlorohexadecafluoro-3-oxa nonane-1-sulfonic acid	AveID	4.753	4.726		2.32	2.33	-0.6	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9527	0.9163		0.577	0.600	-3.8	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9900	0.8410		0.531	0.625	-15.1	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.078	1.087		0.607	0.603	0.8	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9397	0.9427		0.627	0.625	0.3	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.212	1.056		0.544	0.625	-12.9	30.0
11-Chloroeicosafluoro-3-oxau ndecane-1-sulfonic acid	AveID	4.613	4.706		2.40	2.36	2.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	1.253	1.096		0.547	0.625	-12.5	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9128	0.8977		0.595	0.605	-1.6	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	0.1480	0.1448		6.12	6.25	-2.2	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9739	1.004		0.644	0.625	3.1	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	0.1350	0.1231		5.70	6.25	-8.9	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.9863	1.024		0.649	0.625	3.8	30.0
13C4 PFBA	Ave	1.135	1.013		2.23	2.50	-10.8	30.0
13C5 PFPeA	Ave	0.7848	0.6266		0.998	1.25	-20.2	30.0
M2-4:2 FTS	Ave	0.3348	0.5041		1.76	1.17	50.6*	30.0
13C5 PFHxA	Ave	1.405	1.070		0.476	0.625	-23.8	30.0
13C3 PFBS	Ave	1.069	1.222		0.664	0.581	14.3	30.0
13C3 HFPO-DA	Ave	0.4045	0.3078		1.90	2.50	-23.9	30.0
13C4 PFHpA	Ave	1.467	1.195		0.509	0.625	-18.6	30.0
M2-6:2 FTS	Ave	0.3833	0.5385		1.67	1.19	40.5*	30.0
13C8 PFOA	Ave	7.888	7.214		0.572	0.625	-8.5	30.0
13C3 PFHxS	Ave	1.050	1.127		0.635	0.591	7.4	30.0
13C9 PFNA	Ave	0.7843	0.8181		0.326	0.313	4.3	30.0
M2-8:2 FTS	Ave	0.2626	0.3678		1.68	1.20	40.0*	30.0
d3-NMeFOSAA	Ave	0.4628	0.5423		1.47	1.25	17.2	30.0
13C6 PFDA	Ave	0.9624	1.042		0.338	0.313	8.3	30.0
d5-NEtFOSAA	Ave	0.4555	0.5424		1.49	1.25	19.1	30.0
13C8 PFOS	Ave	1.030	1.077		0.624	0.598	4.5	30.0
13C7 PFUnA	Ave	0.9471	1.011		0.334	0.313	6.7	30.0
13C2-PFDoDA	Ave	0.8939	0.998		0.349	0.313	11.6	30.0
13C8 FOSA	Ave	1.106	1.203		0.680	0.625	8.8	30.0
13C2 PFTeDA	Ave	0.5110	0.5405		0.331	0.313	5.8	30.0
d7-N-MeFOSE-M	Ave	0.1639	0.1674		6.39	6.25	2.2	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/40 Calibration Date: 09/19/2024 01:14

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj40.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMePFOSA	Ave	0.2181	0.1994		0.572	0.625	-8.5	30.0
d9-N-EtFOSE-M	Ave	0.2012	0.2118		6.58	6.25	5.2	30.0
d5-NEtPFOSA	Ave	0.2198	0.1943		0.552	0.625	-11.6	30.0

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Lims ID: CCV MID
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2024 01:14:23 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV MID
Misc. Info.: Plate: 1 Rack: 1 240-0146375-040
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:56:44 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:56:44
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.552	3.544	0.008		2018664	1.25			828	
* 2 13C2 PFHxA										
315.10 > 270.00	4.729	4.719	0.010		1595318	0.6250			6531	
* 3 13C4 PFOA										
417.10 > 172.00	5.638	5.629	0.009		261882	0.6250			1406	
* 4 18O2 PFHxS										
403.00 > 83.90	5.862	5.843	0.019		1413774	0.5913			3415	
* 5 13C5 PFNA										
468.00 > 423.00	6.062	6.052	0.010		923403	0.3125			1221	
* 6 13C2 PFDA										
515.10 > 470.10	6.508	6.488	0.020		716469	0.3125			1725	
* 7 13C4 PFOS										
502.80 > 79.90	6.779	6.761	0.018		1338261	0.5975	Target=4.00		2835	
502.80 > 98.90	6.770	6.761	0.009		325970		4.11(2.00-6.00)		1271	
D 8 13C4 PFBA										
216.80 > 171.90	3.552	3.544	0.008	1.000	4087836	2.23		89.2	9985	
D 9 13C5 PFPeA										
268.30 > 223.00	4.211	4.202	0.009	0.890	1999198	1.00		79.8	6927	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.530	4.530	0.0	0.773	1407371	1.76	Target=0.29	151	3768	
329.10 > 309.00	4.530	4.530	0.0	0.773	4204343		0.33(0.14-0.43)	151	1273	
D 11 13C5 PFHxA										
318.00 > 273.00	4.729	4.719	0.010	1.000	1707527	0.4761	Target=40.21	76.2	4407	
318.00 > 120.30	4.729	4.719	0.010	1.000	43380		39.36(20.11-60.32)	76.2	501	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.857	4.846	0.011	0.828	1697860	0.6642	Target=3.28	114	2532	
302.10 > 98.90	4.857	4.846	0.011	0.828	509357		3.33(1.64-4.92)	114	2320	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.922	4.923	-0.001	1.041	1964413	1.90	Target=1.86	76.1	2867	
286.90 > 184.90	4.922	4.923	-0.001	1.041	1170668		1.68(0.93-2.78)	76.1	2837	
D 14 13C4 PFHpA										
367.10 > 322.00	5.193	5.194	-0.001	1.098	1906124	0.5089		81.4	5930	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.426	5.416	0.010	0.926	1529158	1.67	Target=0.38	140	4405	
429.10 > 409.00	5.416	5.416	0.0	0.924	3877773		0.39(0.19-0.57)	140	4410	
D 16 13C8 PFOA										
421.10 > 376.00	5.638	5.619	0.019	1.000	1889201	0.5716		91.5	4154	
D 17 13C3 PFHxS										
402.10 > 79.90	5.862	5.843	0.019	1.000	1593393	0.6348	Target=3.25	107	2938	
402.10 > 98.80	5.853	5.843	0.010	0.998	478915		3.33(1.63-4.88)	107	1888	
D 18 13C9 PFNA										
472.10 > 427.00	6.062	6.052	0.010	1.000	755419	0.3260		104	1408	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.267	6.249	0.018	1.069	1053040	1.68	Target=0.33	140	3617	
529.10 > 509.00	6.267	6.249	0.018	1.069	2892669		0.36(0.16-0.49)	140	4468	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.448	6.427	0.021	0.951	1518289	1.46		117	3523	
D 21 13C6 PFDA										
519.10 > 474.10	6.498	6.488	0.010	0.999	746575	0.3383		108	1510	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.644	6.624	0.020	0.980	1518611	1.49		119	2956	
D 23 13C8 PFOS										
507.10 > 79.90	6.779	6.752	0.027	1.000	1440960	0.6244	Target=4.26	105	600	
507.10 > 98.90	6.779	6.752	0.027	1.000	365399		3.94(2.13-6.39)	105	782	
D 24 13C7 PFUnA										
570.00 > 525.10	6.948	6.923	0.025	1.068	724277	0.3336		107	1376	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.384	7.353	0.031	1.135	714965	0.3489		112	1199	
D 26 13C8 FOSA										
506.10 > 77.80	7.710	7.709	0.001	1.137	1684210	0.6800		109	3513	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.212	8.179	0.034	1.262	387283	0.3306		106	1041	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.597	8.607	-0.010	1.268	2343407	6.38		102	715	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.721	0.0	1.287	279189	0.5716		91.5	1000	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.850	8.849	0.001	1.305	2964301	6.58		105	1024	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.947	8.947	0.0	1.320	271929	0.5523		88.4	159	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										
212.80 > 168.90	3.560	3.559	0.001	1.002	3912043	2.52		101	20.9	
34 3:3 FTCA										
241.00 > 177.00	3.844	3.842	0.002	0.913	252093	2.61	Target=1.06	83.6	2913	
241.00 > 117.00	3.844	3.842	0.002	0.913	238604		1.06(0.53-1.58)		61.8	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.844	3.842	0.002	0.913	2377737	1.08		86.6	4485	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.211	4.219	-0.008	1.000	2875682	1.17		93.9	209	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.390	4.388	0.002	1.043	2621336	1.13		90.4	7501	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.540	4.540	0.0	1.002	7434448	2.06	Target=1.34	88.4	17489	
327.10 > 80.90	4.540	4.540	0.0	1.002	5471583		1.36(0.67-2.01)		3299	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.687	4.696	-0.009	0.991	304363	1.27	Target=1.72	101	2125	
295.00 > 84.90	4.687	4.696	-0.009	0.991	256749		1.19(0.86-2.58)		1358	
48 FBSA										
297.90 > 78.00	4.708	4.718	-0.010	0.969	4552499	2.28		91.1	4120	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.740	4.739	0.001	1.002	1345588	0.6196	Target=14.20	99.1	153	
313.00 > 118.90	4.729	4.739	-0.010	1.000	105426		12.76(7.10-21.30)		687	
41 5:3 FTCA										
341.00 > 237.10	4.813	4.812	0.001	1.018	4597188	11.9	Target=1.54	76.1	3209	
341.00 > 217.00	4.813	4.812	0.001	1.018	2929559		1.57(0.77-2.31)		1199	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.868	4.856	0.012	1.002	1435222	0.5059	Target=3.31	91.6	2946	
298.70 > 98.80	4.857	4.856	0.001	1.000	416691		3.44(1.66-4.97)		1257	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.933	4.932	0.001	1.002	1958601	2.26	Target=1.99	90.5	5745	
284.90 > 184.90	4.933	4.932	0.001	1.002	1122388		1.75(1.00-2.99)		2337	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.124	5.123	0.001	1.083	8953042	1.12	Target=12.91	101	9453	
314.80 > 82.90	5.124	5.123	0.001	1.083	695380		12.88(6.46-19.37)		1508	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.204	5.204	0.0	1.002	1979495	0.6006	Target=3.56	96.1	228	
363.10 > 169.00	5.204	5.204	0.0	1.002	491529		4.03(1.78-5.34)		1476	
49 DONA										
376.90 > 250.90	5.375	5.365	0.010	1.092	10948281	2.60	Target=1.61	111	12251	
376.90 > 84.80	5.365	5.365	0.0	1.090	6183471		1.77(0.81-2.42)		10312	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.396	5.385	0.011	0.920	1745353	0.6305	Target=3.08	108	1431	
349.10 > 98.90	5.385	5.385	0.0	0.919	550215		3.17(1.54-4.63)		1572	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.426	5.425	0.001	1.000	6935948	2.26	Target=1.41	95.5	5729	
427.10 > 80.90	5.426	5.425	0.001	1.000	4837951		1.43(0.70-2.11)		9907	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.638	5.638	0.0	1.000	995159	0.6863	Target=1.93	110	108	M
413.00 > 169.00	5.638	5.638	0.0	1.000	475081		2.09(0.96-2.89)		503	M
54 7:3 FTCA										
441.00 > 316.90	5.695	5.694	0.001	1.204	5450797	14.8	Target=1.07	94.4	4310	
441.00 > 336.90	5.685	5.694	-0.009	1.202	5275465		1.03(0.53-1.60)		8058	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.862	5.862	0.0	1.000	1443552	0.6274	Target=3.17	110	2060	M
398.70 > 98.90	5.862	5.862	0.0	1.000	422875		3.41(1.59-4.76)		775	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.072	6.061	0.011	1.002	1085337	0.5927	Target=4.77	94.8	147	M
463.00 > 169.00	6.072	6.061	0.011	1.002	221814		4.89(2.39-7.16)		225	M
62 FHxSA										
397.90 > 78.00	6.230	6.258	-0.028	1.063	6394709	2.36		94.5	4385	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.267	6.267	0.0	1.000	4874897	2.23	Target=1.35	92.9	11094	
527.10 > 80.80	6.267	6.267	0.0	1.000	3727160		1.31(0.67-2.02)		9965	
57 PFECHS										
461.00 > 381.00	6.277	6.267	0.010	1.071	5874733	1.29	Target=1.89	112	429	
461.00 > 99.00	6.277	6.267	0.010	1.071	2949773		1.99(0.94-2.83)		3723	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.323	6.314	0.009	0.933	1639478	0.5802	Target=3.87	97.5	1664	
449.00 > 98.80	6.323	6.314	0.009	0.933	431590		3.80(1.93-5.80)		1008	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.448	6.447	0.001	1.000	865941	0.6470	Target=1.69	104	1319	M
570.10 > 483.00	6.448	6.447	0.001	1.000	515974		1.68(0.85-2.54)		859	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.508	6.498	0.010	1.001	1090802	0.5751	Target=5.10	92.0	170	
512.90 > 219.00	6.508	6.498	0.010	1.001	236458		4.61(2.55-7.66)		834	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.653	6.643	0.010	1.001	616148	0.6076	Target=1.49	97.2	824	M
584.20 > 526.00	6.653	6.643	0.010	1.001	400612		1.54(0.75-2.24)		471	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.779	6.770	0.009	1.000	1640027	0.5406	Target=4.80	93.2	727	M
498.90 > 98.80	6.779	6.770	0.009	1.000	352381		4.65(2.40-7.20)		1485	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.956	6.940	0.016	1.001	1193816	0.5712	Target=6.10	91.4	437	
563.10 > 269.10	6.948	6.940	0.008	1.000	189600		6.30(3.05-9.15)		970	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.126	7.103	0.023	1.448	8652737	2.32	Target=3.10	99.4	1363	
532.80 > 353.00	7.118	7.103	0.015	1.446	2739020		3.16(1.55-4.65)		2083	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.225	7.205	0.020	1.066	1325912	0.5771	Target=4.02	96.2	2201	
548.80 > 98.80	7.225	7.205	0.020	1.066	320537		4.14(2.01-6.03)		1646	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.384	7.361	0.023	1.000	1202625	0.5309	Target=16.81	84.9	496	
613.10 > 319.00	7.384	7.361	0.023	1.000	69608		17.28(8.41-25.22)		544	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.654	7.627	0.027	1.129	1579190	0.6074	Target=4.25	101	3232	
599.00 > 98.80	7.646	7.627	0.019	1.128	377948		4.18(2.12-6.37)		1933	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.710	7.720	-0.010	1.000	1587621	0.6269	Target=51.55	100	716	M
498.10 > 478.00	7.710	7.720	-0.010	1.000	34506		46.01(25.77-77.32)		144	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.806	7.784	0.022	0.951	1163528	0.5442	Target=6.27	87.1	573	
663.00 > 168.90	7.806	7.784	0.022	0.951	184953		6.29(3.13-9.40)		1191	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.974	7.954	0.020	1.620	8708806	2.40	Target=3.32	102	6308	
632.90 > 452.90	7.974	7.954	0.020	1.620	2706546		3.22(1.66-4.97)		4357	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.212	8.179	0.033	1.000	849278	0.5467	Target=6.82	87.5	591	
713.10 > 168.90	8.212	8.179	0.033	1.000	123817		6.86(3.41-10.24)		1638	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.435	8.402	0.033	1.244	1309795	0.5950	Target=4.61	98.4	1923	
699.10 > 98.80	8.424	8.402	0.022	1.243	285436		4.59(2.30-6.91)		1863	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.618	8.628	-0.010	1.002	339271	6.12		97.8	853	M
75 NMeFOSA										M
511.90 > 219.00	8.731	8.741	-0.010	1.001	280263	0.6442	Target=0.70	103	543	M
511.90 > 169.00	8.731	8.741	-0.010	1.001	407342		0.69(0.35-1.05)		800	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.869	8.879	-0.010	1.002	364819	5.70		91.1	898	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.956	8.965	-0.009	1.001	278383	0.6487	Target=0.71	104	471	M
526.00 > 169.00	8.956	8.965	-0.009	1.001	405610		0.69(0.35-1.06)		566	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

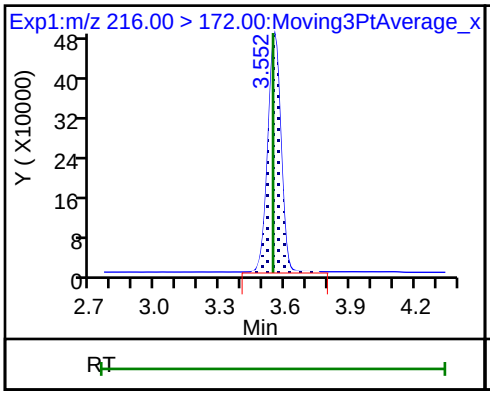
ICV CAL4_00034 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:56:46 Chrom Revision: 2.3 26-Aug-2024 17:14:48

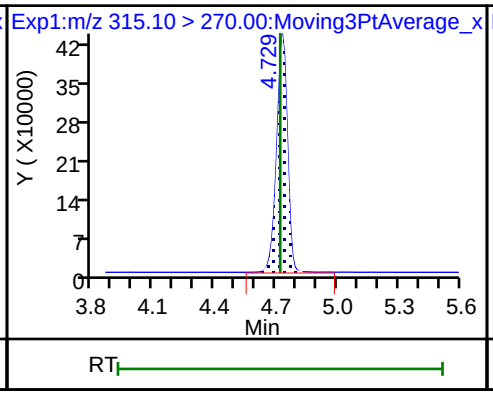
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

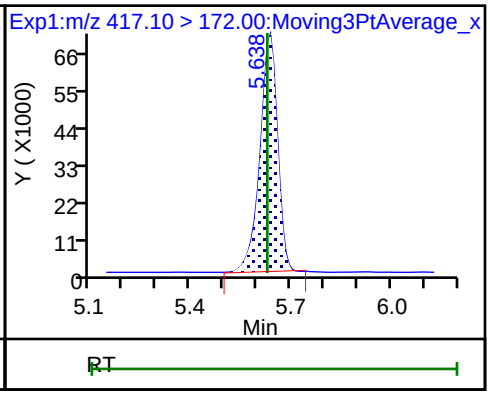
* 1 13C3-PFBA



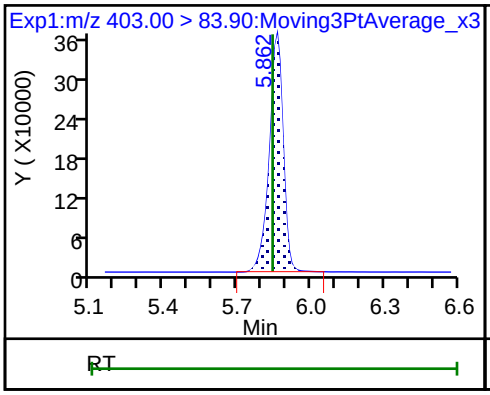
* 2 13C2 PFHxA



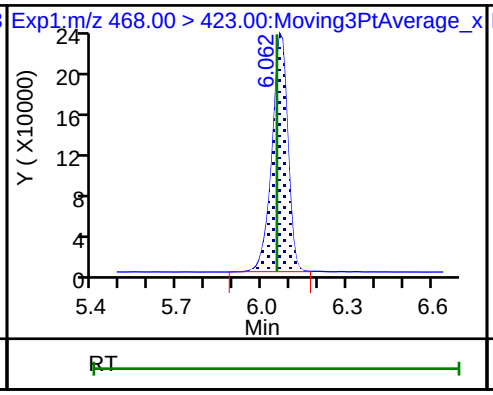
* 3 13C4 PFOA



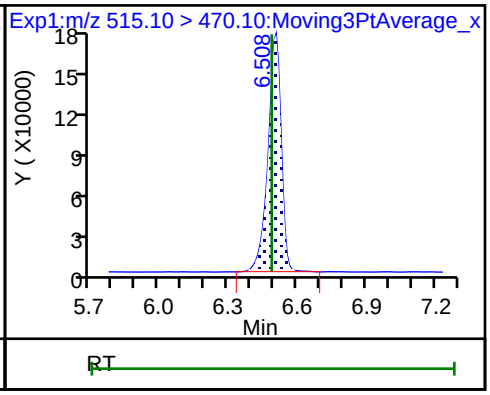
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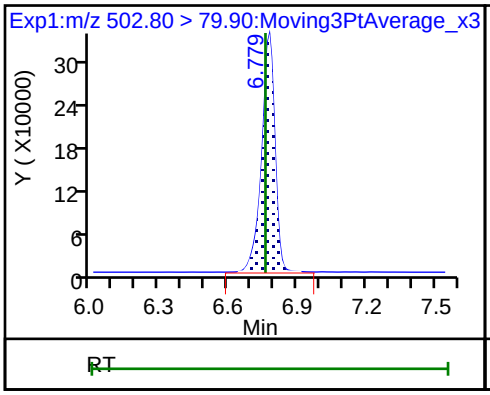
* 5 13C5 PFNA



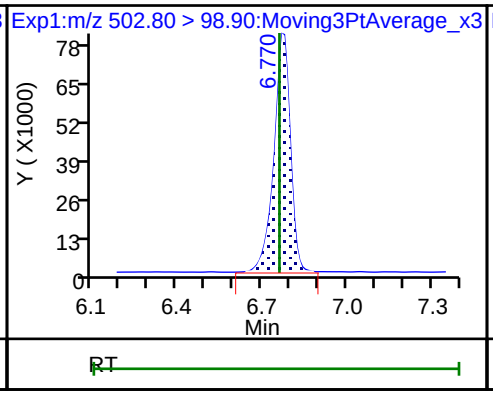
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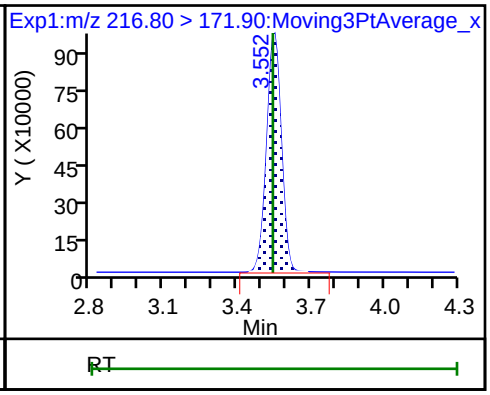
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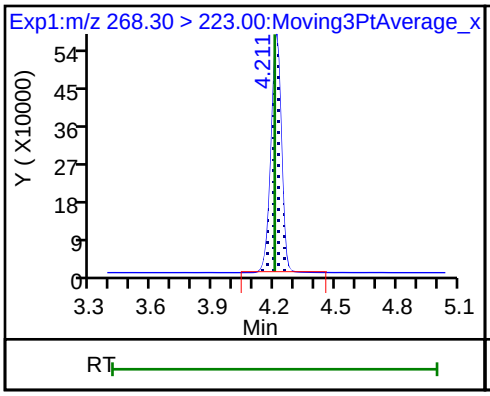
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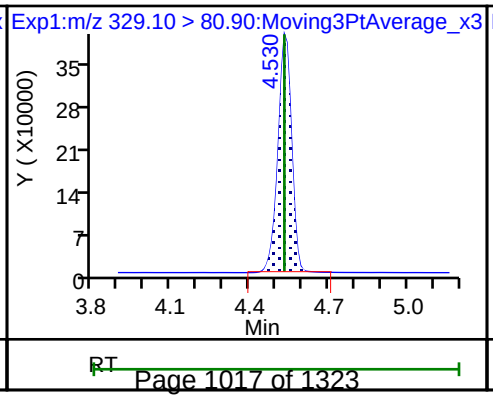
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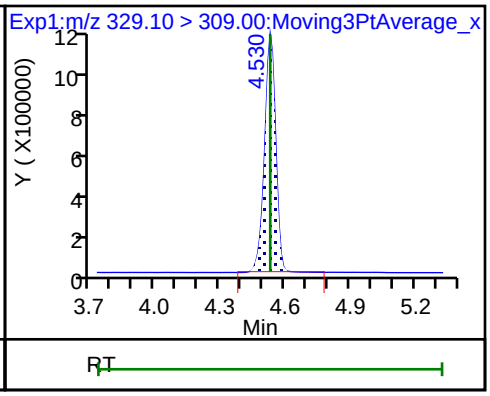
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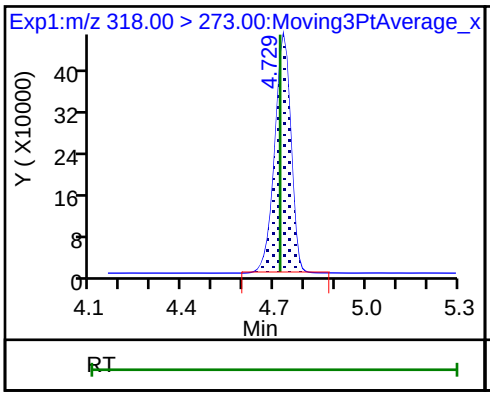
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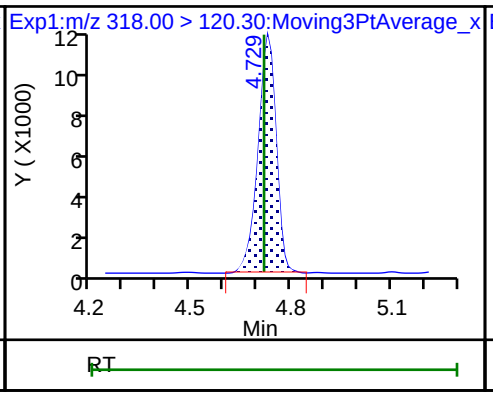
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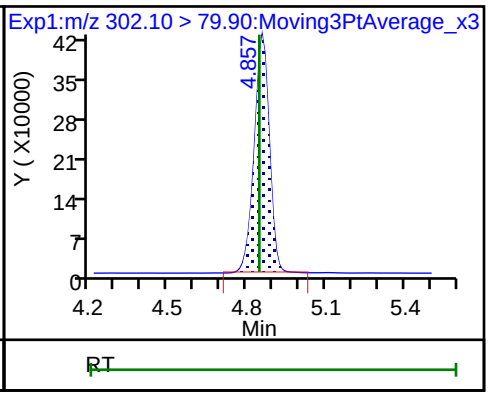
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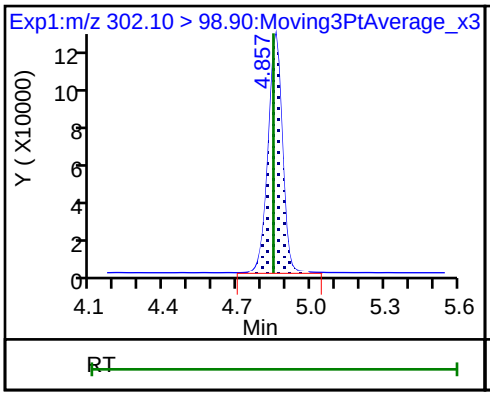
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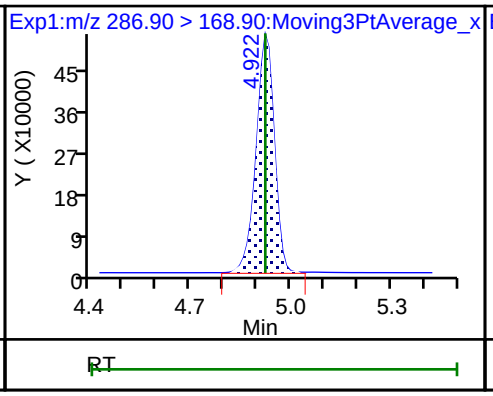
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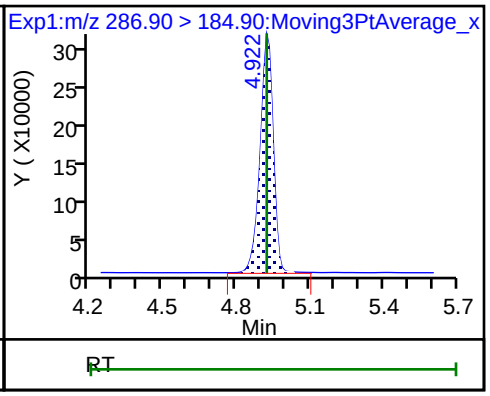
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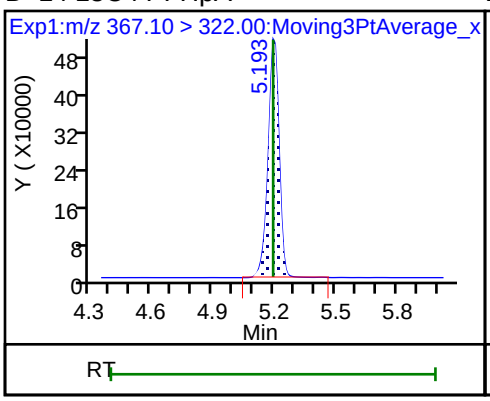
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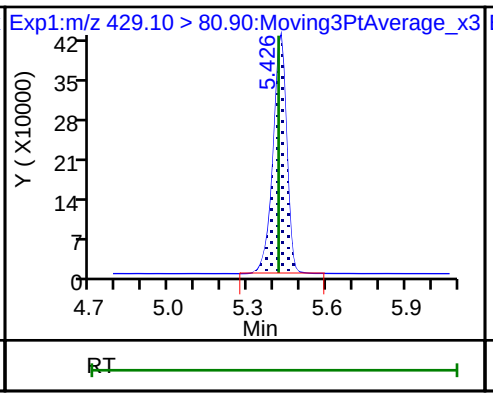
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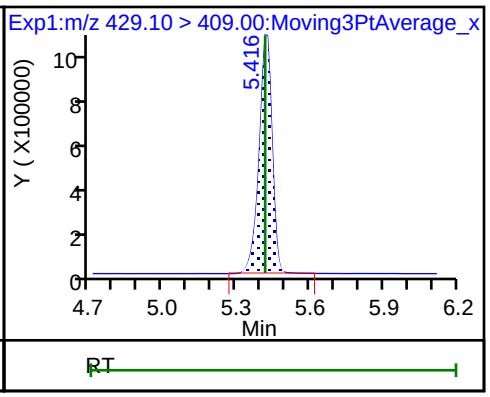
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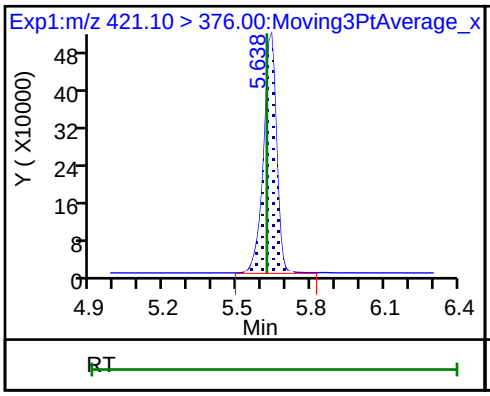
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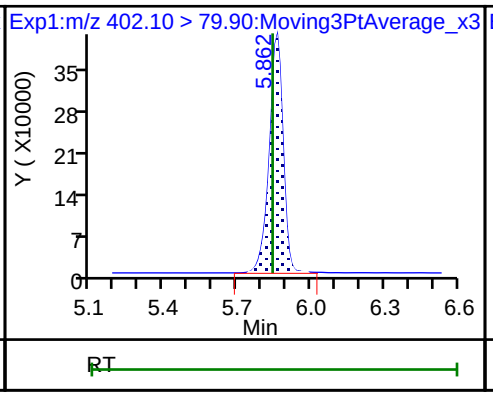
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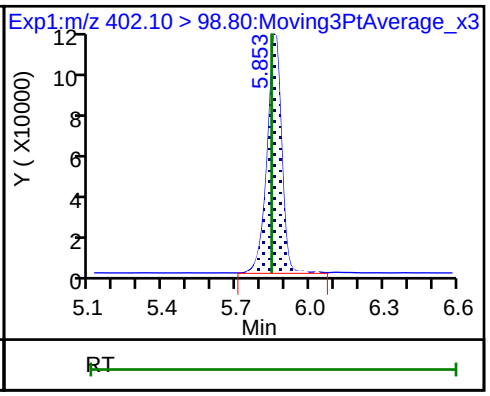
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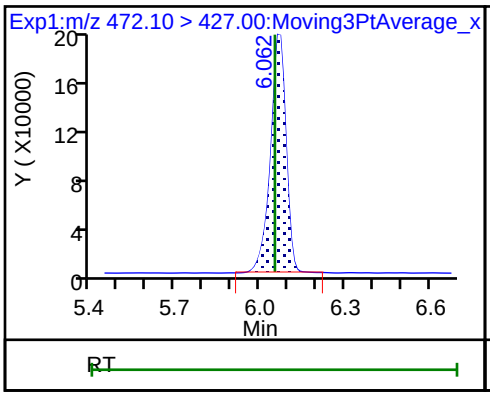
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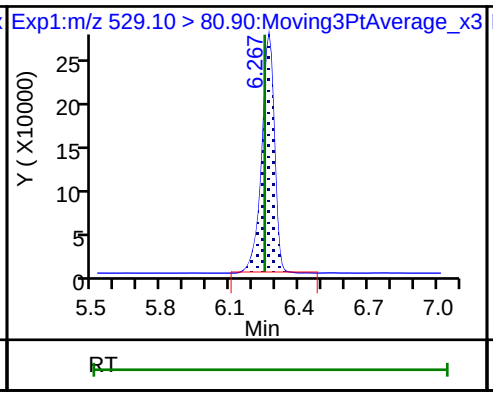
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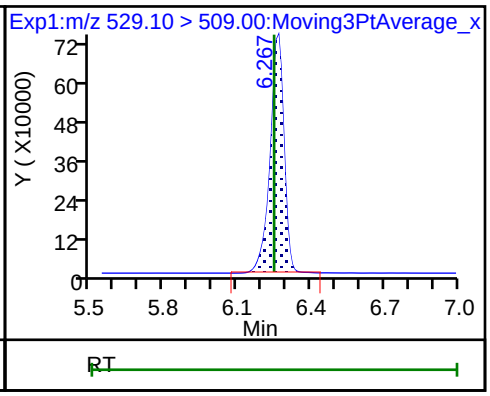
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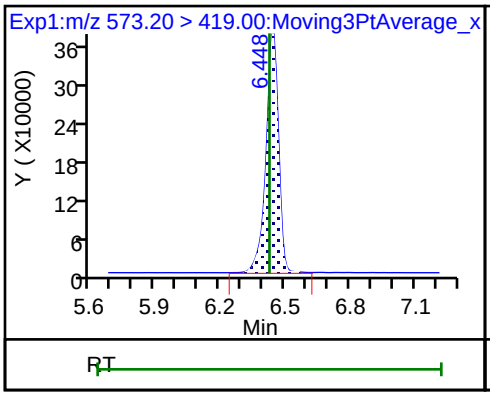
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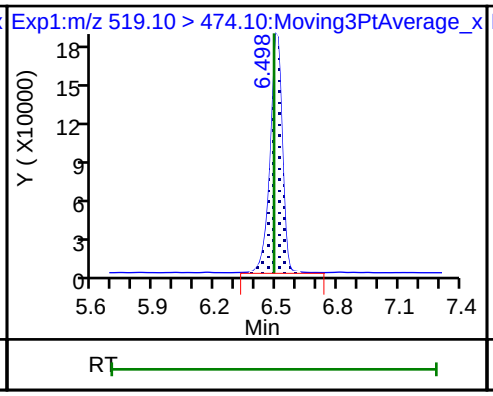
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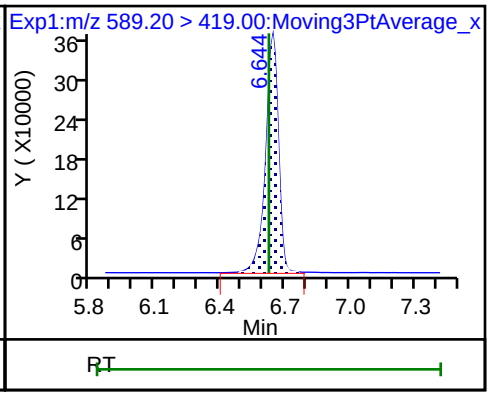
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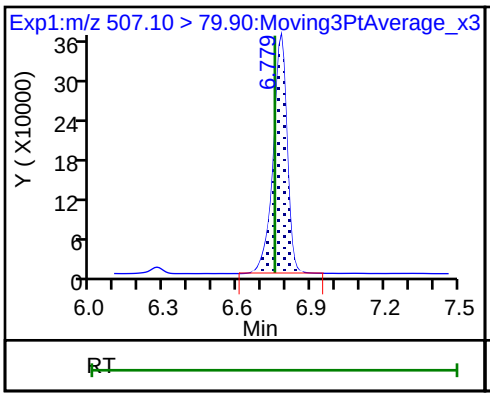
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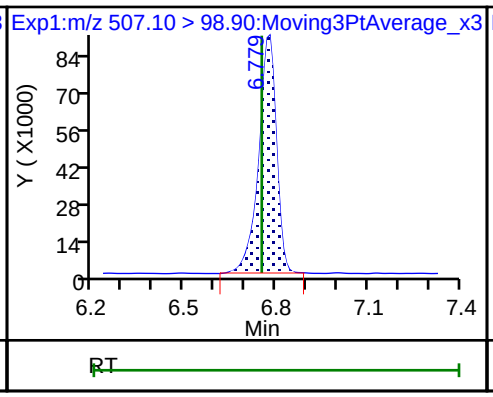
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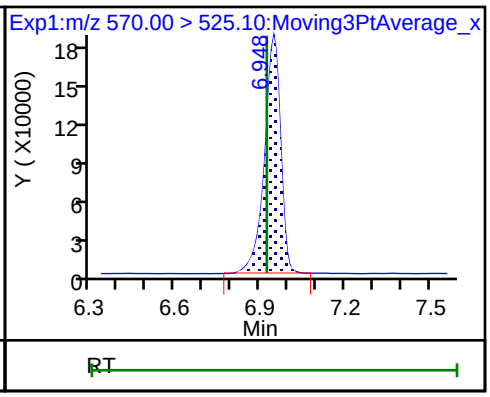
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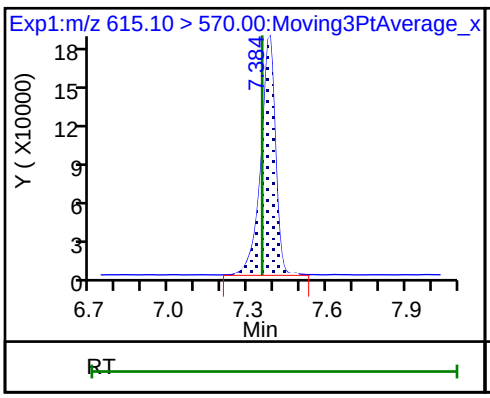
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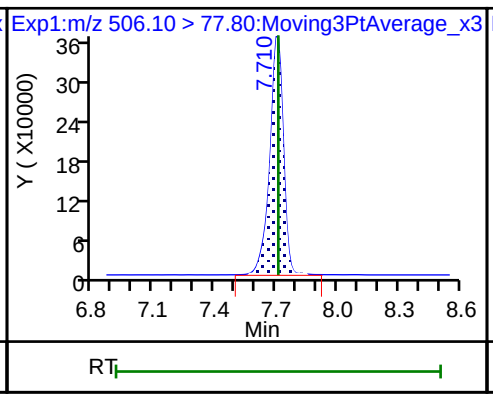
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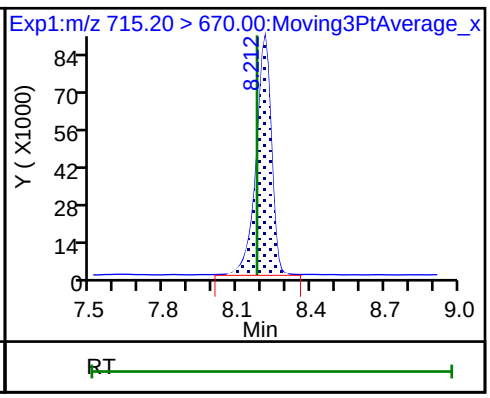
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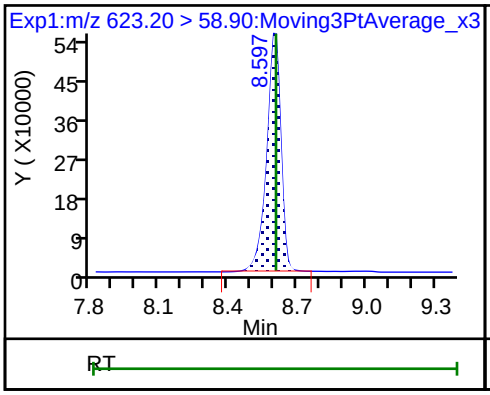
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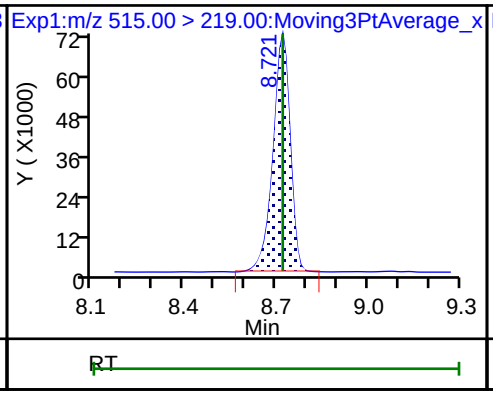
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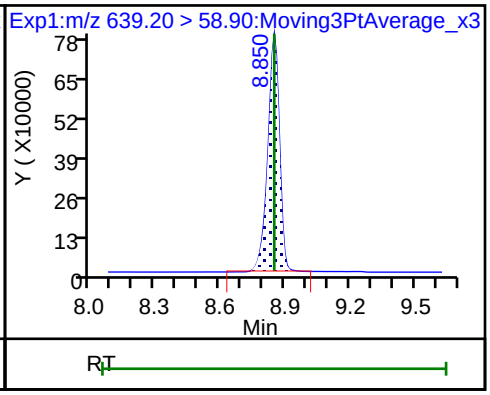
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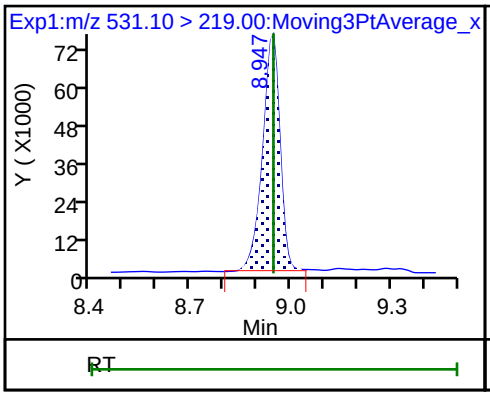
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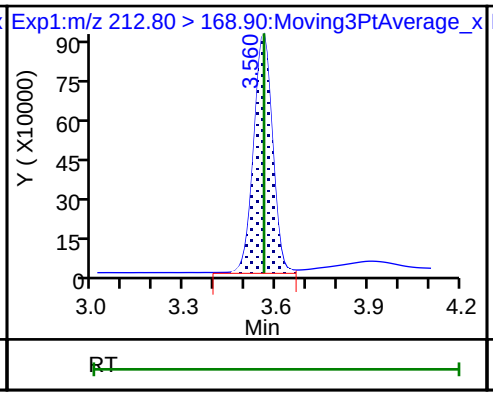
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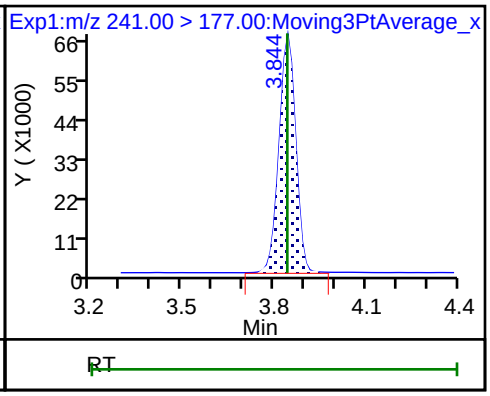
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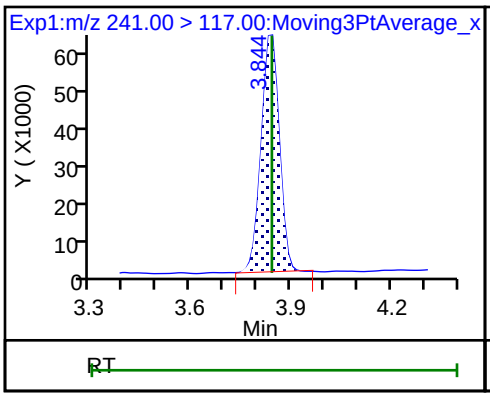
32 Perfluorobutanoic acid



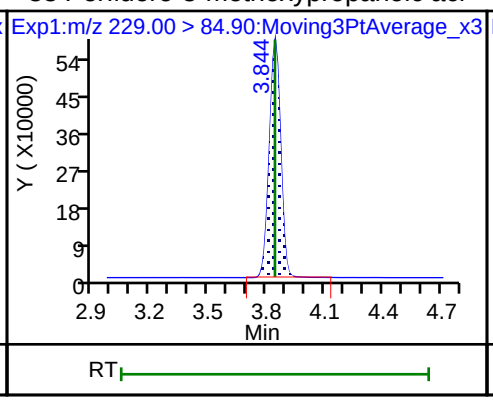
34 3:3 FTCA



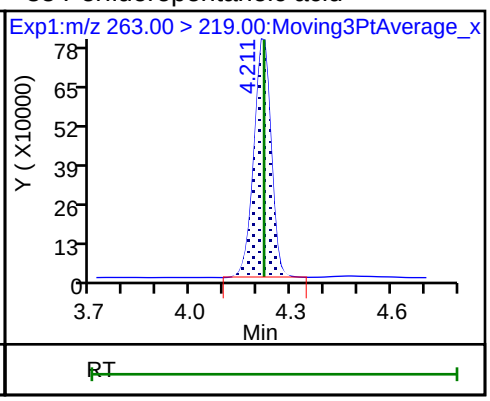
34 3:3 FTCA



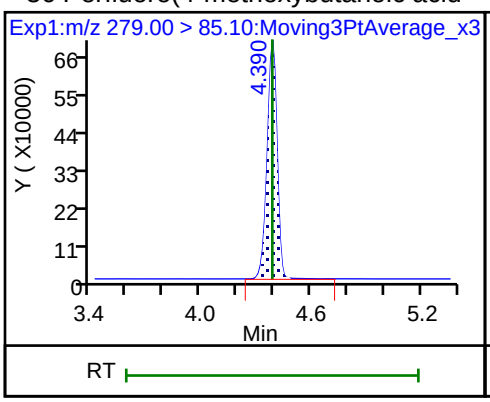
33 Perfluoro-3-methoxypropanoic aci



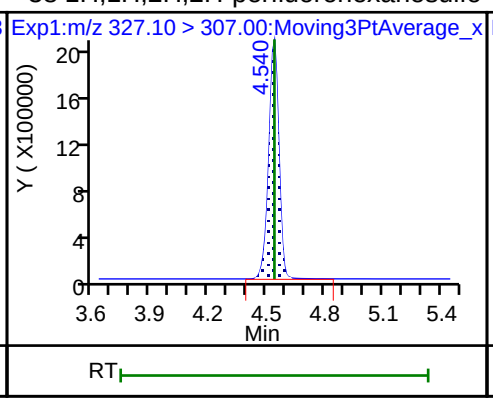
35 Perfluoropentanoic acid



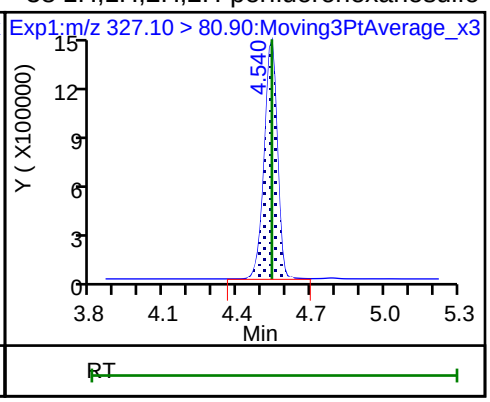
36 Perfluoro(4-methoxybutanoic acid



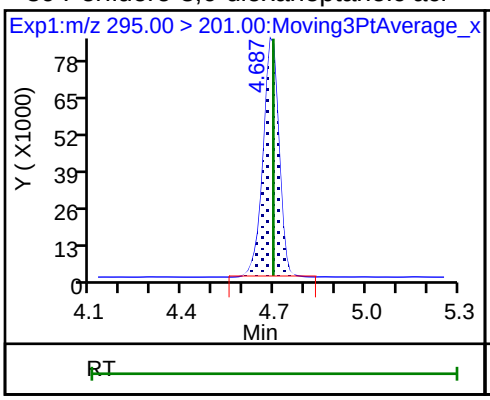
38 1H,1H,2H,2H-perfluorohexanesulfo



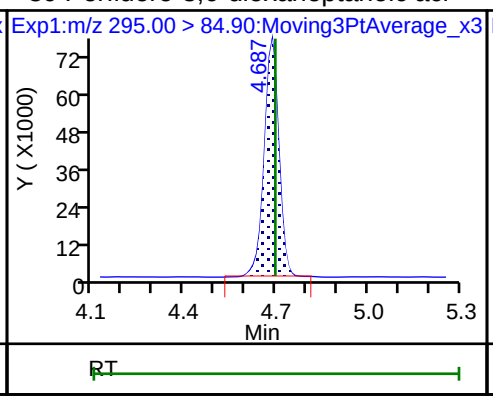
38 1H,1H,2H,2H-perfluorohexanesulfo



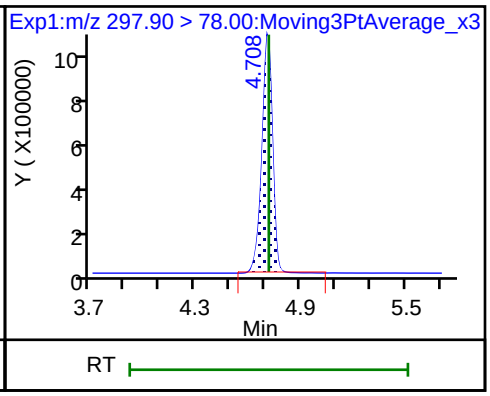
39 Perfluoro-3,6-dioxaheptanoic aci



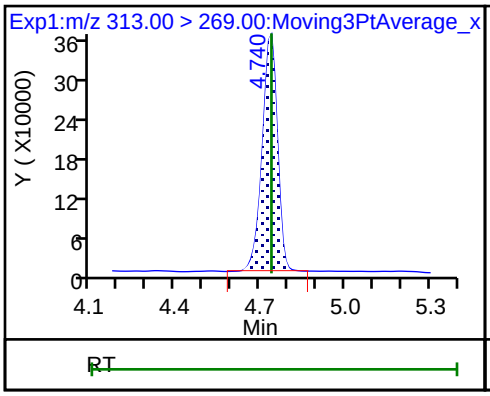
39 Perfluoro-3,6-dioxaheptanoic aci



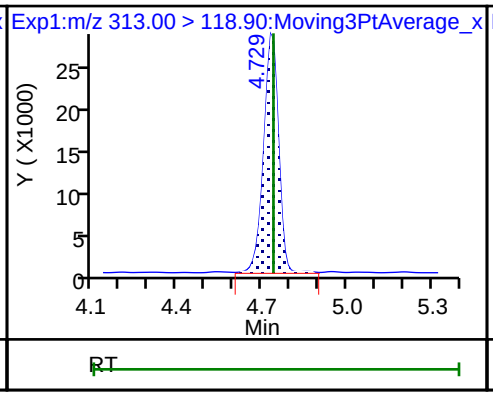
48 FBSA



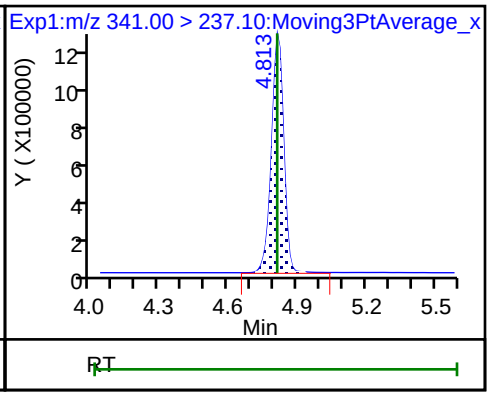
40 Perfluorohexanoic acid



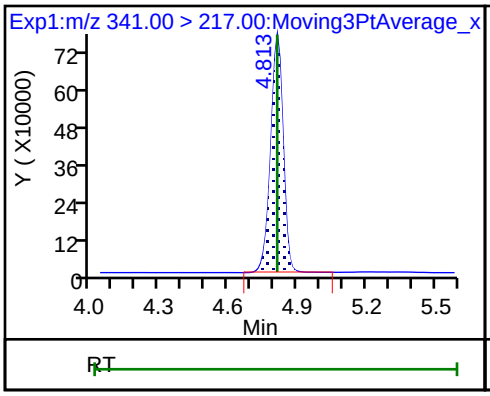
40 Perfluorohexanoic acid



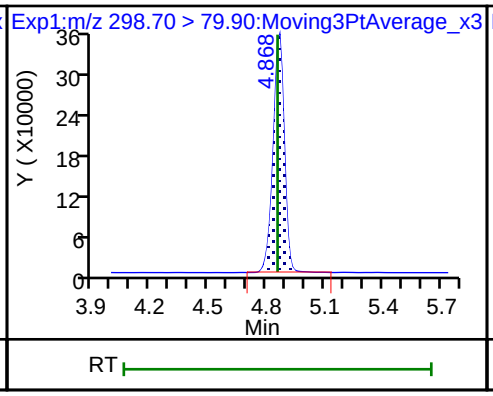
41 5:3 FTCA



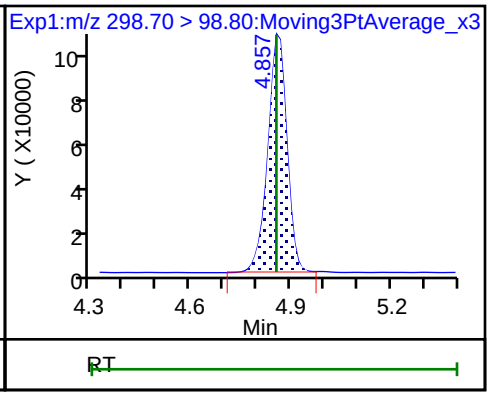
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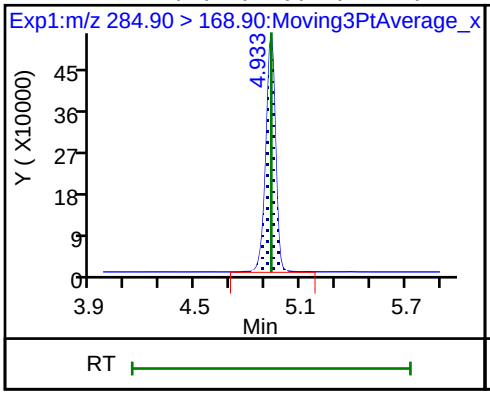
42 Perfluorobutanesulfonic acid



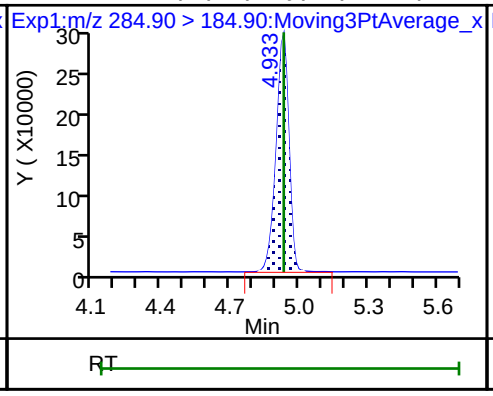
42 Perfluorobutanesulfonic acid



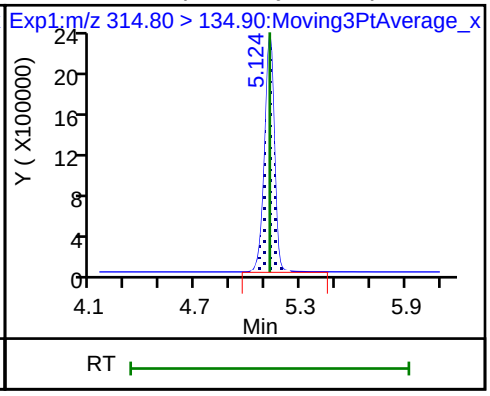
43 Perfluoro(2-propoxypropanoic) ac



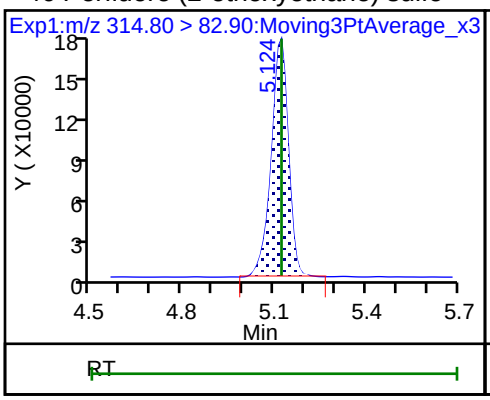
43 Perfluoro(2-propoxypropanoic) ac



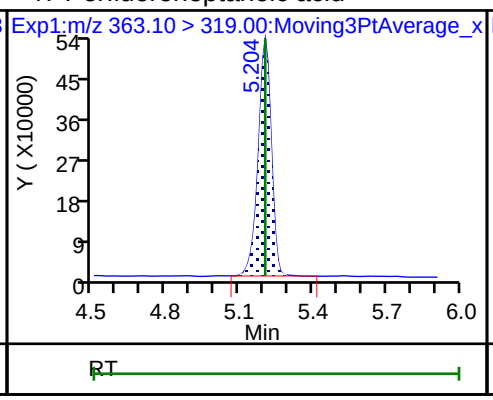
46 Perfluoro (2-ethoxyethane) sulfo



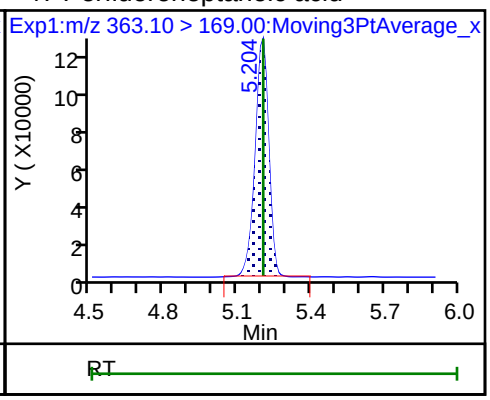
46 Perfluoro (2-ethoxyethane) sulfo



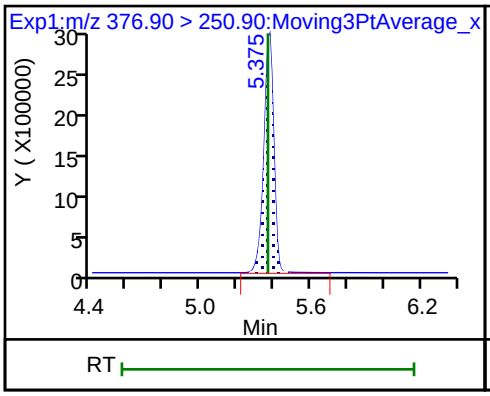
47 Perfluoroheptanoic acid



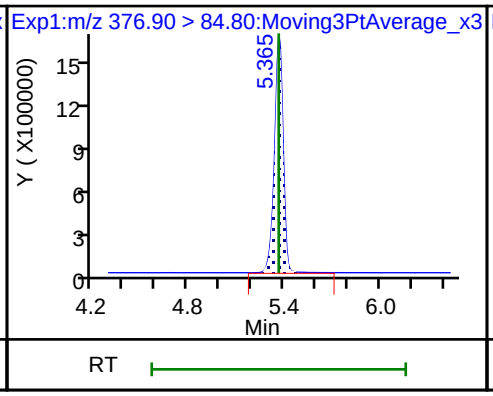
47 Perfluoroheptanoic acid



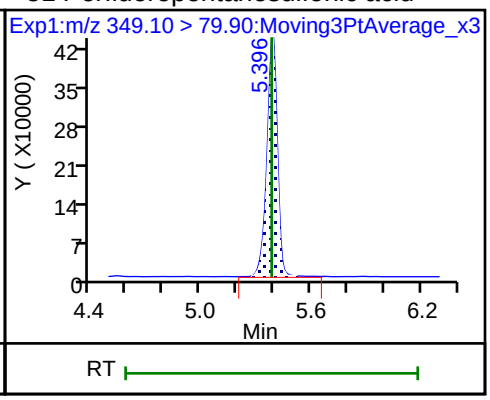
49 DONA



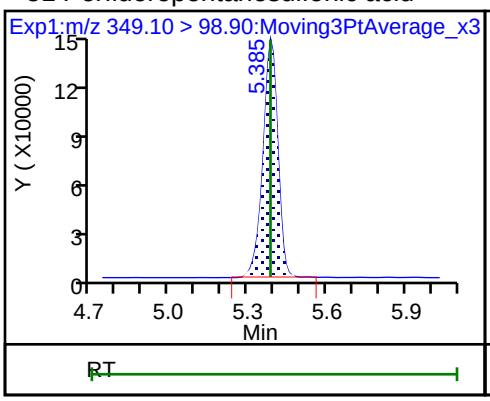
49 DONA



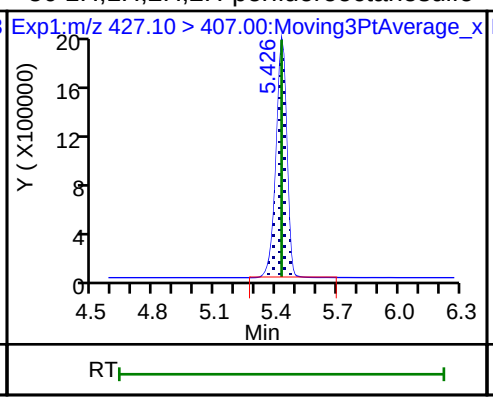
51 Perfluoropentanesulfonic acid



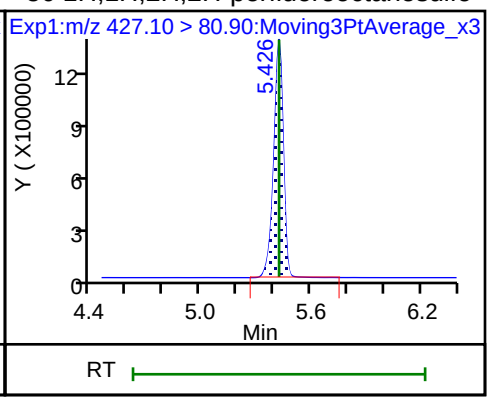
51 Perfluoropentanesulfonic acid



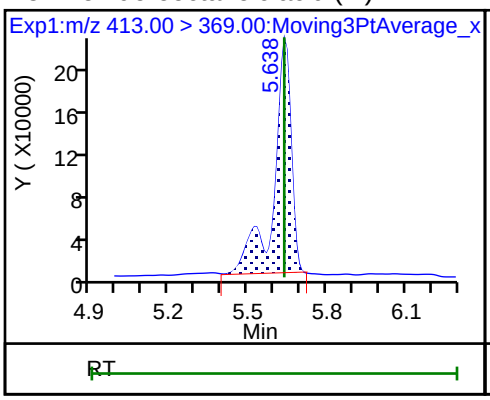
50 1H,1H,2H,2H-perfluorooctanesulfo



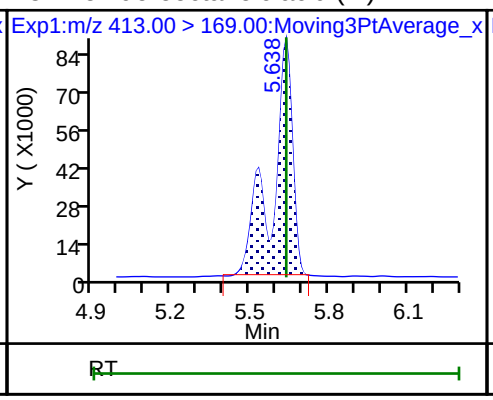
50 1H,1H,2H,2H-perfluorooctanesulfo



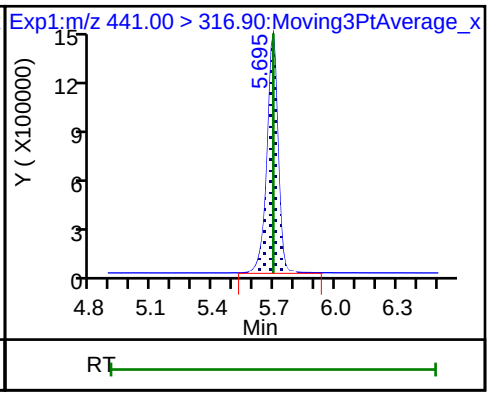
52 Perfluorooctanoic acid (M)



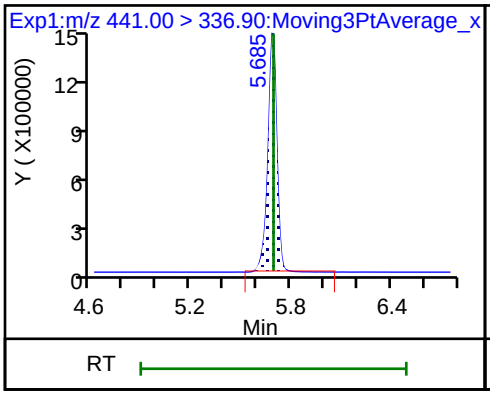
52 Perfluorooctanoic acid (M)



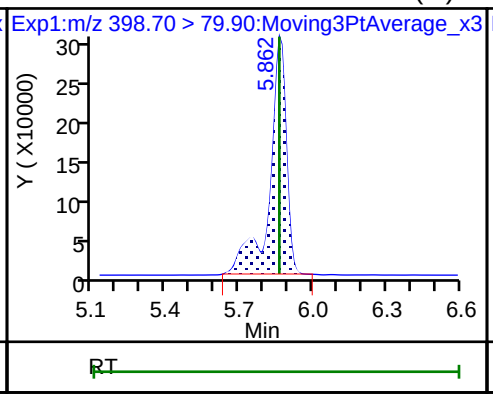
54 7:3 FTCA



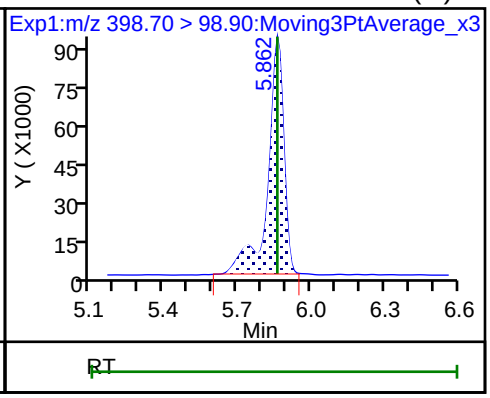
54 7:3 FTCA



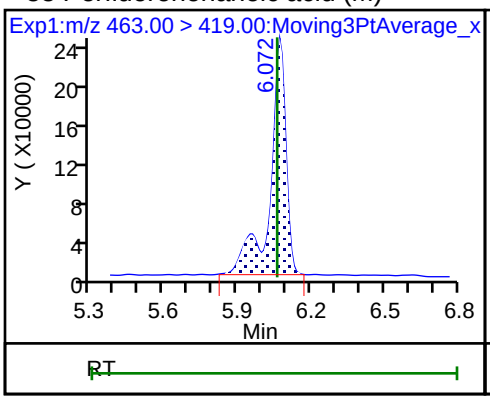
53 Perfluorohexanesulfonic acid (M)



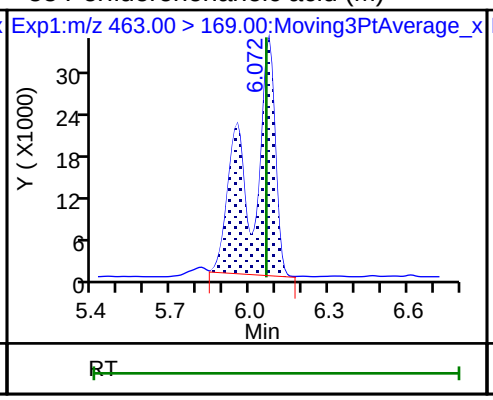
53 Perfluorohexanesulfonic acid (M)



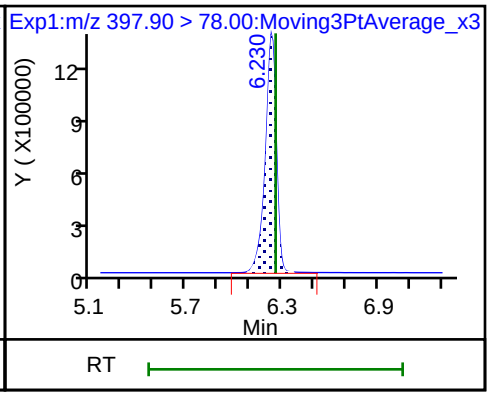
55 Perfluorononanoic acid (M)



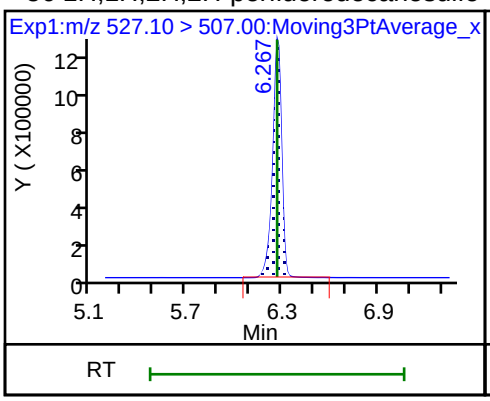
55 Perfluorononanoic acid (M)



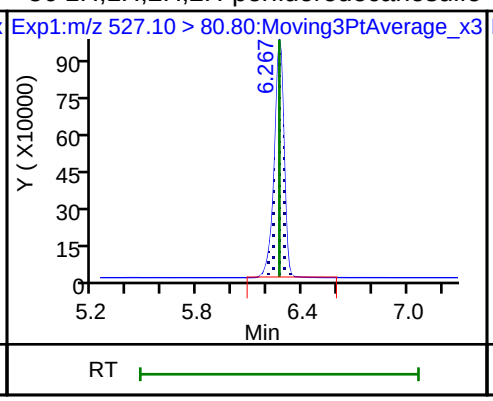
62 FHxSA



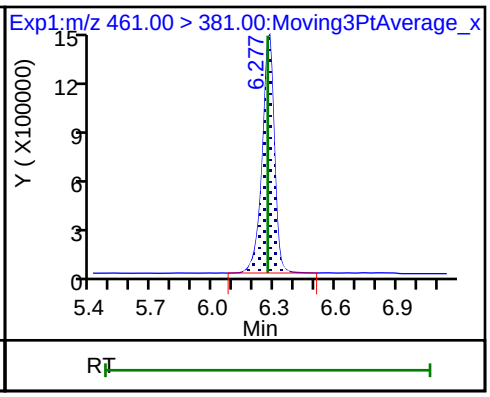
56 1H,1H,2H,2H-perfluorodecanesulfo



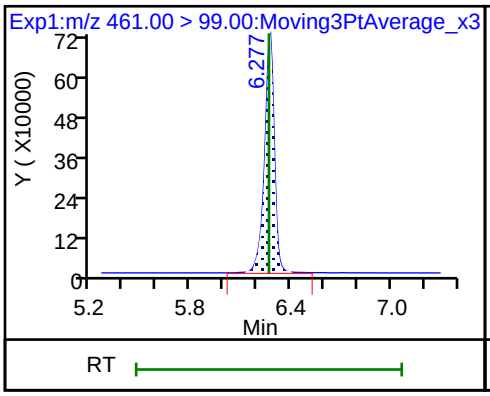
56 1H,1H,2H,2H-perfluorodecanesulfo



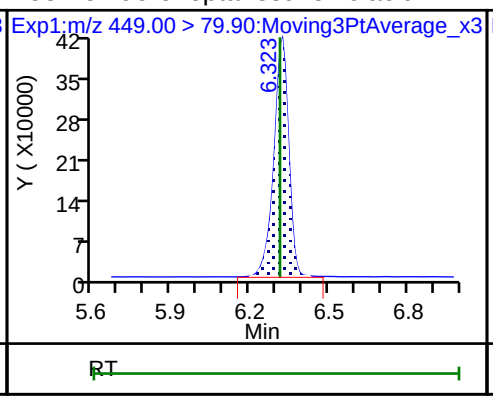
57 PFECHS



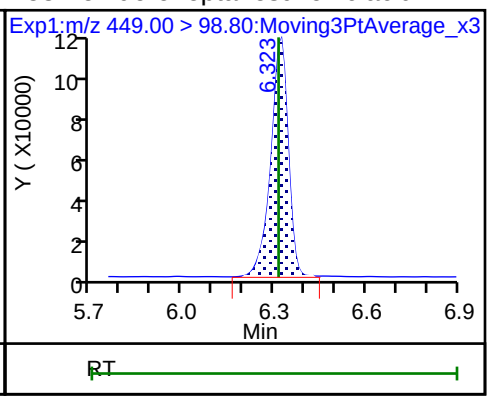
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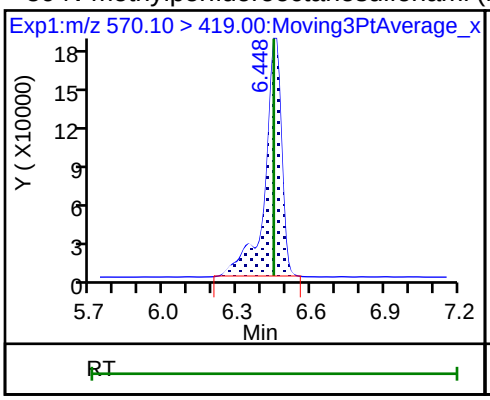
58 Perfluoroheptanesulfonic acid



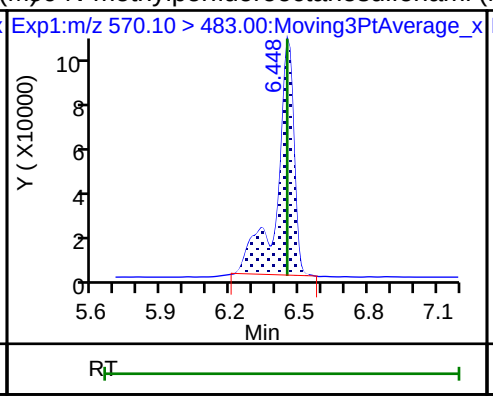
58 Perfluoroheptanesulfonic acid



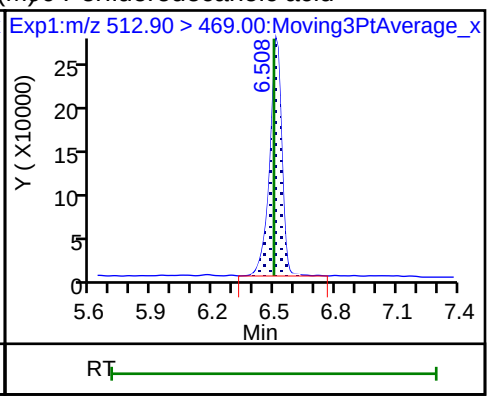
59 N-methylperfluorooctanesulfonami (M)



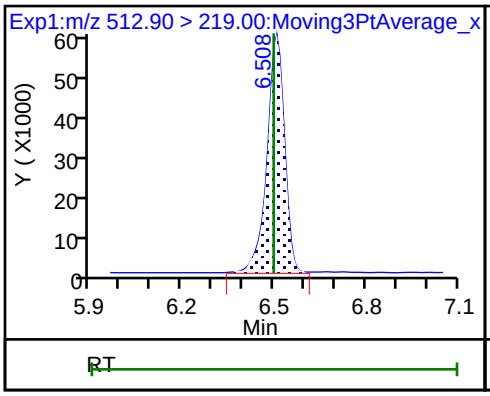
59 N-methylperfluorooctanesulfonami (M)



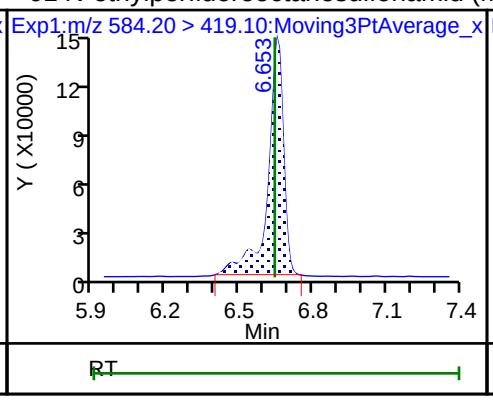
60 Perfluorodecanoic acid



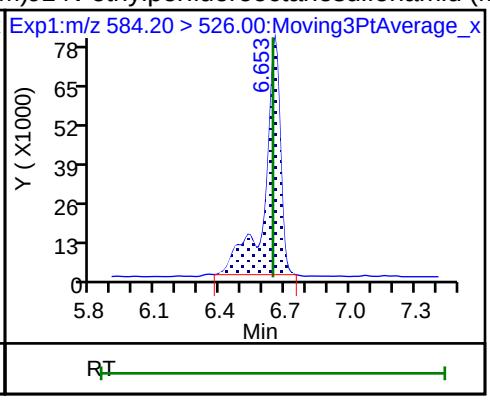
60 Perfluorodecanoic acid



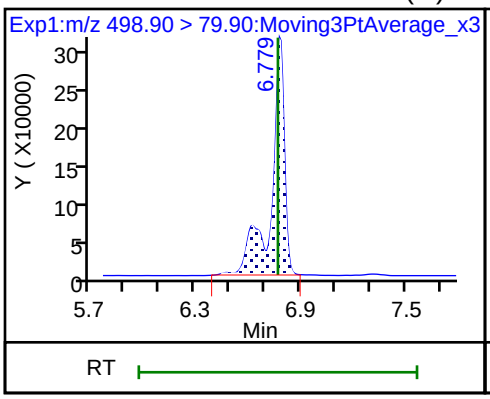
61 N-ethylperfluorooctanesulfonamid (M)



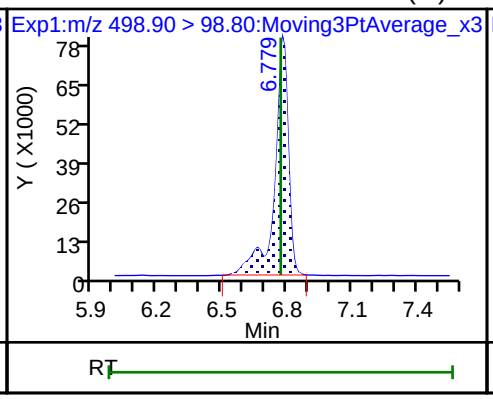
61 N-ethylperfluorooctanesulfonamid (M)



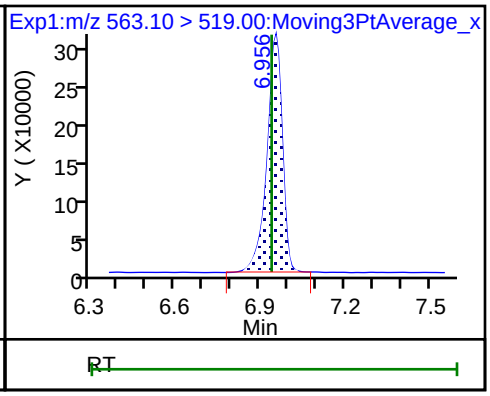
63 Perfluorooctanesulfonic acid (M)



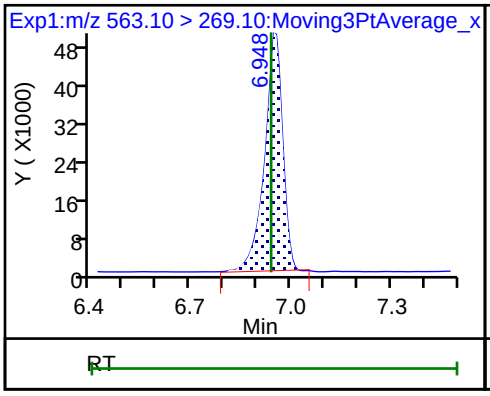
63 Perfluorooctanesulfonic acid (M)



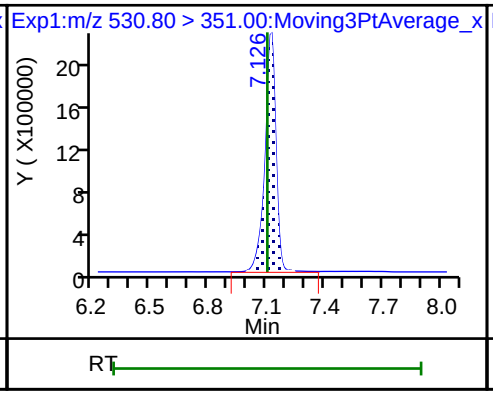
64 Perfluoroundecanoic acid



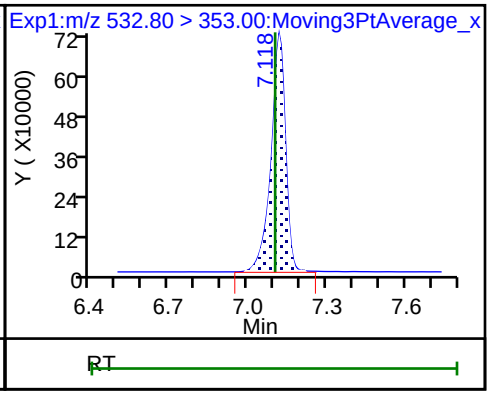
64 Perfluoroundecanoic acid



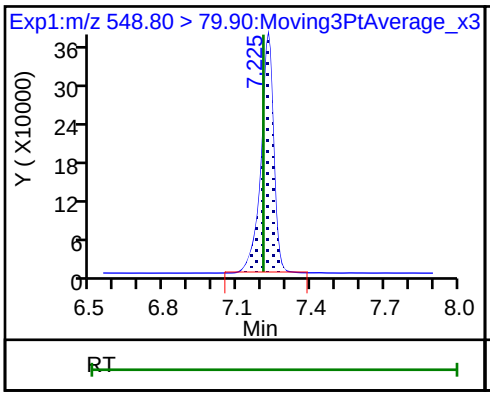
65 9-Chlorohexadecafluoro-3-oxanona



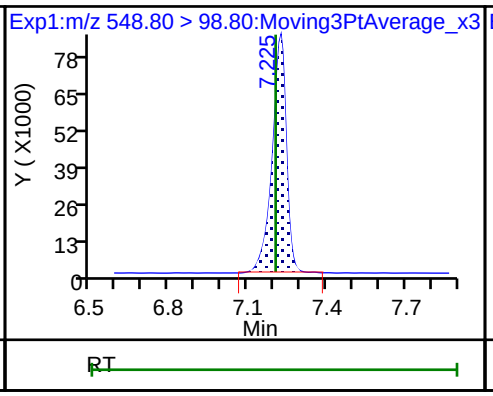
65 9-Chlorohexadecafluoro-3-oxanona



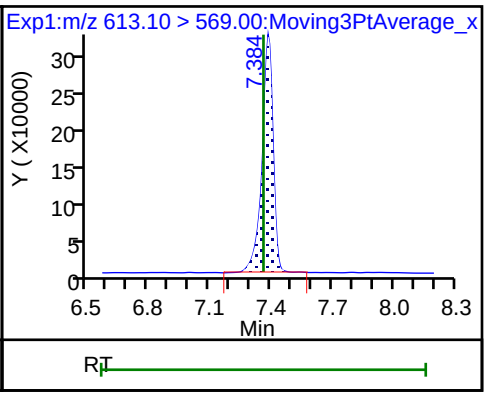
66 Perfluorononanesulfonic acid



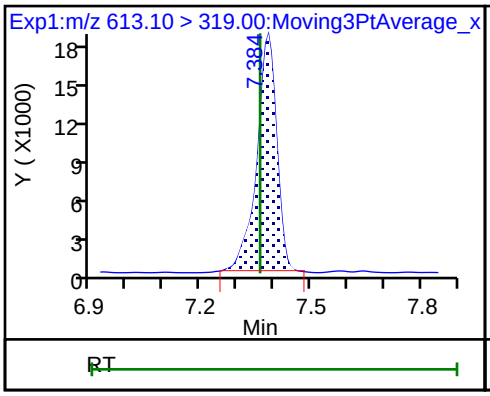
66 Perfluorononanesulfonic acid



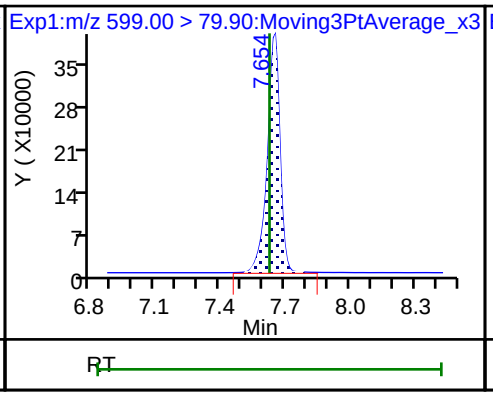
67 Perfluorododecanoic acid



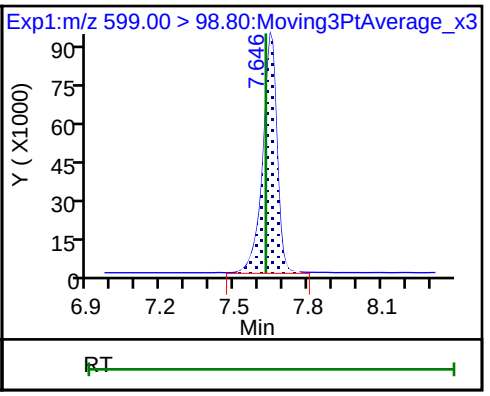
67 Perfluorododecanoic acid



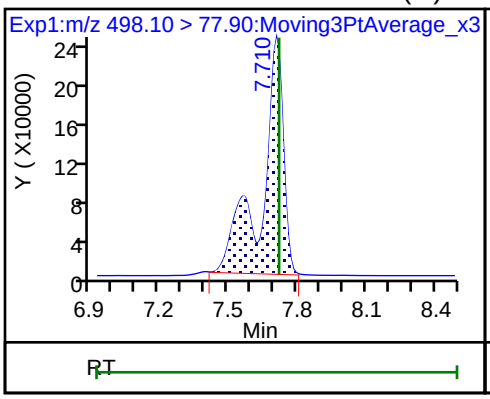
68 Perfluorodecanesulfonic acid



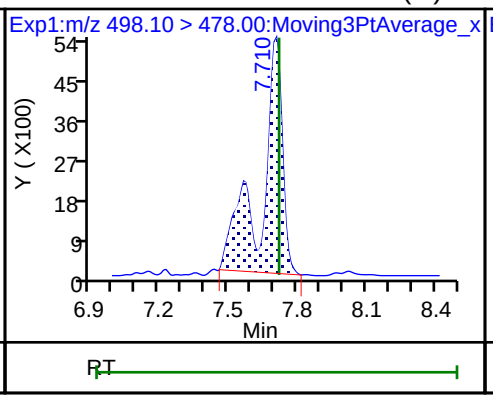
68 Perfluorodecanesulfonic acid



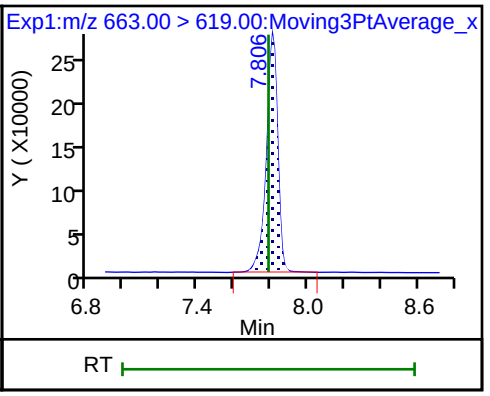
69 Perfluorooctanesulfonamide (M)



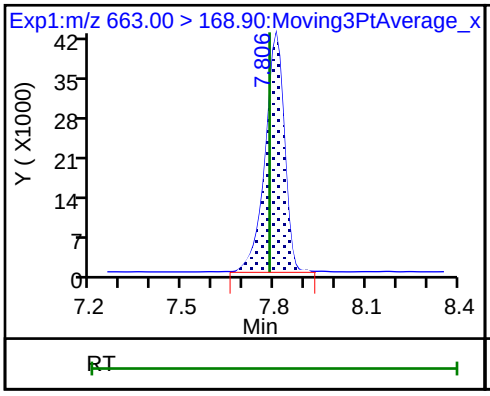
69 Perfluorooctanesulfonamide (M)



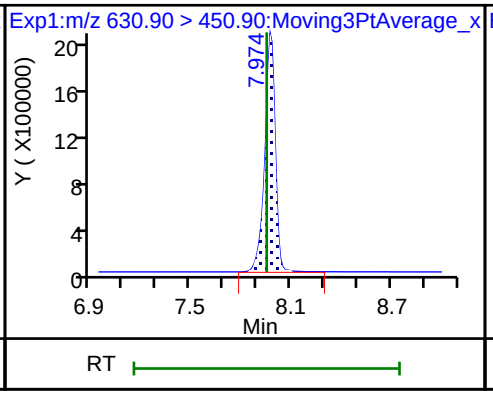
70 Perfluorotridecanoic acid



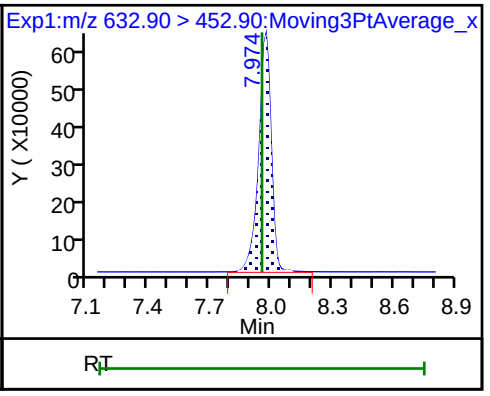
70 Perfluorotridecanoic acid



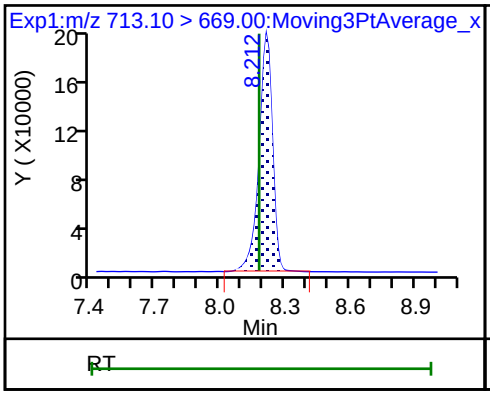
71 11-Chloroeicosafluoro-3-oxaundec



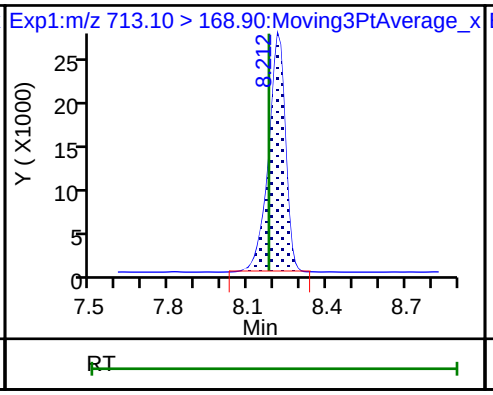
71 11-Chloroeicosafluoro-3-oxaundec



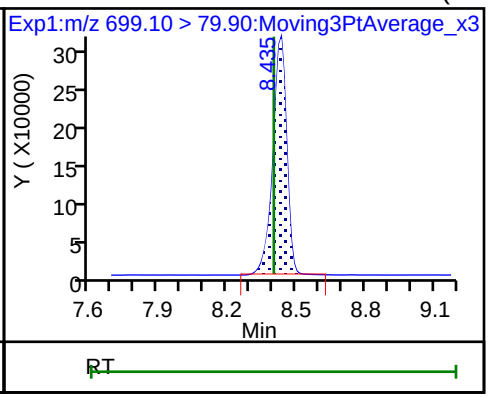
72 Perfluorotetradecanoic acid



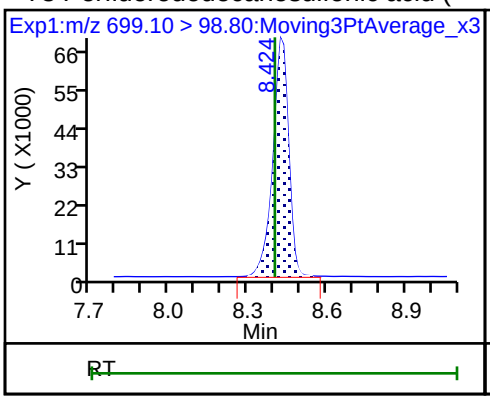
72 Perfluorotetradecanoic acid



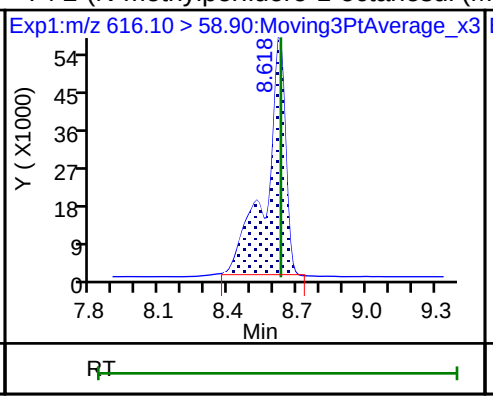
73 Perfluorododecanesulfonic acid (



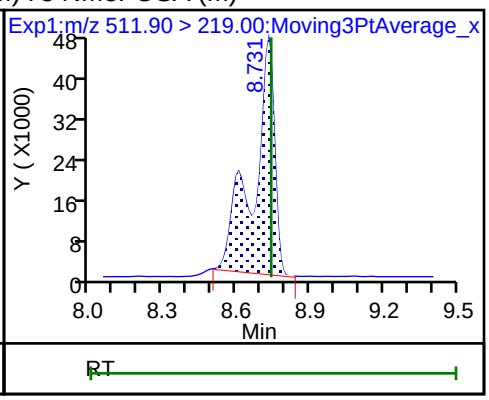
73 Perfluorododecanesulfonic acid (



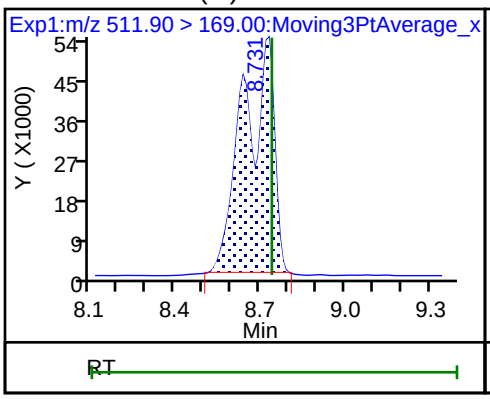
74 2-(N-methylperfluoro-1-octanesul (M)



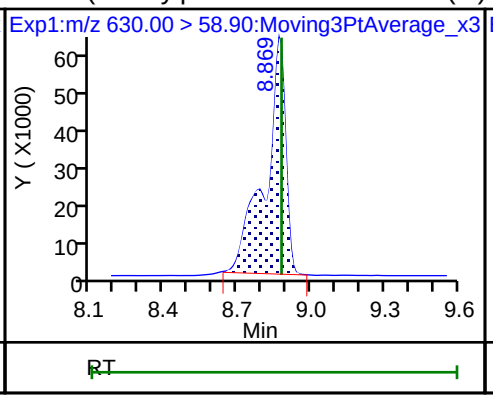
75 NMeFOSA (M)



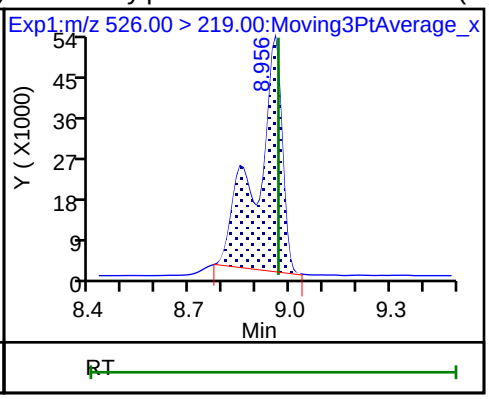
75 NMeFOSA (M)



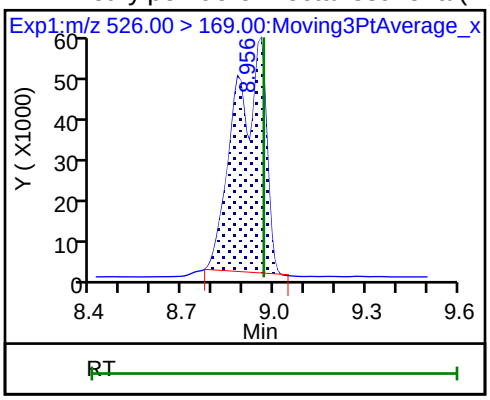
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

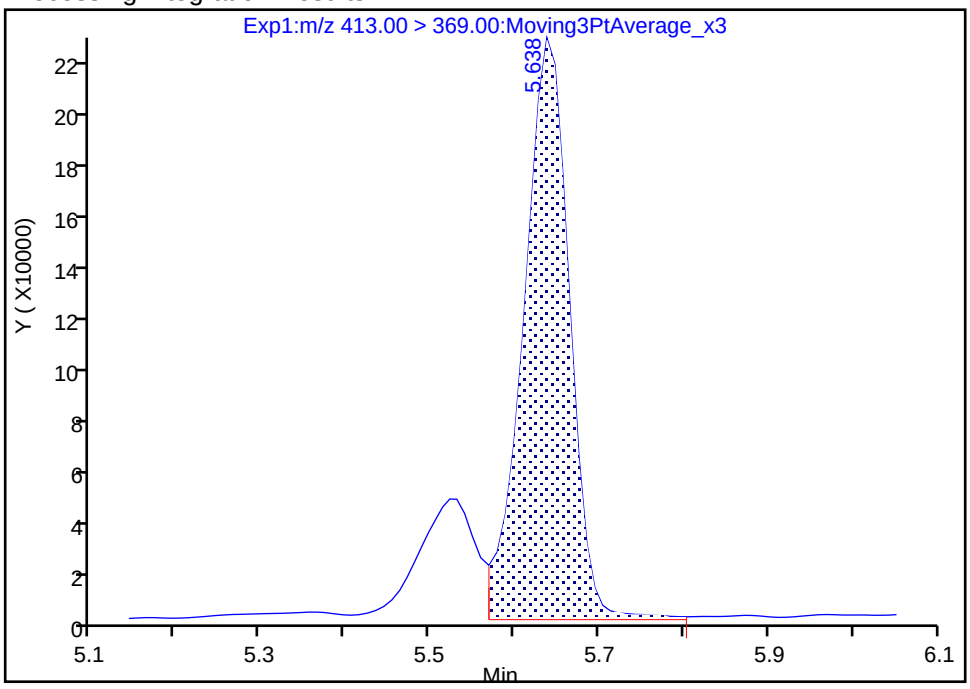
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d				
Injection Date:	19-Sep-2024 01:14:23	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	40
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

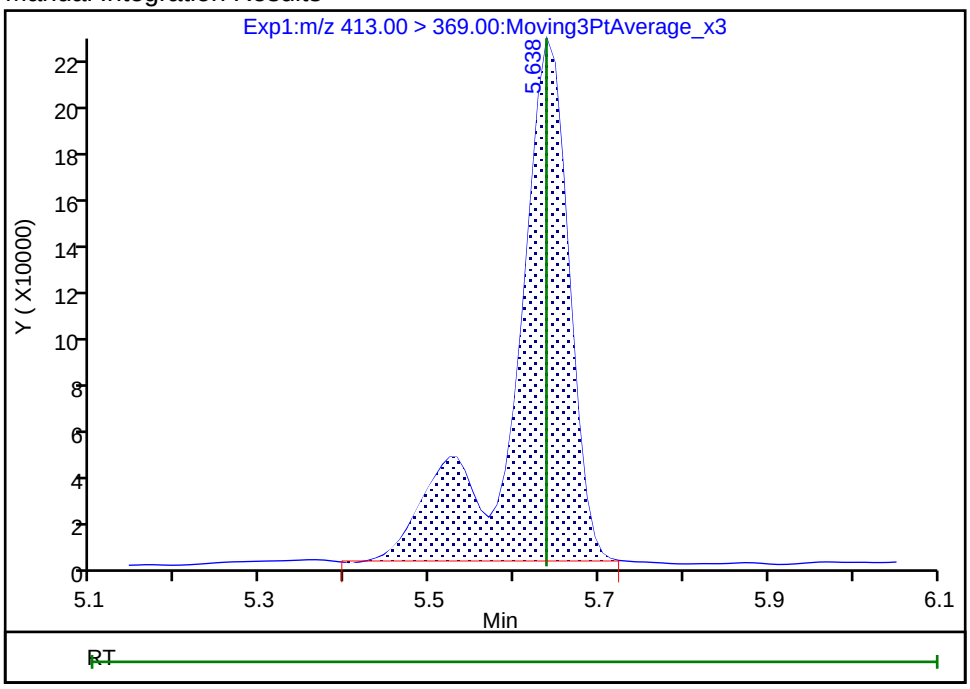
Processing Integration Results

RT: 5.64
Area: 831756
Amount: 0.573620
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 995159
Amount: 0.686311
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:13 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

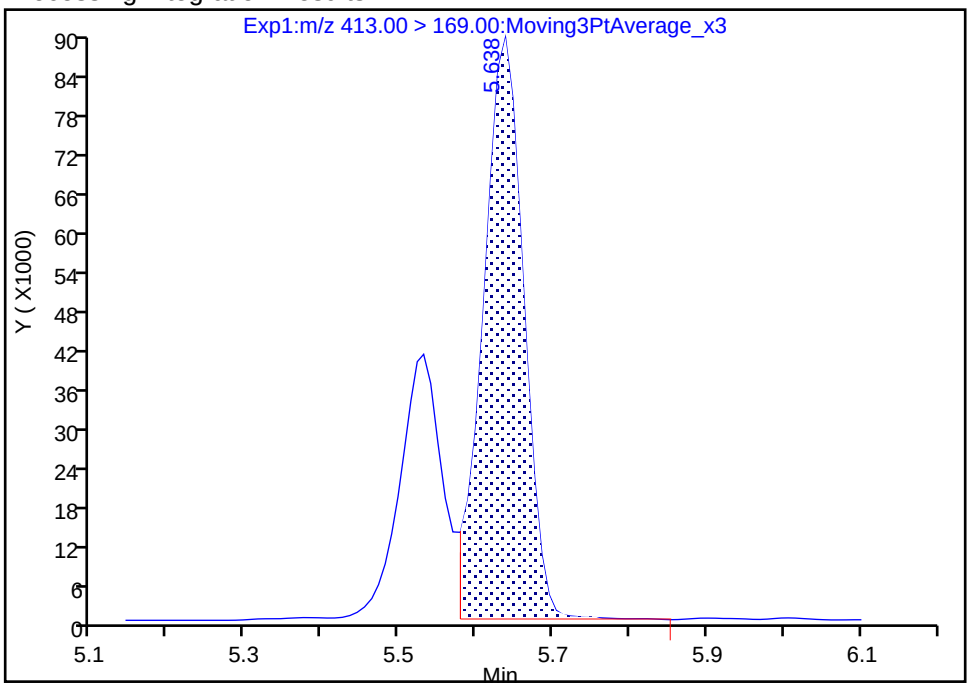
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

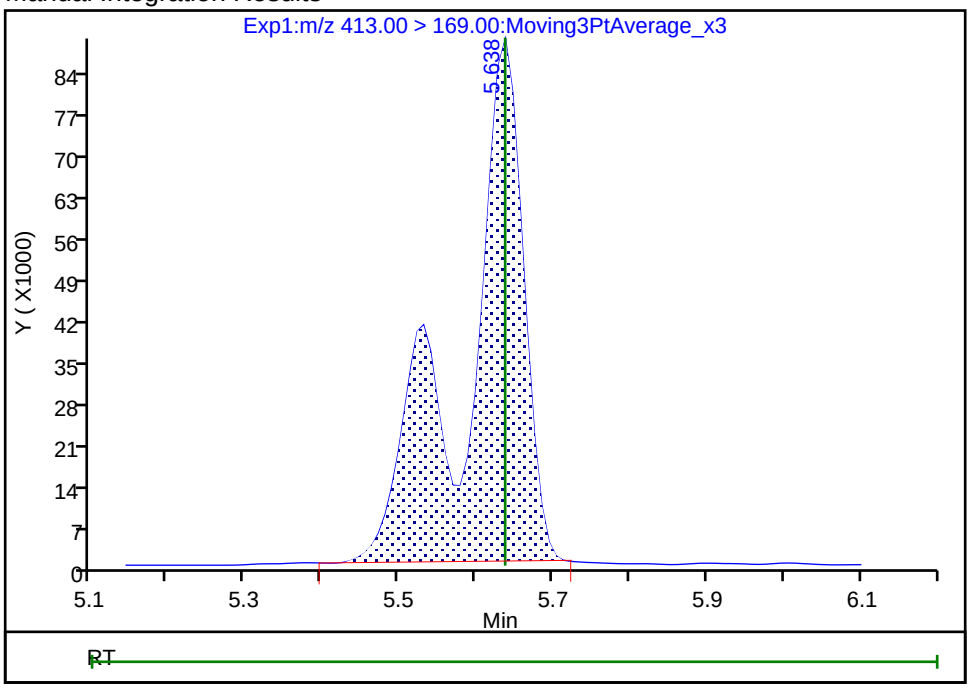
Processing Integration Results

RT: 5.64
Area: 326168
Amount: 0.573620
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 475081
Amount: 0.686311
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:18 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

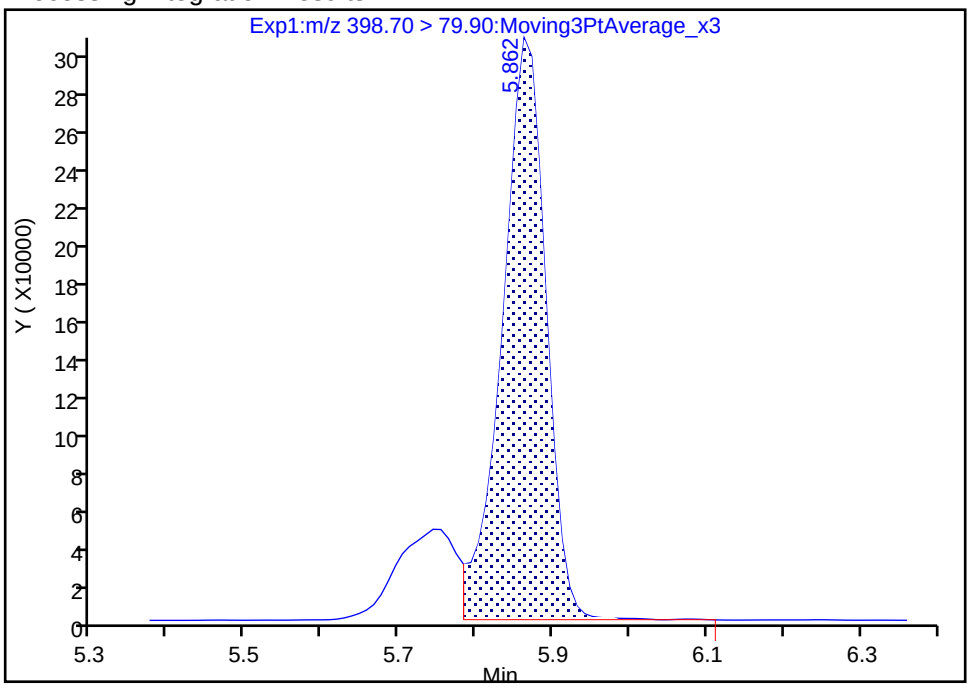
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

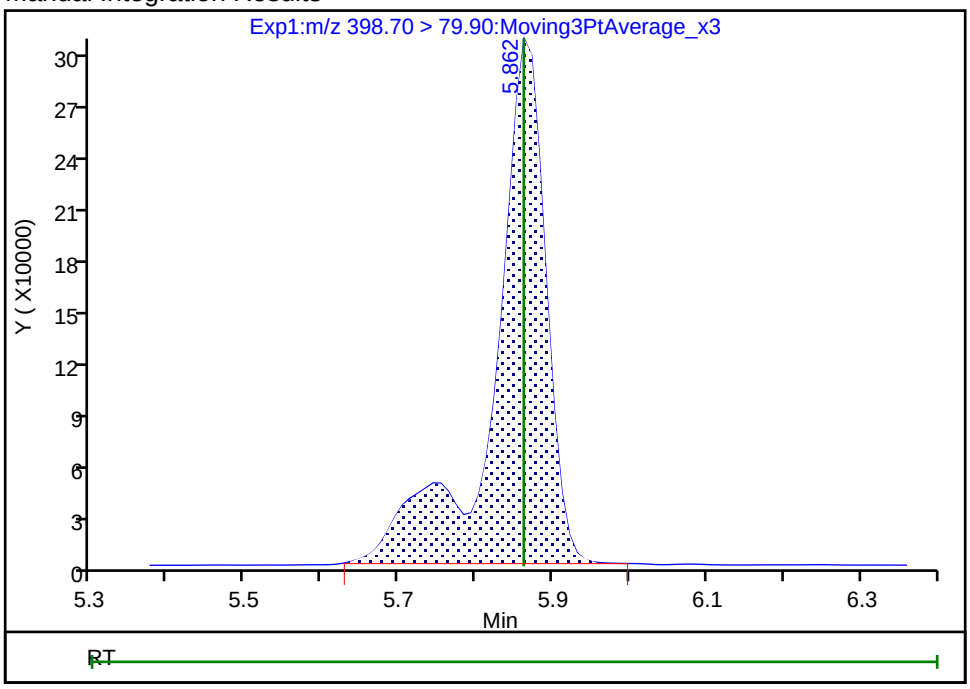
Processing Integration Results

RT: 5.86
Area: 1212265
Amount: 0.526858
Amount Units: ng/ml



Manual Integration Results

RT: 5.86
Area: 1443552
Amount: 0.627377
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:25 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

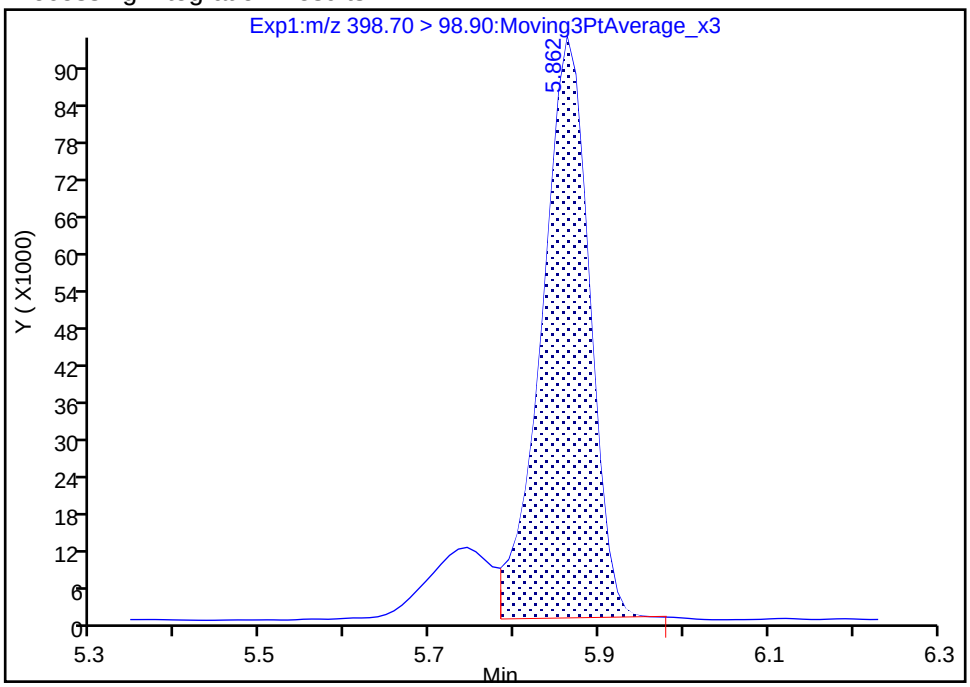
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

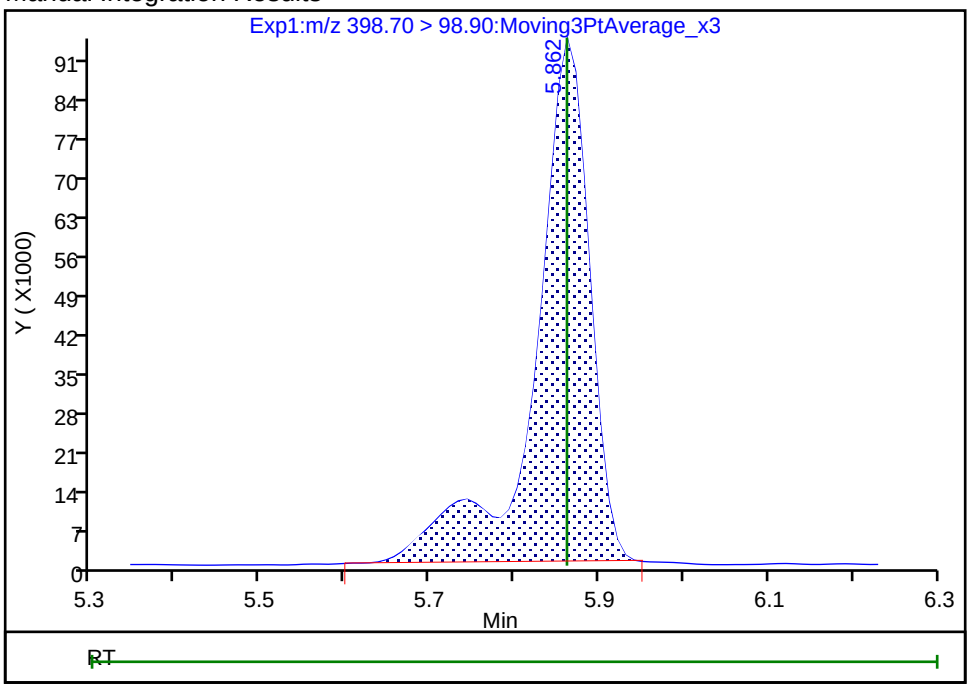
Processing Integration Results

RT: 5.86
Area: 366284
Amount: 0.526858
Amount Units: ng/ml



Manual Integration Results

RT: 5.86
Area: 422875
Amount: 0.627377
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:31 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

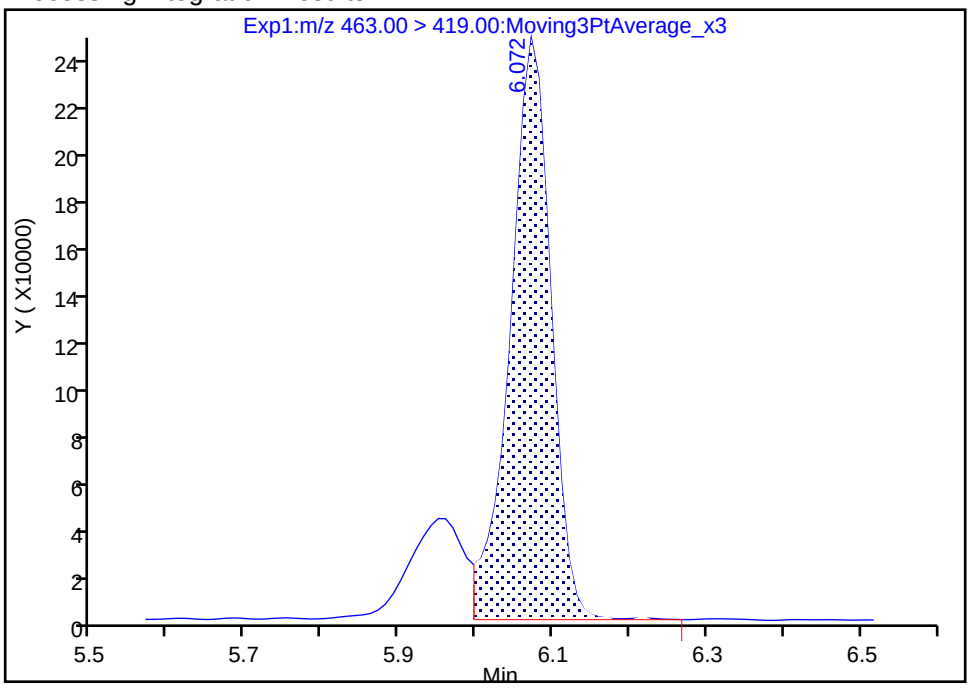
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

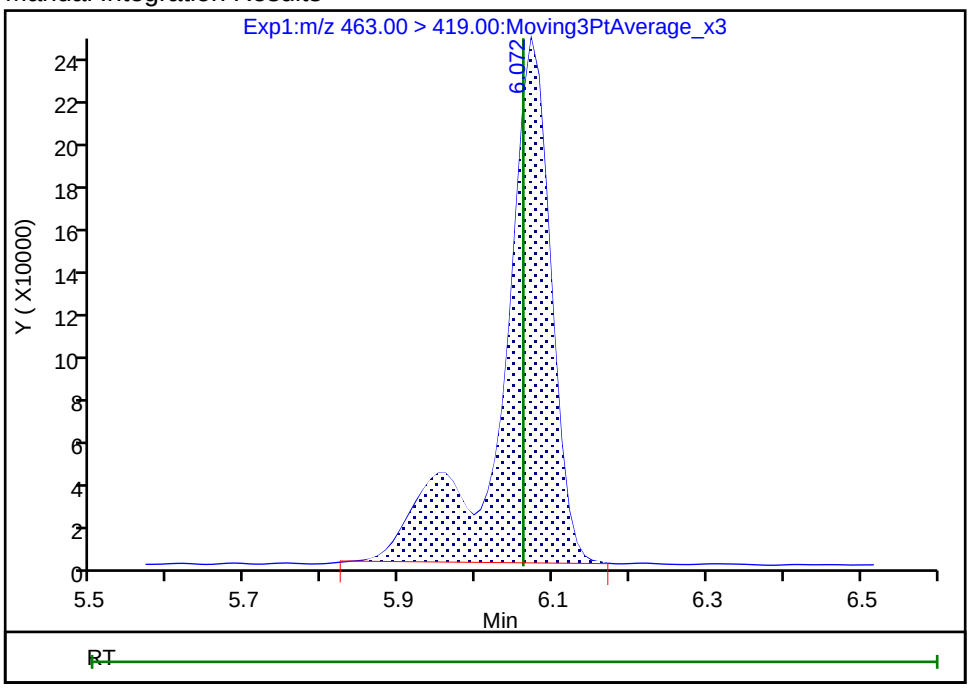
Processing Integration Results

RT: 6.07
Area: 896914
Amount: 0.489802
Amount Units: ng/ml



Manual Integration Results

RT: 6.07
Area: 1085337
Amount: 0.592699
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

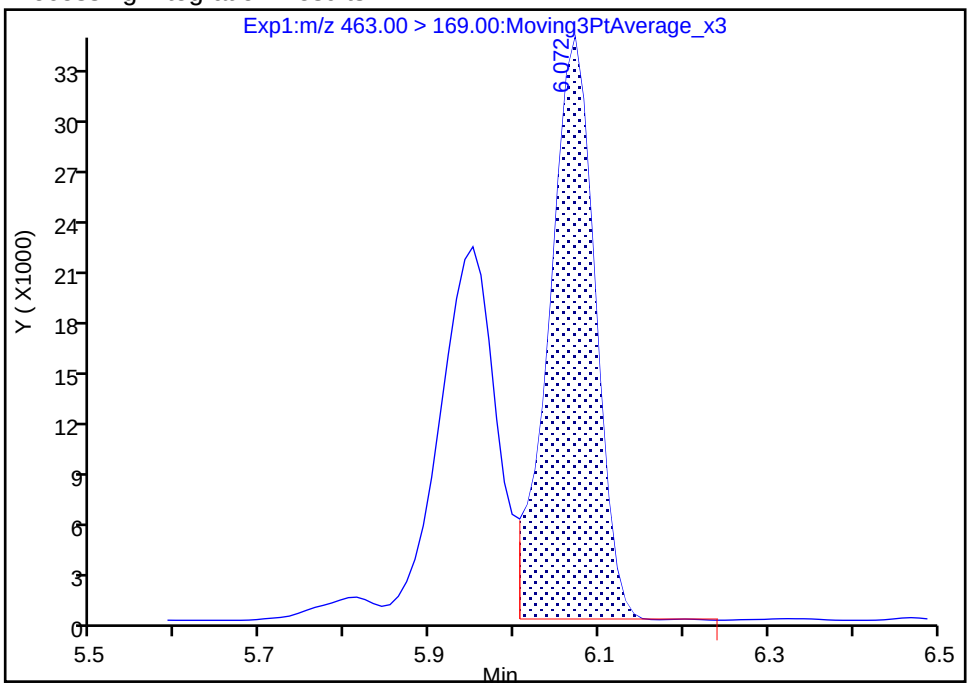
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

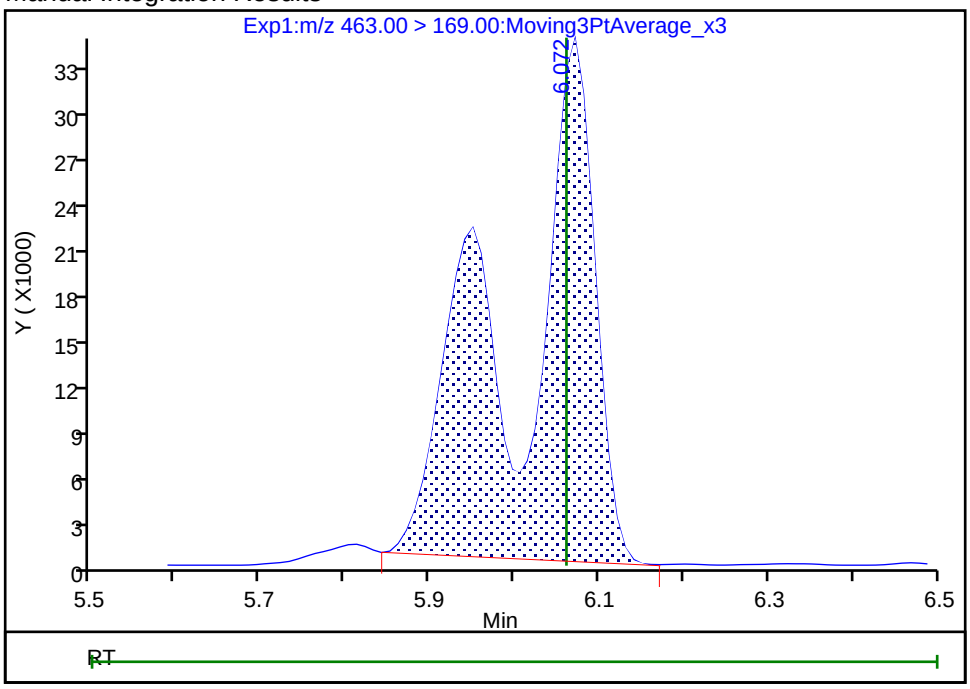
Processing Integration Results

RT: 6.07
Area: 128489
Amount: 0.489802
Amount Units: ng/ml



Manual Integration Results

RT: 6.07
Area: 221814
Amount: 0.592699
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

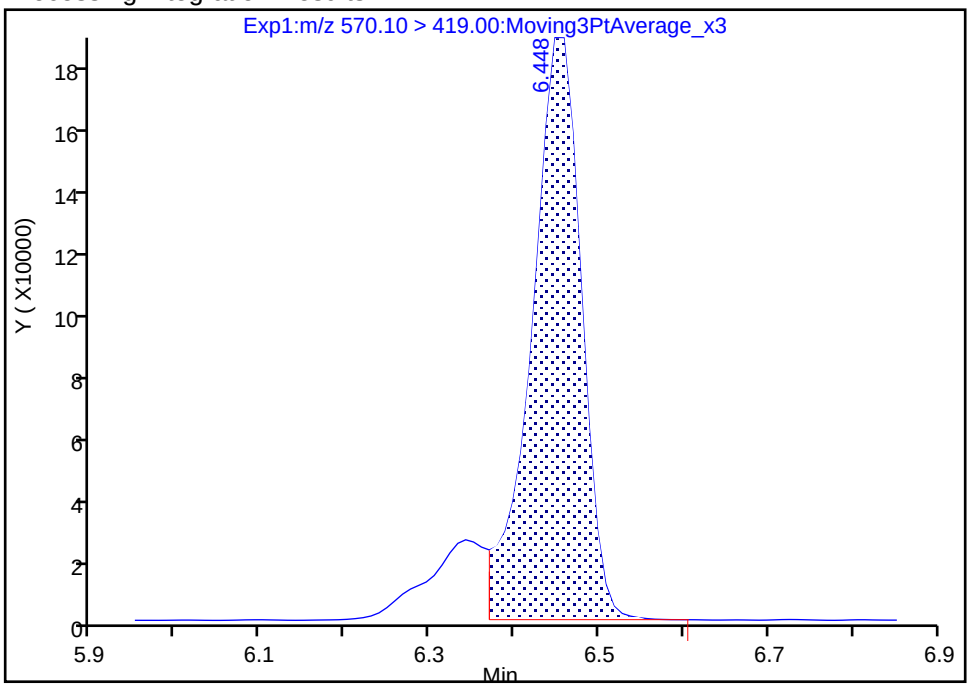
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

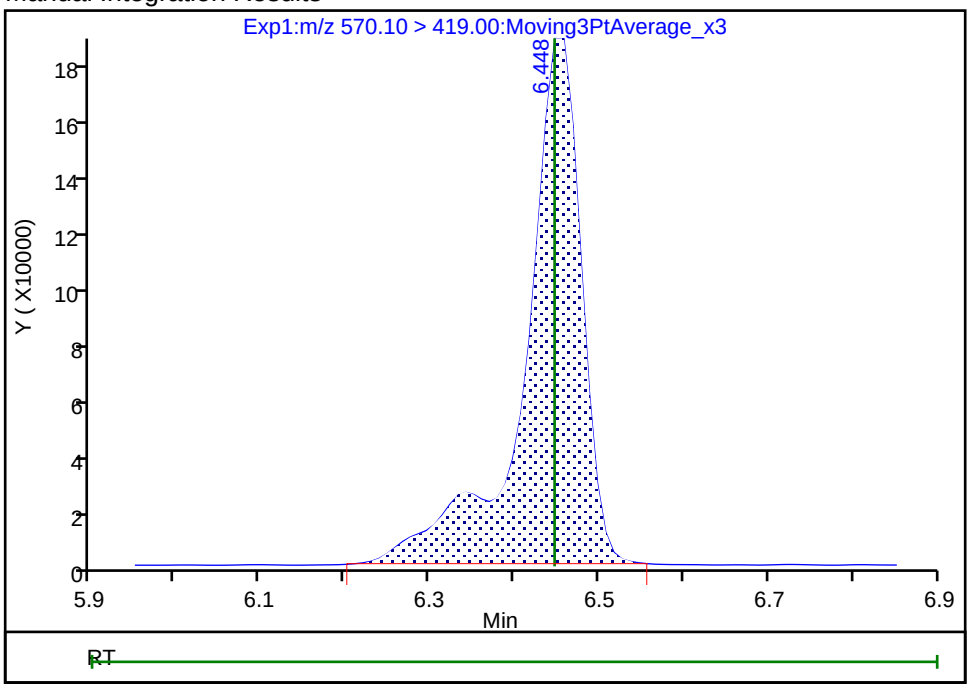
Processing Integration Results

RT: 6.45
Area: 751809
Amount: 0.561751
Amount Units: ng/ml



Manual Integration Results

RT: 6.45
Area: 865941
Amount: 0.647031
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:54:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

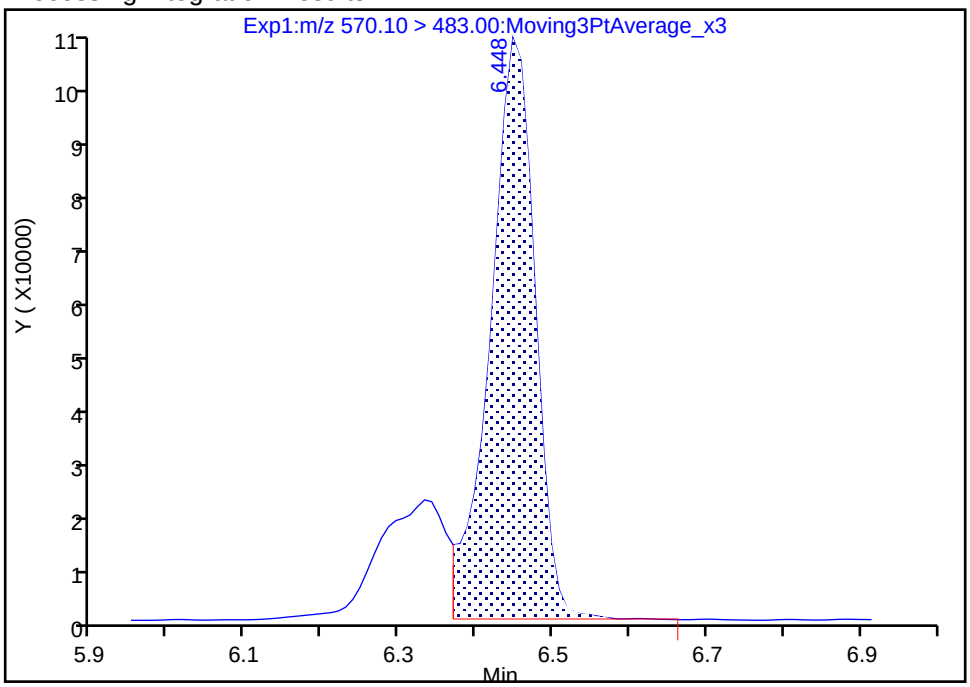
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

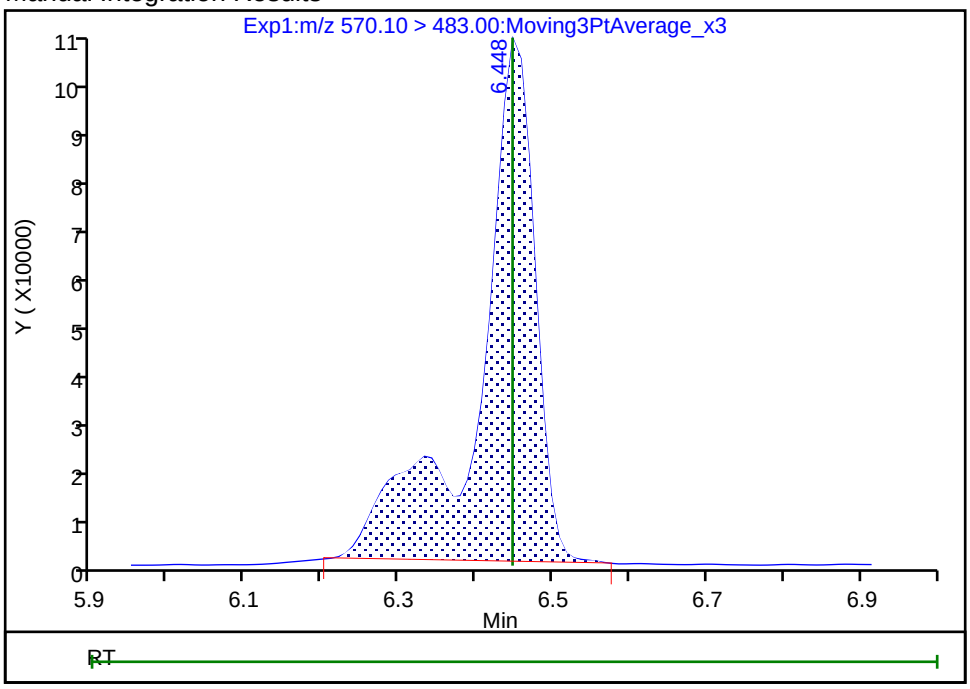
Processing Integration Results

RT: 6.45
Area: 409397
Amount: 0.561751
Amount Units: ng/ml



Manual Integration Results

RT: 6.45
Area: 515974
Amount: 0.647031
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:02 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

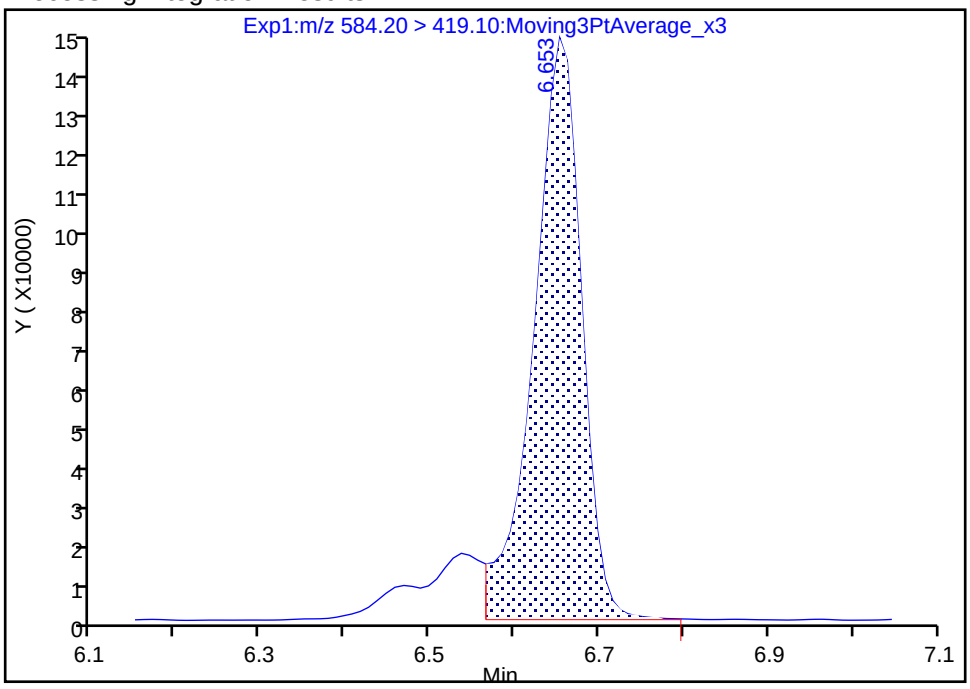
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

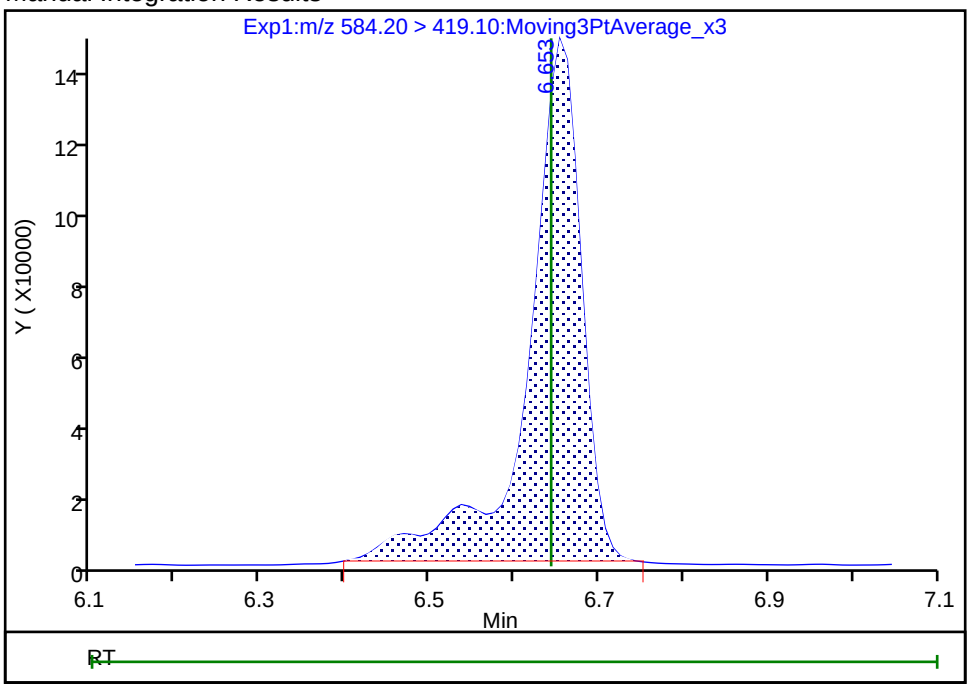
Processing Integration Results

RT: 6.65
Area: 545843
Amount: 0.538313
Amount Units: ng/ml



Manual Integration Results

RT: 6.65
Area: 616148
Amount: 0.607648
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:09 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

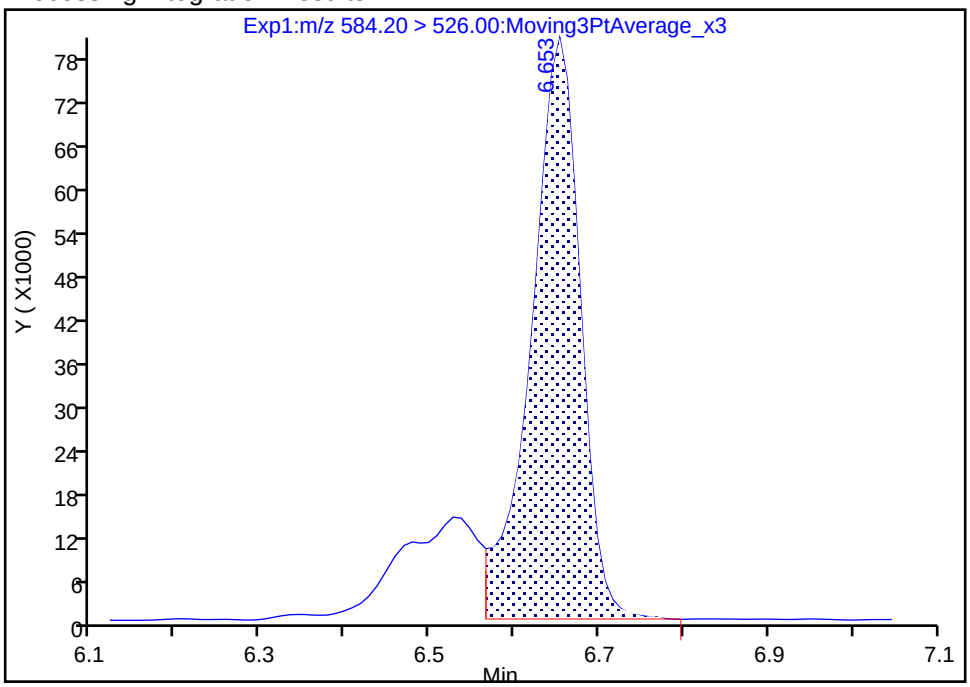
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

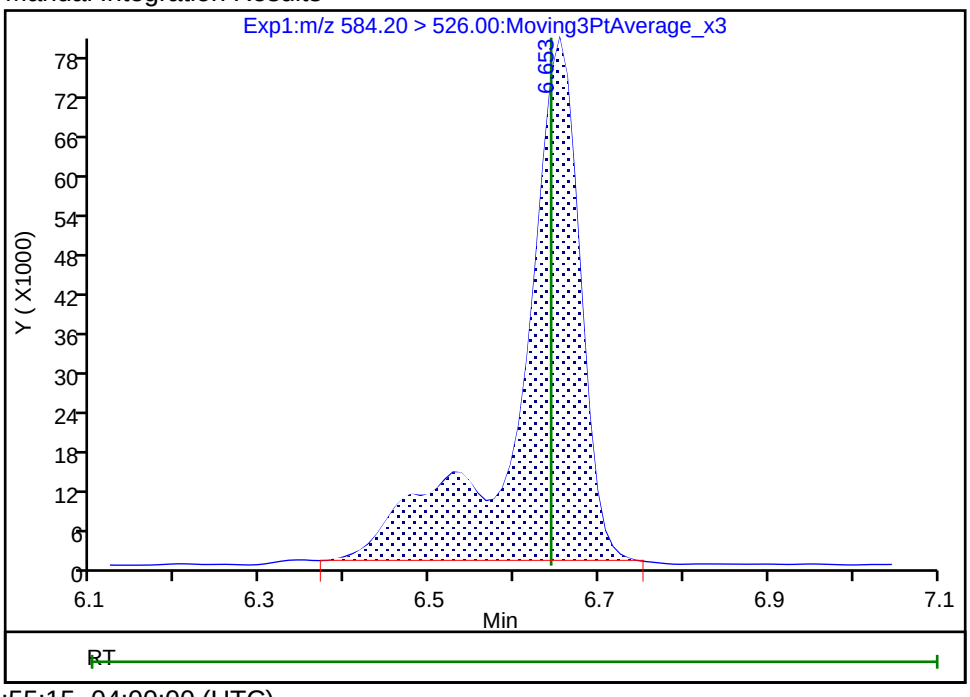
Processing Integration Results

RT: 6.65
Area: 323353
Amount: 0.538313
Amount Units: ng/ml



Manual Integration Results

RT: 6.65
Area: 400612
Amount: 0.607648
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:15 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

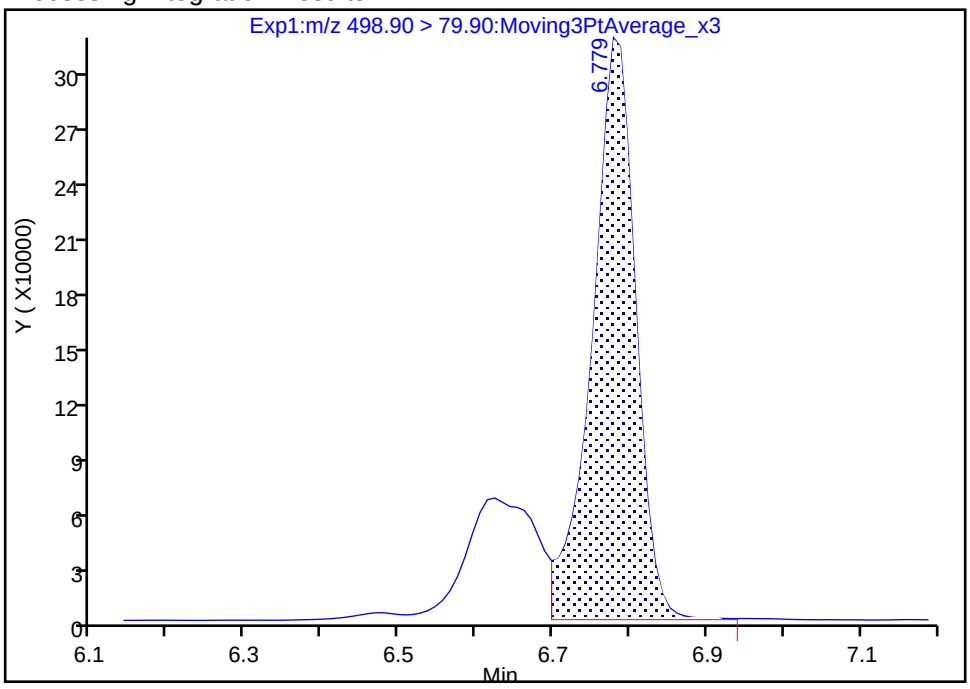
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

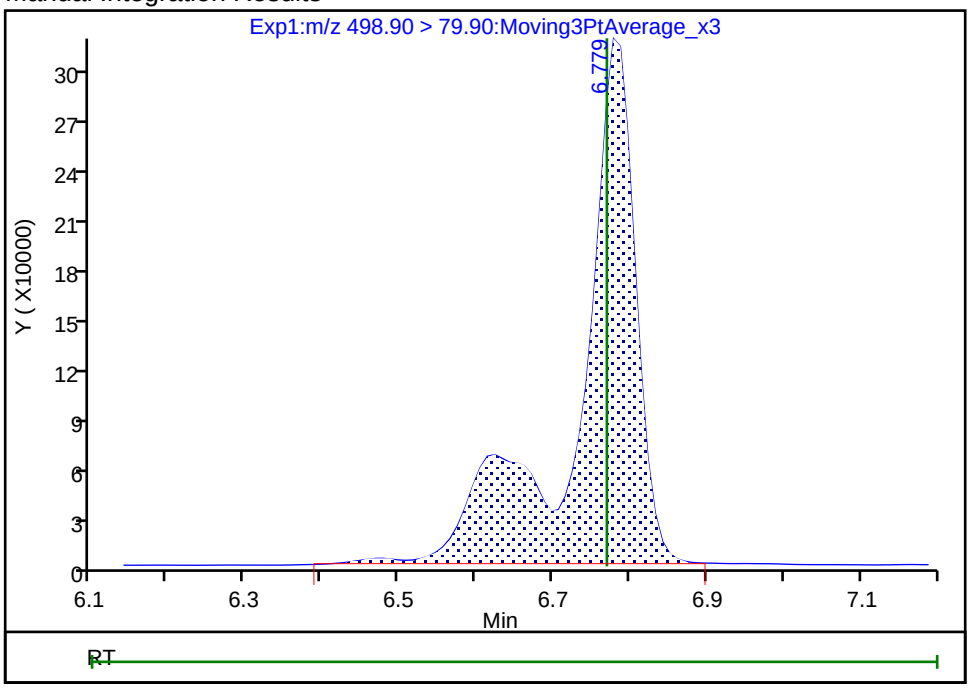
Processing Integration Results

RT: 6.78
Area: 1221503
Amount: 0.402621
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 1640027
Amount: 0.540571
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

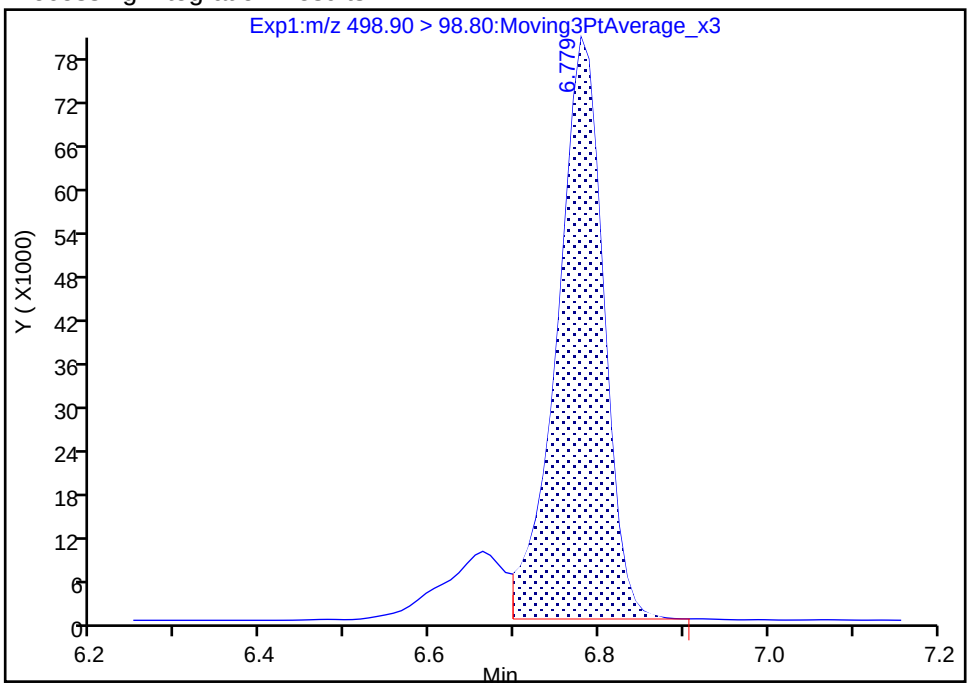
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

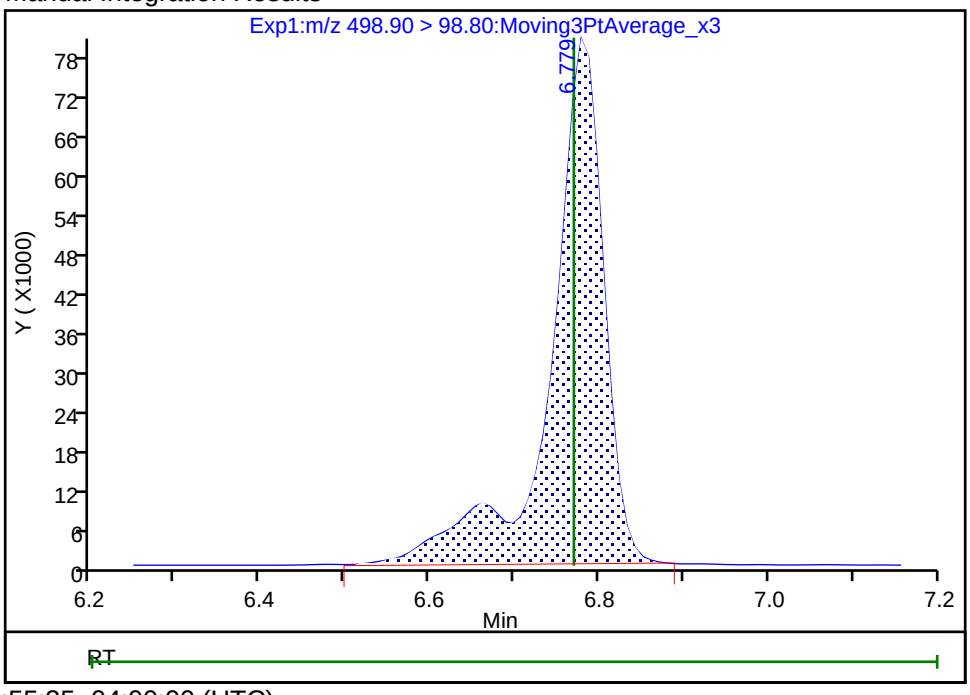
Processing Integration Results

RT: 6.78
Area: 305381
Amount: 0.402621
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 352381
Amount: 0.540571
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

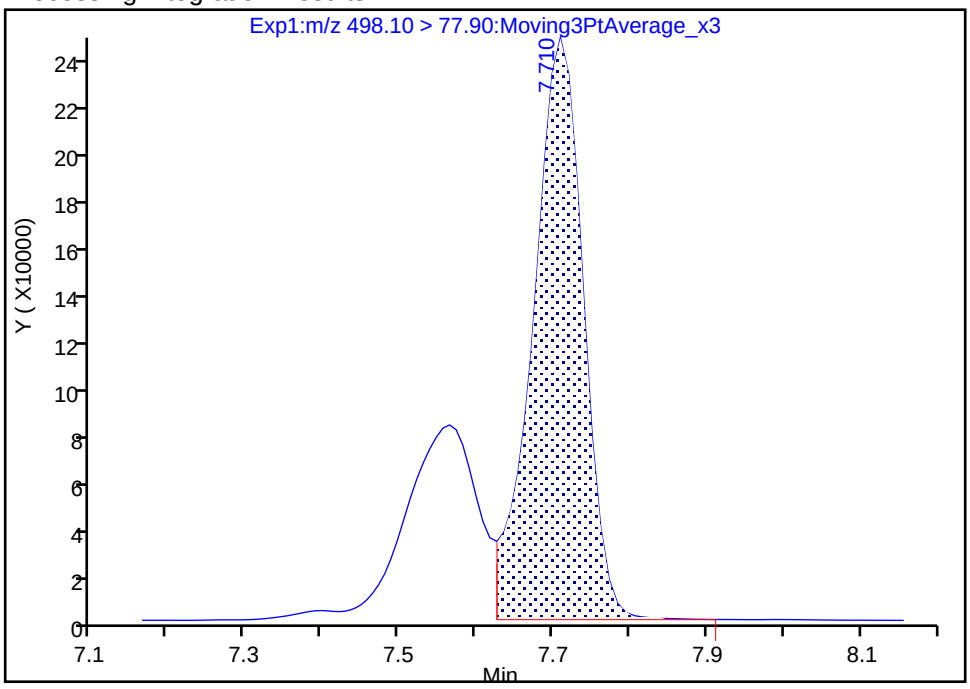
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

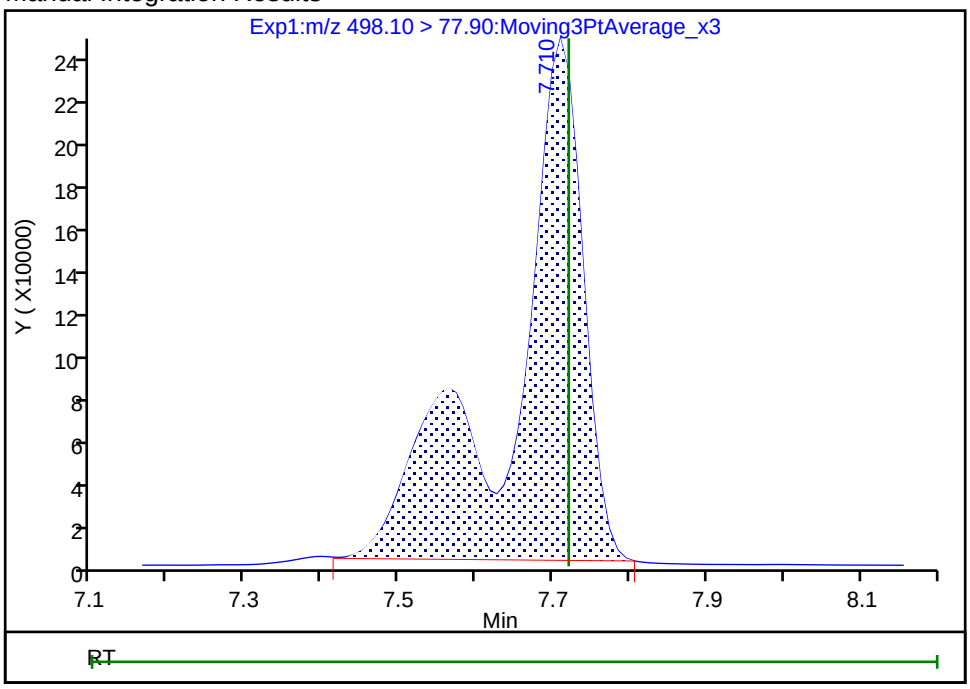
Processing Integration Results

RT: 7.71
Area: 1121459
Amount: 0.442861
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 1587621
Amount: 0.626947
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

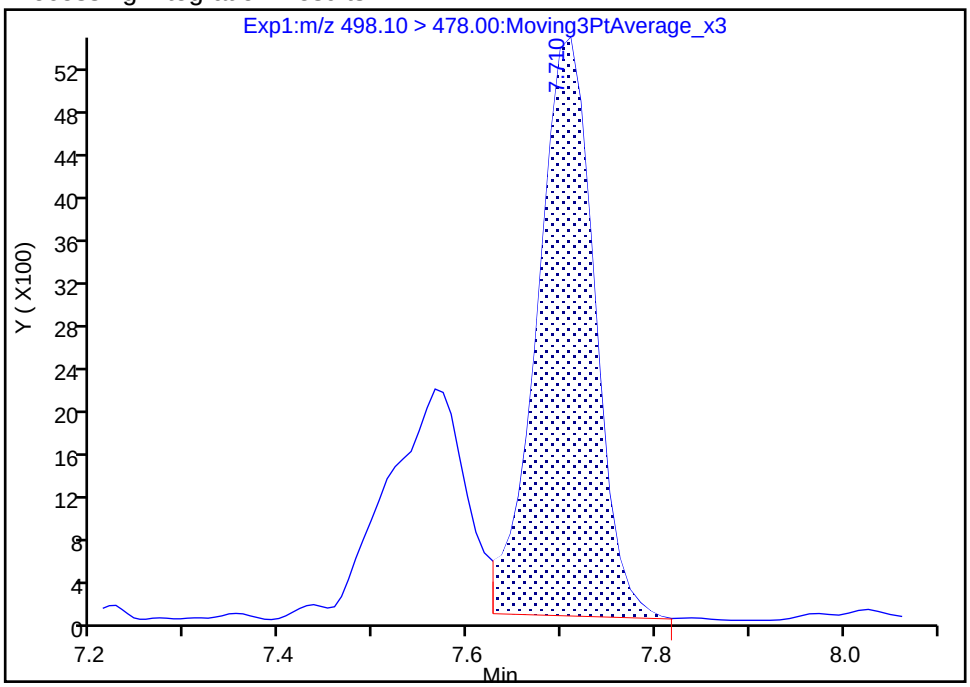
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d				
Injection Date:	19-Sep-2024 01:14:23	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	40
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

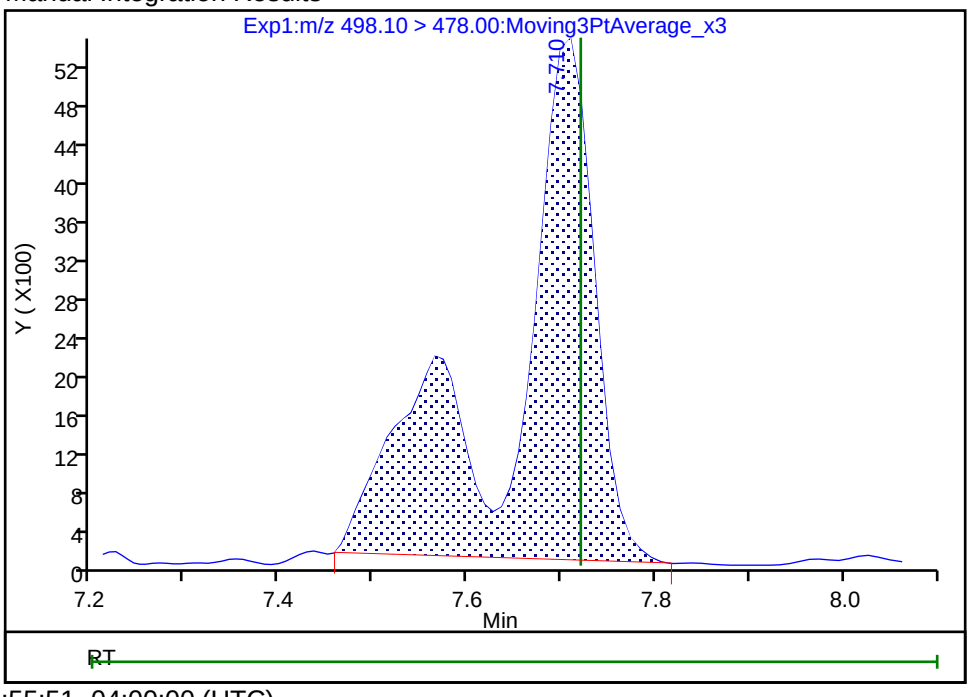
Processing Integration Results

RT: 7.71
Area: 23010
Amount: 0.442861
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 34506
Amount: 0.626947
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:55:51 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

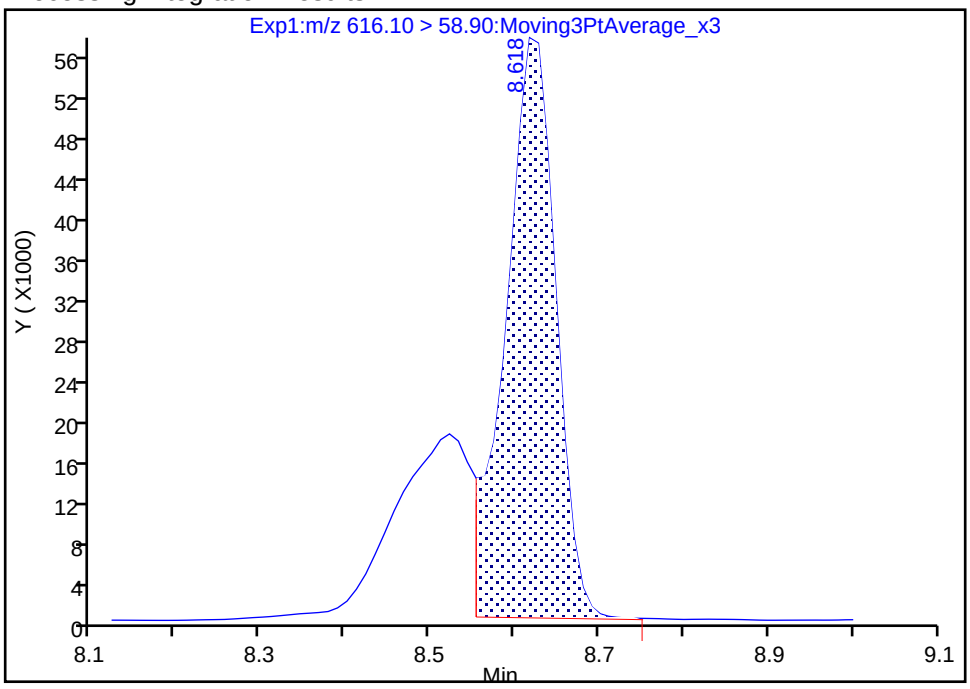
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

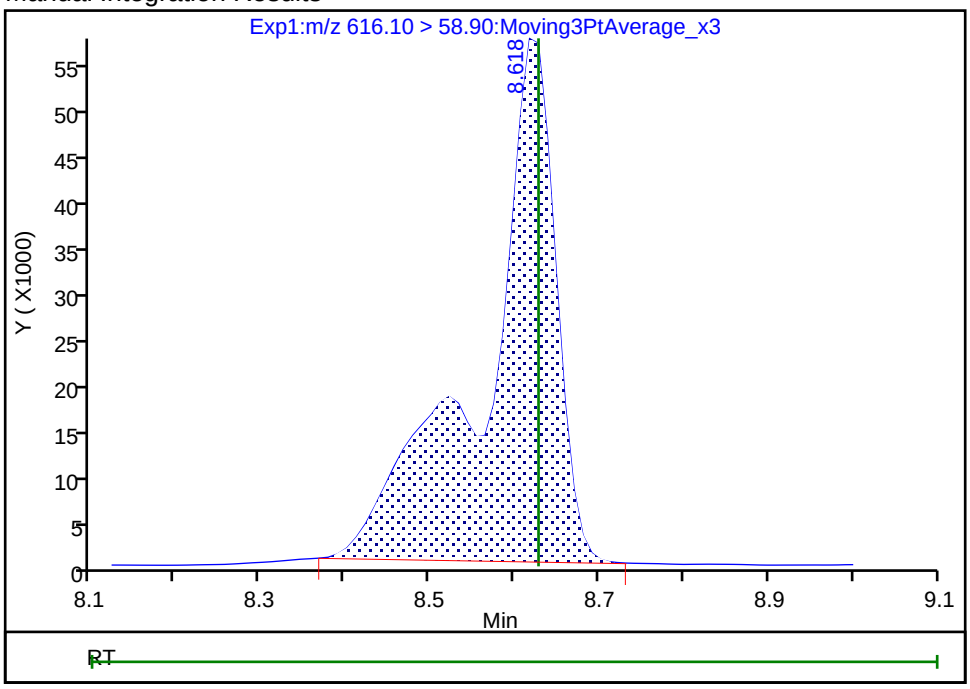
Processing Integration Results

RT: 8.62
Area: 234674
Amount: 4.230099
Amount Units: ng/ml



Manual Integration Results

RT: 8.62
Area: 339271
Amount: 6.115505
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

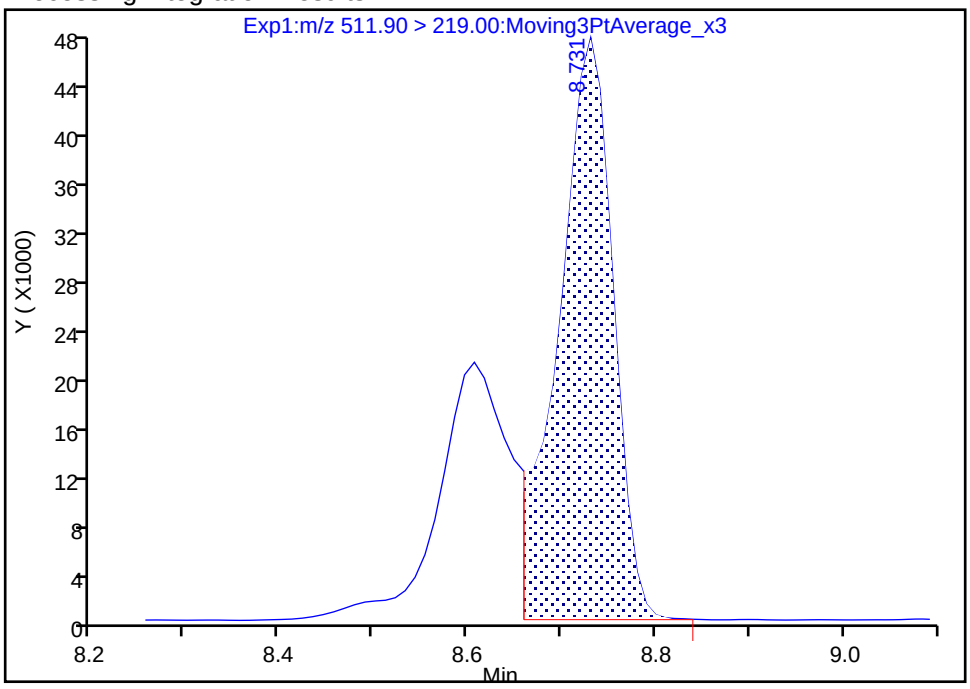
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

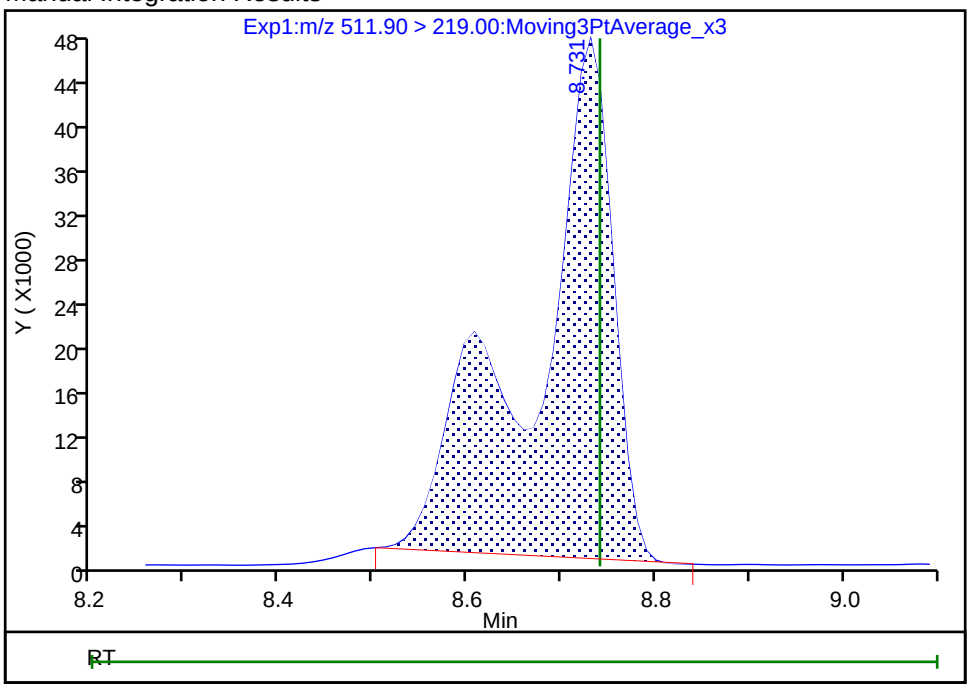
Processing Integration Results

RT: 8.73
Area: 191608
Amount: 0.440439
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 280263
Amount: 0.644225
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:08 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

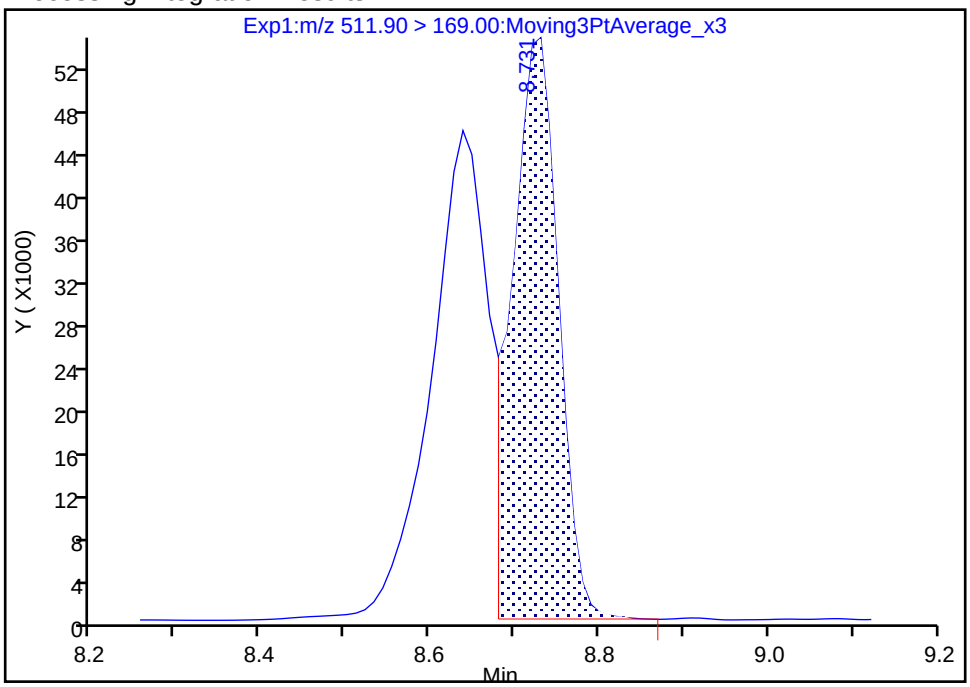
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

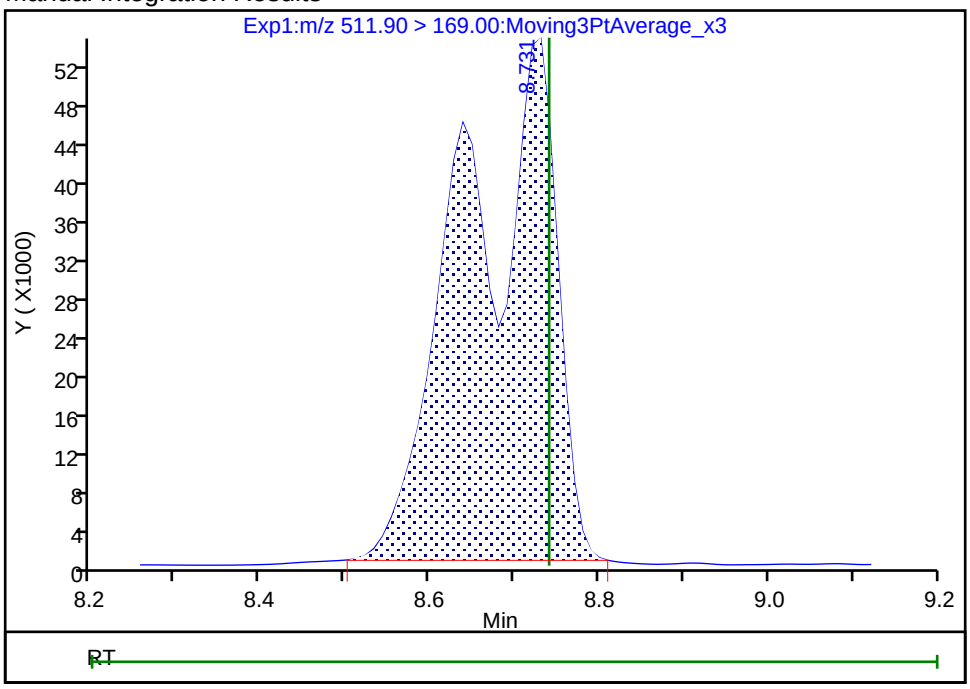
Processing Integration Results

RT: 8.73
Area: 204006
Amount: 0.440439
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 407342
Amount: 0.644225
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

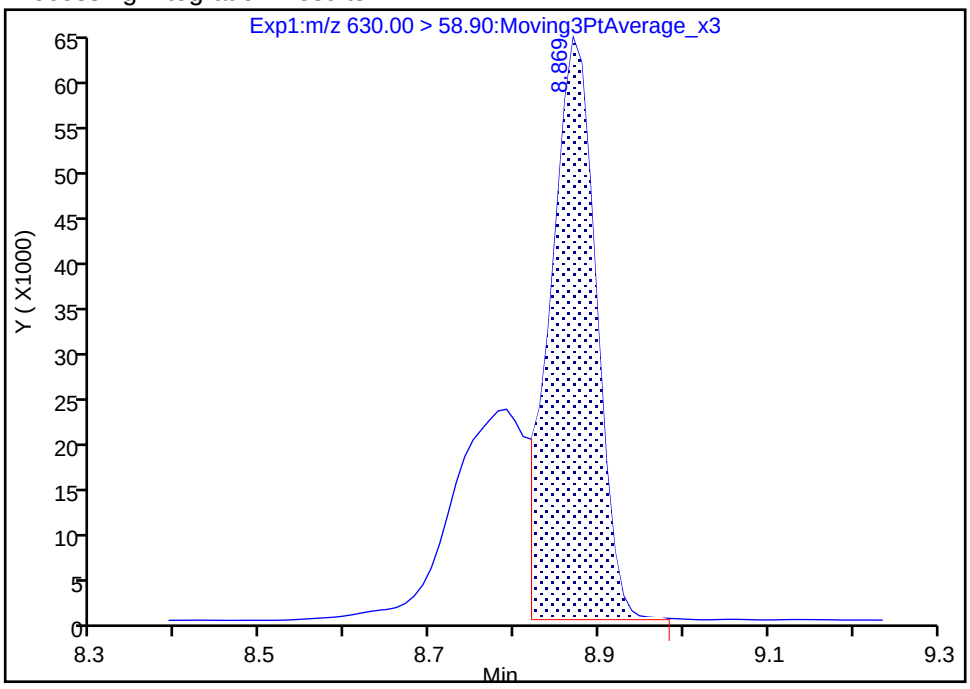
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

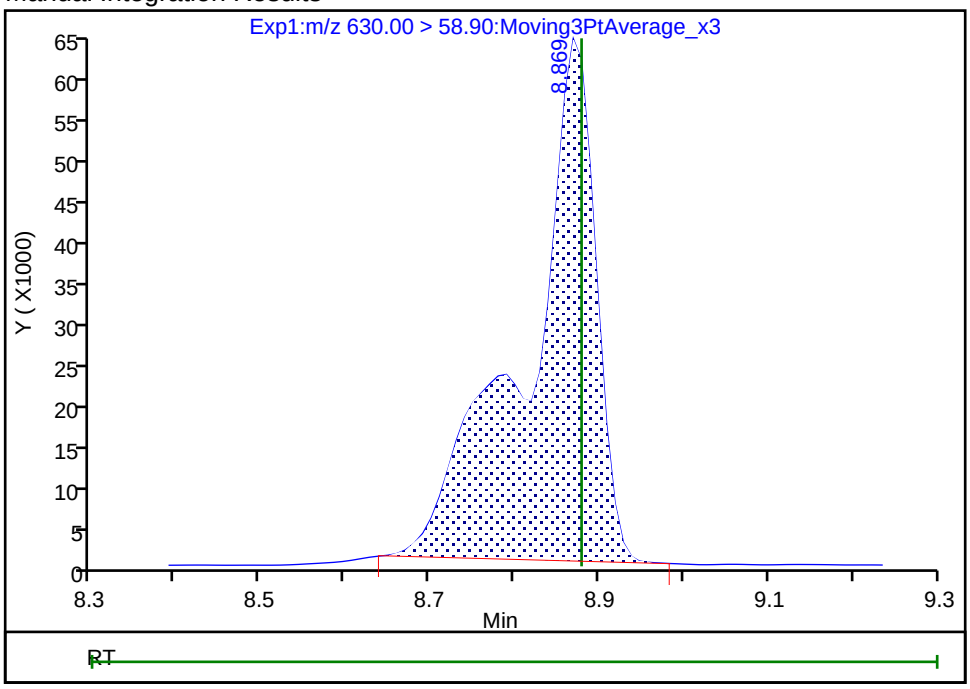
Processing Integration Results

RT: 8.87
Area: 238244
Amount: 3.719663
Amount Units: ng/ml



Manual Integration Results

RT: 8.87
Area: 364819
Amount: 5.695856
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:20 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

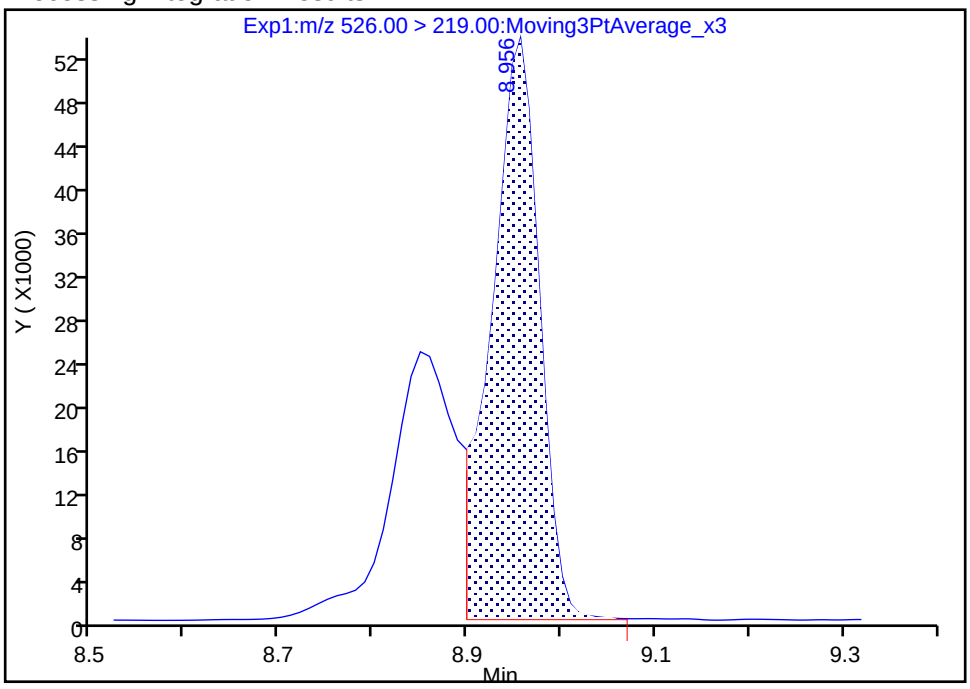
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Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

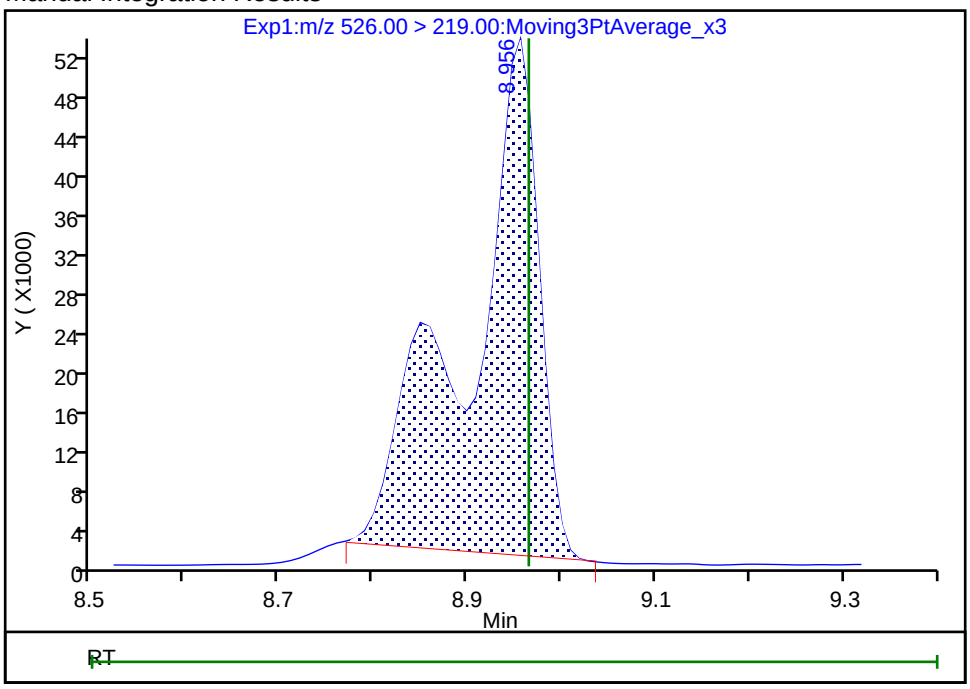
Processing Integration Results

RT: 8.96
Area: 187721
Amount: 0.437437
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 278383
Amount: 0.648702
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:27 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

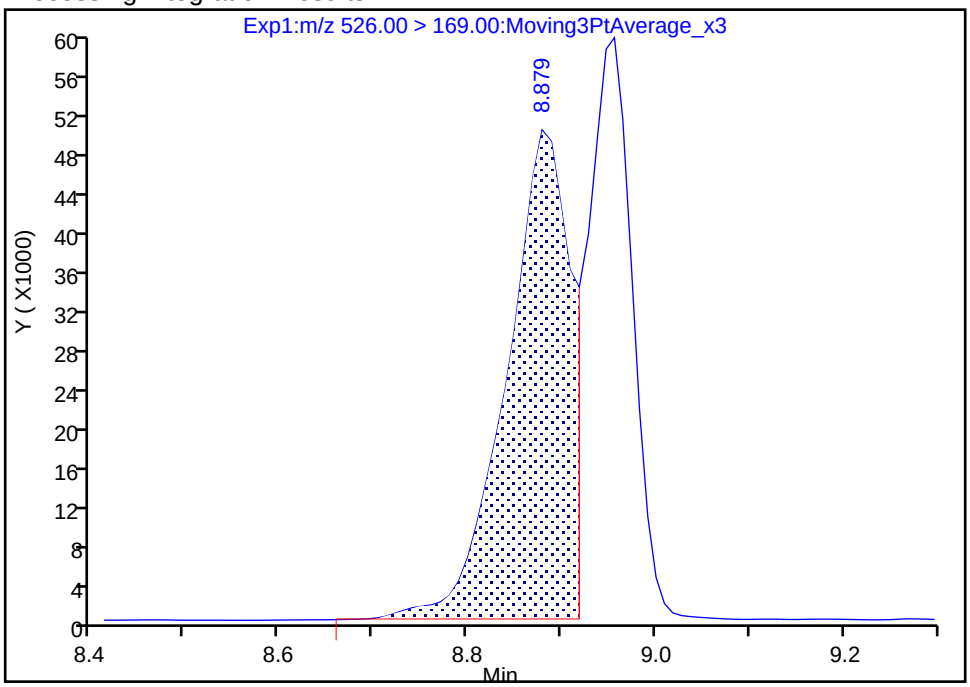
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj40.d
Injection Date: 19-Sep-2024 01:14:23 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

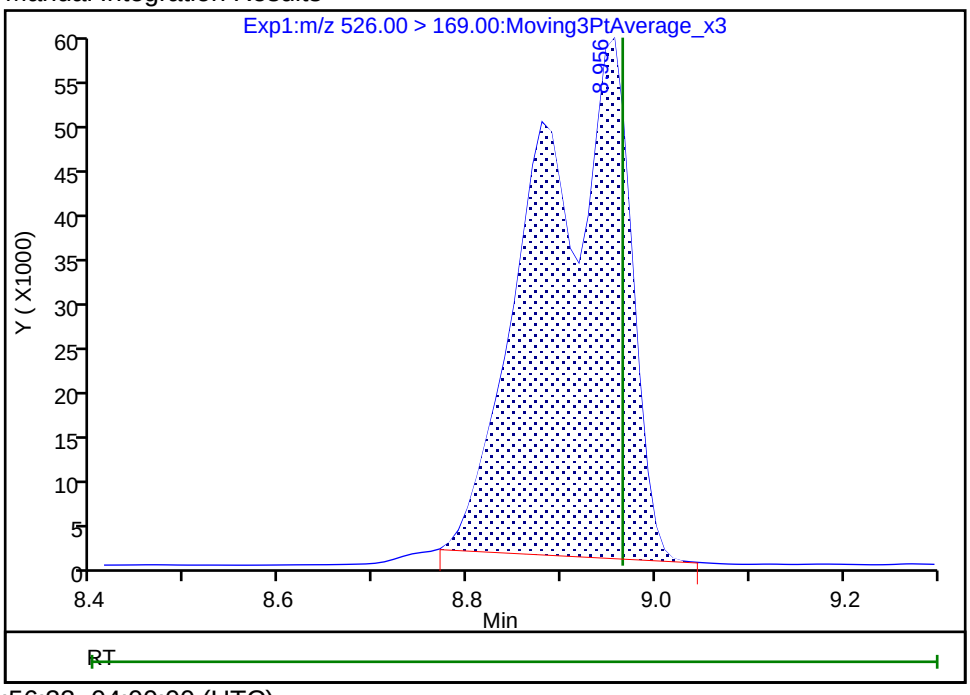
Processing Integration Results

RT: 8.88
Area: 233714
Amount: 0.437437
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 405610
Amount: 0.648702
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:56:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/52 Calibration Date: 09/19/2024 03:57

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj52.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9501	0.9522		2.51	2.50	0.2	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0603	0.0515		2.67	3.13	-14.6	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.374	1.271		1.16	1.25	-7.4	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.532	1.391		1.14	1.25	-9.2	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.450	1.366		1.18	1.25	-5.8	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	2.988	2.763		2.16	2.34	-7.5	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.0878	0.0998		1.42	1.25	13.7	30.0
FBSA	AveID	0.6842	0.6413		2.34	2.50	-6.3	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7948	0.8551		0.672	0.625	7.6	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1416	0.1104		12.2	15.6	-22.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.9713	0.9448		0.537	0.553	-2.7	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.102	0.9685		2.20	2.50	-12.1	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.926	3.153		1.20	1.11	7.8	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.081	1.042		0.603	0.625	-3.6	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	5.350	5.614		2.47	2.36	4.9	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.027	1.051		0.600	0.586	2.3	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	2.380	2.325		2.32	2.37	-2.3	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.4797	0.6063		0.790	0.625	26.4	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.1352	0.1318		15.2	15.6	-2.5	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8538	0.8562		0.570	0.569	0.3	30.0
Perfluorononanoic acid (PFNA)	AveID	0.7575	0.7350		0.606	0.625	-3.0	30.0
FHxSA	AveID	1.005	0.9025		2.25	2.50	-10.2	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	2.491	2.389		2.30	2.40	-4.1	30.0
PFECHS	AveID	1.691	1.831		1.25	1.15	8.3	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.172	1.126		0.572	0.595	-3.9	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.102	1.134		0.643	0.625	3.0	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.7939	0.7971		0.627	0.625	0.4	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8346	0.7683		0.575	0.625	-8.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.258	1.157		0.533	0.580	-8.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/52 Calibration Date: 09/19/2024 03:57

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj52.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoroundecanoic acid (PFUnA)	AveID	0.9017	0.8516		0.590	0.625	-5.6	30.0
9-Chlorohexadecafluoro-3-oxa nonane-1-sulfonic acid	AveID	4.753	4.745		2.33	2.33	-0.2	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9527	0.8746		0.551	0.600	-8.2	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9900	0.9027		0.570	0.625	-8.8	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.078	1.081		0.604	0.603	0.3	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9397	0.9424		0.627	0.625	0.3	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.212	1.064		0.549	0.625	-12.2	30.0
11-Chloroeicosafluoro-3-oxau ndecane-1-sulfonic acid	AveID	4.613	4.574		2.34	2.36	-0.8	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	1.253	1.233		0.615	0.625	-1.6	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9128	0.8588		0.569	0.605	-5.9	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	0.1480	0.1375		5.81	6.25	-7.1	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9739	1.031		0.661	0.625	5.8	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	0.1350	0.1278		5.91	6.25	-5.4	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.9863	1.063		0.674	0.625	7.8	30.0
13C4 PFBA	Ave	1.135	1.019		2.24	2.50	-10.2	30.0
13C5 PFPeA	Ave	0.7848	0.6293		1.00	1.25	-19.8	30.0
M2-4:2 FTS	Ave	0.3348	0.4574		1.60	1.17	36.6*	30.0
13C5 PFHxA	Ave	1.405	1.065		0.474	0.625	-24.2	30.0
13C3 PFBS	Ave	1.069	1.127		0.613	0.581	5.5	30.0
13C3 HFPO-DA	Ave	0.4045	0.3233		2.00	2.50	-20.1	30.0
13C4 PFHpA	Ave	1.467	1.220		0.520	0.625	-16.8	30.0
M2-6:2 FTS	Ave	0.3833	0.5017		1.55	1.19	30.9*	30.0
13C8 PFOA	Ave	7.888	6.473		0.513	0.625	-17.9	30.0
13C3 PFHxS	Ave	1.050	1.110		0.625	0.591	5.7	30.0
13C9 PFNA	Ave	0.7843	0.8357		0.333	0.313	6.6	30.0
M2-8:2 FTS	Ave	0.2626	0.3406		1.55	1.20	29.7	30.0
d3-NMeFOSAA	Ave	0.4628	0.5389		1.46	1.25	16.4	30.0
13C6 PFDA	Ave	0.9624	1.027		0.333	0.313	6.7	30.0
d5-NEtFOSAA	Ave	0.4555	0.5874		1.61	1.25	29.0	30.0
13C8 PFOS	Ave	1.030	1.118		0.648	0.598	8.5	30.0
13C7 PFUnA	Ave	0.9471	1.050		0.347	0.313	10.9	30.0
13C2-PFDoDA	Ave	0.8939	0.995		0.348	0.313	11.4	30.0
13C8 FOSA	Ave	1.106	1.219		0.689	0.625	10.2	30.0
13C2 PFTeDA	Ave	0.5110	0.5568		0.340	0.313	9.0	30.0
d7-N-MeFOSE-M	Ave	0.1639	0.1771		6.76	6.25	8.1	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Lab Sample ID: CCV 240-627555/52 Calibration Date: 09/19/2024 03:57

Instrument ID: LCMS04 Calib Start Date: 09/10/2024 17:12

GC Column: ID: Calib End Date: 09/10/2024 18:34

Lab File ID: 2024_09_18solidwatinj52.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMePFOSA	Ave	0.2181	0.2038		0.584	0.625	-6.5	30.0
d9-N-EtFOSE-M	Ave	0.2012	0.2070		6.43	6.25	2.9	30.0
d5-NEtPFOSA	Ave	0.2198	0.2005		0.570	0.625	-8.8	30.0

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Lims ID: CCV MID
Client ID:
Sample Type: CCV
Inject. Date: 19-Sep-2024 03:57:34 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV MID
Misc. Info.: Plate: 1 Rack: 1 240-0146375-052
Operator ID: CANPFAS4 Instrument ID: LCMS04
Sublist: chrom-1633_LCMS04*sub1

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 09:05:36 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 09:05:36
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.556	3.544	0.012		2035743	1.25			844	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.719	0.014		1562628	0.6250			4370	
* 3 13C4 PFOA										
417.10 > 172.00	5.634	5.629	0.005		270336	0.6250			1567	
* 4 18O2 PFHxS										
403.00 > 83.90	5.859	5.843	0.016		1496050	0.5913			3144	
* 5 13C5 PFNA										
468.00 > 423.00	6.067	6.052	0.015		892225	0.3125			1425	
* 6 13C2 PFDA										
515.10 > 470.10	6.502	6.488	0.014		680519	0.3125			1609	
* 7 13C4 PFOS										
502.80 > 79.90	6.774	6.761	0.013		1325774	0.5975	Target=4.00		3005	
502.80 > 98.90	6.774	6.761	0.013		314919		4.21(2.00-6.00)		1389	
D 8 13C4 PFBA										
216.80 > 171.90	3.548	3.544	0.004	0.998	4148702	2.24		89.8	10250	
D 9 13C5 PFPeA										
268.30 > 223.00	4.216	4.202	0.014	0.891	1966747	1.00		80.2	6323	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.534	4.530	0.004	0.774	1351362	1.60	Target=0.29	137	3816	
329.10 > 309.00	4.534	4.530	0.004	0.774	4125241		0.33(0.14-0.43)	137	1281	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.719	0.014	1.000	1663612	0.4735	Target=40.21	75.8	3683	
318.00 > 120.30	4.733	4.719	0.014	1.000	44647		37.26(20.11-60.32)	75.8	404	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 PFBS										
302.10 > 79.90	4.860	4.846	0.014	0.830	1658210	0.6130	Target=3.28	105	3306	
302.10 > 98.90	4.860	4.846	0.014	0.830	512414		3.24(1.64-4.92)	105	1999	
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.925	4.923	0.002	1.041	2020670	2.00	Target=1.86	79.9	6202	
286.90 > 184.90	4.925	4.923	0.002	1.041	921392		2.19(0.93-2.78)	79.9	2370	
D 14 13C4 PFHpA										
367.10 > 322.00	5.197	5.194	0.003	1.098	1907125	0.5198		83.2	4679	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.421	5.416	0.005	0.925	1507518	1.55	Target=0.38	131	3454	
429.10 > 409.00	5.421	5.416	0.005	0.925	3863516		0.39(0.19-0.57)	131	5558	
D 16 13C8 PFOA										
421.10 > 376.00	5.634	5.619	0.015	1.000	1749990	0.5129		82.1	3292	
D 17 13C3 PFHxS										
402.10 > 79.90	5.859	5.843	0.016	1.000	1660083	0.6250	Target=3.25	106	3633	
402.10 > 98.80	5.859	5.843	0.016	1.000	492500		3.37(1.63-4.88)	106	2334	
D 18 13C9 PFNA										
472.10 > 427.00	6.067	6.052	0.015	1.000	745632	0.3330		107	1309	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.272	6.249	0.023	1.071	1032177	1.55	Target=0.33	130	2390	
529.10 > 509.00	6.272	6.249	0.023	1.071	2939968		0.35(0.16-0.49)	130	6470	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.441	6.427	0.014	0.951	1494551	1.46		116	6069	
D 21 13C6 PFDA										
519.10 > 474.10	6.502	6.488	0.014	1.000	698937	0.3335		107	1400	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.648	6.624	0.024	0.981	1629311	1.61		129	4668	
D 23 13C8 PFOS										
507.10 > 79.90	6.774	6.752	0.022	1.000	1482022	0.6483	Target=4.26	109	630	
507.10 > 98.90	6.774	6.752	0.022	1.000	361062		4.10(2.13-6.39)	109	955	
D 24 13C7 PFUnA										
570.00 > 525.10	6.952	6.923	0.029	1.069	714847	0.3466		111	1292	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.380	7.353	0.027	1.135	677443	0.3480		111	1260	
D 26 13C8 FOSA										
506.10 > 77.80	7.705	7.709	-0.004	1.137	1689987	0.6888		110	3818	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.217	8.179	0.039	1.264	378898	0.3405		109	710	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.600	8.607	-0.007	1.270	2456593	6.76		108	774	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.724	8.721	0.003	1.288	282604	0.5841		93.5	1298	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.849	0.004	1.307	2870457	6.43		103	1067	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.950	8.947	0.003	1.321	278096	0.5702		91.2	159	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
32 Perfluorobutanoic acid										
212.80 > 168.90	3.556	3.559	-0.003	1.002	3950404	2.51		100	20.9	
34 3:3 FTCA										
241.00 > 177.00	3.851	3.842	0.009	0.914	253410	2.67	Target=1.06	85.4	2675	
241.00 > 117.00	3.839	3.842	-0.003	0.911	237630		1.07(0.53-1.58)		60.1	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.851	3.842	0.009	0.914	2500369	1.16		92.6	4056	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.216	4.219	-0.003	1.000	2736492	1.14		90.8	195	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.395	4.388	0.007	1.043	2686506	1.18		94.2	6771	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.544	4.540	0.004	1.002	7468169	2.16	Target=1.34	92.5	14889	
327.10 > 80.90	4.534	4.540	-0.006	1.000	5411680		1.38(0.67-2.01)		3448	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.691	4.696	-0.005	0.991	332112	1.42	Target=1.72	114	1711	
295.00 > 84.90	4.691	4.696	-0.005	0.991	174101		1.91(0.86-2.58)		812	
48 FBSA										
297.90 > 78.00	4.711	4.718	-0.007	0.969	4573470	2.34		93.7	4819	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.733	4.739	-0.006	1.000	1422510	0.6724	Target=14.20	108	155	
313.00 > 118.90	4.733	4.739	-0.006	1.000	94242		15.09(7.10-21.30)		705	
41 5:3 FTCA										
341.00 > 237.10	4.816	4.812	0.004	1.018	4591767	12.2	Target=1.54	78.0	3518	
341.00 > 217.00	4.816	4.812	0.004	1.018	3006568		1.53(0.77-2.31)		1163	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.860	4.856	0.004	1.000	1489256	0.5375	Target=3.31	97.3	3269	
298.70 > 98.80	4.860	4.856	0.004	1.000	421366		3.53(1.66-4.97)		1791	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.936	4.932	0.004	1.002	1957094	2.20	Target=1.99	87.9	3826	
284.90 > 184.90	4.925	4.932	-0.007	1.000	1045470		1.87(1.00-2.99)		2121	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.127	5.123	0.004	1.083	9336468	1.20	Target=12.91	108	7810	
314.80 > 82.90	5.127	5.123	0.004	1.083	690588		13.52(6.46-19.37)		1763	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.208	5.204	0.004	1.002	1987771	0.6028	Target=3.56	96.4	219	
363.10 > 169.00	5.197	5.204	-0.007	1.000	509857		3.90(1.78-5.34)		1666	
49 DONA										
376.90 > 250.90	5.369	5.365	0.004	1.090	10686675	2.47	Target=1.61	105	11329	
376.90 > 84.80	5.369	5.365	0.004	1.090	6284710		1.70(0.81-2.42)		8445	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.390	5.385	0.005	0.920	1729401	0.5997	Target=3.08	102	1678	
349.10 > 98.90	5.390	5.385	0.005	0.920	542981		3.19(1.54-4.63)		1759	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.431	5.425	0.006	1.002	6994871	2.31	Target=1.41	97.7	7508	
427.10 > 80.90	5.431	5.425	0.006	1.002	4750831		1.47(0.70-2.11)		7980	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.643	5.638	0.005	1.002	1061054	0.7900	Target=1.93	126	123	M
413.00 > 169.00	5.643	5.638	0.005	1.002	476528		2.23(0.96-2.89)		563	M
54 7:3 FTCA										
441.00 > 316.90	5.691	5.694	-0.003	1.202	5482208	15.2	Target=1.07	97.5	5846	
441.00 > 336.90	5.691	5.694	-0.003	1.202	5126502		1.07(0.53-1.60)		8415	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.869	5.862	0.007	1.002	1367282	0.5704	Target=3.17	100	1453	M
398.70 > 98.90	5.869	5.862	0.007	1.002	421820		3.24(1.59-4.76)		803	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.077	6.061	0.016	1.002	1096019	0.6064	Target=4.77	97.0	137	M
463.00 > 169.00	6.067	6.061	0.006	1.000	209280		5.24(2.39-7.16)		419	M
62 FHxSA										
397.90 > 78.00	6.235	6.258	-0.023	1.064	6335091	2.25		89.8	4030	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.272	6.267	0.005	1.000	4930882	2.30	Target=1.35	95.9	5705	
527.10 > 80.80	6.272	6.267	0.005	1.000	3647066		1.35(0.67-2.02)		7877	
57 PFECHS										
461.00 > 381.00	6.272	6.267	0.005	1.071	5923772	1.25	Target=1.89	108	462	
461.00 > 99.00	6.272	6.267	0.005	1.071	2941046		2.01(0.94-2.83)		3193	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.328	6.314	0.014	0.934	1662256	0.5720	Target=3.87	96.1	1906	
449.00 > 98.80	6.319	6.314	0.005	0.933	426474		3.90(1.93-5.80)		1157	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.452	6.447	0.005	1.002	847671	0.6434	Target=1.69	103	1317	M
570.10 > 483.00	6.452	6.447	0.005	1.002	508843		1.67(0.85-2.54)		1087	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.512	6.498	0.014	1.001	1114262	0.6275	Target=5.10	100	179	
512.90 > 219.00	6.512	6.498	0.014	1.001	243331		4.58(2.55-7.66)		1015	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.657	6.643	0.014	1.001	625882	0.5753	Target=1.49	92.0	819	M
584.20 > 526.00	6.657	6.643	0.014	1.001	428842		1.46(0.75-2.24)		558	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.783	6.770	0.013	1.001	1664114	0.5333	Target=4.80	92.0	724	M
498.90 > 98.80	6.783	6.770	0.013	1.001	351449		4.74(2.40-7.20)		1083	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.952	6.940	0.012	1.000	1217560	0.5903	Target=6.10	94.4	435	
563.10 > 269.10	6.952	6.940	0.012	1.000	203751		5.98(3.05-9.15)		1335	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.122	7.103	0.019	1.446	8936039	2.33	Target=3.10	99.8	1425	
532.80 > 353.00	7.122	7.103	0.019	1.446	2732521		3.27(1.55-4.65)		2546	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.222	7.205	0.017	1.066	1301622	0.5508	Target=4.02	91.8	1951	
548.80 > 98.80	7.222	7.205	0.017	1.066	322396		4.04(2.01-6.03)		1693	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.388	7.361	0.027	1.001	1223016	0.5698	Target=16.81	91.2	466	
613.10 > 319.00	7.380	7.361	0.019	1.000	71251		17.16(8.41-25.22)		566	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.651	7.627	0.024	1.130	1615075	0.6040	Target=4.25	100	3209	
599.00 > 98.80	7.651	7.627	0.024	1.130	375775		4.30(2.12-6.37)		2071	
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.716	7.720	-0.004	1.001	1592710	0.6268	Target=51.55	100	657	M
498.10 > 478.00	7.705	7.720	-0.015	1.000	35819		44.47(25.77-77.32)		183	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.811	7.784	0.027	0.951	1124367	0.5487	Target=6.27	87.8	561	
663.00 > 168.90	7.811	7.784	0.027	0.951	172090		6.53(3.13-9.40)		1081	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.979	7.954	0.025	1.620	8707068	2.34	Target=3.32	99.2	8327	
632.90 > 452.90	7.969	7.954	0.015	1.618	2682090		3.25(1.66-4.97)		3808	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.217	8.179	0.038	1.000	934235	0.6147	Target=6.82	98.4	607	
713.10 > 168.90	8.217	8.179	0.038	1.000	113664		8.22(3.41-10.24)		1268	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.428	8.402	0.026	1.244	1288730	0.5692	Target=4.61	94.1	1919	
699.10 > 98.80	8.428	8.402	0.026	1.244	271467		4.75(2.30-6.91)		1632	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.632	8.628	0.004	1.004	337737	5.81		92.9	932	M
75 NMeFOSA										M
511.90 > 219.00	8.734	8.741	-0.007	1.001	291291	0.6615	Target=0.70	106	673	M
511.90 > 169.00	8.734	8.741	-0.007	1.001	431631		0.67(0.35-1.05)		1088	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.872	8.879	-0.007	1.002	366750	5.91		94.6	1517	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.959	8.965	-0.006	1.001	295651	0.6737	Target=0.71	108	984	M
526.00 > 169.00	8.959	8.965	-0.006	1.001	425715		0.69(0.35-1.06)		779	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

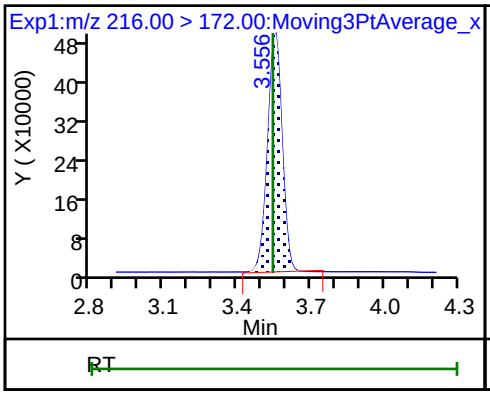
ICV CAL4_00034 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 09:05:38 Chrom Revision: 2.3 26-Aug-2024 17:14:48

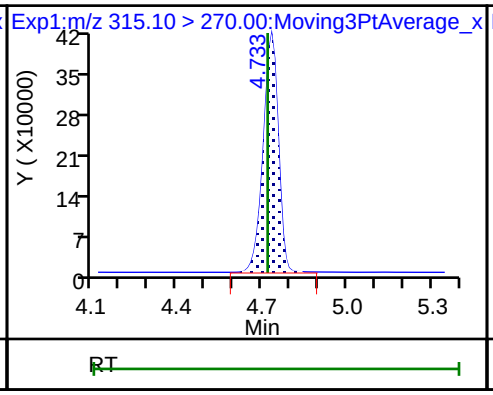
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

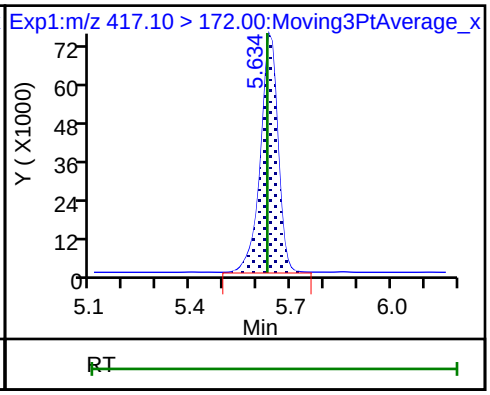
* 1 13C3-PFBA



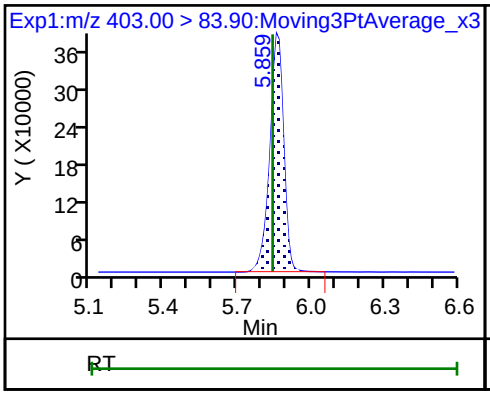
* 2 13C2 PFHxA



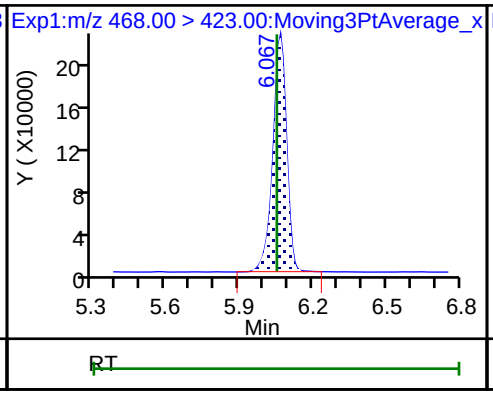
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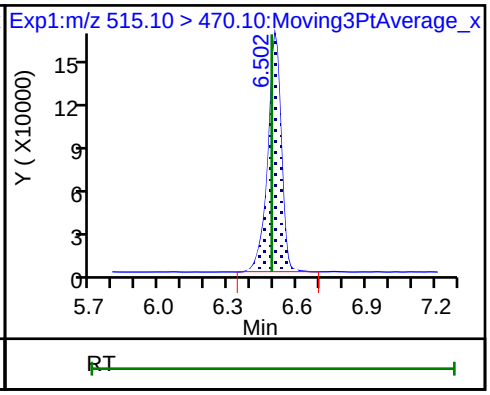
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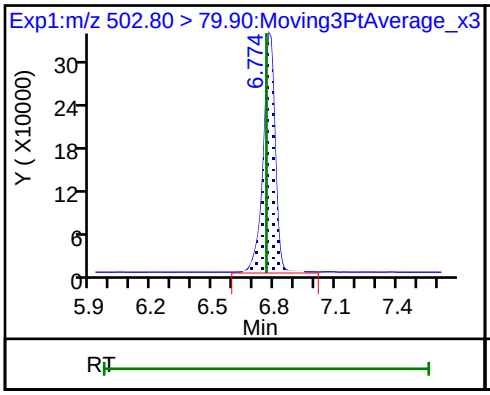
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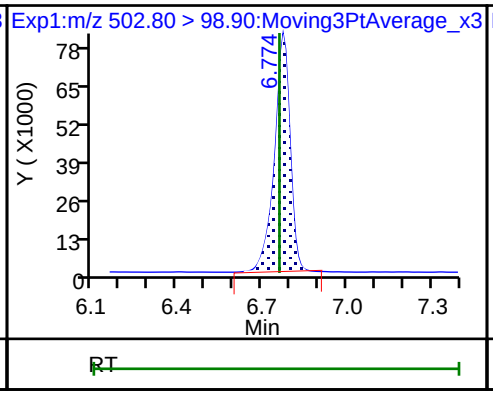
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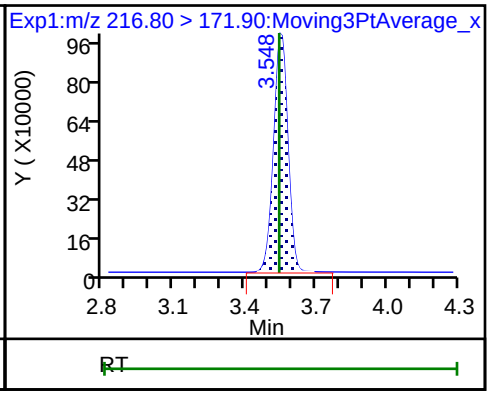
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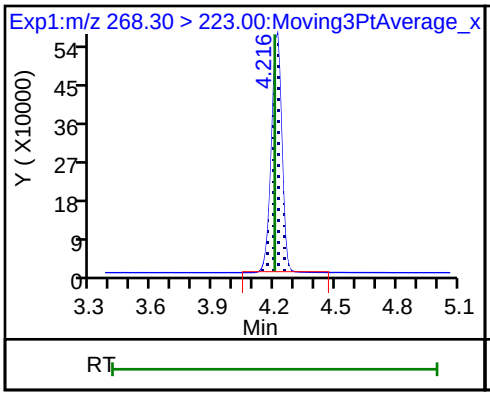
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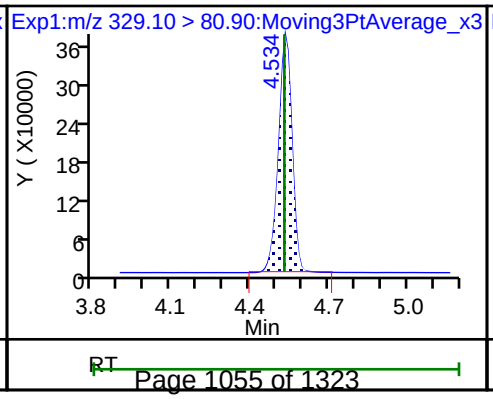
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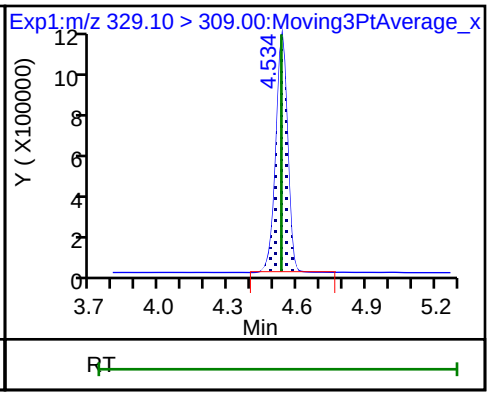
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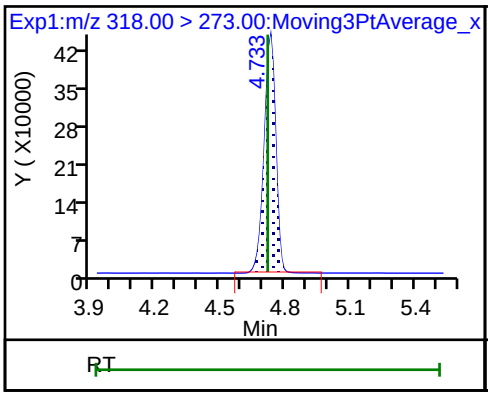
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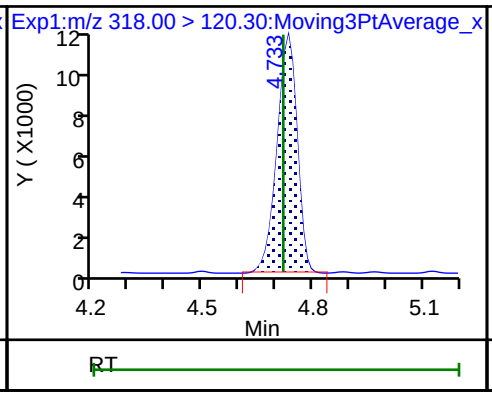
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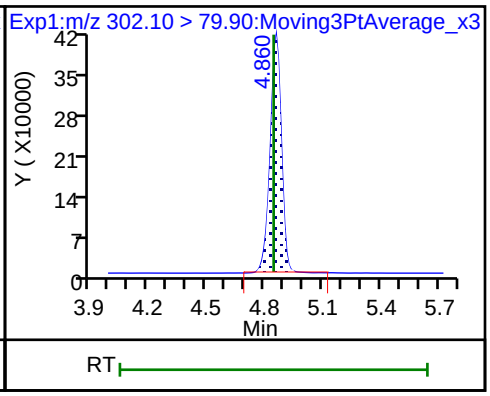
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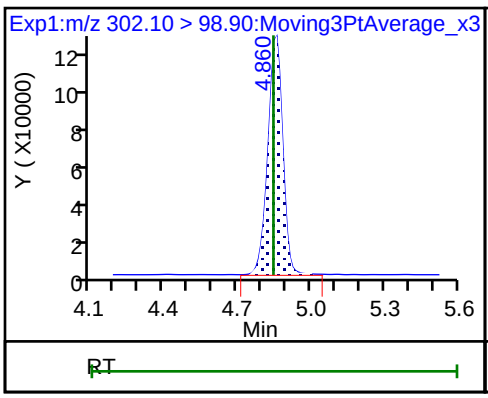
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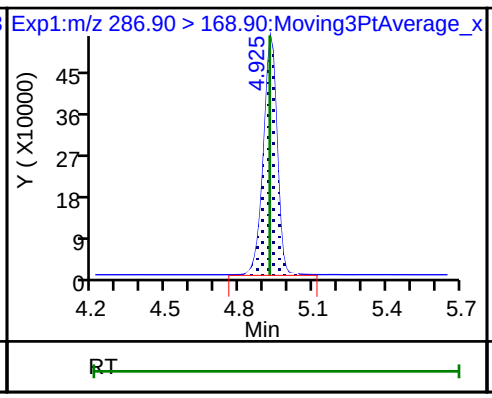
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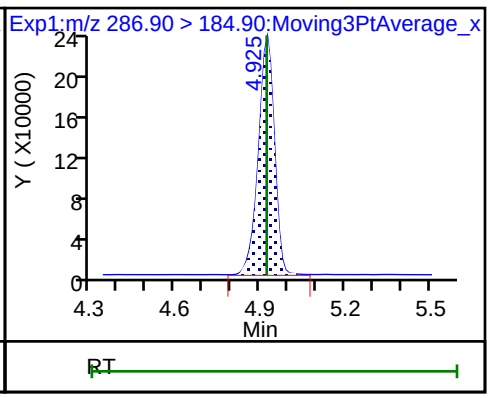
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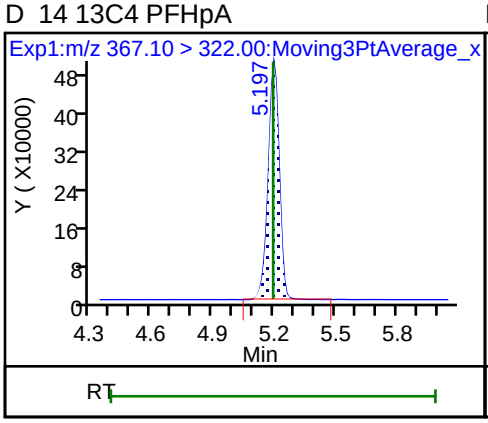
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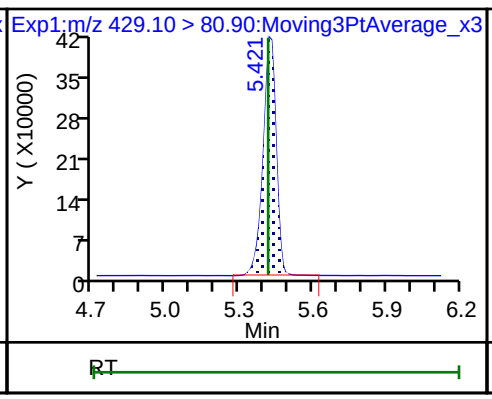
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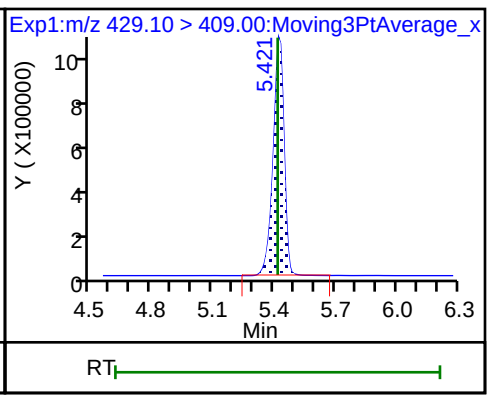
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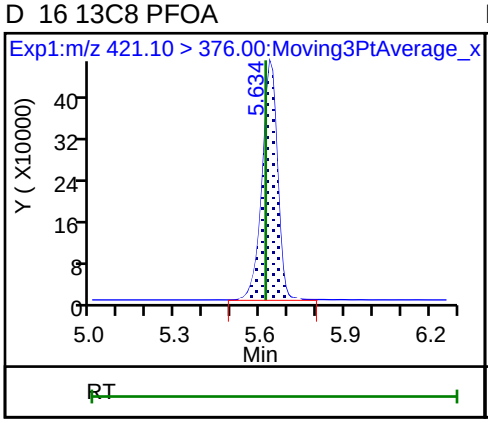
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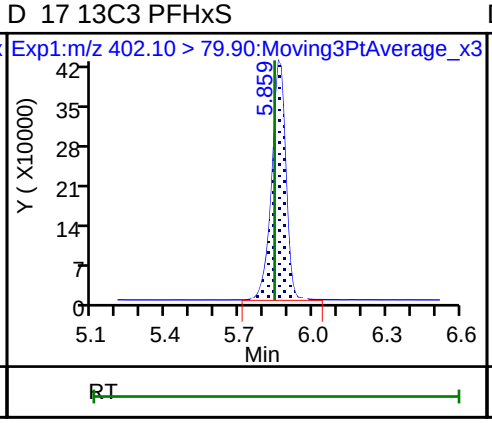
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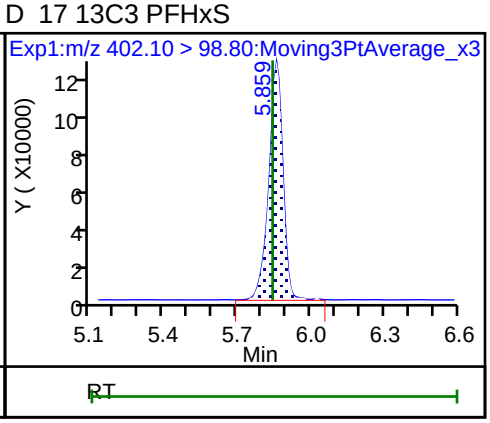
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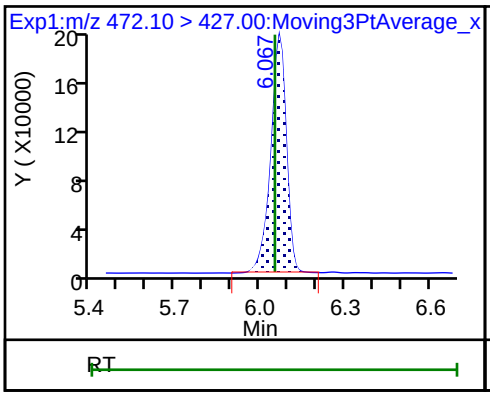
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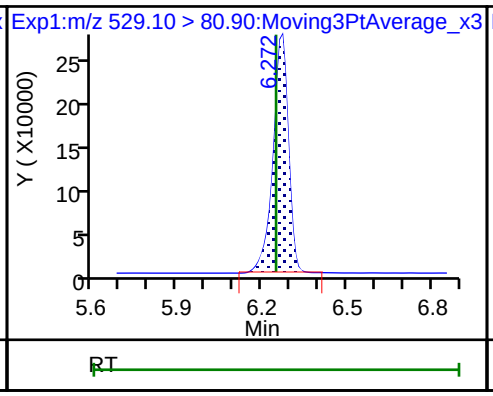
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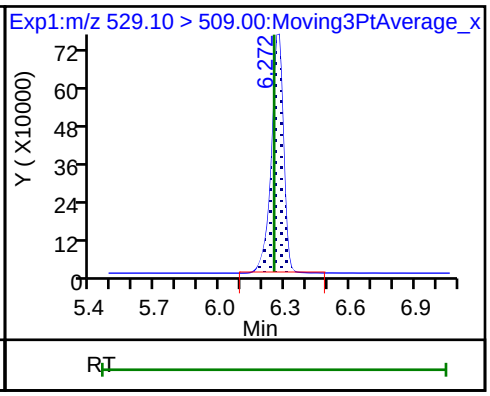
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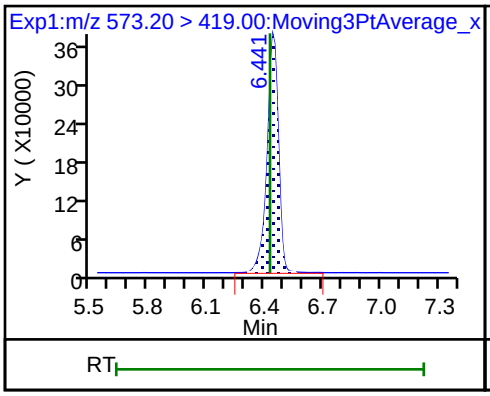
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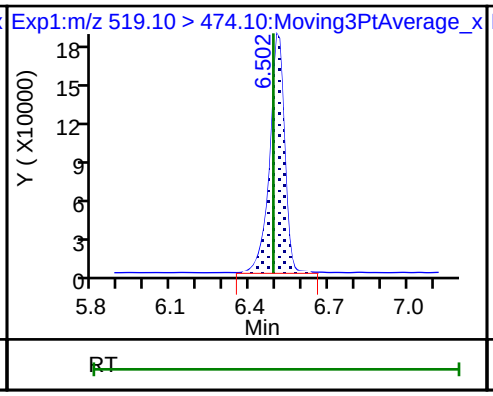
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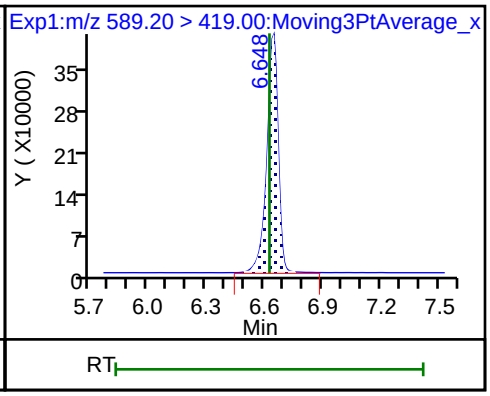
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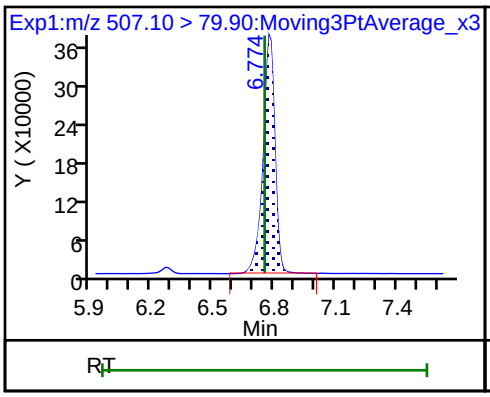
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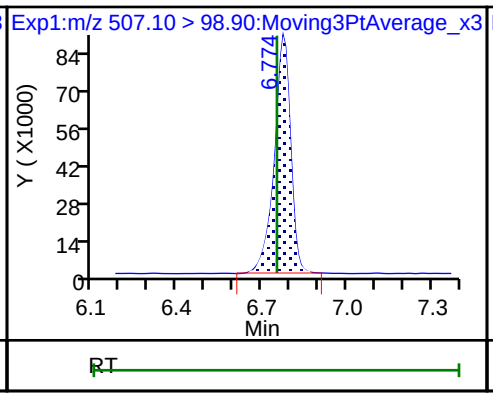
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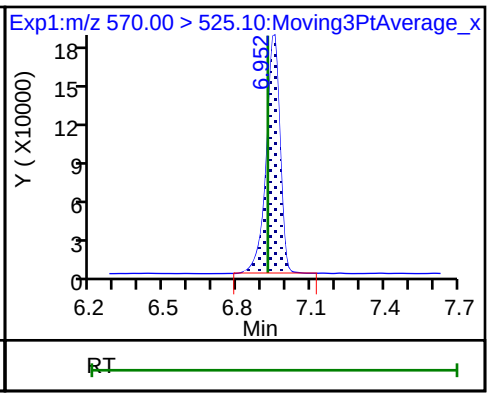
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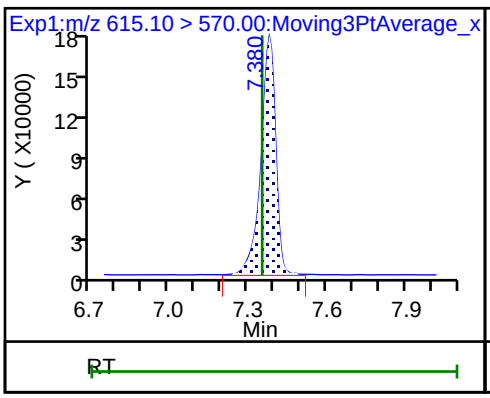
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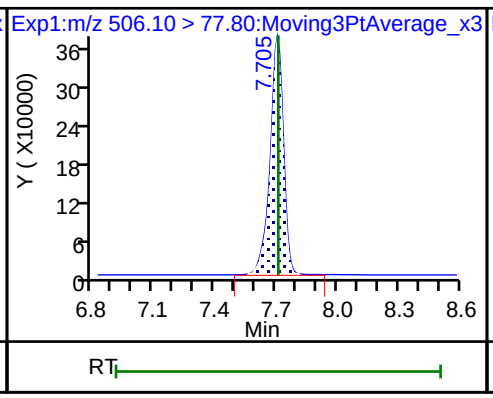
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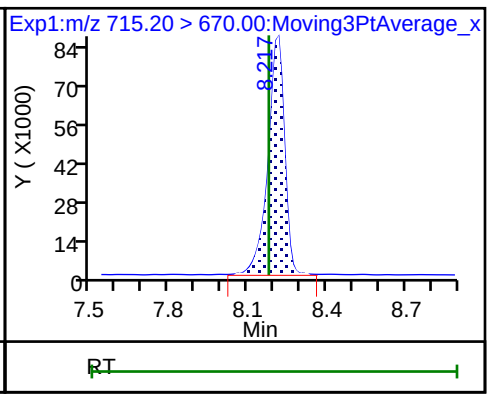
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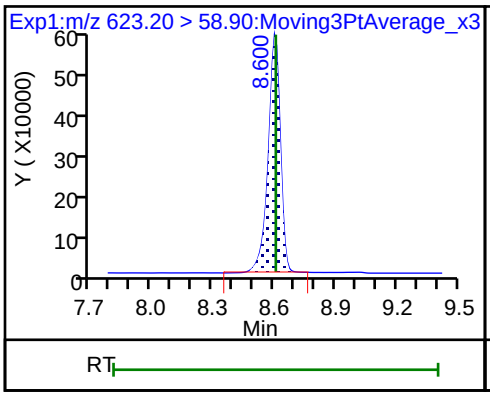
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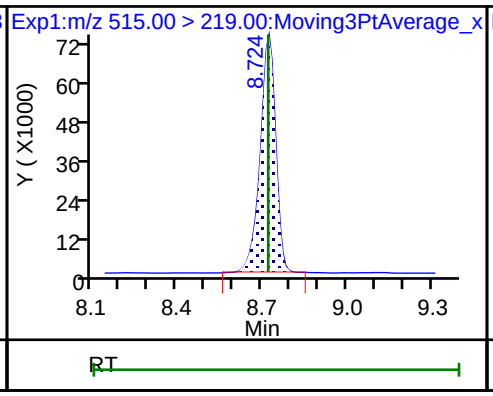
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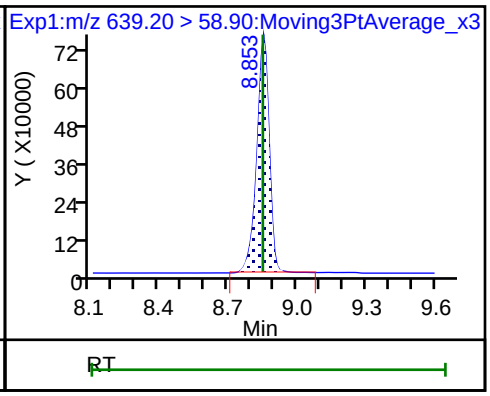
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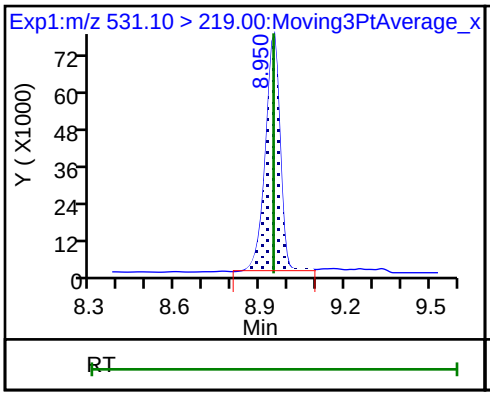
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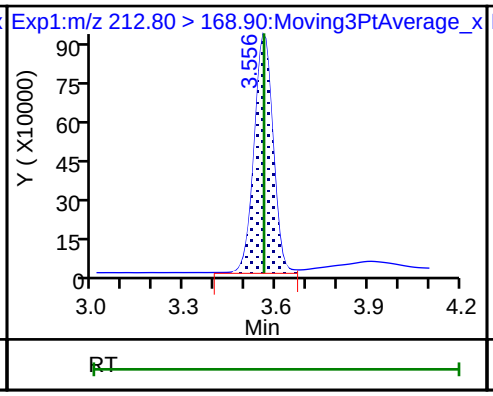
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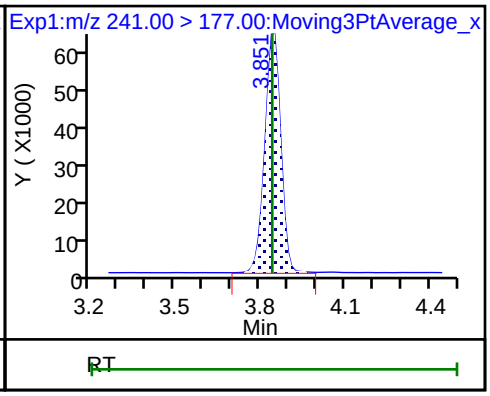
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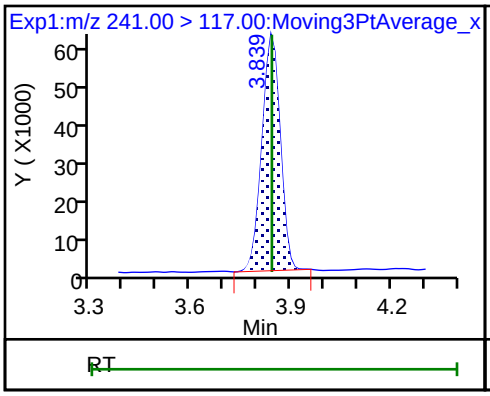
32 Perfluorobutanoic acid



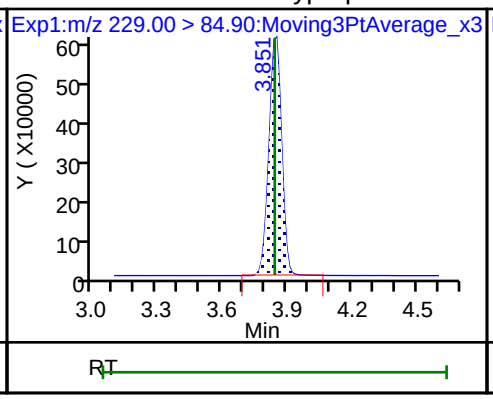
34 3:3 FTCA



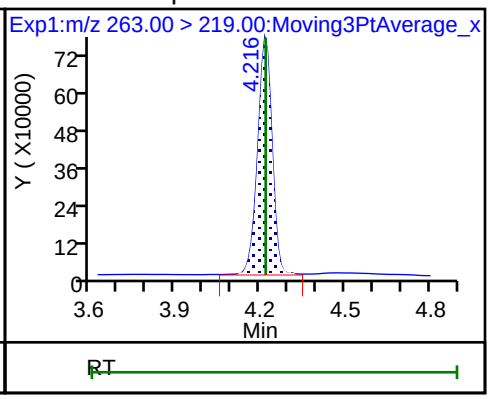
34 3:3 FTCA



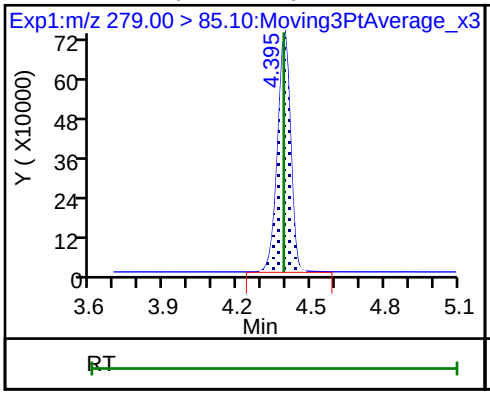
33 Perfluoro-3-methoxypropanoic aci



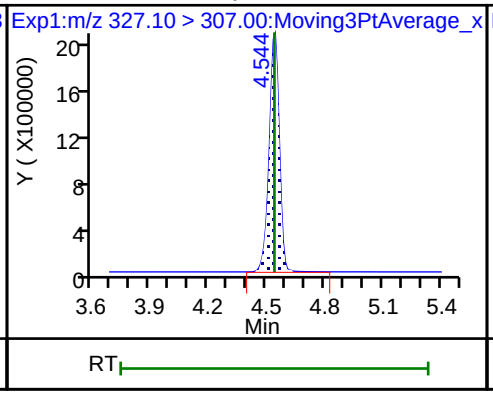
35 Perfluoropentanoic acid



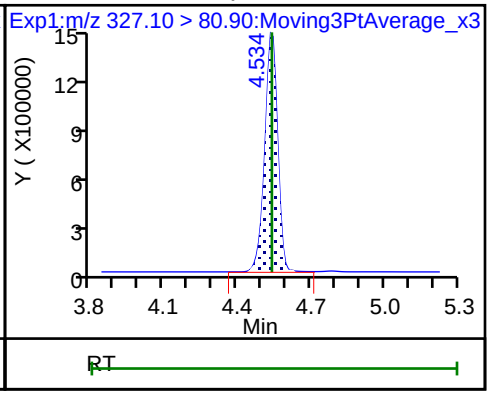
36 Perfluoro(4-methoxybutanoic acid



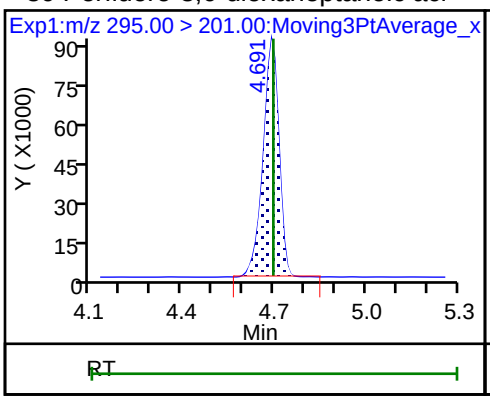
38 1H,1H,2H,2H-perfluorohexanesulfo



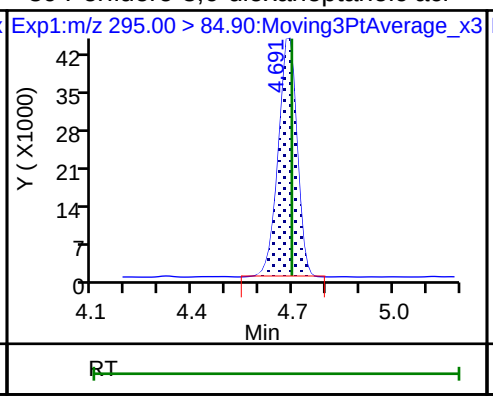
38 1H,1H,2H,2H-perfluorohexanesulfo



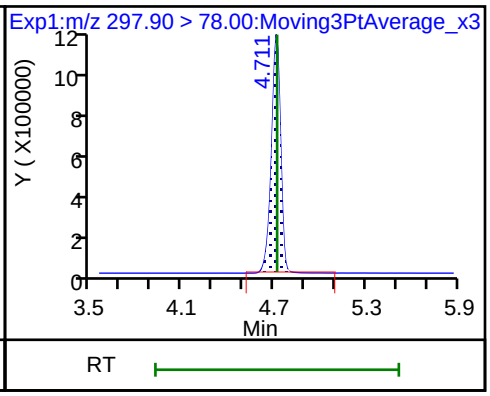
39 Perfluoro-3,6-dioxaheptanoic aci



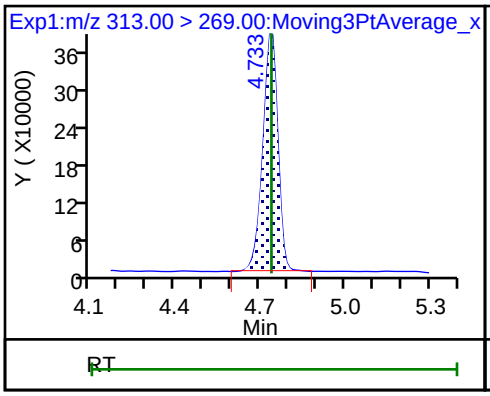
39 Perfluoro-3,6-dioxaheptanoic aci



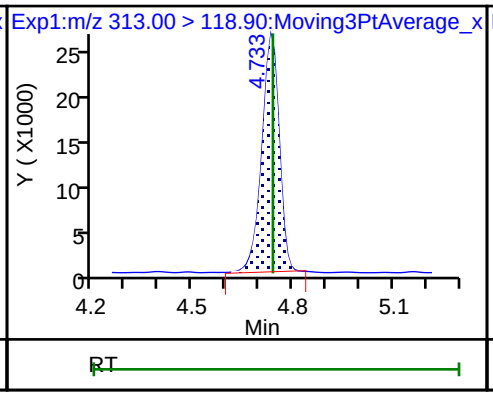
48 FBSA



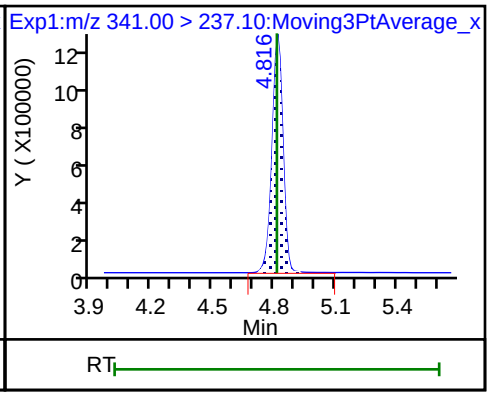
40 Perfluorohexanoic acid



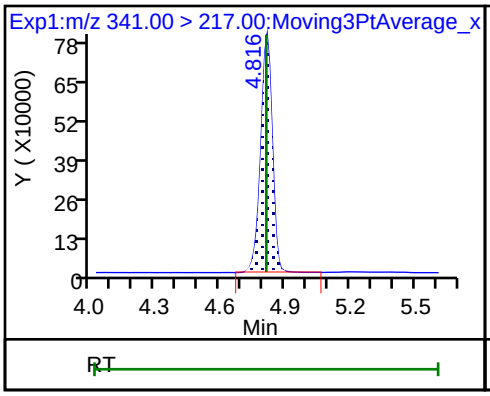
40 Perfluorohexanoic acid



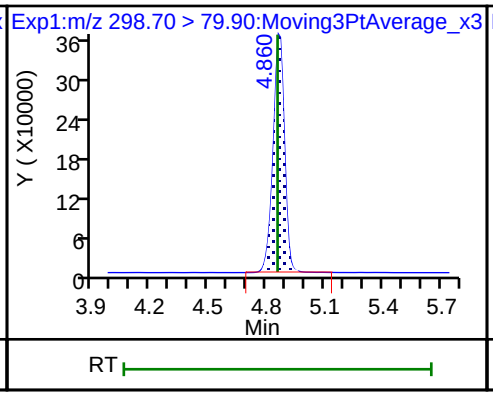
41 5:3 FTCA



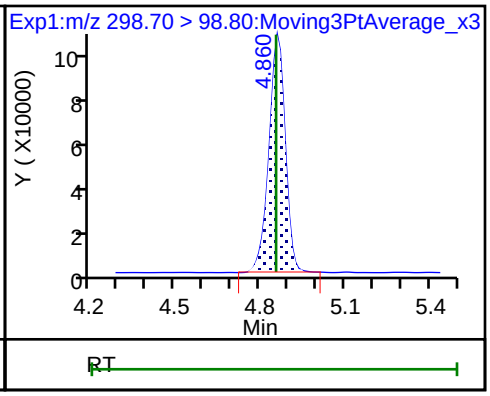
41 5:3 FTCA



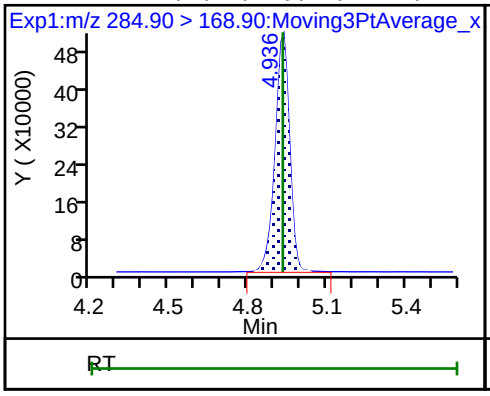
42 Perfluorobutanesulfonic acid



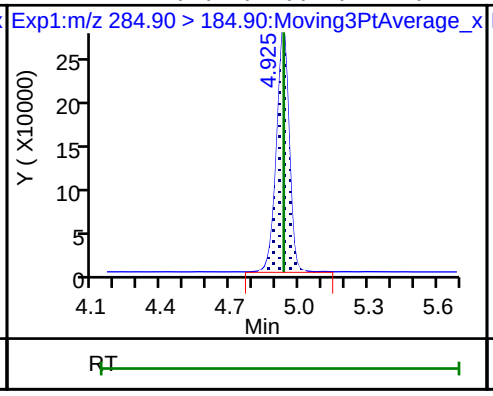
42 Perfluorobutanesulfonic acid



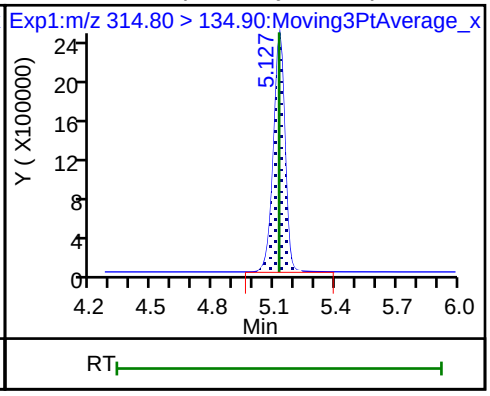
43 Perfluoro(2-propoxypropanoic) ac



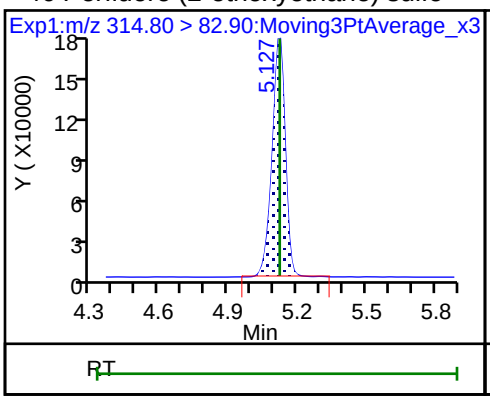
43 Perfluoro(2-propoxypropanoic) ac



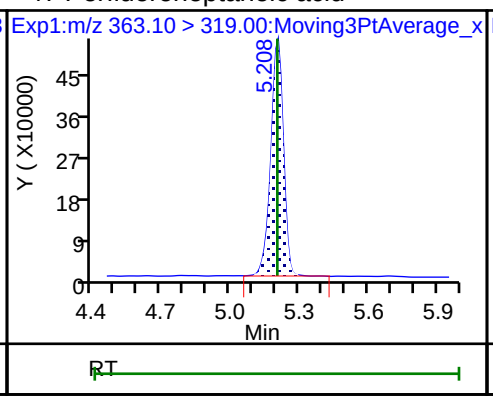
46 Perfluoro (2-ethoxyethane) sulfo



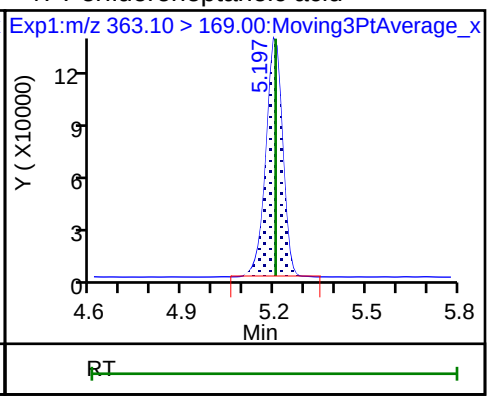
46 Perfluoro (2-ethoxyethane) sulfo



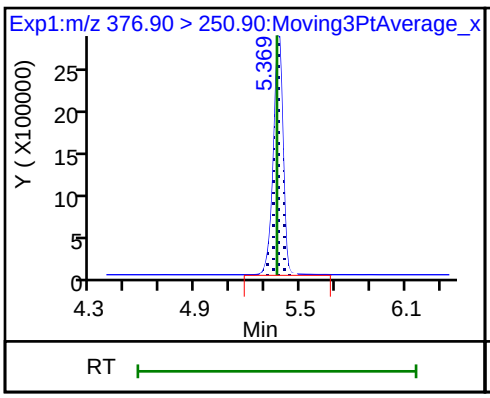
47 Perfluoroheptanoic acid



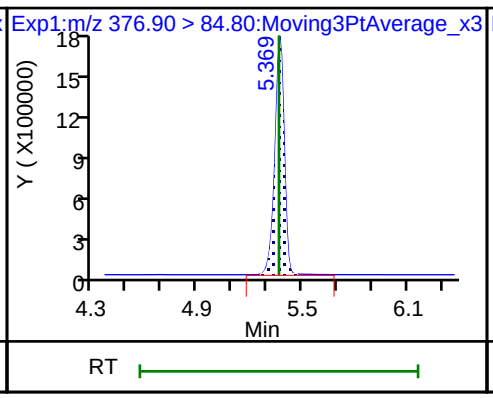
47 Perfluoroheptanoic acid



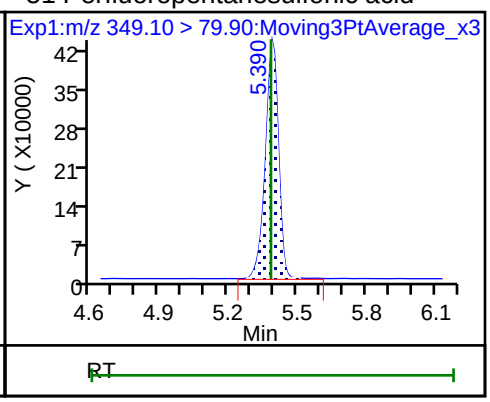
49 DONA



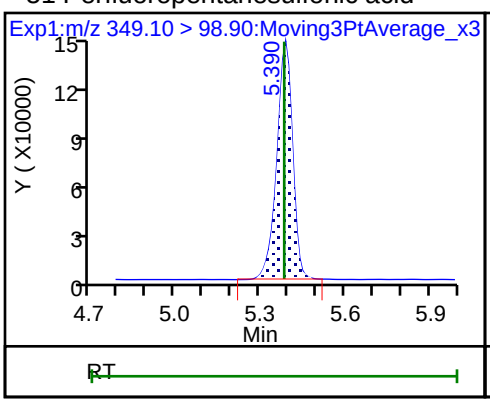
49 DONA



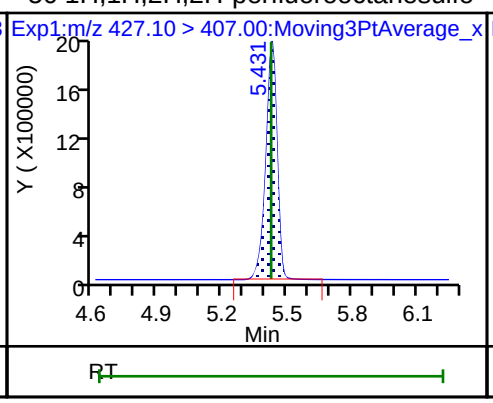
51 Perfluoropentanesulfonic acid



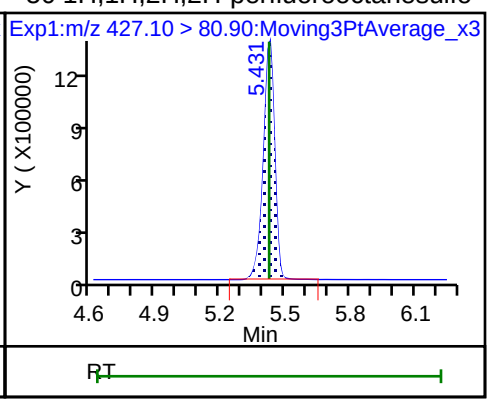
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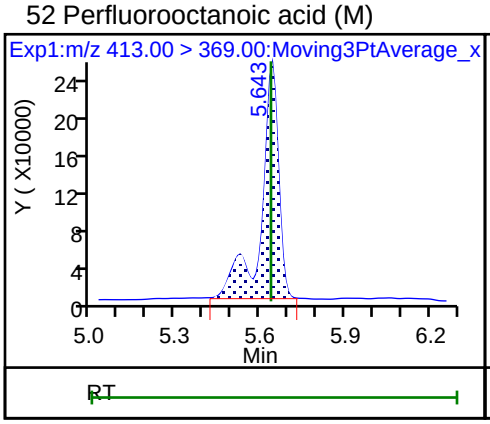
50 1H,1H,2H,2H-perfluorooctanesulfo



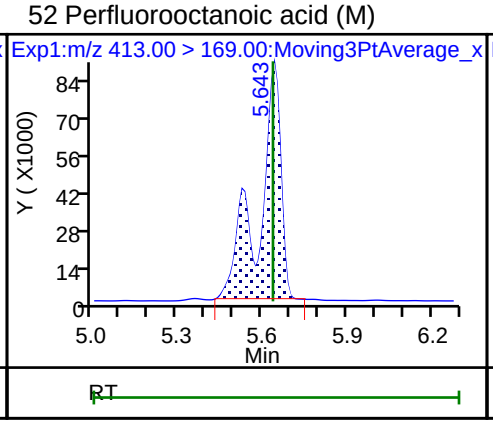
50 1H,1H,2H,2H-perfluorooctanesulfo



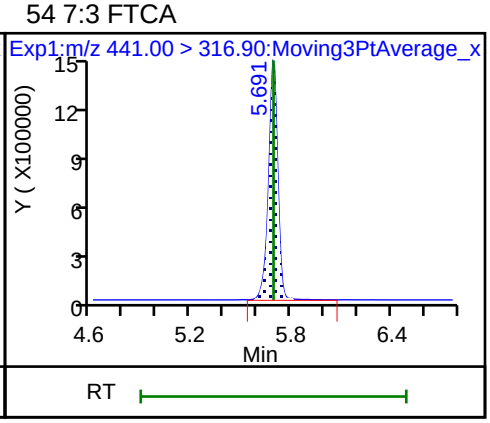
52 Perfluorooctanoic acid (M)



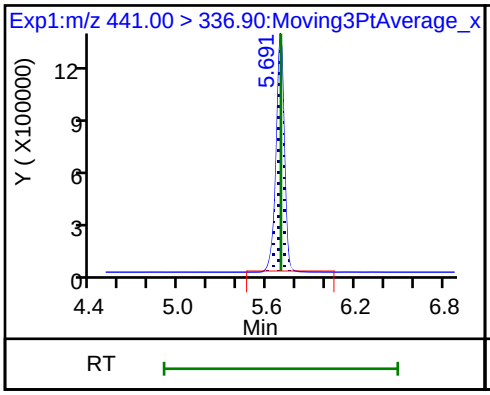
52 Perfluorooctanoic acid (M)



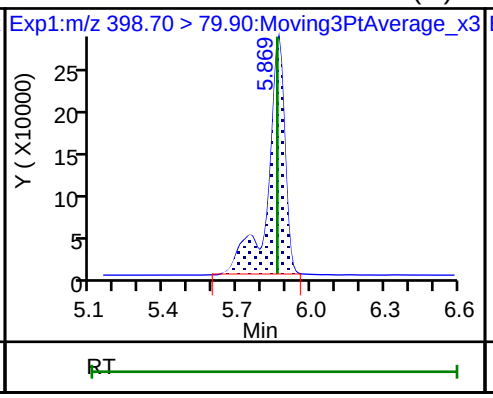
54 7:3 FTCA



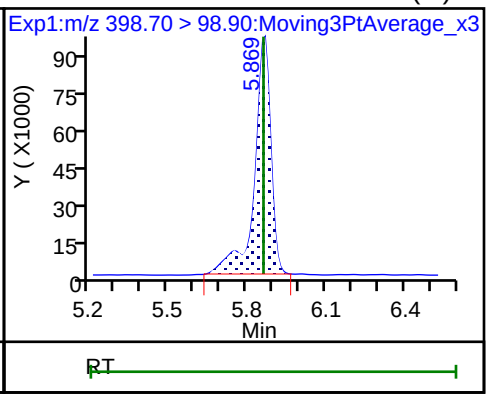
54 7:3 FTCA



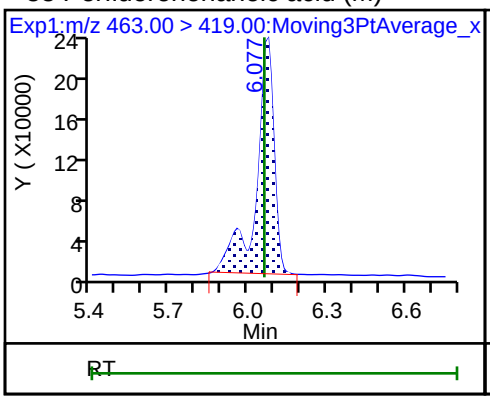
53 Perfluorohexanesulfonic acid (M)



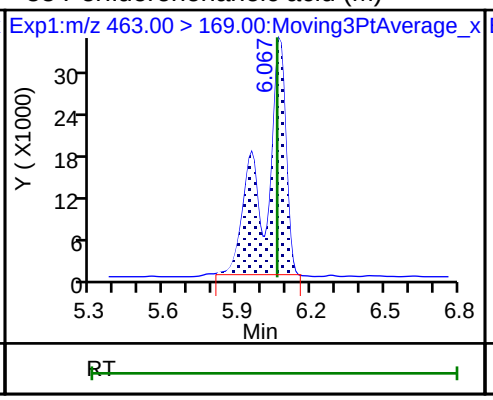
53 Perfluorohexanesulfonic acid (M)



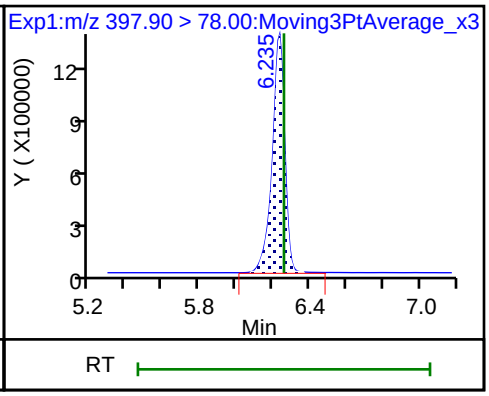
55 Perfluorononanoic acid (M)



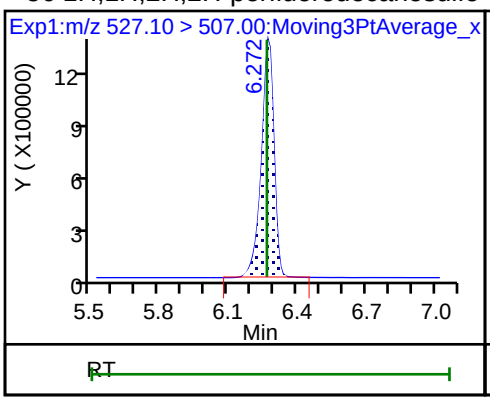
55 Perfluorononanoic acid (M)



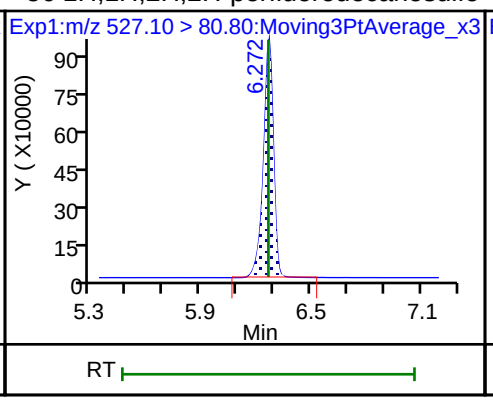
62 FHxSA



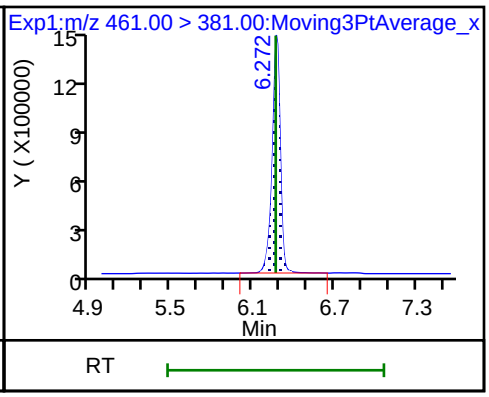
56 1H,1H,2H,2H-perfluorodecanesulfo



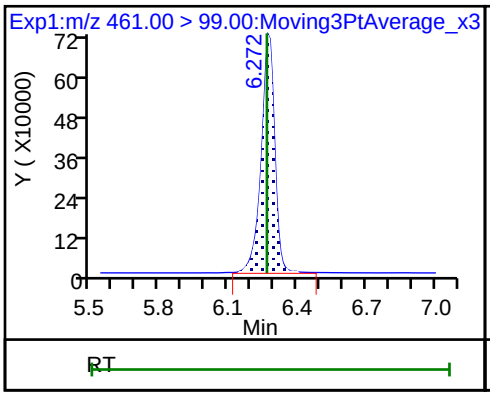
56 1H,1H,2H,2H-perfluorodecanesulfo



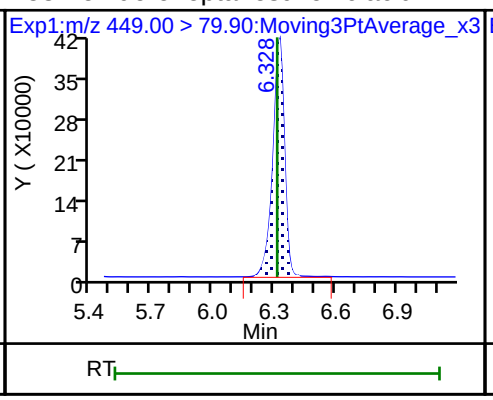
57 PFECHS



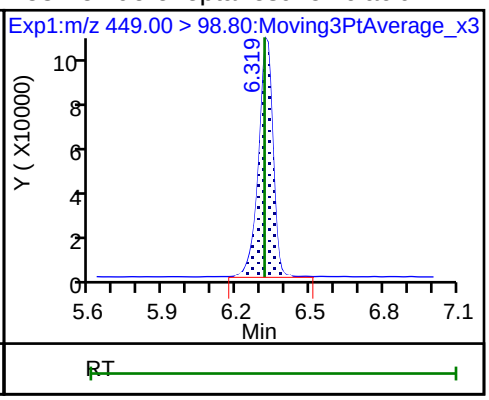
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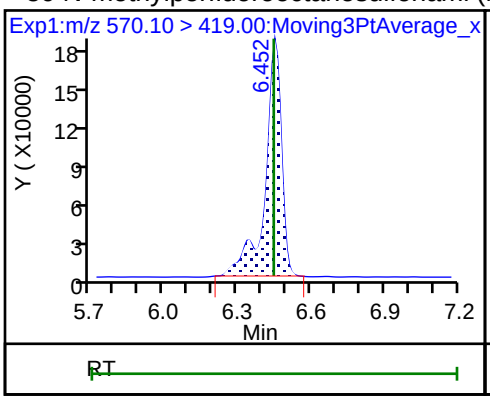
58 Perfluoroheptanesulfonic acid



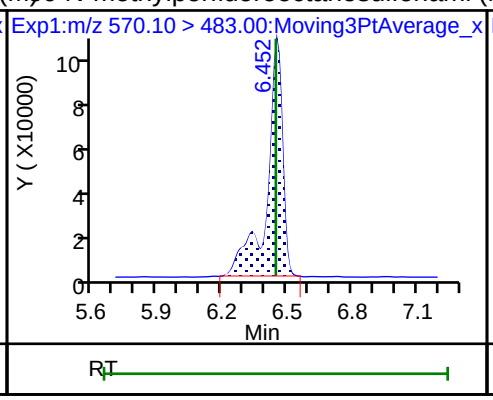
58 Perfluoroheptanesulfonic acid



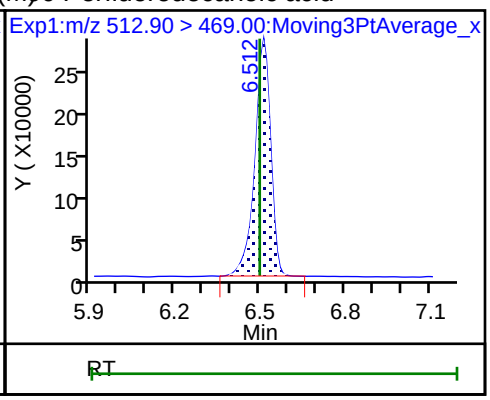
59 N-methylperfluorooctanesulfonami (M)



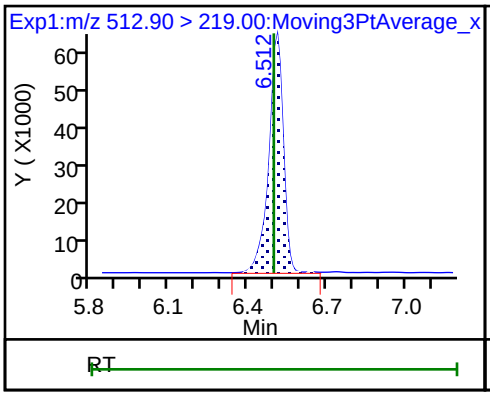
59 N-methylperfluorooctanesulfonami (M)



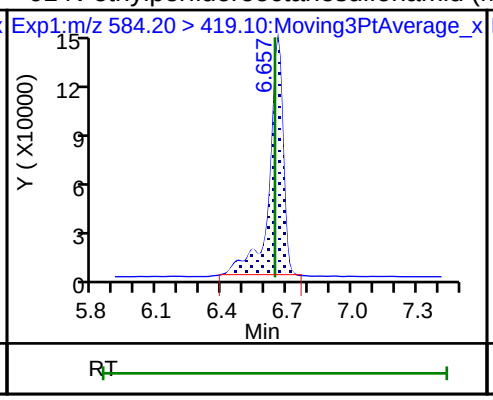
60 Perfluorodecanoic acid



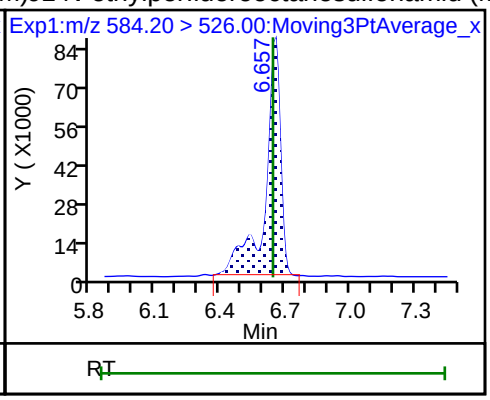
60 Perfluorodecanoic acid



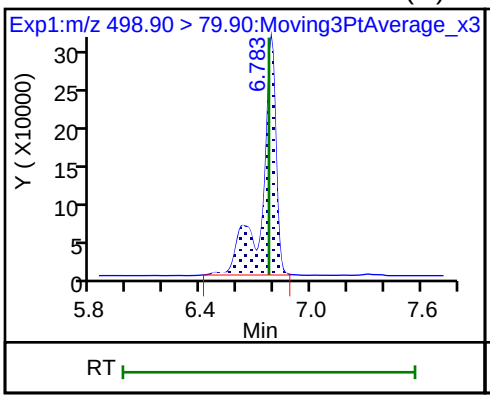
61 N-ethylperfluorooctanesulfonamid (M)



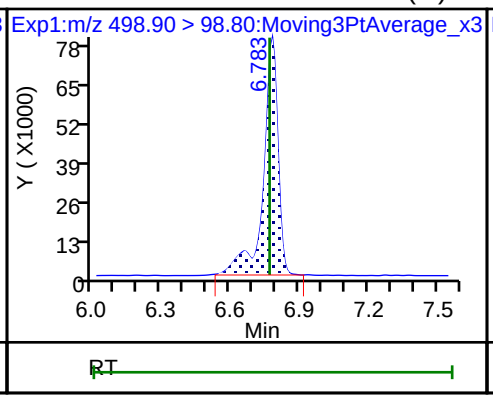
61 N-ethylperfluorooctanesulfonamid (M)



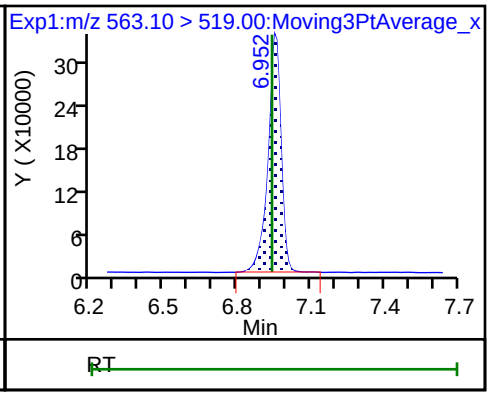
63 Perfluorooctanesulfonic acid (M)



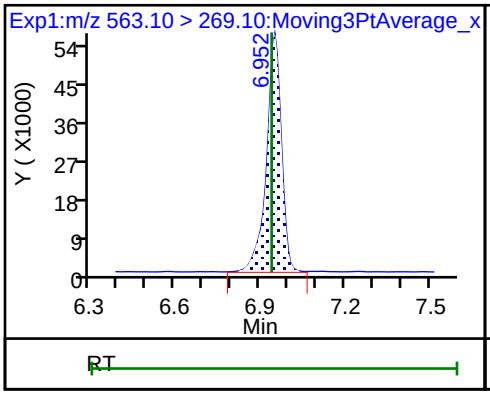
63 Perfluorooctanesulfonic acid (M)



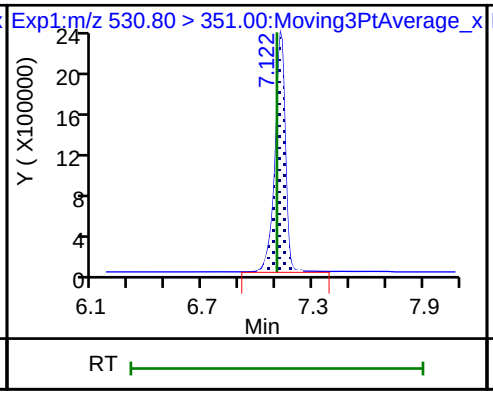
64 Perfluoroundecanoic acid



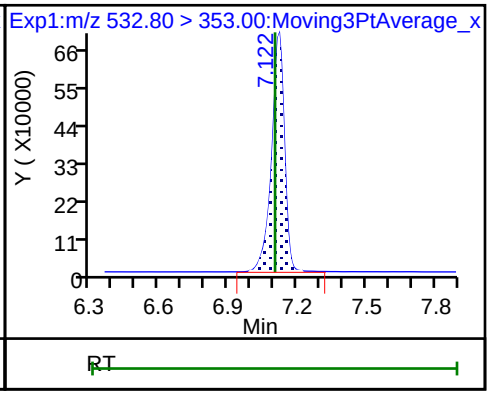
64 Perfluoroundecanoic acid



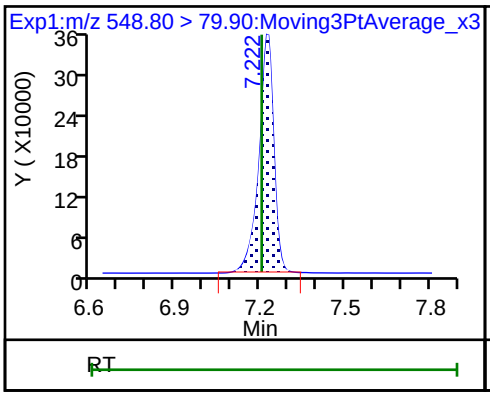
65 9-Chlorohexadecafluoro-3-oxanona



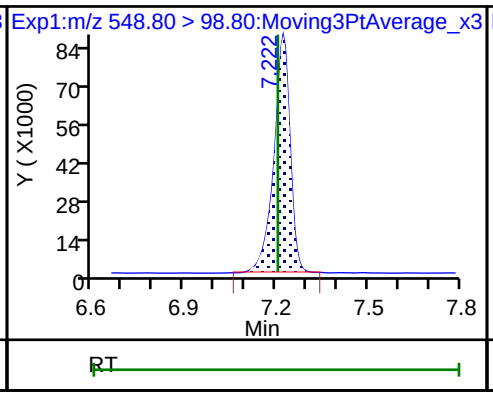
65 9-Chlorohexadecafluoro-3-oxanona



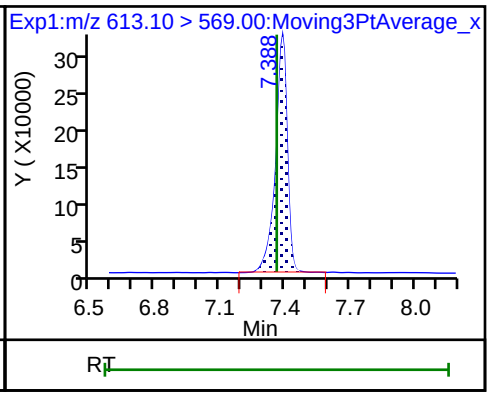
66 Perfluorononanesulfonic acid



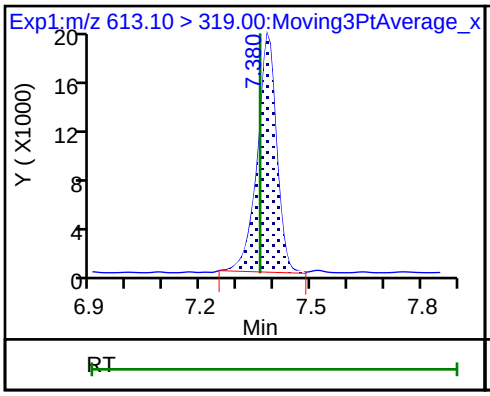
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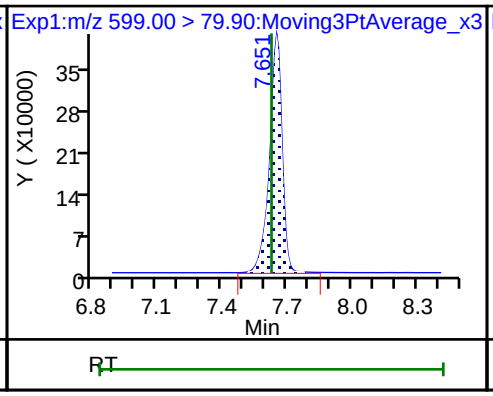
67 Perfluorododecanoic acid



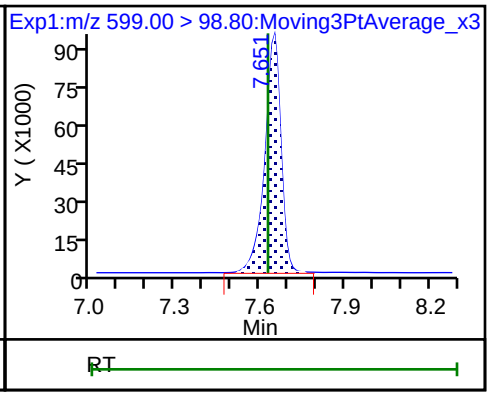
67 Perfluorododecanoic acid



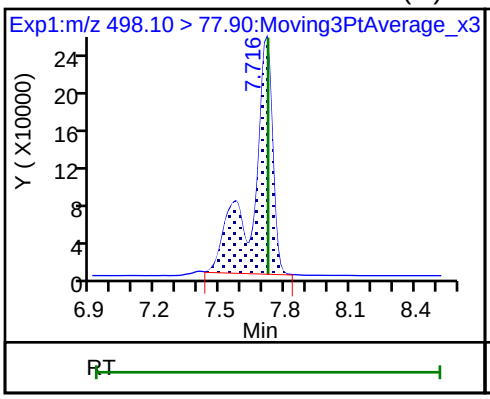
68 Perfluorodecanesulfonic acid



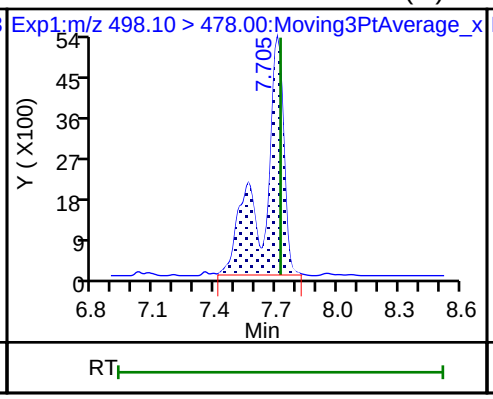
68 Perfluorodecanesulfonic acid



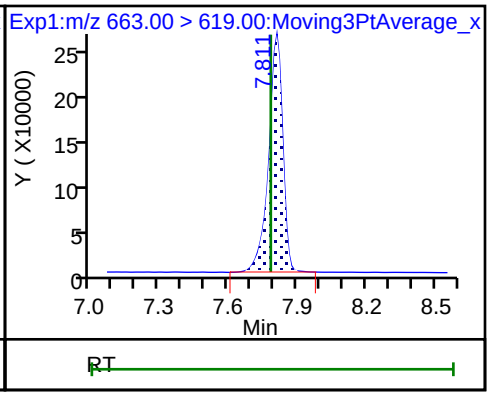
69 Perfluorooctanesulfonamide (M)



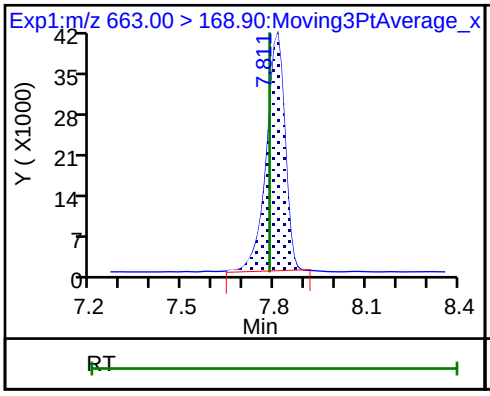
69 Perfluorooctanesulfonamide (M)



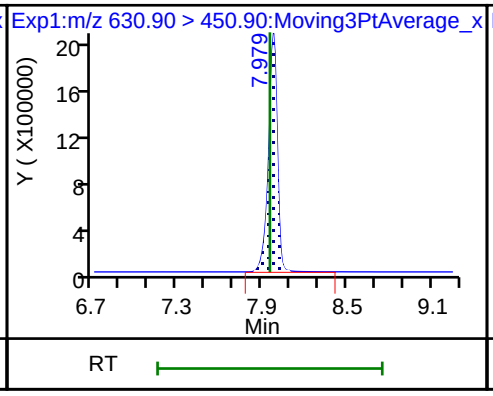
70 Perfluorotridecanoic acid



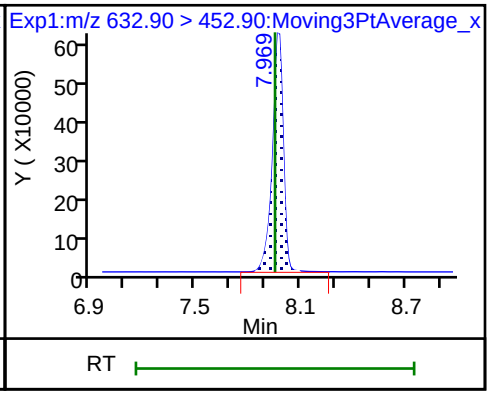
70 Perfluorotridecanoic acid



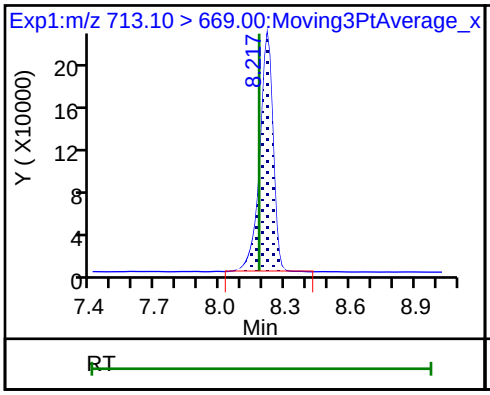
71 11-Chloroeicosafluoro-3-oxaundec



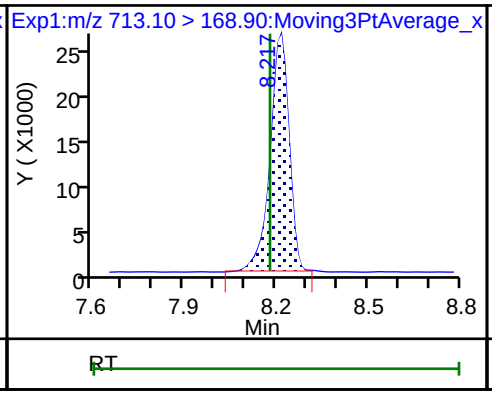
71 11-Chloroeicosafluoro-3-oxaundec



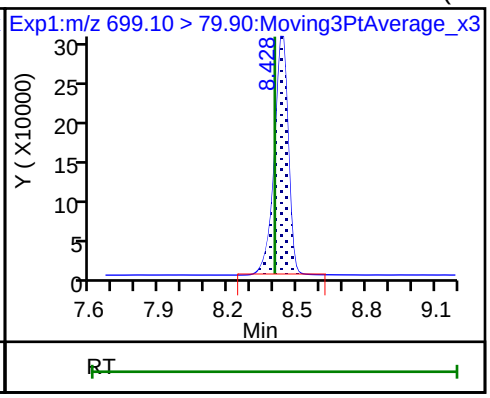
72 Perfluorotetradecanoic acid



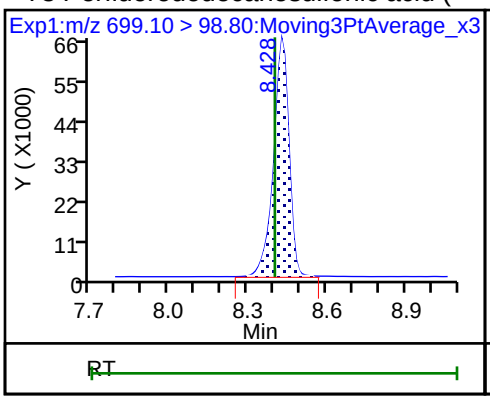
72 Perfluorotetradecanoic acid



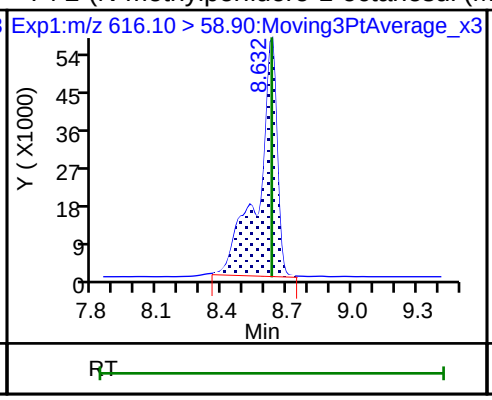
73 Perfluorododecanesulfonic acid (



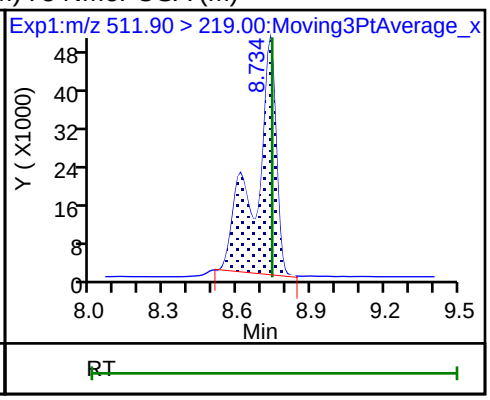
73 Perfluorododecanesulfonic acid (



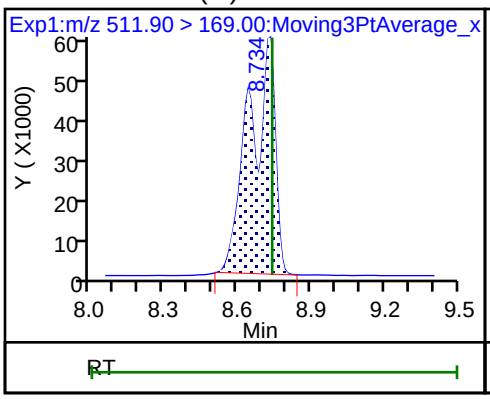
74 2-(N-methylperfluoro-1-octanesul (M)



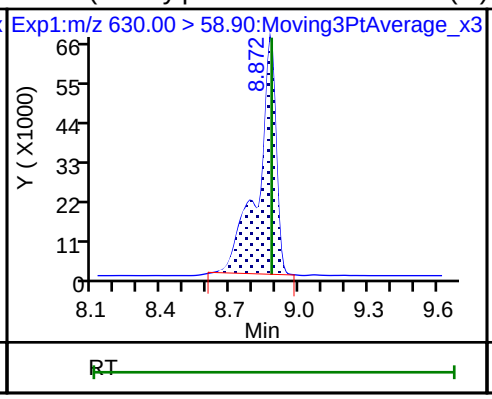
75 NMeFOSA (M)



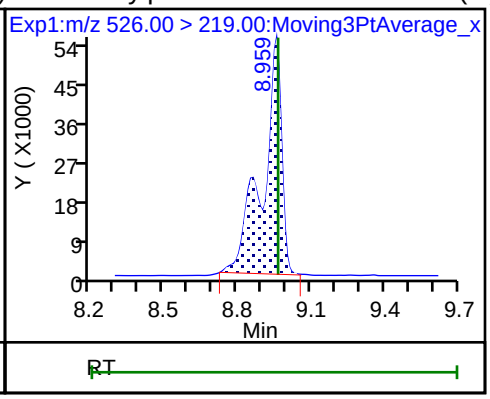
75 NMeFOSA (M)



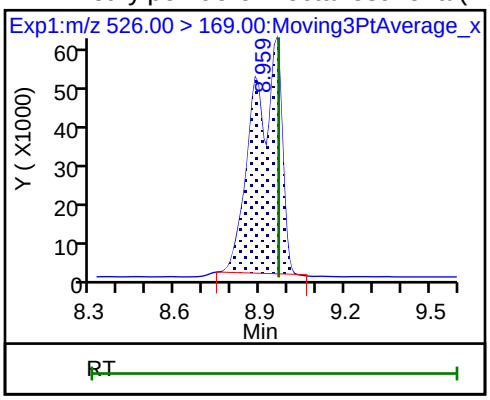
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

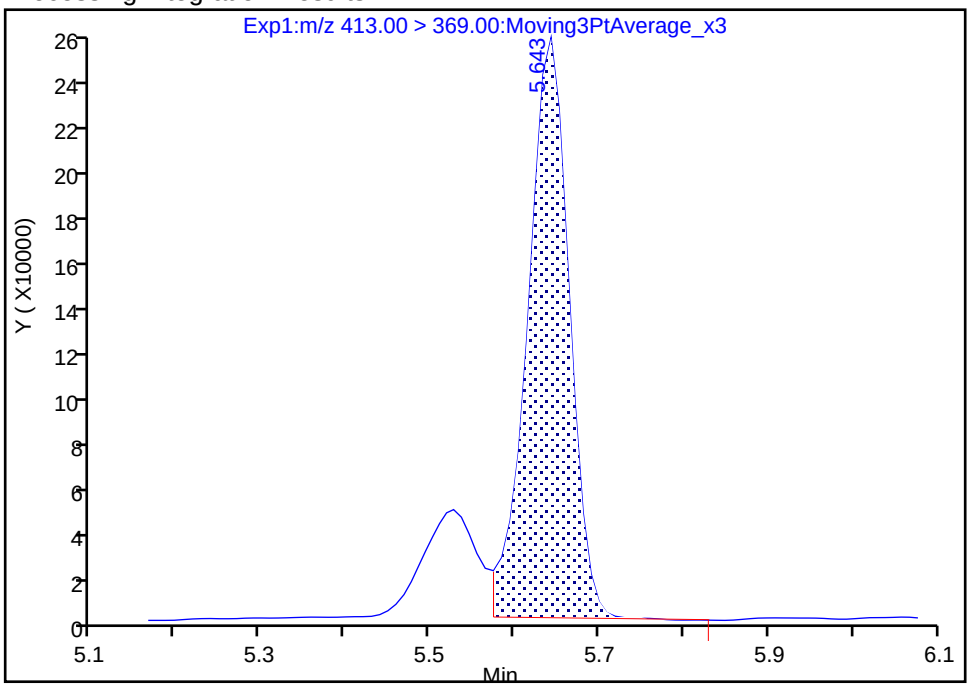
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

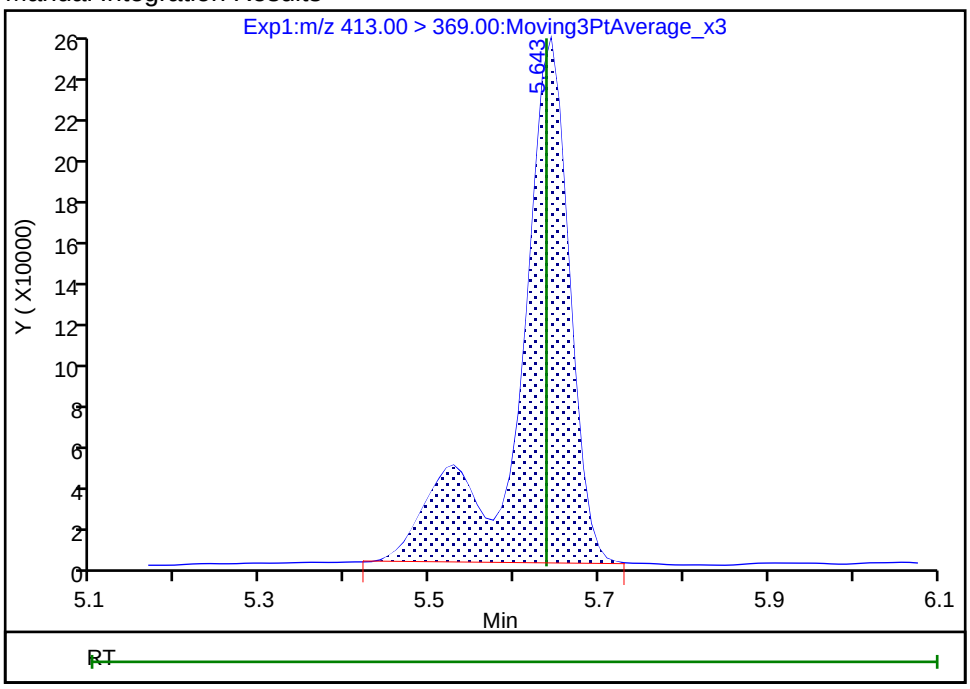
Processing Integration Results

RT: 5.64
Area: 862483
Amount: 0.642128
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 1061054
Amount: 0.789967
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:01:43 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

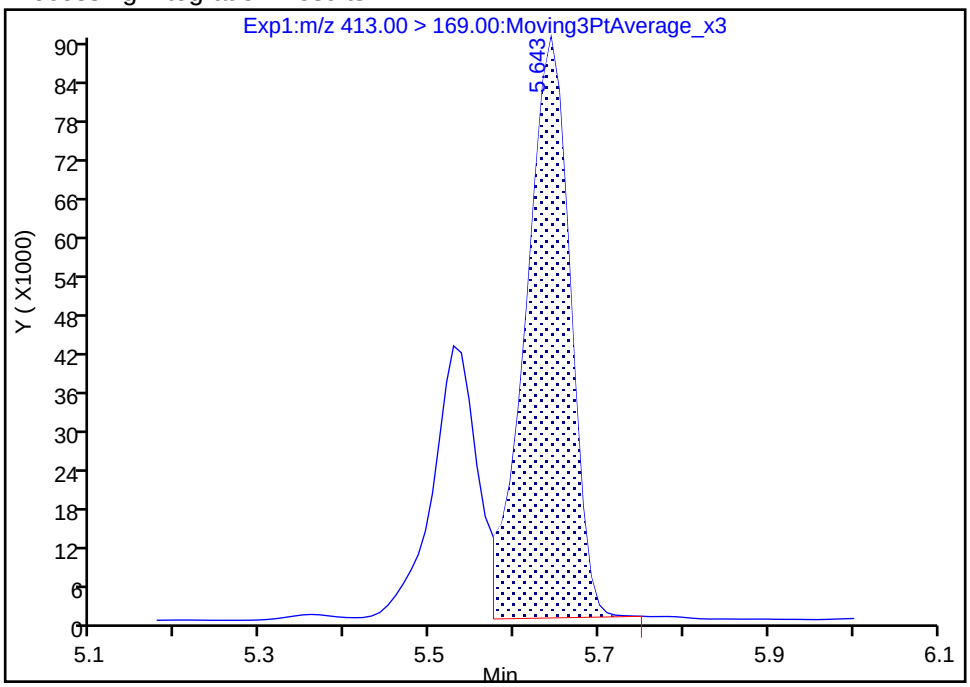
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

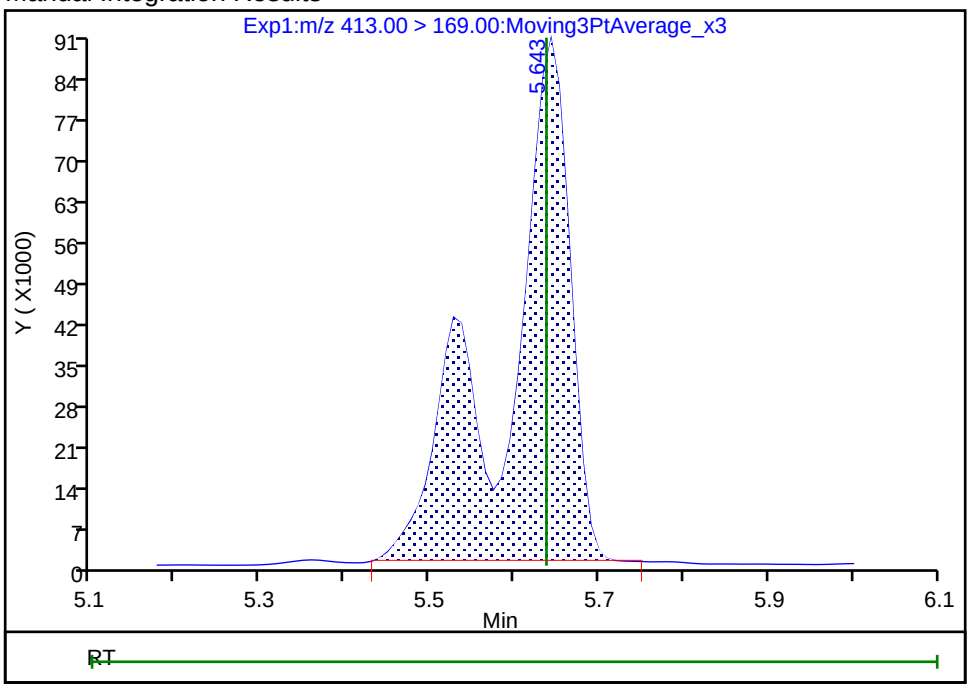
Processing Integration Results

RT: 5.64
Area: 326800
Amount: 0.642128
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 476528
Amount: 0.789967
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:01:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

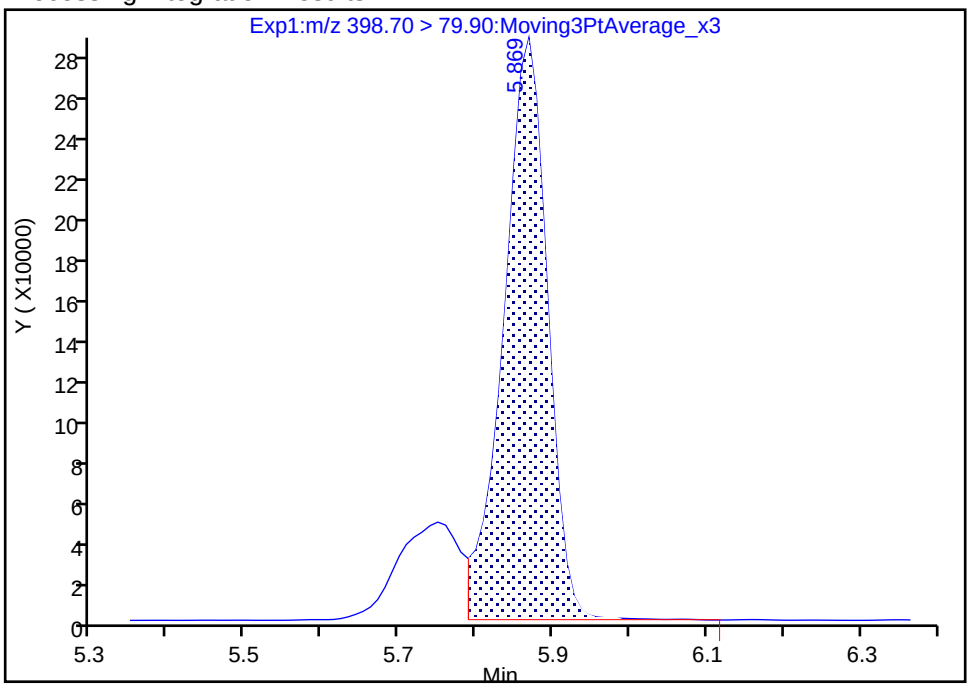
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

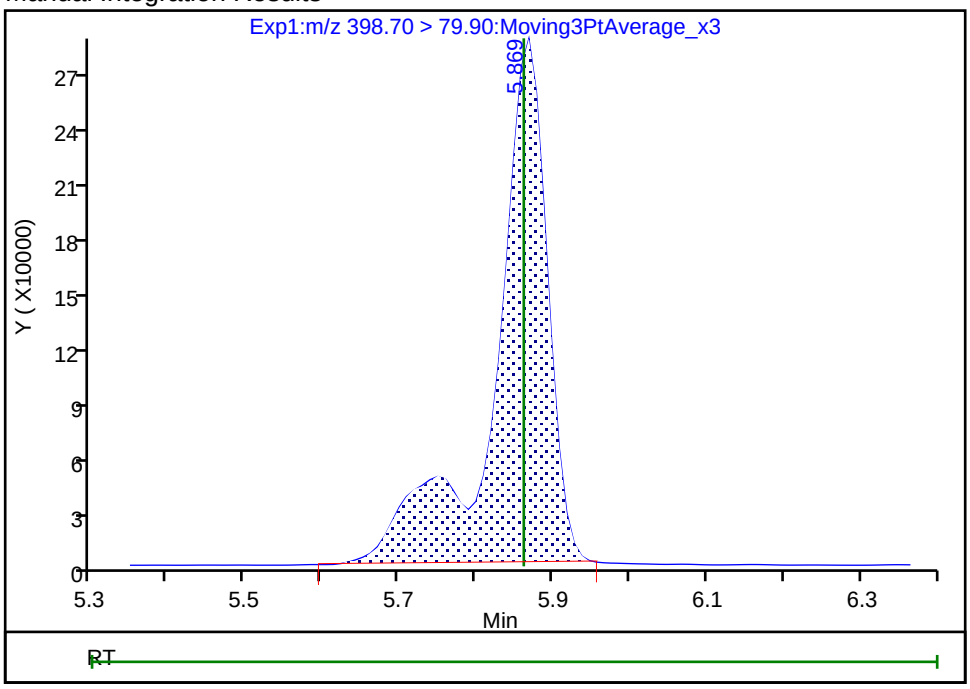
Processing Integration Results

RT: 5.87
Area: 1126210
Amount: 0.469796
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 1367282
Amount: 0.570358
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:01:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

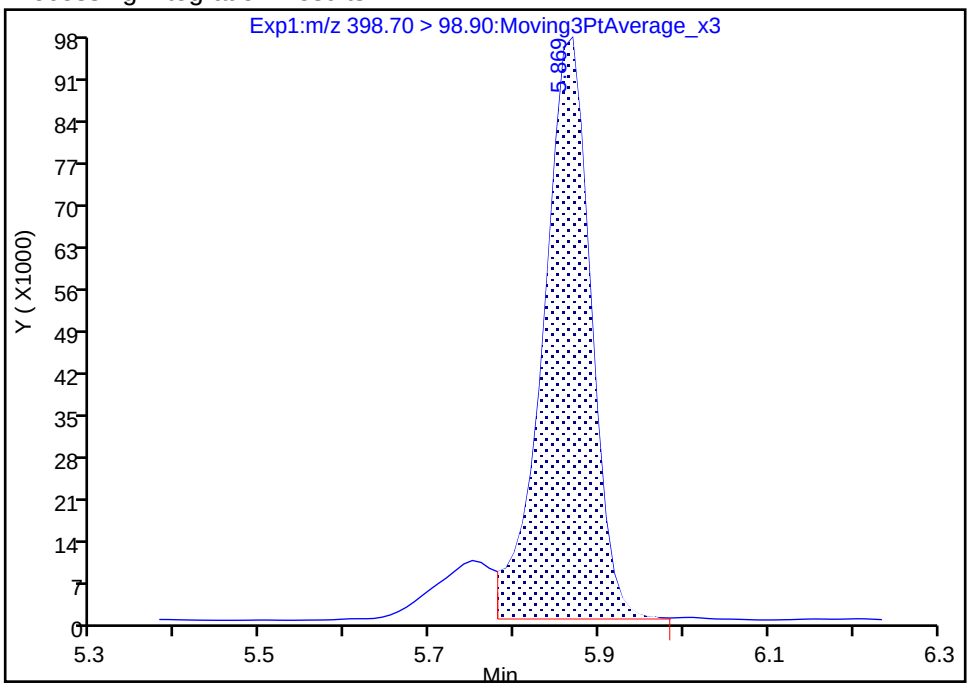
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d				
Injection Date:	19-Sep-2024 03:57:34	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	52
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

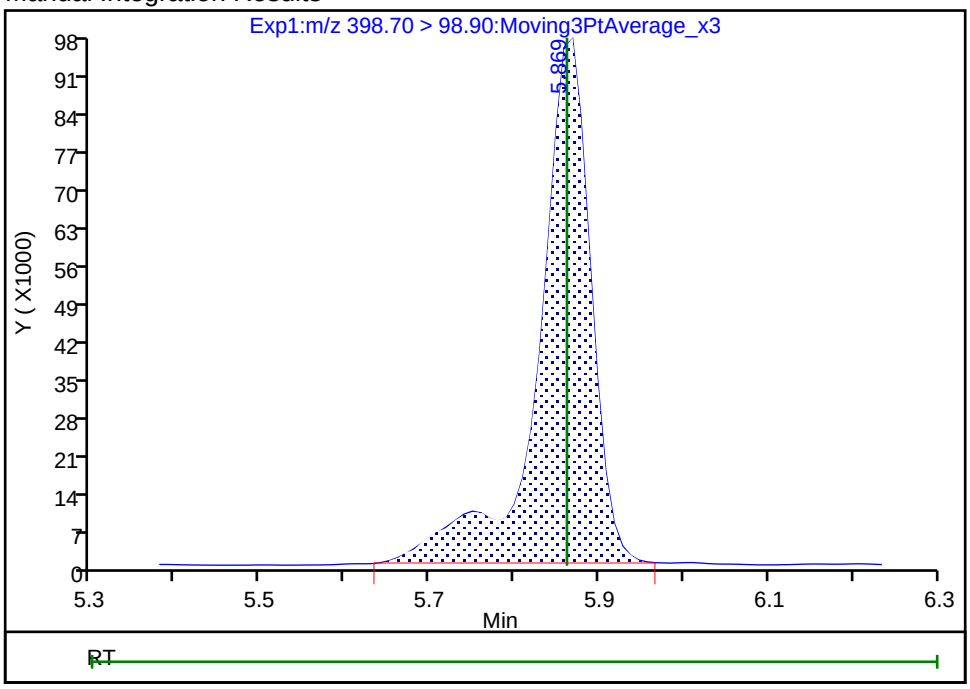
Processing Integration Results

RT: 5.87
Area: 377840
Amount: 0.469796
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 421820
Amount: 0.570358
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:02:02 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

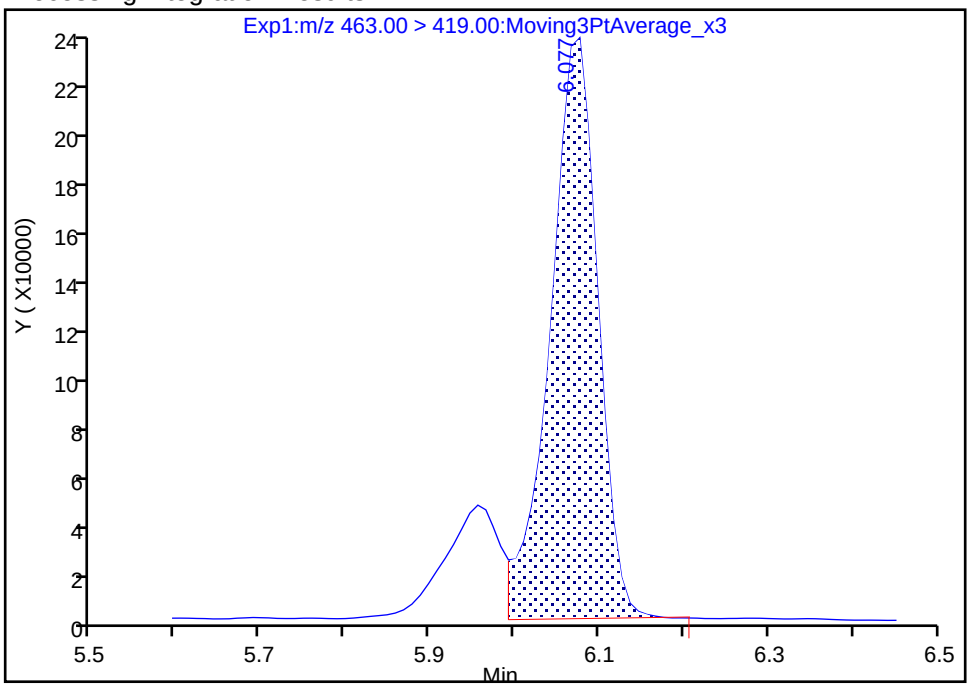
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

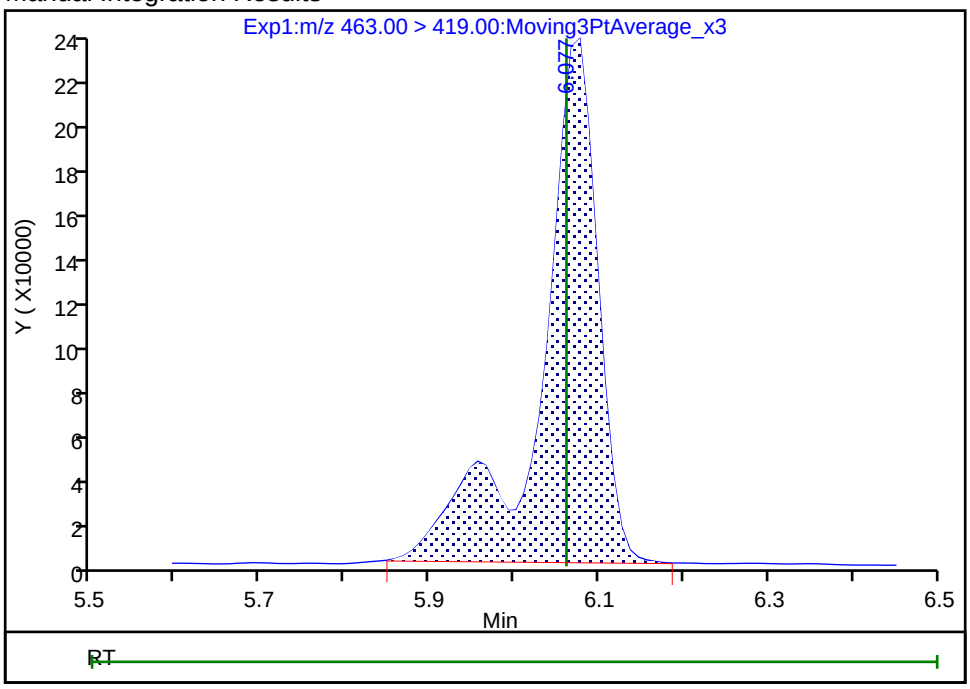
Processing Integration Results

RT: 6.08
Area: 912088
Amount: 0.504626
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 1096019
Amount: 0.606389
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:03:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

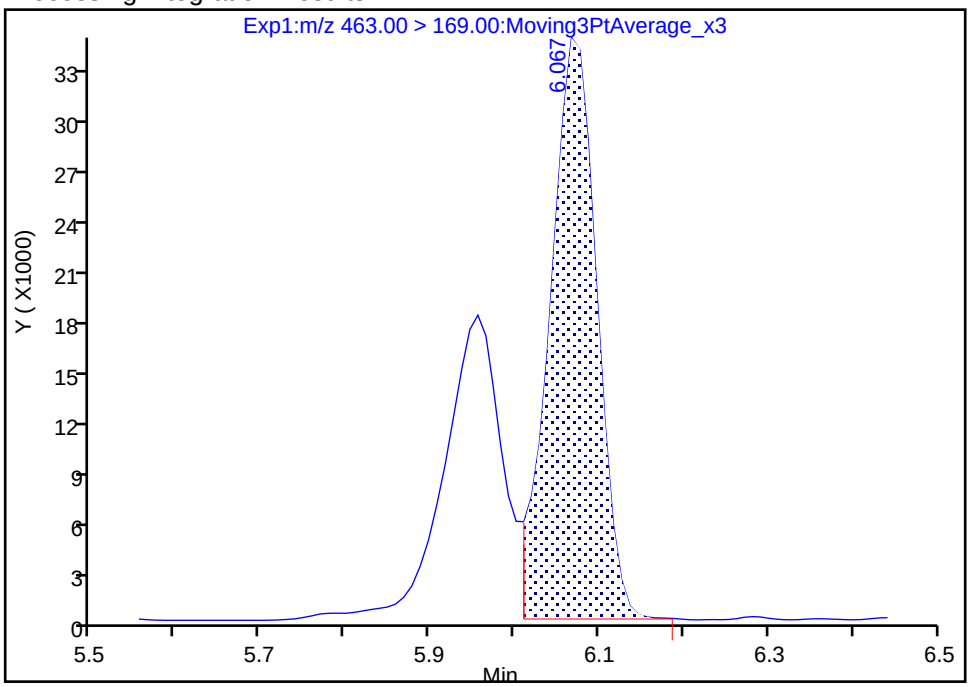
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Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

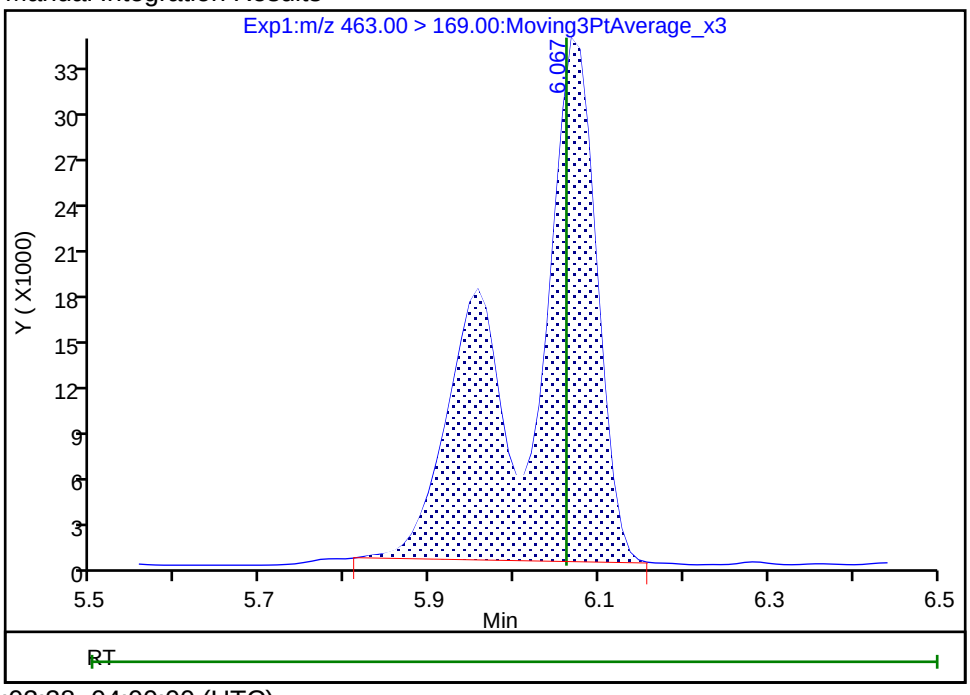
Processing Integration Results

RT: 6.07
Area: 130812
Amount: 0.504626
Amount Units: ng/ml



Manual Integration Results

RT: 6.07
Area: 209280
Amount: 0.606389
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:03:38 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

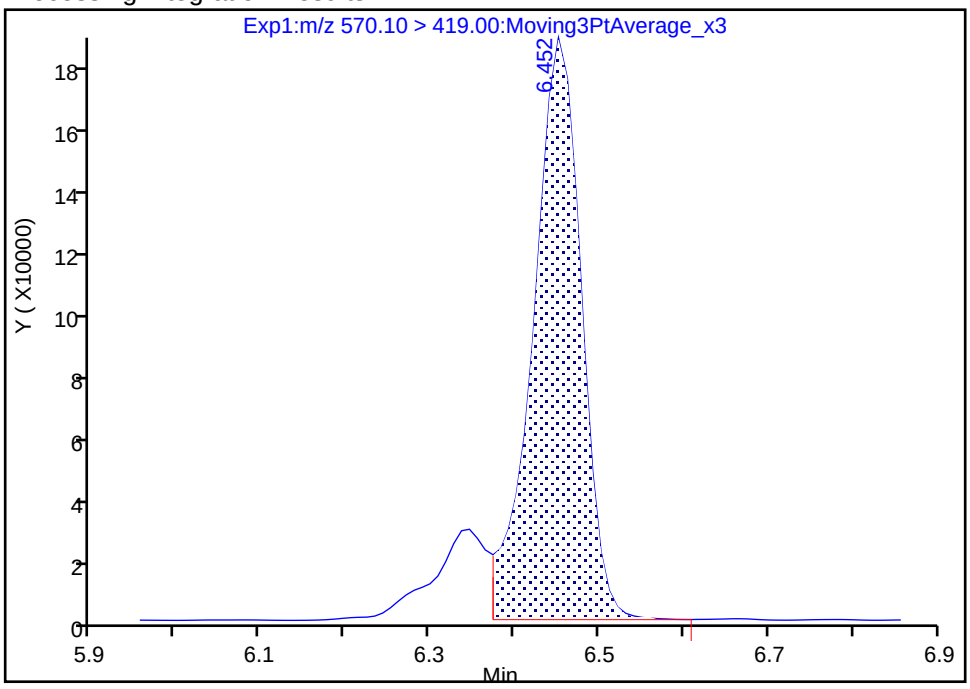
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

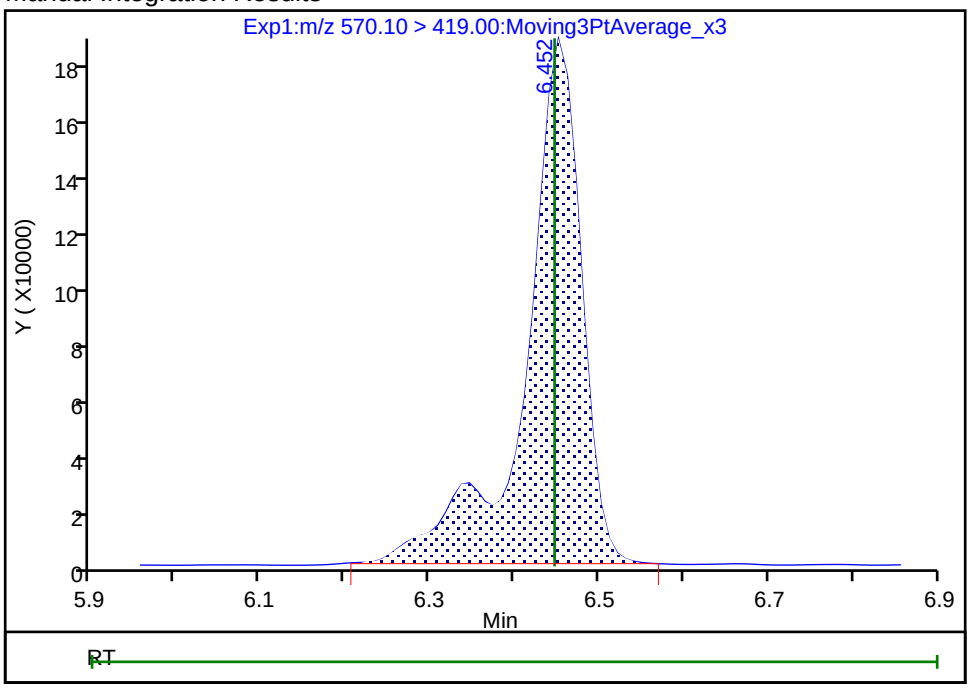
Processing Integration Results

RT: 6.45
Area: 732526
Amount: 0.556037
Amount Units: ng/ml



Manual Integration Results

RT: 6.45
Area: 847671
Amount: 0.643440
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:03:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

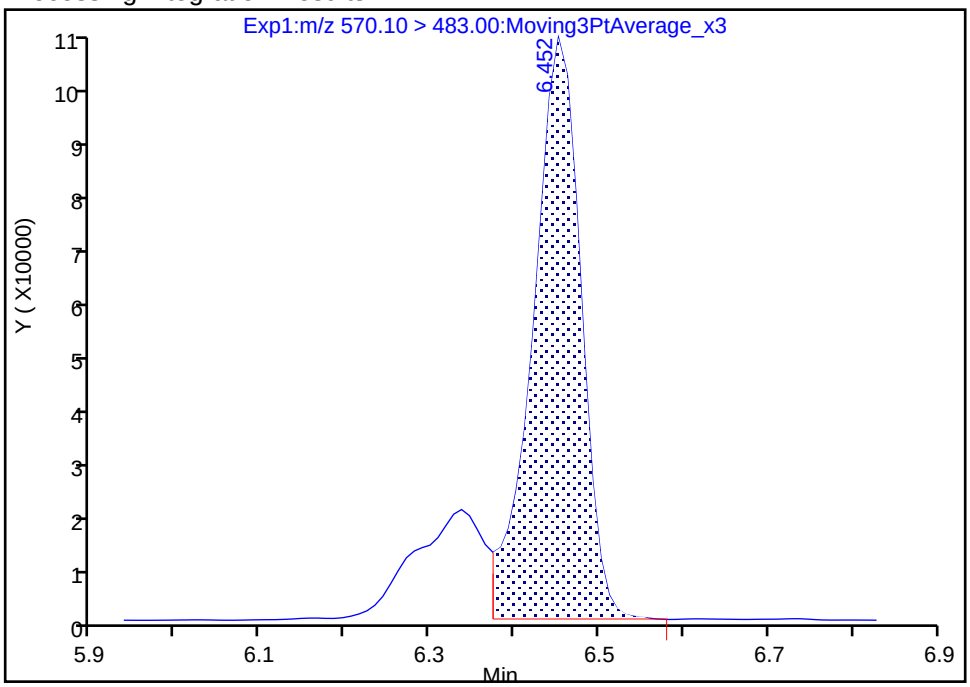
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

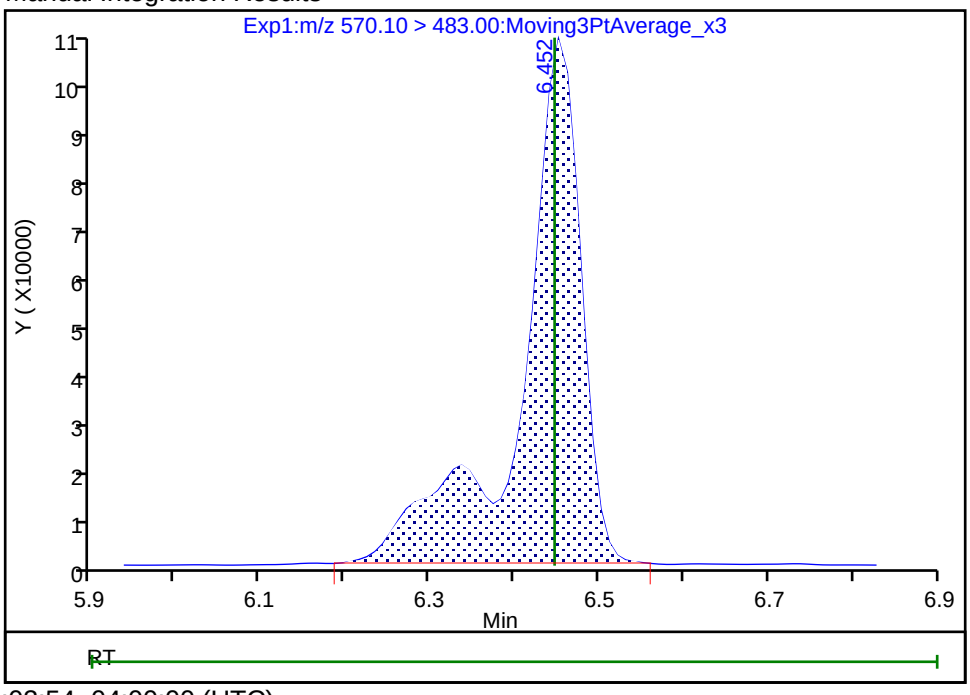
Processing Integration Results

RT: 6.45
Area: 403987
Amount: 0.556037
Amount Units: ng/ml



Manual Integration Results

RT: 6.45
Area: 508843
Amount: 0.643440
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:03:54 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

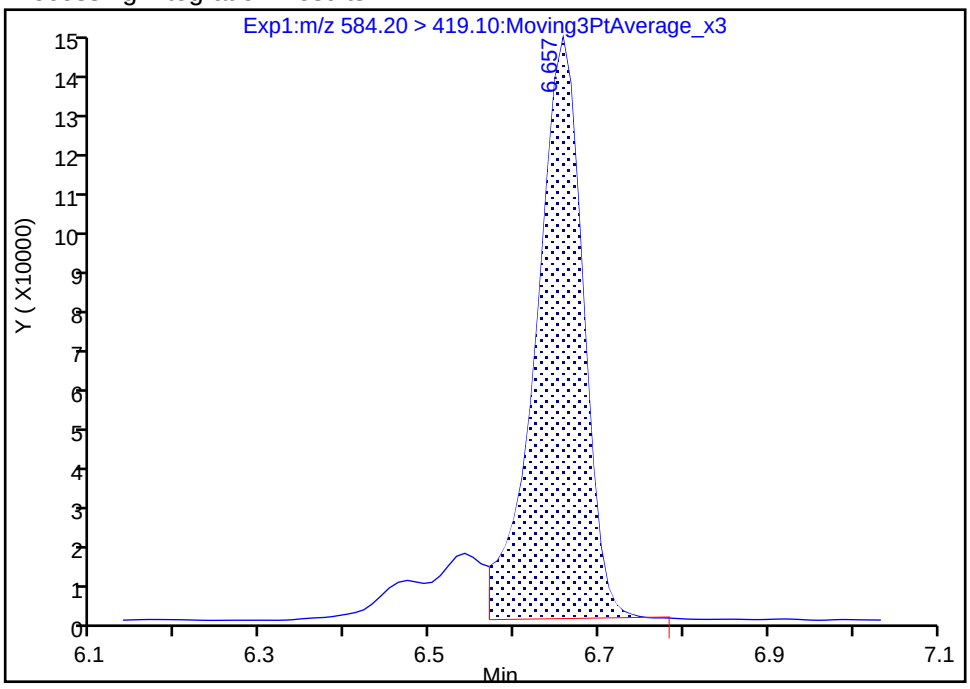
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d				
Injection Date:	19-Sep-2024 03:57:34	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	52
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

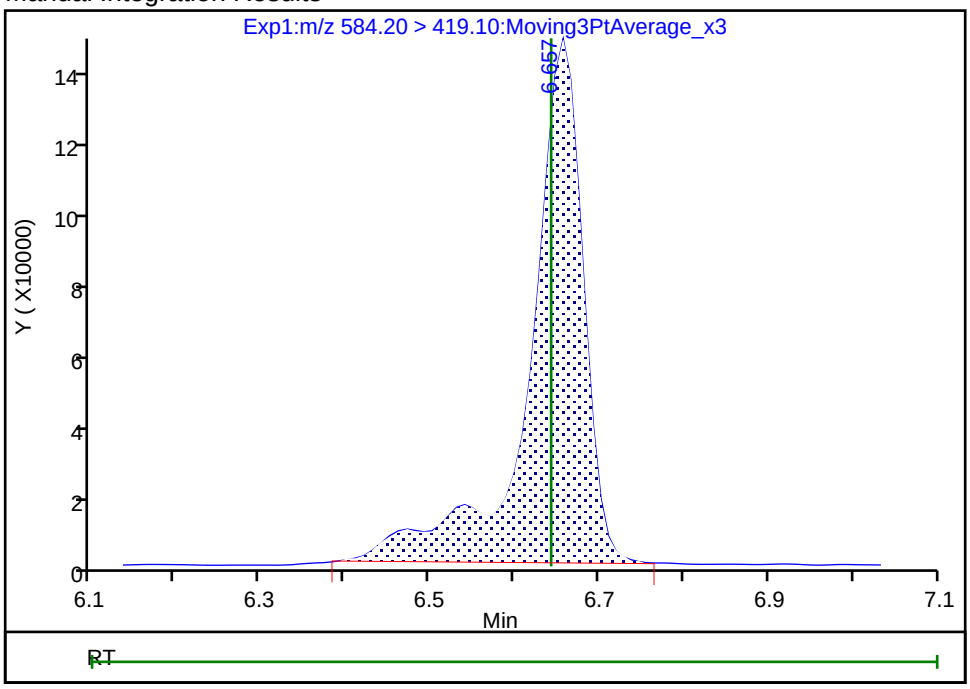
Processing Integration Results

RT: 6.66
Area: 542190
Amount: 0.498381
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 625882
Amount: 0.575310
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

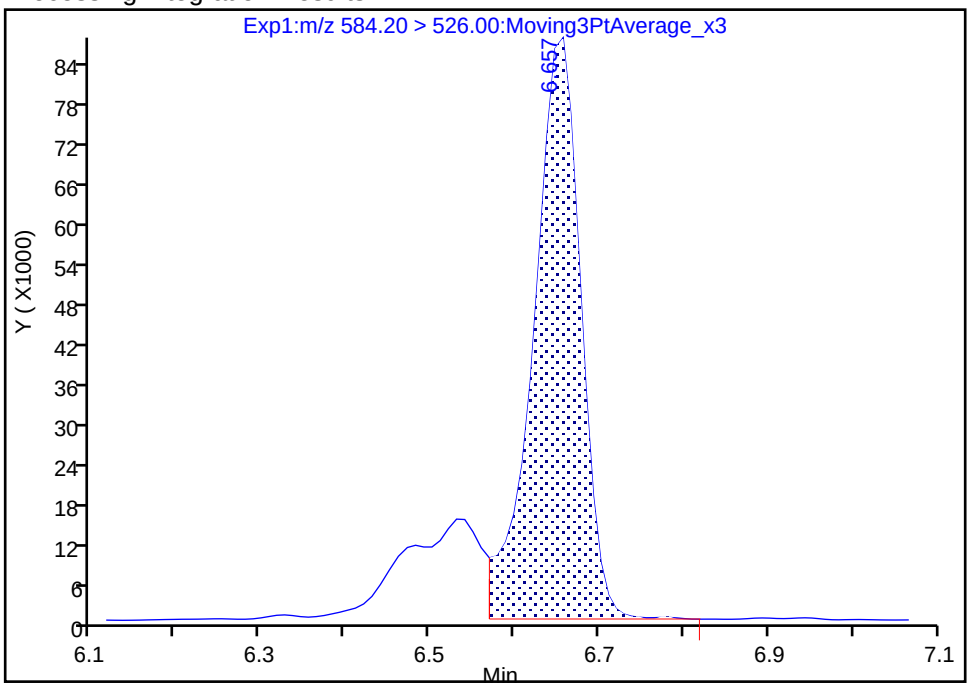
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

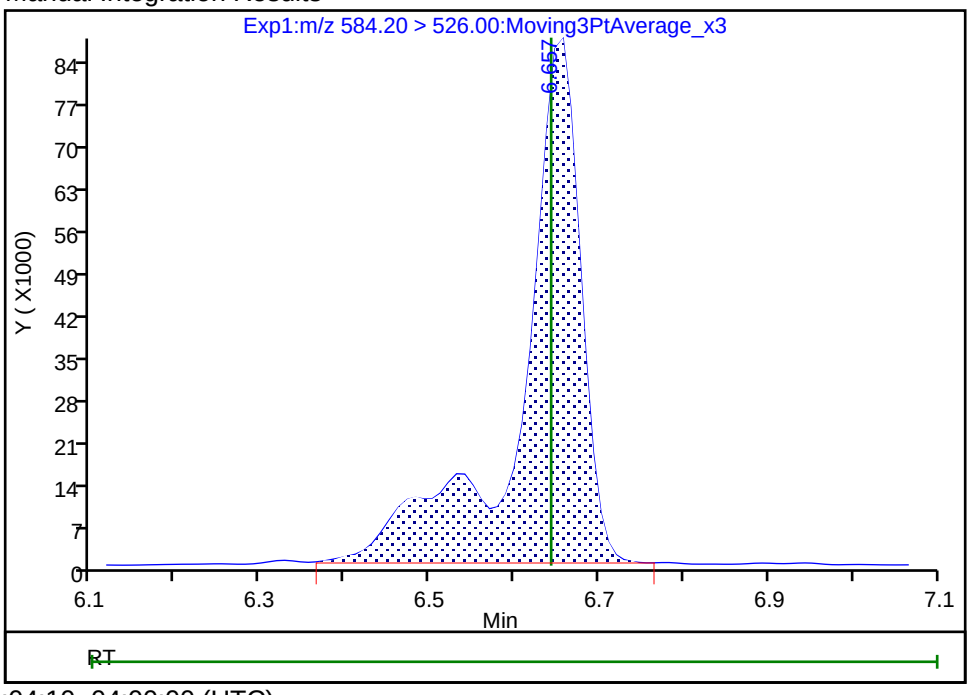
Processing Integration Results

RT: 6.66
Area: 341224
Amount: 0.498381
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 428842
Amount: 0.575310
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:10 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

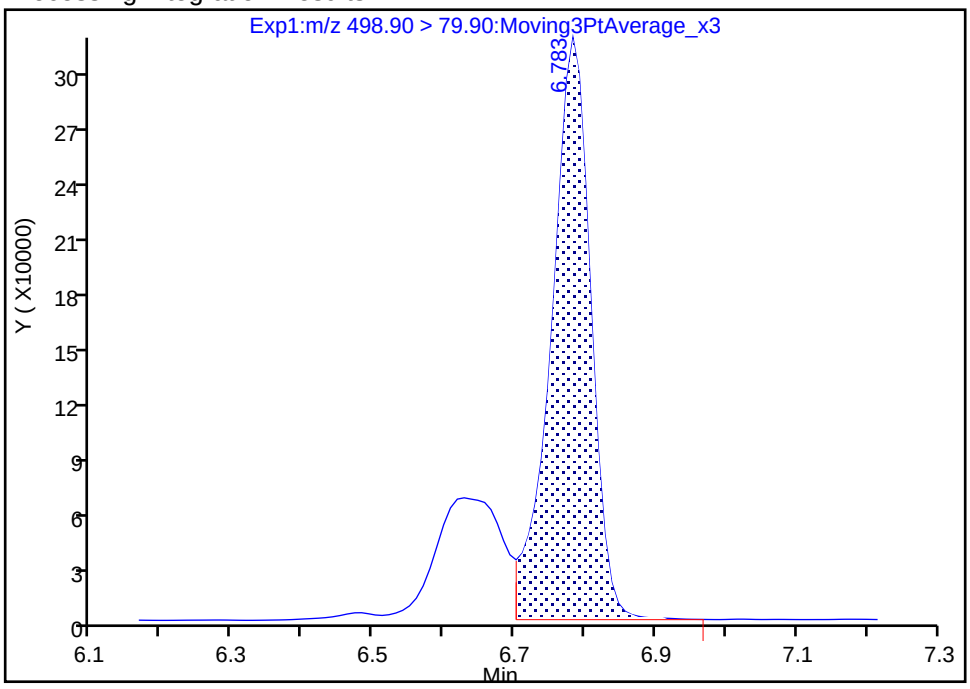
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

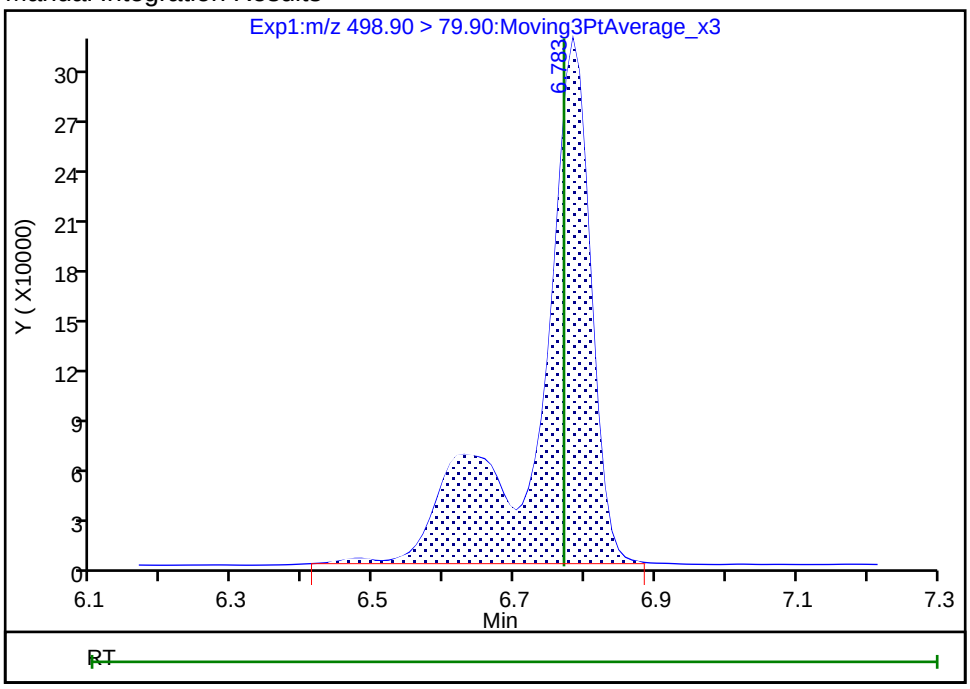
Processing Integration Results

RT: 6.78
Area: 1242465
Amount: 0.398183
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 1664114
Amount: 0.533313
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

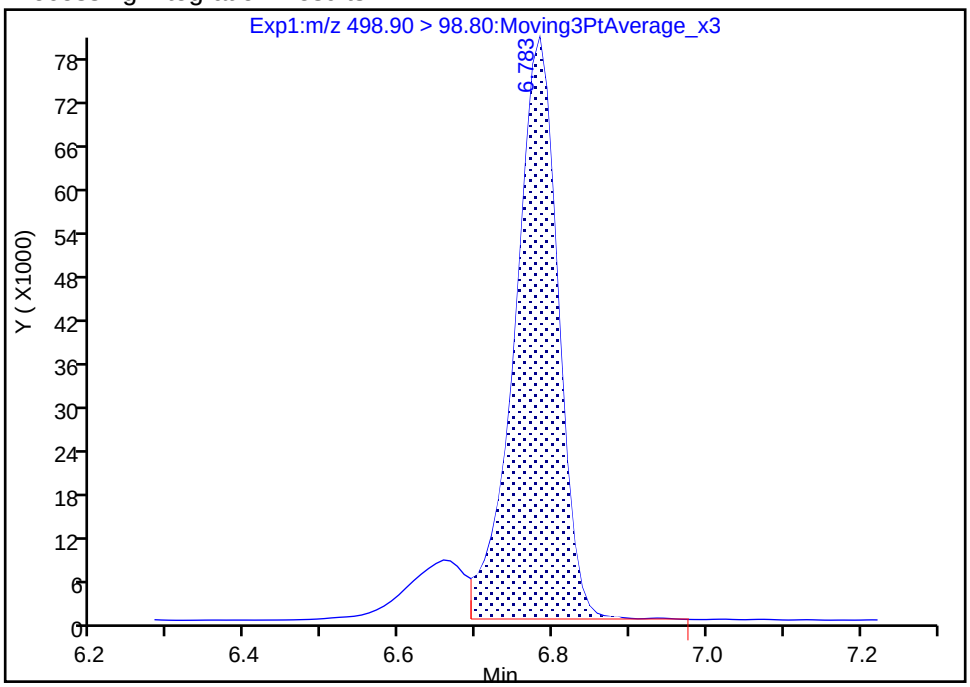
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

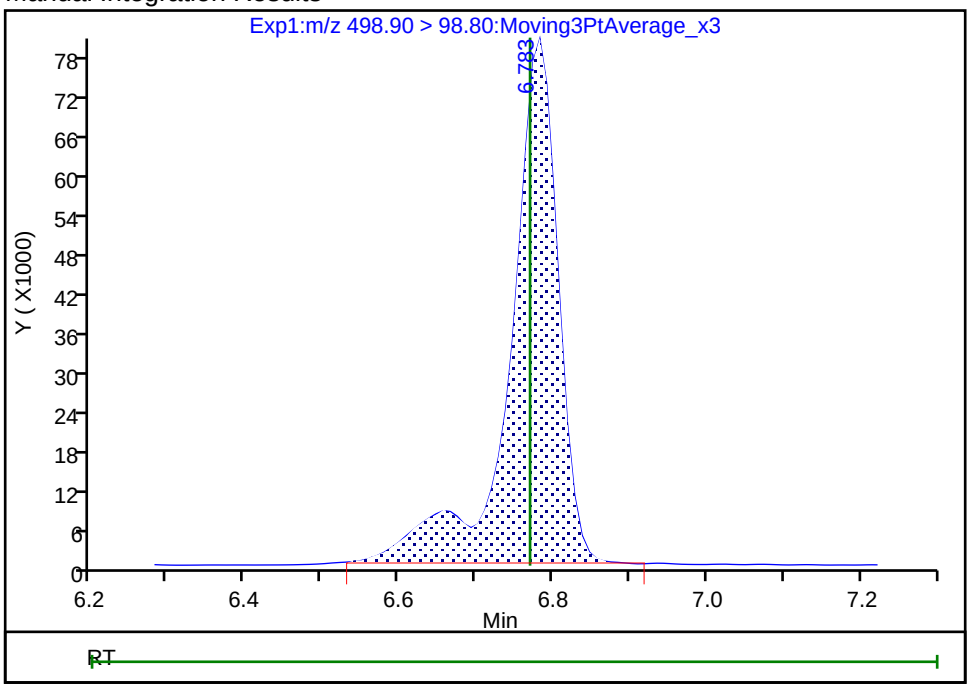
Processing Integration Results

RT: 6.78
Area: 314368
Amount: 0.398183
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 351449
Amount: 0.533313
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:23 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

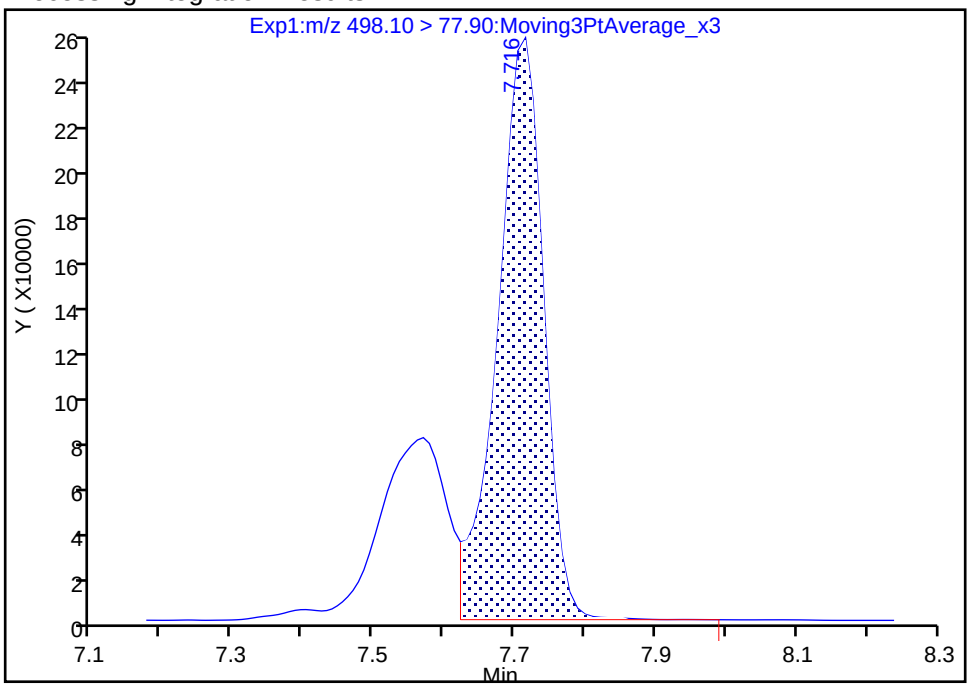
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

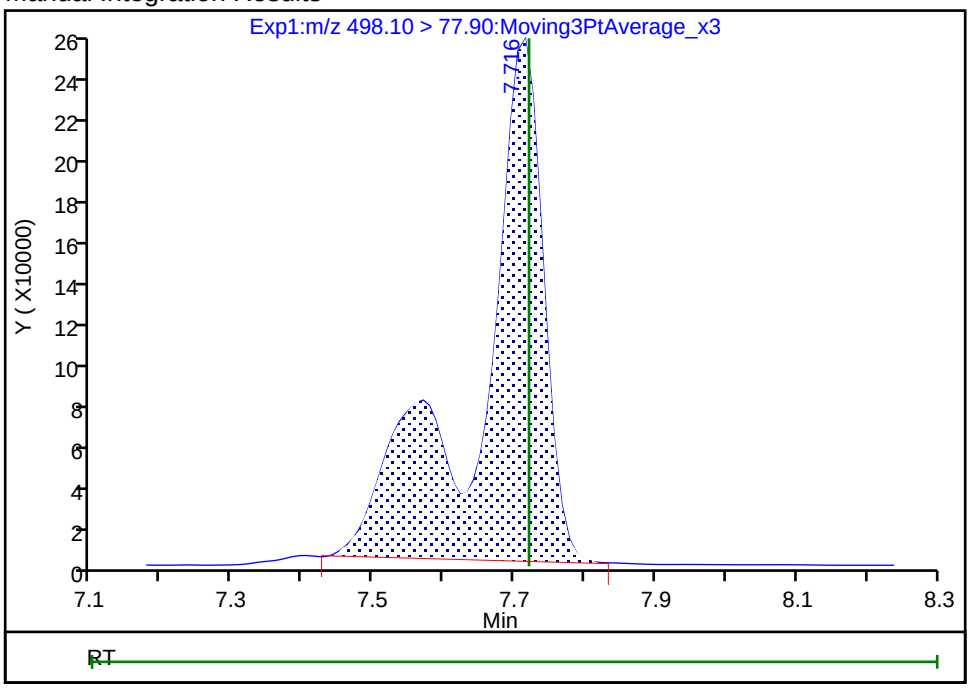
Processing Integration Results

RT: 7.72
Area: 1144257
Amount: 0.450319
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 1592710
Amount: 0.626806
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

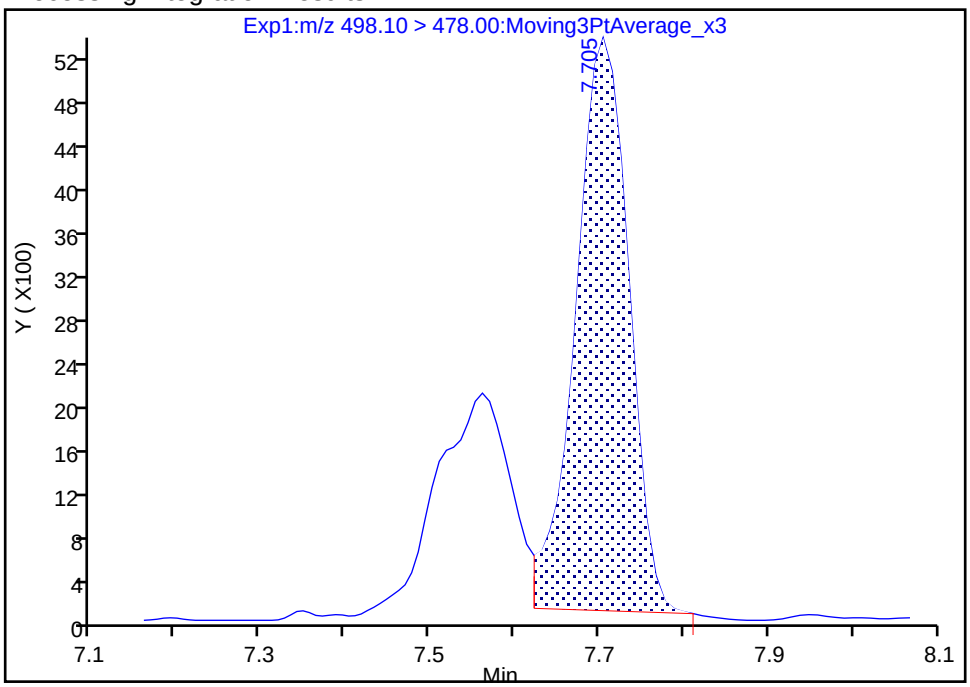
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

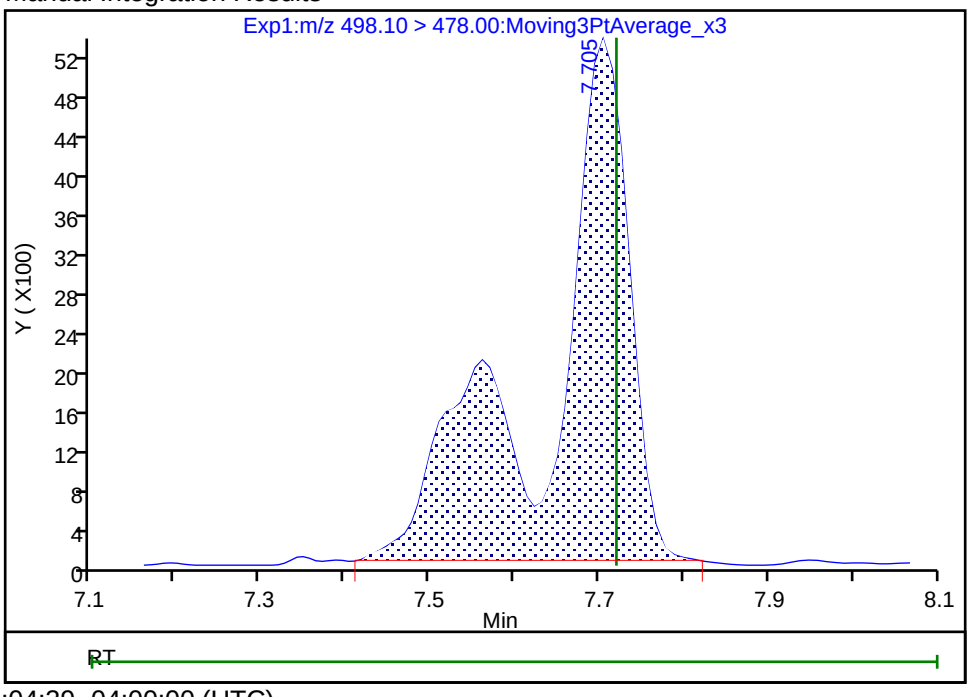
Processing Integration Results

RT: 7.70
Area: 22934
Amount: 0.450319
Amount Units: ng/ml



Manual Integration Results

RT: 7.70
Area: 35819
Amount: 0.626806
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

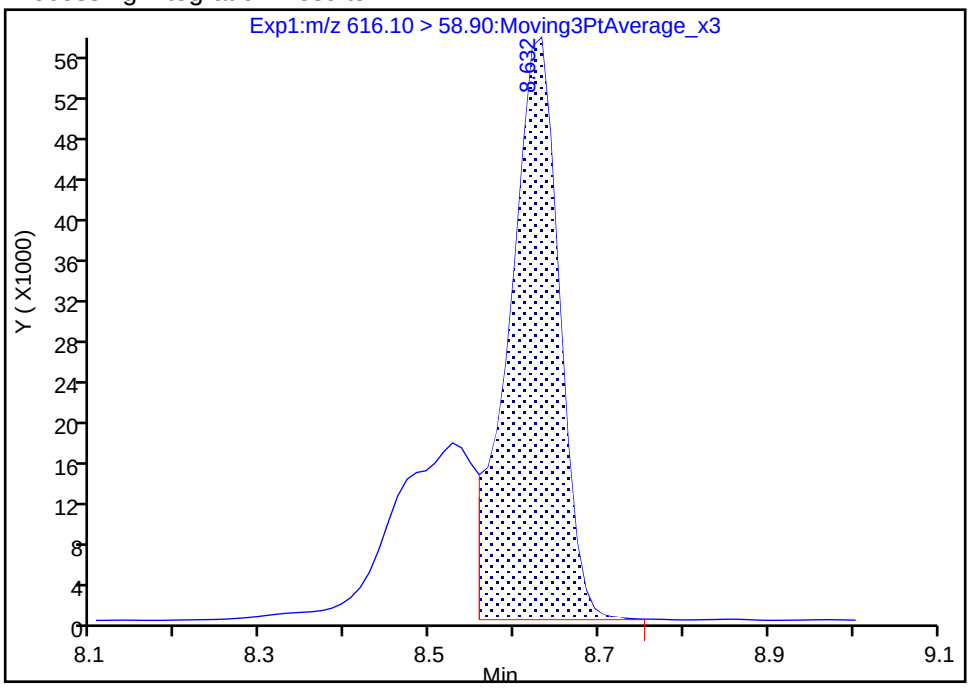
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

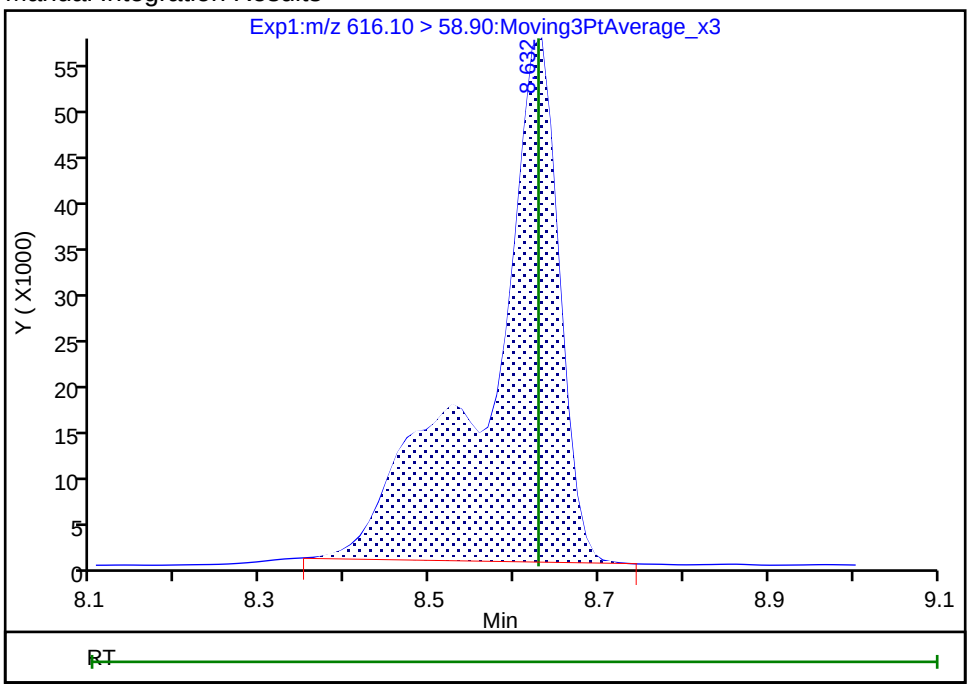
Processing Integration Results

RT: 8.63
Area: 233528
Amount: 4.015495
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 337737
Amount: 5.807360
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

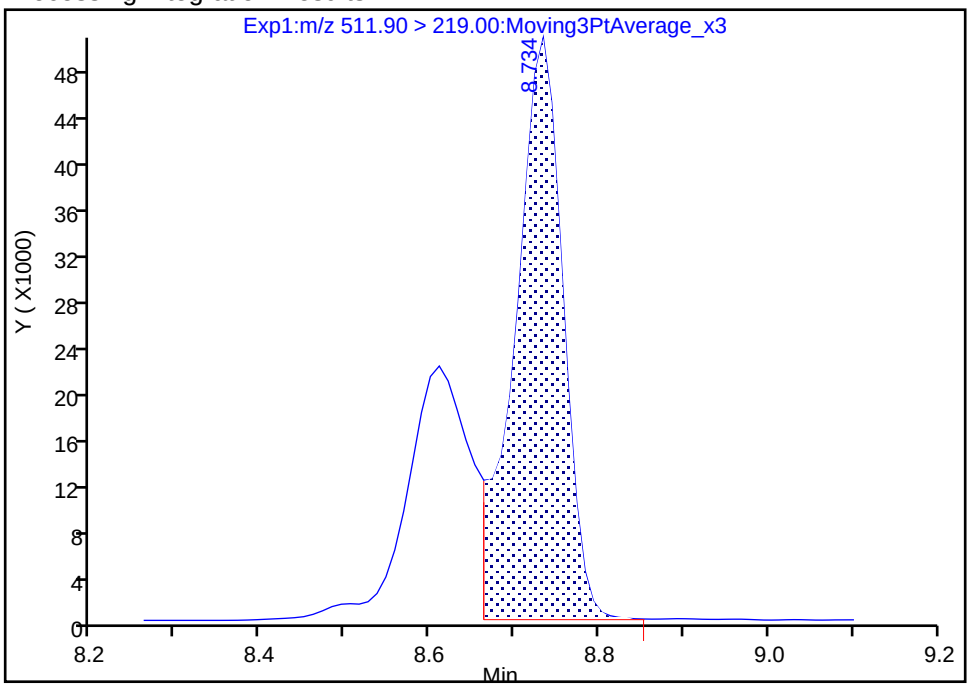
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

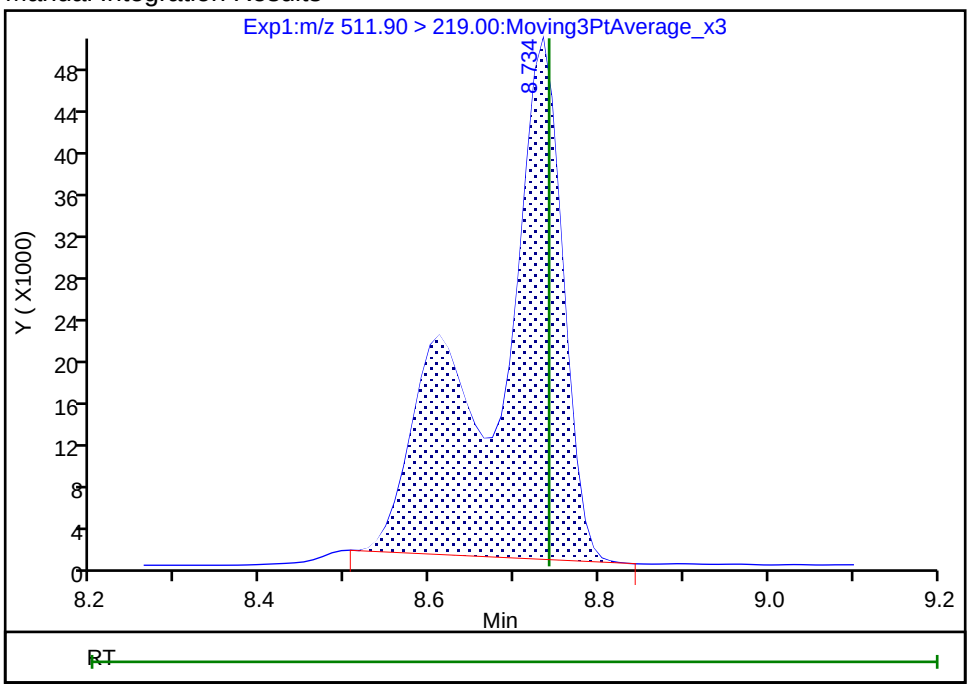
Processing Integration Results

RT: 8.73
Area: 196172
Amount: 0.445481
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 291291
Amount: 0.661484
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:04:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

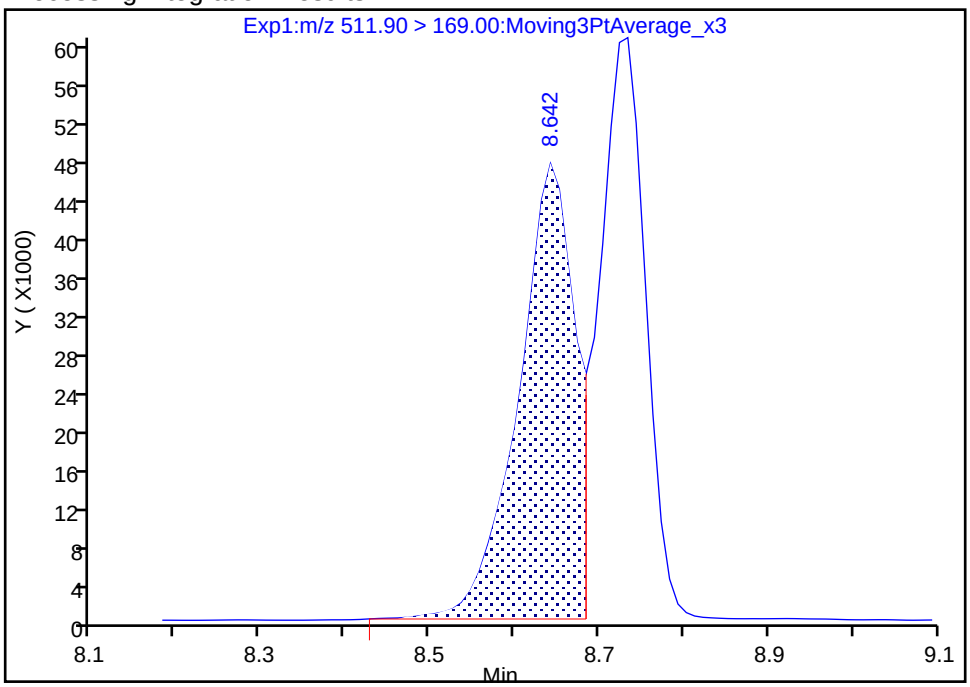
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

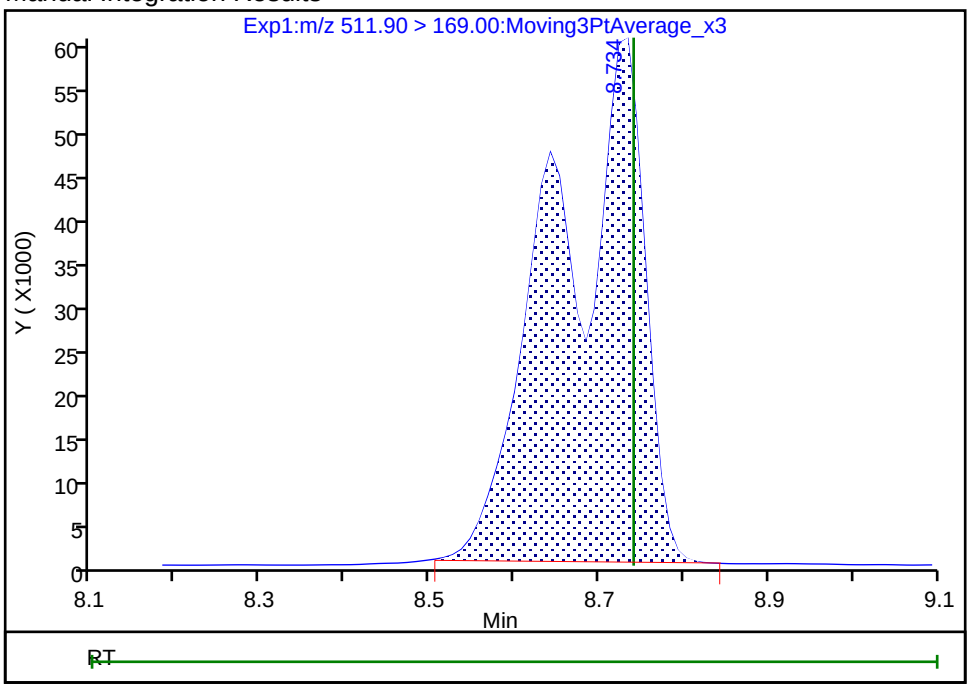
Processing Integration Results

RT: 8.64
Area: 214962
Amount: 0.445481
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 431631
Amount: 0.661484
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:05:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

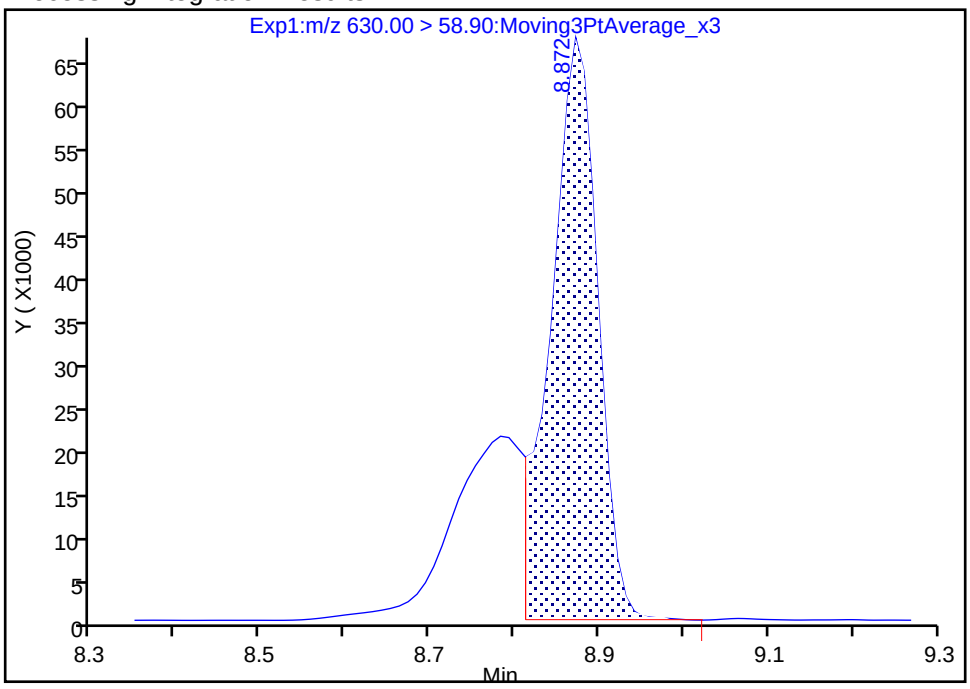
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d
Injection Date: 19-Sep-2024 03:57:34 Instrument ID: LCMS04
Lims ID: CCV MID
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 36 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

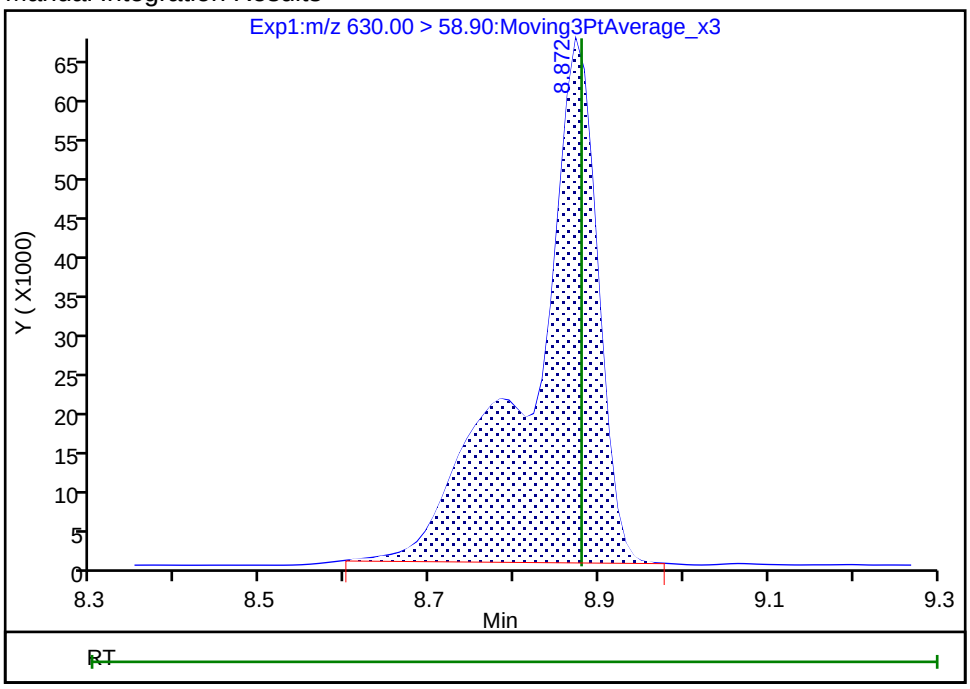
Processing Integration Results

RT: 8.87
Area: 256565
Amount: 4.136664
Amount Units: ng/ml



Manual Integration Results

RT: 8.87
Area: 366750
Amount: 5.913205
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:05:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

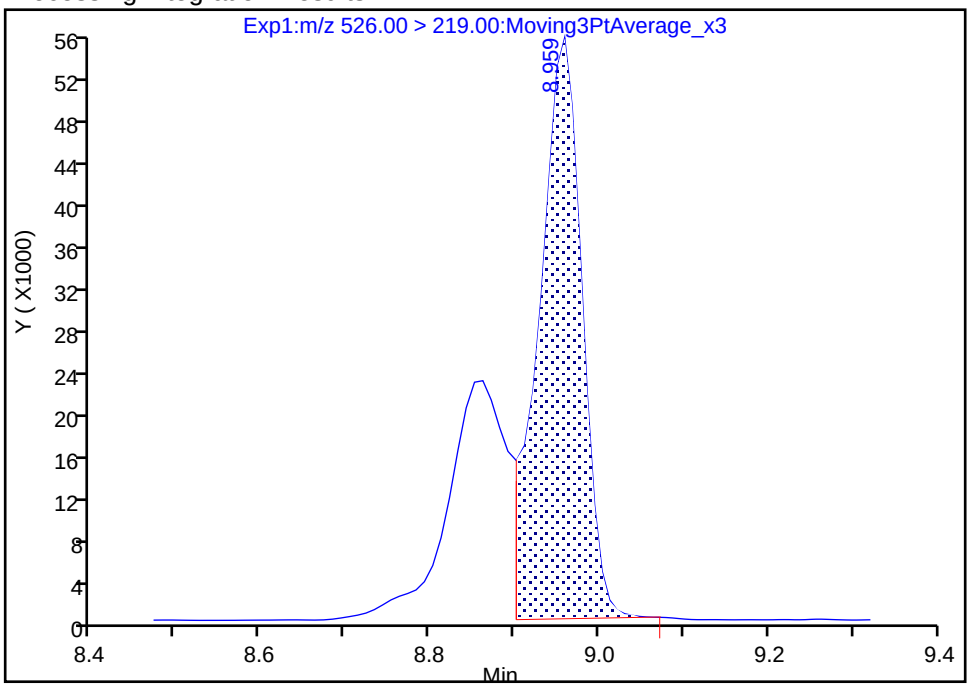
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d				
Injection Date:	19-Sep-2024 03:57:34	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	52
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

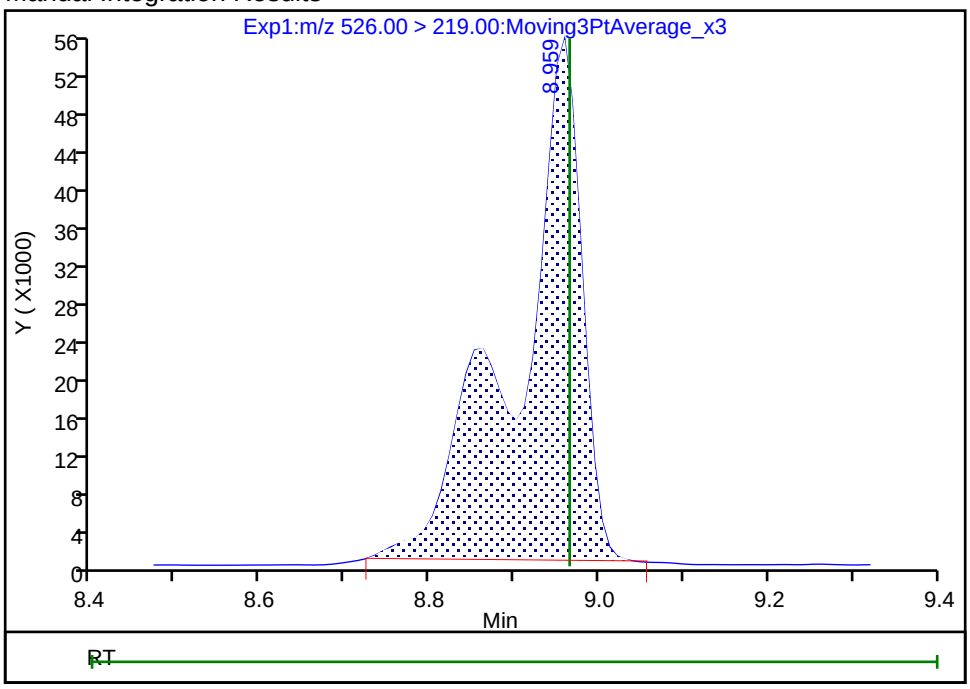
Processing Integration Results

RT: 8.96
Area: 193238
Amount: 0.440307
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 295651
Amount: 0.673663
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:05:14 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

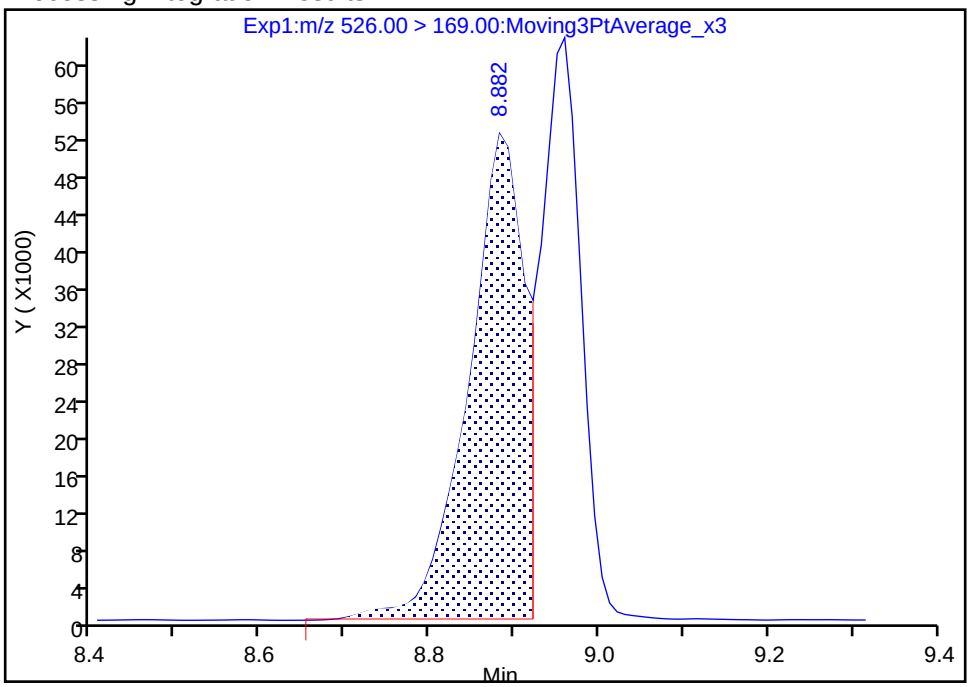
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj52.d				
Injection Date:	19-Sep-2024 03:57:34	Instrument ID:	LCMS04		
Lims ID:	CCV MID				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	36	Worklist Smp#:	52
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

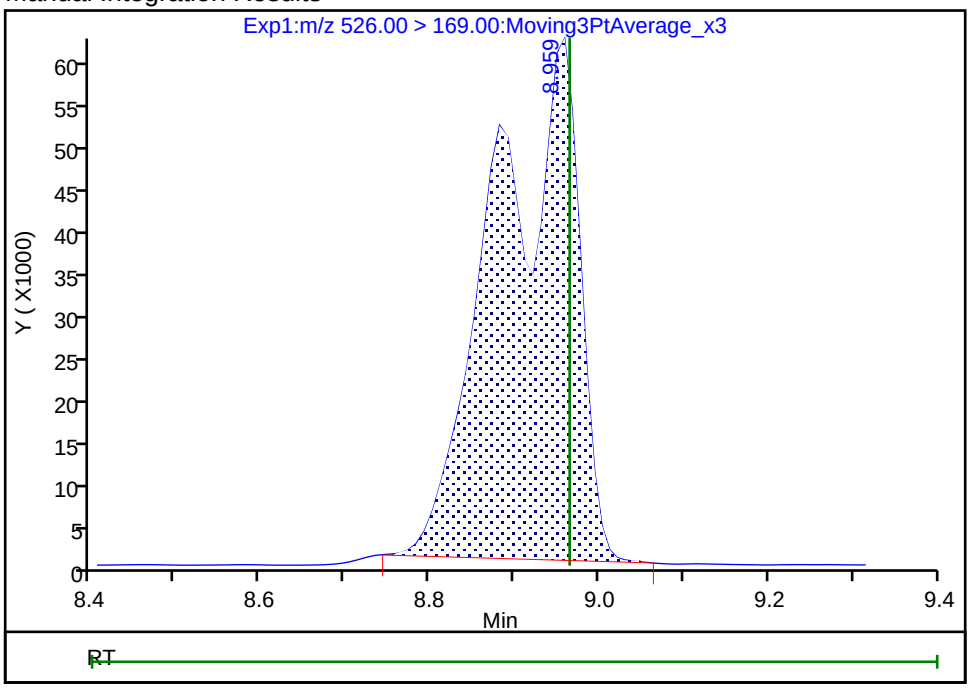
Processing Integration Results

RT: 8.88
Area: 239533
Amount: 0.440307
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 425715
Amount: 0.673663
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 09:05:23 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Report Date: 11-Sep-2024 10:04:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj10.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 10-Sep-2024 19:15:13 ALS Bottle#: 37 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: Plate: 2 Rack: 1 240-0146069-010
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:04:00 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:58:16
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.573	0.0		2429308	1.25			887	
* 2 13C2 PFHxA										
315.10 > 270.00	4.744	4.744	0.0		1502955	0.6250			6528	
* 3 13C4 PFOA										
417.10 > 172.00	5.653	5.653	0.0		299649	0.6250			2525	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.878	0.0		1986193	0.5913			4355	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.077	0.0		1040529	0.3125			1862	
* 6 13C2 PFDA										
515.10 > 470.10	6.522	6.522	0.0		786118	0.3125			1995	
* 7 13C4 PFOS										
502.80 > 79.90	6.792	6.792	0.0		1688114	0.5975	Target=4.00		2999	
502.80 > 98.90	6.792	6.792	0.0		420790		4.01(2.00-6.00)		2225	
D 8 13C4 PFBA										
216.80 > 171.90	3.573	3.573	0.0	1.000	5271451	2.39		95.6	17224	
D 9 13C5 PFPeA										
268.30 > 223.00	4.225	4.225	0.0	0.891	2174939	1.15		92.2	7325	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.555	4.555	0.0	0.775	1326747	1.18	Target=0.29	101	3985	
329.10 > 309.00	4.544	4.555	-0.011	0.773	3620450		0.37(0.14-0.43)	101	1007	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.744	0.0	1.000	1984595	0.5873	Target=40.21	94.0	7255	
318.00 > 120.30	4.744	4.744	0.0	1.000	48462		40.95(20.11-60.32)	94.0	509	
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.871	0.0	0.829	1979384	0.5512	Target=3.28	94.8	4221	
302.10 > 98.90	4.871	4.871	0.0	0.829	607128		3.26(1.64-4.92)	94.8	2084	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.936	0.0	1.040	2366039	2.43	Target=1.86	97.3	6528	
286.90 > 184.90	4.936	4.936	0.0	1.040	1150054		2.06(0.93-2.78)	97.3	2020	
D 14 13C4 PFHpA										
367.10 > 322.00	5.219	5.219	0.0	1.100	2039655	0.5780		92.5	6259	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.441	5.441	0.0	0.926	1468955	1.14	Target=0.38	96.1	3502	
429.10 > 409.00	5.441	5.441	0.0	0.926	3164014		0.46(0.19-0.57)	96.1	5035	
D 16 13C8 PFOA										
421.10 > 376.00	5.653	5.653	0.0	1.000	2037471	0.5387		86.2	4375	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.878	0.0	1.000	1905022	0.5402	Target=3.25	91.4	4279	
402.10 > 98.80	5.878	5.878	0.0	1.000	590879		3.22(1.63-4.88)	91.4	2446	
D 18 13C9 PFNA										
472.10 > 427.00	6.087	6.087	0.0	1.002	746003	0.2857		91.4	2398	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.281	6.281	0.0	1.069	1020547	1.16	Target=0.33	96.6	4427	
529.10 > 509.00	6.281	6.281	0.0	1.069	2601557		0.39(0.16-0.49)	96.6	7140	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.462	6.462	0.0	0.952	1514583	1.16		92.7	7217	
D 21 13C6 PFDA										
519.10 > 474.10	6.522	6.522	0.0	1.000	765348	0.3161		101	2301	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.657	6.657	0.0	0.980	1557157	1.21		96.8	2472	
D 23 13C8 PFOS										
507.10 > 79.90	6.792	6.792	0.0	1.000	1717629	0.5901	Target=4.26	98.8	3151	
507.10 > 98.90	6.792	6.792	0.0	1.000	434908		3.95(2.13-6.39)	98.8	1231	
D 24 13C7 PFUnA										
570.00 > 525.10	6.960	6.960	0.0	1.067	707949	0.2971		95.1	1888	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.388	7.388	0.0	1.133	652189	0.2900		92.8	1510	
D 26 13C8 FOSA										
506.10 > 77.80	7.726	7.726	0.0	1.138	1837361	0.5881		94.1	6283	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.217	8.217	0.0	1.260	382499	0.2976		95.2	939	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.600	8.600	0.0	1.266	2917140	6.30		101	872	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.724	8.724	0.0	1.285	383243	0.6221		99.5	1809	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.853	0.0	1.303	3521648	6.19		99.1	1628	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.950	8.950	0.0	1.318	364743	0.5873		94.0	316	
37 Tauroursodeoxycholic acid										a
498.20 > 80.00	4.586	4.586	0.0	0.675	11156153	3.88			1764	a
44 Taurochenodeoxycholic acid										a
498.10 > 80.00	5.067	5.067	0.0	0.746	8338532	2.90			12.5	a

Report Date: 11-Sep-2024 10:04:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj10.d
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Taurodeoxycholic Acid										a
498.00 > 80.00	5.187	5.187	0.0	0.764	4692523	1.63			9.0	a

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

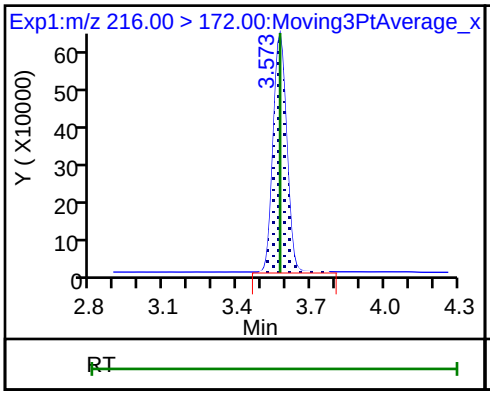
WDM_00018 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:04:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48

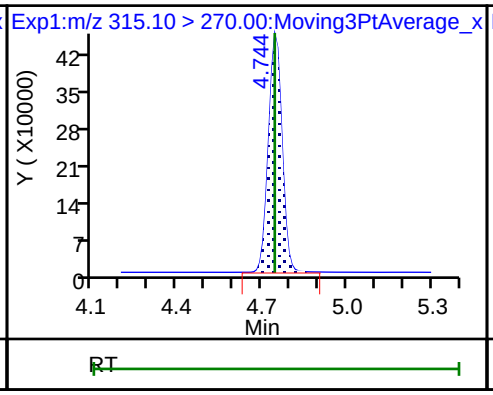
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj10.d
Injection Date: 10-Sep-2024 19:15:13 Instrument ID: LCMS04
Lims ID: WDM
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 37 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

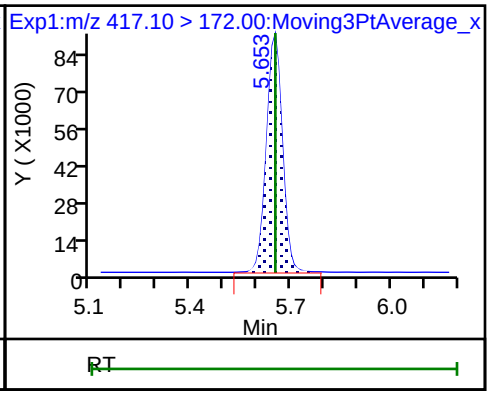
* 1 13C3-PFBA



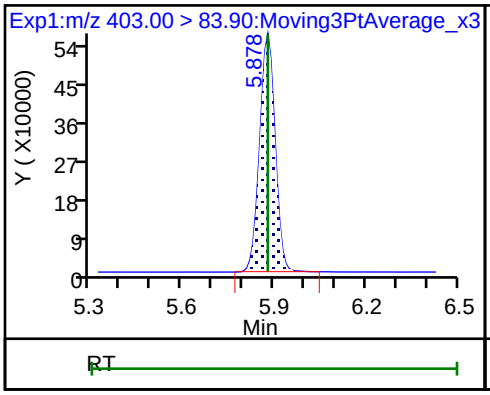
* 2 13C2 PFHxA



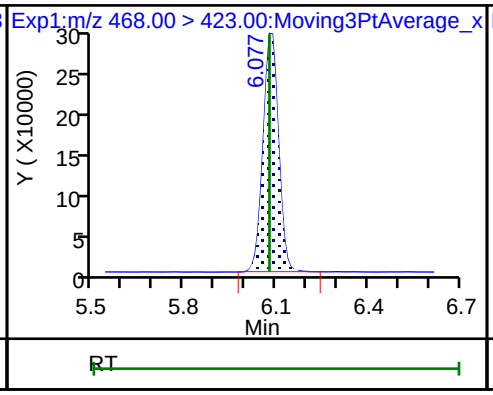
* 3 13C4 PFOA



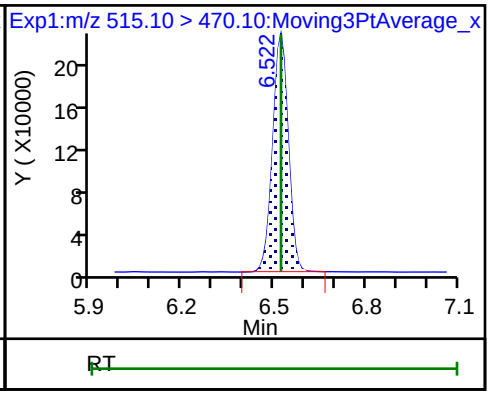
* 4 18O2 PFHxS



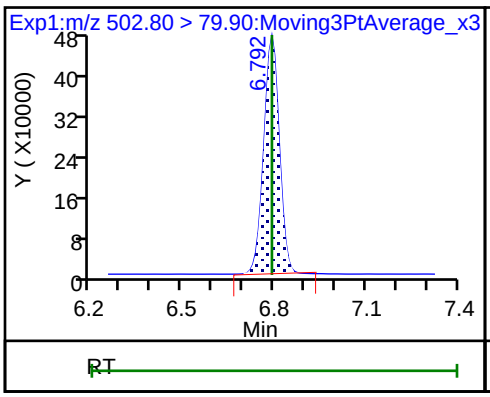
* 5 13C5 PFNA



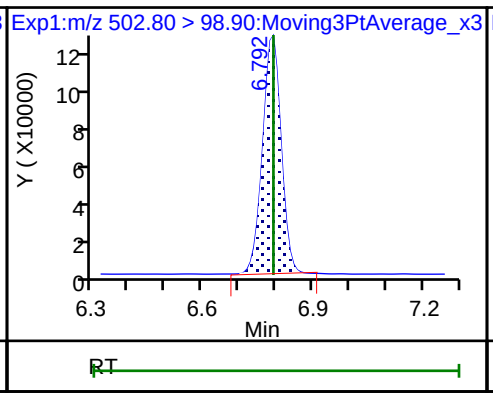
* 6 13C2 PFDA



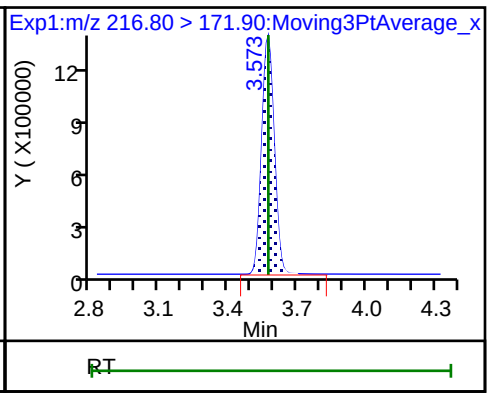
* 7 13C4 PFOS



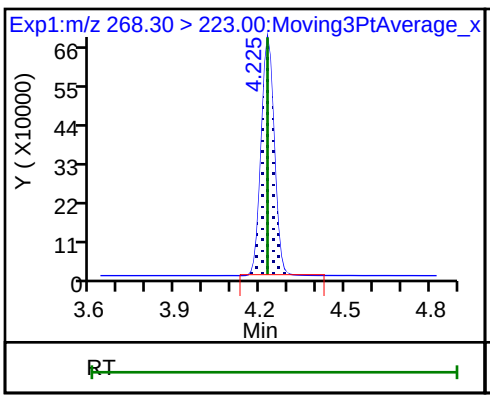
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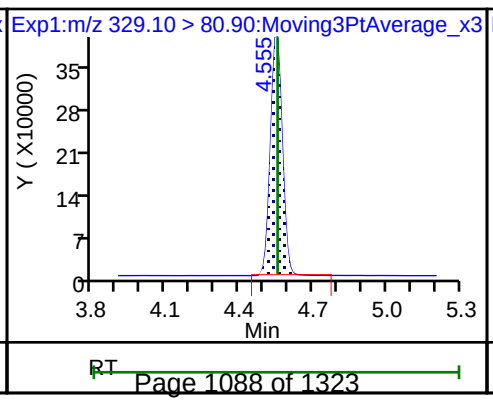
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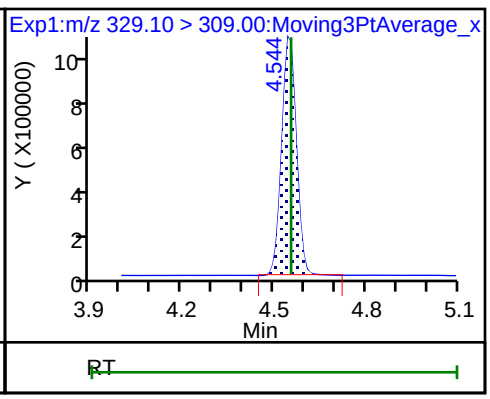
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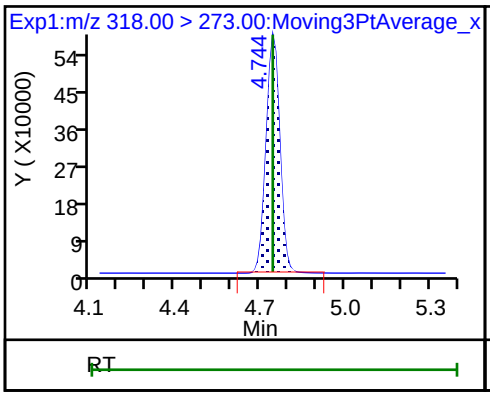
D 10 M2-4:2 FTS



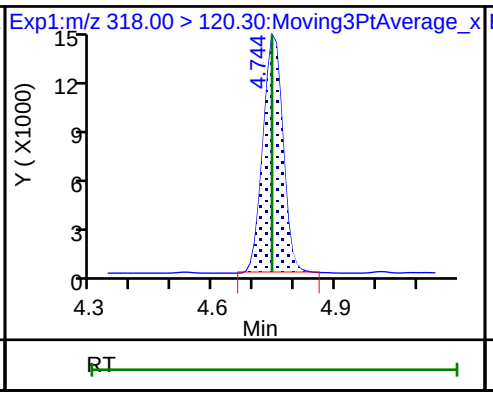
D 10 M2-4:2 FTS



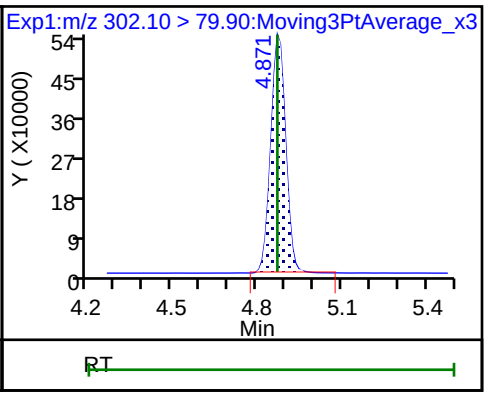
D 11 13C5 PFHxA



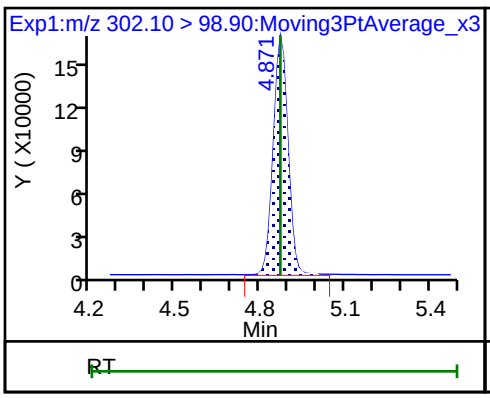
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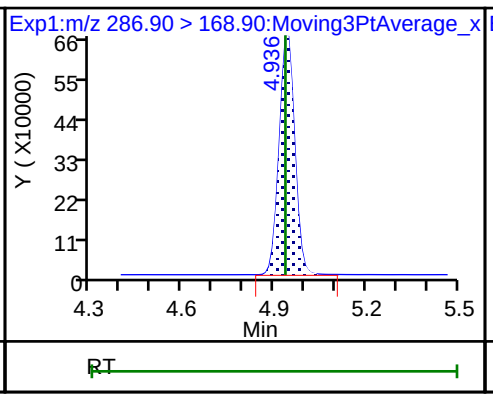
D 12 13C3 PFBS



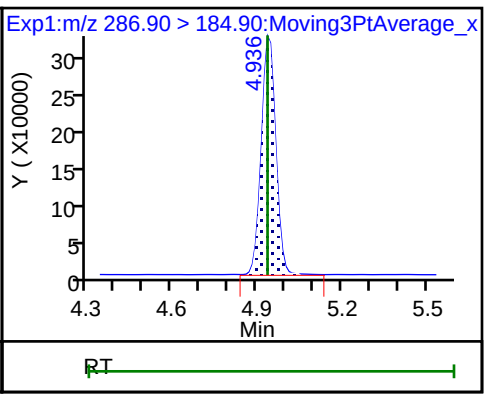
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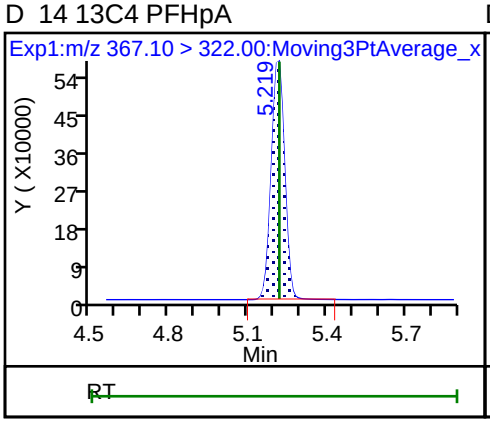
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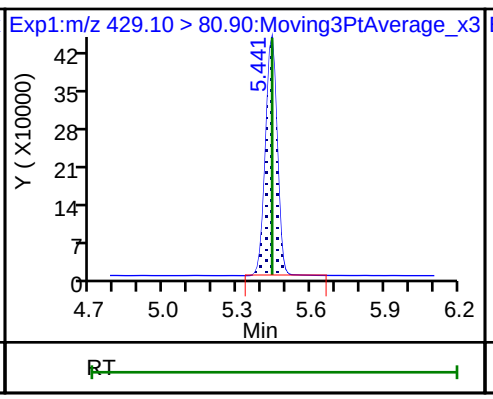
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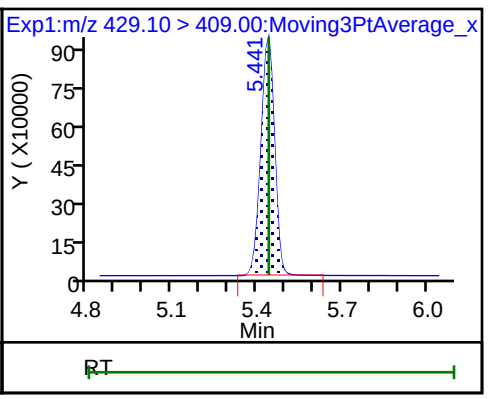
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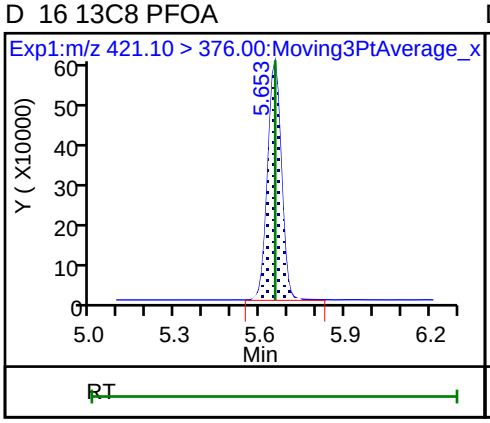
D 15 M2-6:2 FTS



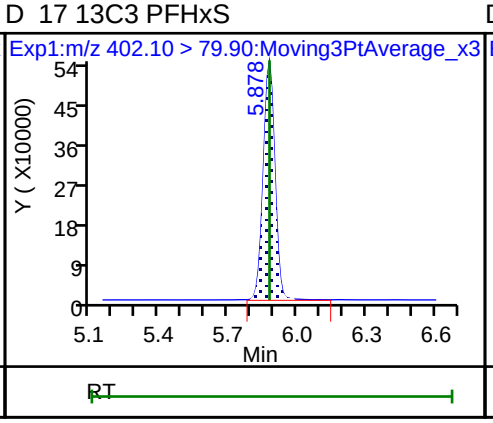
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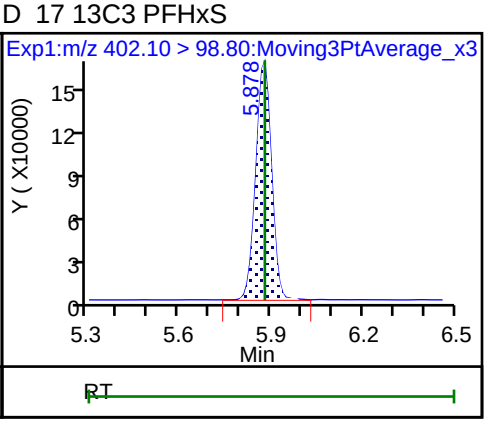
D 16 13C8 PFOA



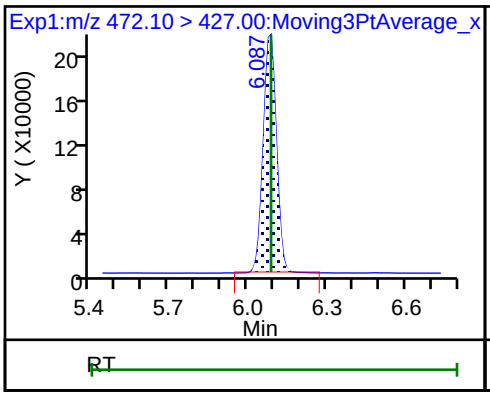
D 17 13C3 PFHxS



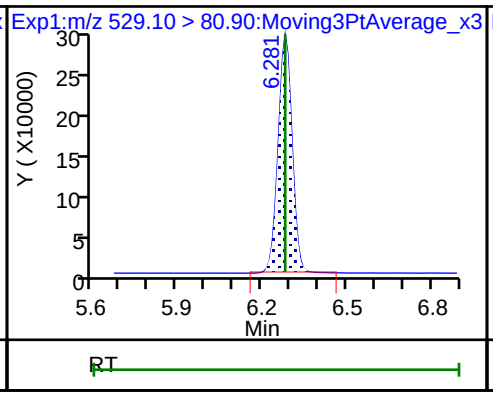
D 17 13C3 PFHxS



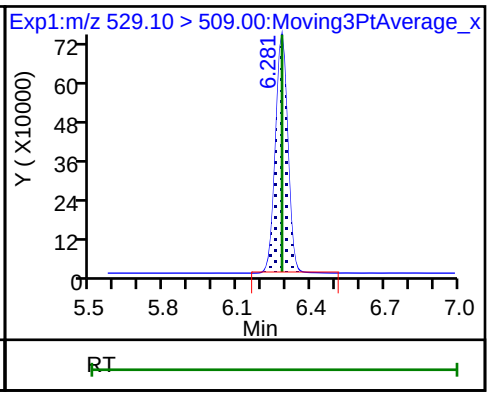
D 18 13C9 PFNA



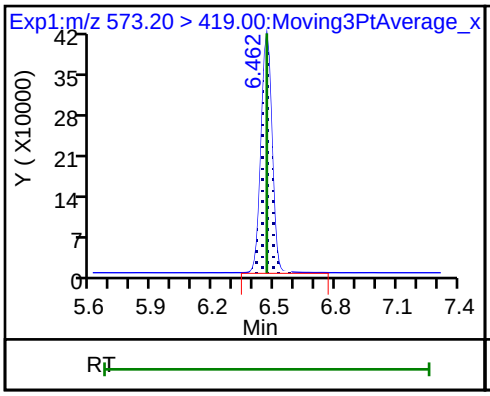
D 19 M2-8:2 FTS



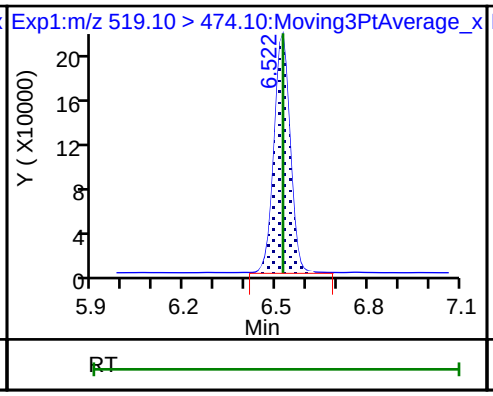
D 19 M2-8:2 FTS



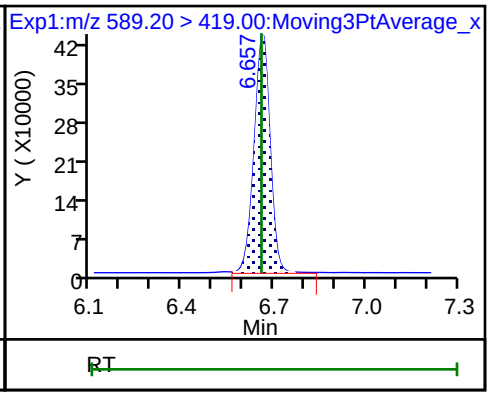
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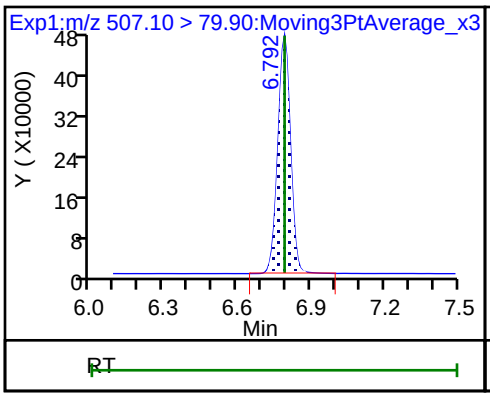
D 21 13C6 PFDA



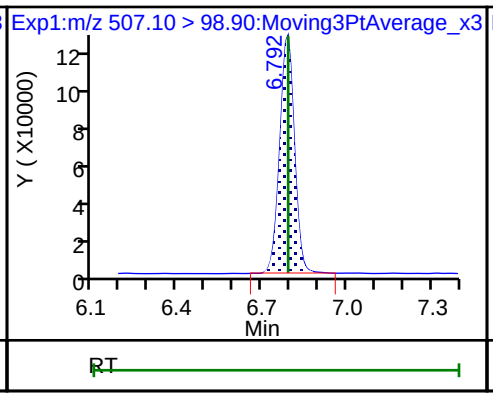
D 22 d5-NEtFOSAA



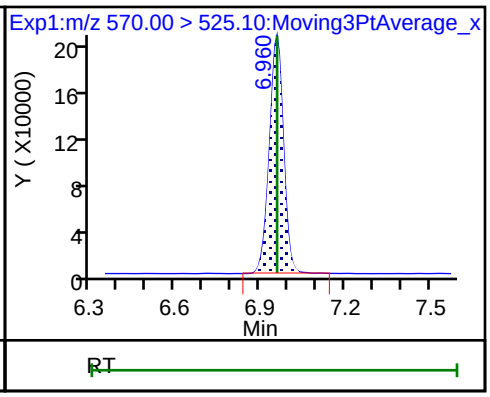
D 23 13C8 PFOS



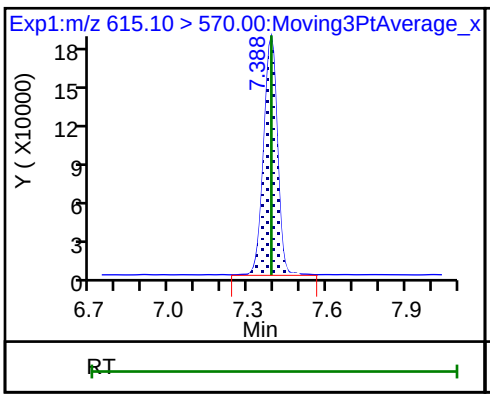
D 23 13C8 PFOS



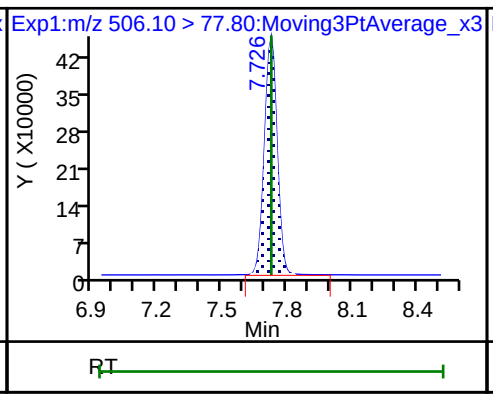
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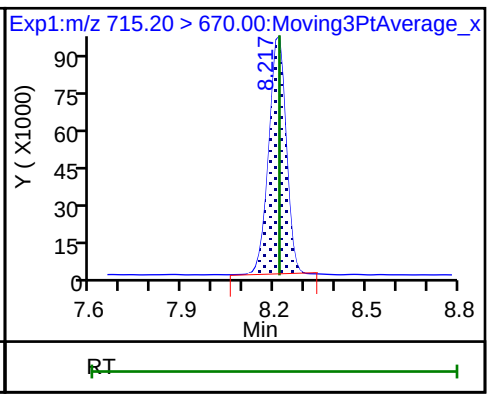
D 25 13C2-PFDoDA



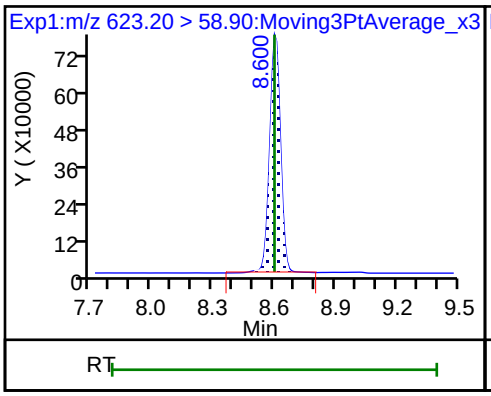
D 26 13C8 FOSA



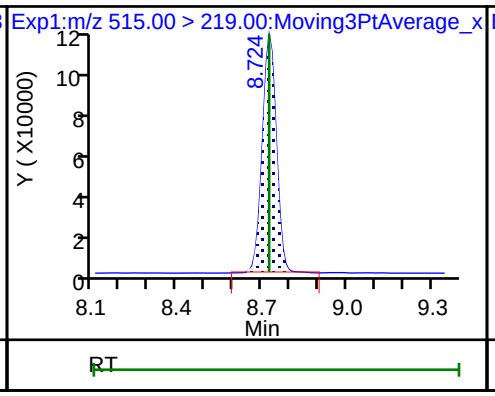
D 27 13C2 PFTeDA



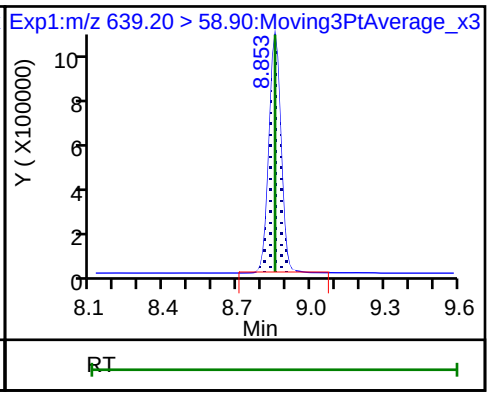
D 28 d7-N-MeFOSE-M



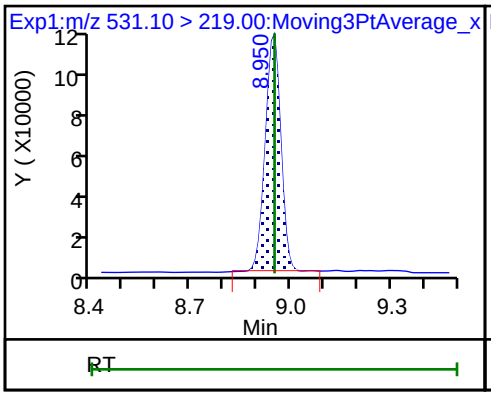
D 29 d3-NMePFOSA



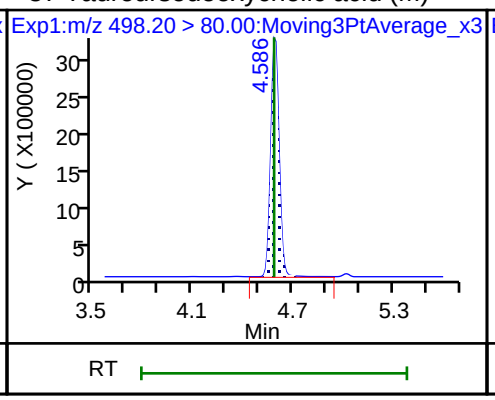
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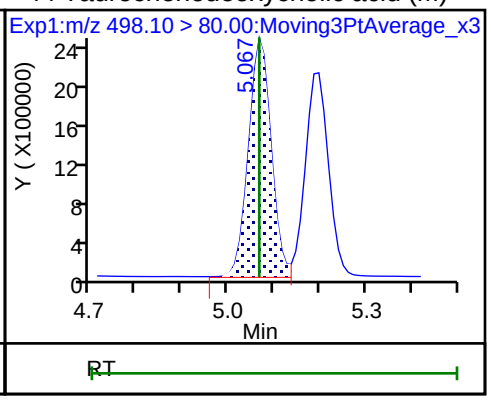
D 31 d5-NEtPFOSA



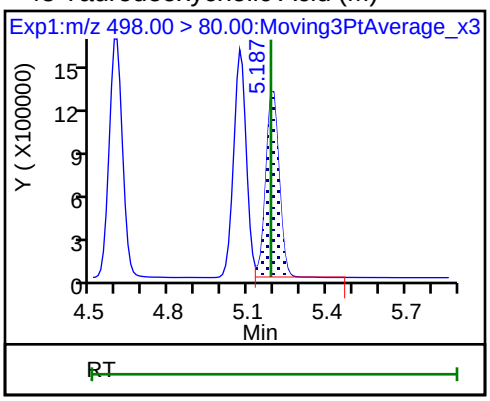
37 Tauroursodeoxycholic acid (M)



44 Taurochenodeoxycholic acid (M)



45 Taurodeoxycholic Acid (M)



Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj04.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Sep-2024 17:04:46 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: Plate: 1 Rack: 1 240-0146375-004
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:35:00 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:35:00
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.544	3.544	0.0		2152423	1.25			811	
* 2 13C2 PFHxA										
315.10 > 270.00	4.719	4.719	0.0		1388613	0.6250			5310	
* 3 13C4 PFOA										
417.10 > 172.00	5.629	5.629	0.0		241633	0.6250			1588	
* 4 18O2 PFHxS										
403.00 > 83.90	5.843	5.843	0.0		1650591	0.5913			3084	
* 5 13C5 PFNA										
468.00 > 423.00	6.052	6.052	0.0		973788	0.3125			1513	
* 6 13C2 PFDA										
515.10 > 470.10	6.488	6.488	0.0		790076	0.3125			1528	
* 7 13C4 PFOS										
502.80 > 79.90	6.761	6.761	0.0		1473933	0.5975	Target=4.00		2866	
502.80 > 98.90	6.752	6.761	-0.009		362325		4.07(2.00-6.00)		1432	
D 8 13C4 PFBA										
216.80 > 171.90	3.544	3.544	0.0	1.000	4624454	2.37		94.6	17837	
D 9 13C5 PFPeA										
268.30 > 223.00	4.202	4.202	0.0	0.890	2039959	1.17		93.6	7431	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.530	4.530	0.0	0.775	1536069	1.64	Target=0.29	141	4818	
329.10 > 309.00	4.530	4.530	0.0	0.775	4085265		0.38(0.14-0.43)	141	1160	
D 11 13C5 PFHxA										
318.00 > 273.00	4.719	4.719	0.0	1.000	1874067	0.6003	Target=40.21	96.0	4654	
318.00 > 120.30	4.719	4.719	0.0	1.000	48833		38.38(20.11-60.32)	96.0	713	
D 12 13C3 PFBS										
302.10 > 79.90	4.846	4.846	0.0	0.829	1918152	0.6427	Target=3.28	111	5091	
302.10 > 98.90	4.846	4.846	0.0	0.829	586625		3.27(1.64-4.92)	111	2253	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.923	4.923	0.0	1.043	2201697	2.45	Target=1.86	98.0	6450	
286.90 > 184.90	4.912	4.923	-0.011	1.041	1171150		1.88(0.93-2.78)	98.0	2559	
D 14 13C4 PFHpA										
367.10 > 322.00	5.194	5.194	0.0	1.101	2052632	0.6296		101	3853	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.416	5.416	0.0	0.927	1683055	1.57	Target=0.38	132	3257	
429.10 > 409.00	5.416	5.416	0.0	0.927	3829872		0.44(0.19-0.57)	132	5064	
D 16 13C8 PFOA										
421.10 > 376.00	5.619	5.619	0.0	0.998	1946893	0.6384		102	3227	
D 17 13C3 PFHxS										
402.10 > 79.90	5.843	5.843	0.0	1.000	2002301	0.6833	Target=3.25	116	3661	
402.10 > 98.80	5.843	5.843	0.0	1.000	617071		3.24(1.63-4.88)	116	2352	
D 18 13C9 PFNA										
472.10 > 427.00	6.052	6.052	0.0	1.000	707357	0.2894		92.6	1657	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.249	6.249	0.0	1.070	1194357	1.63	Target=0.33	136	3343	
529.10 > 509.00	6.249	6.249	0.0	1.070	3089414		0.39(0.16-0.49)	136	4777	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.427	6.427	0.0	0.951	1680849	1.47		118	5699	
D 21 13C6 PFDA										
519.10 > 474.10	6.488	6.488	0.0	1.000	819261	0.3367		108	1813	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.624	6.624	0.0	0.980	1724923	1.54		123	3760	
D 23 13C8 PFOS										
507.10 > 79.90	6.752	6.752	0.0	0.999	1867720	0.7349	Target=4.26	123	3019	
507.10 > 98.90	6.752	6.752	0.0	0.999	456868		4.09(2.13-6.39)	123	1162	
D 24 13C7 PFUnA										
570.00 > 525.10	6.923	6.923	0.0	1.067	752758	0.3144		101	1800	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.353	7.353	0.0	1.133	721799	0.3194		102	1197	
D 26 13C8 FOSA										
506.10 > 77.80	7.709	7.709	0.0	1.140	1882146	0.6900		110	4404	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.179	8.179	0.0	1.260	321254	0.2487		79.6	720	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.607	8.607	0.0	1.273	2284720	5.65		90.4	255	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.721	0.0	1.290	316489	0.5883		94.1	1221	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.849	8.849	0.0	1.309	2706042	5.45		87.2	463	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.947	8.947	0.0	1.323	317064	0.5847		93.6	211	
37 Tauroursodeoxycholic acid										
498.20 > 80.00	4.572	4.572	0.0	0.677	11613816	3.72			95.2	
44 Taurochenodeoxycholic acid										
498.10 > 80.00	5.054	5.054	0.0	0.749	7985610	2.55			10.4	

Report Date: 19-Sep-2024 08:35:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj04.d
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Taurodeoxycholic Acid										
498.00 > 80.00	5.174	5.174	0.0	0.766	4813182	1.54			9.4	

QC Flag Legend

Processing Flags

Reagents:

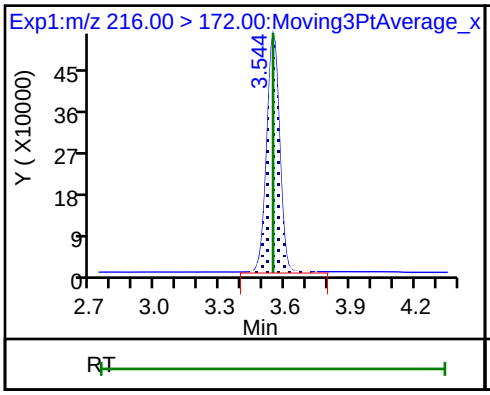
WDM_00019 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:35:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48

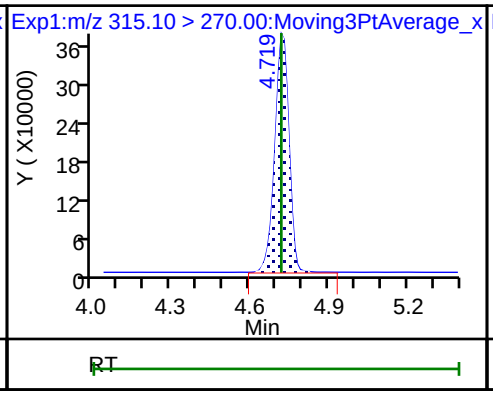
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj04.d
Injection Date: 18-Sep-2024 17:04:46 Instrument ID: LCMS04
Lims ID: WDM
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

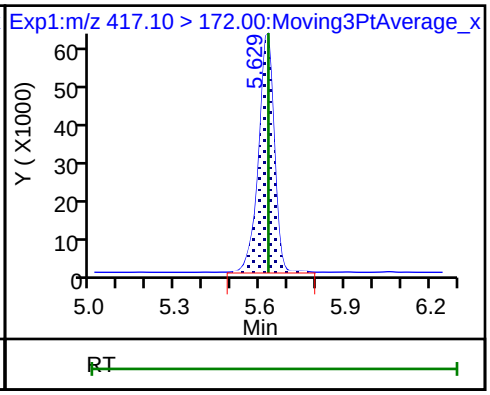
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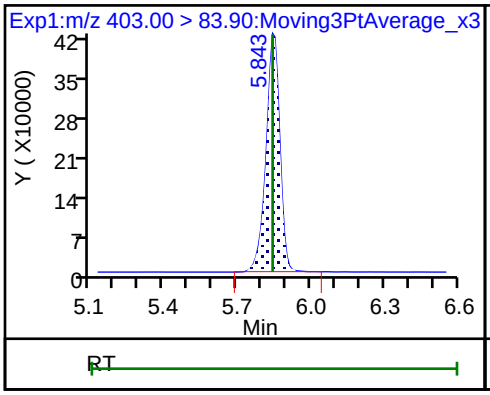
* 2 13C2 PFHxA



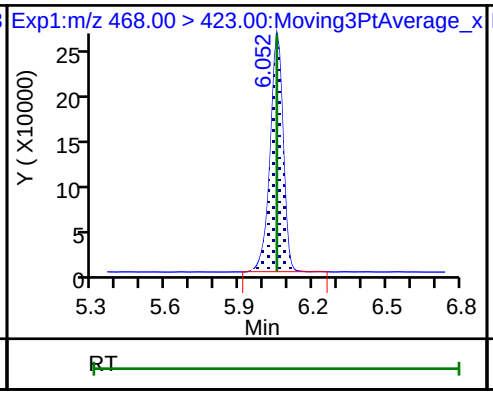
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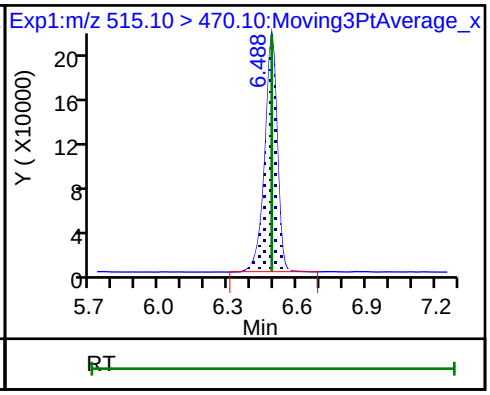
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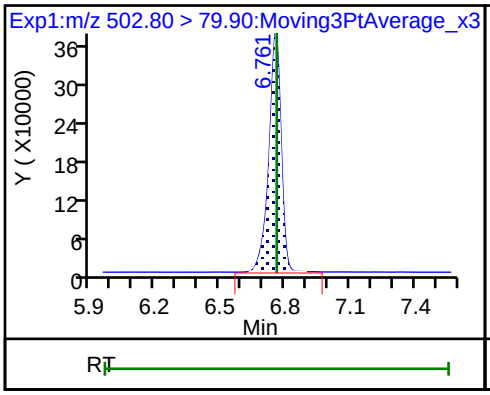
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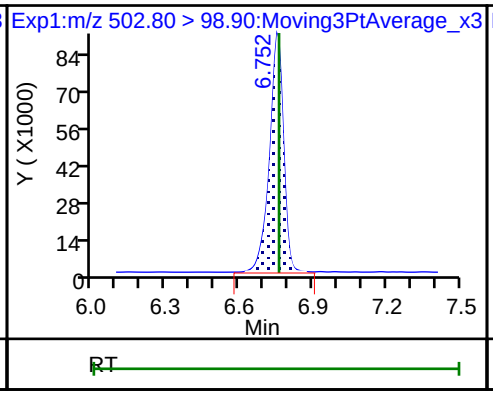
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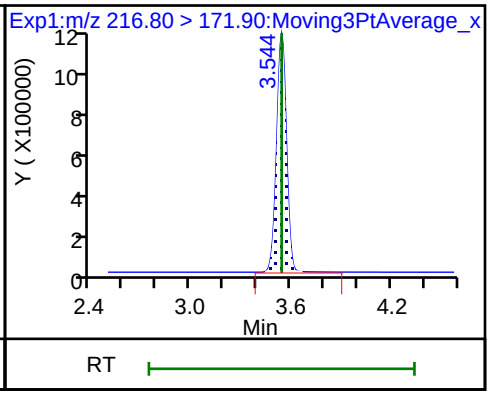
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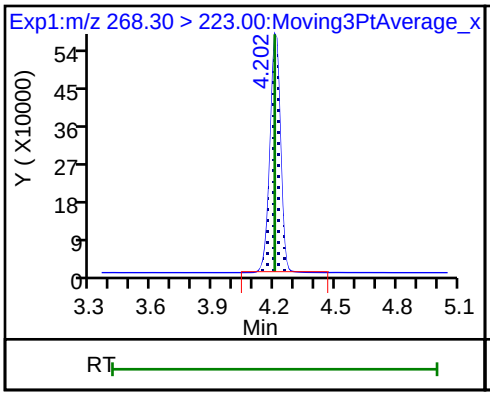
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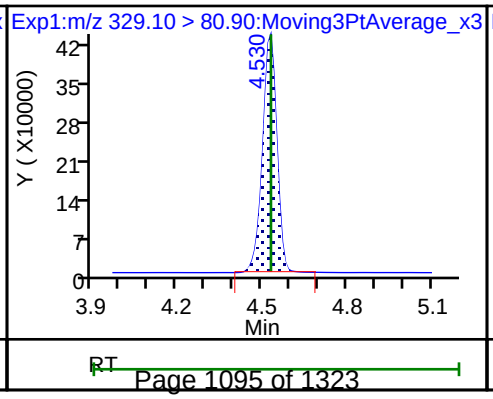
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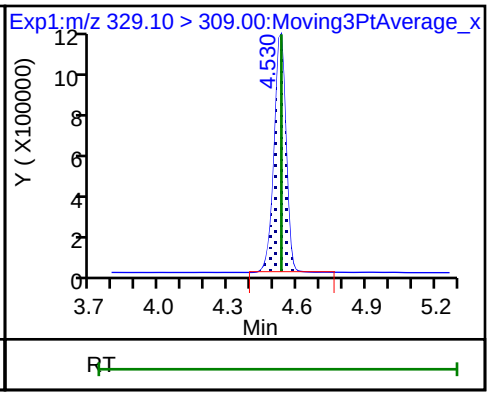
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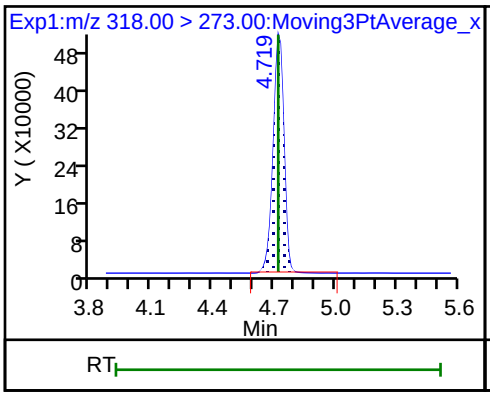
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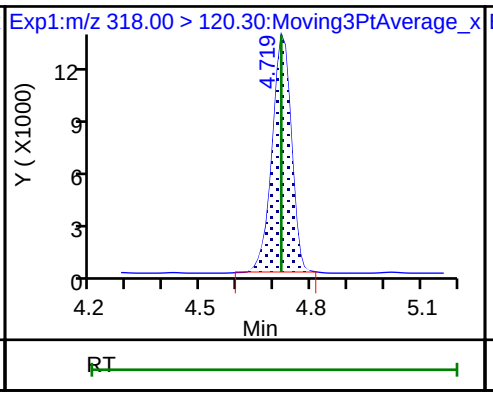
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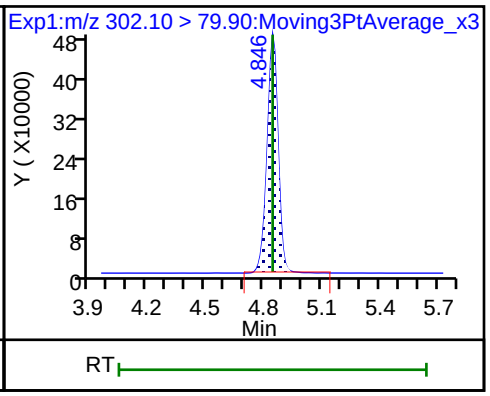
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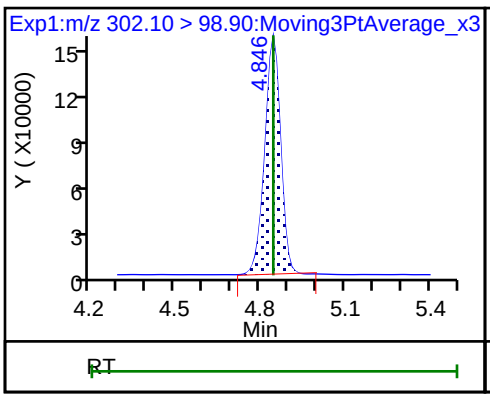
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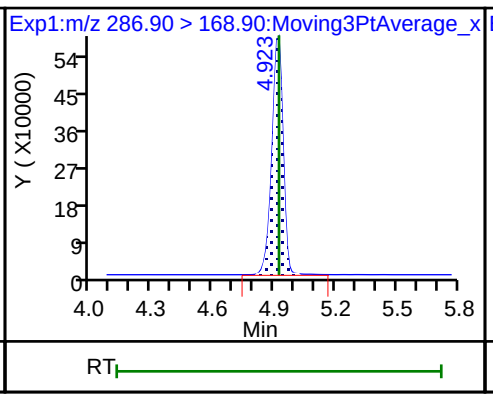
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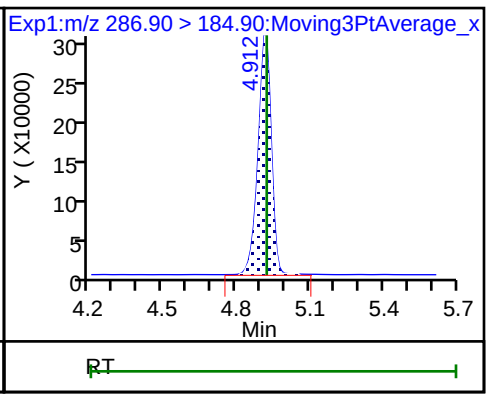
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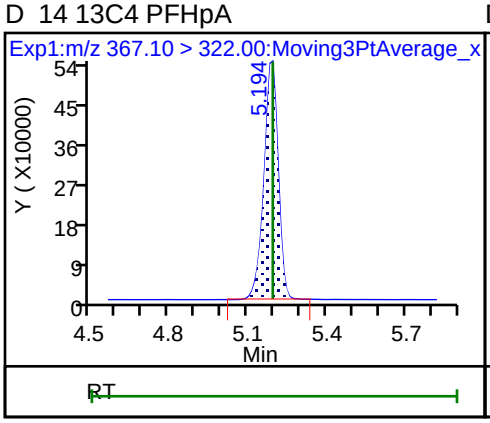
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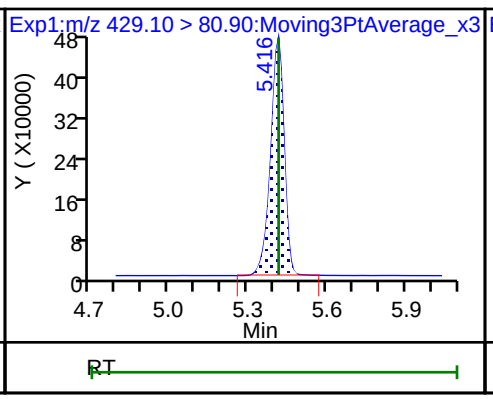
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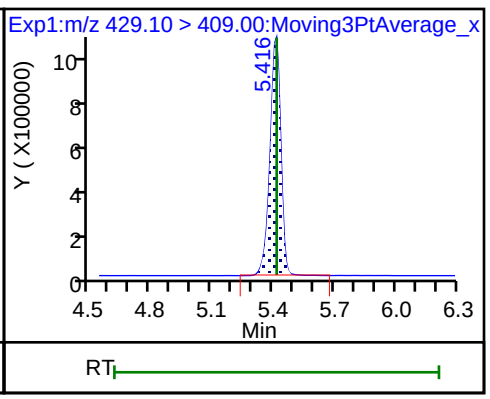
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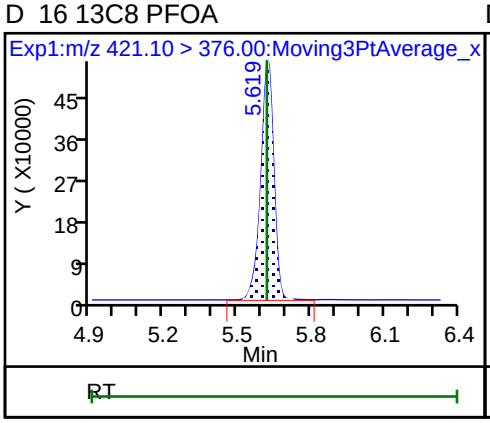
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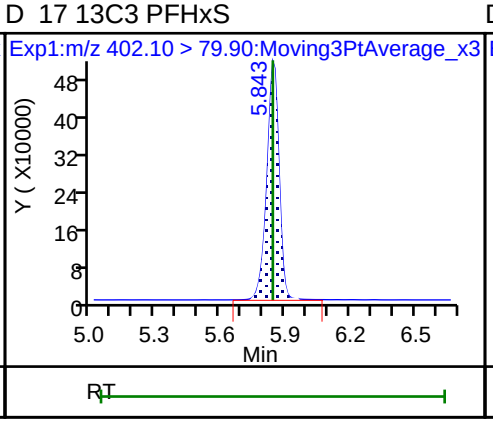
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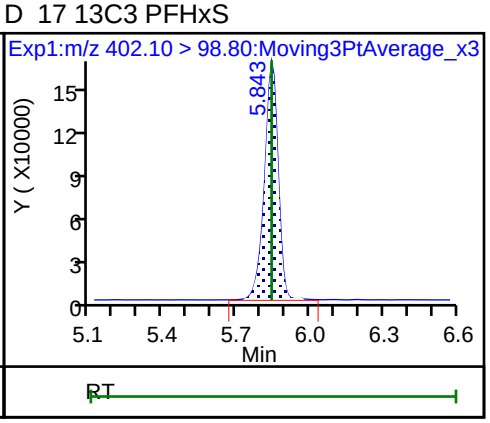
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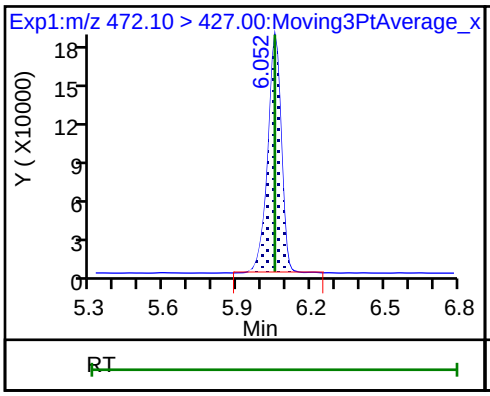
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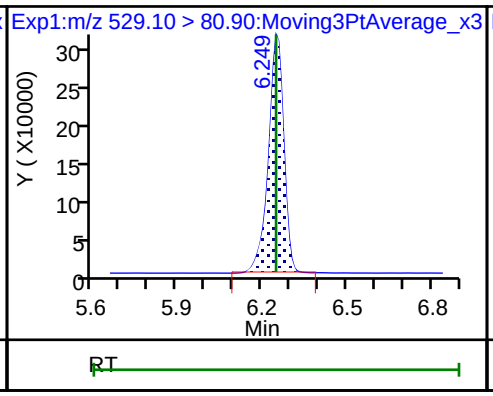
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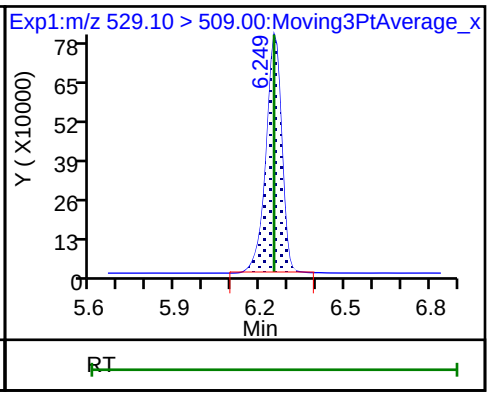
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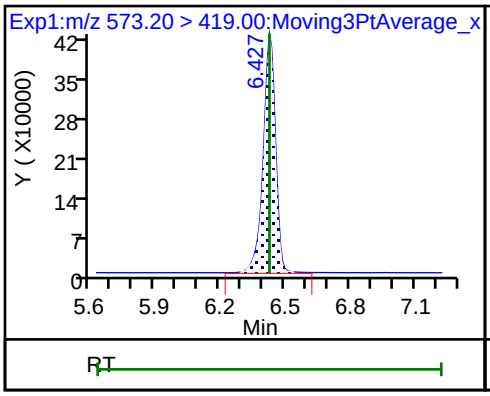
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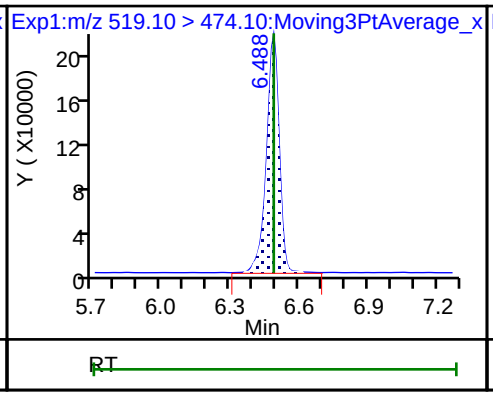
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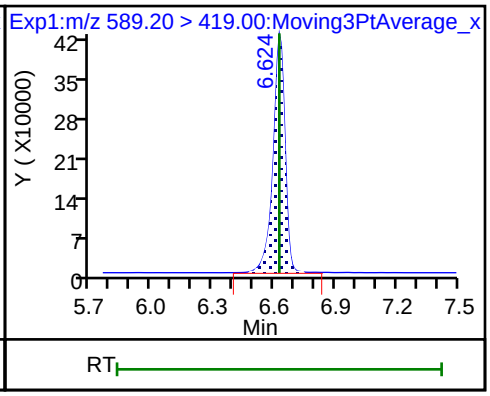
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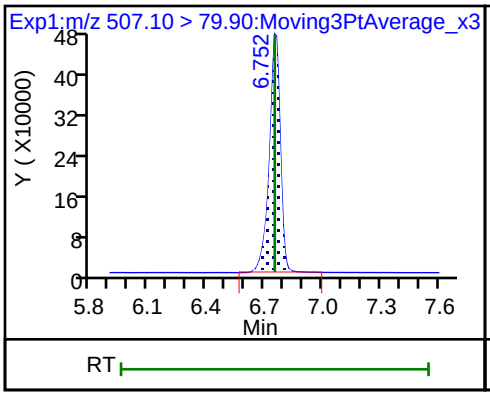
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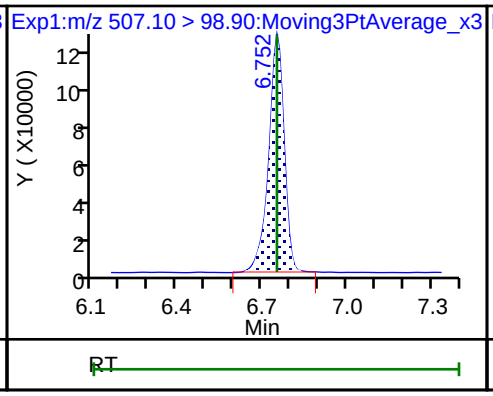
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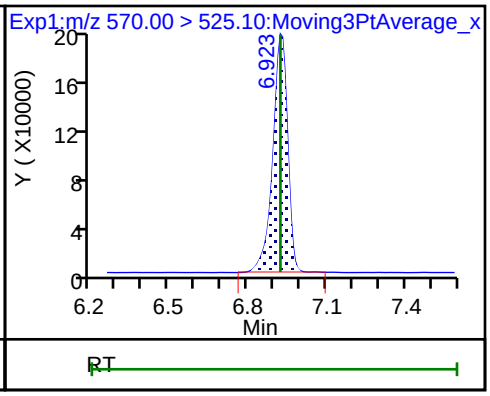
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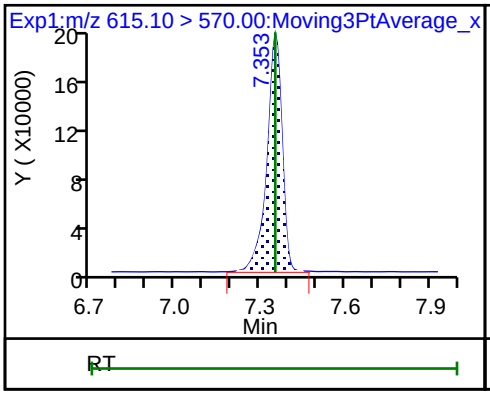
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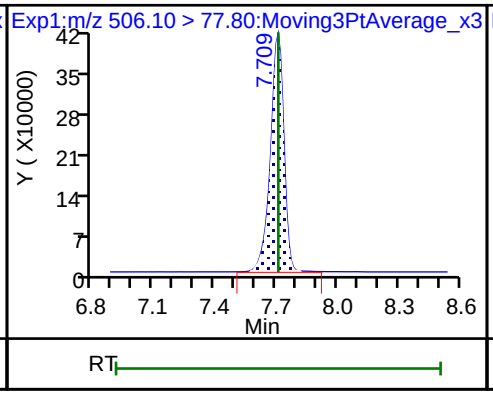
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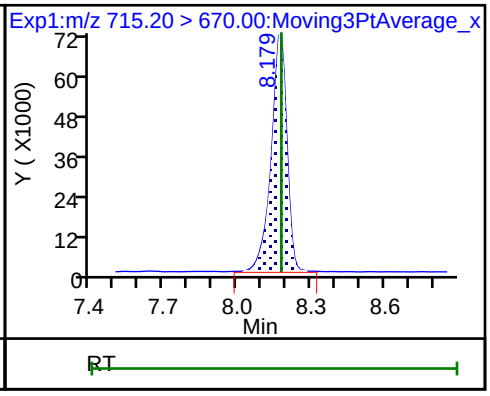
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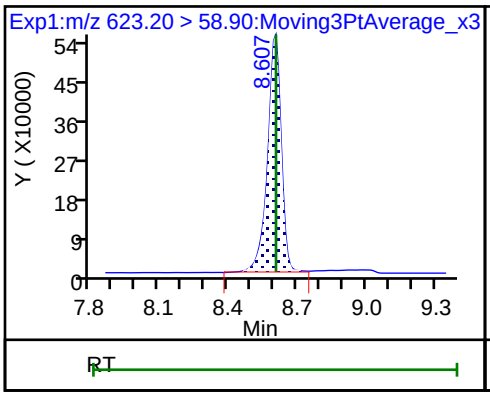
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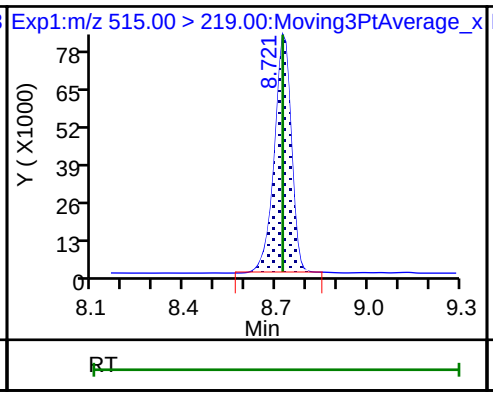
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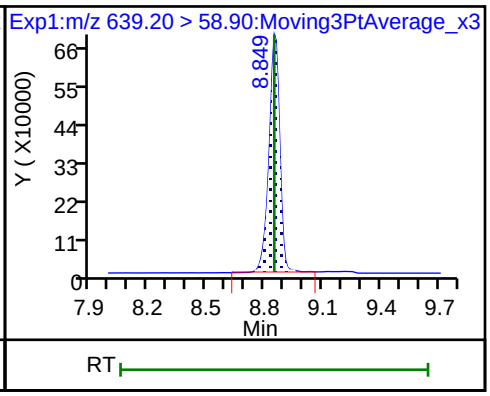
D 28 d7-N-MeFOSE-M



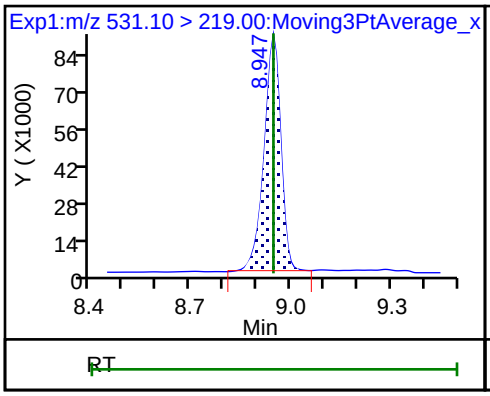
D 29 d3-NMePFOSA



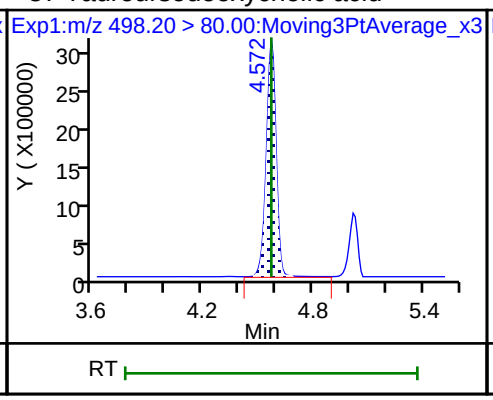
D 30 d9-N-EtFOSE-M



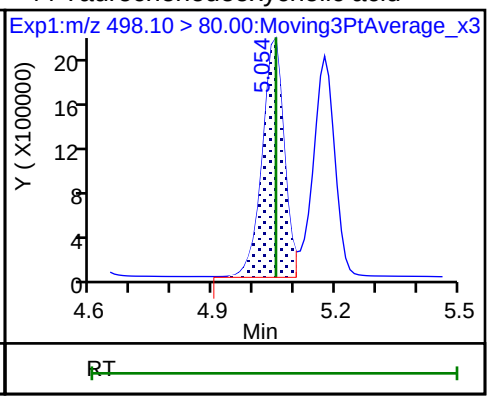
D 31 d5-NEtPFOSA



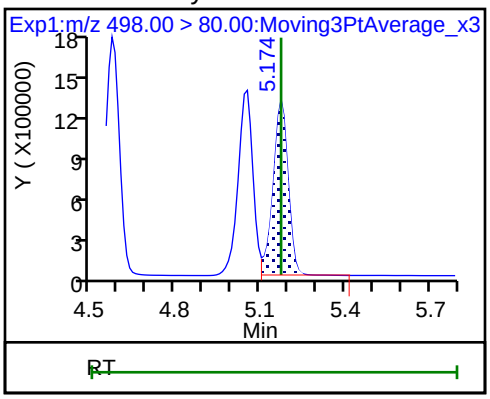
37 Tauroursodeoxycholic acid



44 Taurochenodeoxycholic acid



45 Taurodeoxycholic Acid



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-627485/1-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj34.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/18/2024 23:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	8.00	U	8.00	2.13
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.00	U	4.00	1.00
307-24-4	Perfluorohexanoic acid (PFHxA)	2.00	U	2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.50
335-67-1	Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.50
375-95-1	Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.50
335-76-2	Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.50
2058-94-8	Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.50
307-55-1	Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.50
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	2.00	U	2.00	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	2.00	U	2.00	0.50
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.50
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	2.00	U	2.00	0.50
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.52
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.00	U	2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	0.50
68259-12-1	Perfluorononanesulfonic acid (PFNS)	2.00	U	2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	2.00	U	2.00	0.50
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	8.00	U	8.00	2.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	8.00	U	8.00	2.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	8.00	U	8.00	2.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	2.00	U	2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	2.00	U	2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	U	2.00	0.50
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.62

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-627485/1-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj34.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/18/2024 23:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.52
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	U	20.0	5.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	U	20.0	5.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	8.00	U	8.00	2.00
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.00	U	8.00	2.00
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	U	4.00	1.00
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	U	4.00	1.22
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	8.00	U	8.00	2.00
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	8.00	U	8.00	2.00
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	4.00	U	4.00	1.00
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	10.0	U	10.0	2.50
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	50.0	U	50.0	12.5
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50.0	U	50.0	14.9
335-77-3	Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	U	4.00	1.00

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-627485/1-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj34.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/18/2024 23:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	98.6		10-130
2283397-79-3	13C5 PFPeA	93.7		35-150
2328024-54-8	13C5 PFHxA	86.5		55-150
2328024-55-9	13C4 PFHpA	89.9		55-150
1350614-84-4	13C8 PFOA	91.7		60-140
2283397-80-6	13C9 PFNA	107		55-140
2328024-56-0	13C6 PFDA	113		50-140
STL02580	13C7 PFUnA	105		30-140
STL02116	13C2 PFTeDA	74.1		10-130
2708218-83-9	13C3 PFBS	109		55-150
2708218-85-1	13C3 PFHxS	107		55-150
2265893-05-6	13C8 PFOS	116		45-140
STL01056	13C8 FOSA	113		30-130
1400690-70-1	d3-NMeFOSAA	110		45-200
1265205-97-7	d5-NEtFOSAA	122		10-200
STL02395	M2-4:2 FTS	158		60-200
STL02279	M2-6:2 FTS	150		60-200
STL02280	M2-8:2 FTS	143		50-200
STL02255	13C3 HFPO-DA	91.6		25-160
STL02277	d7-N-MeFOSE-M	112		10-150
STL02278	d9-N-EtFOSE-M	92.5		10-150
STL02704	d5-NEtPFOSA	76.6		10-130
STL02705	d3-NMePFOSA	79.1		15-130
STL02703	13C2-PFDoDA	96.6		10-150

Report Date: 19-Sep-2024 08:42:43 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj34.d
Lims ID: MB 240-627485/1-A
Client ID:
Sample Type: MB
Inject. Date: 18-Sep-2024 23:52:47 ALS Bottle#: 30 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: MB 240-627485/1-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-034
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:42:42 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:42:42
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.544	0.029		1851427	1.25			781	
* 2 13C2 PFHxA										
315.10 > 270.00	4.744	4.719	0.025		1349512	0.6250			4397	
* 3 13C4 PFOA										
417.10 > 172.00	5.642	5.629	0.013		239926	0.6250			1053	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.843	0.035		1355003	0.5913			1621	
* 5 13C5 PFNA										
468.00 > 423.00	6.076	6.052	0.024		869139	0.3125			1157	
* 6 13C2 PFDA										
515.10 > 470.10	6.520	6.488	0.032		658342	0.3125			1795	
* 7 13C4 PFOS										
502.80 > 79.90	6.791	6.761	0.030		1192374	0.5975	Target=4.00		2038	
502.80 > 98.90	6.791	6.761	0.030		307338		3.88(2.00-6.00)		1174	
D 8 13C4 PFBA										
216.80 > 171.90	3.573	3.544	0.029	1.000	4143751	2.46		98.6	9068	
D 9 13C5 PFPeA										
268.30 > 223.00	4.225	4.202	0.023	0.891	1985352	1.17		93.7	7019	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.544	4.530	0.014	0.773	1412867	1.84	Target=0.29	158	3915	
329.10 > 309.00	4.544	4.530	0.014	0.773	3896972		0.36(0.14-0.43)	158	1094	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.719	0.025	1.000	1640918	0.5408	Target=40.21	86.5	3444	
318.00 > 120.30	4.744	4.719	0.025	1.000	39190		41.87(20.11-60.32)	86.5	253	
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.846	0.025	0.829	1557672	0.6358	Target=3.28	109	2849	
302.10 > 98.90	4.871	4.846	0.025	0.829	485068		3.21(1.64-4.92)	109	2445	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.923	0.013	1.040	2000782	2.29	Target=1.86	91.6	3766	
286.90 > 184.90	4.936	4.923	0.013	1.040	1089707		1.84(0.93-2.78)	91.6	2690	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.194	0.013	1.098	1780820	0.5620		89.9	3410	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.440	5.416	0.024	0.925	1566778	1.78	Target=0.38	150	3059	
429.10 > 409.00	5.430	5.416	0.014	0.924	3329711		0.47(0.19-0.57)	150	4453	
D 16 13C8 PFOA										
421.10 > 376.00	5.652	5.619	0.033	1.002	1735688	0.5732		91.7	2260	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.843	0.035	1.000	1517535	0.6308	Target=3.25	107	3157	
402.10 > 98.80	5.868	5.843	0.025	0.998	456808		3.32(1.63-4.88)	107	2056	
D 18 13C9 PFNA										
472.10 > 427.00	6.085	6.052	0.033	1.002	728394	0.3339		107	1673	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.280	6.249	0.031	1.068	1028711	1.71	Target=0.33	143	4740	
529.10 > 509.00	6.280	6.249	0.031	1.068	2563025		0.40(0.16-0.49)	143	5122	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.461	6.427	0.034	0.952	1266587	1.37		110	3269	
D 21 13C6 PFDA										
519.10 > 474.10	6.520	6.488	0.032	1.000	718843	0.3545		113	1706	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.656	6.624	0.032	0.980	1385129	1.52		122	3035	
D 23 13C8 PFOS										
507.10 > 79.90	6.791	6.752	0.039	1.000	1423165	0.6922	Target=4.26	116	1830	
507.10 > 98.90	6.791	6.752	0.039	1.000	335480		4.24(2.13-6.39)	116	855	
D 24 13C7 PFUnA										
570.00 > 525.10	6.959	6.923	0.036	1.067	654291	0.3279		105	1384	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.395	7.353	0.042	1.134	568420	0.3018		96.6	961	
D 26 13C8 FOSA										
506.10 > 77.80	7.713	7.709	0.004	1.136	1554577	0.7045		113	3176	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.226	8.179	0.048	1.262	249170	0.2315		74.1	498	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.610	8.607	0.003	1.268	2286409	6.99		112	664	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.733	8.721	0.012	1.286	215262	0.4947		79.1	883	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.861	8.849	0.012	1.305	2321543	5.78		92.5	689	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.947	0.002	1.318	210120	0.4790		76.6	139	

QC Flag Legend

Processing Flags

Reagents:

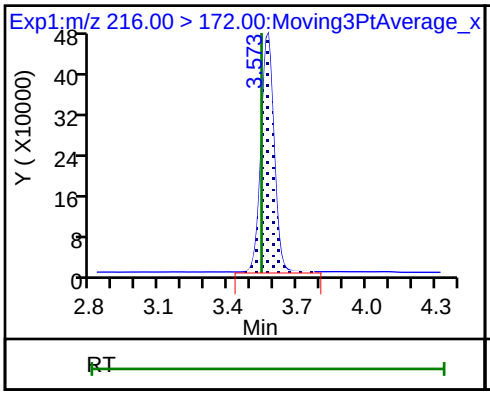
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Report Date: 19-Sep-2024 08:42:43 Chrom Revision: 2.3 26-Aug-2024 17:14:48

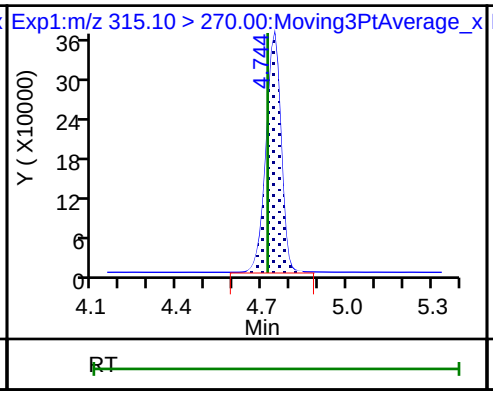
Eurofins Cleveland

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Injection Date: 18-Sep-2024 23:52:47 Instrument ID: LCMS04
Lims ID: MB 240-627485/1-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 30 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

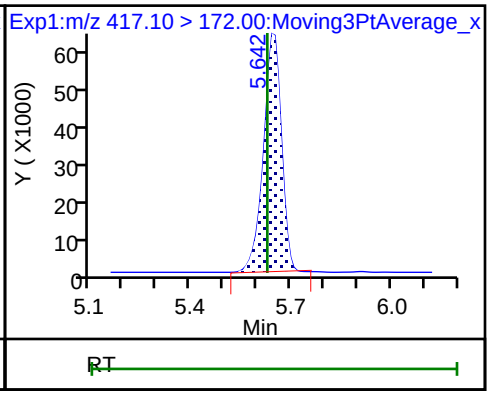
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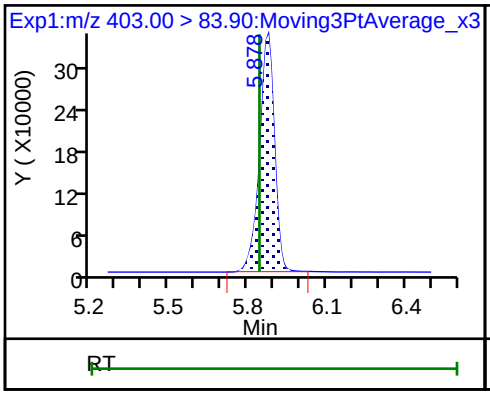
* 2 13C2 PFHxA



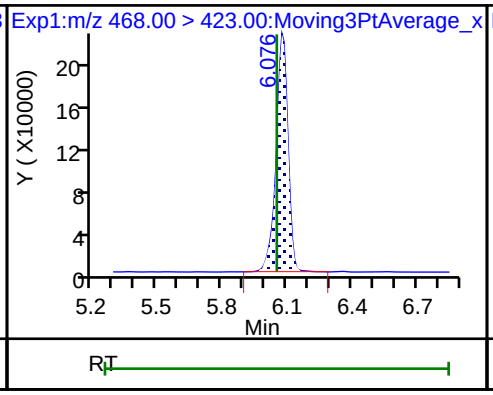
* 3 13C4 PFOA



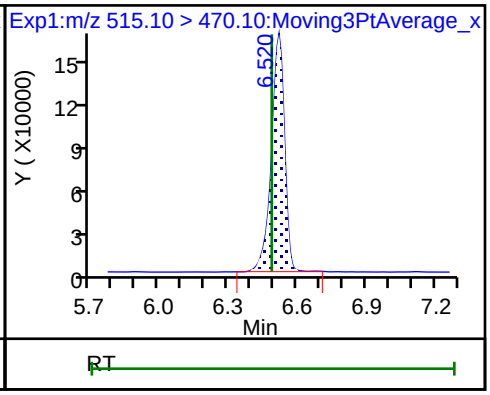
* 4 18O2 PFHxS



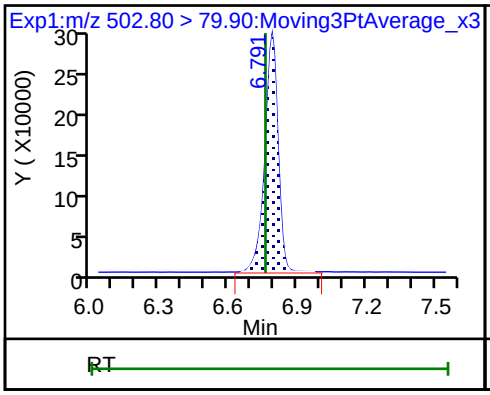
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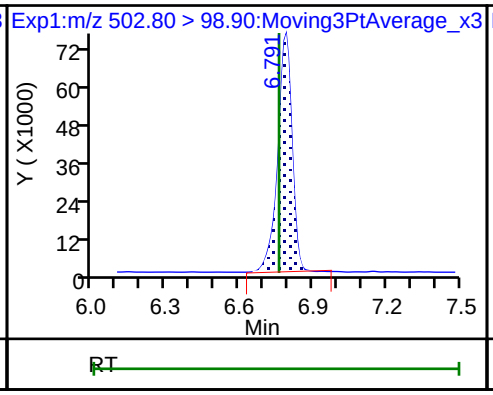
* 6 13C2 PFDA



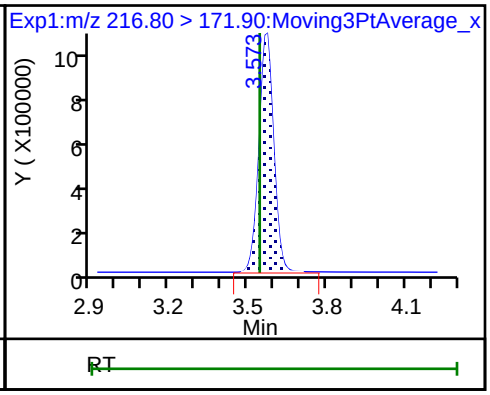
* 7 13C4 PFOS



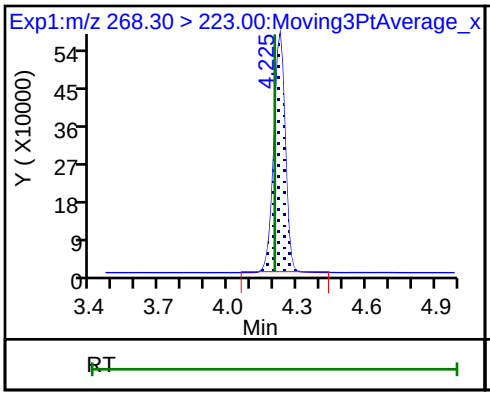
* 7 13C4 PFOS



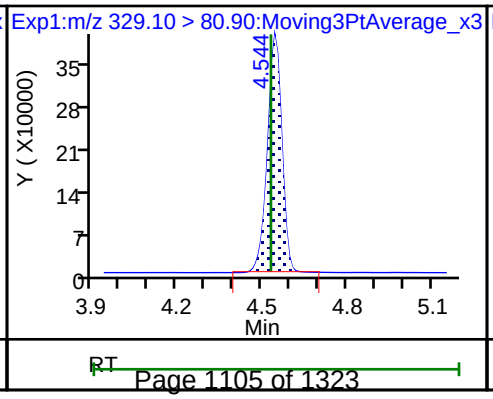
D 8 13C4 PFBA



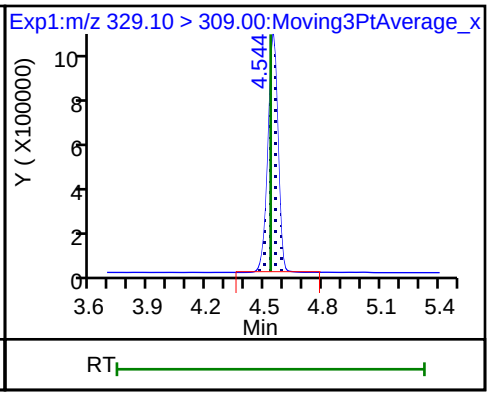
D 9 13C5 PFPeA



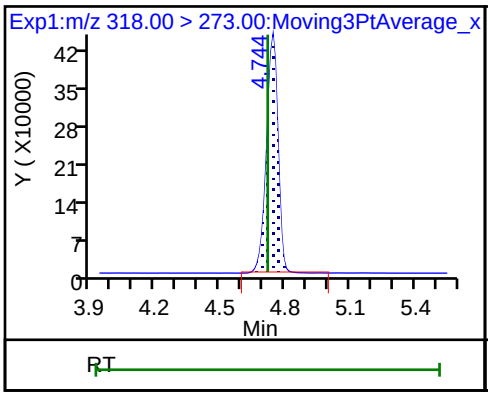
D 10 M2-4:2 FTS



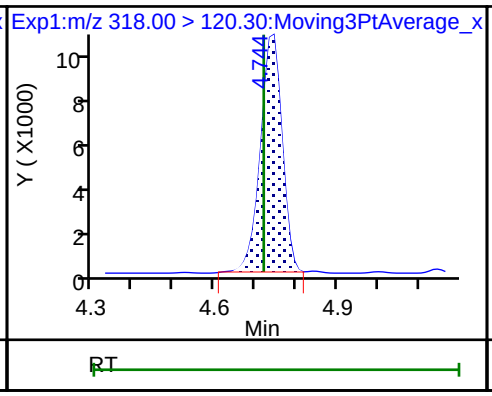
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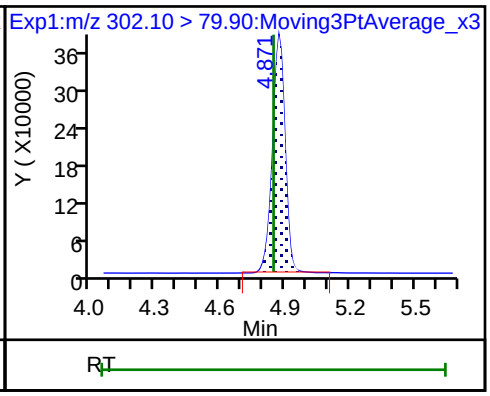
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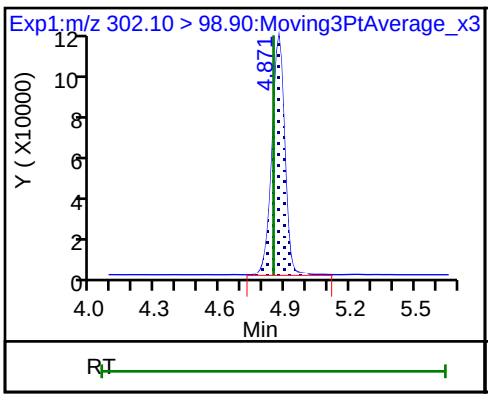
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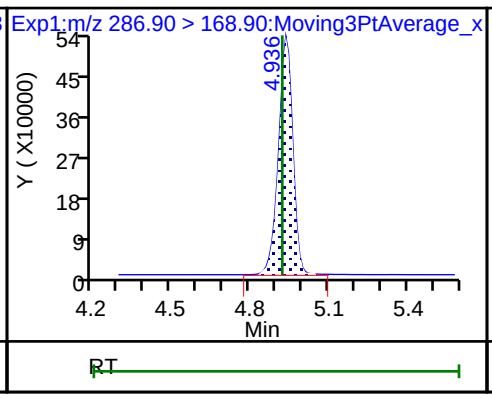
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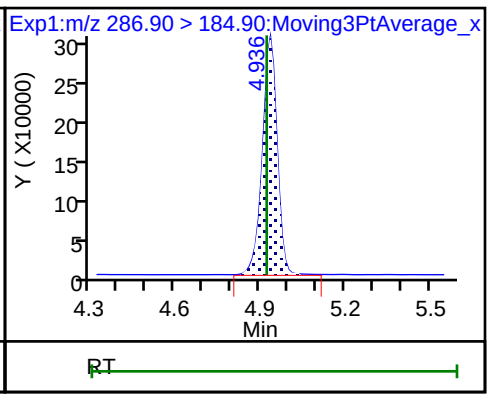
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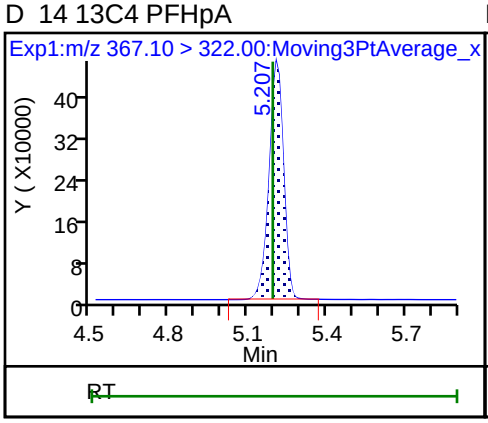
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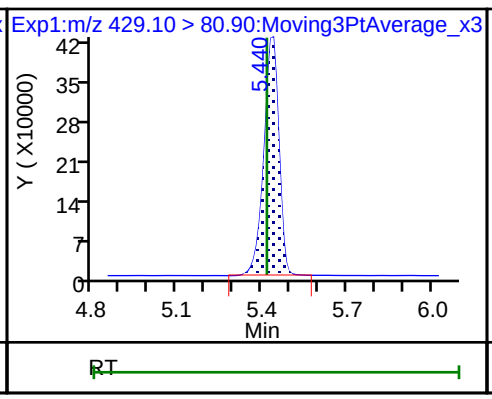
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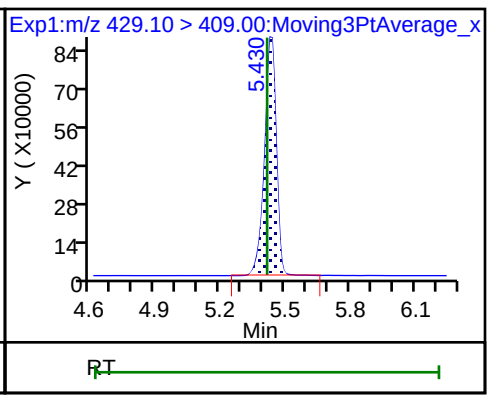
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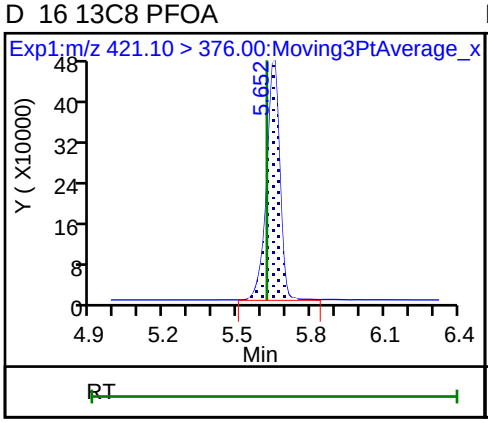
D 15 M2-6:2 FTS



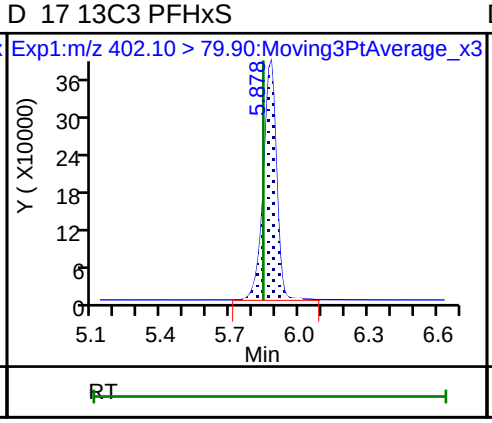
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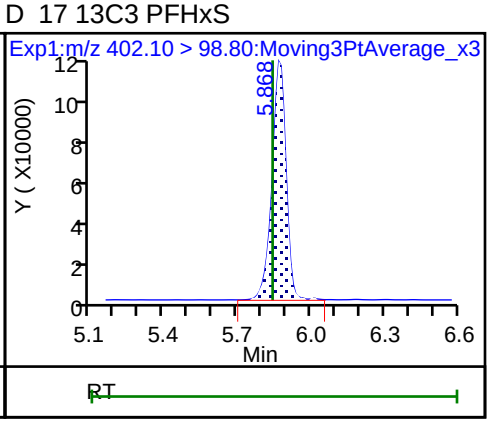
D 16 13C8 PFOA



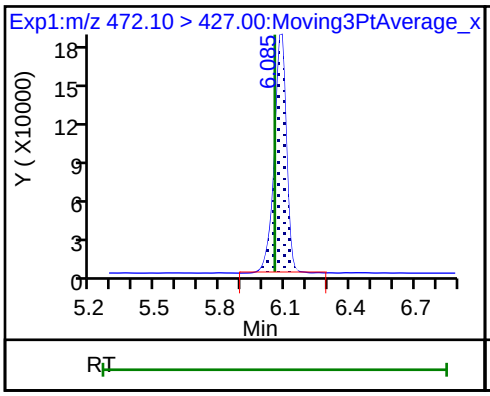
D 17 13C3 PFHxS



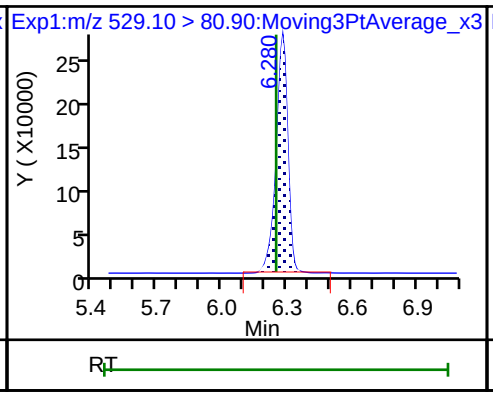
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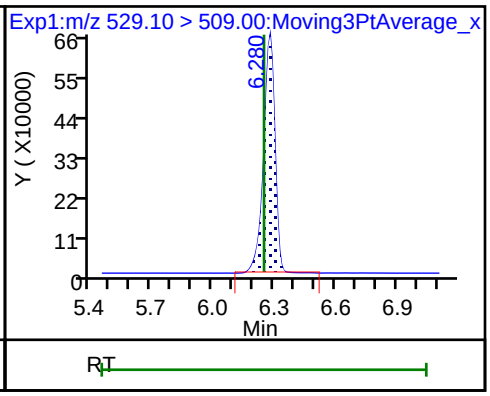
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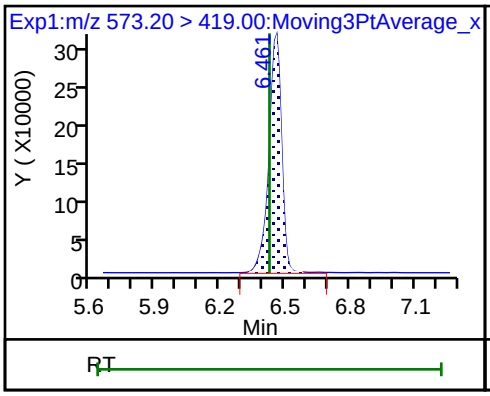
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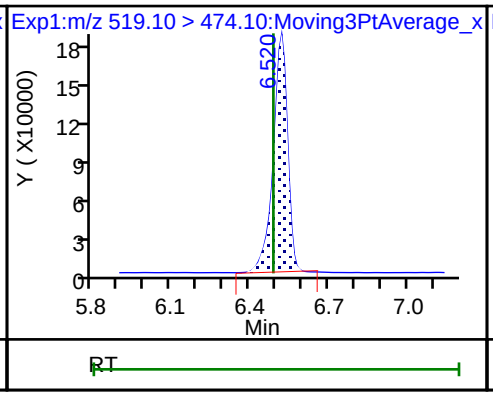
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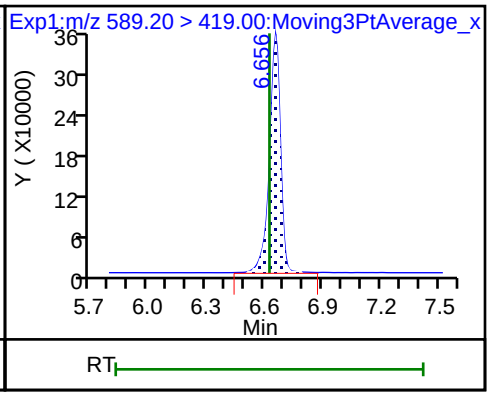
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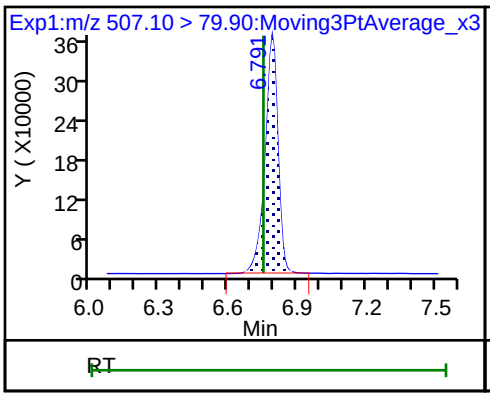
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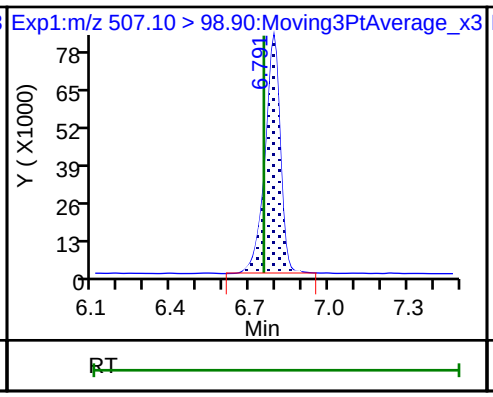
D 22 d5-NEtFOSAA



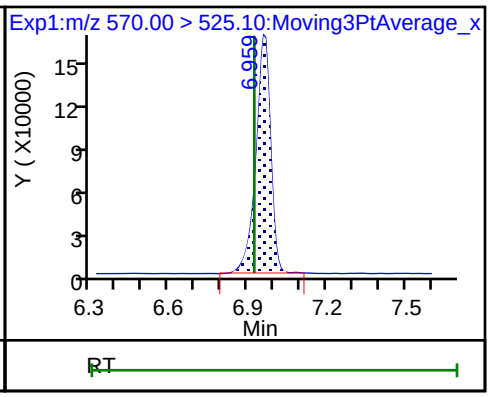
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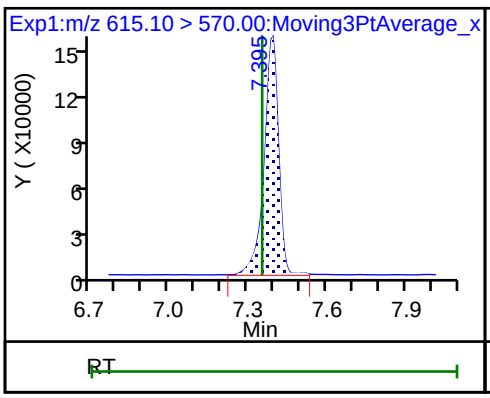
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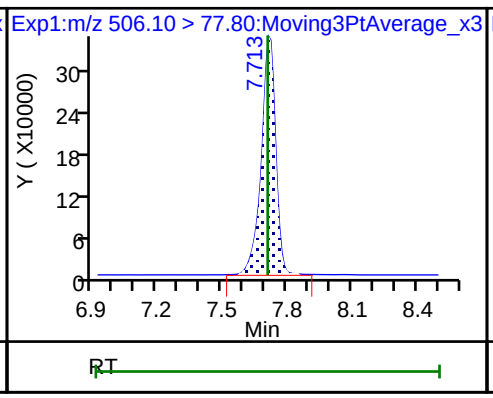
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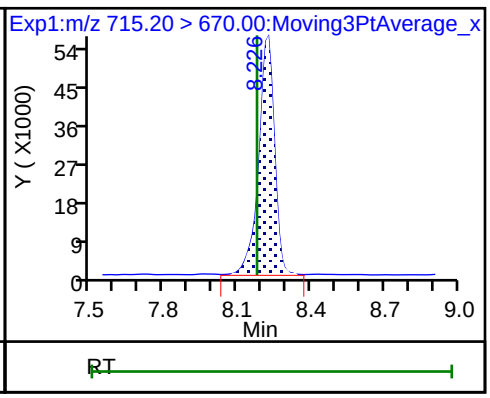
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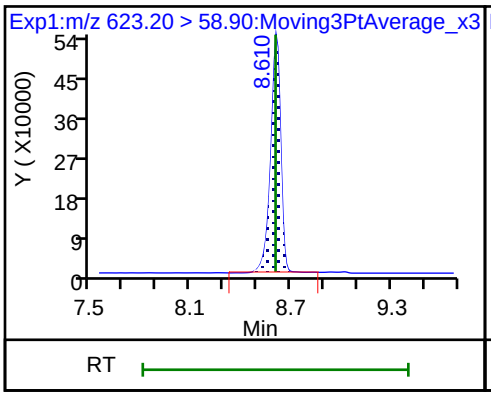
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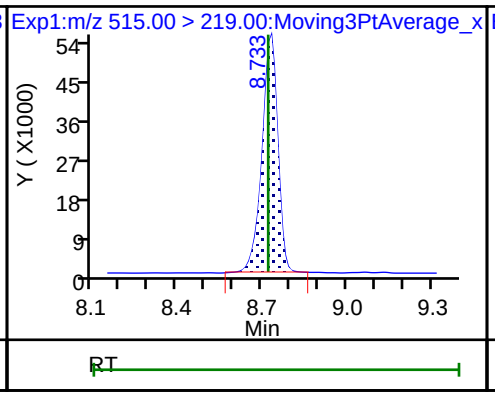
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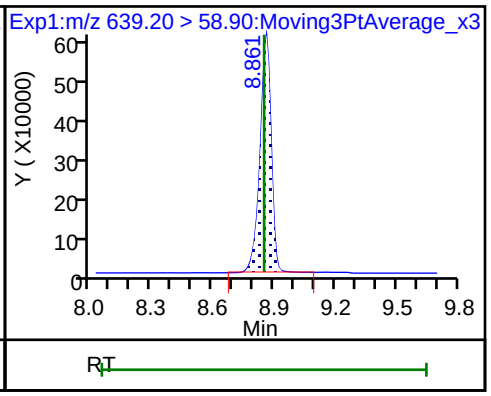
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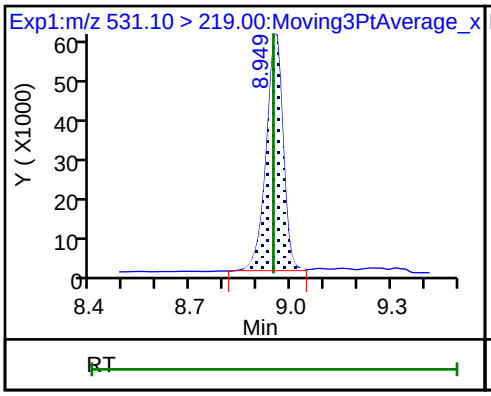
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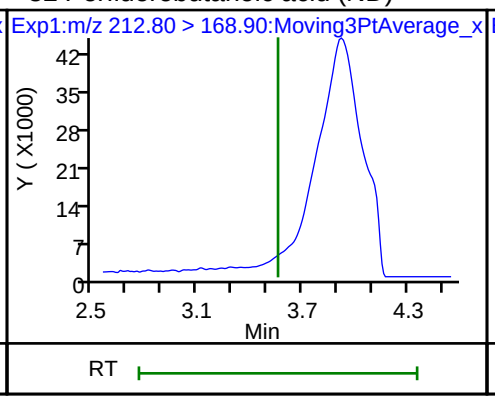
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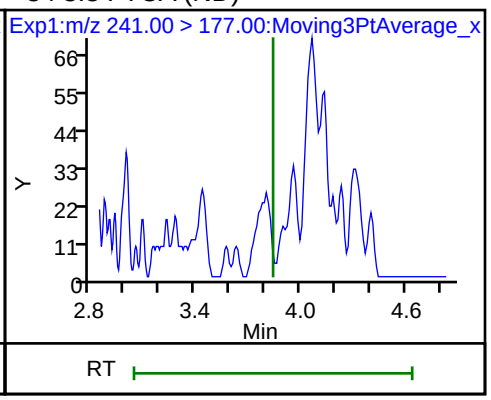
D 31 d5-NEtPFOSA



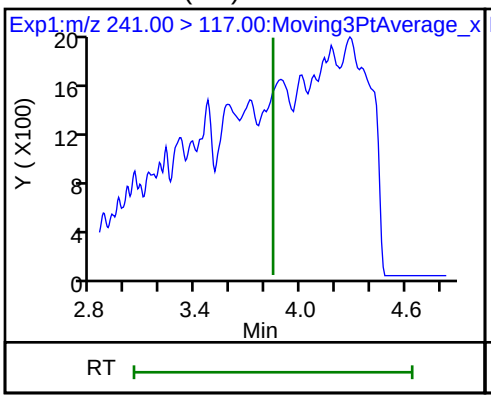
32 Perfluorobutanoic acid (ND)



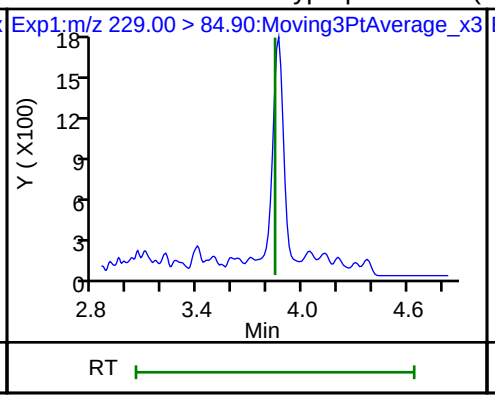
34 3:3 FTCA (ND)



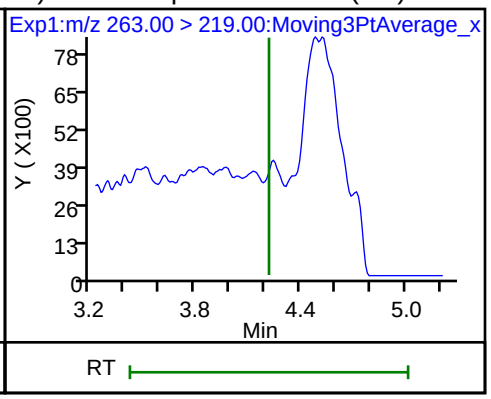
34 3:3 FTCA (ND)



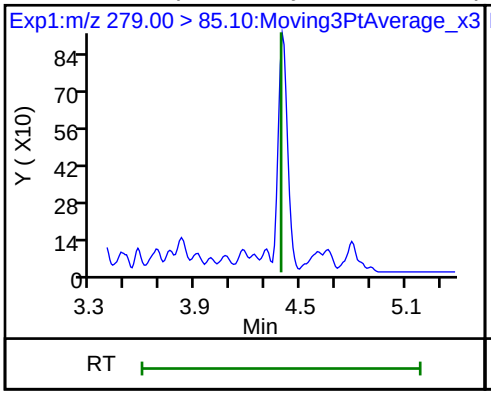
33 Perfluoro-3-methoxypropanoic aci (ND)



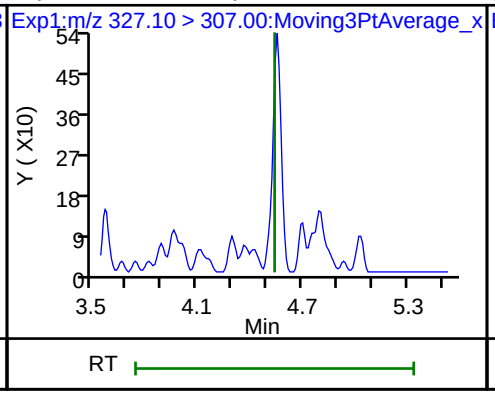
35 Perfluoropentanoic acid (ND)



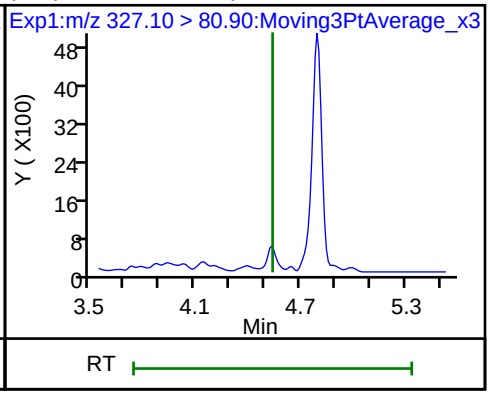
36 Perfluoro(4-methoxybutanoic acid (ND)



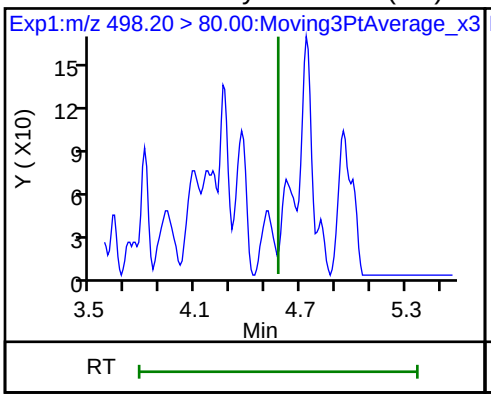
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



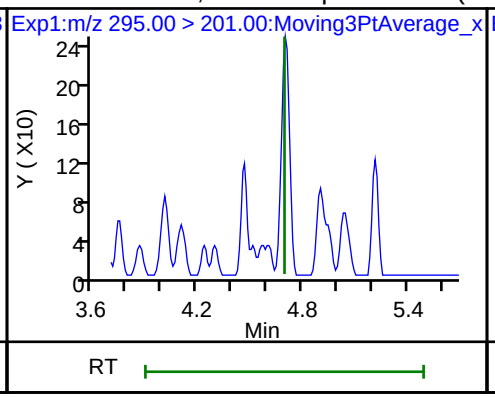
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



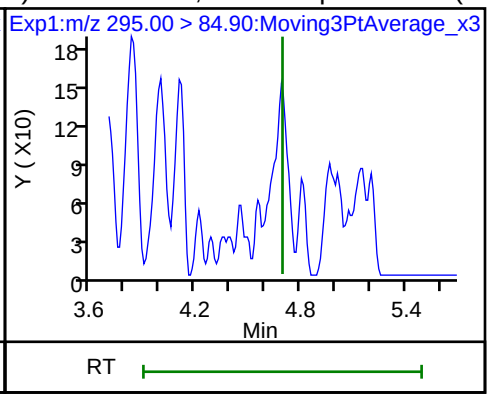
37 Tauroursodeoxycholic acid (ND)



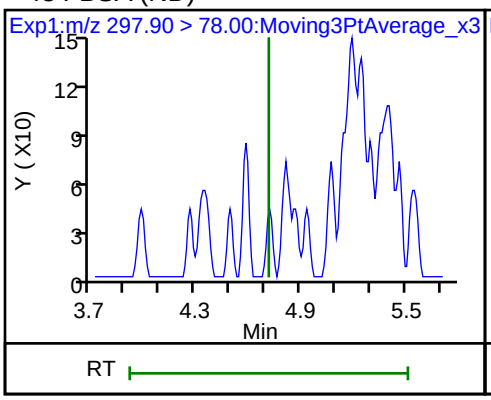
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



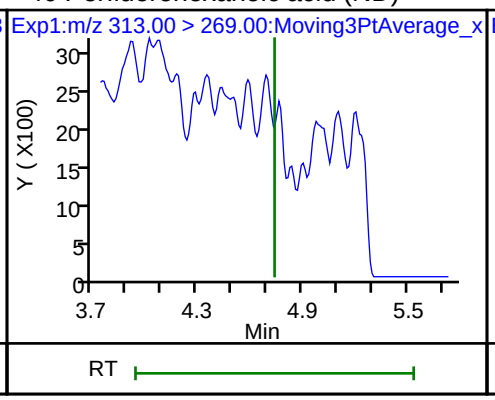
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



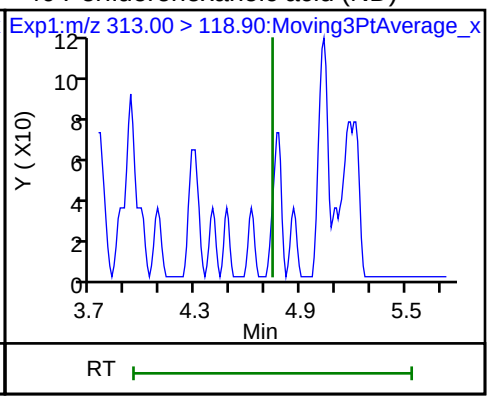
48 FBSA (ND)



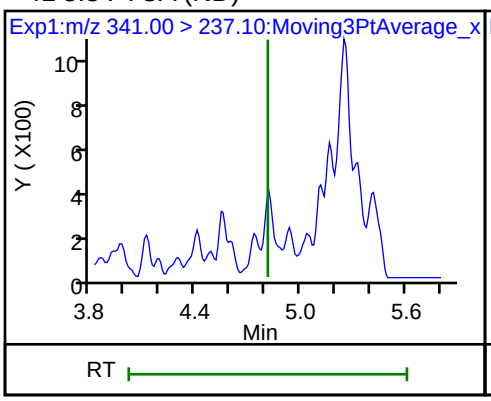
40 Perfluorohexanoic acid (ND)



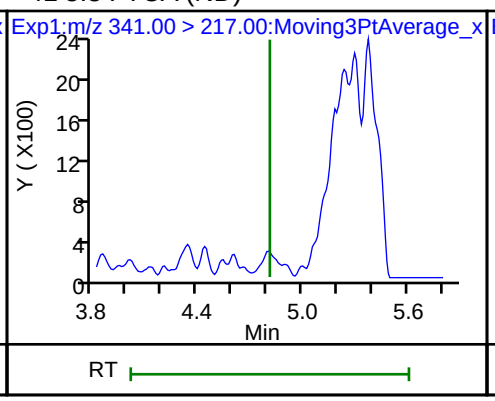
40 Perfluorohexanoic acid (ND)



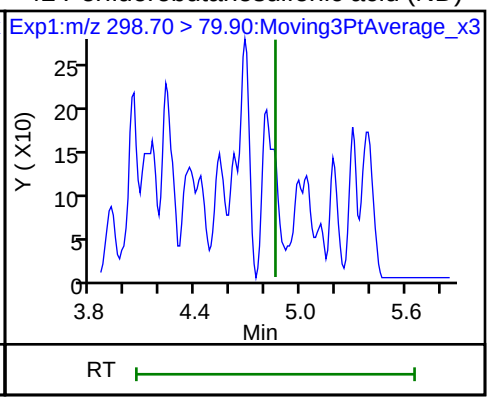
41 5:3 FTCA (ND)



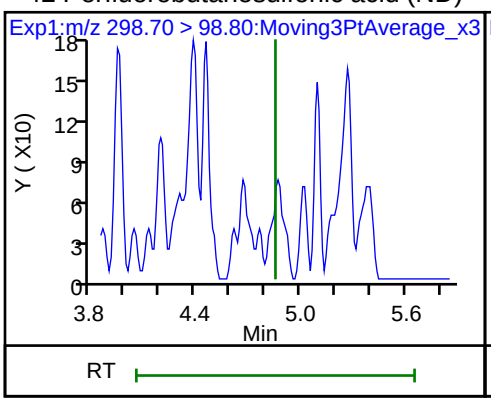
41 5:3 FTCA (ND)



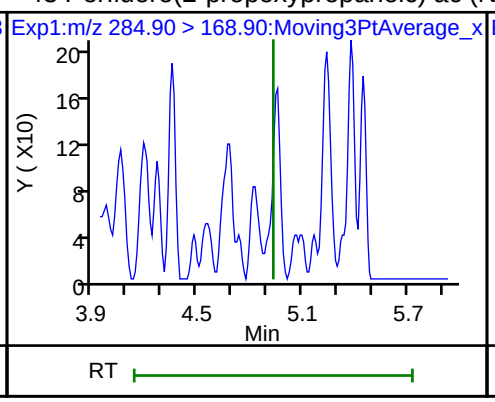
42 Perfluorobutanesulfonic acid (ND)



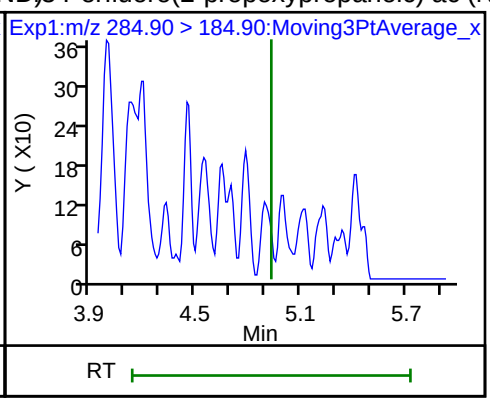
42 Perfluorobutanesulfonic acid (ND)



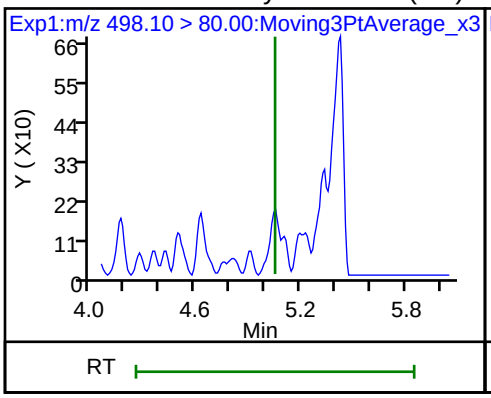
43 Perfluoro(2-propoxypropanoic) ac (ND)



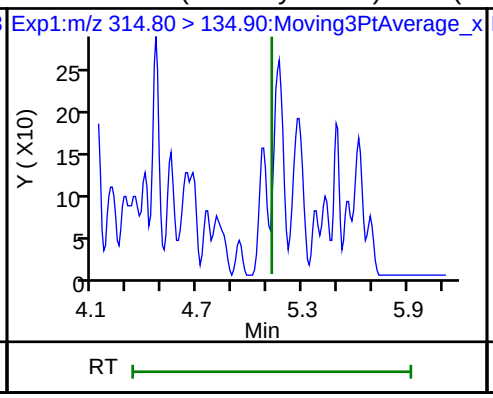
43 Perfluoro(2-propoxypropanoic) ac (ND)



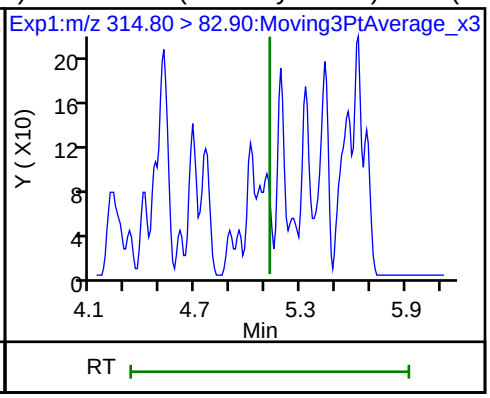
44 Taurochenodeoxycholic acid (ND)



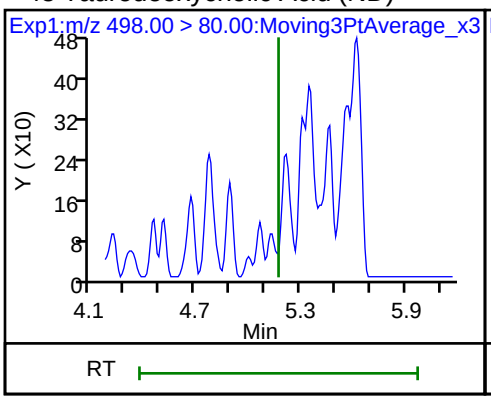
46 Perfluoro (2-ethoxyethane) sulfo (ND)



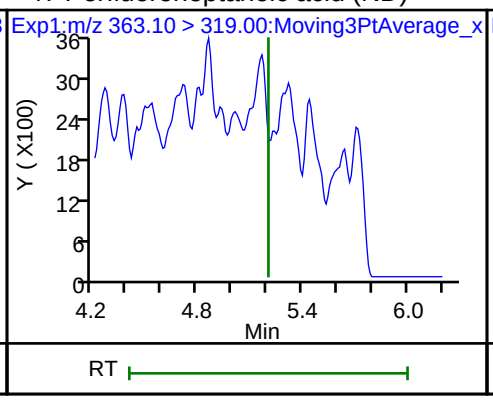
46 Perfluoro (2-ethoxyethane) sulfo (ND)



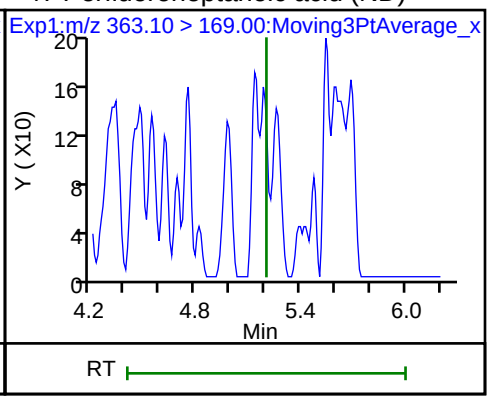
45 Taurodeoxycholic Acid (ND)



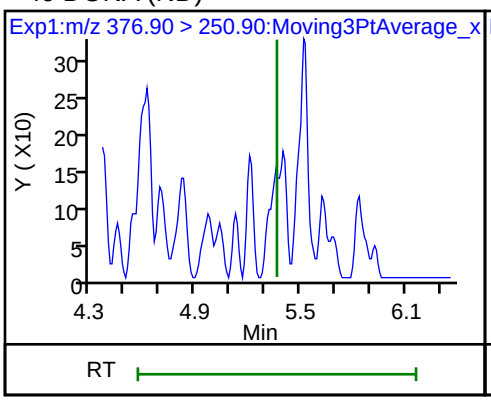
47 Perfluoroheptanoic acid (ND)



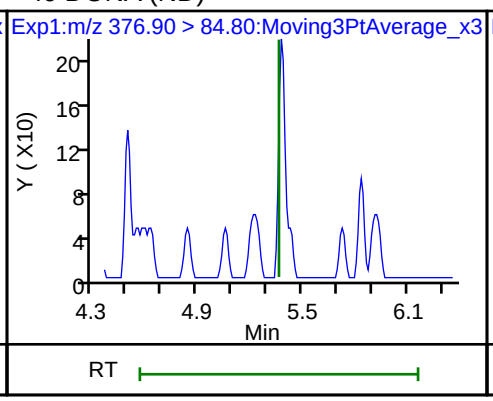
47 Perfluoroheptanoic acid (ND)



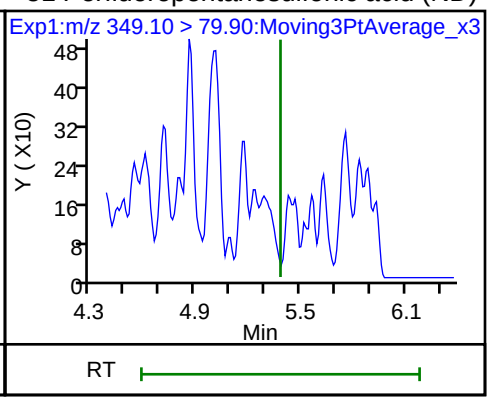
49 DONA (ND)



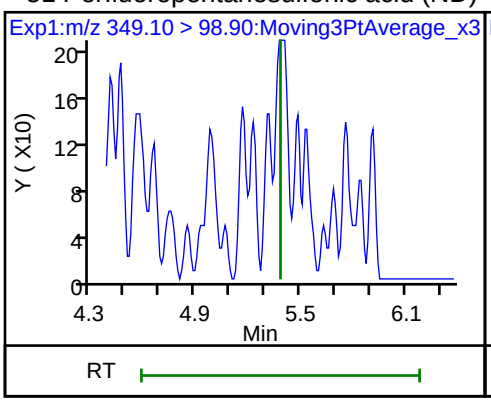
49 DONA (ND)



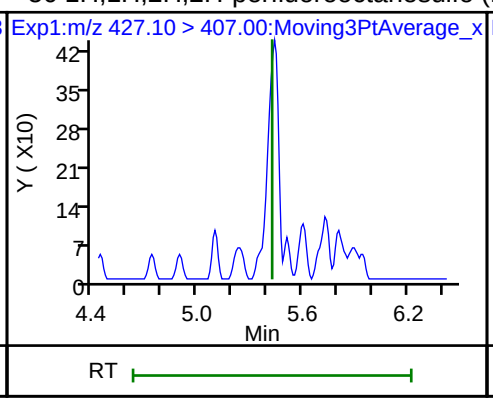
51 Perfluoropentanesulfonic acid (ND)



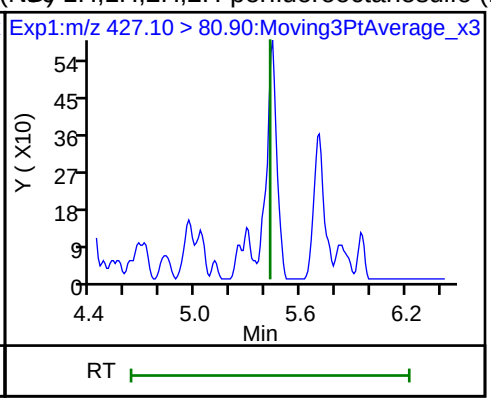
51 Perfluoropentanesulfonic acid (ND)



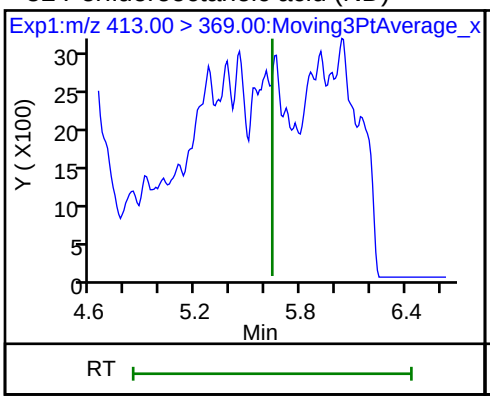
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



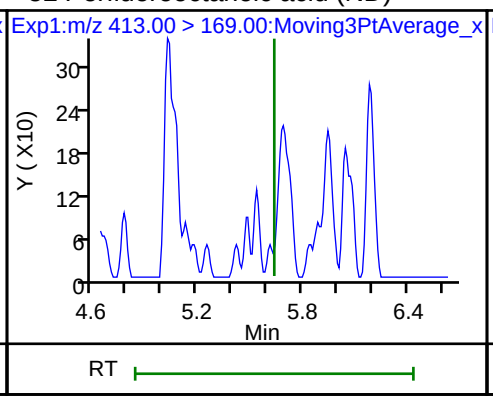
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



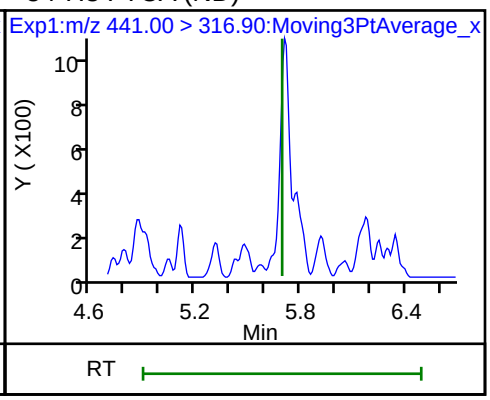
52 Perfluorooctanoic acid (ND)



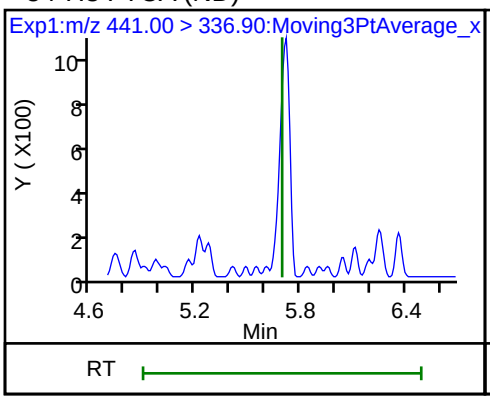
52 Perfluorooctanoic acid (ND)



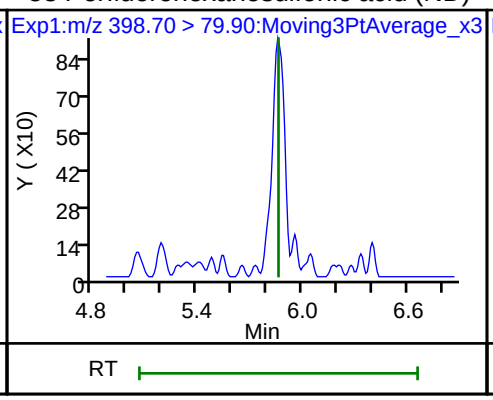
54 7:3 FTCA (ND)



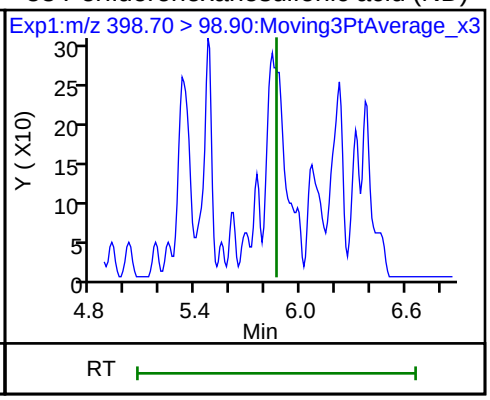
54 7:3 FTCA (ND)



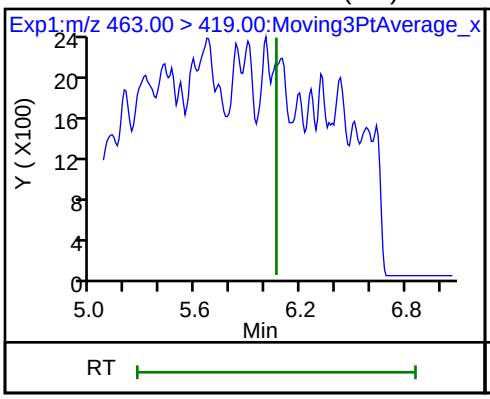
53 Perfluorohexanesulfonic acid (ND)



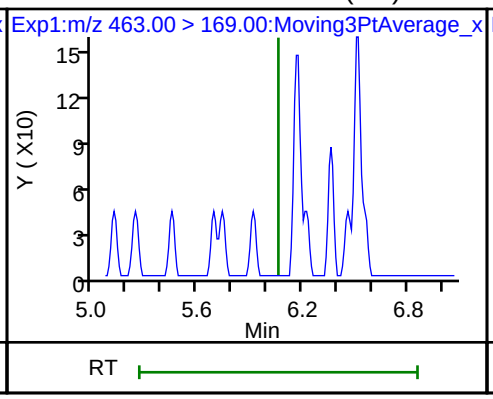
53 Perfluorohexanesulfonic acid (ND)



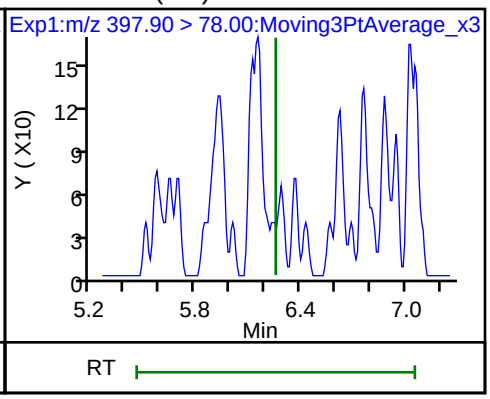
55 Perfluorononanoic acid (ND)



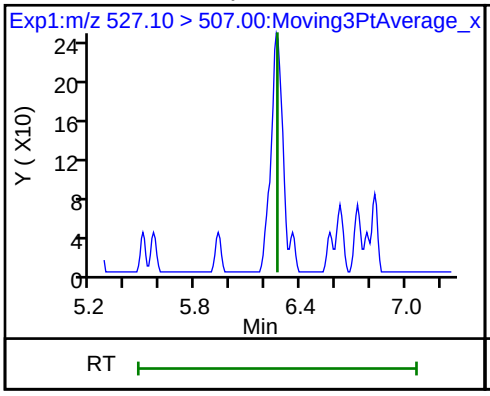
55 Perfluorononanoic acid (ND)



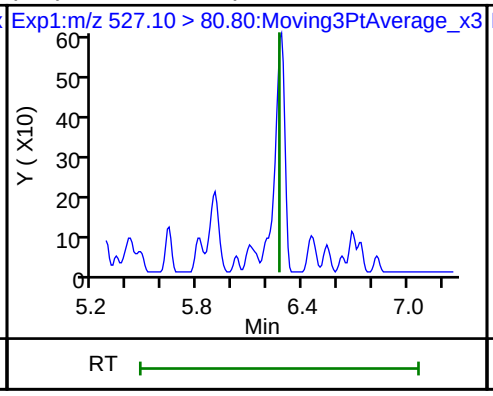
62 FHxSA (ND)



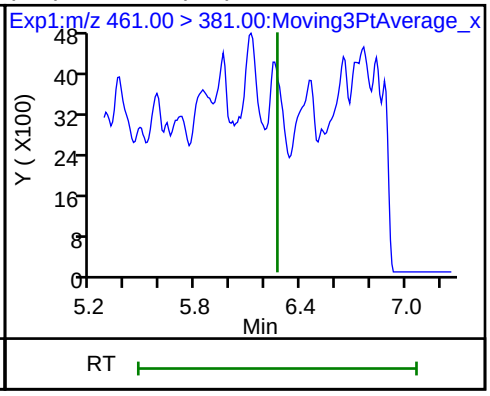
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



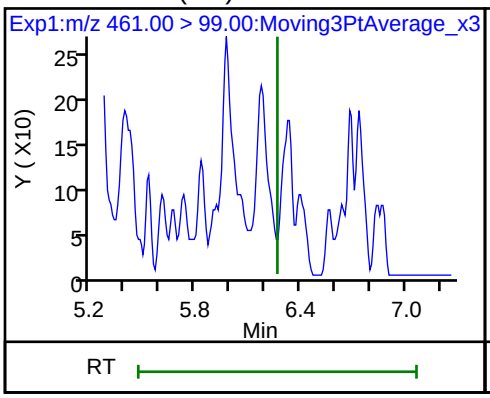
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



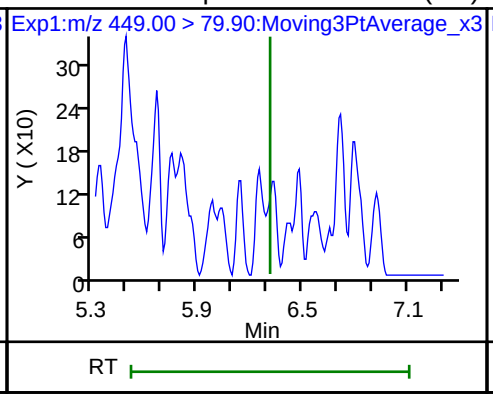
57 PFECHS (ND)



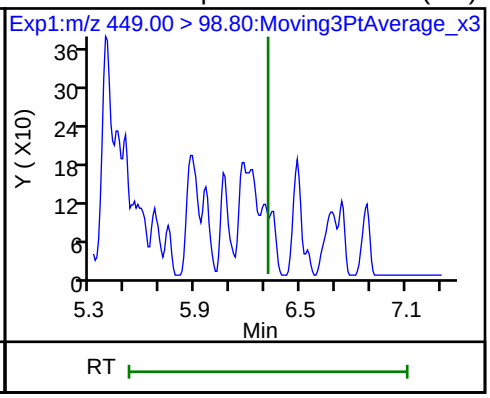
57 PFECHS (ND)



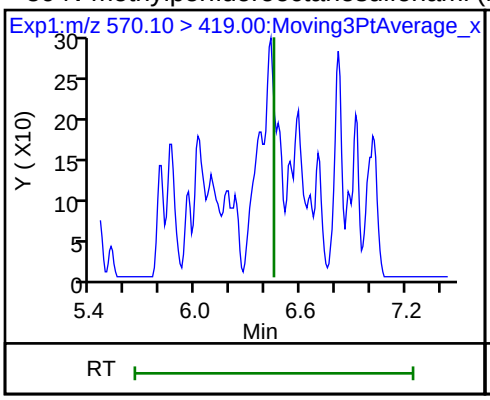
58 Perfluoroheptanesulfonic acid (ND)



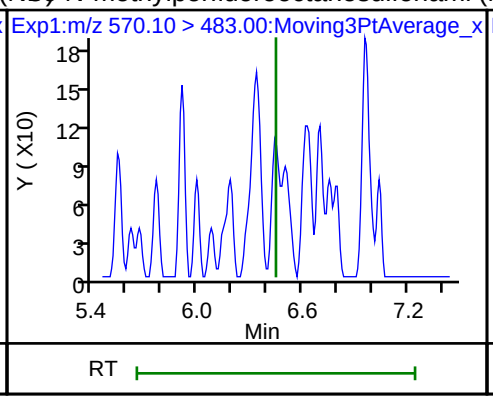
58 Perfluoroheptanesulfonic acid (ND)



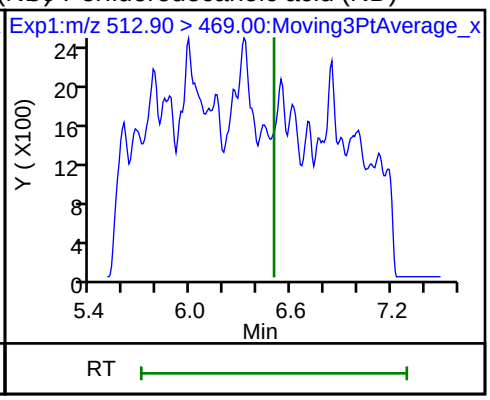
59 N-methylperfluorooctanesulfonami (ND)



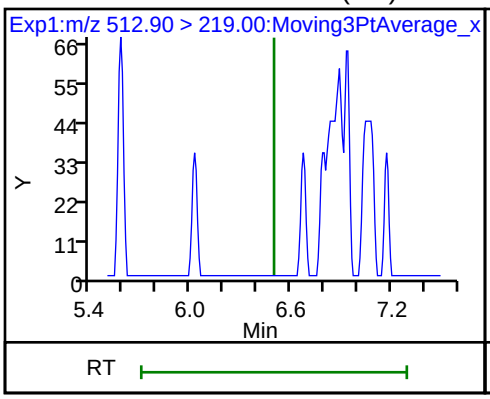
59 N-methylperfluorooctanesulfonami (ND)



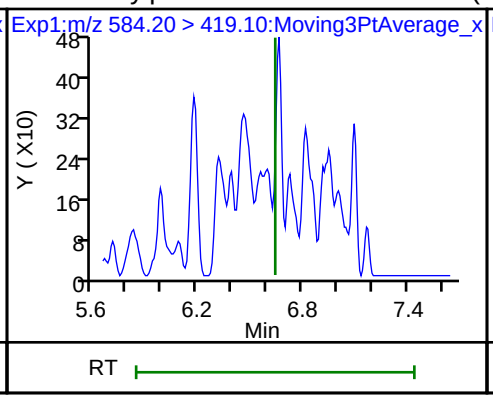
60 Perfluorodecanoic acid (ND)



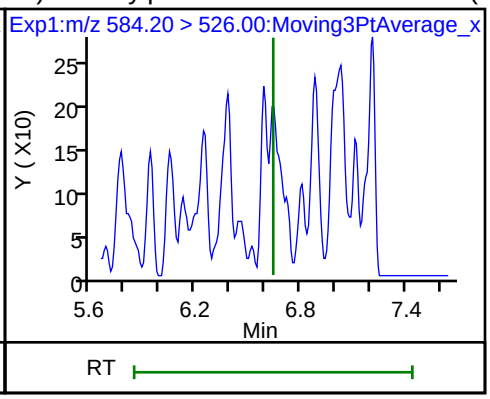
60 Perfluorodecanoic acid (ND)



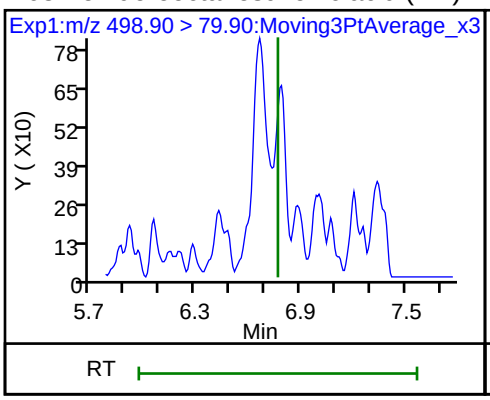
61 N-ethylperfluorooctanesulfonamid (ND)



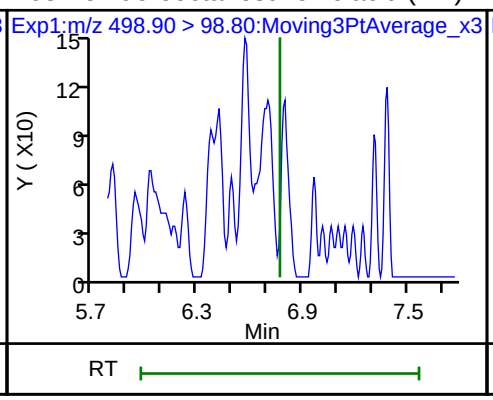
61 N-ethylperfluorooctanesulfonamid (ND)



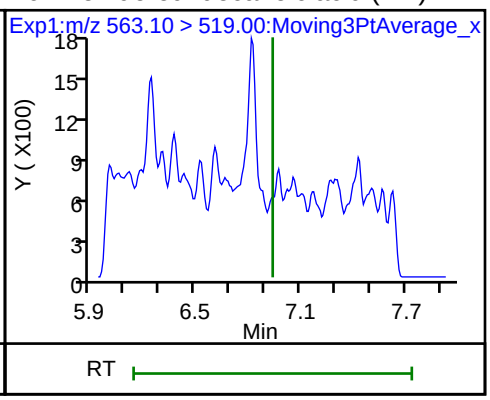
63 Perfluorooctanesulfonic acid (ND)



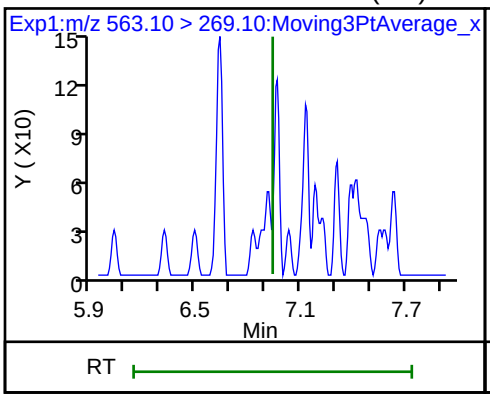
63 Perfluorooctanesulfonic acid (ND)



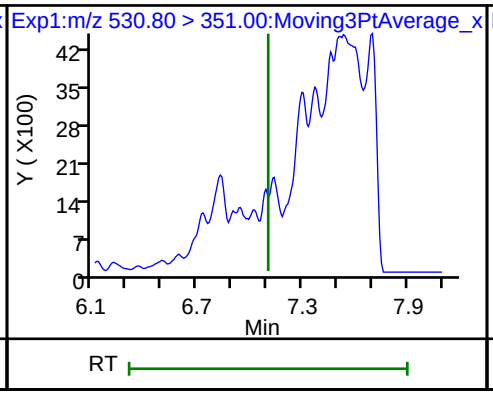
64 Perfluoroundecanoic acid (ND)



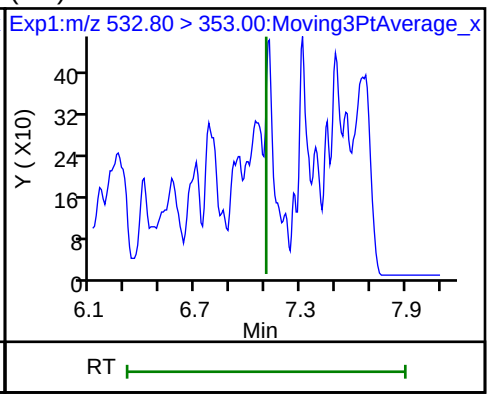
64 Perfluoroundecanoic acid (ND)



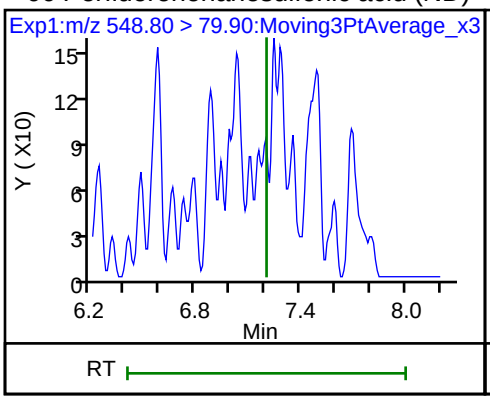
65 9-Chlorohexadecafluoro-3-oxanona (ND)



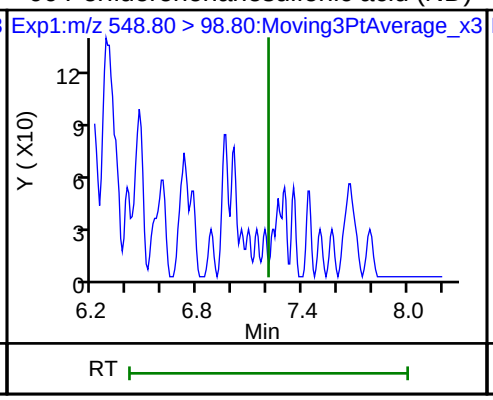
65 9-Chlorohexadecafluoro-3-oxanona (ND)



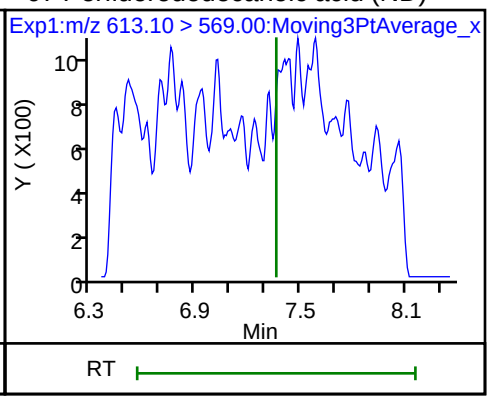
66 Perfluorononanesulfonic acid (ND)



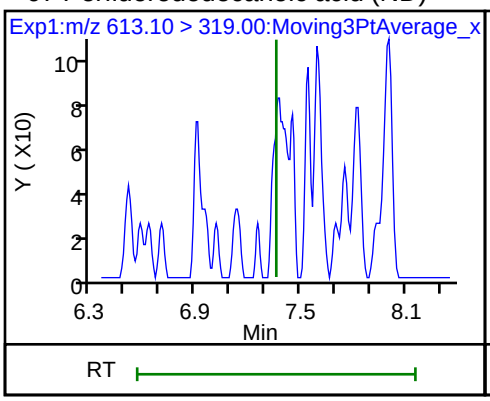
66 Perfluorononanesulfonic acid (ND)



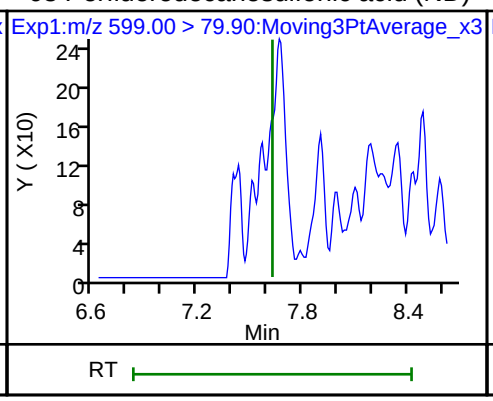
67 Perfluorododecanoic acid (ND)



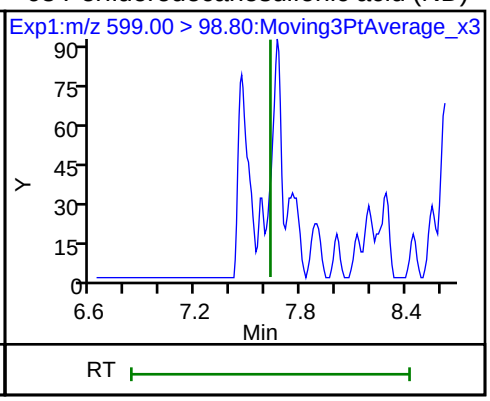
67 Perfluorododecanoic acid (ND)



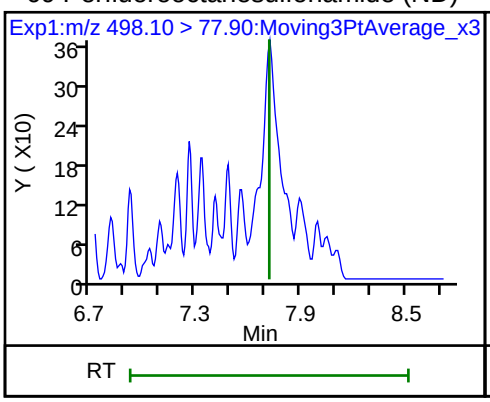
68 Perfluorodecanesulfonic acid (ND)



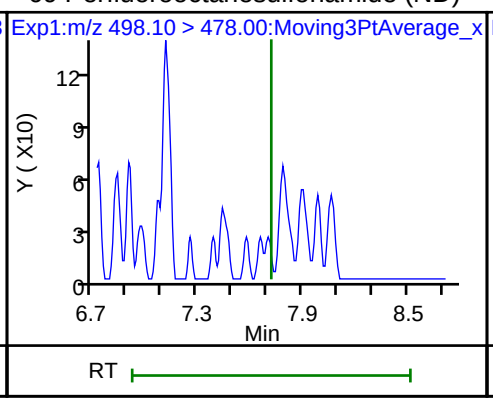
68 Perfluorodecanesulfonic acid (ND)



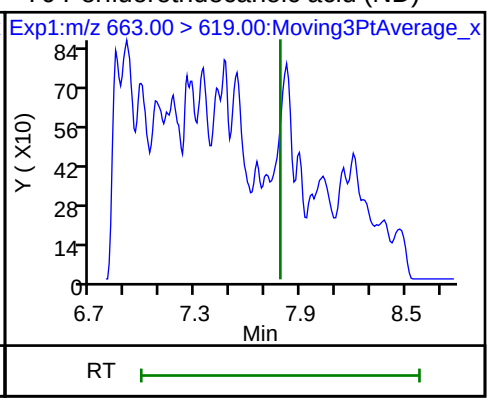
69 Perfluorooctanesulfonamide (ND)



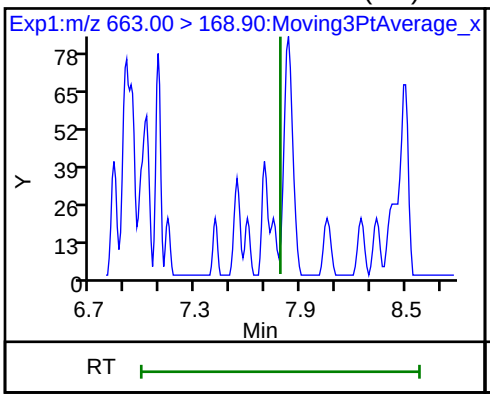
69 Perfluorooctanesulfonamide (ND)



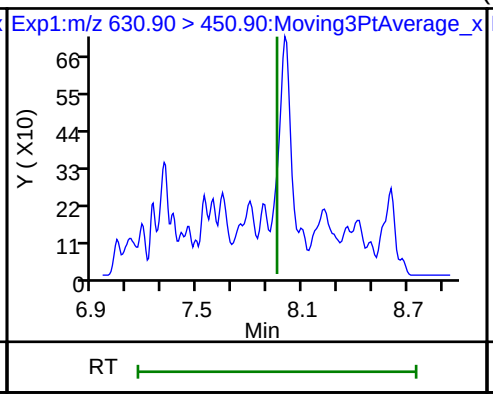
70 Perfluorotridecanoic acid (ND)



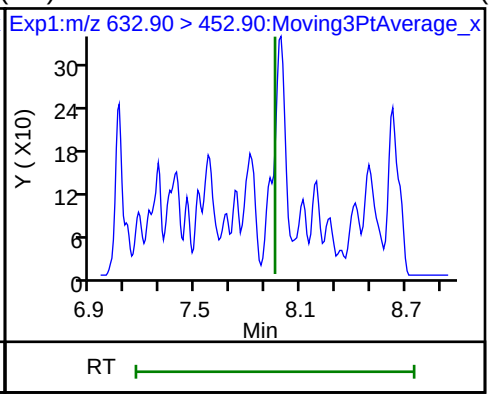
70 Perfluorotridecanoic acid (ND)



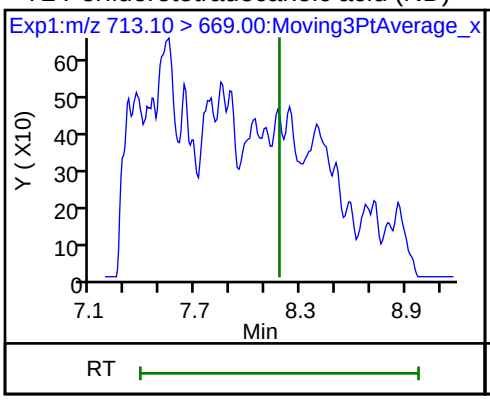
71 11-Chloroeicosafluoro-3-oxaundec (ND)



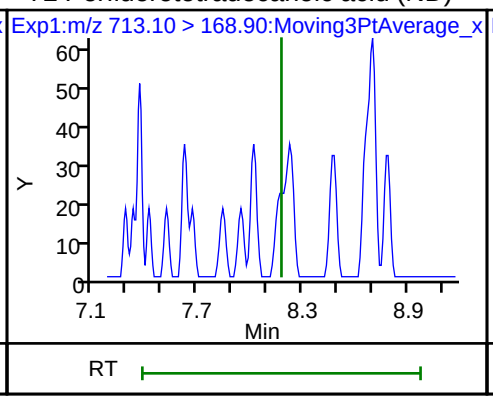
71 11-Chloroeicosafluoro-3-oxaundec (ND)



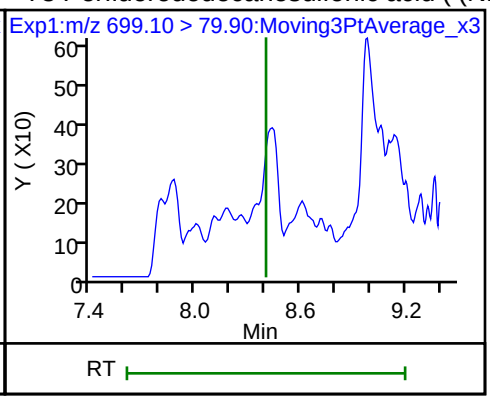
72 Perfluorotetradecanoic acid (ND)



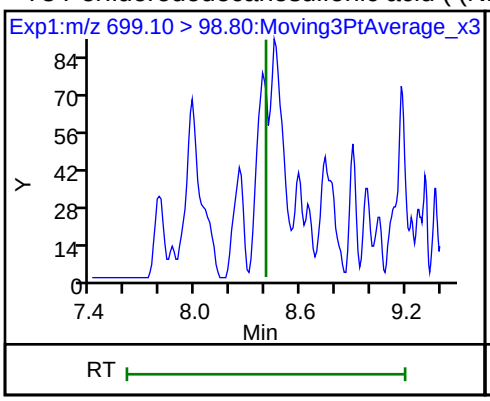
72 Perfluorotetradecanoic acid (ND)



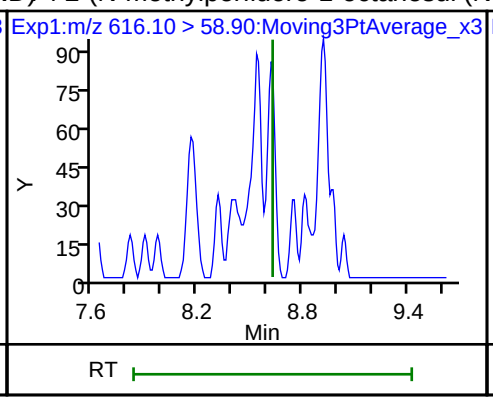
73 Perfluorododecanesulfonic acid ((ND)



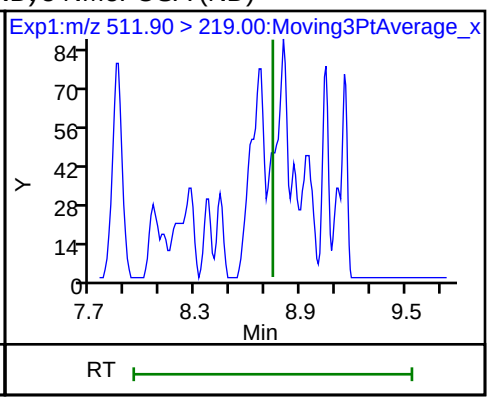
73 Perfluorododecanesulfonic acid ((ND)



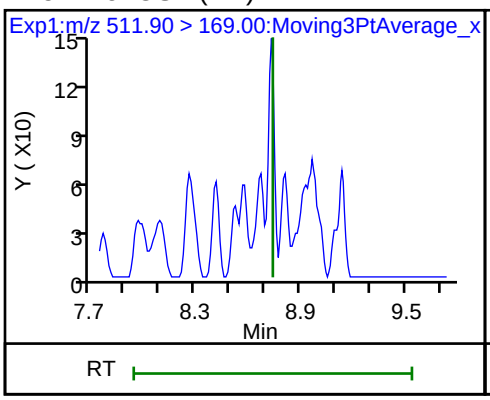
74 2-(N-methylperfluoro-1-octanesul (ND)



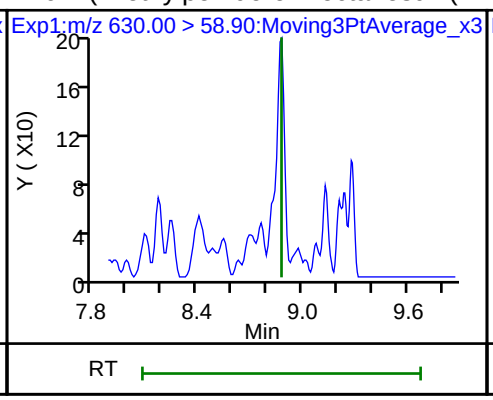
75 NMeFOSA (ND)



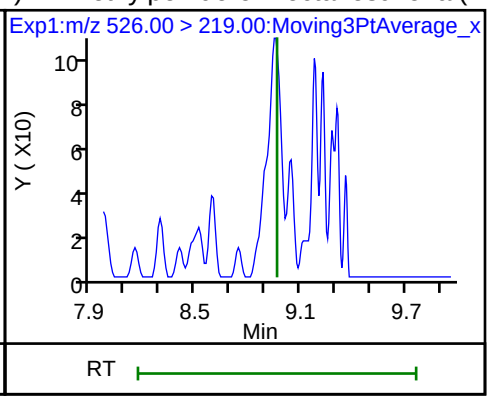
75 NMeFOSA (ND)



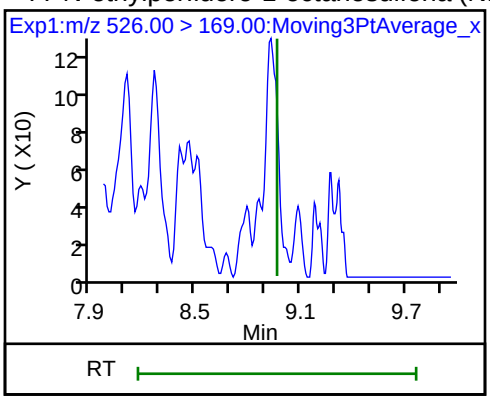
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/29

Matrix: Water | Lab File ID: 2024_09_18solidwatinj29.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/18/2024 22:44

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.10	U	0.10	0.0019
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.10	U	0.10	0.00077
307-24-4	Perfluorohexanoic acid (PFHxA)	0.10	U	0.10	0.00040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.10	U	0.10	0.00027
335-67-1	Perfluorooctanoic acid (PFOA)	0.10	U	0.10	0.00038
375-95-1	Perfluorononanoic acid (PFNA)	0.10	U	0.10	0.00032
335-76-2	Perfluorodecanoic acid (PFDA)	0.10	U	0.10	0.00025
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.10	U	0.10	0.00020
307-55-1	Perfluorododecanoic acid (PFDoA)	0.10	U	0.10	0.00025
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.10	U	0.10	0.00033
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.10	U	0.10	0.00018
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.10	0.00038
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.10	U	0.10	0.00036
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.10	U	0.10	0.00042
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.10	U	0.10	0.00023
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.10	U	0.10	0.00053
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.10	U	0.10	0.00030
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.10	U	0.10	0.00029
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.10	U	0.10	0.00094
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.10	U	0.10	0.0011
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.10	U	0.10	0.0012
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.10	U	0.10	0.00029
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.10	U	0.10	0.00057
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.10	U	0.10	0.00029
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.10	U	0.10	0.00067

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 240-627555/29

Matrix: Water Lab File ID: 2024_09_18solidwatinj29.d

Analysis Method: 1633 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 09/18/2024 22:44

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 Units: ng/mL

Preparation Batch No.: Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.10	U	0.10	0.00062
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.10	U	0.10	0.0023
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.10	U	0.10	0.0016
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.10	U	0.10	0.0014
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.10	U	0.10	0.00046
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.10	U	0.10	0.00027
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.10	U	0.10	0.0012
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.10	U	0.10	0.0010
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.10	U	0.10	0.0016
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.10	U	0.10	0.00054
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.10	U	0.10	0.00096
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.10	U	0.10	0.0092
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.10	U	0.10	0.017
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.10	U	0.10	0.00020
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.10	U	0.10	0.00023

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/29

Matrix: Water | Lab File ID: 2024_09_18solidwatinj29.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/18/2024 22:44

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	86.7		10-130
2283397-79-3	13C5 PFPeA	79.1		35-150
2328024-54-8	13C5 PFHxA	74.3		55-150
2328024-55-9	13C4 PFHpA	78.6		55-150
1350614-84-4	13C8 PFOA	78.3		60-140
2283397-80-6	13C9 PFNA	101		55-140
2328024-56-0	13C6 PFDA	123		50-140
STL02580	13C7 PFUnA	112		30-140
STL02116	13C2 PFTeDA	97.8		10-130
2708218-83-9	13C3 PFBS	102		55-150
2708218-85-1	13C3 PFHxS	100		55-150
2265893-05-6	13C8 PFOS	109		45-140
STL01056	13C8 FOSA	107		30-130
1400690-70-1	d3-NMeFOSAA	121		45-200
1265205-97-7	d5-NEtFOSAA	126		10-200
STL02395	M2-4:2 FTS	134		60-200
STL02279	M2-6:2 FTS	128		60-200
STL02280	M2-8:2 FTS	131		50-200
STL02255	13C3 HFPO-DA	75.2		25-160
STL02277	d7-N-MeFOSE-M	105		10-150
STL02278	d9-N-EtFOSE-M	99.0		10-150
STL02704	d5-NEtPFOSA	93.8		10-130
STL02705	d3-NMePFOSA	92.5		15-130
STL02703	13C2-PFDoDA	106		10-150

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj29.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 18-Sep-2024 22:44:46 ALS Bottle#: 5 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1 Rack: 1 240-0146375-029
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:40:40 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:40:40
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.548	3.544	0.004		2177408	1.25			912	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.719	0.014		1643480	0.6250			6469	
* 3 13C4 PFOA										
417.10 > 172.00	5.633	5.629	0.004		296649	0.6250			1237	
* 4 18O2 PFHxS										
403.00 > 83.90	5.858	5.843	0.015		1575784	0.5913			2586	
* 5 13C5 PFNA										
468.00 > 423.00	6.066	6.052	0.014		977332	0.3125			1341	
* 6 13C2 PFDA										
515.10 > 470.10	6.501	6.488	0.013		706563	0.3125			1963	
* 7 13C4 PFOS										
502.80 > 79.90	6.773	6.761	0.012		1340489	0.5975	Target=4.00		1373	
502.80 > 98.90	6.773	6.761	0.012		352896		3.80(2.00-6.00)		1612	
D 8 13C4 PFBA										
216.80 > 171.90	3.548	3.544	0.004	1.000	4283748	2.17		86.7	10786	
D 9 13C5 PFPeA										
268.30 > 223.00	4.206	4.202	0.004	0.889	2039996	0.9885		79.1	6395	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.534	4.530	0.004	0.774	1394104	1.56	Target=0.29	134	3797	
329.10 > 309.00	4.534	4.530	0.004	0.774	3737063		0.37(0.14-0.43)	134	1089	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.719	0.014	1.000	1715223	0.4642	Target=40.21	74.3	4599	
318.00 > 120.30	4.722	4.719	0.003	0.998	43211		39.69(20.11-60.32)	74.3	392	
D 12 13C3 PFBS										
302.10 > 79.90	4.860	4.846	0.014	0.830	1690190	0.5932	Target=3.28	102	2726	
302.10 > 98.90	4.849	4.846	0.003	0.828	510636		3.31(1.64-4.92)	102	1821	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.925	4.923	0.002	1.041	2000573	1.88	Target=1.86	75.2	3773	
286.90 > 184.90	4.925	4.923	0.002	1.041	985982		2.03(0.93-2.78)	75.2	2066	
D 14 13C4 PFHpA										
367.10 > 322.00	5.196	5.194	0.002	1.098	1895874	0.4913		78.6	3876	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.420	5.416	0.004	0.925	1552538	1.52	Target=0.38	128	2839	
429.10 > 409.00	5.420	5.416	0.004	0.925	3424079		0.45(0.19-0.57)	128	6057	
D 16 13C8 PFOA										
421.10 > 376.00	5.633	5.619	0.014	1.000	1832802	0.4895		78.3	3879	
D 17 13C3 PFHxS										
402.10 > 79.90	5.858	5.843	0.015	1.000	1660169	0.5934	Target=3.25	100	2624	
402.10 > 98.80	5.858	5.843	0.015	1.000	490666		3.38(1.63-4.88)	100	1532	
D 18 13C9 PFNA										
472.10 > 427.00	6.066	6.052	0.014	1.000	773663	0.3154		101	1347	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.261	6.249	0.012	1.069	1097345	1.57	Target=0.33	131	3576	
529.10 > 509.00	6.261	6.249	0.012	1.069	2833562		0.39(0.16-0.49)	131	7035	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.440	6.427	0.013	0.951	1569126	1.51		121	3627	
D 21 13C6 PFDA										
519.10 > 474.10	6.501	6.488	0.013	1.000	833394	0.3830		123	1812	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.637	6.624	0.013	0.980	1613911	1.58		126	3329	
D 23 13C8 PFOS										
507.10 > 79.90	6.773	6.752	0.021	1.000	1506953	0.6520	Target=4.26	109	557	
507.10 > 98.90	6.773	6.752	0.021	1.000	385608		3.91(2.13-6.39)	109	1011	
D 24 13C7 PFUnA										
570.00 > 525.10	6.942	6.923	0.019	1.068	750553	0.3505		112	1601	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.371	7.353	0.018	1.134	670251	0.3316		106	1130	
D 26 13C8 FOSA										
506.10 > 77.80	7.703	7.709	-0.006	1.137	1662218	0.6700		107	4379	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.204	8.179	0.026	1.262	353064	0.3056		97.8	911	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.599	8.607	-0.008	1.270	2418212	6.58		105	817	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.723	8.721	0.002	1.288	282796	0.5780		92.5	1067	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.851	8.849	0.002	1.307	2793673	6.19		99.0	1000	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.947	0.002	1.321	289247	0.5865		93.8	181	
44 Taurochenodeoxycholic acid										7
498.10 > 80.00	5.166	5.054	0.112	0.763	969	0.000384			2.4	7
LOD = 0.001000										

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

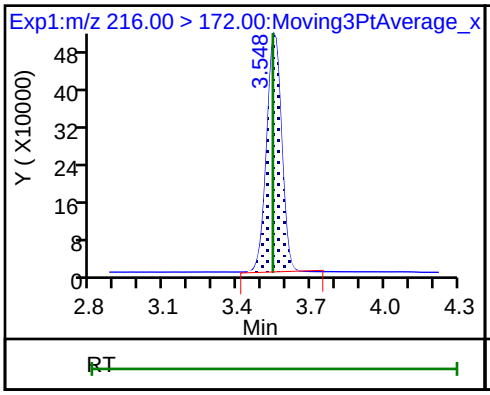
CCB_00030 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:40:42 Chrom Revision: 2.3 26-Aug-2024 17:14:48

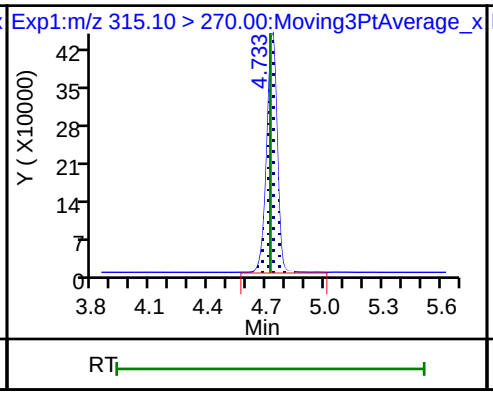
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj29.d
Injection Date: 18-Sep-2024 22:44:46 Instrument ID: LCMS04
Lims ID: CCB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 5 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

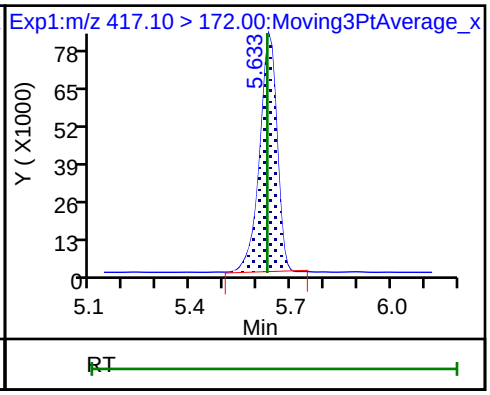
* 1 13C3-PFBA



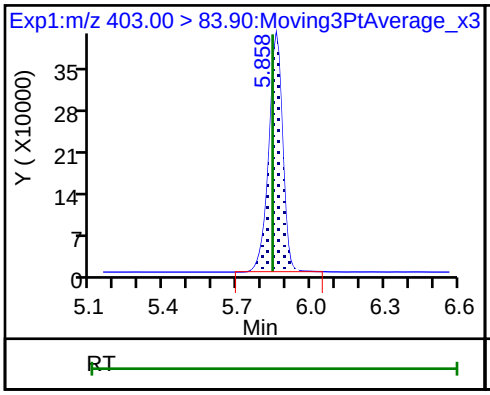
* 2 13C2 PFHxA



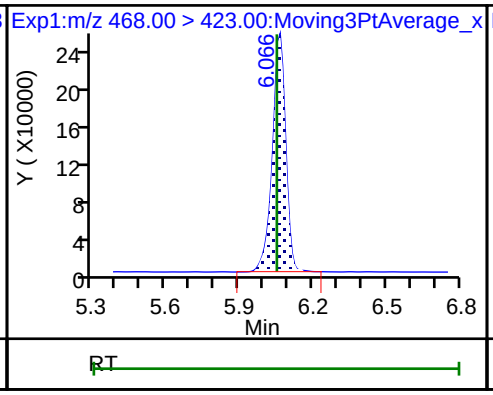
* 3 13C4 PFOA



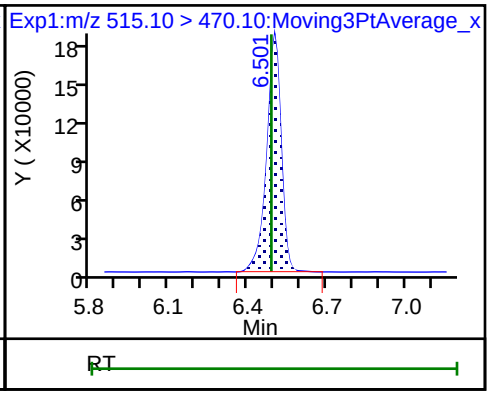
* 4 18O2 PFHxS



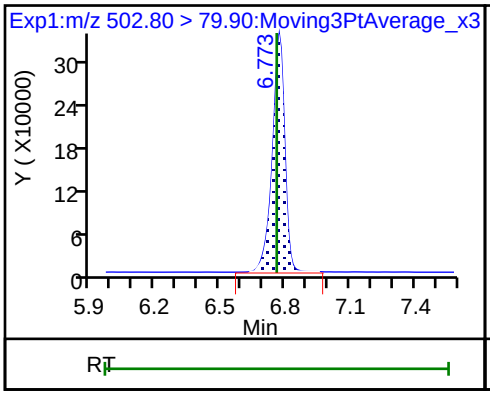
* 5 13C5 PFNA



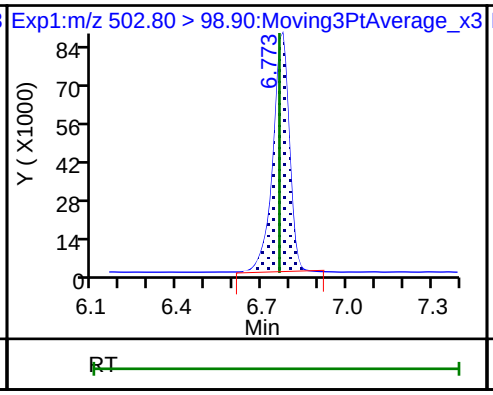
* 6 13C2 PFDA



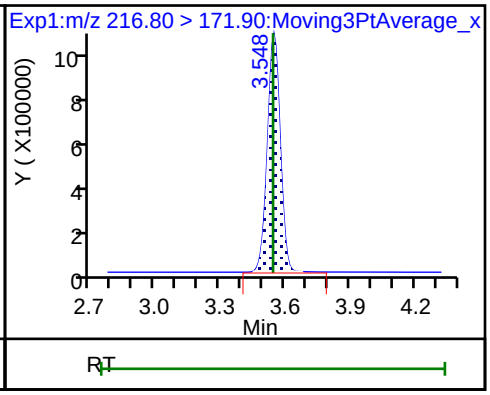
* 7 13C4 PFOS



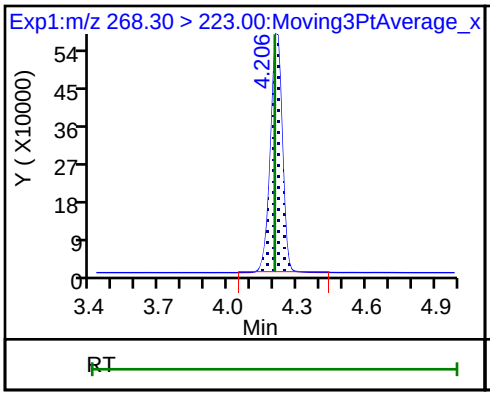
* 7 13C4 PFOS



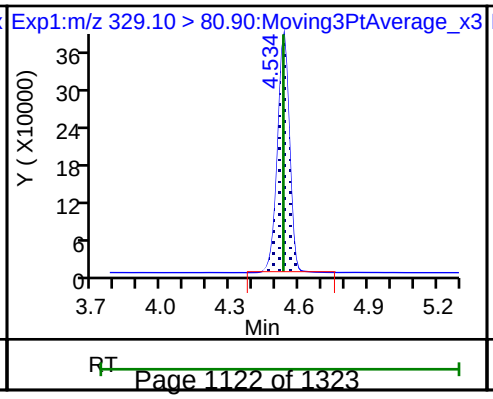
D 8 13C4 PFBA



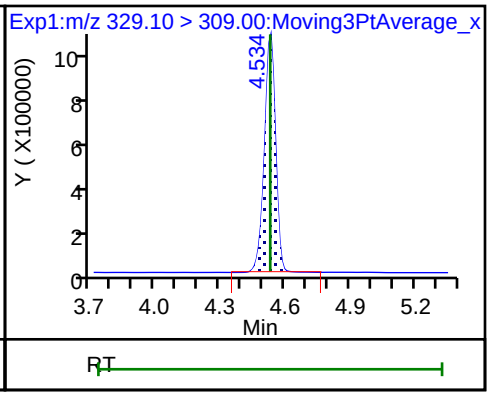
D 9 13C5 PFPeA



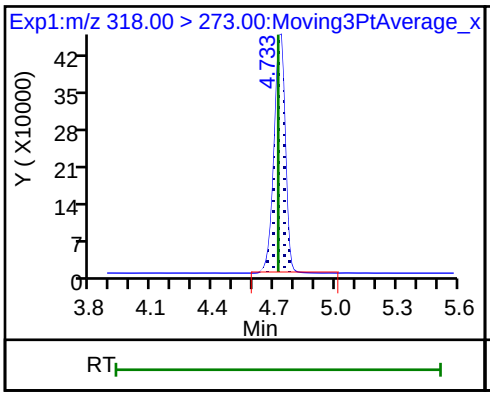
D 10 M2-4:2 FTS



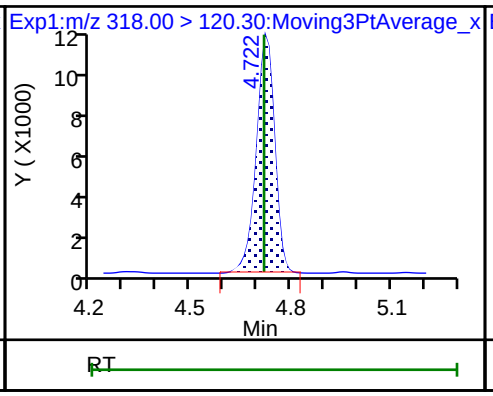
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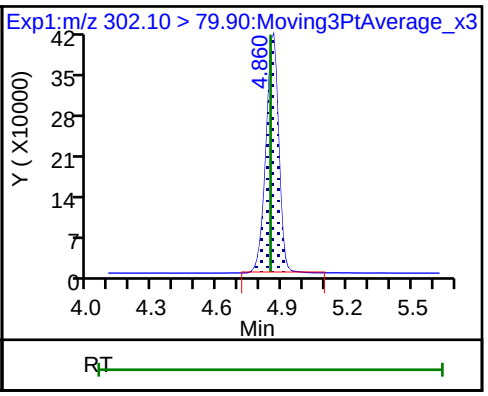
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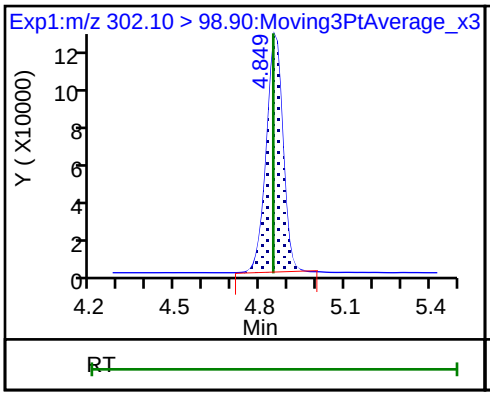
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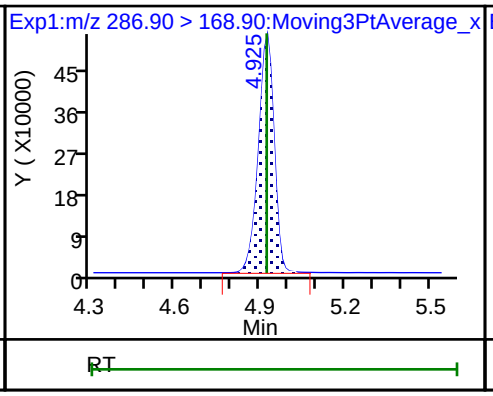
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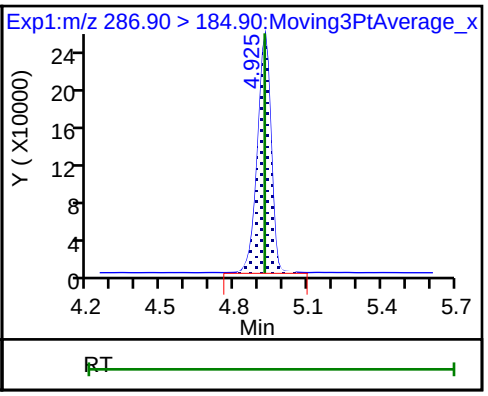
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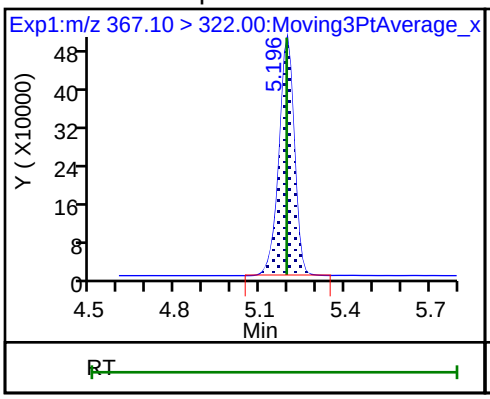
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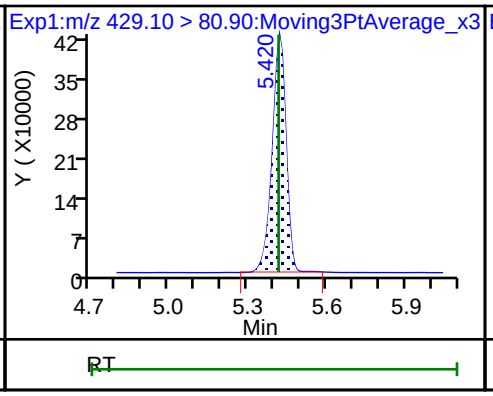
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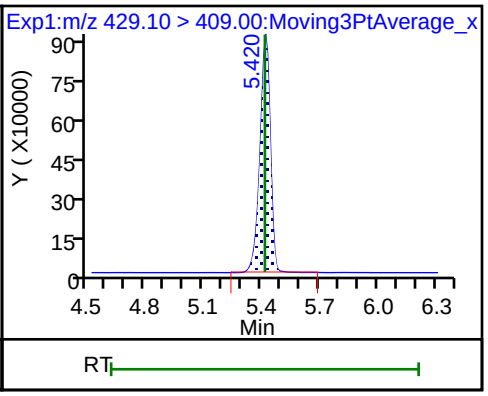
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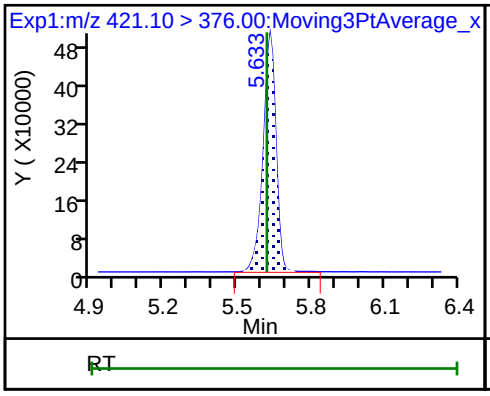
D 15 M2-6:2 FTS



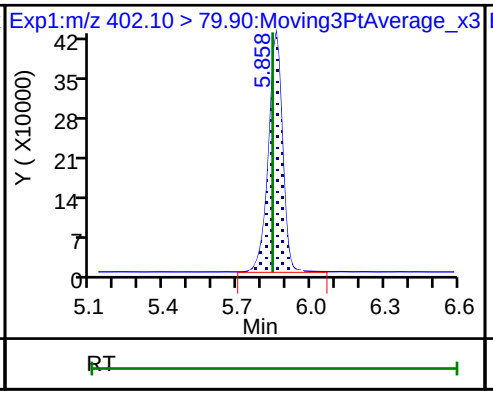
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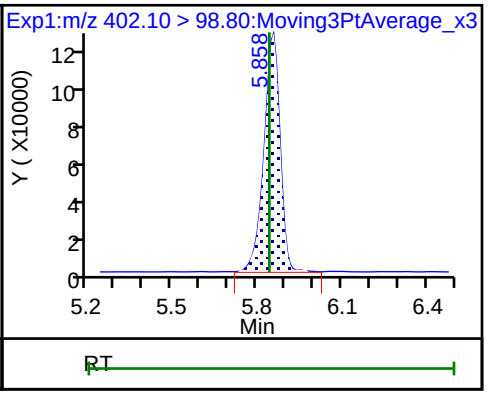
D 16 13C8 PFOA



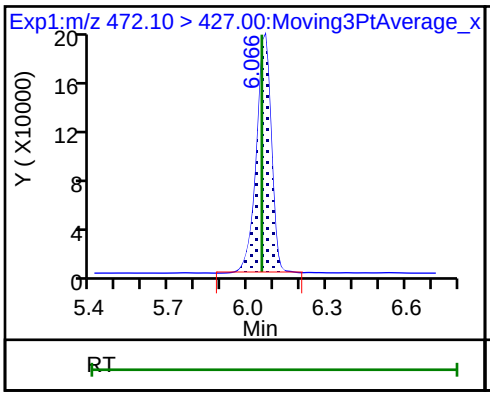
D 17 13C3 PFHxS



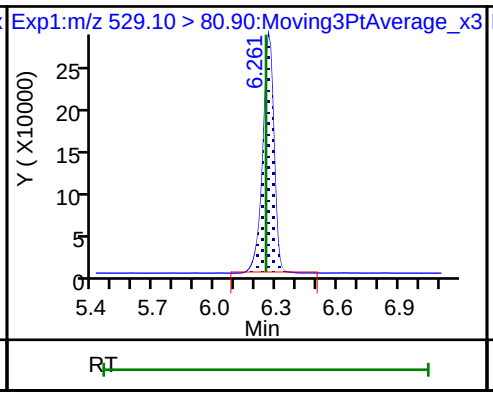
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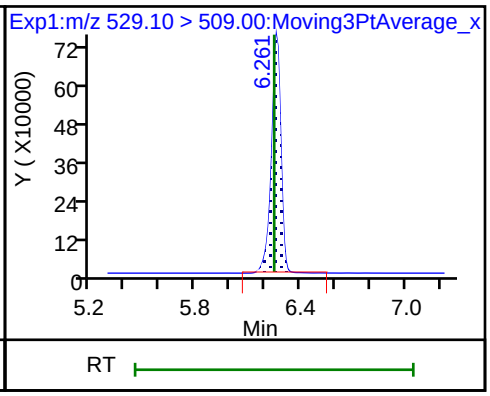
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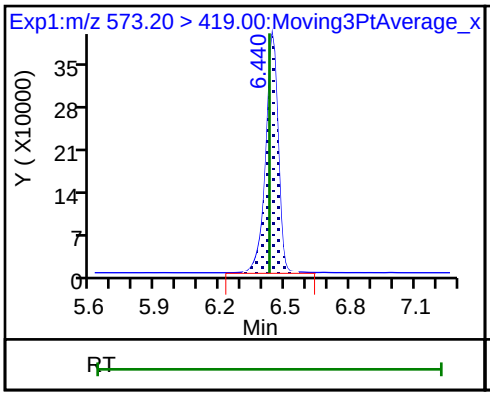
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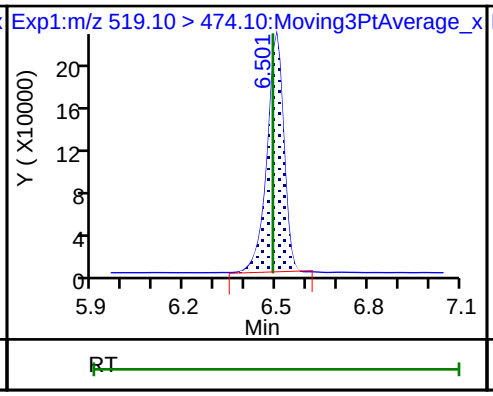
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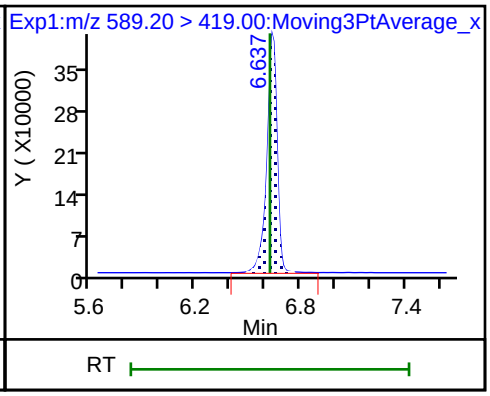
D 20 d3-NMeFOSAA



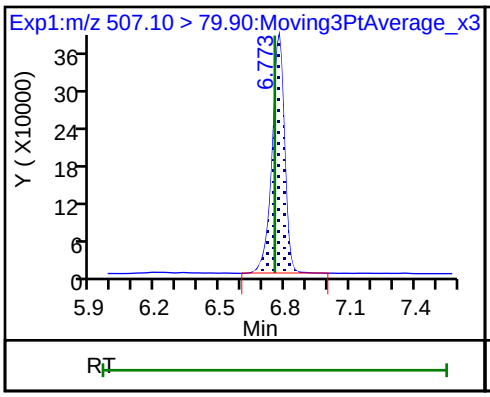
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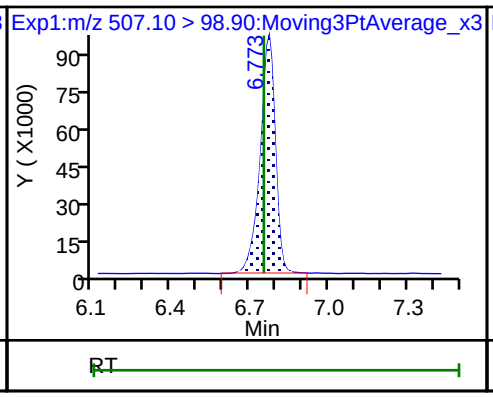
D 22 d5-NEtFOSAA



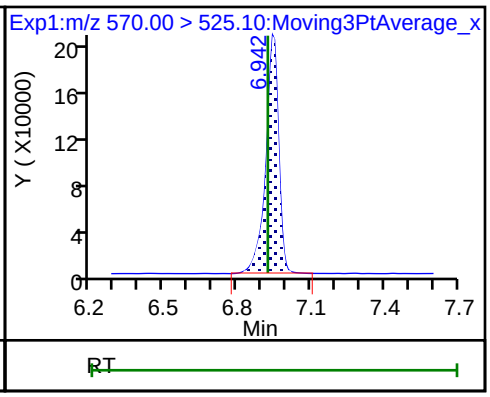
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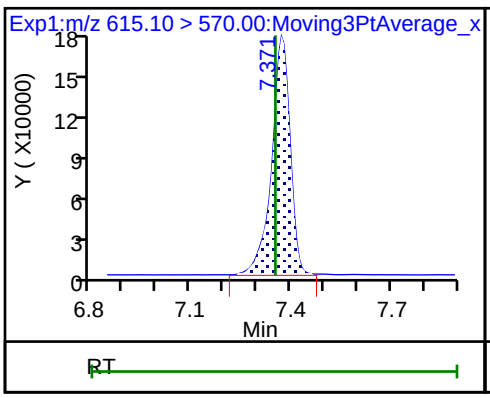
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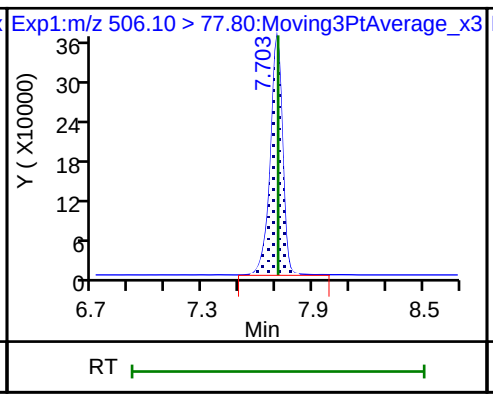
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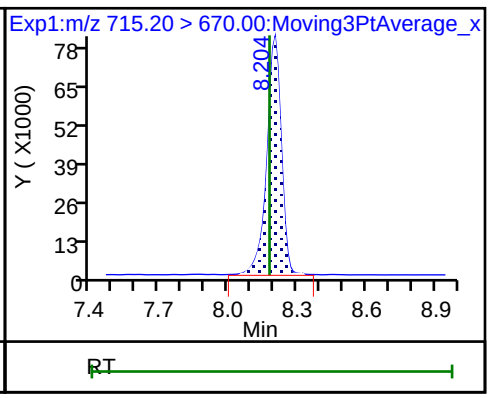
D 25 13C2-PFDoDA



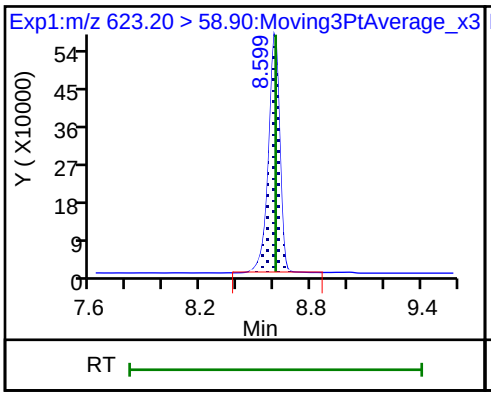
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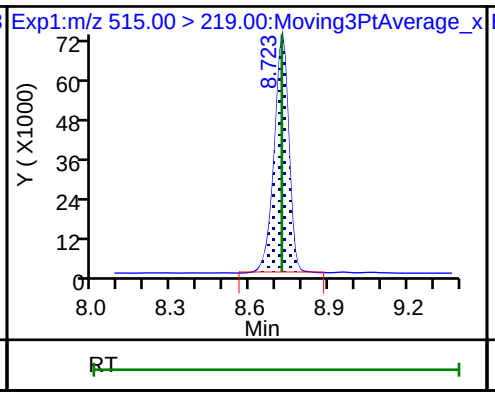
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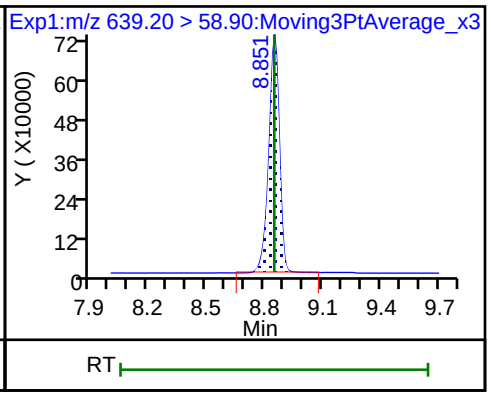
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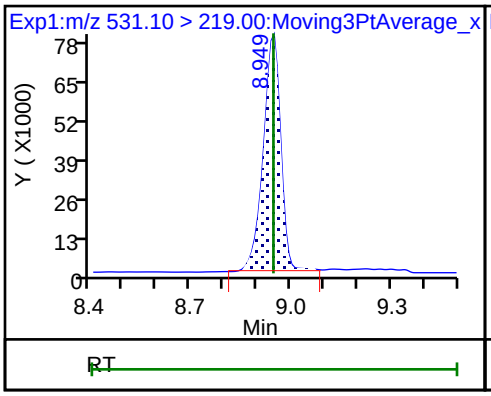
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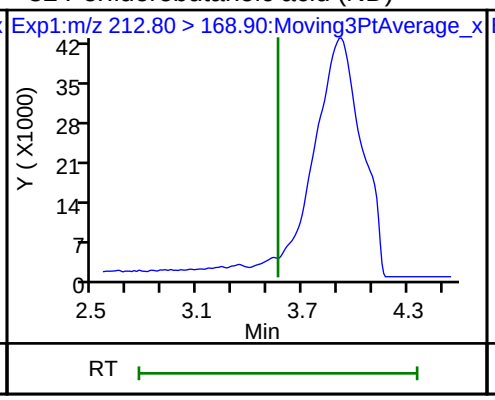
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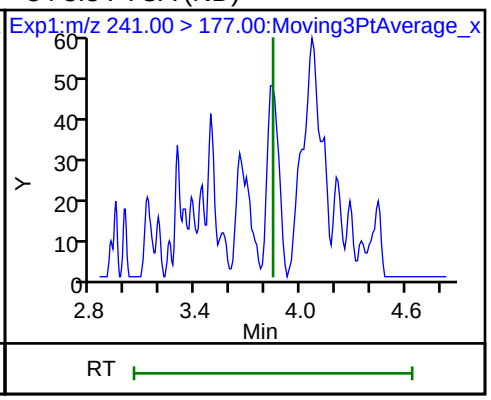
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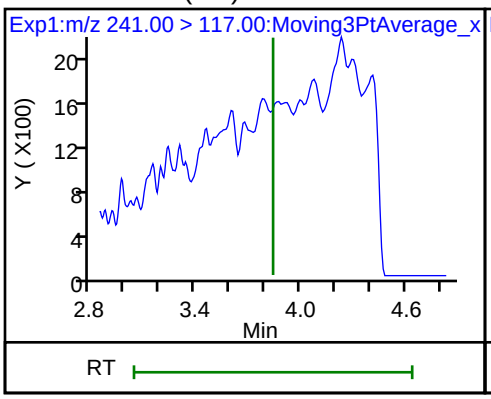
32 Perfluorobutanoic acid (ND)



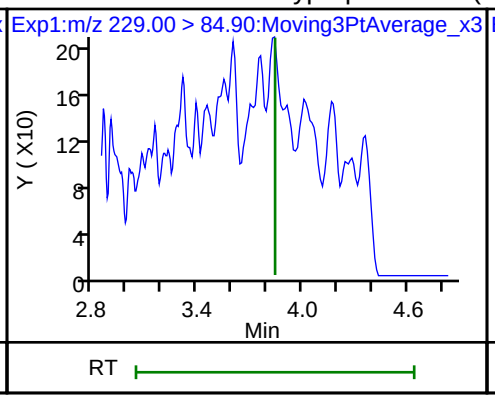
34 3:3 FTCA (ND)



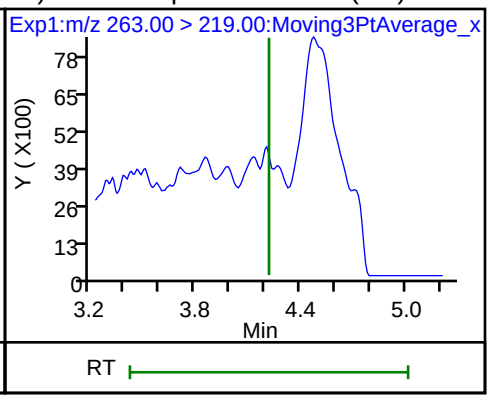
34 3:3 FTCA (ND)



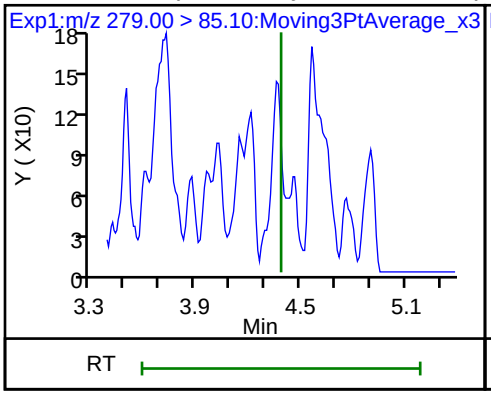
33 Perfluoro-3-methoxypropanoic aci (ND)



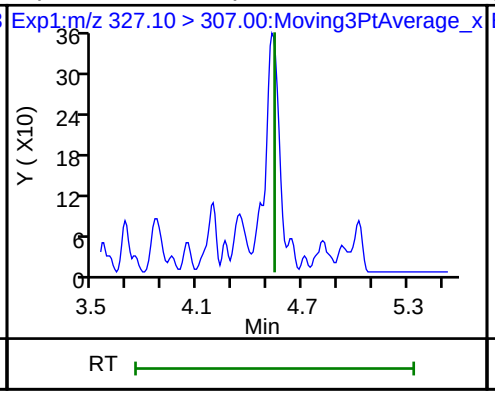
35 Perfluoropentanoic acid (ND)



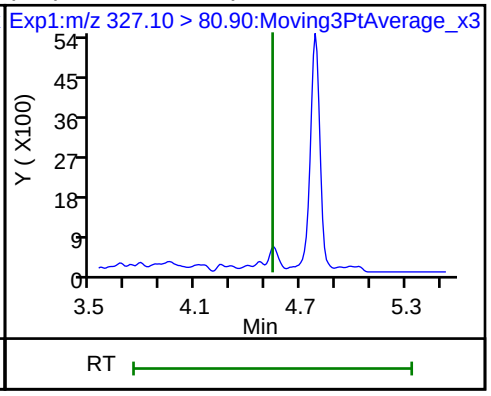
36 Perfluoro(4-methoxybutanoic acid (ND)



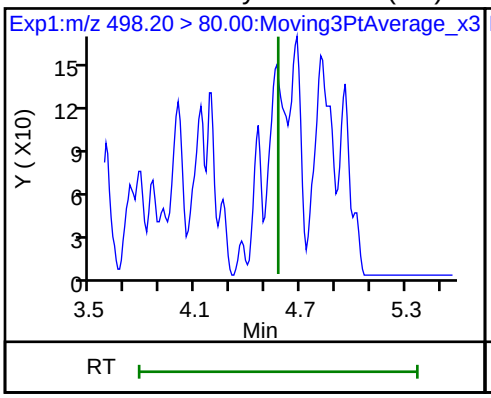
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



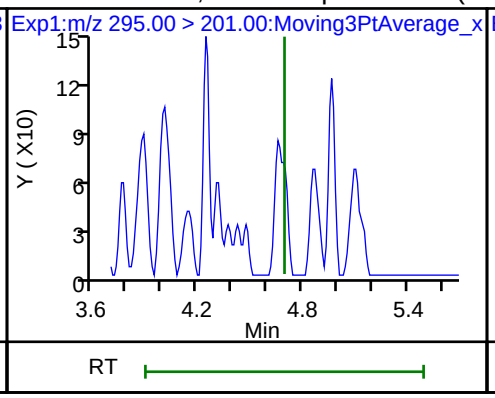
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



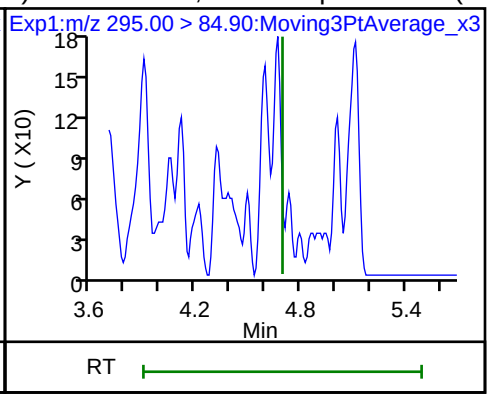
37 Tauroursodeoxycholic acid (ND)



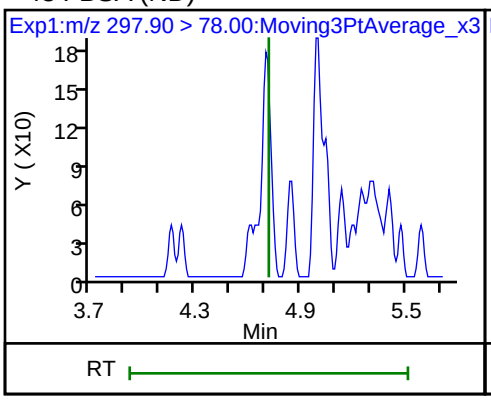
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



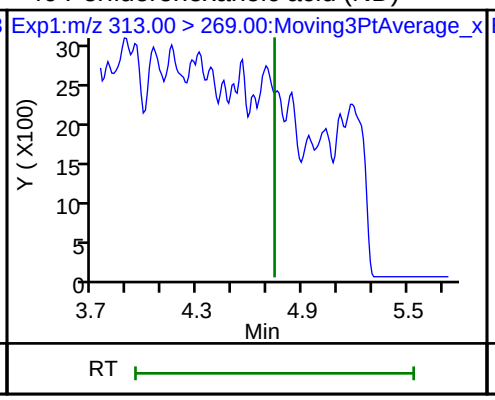
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



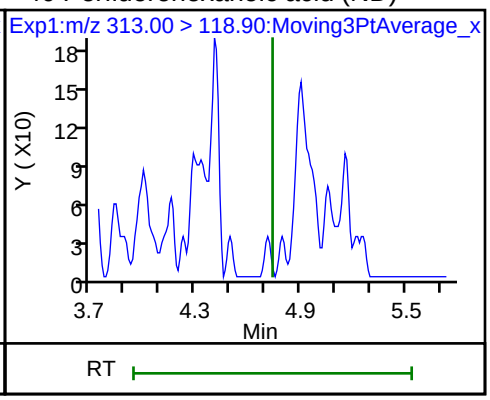
48 FBSA (ND)



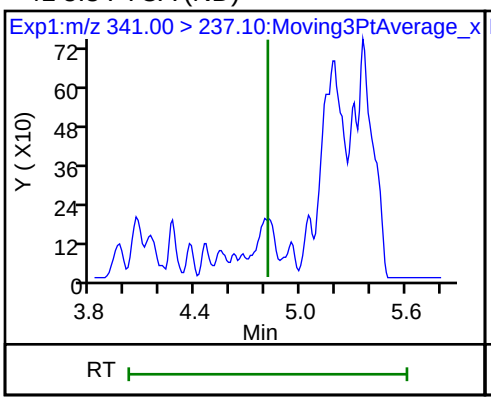
40 Perfluorohexanoic acid (ND)



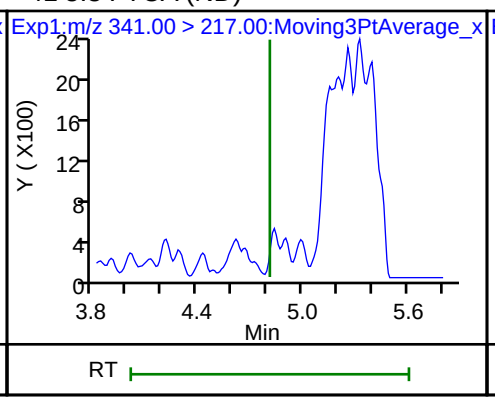
40 Perfluorohexanoic acid (ND)



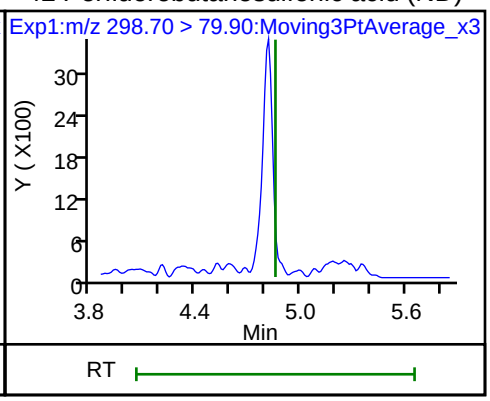
41 5:3 FTCA (ND)



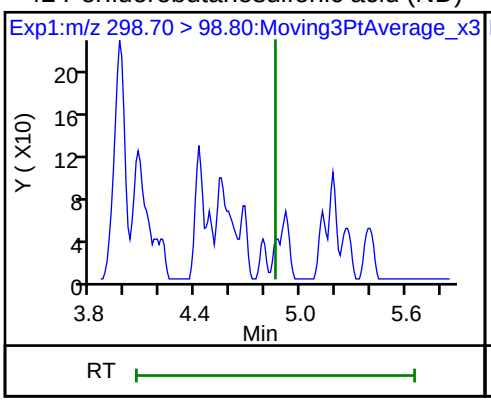
41 5:3 FTCA (ND)



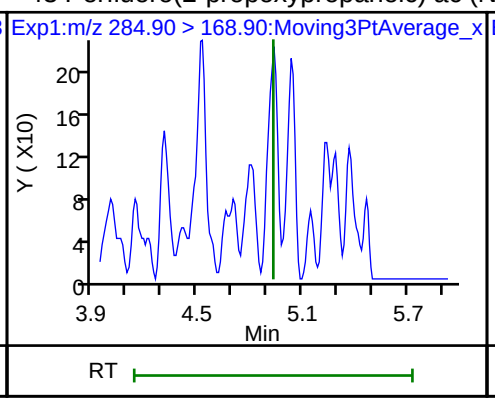
42 Perfluorobutanesulfonic acid (ND)



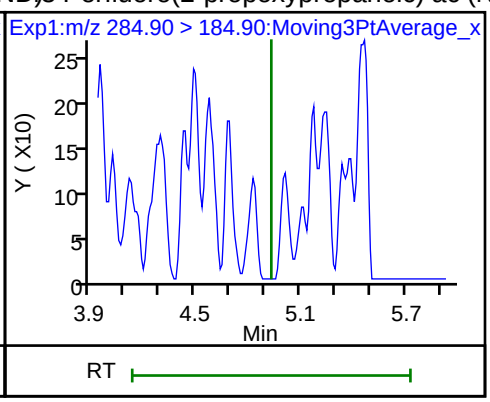
42 Perfluorobutanesulfonic acid (ND)



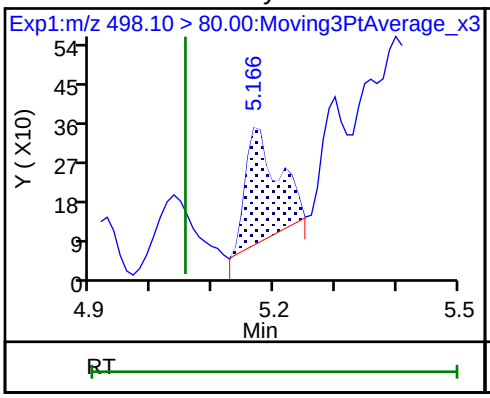
43 Perfluoro(2-propoxypropanoic) ac (ND)



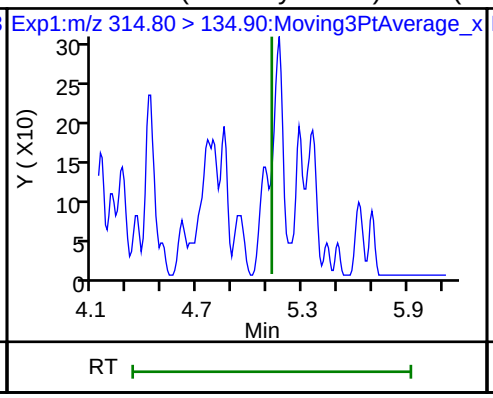
43 Perfluoro(2-propoxypropanoic) ac (ND)



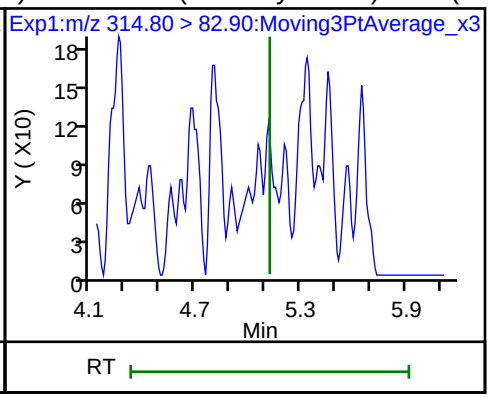
44 Taurochenodeoxycholic acid



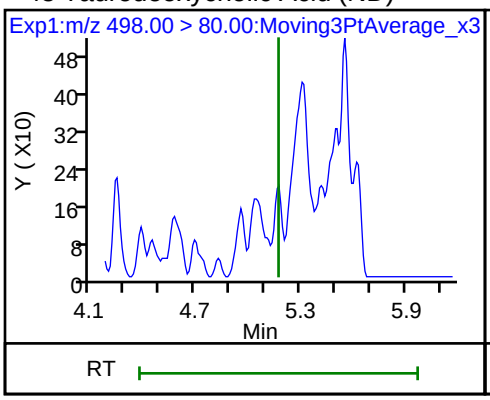
46 Perfluoro (2-ethoxyethane) sulfo (ND)



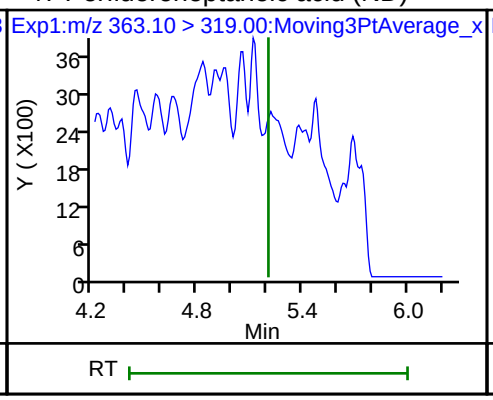
46 Perfluoro (2-ethoxyethane) sulfo (ND)



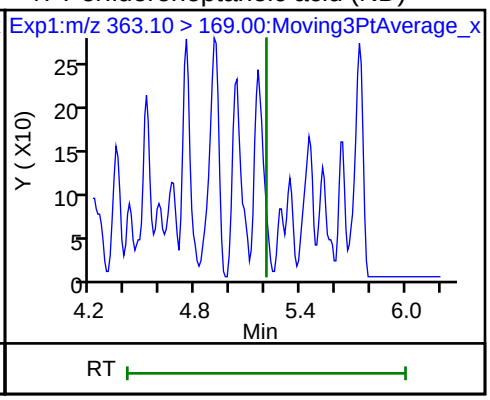
45 Taurodeoxycholic Acid (ND)



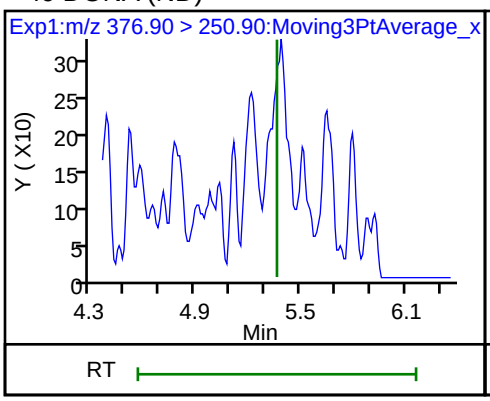
47 Perfluoroheptanoic acid (ND)



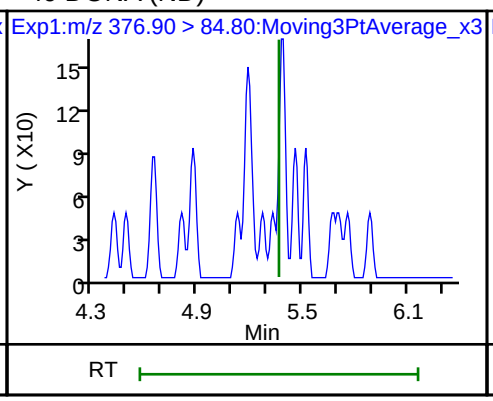
47 Perfluoroheptanoic acid (ND)



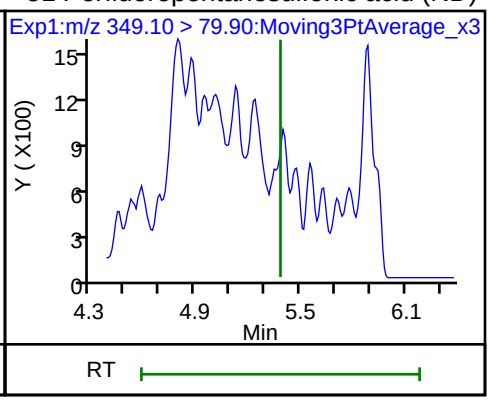
49 DONA (ND)



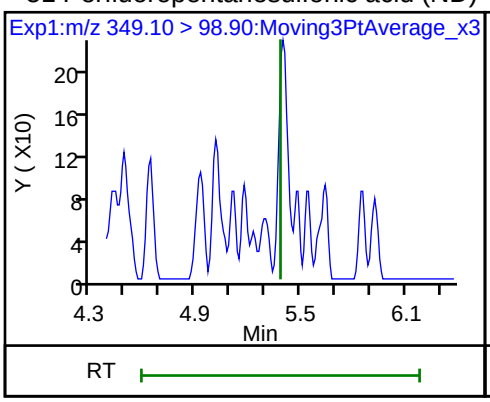
49 DONA (ND)



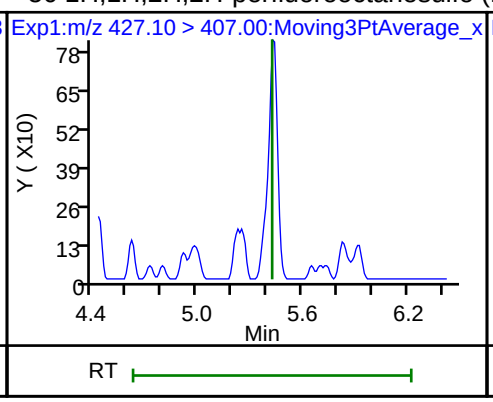
51 Perfluoropentanesulfonic acid (ND)



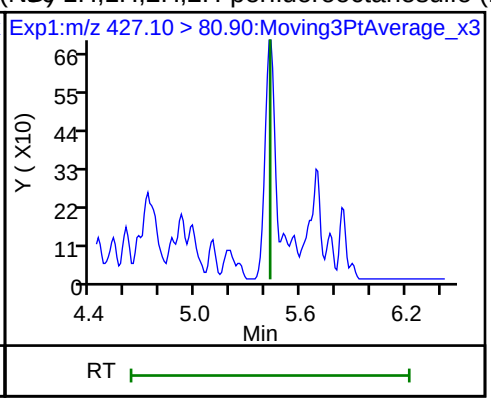
51 Perfluoropentanesulfonic acid (ND)



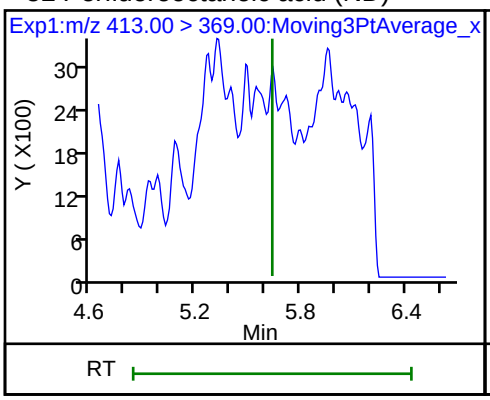
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



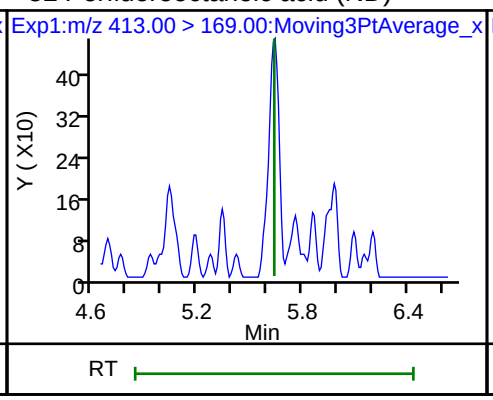
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



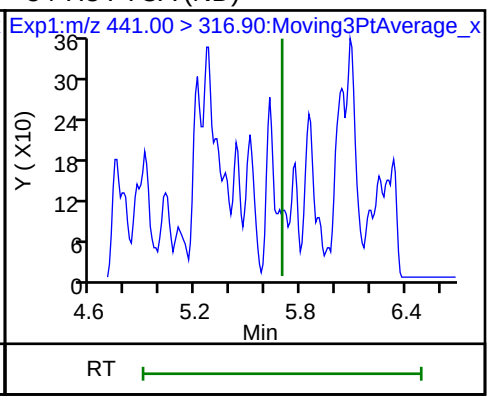
52 Perfluorooctanoic acid (ND)



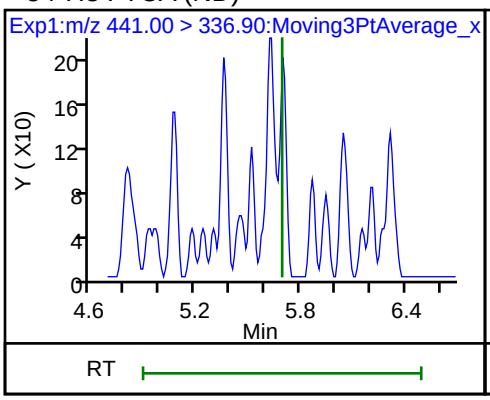
52 Perfluorooctanoic acid (ND)



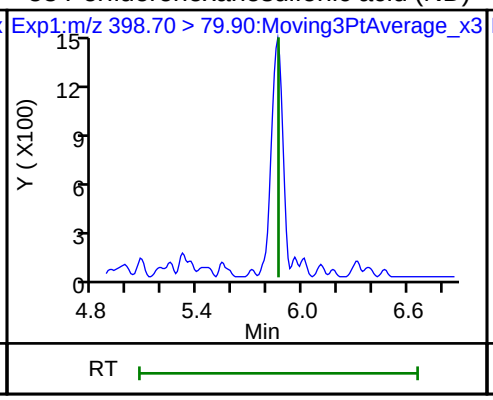
54 7:3 FTCA (ND)



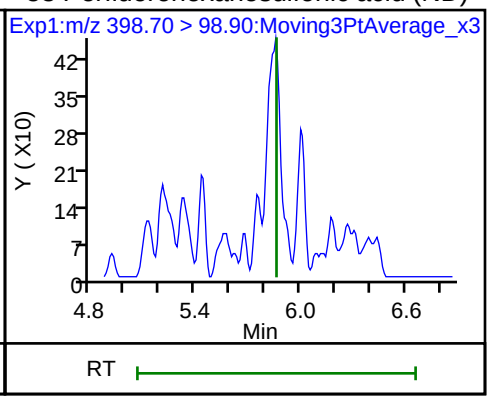
54 7:3 FTCA (ND)



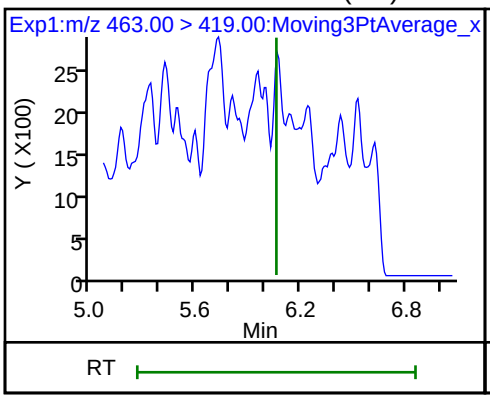
53 Perfluorohexanesulfonic acid (ND)



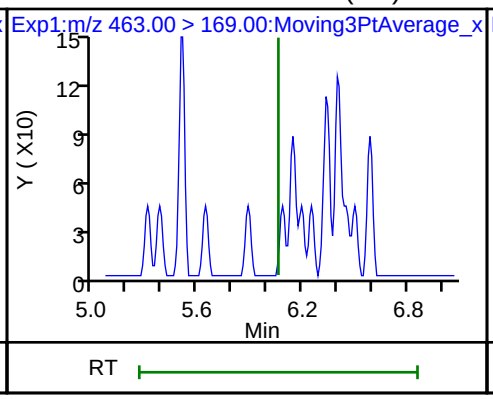
53 Perfluorohexanesulfonic acid (ND)



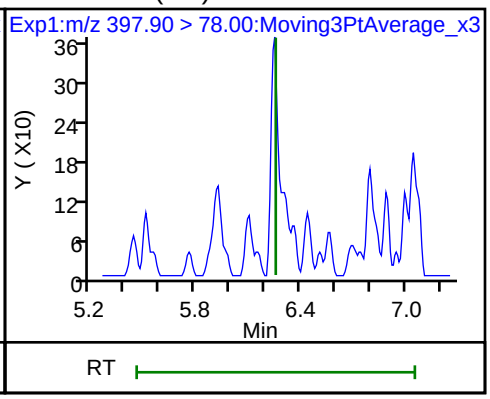
55 Perfluorononanoic acid (ND)



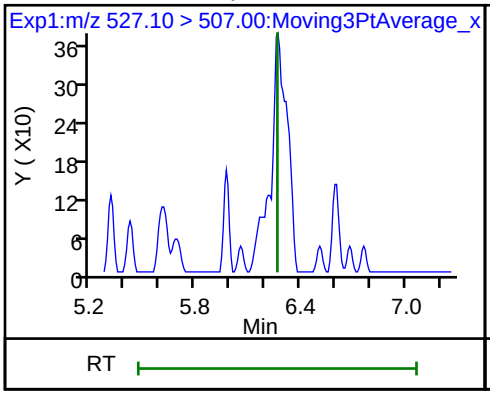
55 Perfluorononanoic acid (ND)



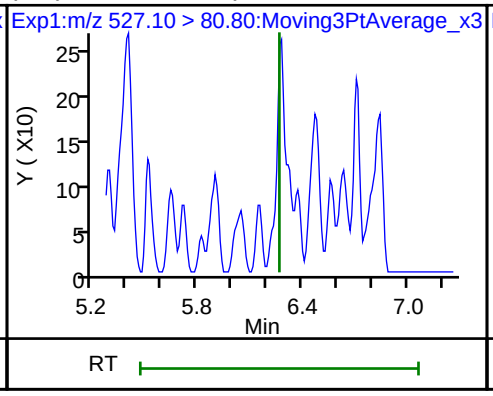
62 FHxSA (ND)



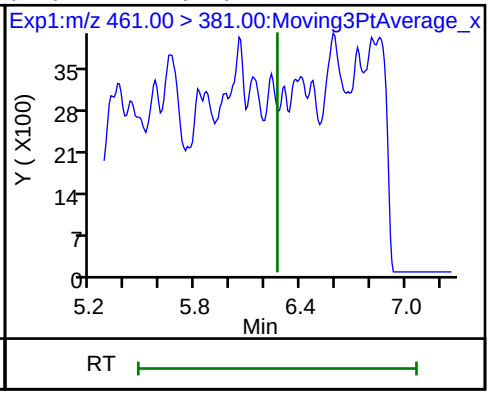
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



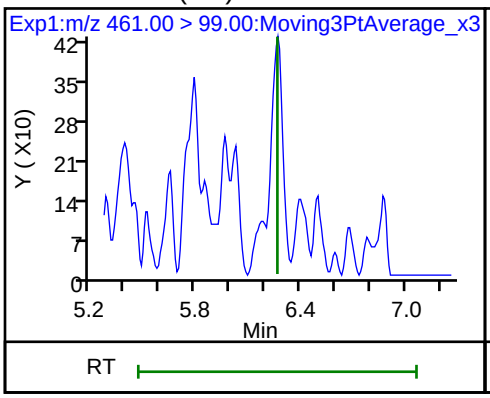
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



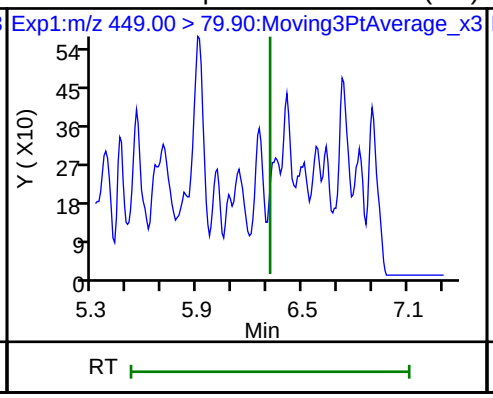
57 PFECHS (ND)



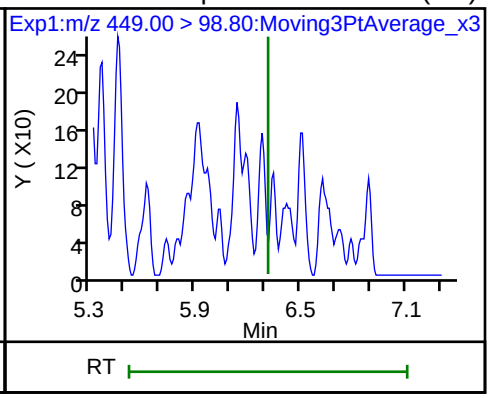
57 PFECHS (ND)



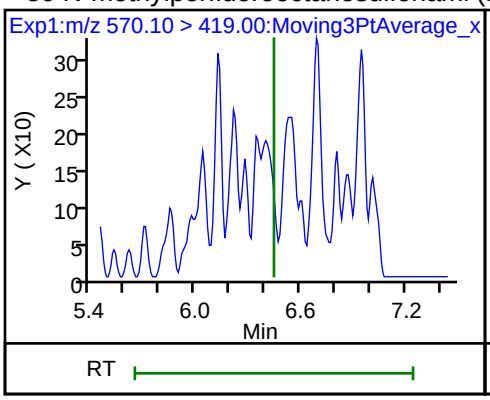
58 Perfluoroheptanesulfonic acid (ND)



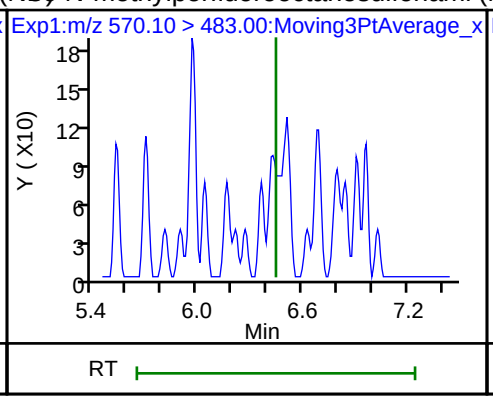
58 Perfluoroheptanesulfonic acid (ND)



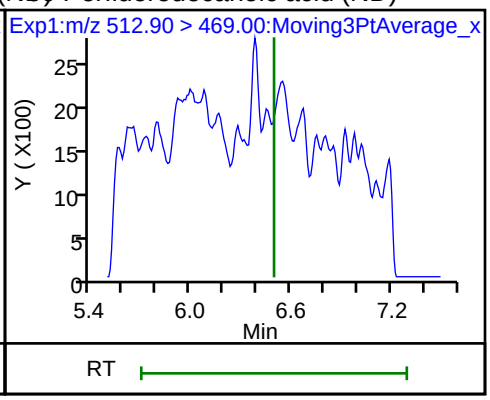
59 N-methylperfluorooctanesulfonami (ND)



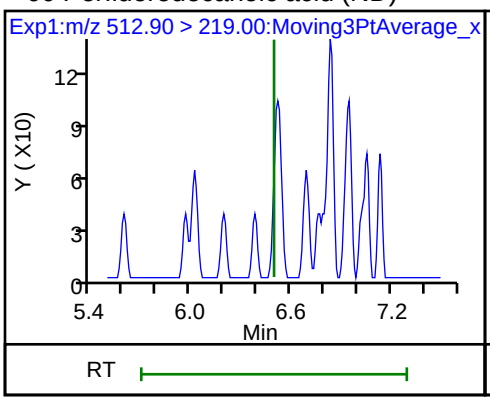
59 N-methylperfluorooctanesulfonami (ND)



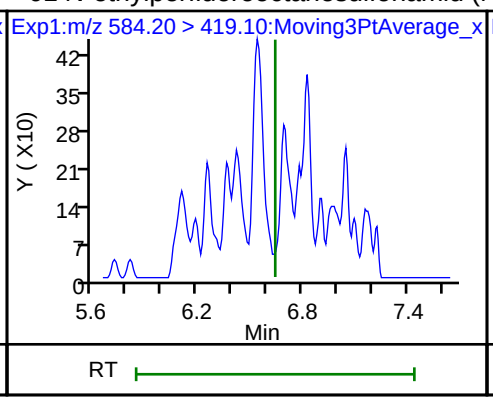
60 Perfluorodecanoic acid (ND)



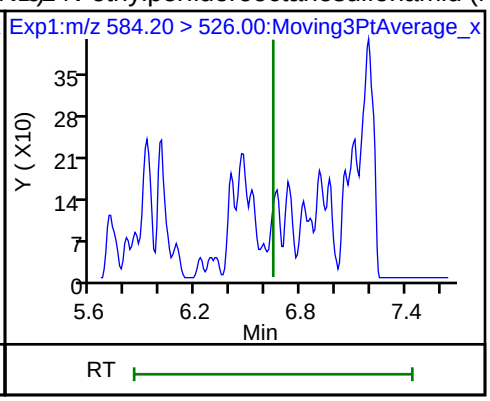
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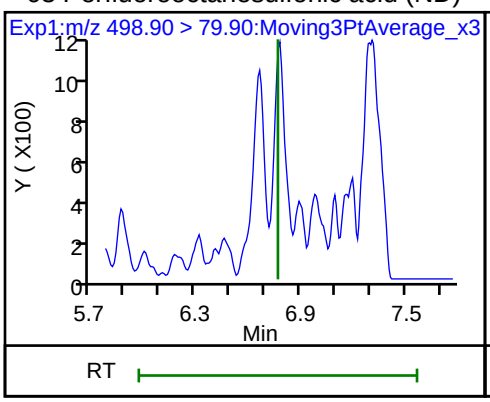
61 N-ethylperfluorooctanesulfonamid (ND)



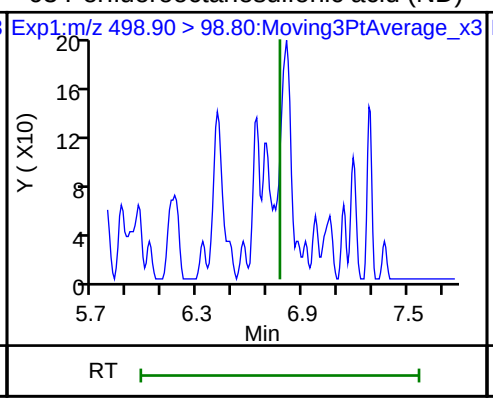
61 N-ethylperfluorooctanesulfonamid (ND)



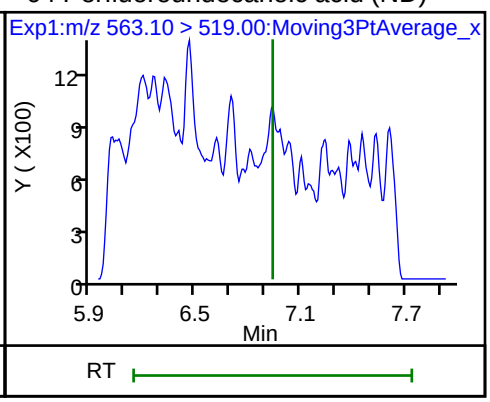
63 Perfluorooctanesulfonic acid (ND)



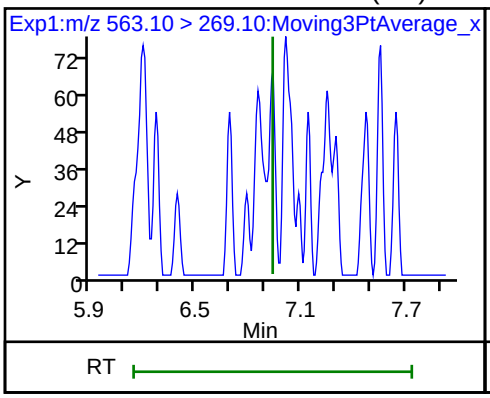
63 Perfluorooctanesulfonic acid (ND)



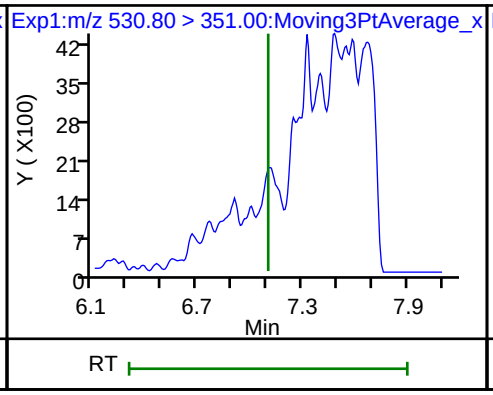
64 Perfluoroundecanoic acid (ND)



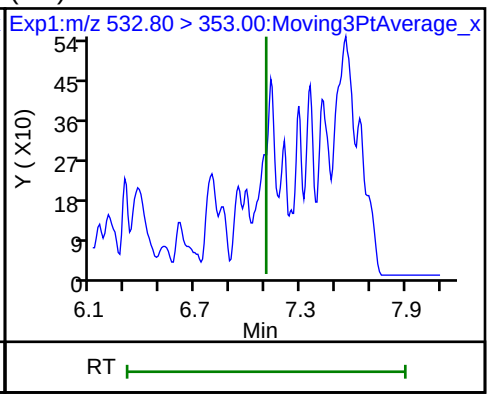
64 Perfluoroundecanoic acid (ND)



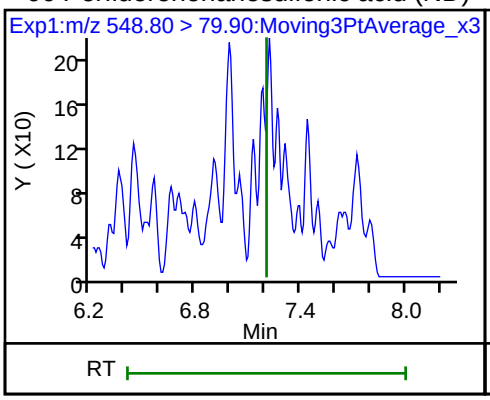
65 9-Chlorohexadecafluoro-3-oxanona (ND)



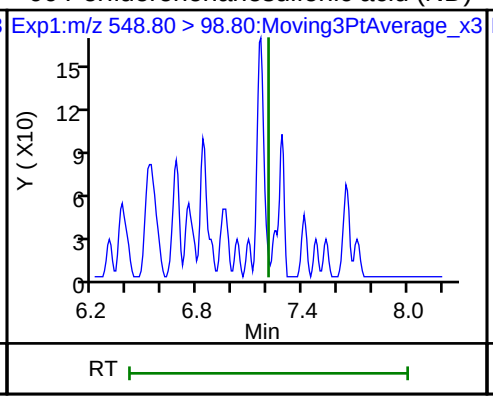
65 9-Chlorohexadecafluoro-3-oxanona (ND)



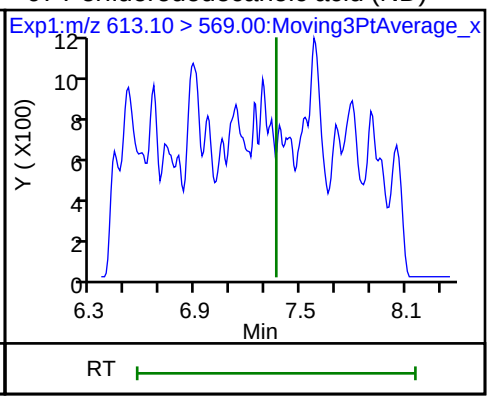
66 Perfluorononanesulfonic acid (ND)



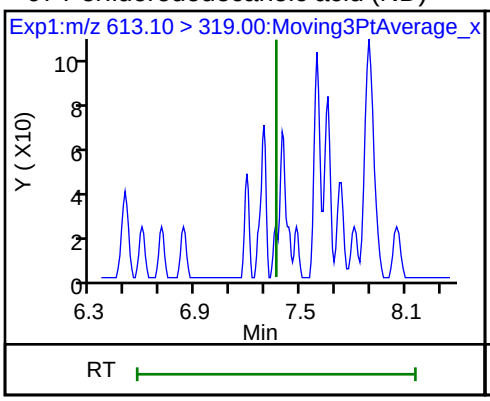
66 Perfluorononanesulfonic acid (ND)



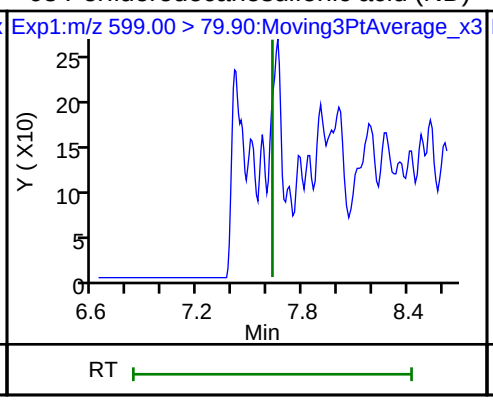
67 Perfluorododecanoic acid (ND)



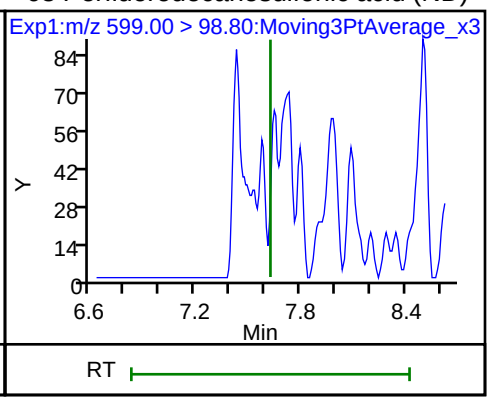
67 Perfluorododecanoic acid (ND)



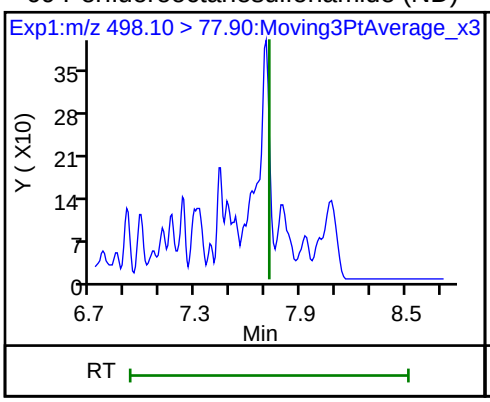
68 Perfluorodecanesulfonic acid (ND)



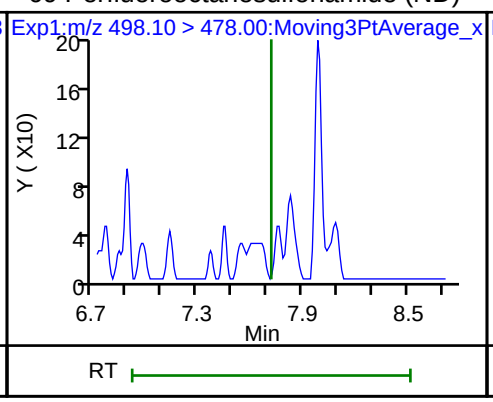
68 Perfluorodecanesulfonic acid (ND)



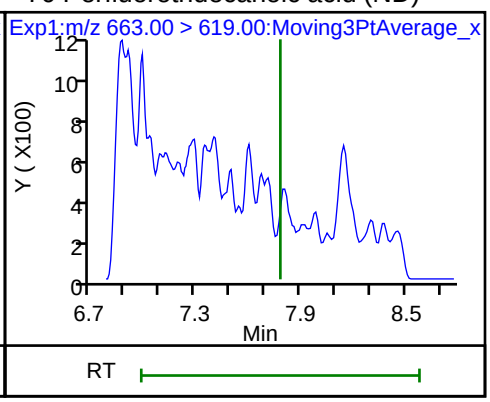
69 Perfluorooctanesulfonamide (ND)



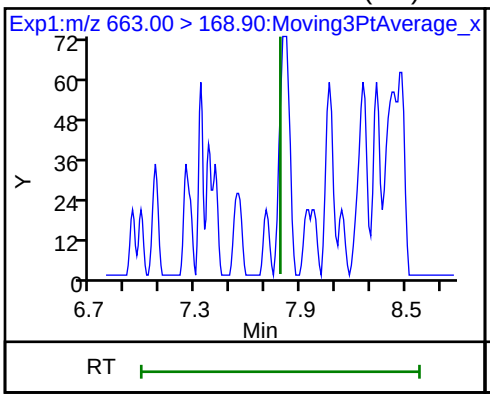
69 Perfluorooctanesulfonamide (ND)



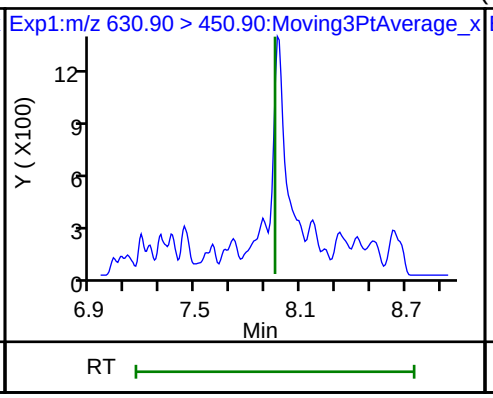
70 Perfluorotridecanoic acid (ND)



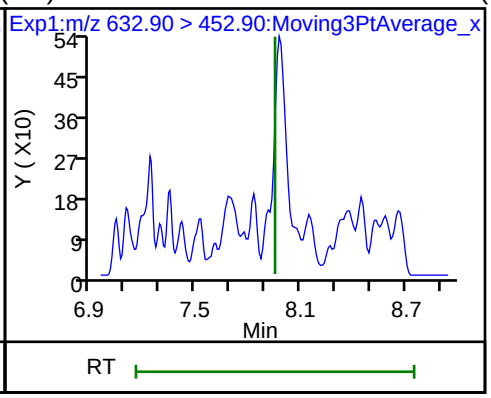
70 Perfluorotridecanoic acid (ND)



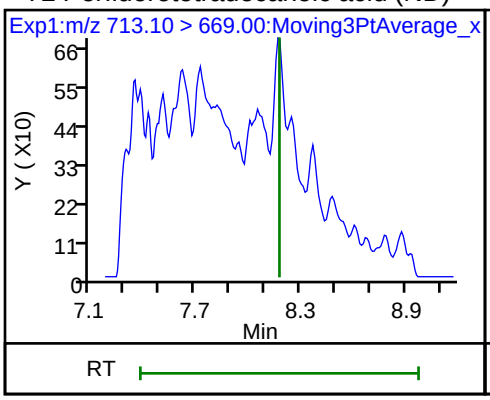
71 11-Chloroeicosafluoro-3-oxaundec (ND)



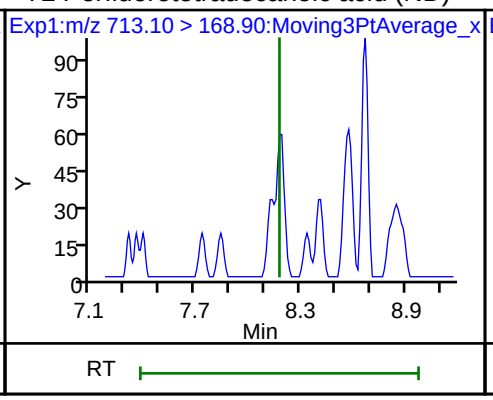
71 11-Chloroeicosafluoro-3-oxaundec (ND)



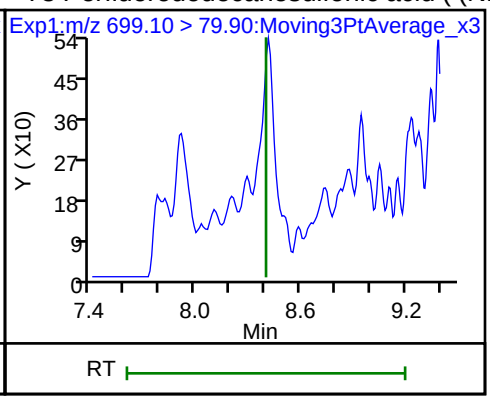
72 Perfluorotetradecanoic acid (ND)



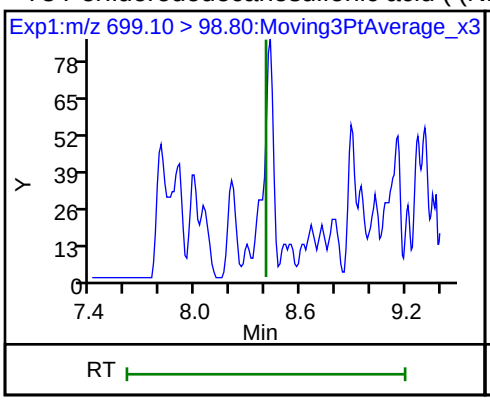
72 Perfluorotetradecanoic acid (ND)



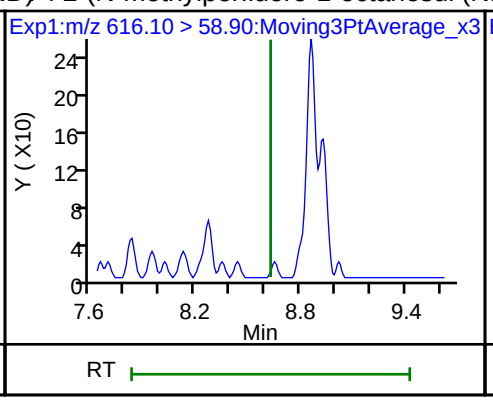
73 Perfluorododecanesulfonic acid ((ND)



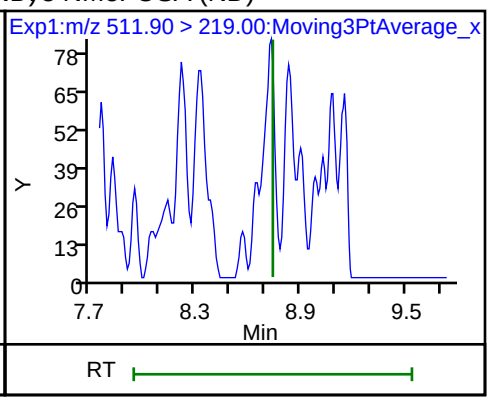
73 Perfluorododecanesulfonic acid ((ND)



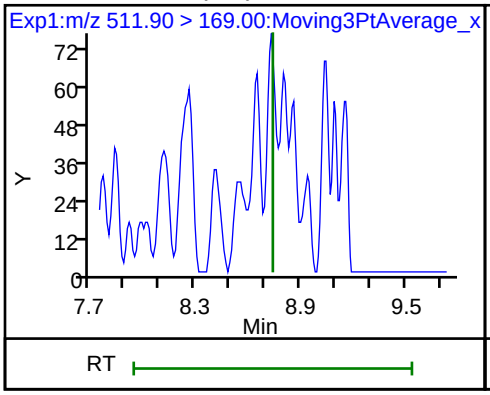
74 2-(N-methylperfluoro-1-octanesul (ND)



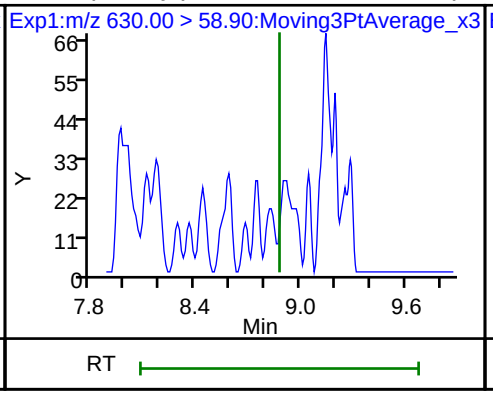
75 NMeFOSA (ND)



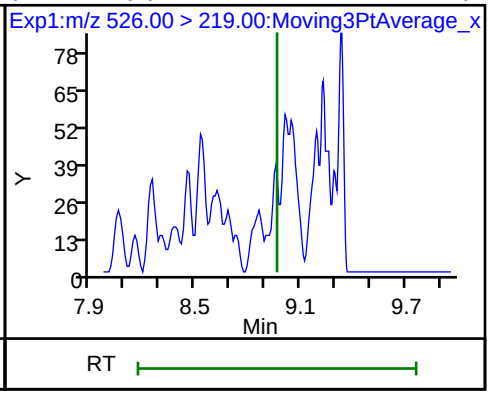
75 NMeFOSA (ND)



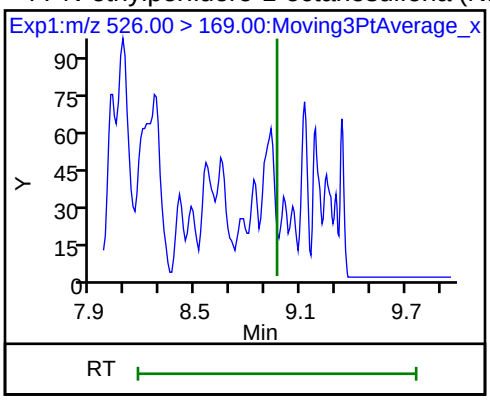
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/41

Matrix: Water | Lab File ID: 2024_09_18solidwatinj41.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/19/2024 01:27

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.10	U	0.10	0.0019
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.10	U	0.10	0.00077
307-24-4	Perfluorohexanoic acid (PFHxA)	0.10	U	0.10	0.00040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.10	U	0.10	0.00027
335-67-1	Perfluorooctanoic acid (PFOA)	0.10	U	0.10	0.00038
375-95-1	Perfluorononanoic acid (PFNA)	0.10	U	0.10	0.00032
335-76-2	Perfluorodecanoic acid (PFDA)	0.10	U	0.10	0.00025
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.10	U	0.10	0.00020
307-55-1	Perfluorododecanoic acid (PFDoA)	0.10	U	0.10	0.00025
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.10	U	0.10	0.00033
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.10	U	0.10	0.00018
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.10	0.00038
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.10	U	0.10	0.00036
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.10	U	0.10	0.00042
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.10	U	0.10	0.00023
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.10	U	0.10	0.00053
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.10	U	0.10	0.00030
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.10	U	0.10	0.00029
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.10	U	0.10	0.00094
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.10	U	0.10	0.0011
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.10	U	0.10	0.0012
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.10	U	0.10	0.00029
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.10	U	0.10	0.00057
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.10	U	0.10	0.00029
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.10	U	0.10	0.00067

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 240-627555/41

Matrix: Water Lab File ID: 2024_09_18solidwatinj41.d

Analysis Method: 1633 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 09/19/2024 01:27

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 Units: ng/mL

Preparation Batch No.: Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.10	U	0.10	0.00062
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.10	U	0.10	0.0023
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.10	U	0.10	0.0016
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.10	U	0.10	0.0014
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.10	U	0.10	0.00046
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.10	U	0.10	0.00027
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.10	U	0.10	0.0012
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.10	U	0.10	0.0010
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.10	U	0.10	0.0016
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.10	U	0.10	0.00054
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.10	U	0.10	0.00096
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.10	U	0.10	0.0092
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.10	U	0.10	0.017
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.10	U	0.10	0.00020
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.10	U	0.10	0.00023

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/41

Matrix: Water | Lab File ID: 2024_09_18solidwatinj41.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/19/2024 01:27

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	95.0		10-130
2283397-79-3	13C5 PFPeA	85.9		35-150
2328024-54-8	13C5 PFHxA	85.8		55-150
2328024-55-9	13C4 PFHpA	91.9		55-150
1350614-84-4	13C8 PFOA	88.2		60-140
2283397-80-6	13C9 PFNA	96.5		55-140
2328024-56-0	13C6 PFDA	108		50-140
STL02580	13C7 PFUnA	104		30-140
STL02116	13C2 PFTeDA	89.2		10-130
2708218-83-9	13C3 PFBS	108		55-150
2708218-85-1	13C3 PFHxS	115		55-150
2265893-05-6	13C8 PFOS	124		45-140
STL01056	13C8 FOSA	113		30-130
1400690-70-1	d3-NMeFOSAA	120		45-200
1265205-97-7	d5-NEtFOSAA	127		10-200
STL02395	M2-4:2 FTS	139		60-200
STL02279	M2-6:2 FTS	134		60-200
STL02280	M2-8:2 FTS	132		50-200
STL02255	13C3 HFPO-DA	87.7		25-160
STL02277	d7-N-MeFOSE-M	108		10-150
STL02278	d9-N-EtFOSE-M	105		10-150
STL02704	d5-NEtPFOSA	106		10-130
STL02705	d3-NMePFOSA	101		15-130
STL02703	13C2-PFDoDA	107		10-150

Report Date: 19-Sep-2024 08:57:34 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj41.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Sep-2024 01:27:59 ALS Bottle#: 37 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1 Rack: 1 240-0146375-041
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:57:33 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:57:33
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.552	3.544	0.008		2356315	1.25			1025	
* 2 13C2 PFHxA										
315.10 > 270.00	4.729	4.719	0.010		1724279	0.6250			6681	
* 3 13C4 PFOA										
417.10 > 172.00	5.638	5.629	0.009		317713	0.6250			1758	
* 4 18O2 PFHxS										
403.00 > 83.90	5.862	5.843	0.019		1916249	0.5913			5544	
* 5 13C5 PFNA										
468.00 > 423.00	6.062	6.052	0.010		1108571	0.3125			1723	
* 6 13C2 PFDA										
515.10 > 470.10	6.498	6.488	0.010		888417	0.3125			1820	
* 7 13C4 PFOS										
502.80 > 79.90	6.779	6.761	0.018		1671103	0.5975	Target=4.00		3266	
502.80 > 98.90	6.770	6.761	0.009		436313		3.83(2.00-6.00)		1734	
D 8 13C4 PFBA										
216.80 > 171.90	3.552	3.544	0.008	1.000	5078783	2.37		95.0	12339	
D 9 13C5 PFPeA										
268.30 > 223.00	4.211	4.202	0.009	0.890	2326001	1.07		85.9	6554	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.530	4.530	0.0	0.773	1757659	1.62	Target=0.29	139	6117	
329.10 > 309.00	4.530	4.530	0.0	0.773	4886519		0.36(0.14-0.43)	139	1399	
D 11 13C5 PFHxA										
318.00 > 273.00	4.729	4.719	0.010	1.000	2078187	0.5361	Target=40.21	85.8	5248	
318.00 > 120.30	4.729	4.719	0.010	1.000	47924		43.36(20.11-60.32)	85.8	584	
D 12 13C3 PFBS										
302.10 > 79.90	4.857	4.846	0.011	0.828	2166791	0.6254	Target=3.28	108	3155	
302.10 > 98.90	4.857	4.846	0.011	0.828	646850		3.35(1.64-4.92)	108	1664	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.922	4.923	-0.001	1.041	2446569	2.19	Target=1.86	87.7	3035	
286.90 > 184.90	4.922	4.923	-0.001	1.041	1338991		1.83(0.93-2.78)	87.7	3720	
D 14 13C4 PFHpA										
367.10 > 322.00	5.204	5.194	0.010	1.100	2325770	0.5745		91.9	5960	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.426	5.416	0.010	0.926	1984251	1.60	Target=0.38	134	5668	
429.10 > 409.00	5.426	5.416	0.010	0.926	4389476		0.45(0.19-0.57)	134	4699	
D 16 13C8 PFOA										
421.10 > 376.00	5.638	5.619	0.019	1.000	2211239	0.5515		88.2	3959	
D 17 13C3 PFHxS										
402.10 > 79.90	5.862	5.843	0.019	1.000	2307408	0.6782	Target=3.25	115	4554	
402.10 > 98.80	5.852	5.843	0.009	0.998	690083		3.34(1.63-4.88)	115	1899	
D 18 13C9 PFNA										
472.10 > 427.00	6.072	6.052	0.020	1.002	839423	0.3017		96.5	1556	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.267	6.249	0.018	1.069	1348724	1.58	Target=0.33	132	3295	
529.10 > 509.00	6.267	6.249	0.018	1.069	3603933		0.37(0.16-0.49)	132	7835	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.448	6.427	0.021	0.951	1944024	1.50		120	4050	
D 21 13C6 PFDA										
519.10 > 474.10	6.508	6.488	0.020	1.001	920906	0.3366		108	2684	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.644	6.624	0.020	0.980	2028252	1.59		127	2782	
D 23 13C8 PFOS										
507.10 > 79.90	6.779	6.752	0.027	1.000	2142413	0.7435	Target=4.26	124	3057	
507.10 > 98.90	6.770	6.752	0.018	0.999	535904		4.00(2.13-6.39)	124	1141	
D 24 13C7 PFUnA										
570.00 > 525.10	6.948	6.923	0.025	1.069	875984	0.3253		104	1674	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.376	7.353	0.023	1.135	848018	0.3337		107	1744	
D 26 13C8 FOSA										
506.10 > 77.80	7.699	7.709	-0.010	1.136	2182069	0.7056		113	5837	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.212	8.179	0.034	1.264	404810	0.2786		89.2	949	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.596	8.607	-0.011	1.268	3099310	6.76		108	1063	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.721	0.0	1.286	386244	0.6333		101	1341	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.849	8.849	0.0	1.305	3706477	6.59		105	1389	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.947	8.947	0.0	1.320	407650	0.6631		106	237	
37 Tauroursodeoxycholic acid										7
498.20 > 80.00	5.020	4.572	0.448	0.741	1468	0.000409			10.5	7
LOD = 0.001000										

Report Date: 19-Sep-2024 08:57:34 Chrom Revision: 2.3 26-Aug-2024 17:14:48
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj41.d
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Taurochenodeoxycholic acid										
498.10 > 80.00	5.054	5.054	0.0	0.746	9833	0.002742			15.4	
45 Taurodeoxycholic Acid										7
498.00 > 80.00	5.184	5.174	0.010	0.765	2173	0.000606			2.9	7
LOD = 0.001000										

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

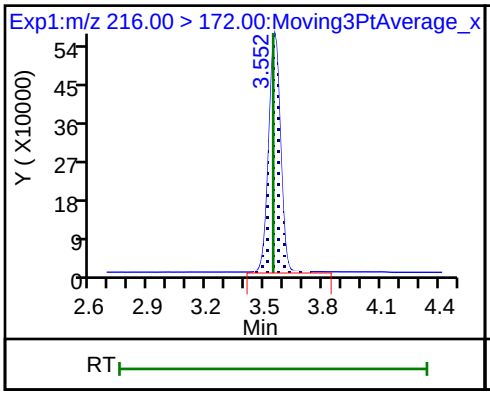
CCB_00030 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 08:57:34 Chrom Revision: 2.3 26-Aug-2024 17:14:48

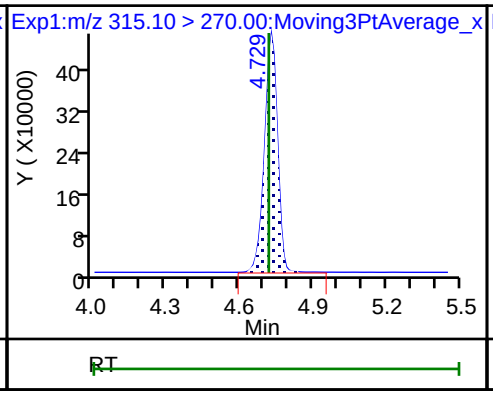
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj41.d
Injection Date: 19-Sep-2024 01:27:59 Instrument ID: LCMS04
Lims ID: CCB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 37 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

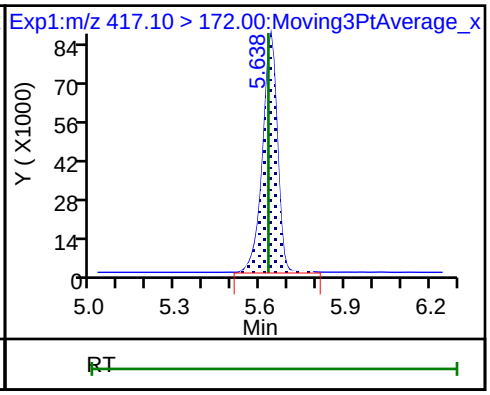
* 1 13C3-PFBA



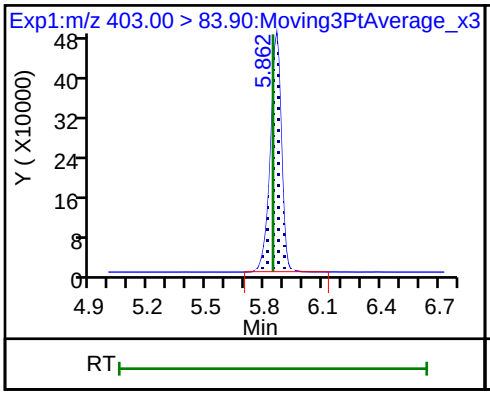
* 2 13C2 PFHxA



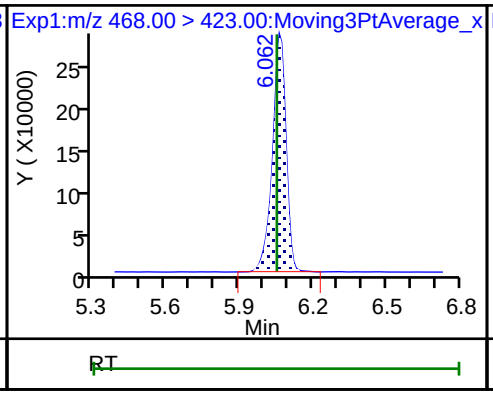
* 3 13C4 PFOA



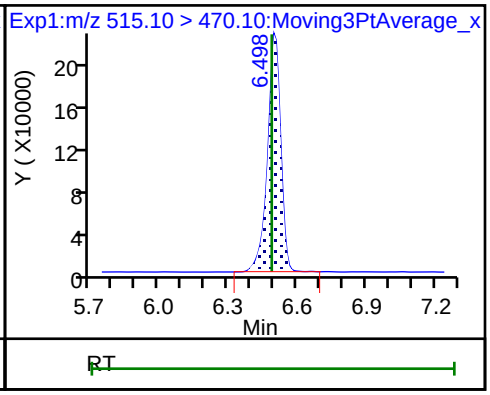
* 4 18O2 PFHxS



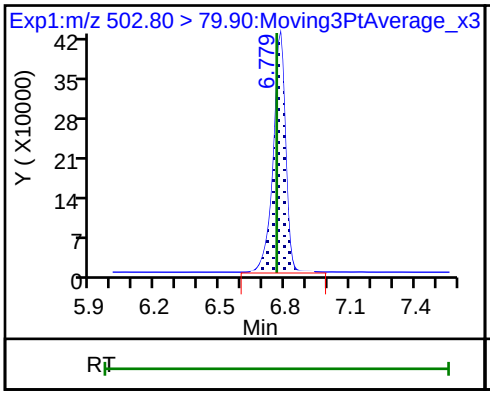
* 5 13C5 PFNA



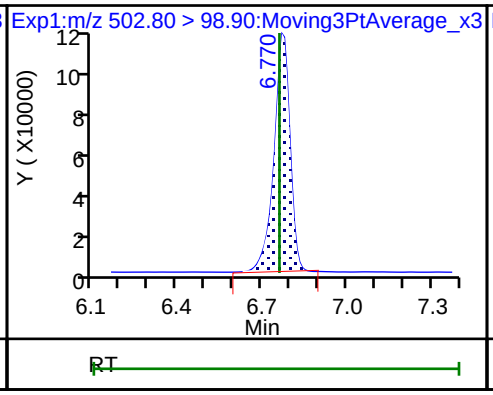
* 6 13C2 PFDA



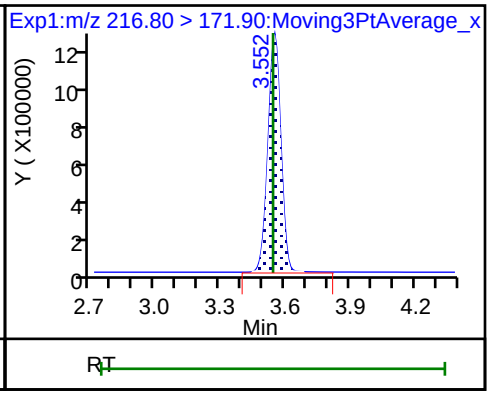
* 7 13C4 PFOS



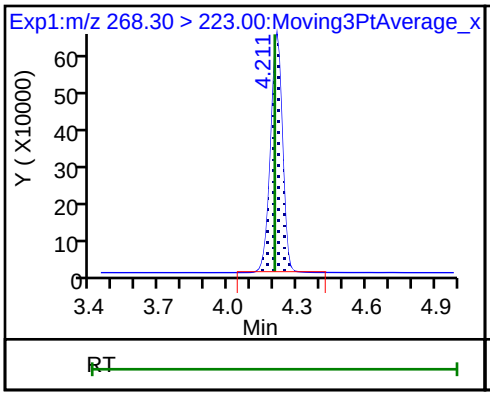
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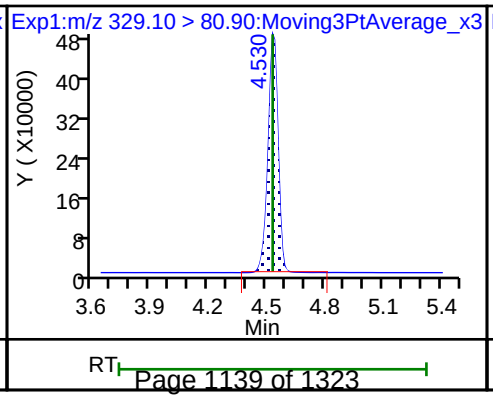
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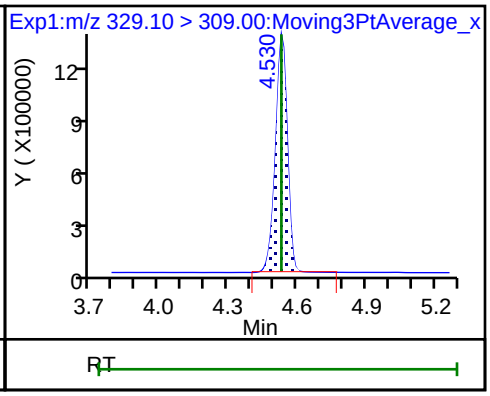
D 9 13C5 PFPeA



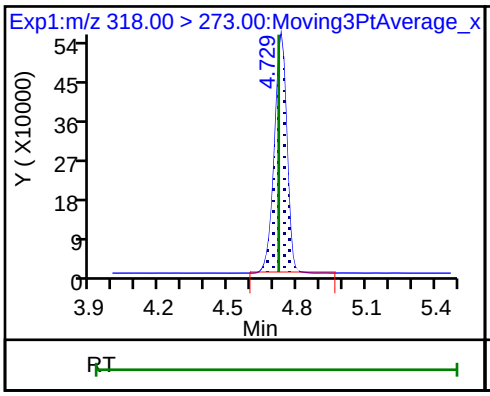
D 10 M2-4:2 FTS



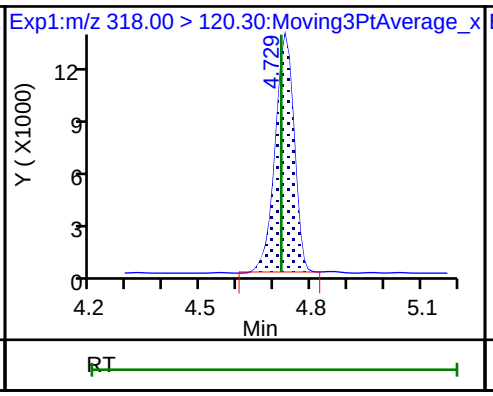
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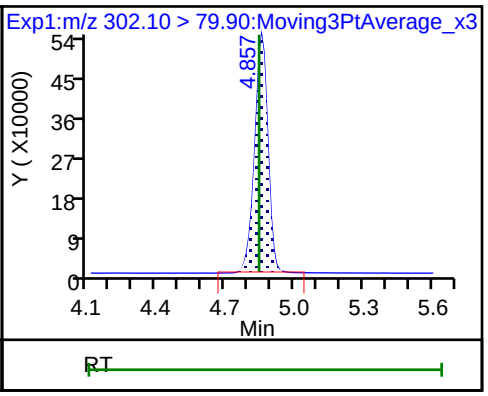
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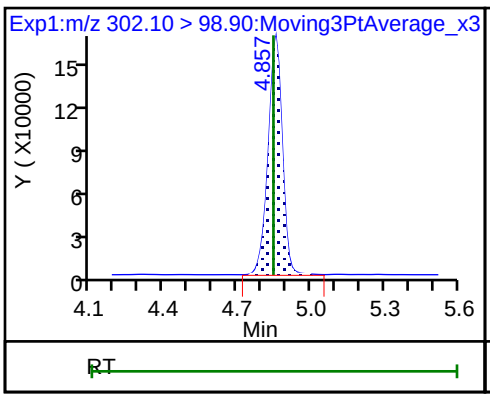
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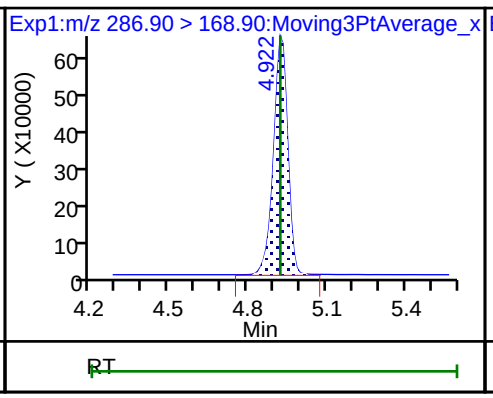
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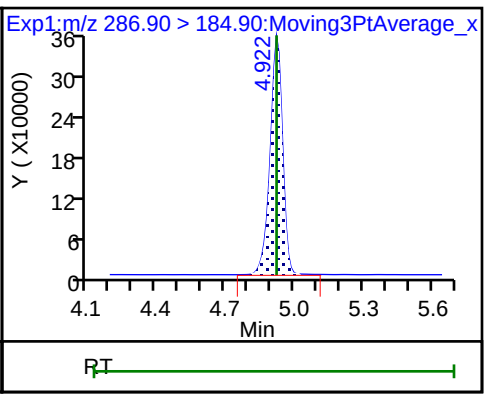
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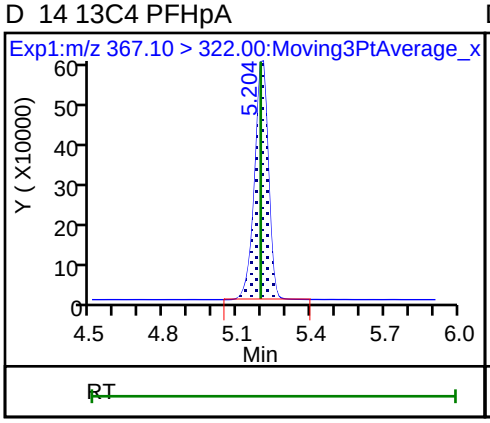
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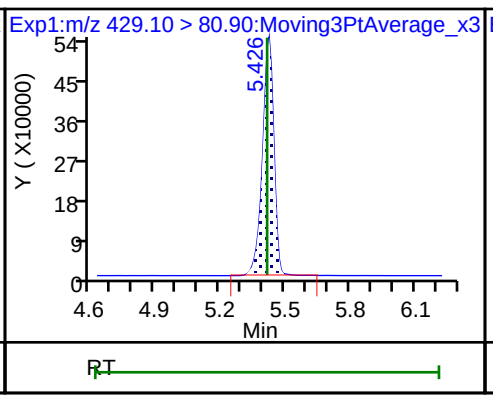
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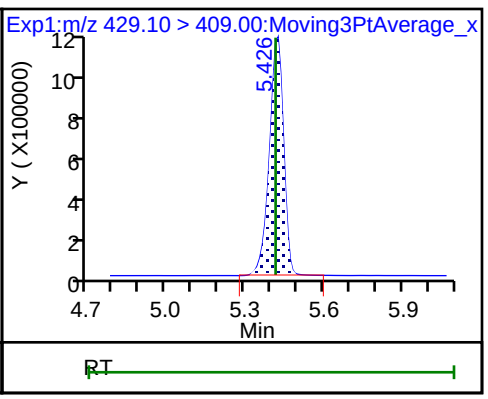
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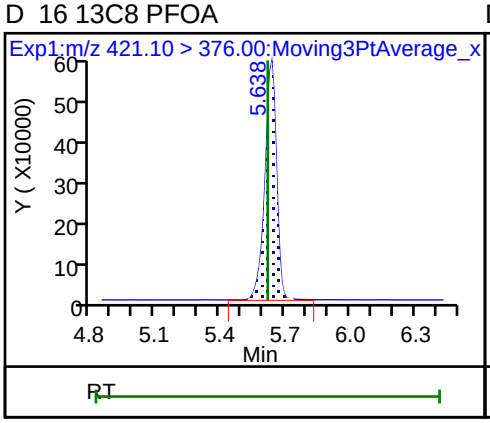
D 15 M2-6:2 FTS



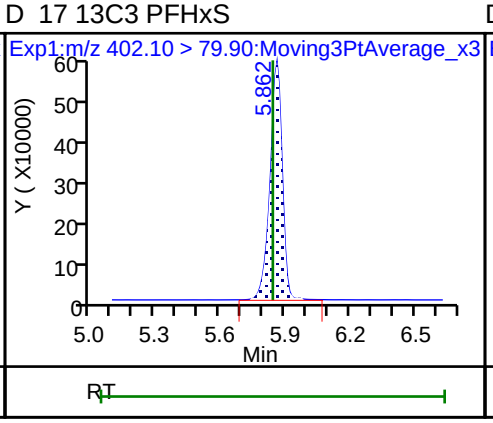
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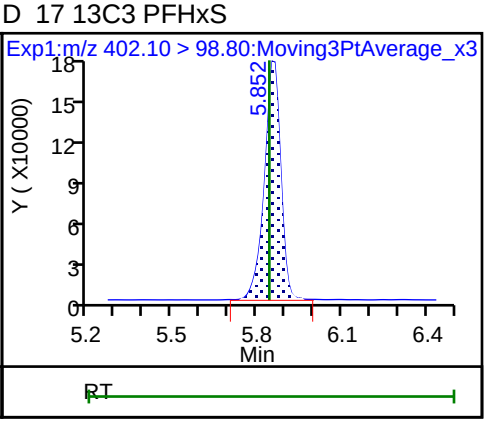
D 16 13C8 PFOA



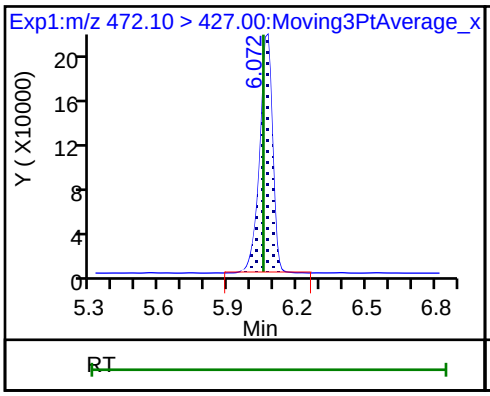
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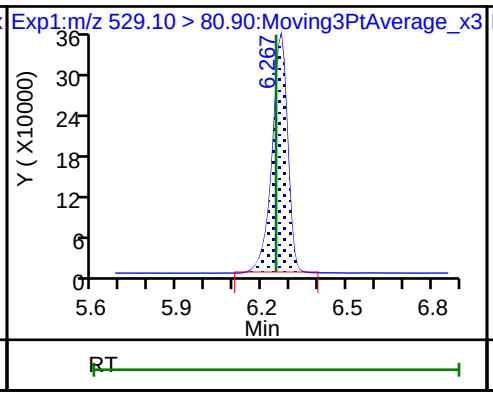
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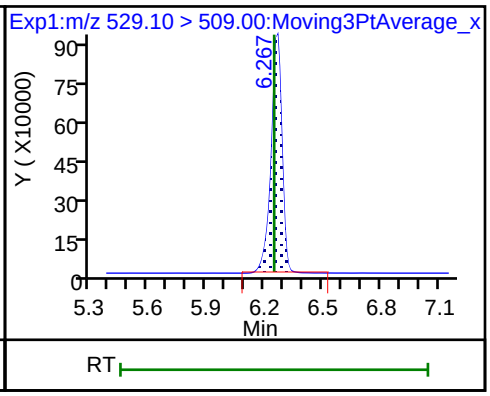
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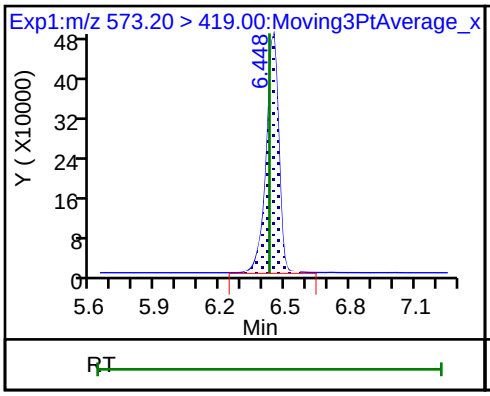
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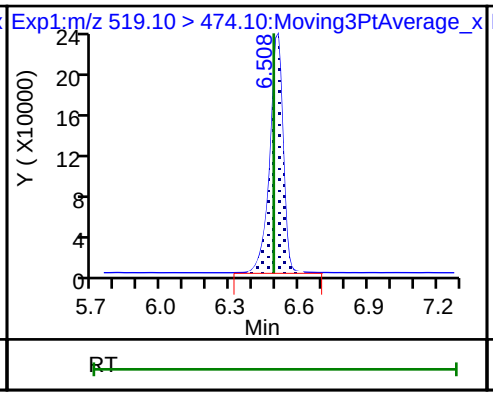
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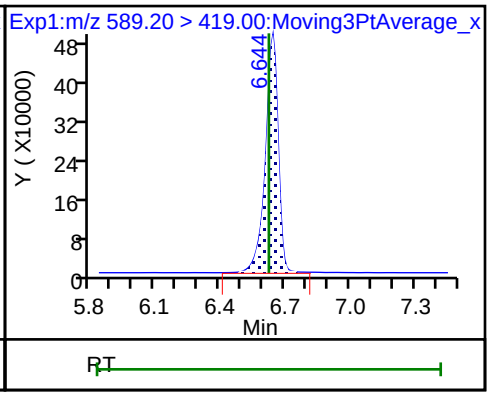
D 20 d3-NMeFOSAA



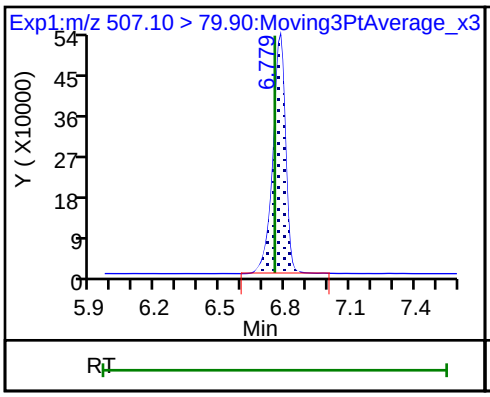
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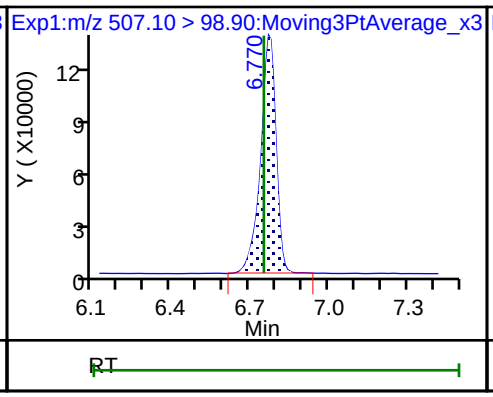
D 22 d5-NEtFOSAA



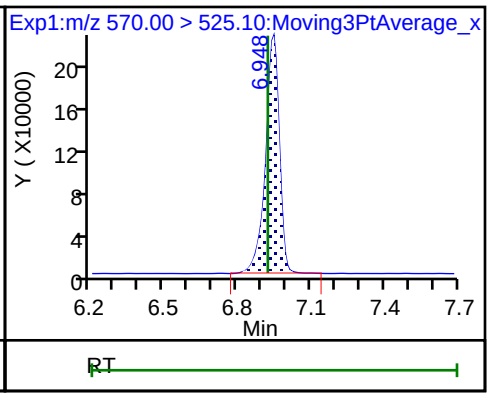
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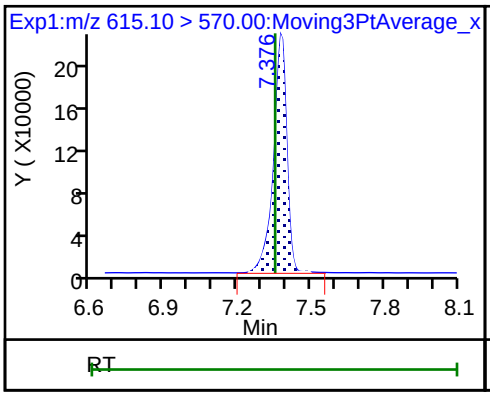
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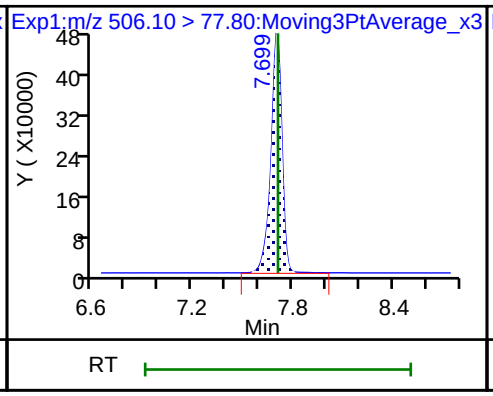
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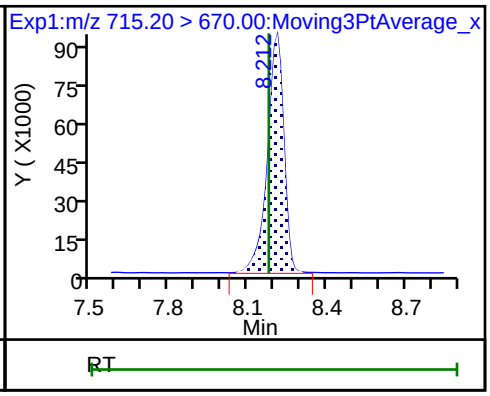
D 25 13C2-PFDoDA



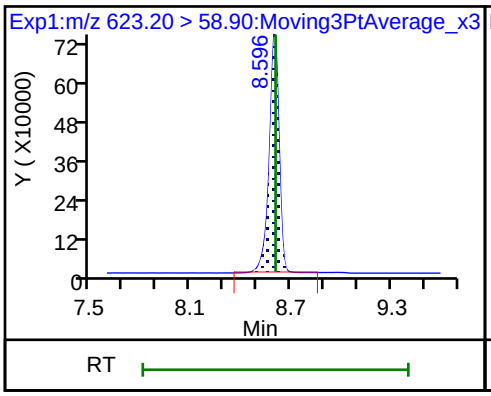
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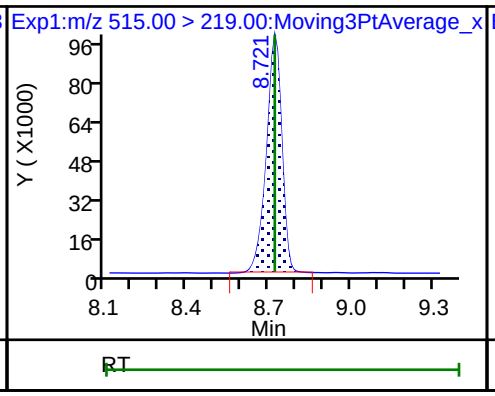
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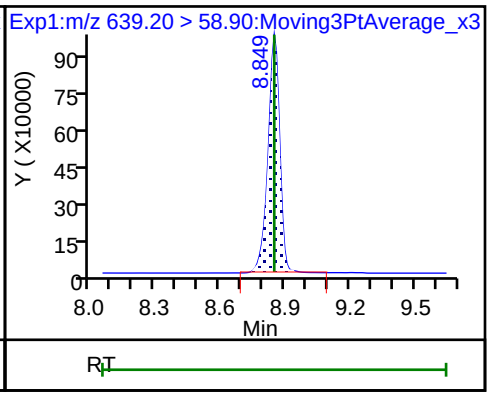
D 28 d7-N-MeFOSE-M



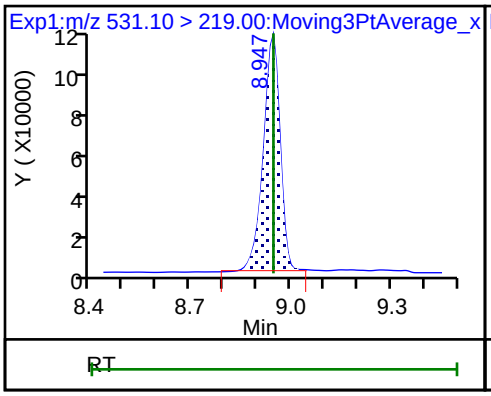
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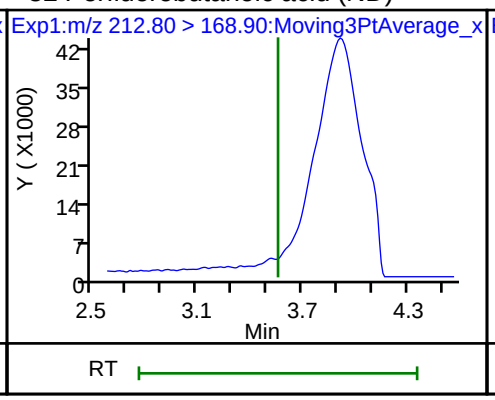
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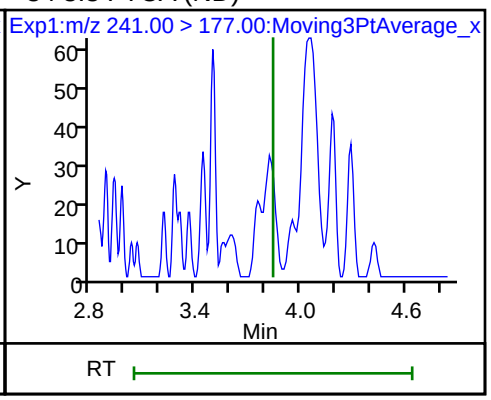
D 31 d5-NEtPFOSA



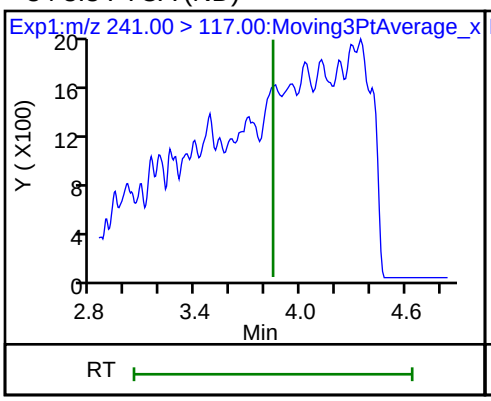
32 Perfluorobutanoic acid (ND)



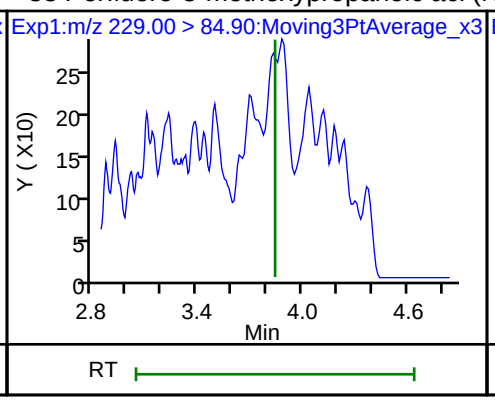
34 3:3 FTCA (ND)



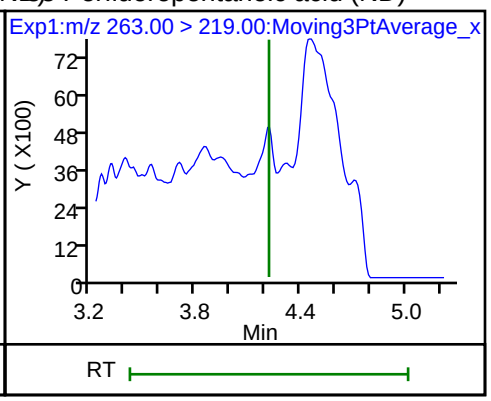
34 3:3 FTCA (ND)



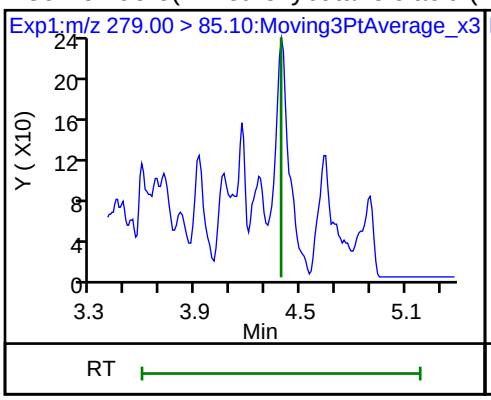
33 Perfluoro-3-methoxypropanoic aci (ND)



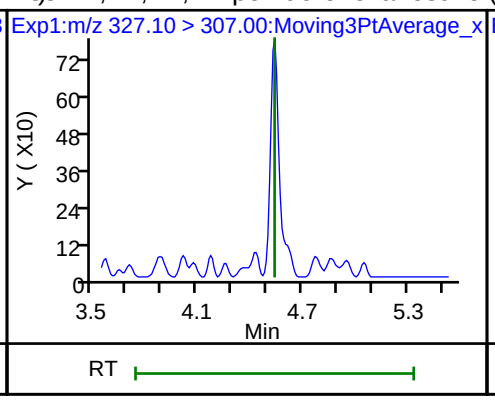
35 Perfluoropentanoic acid (ND)



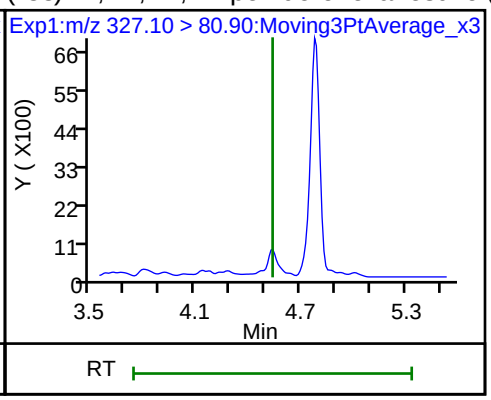
36 Perfluoro(4-methoxybutanoic acid (ND)



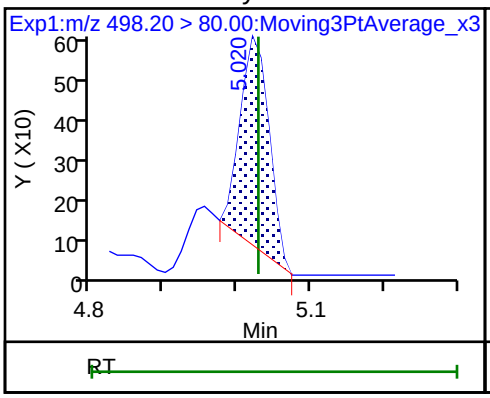
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



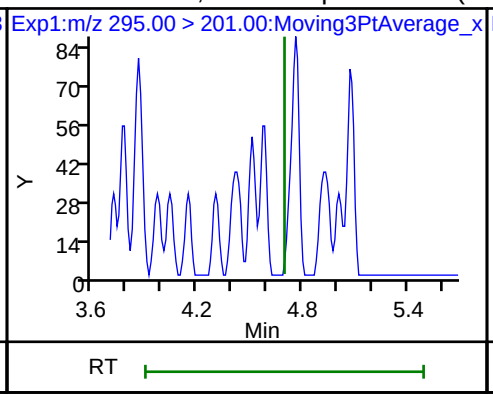
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



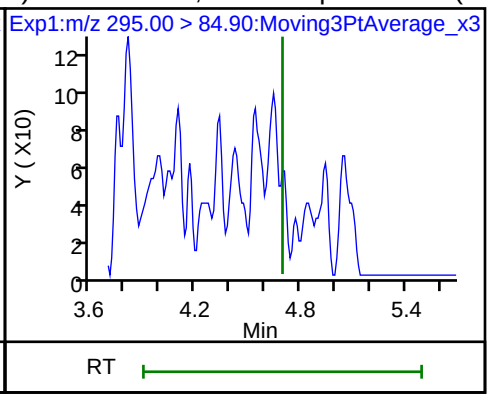
37 Tauroursodeoxycholic acid



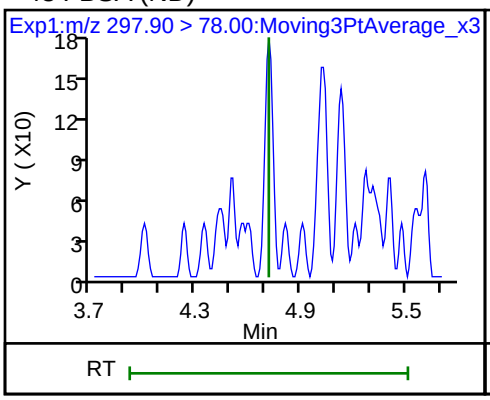
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



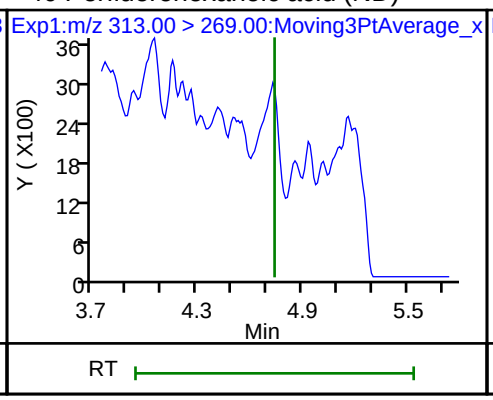
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



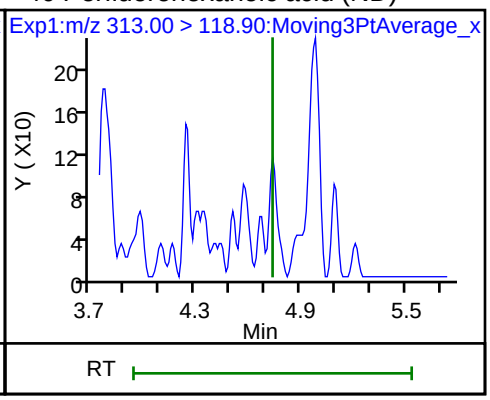
48 FBSA (ND)



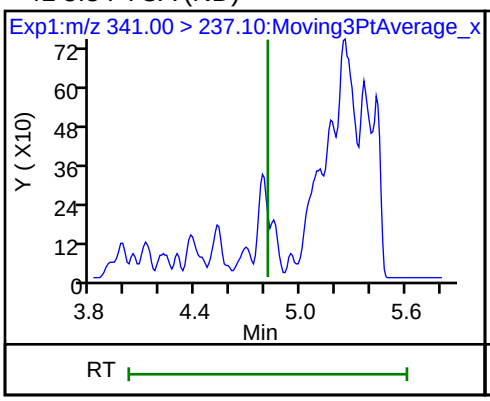
40 Perfluorohexanoic acid (ND)



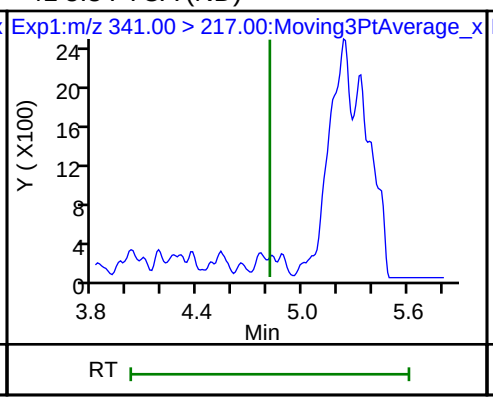
40 Perfluorohexanoic acid (ND)



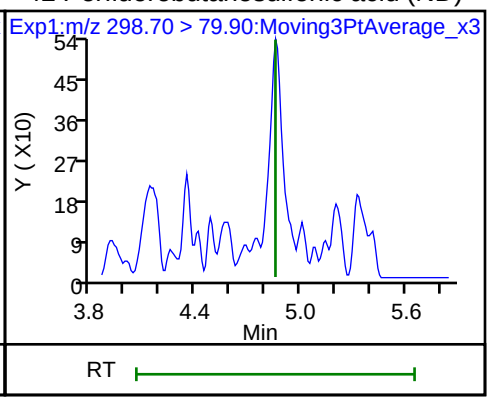
41 5:3 FTCA (ND)



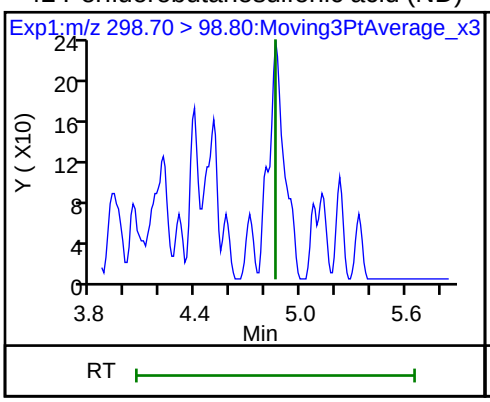
41 5:3 FTCA (ND)



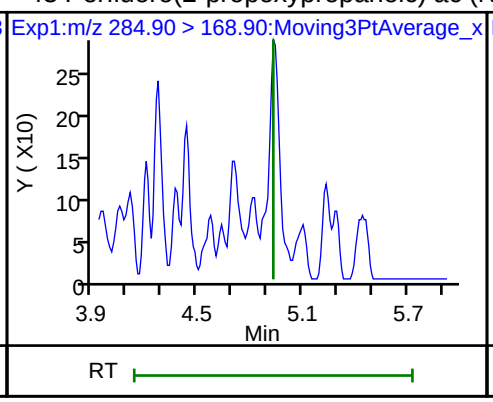
42 Perfluorobutanesulfonic acid (ND)



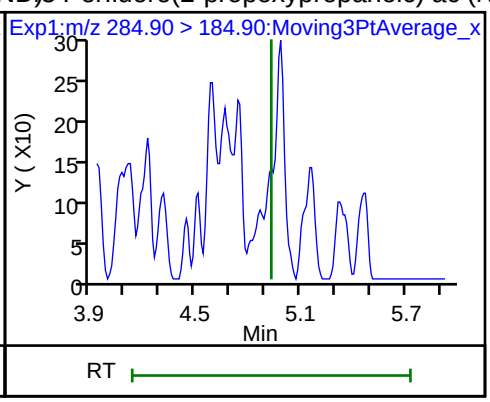
42 Perfluorobutanesulfonic acid (ND)



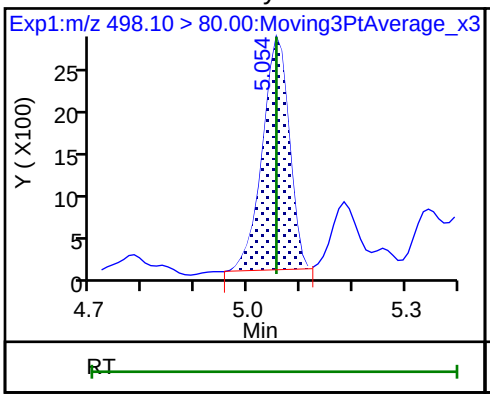
43 Perfluoro(2-propoxypropanoic) ac (ND)



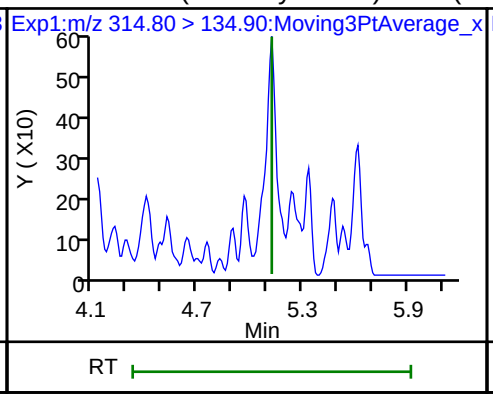
43 Perfluoro(2-propoxypropanoic) ac (ND)



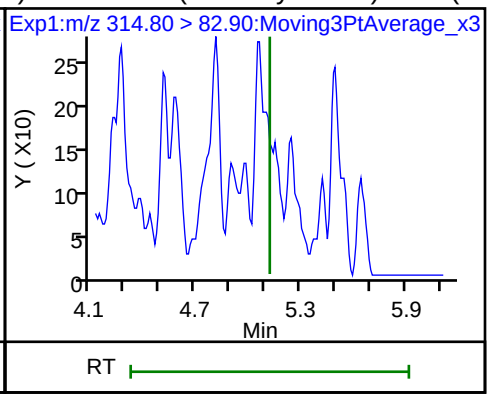
44 Taurochenodeoxycholic acid



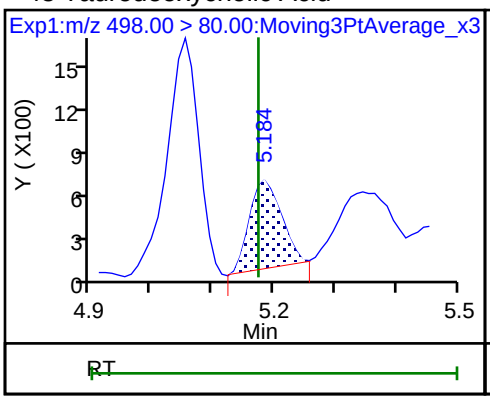
46 Perfluoro (2-ethoxyethane) sulfo (ND)



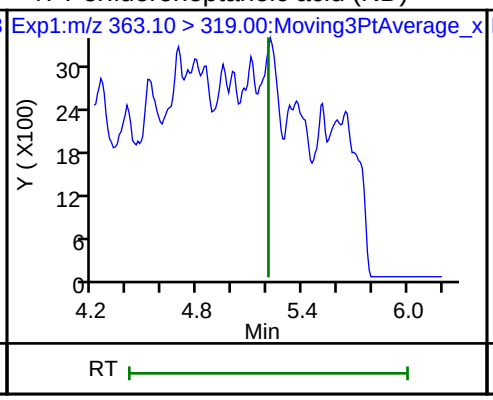
46 Perfluoro (2-ethoxyethane) sulfo (ND)



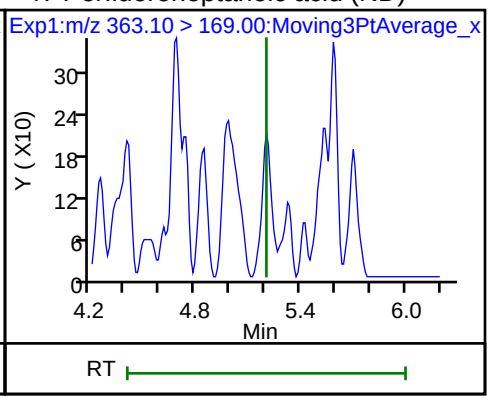
45 Taurodeoxycholic Acid



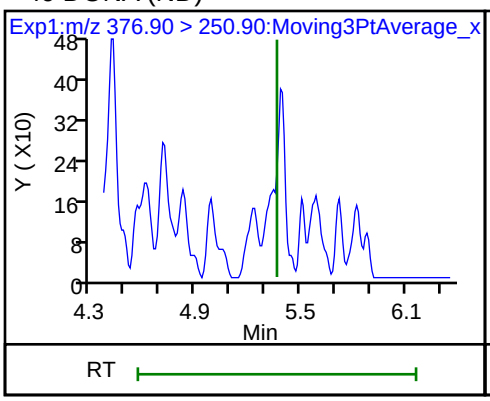
47 Perfluoroheptanoic acid (ND)



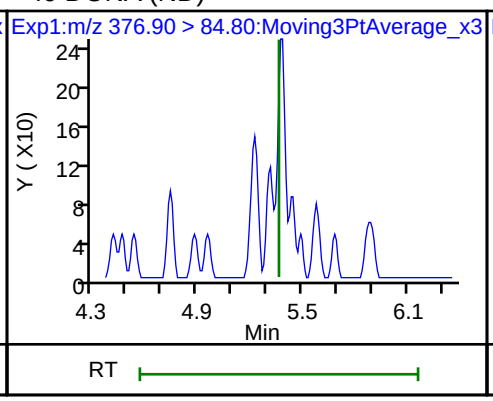
47 Perfluoroheptanoic acid (ND)



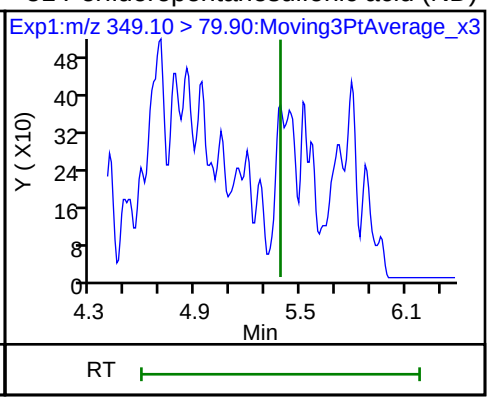
49 DONA (ND)



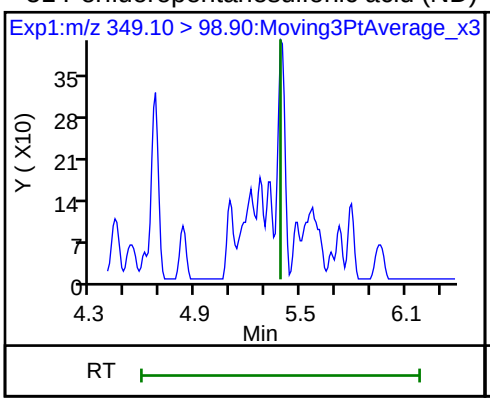
49 DONA (ND)



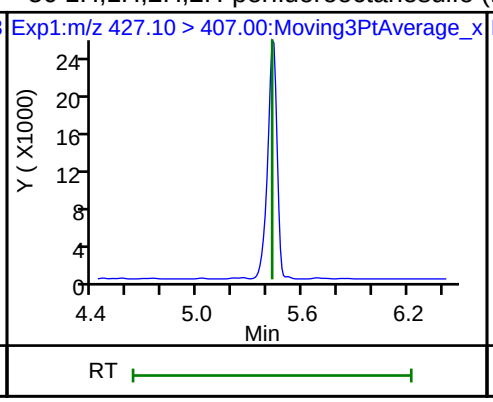
51 Perfluoropentanesulfonic acid (ND)



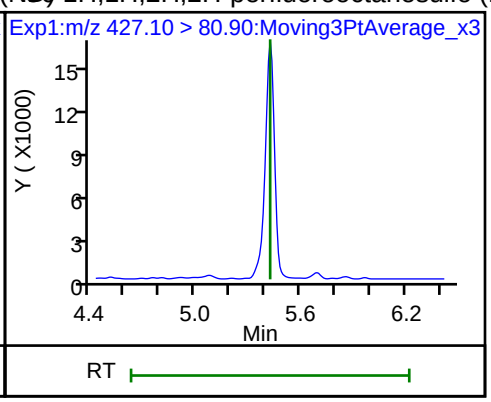
51 Perfluoropentanesulfonic acid (ND)



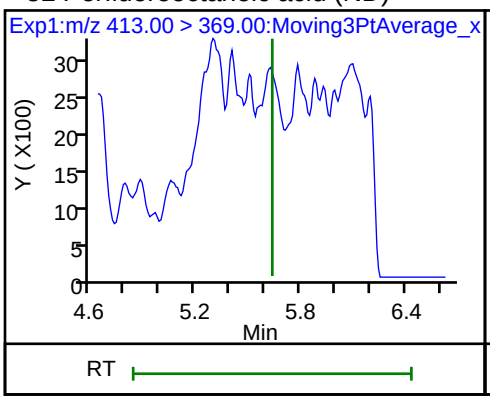
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



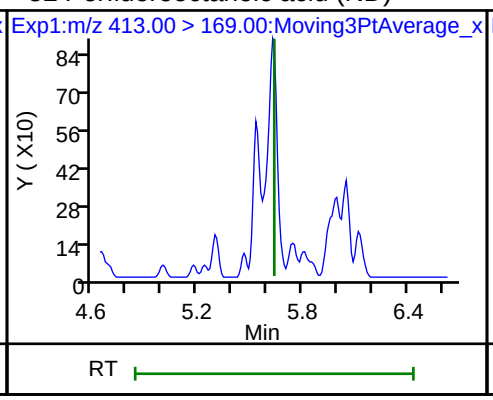
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



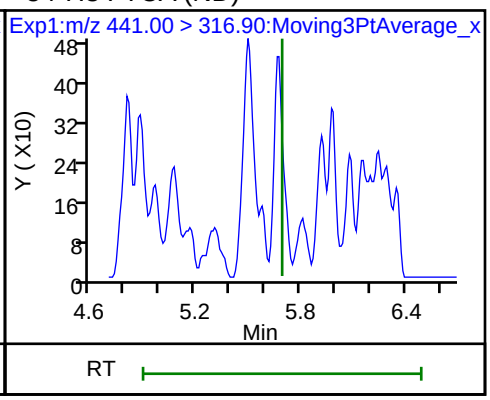
52 Perfluorooctanoic acid (ND)



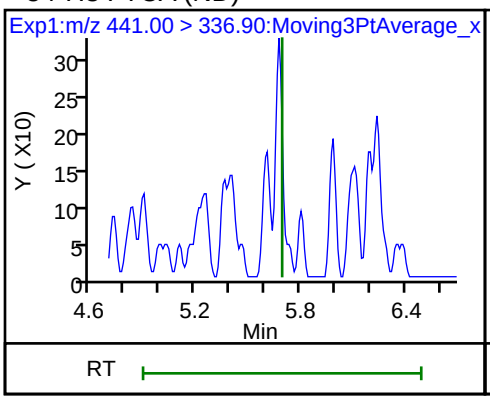
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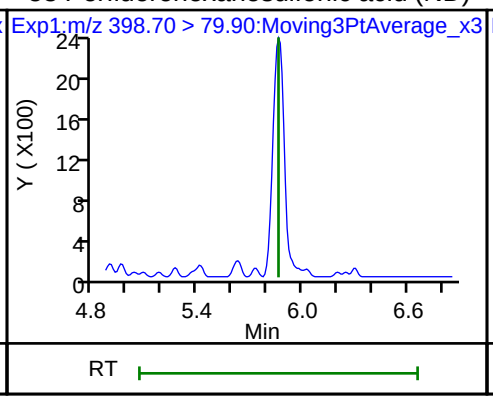
54 7:3 FTCA (ND)



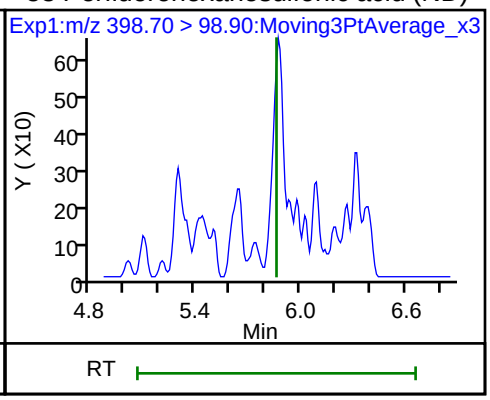
54 7:3 FTCA (ND)



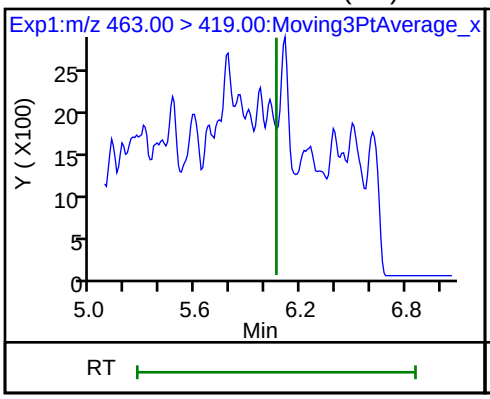
53 Perfluorohexanesulfonic acid (ND)



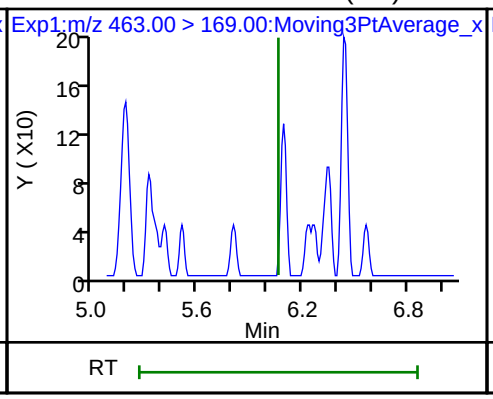
53 Perfluorohexanesulfonic acid (ND)



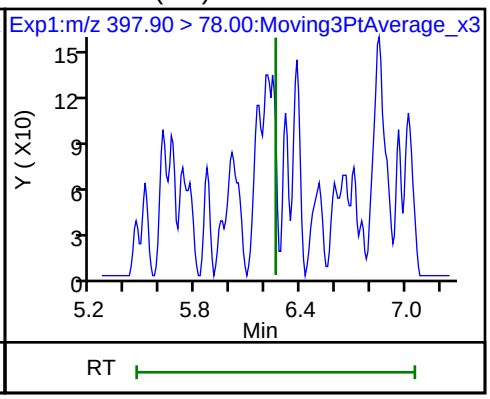
55 Perfluorononanoic acid (ND)



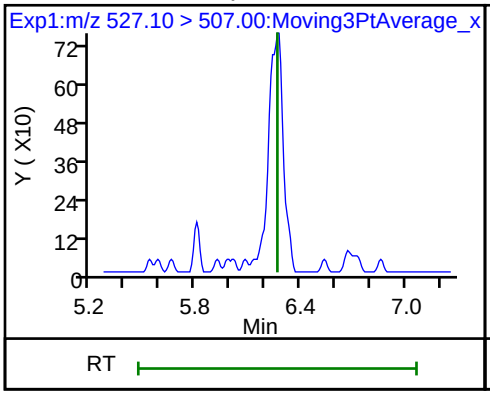
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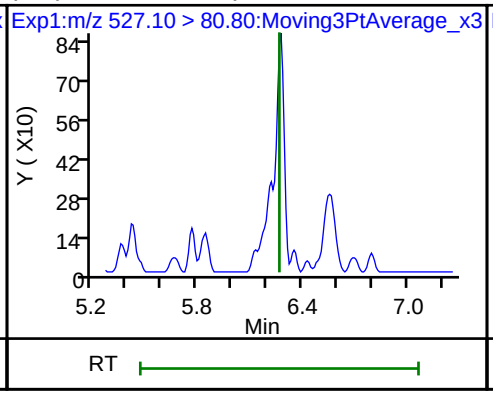
62 FHxSA (ND)



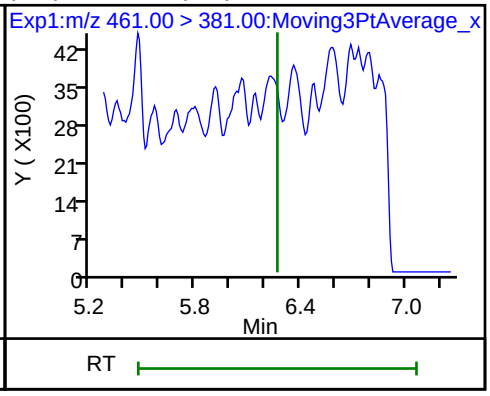
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



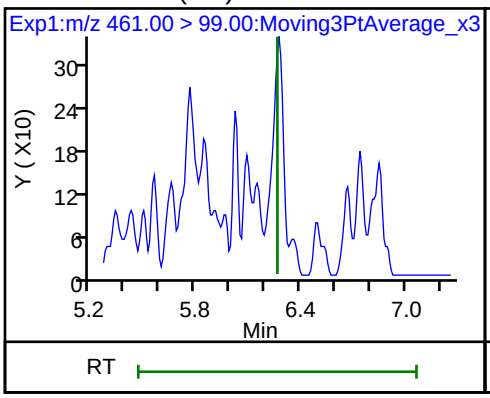
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



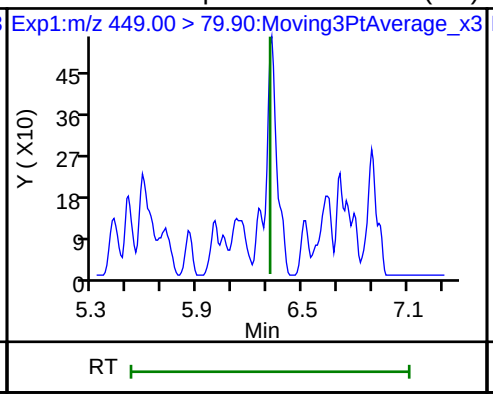
57 PFECHS (ND)



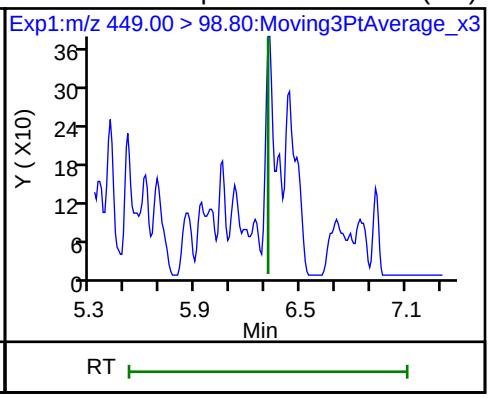
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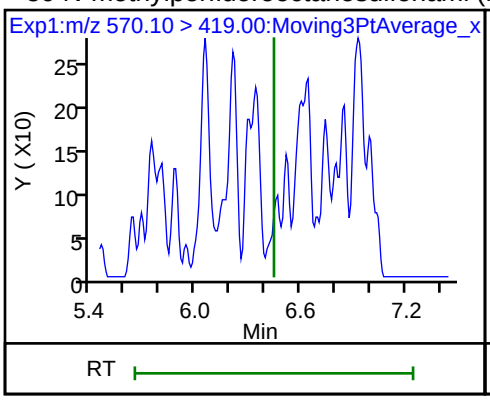
58 Perfluoroheptanesulfonic acid (ND)



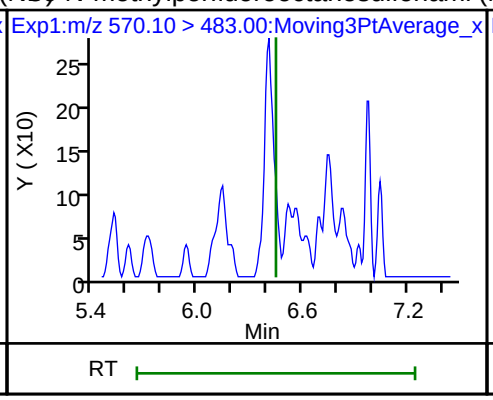
58 Perfluoroheptanesulfonic acid (ND)



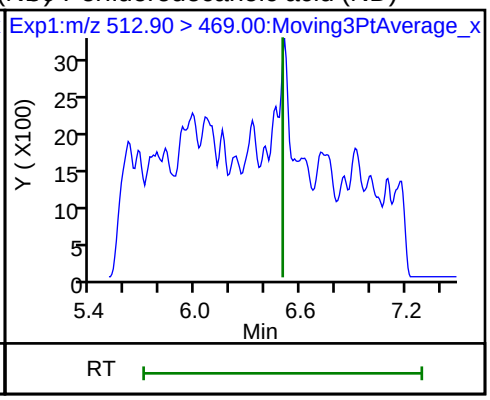
59 N-methylperfluorooctanesulfonami (ND)



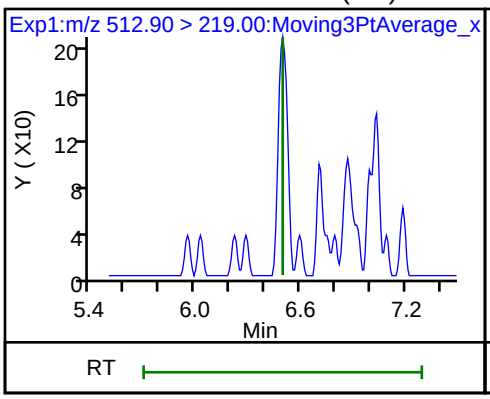
59 N-methylperfluorooctanesulfonami (ND)



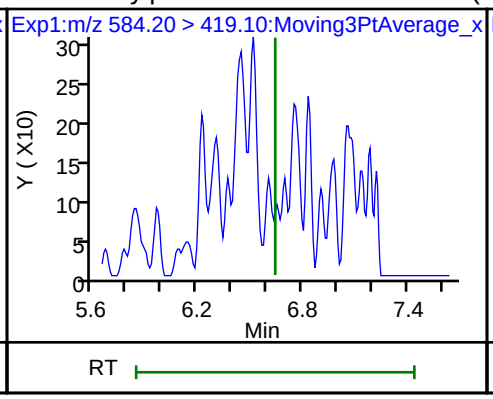
60 Perfluorodecanoic acid (ND)



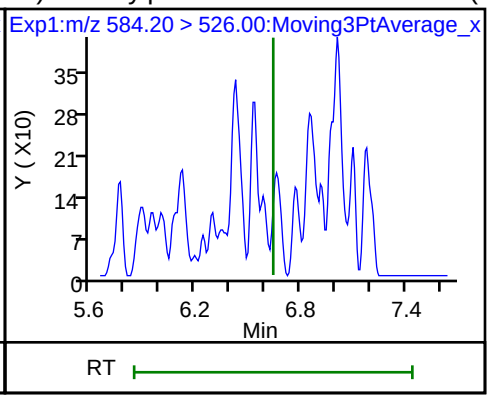
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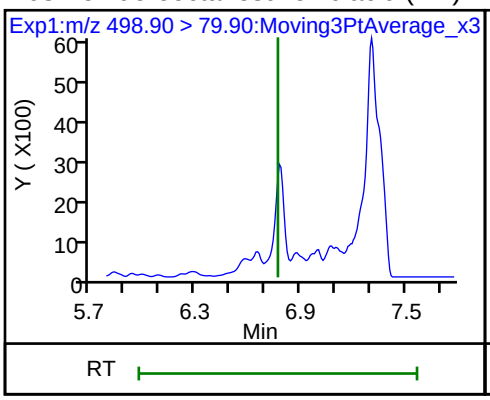
61 N-ethylperfluorooctanesulfonamid (ND)



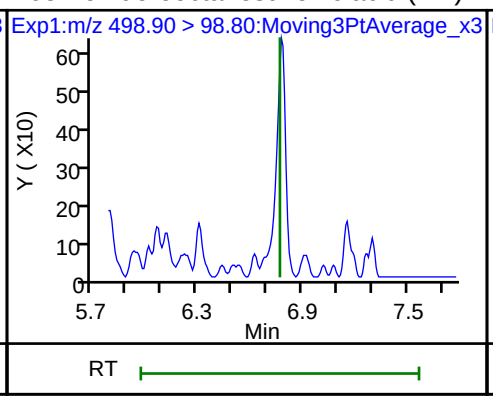
61 N-ethylperfluorooctanesulfonamid (ND)



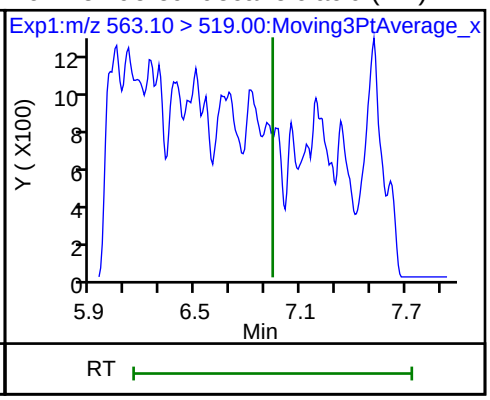
63 Perfluorooctanesulfonic acid (ND)



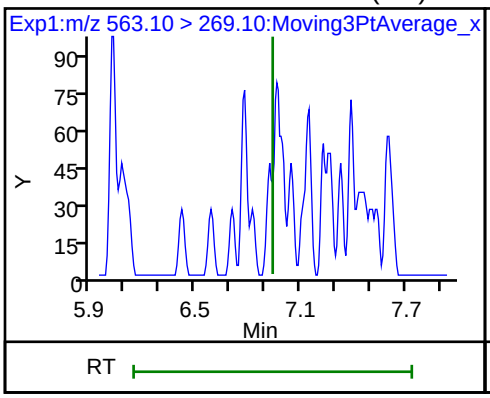
63 Perfluorooctanesulfonic acid (ND)



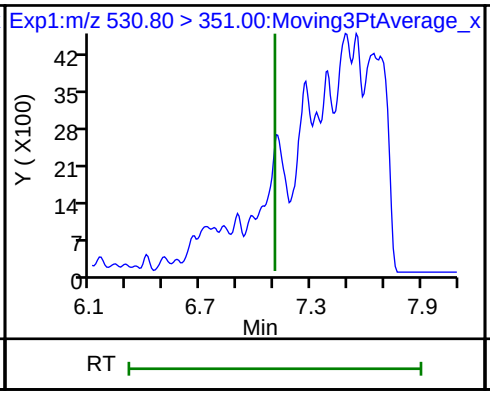
64 Perfluoroundecanoic acid (ND)



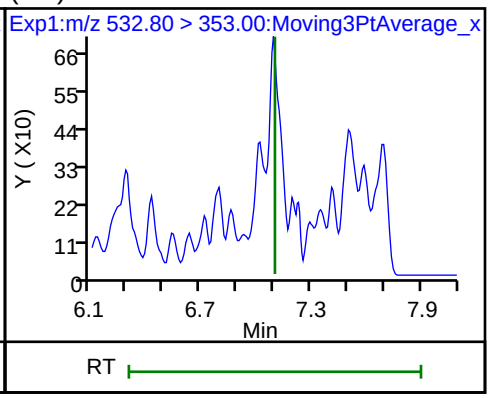
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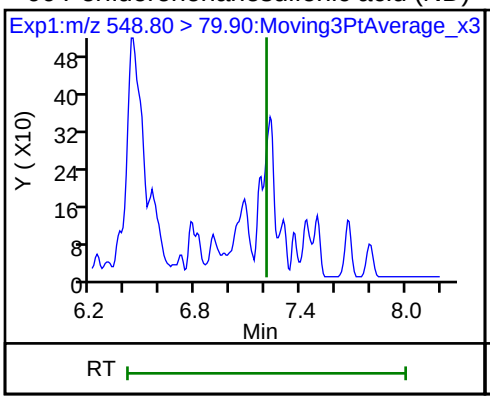
65 9-Chlorohexadecafluoro-3-oxanona (ND)



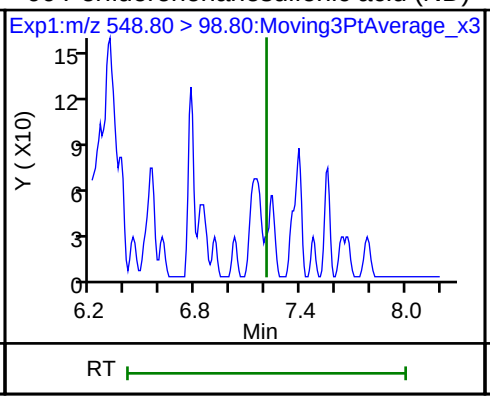
65 9-Chlorohexadecafluoro-3-oxanona (ND)



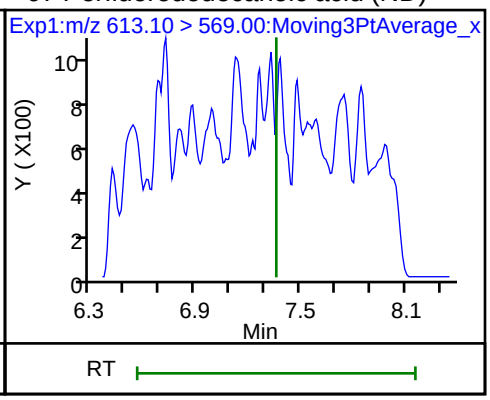
66 Perfluorononanesulfonic acid (ND)



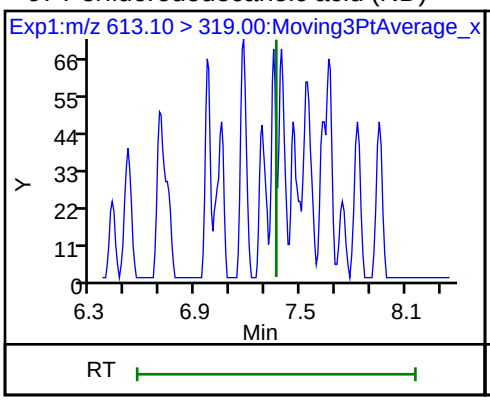
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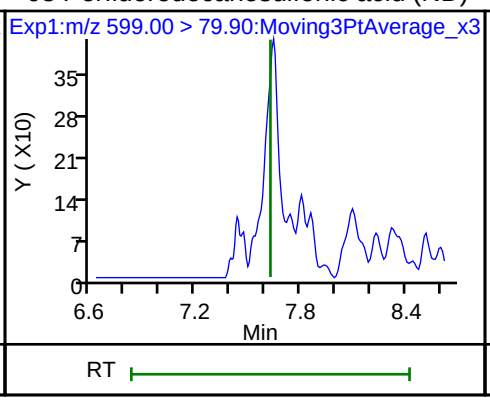
67 Perfluorododecanoic acid (ND)



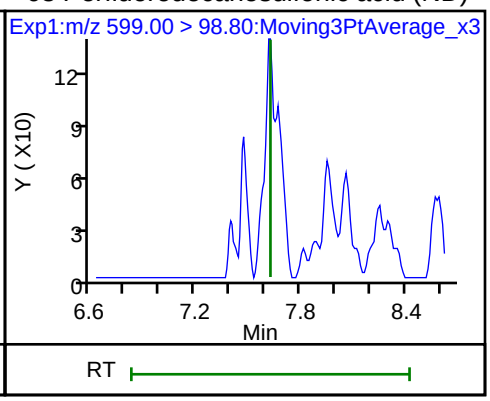
67 Perfluorododecanoic acid (ND)



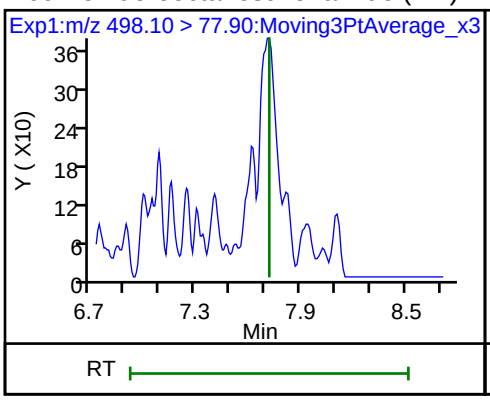
68 Perfluorodecanesulfonic acid (ND)



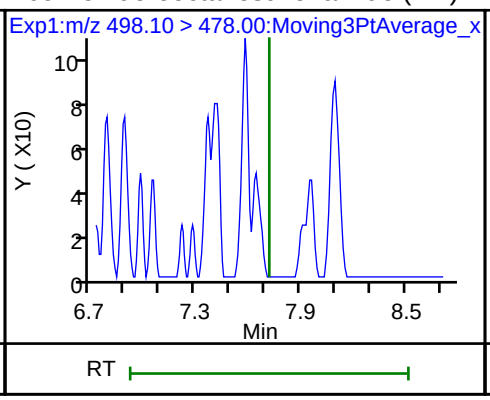
68 Perfluorodecanesulfonic acid (ND)



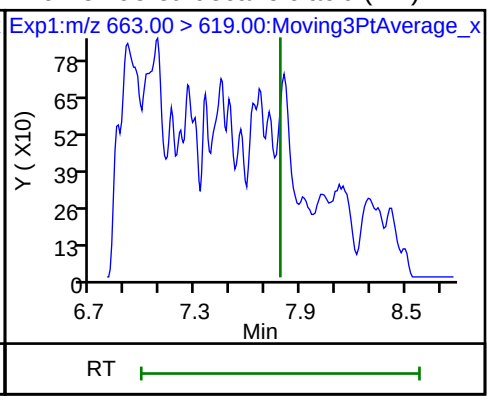
69 Perfluorooctanesulfonamide (ND)



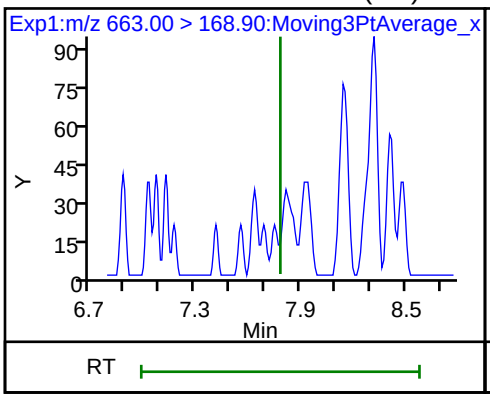
69 Perfluorooctanesulfonamide (ND)



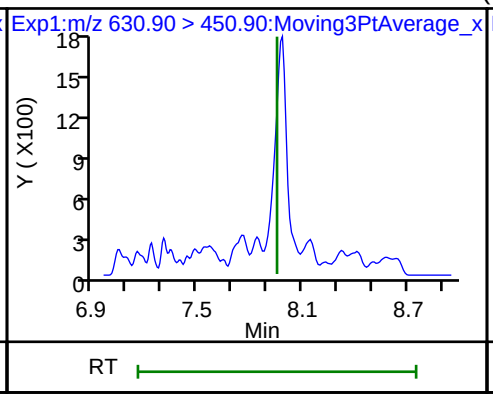
70 Perfluorotridecanoic acid (ND)



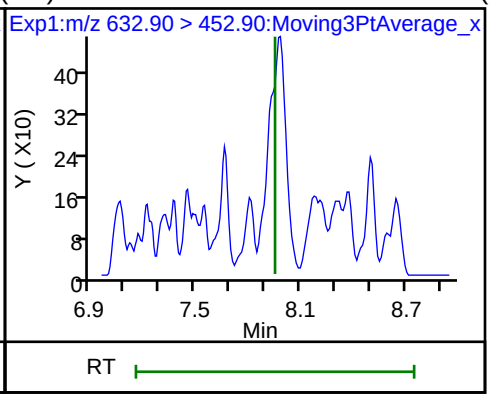
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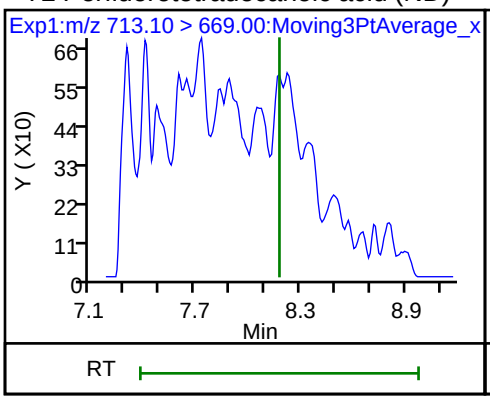
71 11-Chloroeicosafluoro-3-oxaundec (ND)



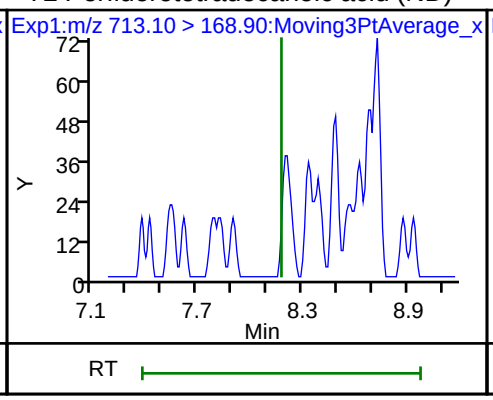
71 11-Chloroeicosafluoro-3-oxaundec (ND)



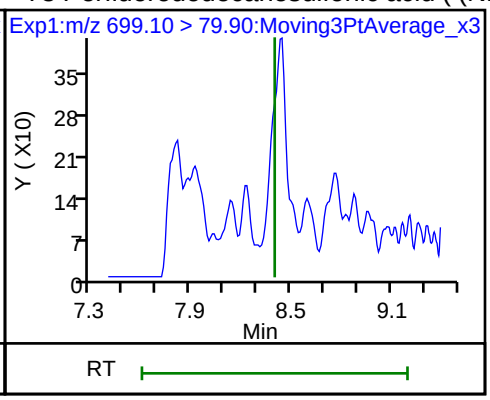
72 Perfluorotetradecanoic acid (ND)



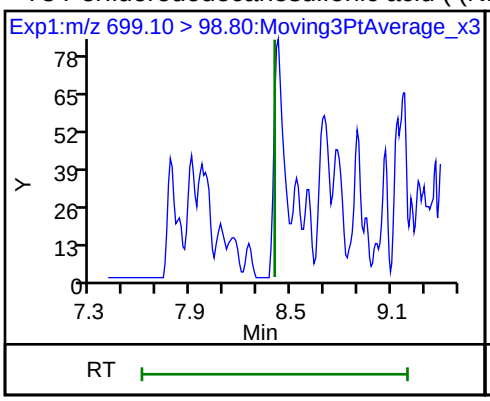
72 Perfluorotetradecanoic acid (ND)



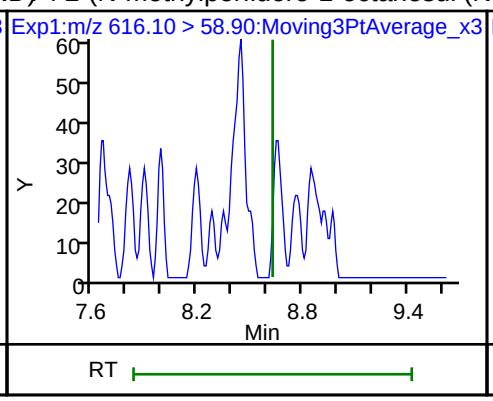
73 Perfluorododecanesulfonic acid ((ND)



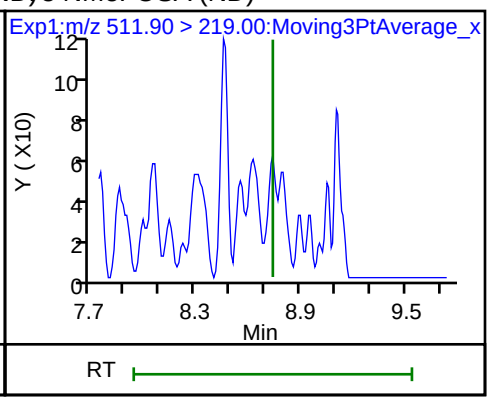
73 Perfluorododecanesulfonic acid ((ND)



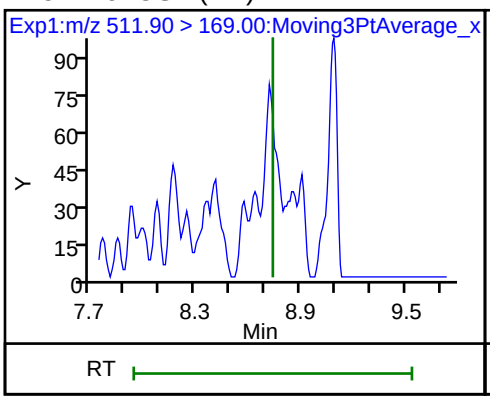
74 2-(N-methylperfluoro-1-octanesul (ND)



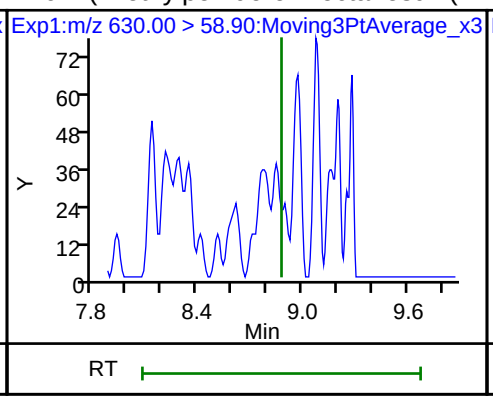
75 NMeFOSA (ND)



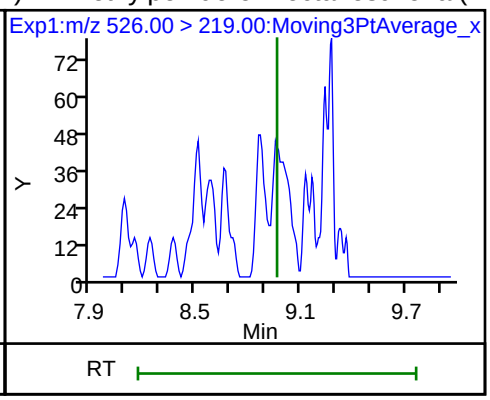
75 NMeFOSA (ND)



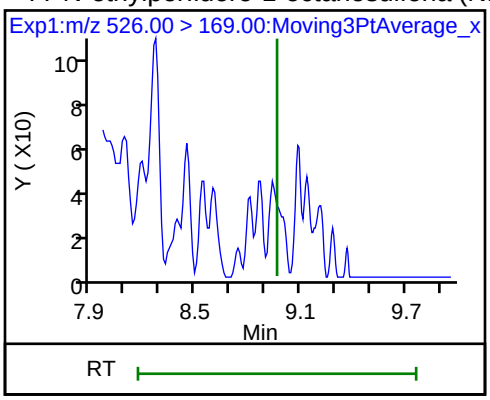
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/53

Matrix: Water | Lab File ID: 2024_09_18solidwatinj53.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/19/2024 04:11

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.10	U	0.10	0.0019
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.10	U	0.10	0.00077
307-24-4	Perfluorohexanoic acid (PFHxA)	0.10	U	0.10	0.00040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.10	U	0.10	0.00027
335-67-1	Perfluorooctanoic acid (PFOA)	0.10	U	0.10	0.00038
375-95-1	Perfluorononanoic acid (PFNA)	0.10	U	0.10	0.00032
335-76-2	Perfluorodecanoic acid (PFDA)	0.10	U	0.10	0.00025
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.10	U	0.10	0.00020
307-55-1	Perfluorododecanoic acid (PFDoA)	0.10	U	0.10	0.00025
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.10	U	0.10	0.00033
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.10	U	0.10	0.00018
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.10	0.00038
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.10	U	0.10	0.00036
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.10	U	0.10	0.00042
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.10	U	0.10	0.00023
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.10	U	0.10	0.00053
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.10	U	0.10	0.00030
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.10	U	0.10	0.00029
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.10	U	0.10	0.00094
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.10	U	0.10	0.0011
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.10	U	0.10	0.0012
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.10	U	0.10	0.00029
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.10	U	0.10	0.00057
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.10	U	0.10	0.00029
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.10	U	0.10	0.00067

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 240-627555/53

Matrix: Water Lab File ID: 2024_09_18solidwatinj53.d

Analysis Method: 1633 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 09/19/2024 04:11

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 Units: ng/mL

Preparation Batch No.: Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.10	U	0.10	0.00062
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.10	U	0.10	0.0023
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.10	U	0.10	0.0016
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.10	U	0.10	0.0014
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.10	U	0.10	0.00046
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.10	U	0.10	0.00027
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.10	U	0.10	0.0012
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.10	U	0.10	0.0010
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.10	U	0.10	0.0016
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.10	U	0.10	0.00054
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.10	U	0.10	0.00096
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.10	U	0.10	0.0092
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.10	U	0.10	0.017
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.10	U	0.10	0.00020
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.10	U	0.10	0.00023

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 240-627555/53

Matrix: Water | Lab File ID: 2024_09_18solidwatinj53.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/19/2024 04:11

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	95.4		10-130
2283397-79-3	13C5 PFPeA	87.6		35-150
2328024-54-8	13C5 PFHxA	86.0		55-150
2328024-55-9	13C4 PFHpA	97.3		55-150
1350614-84-4	13C8 PFOA	99.3		60-140
2283397-80-6	13C9 PFNA	99.9		55-140
2328024-56-0	13C6 PFDA	115		50-140
STL02580	13C7 PFUnA	103		30-140
STL02116	13C2 PFTeDA	98.6		10-130
2708218-83-9	13C3 PFBS	109		55-150
2708218-85-1	13C3 PFHxS	114		55-150
2265893-05-6	13C8 PFOS	123		45-140
STL01056	13C8 FOSA	110		30-130
1400690-70-1	d3-NMeFOSAA	119		45-200
1265205-97-7	d5-NEtFOSAA	126		10-200
STL02395	M2-4:2 FTS	143		60-200
STL02279	M2-6:2 FTS	138		60-200
STL02280	M2-8:2 FTS	137		50-200
STL02255	13C3 HFPO-DA	86.2		25-160
STL02277	d7-N-MeFOSE-M	102		10-150
STL02278	d9-N-EtFOSE-M	102		10-150
STL02704	d5-NEtPFOSA	103		10-130
STL02705	d3-NMePFOSA	96.2		15-130
STL02703	13C2-PFDoDA	114		10-150

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj53.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Sep-2024 04:11:10 ALS Bottle#: 37 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1 Rack: 1 240-0146375-053
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 09:06:13 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 09:06:13
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.551	3.544	0.007		2357790	1.25			991	
* 2 13C2 PFHxA										
315.10 > 270.00	4.729	4.719	0.010		1728845	0.6250			6481	
* 3 13C4 PFOA										
417.10 > 172.00	5.638	5.629	0.009		297095	0.6250			1969	
* 4 18O2 PFHxS										
403.00 > 83.90	5.862	5.843	0.019		1870354	0.5913			4679	
* 5 13C5 PFNA										
468.00 > 423.00	6.062	6.052	0.010		1121306	0.3125			1542	
* 6 13C2 PFDA										
515.10 > 470.10	6.508	6.488	0.020		832715	0.3125			1888	
* 7 13C4 PFOS										
502.80 > 79.90	6.779	6.761	0.018		1710178	0.5975	Target=4.00		3327	
502.80 > 98.90	6.770	6.761	0.009		437923		3.91(2.00-6.00)		2187	
D 8 13C4 PFBA										
216.80 > 171.90	3.551	3.544	0.007	1.000	5106228	2.39		95.4	18191	
D 9 13C5 PFPeA										
268.30 > 223.00	4.209	4.202	0.007	0.890	2378290	1.10		87.6	7519	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.530	4.530	0.0	0.773	1764006	1.67	Target=0.29	143	5041	
329.10 > 309.00	4.530	4.530	0.0	0.773	4783649		0.37(0.14-0.43)	143	1411	
D 11 13C5 PFHxA										
318.00 > 273.00	4.729	4.719	0.010	1.000	2089903	0.5377	Target=40.21	86.0	5592	
318.00 > 120.30	4.729	4.719	0.010	1.000	50983		40.99(20.11-60.32)	86.0	404	
D 12 13C3 PFBS										
302.10 > 79.90	4.856	4.846	0.010	0.828	2150668	0.6359	Target=3.28	109	3428	
302.10 > 98.90	4.856	4.846	0.010	0.828	672633		3.20(1.64-4.92)	109	2048	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.922	4.923	-0.001	1.041	2411316	2.16	Target=1.86	86.2	5039	
286.90 > 184.90	4.922	4.923	-0.001	1.041	1293763		1.86(0.93-2.78)	86.2	3669	
D 14 13C4 PFHpA										
367.10 > 322.00	5.194	5.194	0.0	1.098	2469307	0.6083		97.3	4628	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.426	5.416	0.010	0.926	1980437	1.63	Target=0.38	138	4183	
429.10 > 409.00	5.416	5.416	0.0	0.924	4603129		0.43(0.19-0.57)	138	6318	
D 16 13C8 PFOA										
421.10 > 376.00	5.638	5.619	0.019	1.000	2327002	0.6206		99.3	4573	
D 17 13C3 PFHxS										
402.10 > 79.90	5.862	5.843	0.019	1.000	2236051	0.6734	Target=3.25	114	5552	
402.10 > 98.80	5.862	5.843	0.019	1.000	703211		3.18(1.63-4.88)	114	2607	
D 18 13C9 PFNA										
472.10 > 427.00	6.072	6.052	0.020	1.002	878133	0.3120		99.9	1568	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.268	6.249	0.019	1.069	1366874	1.65	Target=0.33	137	4842	
529.10 > 509.00	6.268	6.249	0.019	1.069	3553592		0.38(0.16-0.49)	137	5131	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.448	6.427	0.021	0.951	1965958	1.48		119	4840	
D 21 13C6 PFDA										
519.10 > 474.10	6.508	6.488	0.020	1.000	917742	0.3579		115	1974	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.644	6.624	0.020	0.980	2060372	1.58		126	4696	
D 23 13C8 PFOS										
507.10 > 79.90	6.779	6.752	0.027	1.000	2167847	0.7351	Target=4.26	123	2352	
507.10 > 98.90	6.770	6.752	0.018	0.999	533312		4.06(2.13-6.39)	123	1024	
D 24 13C7 PFUnA										
570.00 > 525.10	6.948	6.923	0.025	1.068	808572	0.3204		103	1329	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.376	7.353	0.023	1.133	850388	0.3570		114	1509	
D 26 13C8 FOSA										
506.10 > 77.80	7.709	7.709	0.0	1.137	2180576	0.6890		110	3666	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.212	8.179	0.034	1.262	419582	0.3081		98.6	943	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.596	8.607	-0.011	1.268	2981488	6.36		102	984	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.721	8.721	0.0	1.286	375221	0.6012		96.2	1404	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.849	8.849	0.0	1.305	3660695	6.36		102	1266	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.947	8.947	0.0	1.320	403242	0.6409		103	256	
37 Tauroursodeoxycholic acid										7
498.20 > 80.00	5.020	4.572	0.448	0.741	2112	0.000582			13.4	7
LOD = 0.001000										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Taurochenodeoxycholic acid										
498.10 > 80.00	5.053	5.054	-0.001	0.745	8833	0.002435			15.5	
45 Taurodeoxycholic Acid										
498.00 > 80.00	5.053	5.174	-0.121	0.745	5097	0.001405			10.4	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

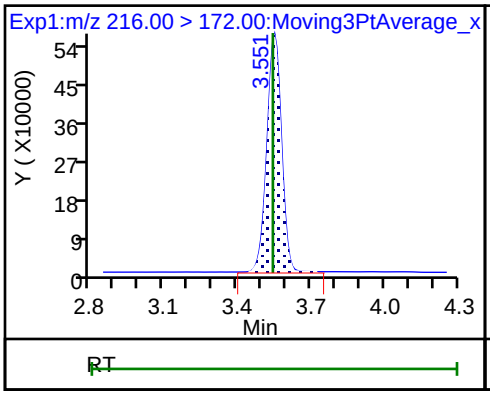
CCB_00030 Amount Added: 1.00 Units: mL

Report Date: 19-Sep-2024 09:06:14 Chrom Revision: 2.3 26-Aug-2024 17:14:48

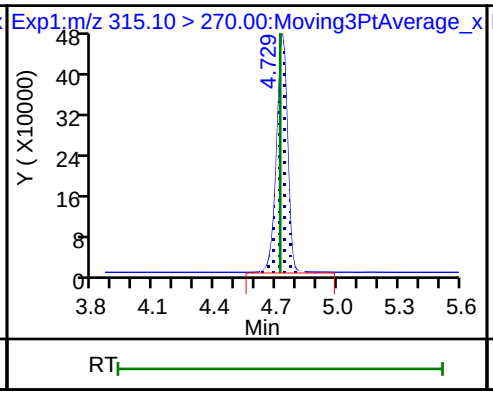
Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj53.d
Injection Date: 19-Sep-2024 04:11:10 Instrument ID: LCMS04
Lims ID: CCB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 37 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

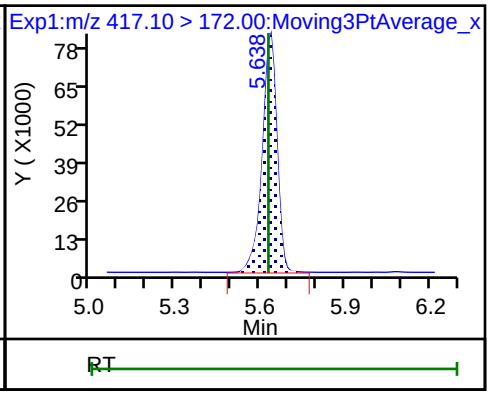
* 1 13C3-PFBA



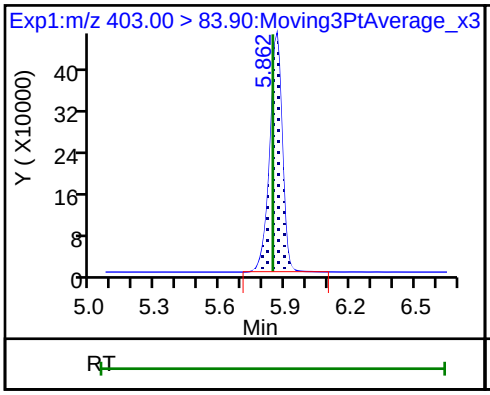
* 2 13C2 PFHxA



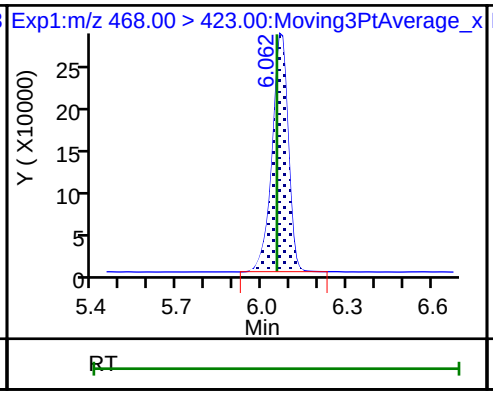
* 3 13C4 PFOA



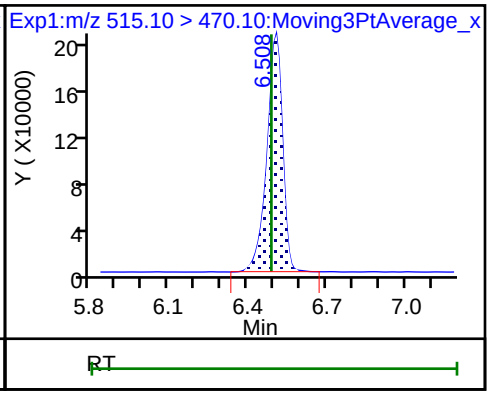
* 4 18O2 PFHxS



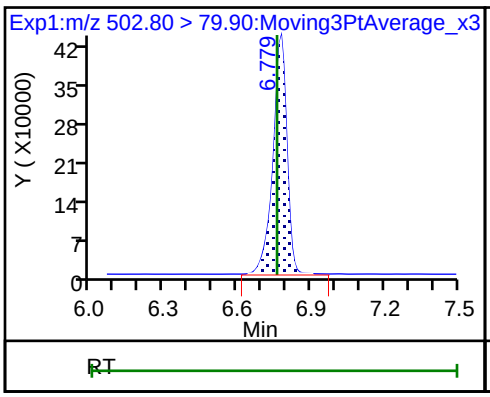
* 5 13C5 PFNA



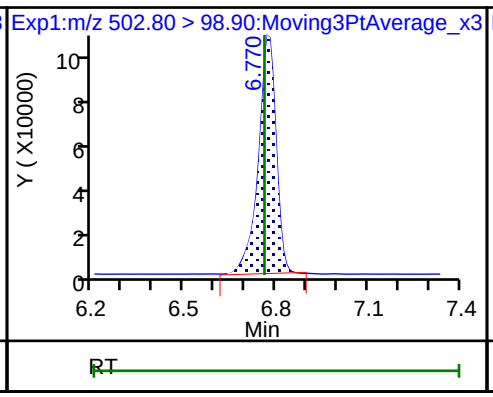
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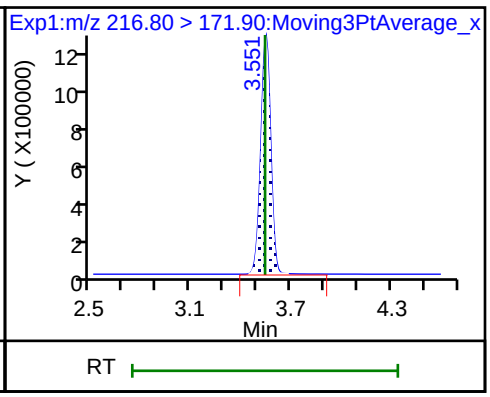
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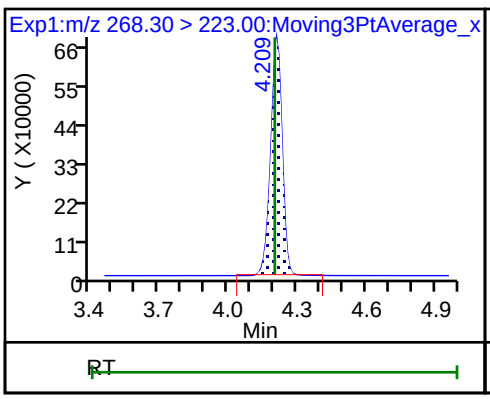
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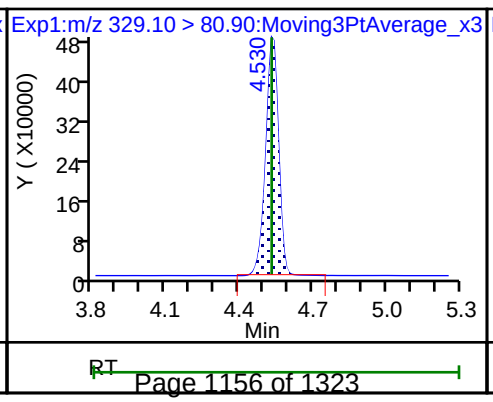
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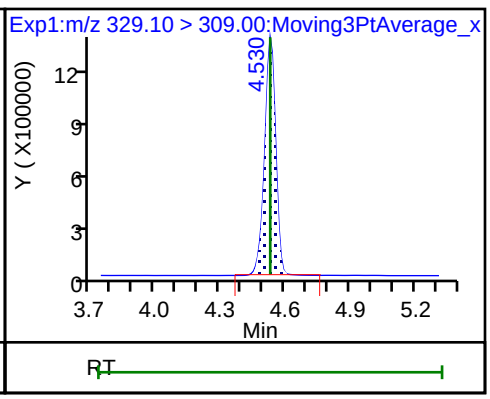
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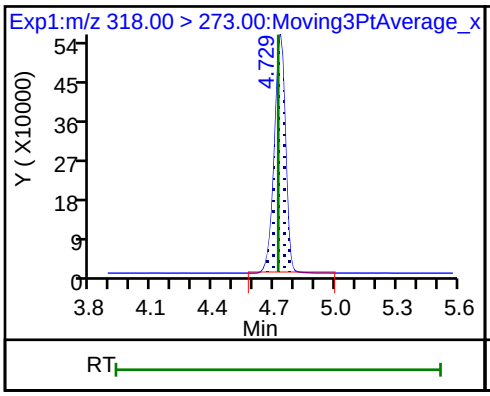
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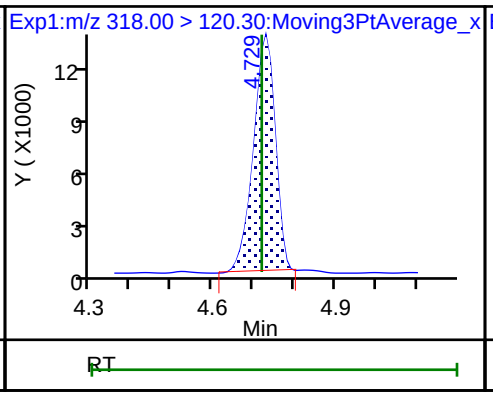
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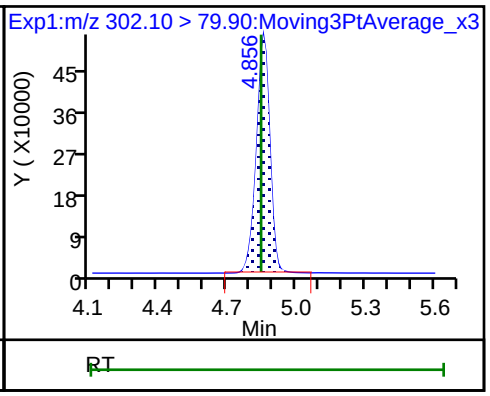
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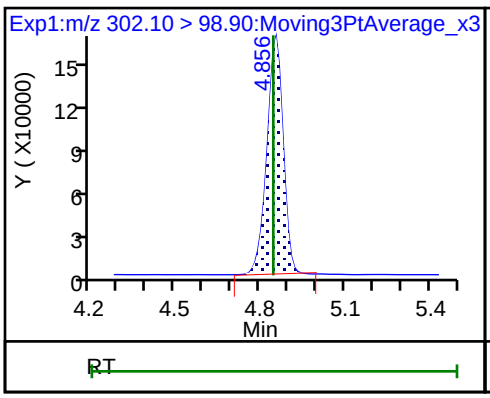
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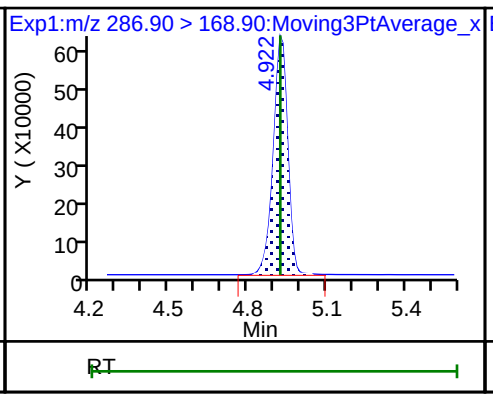
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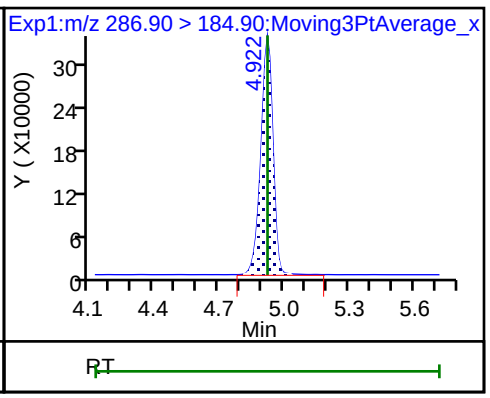
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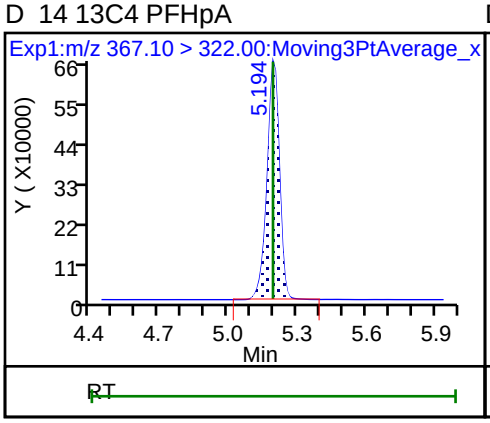
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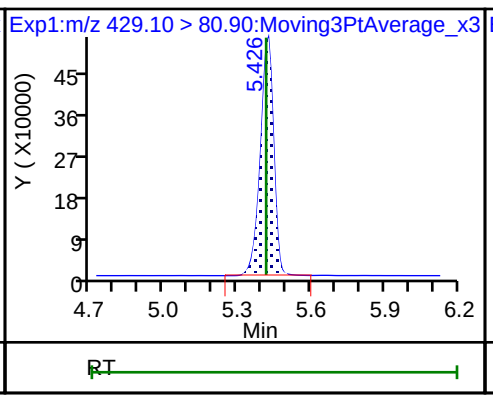
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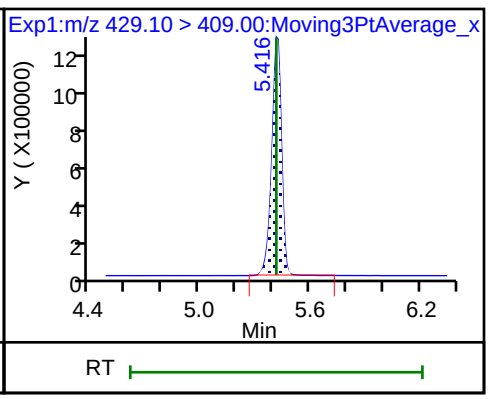
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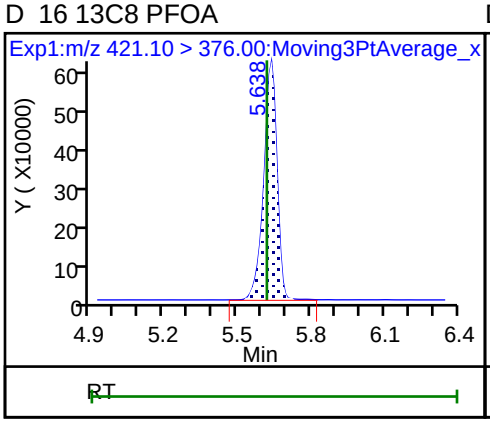
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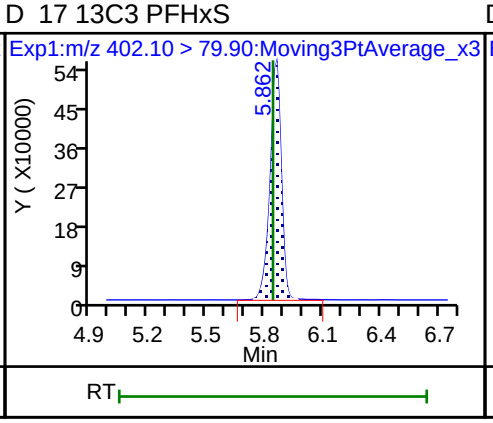
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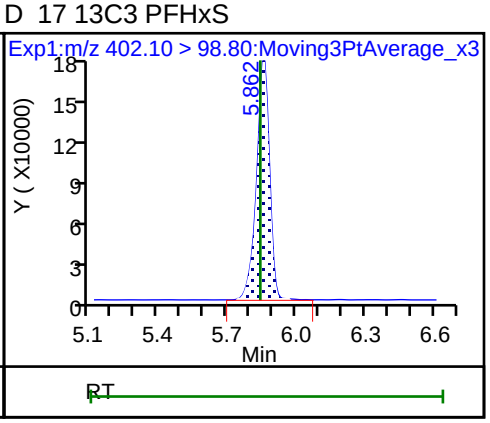
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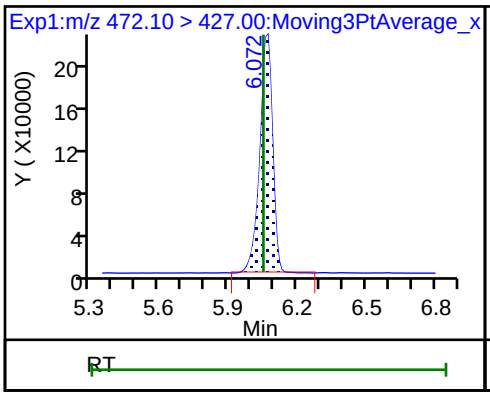
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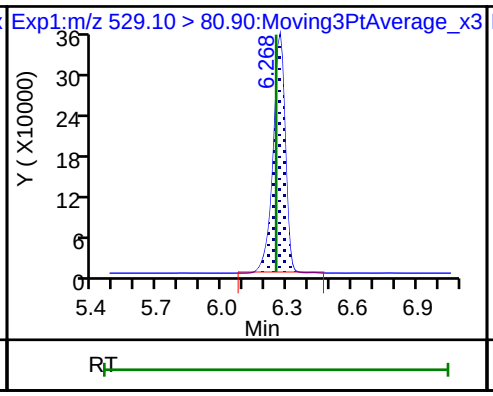
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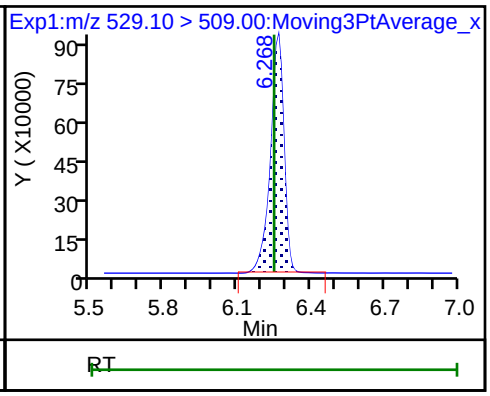
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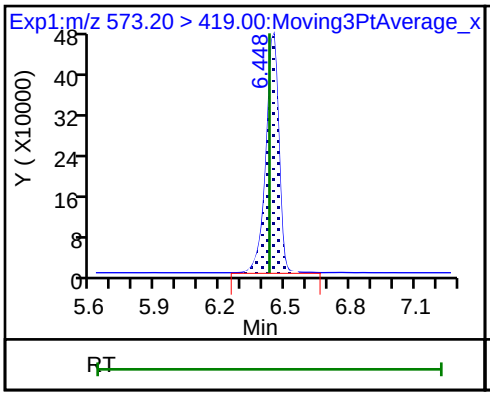
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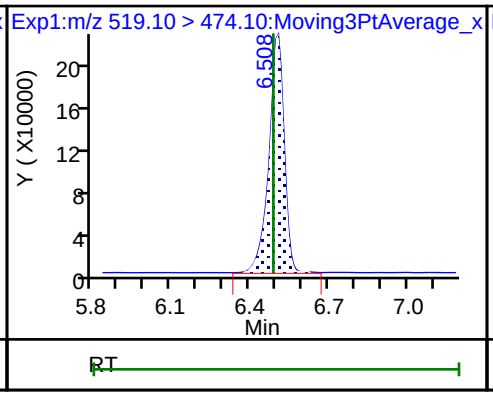
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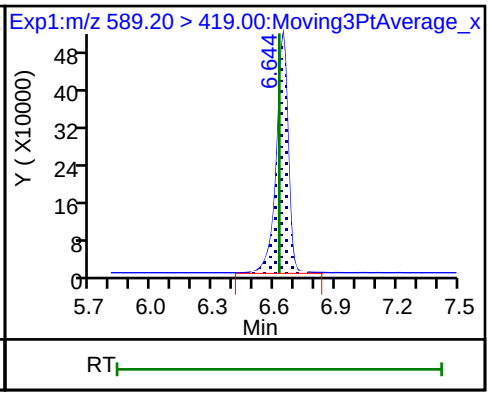
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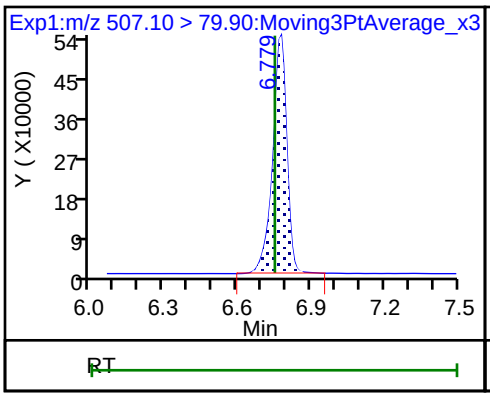
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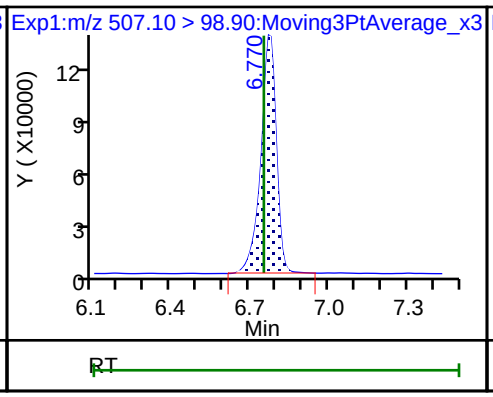
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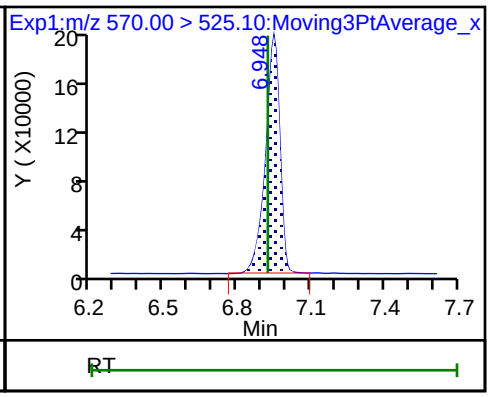
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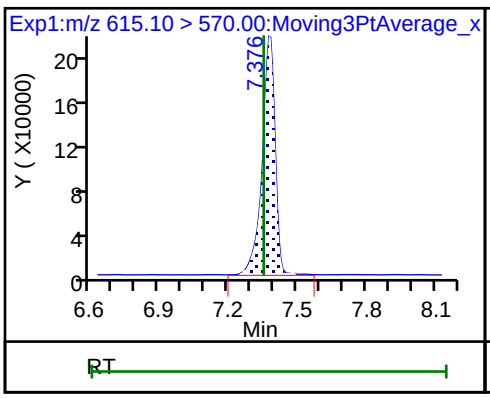
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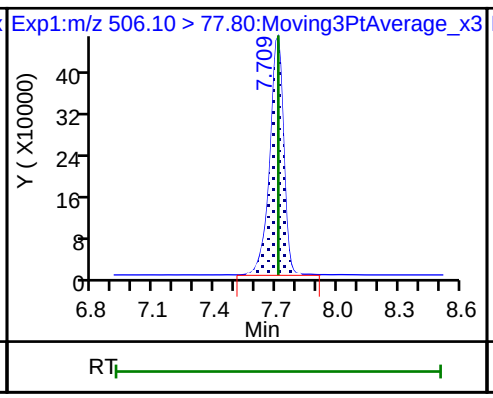
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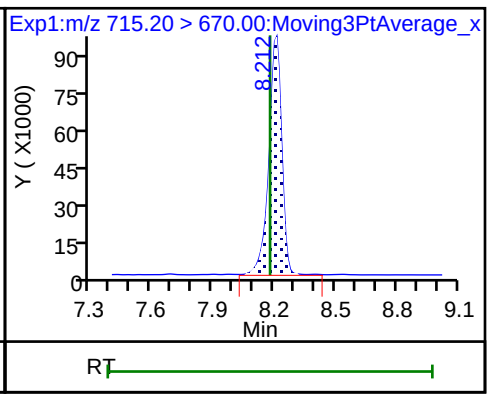
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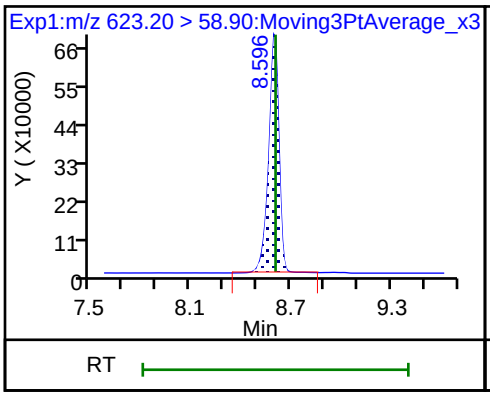
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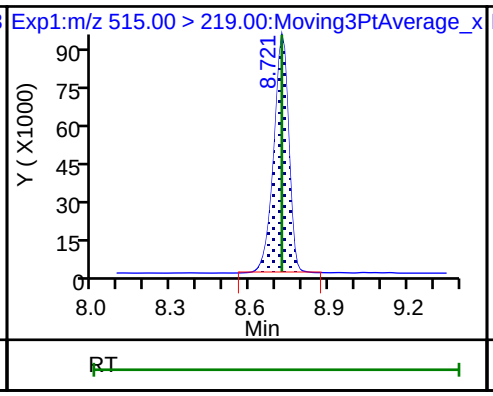
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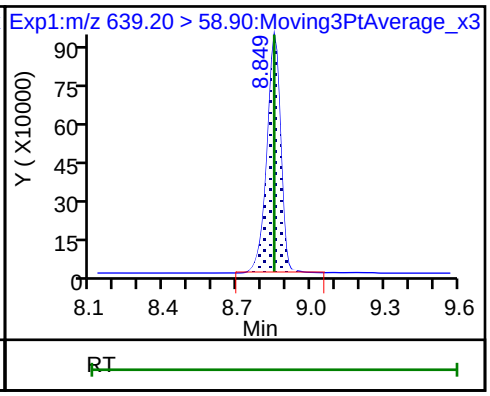
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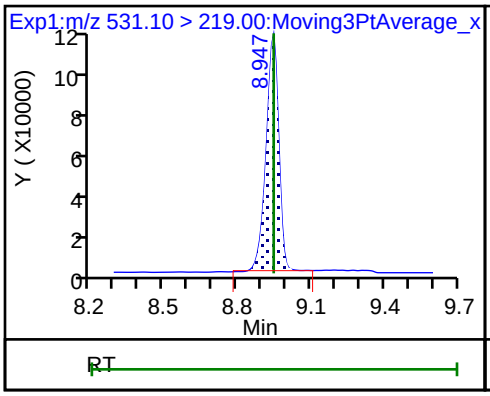
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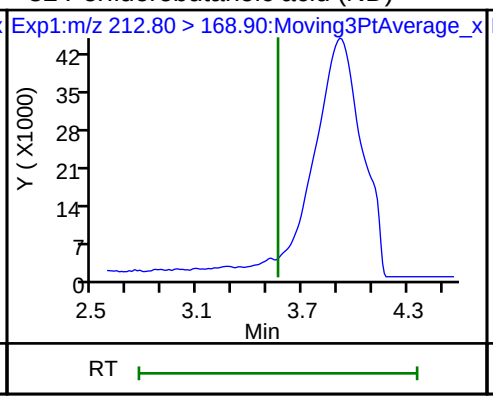
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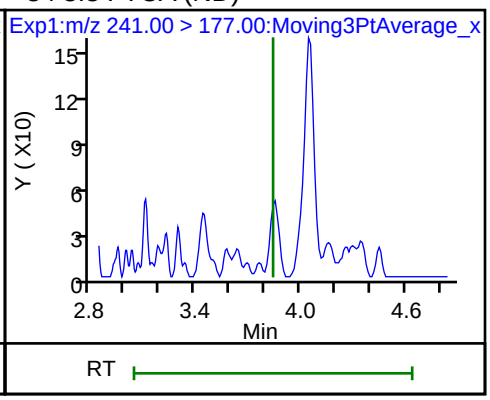
D 31 d5-NEtPFOSA



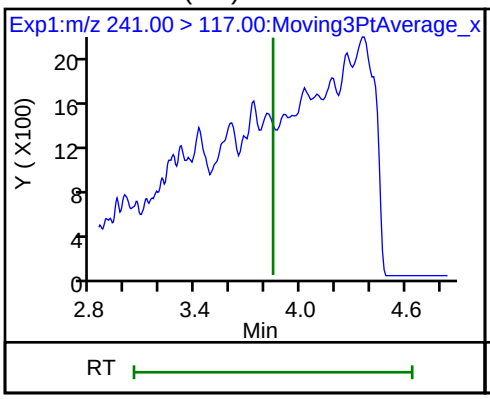
32 Perfluorobutanoic acid (ND)



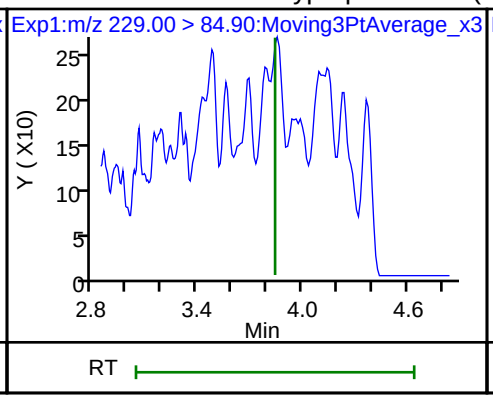
34 3:3 FTCA (ND)



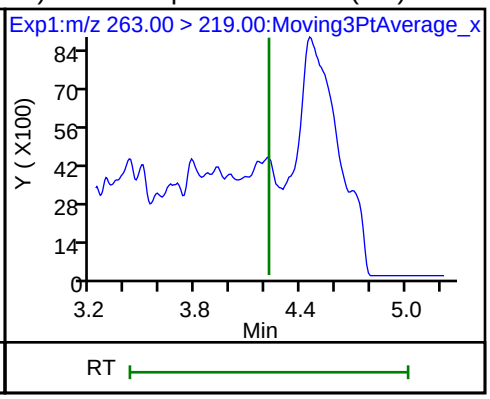
34 3:3 FTCA (ND)



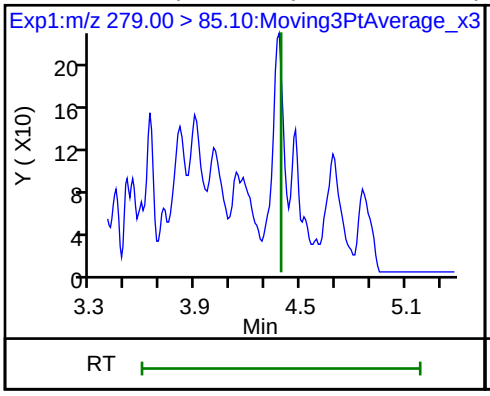
33 Perfluoro-3-methoxypropanoic aci (ND)



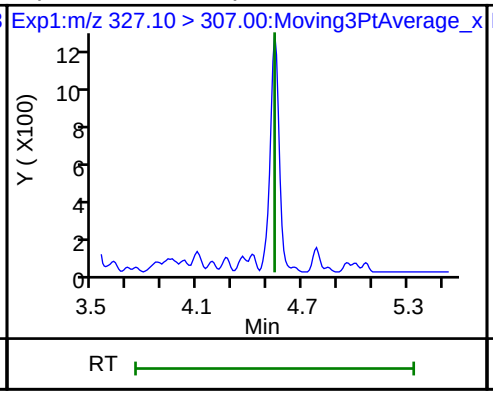
35 Perfluoropentanoic acid (ND)



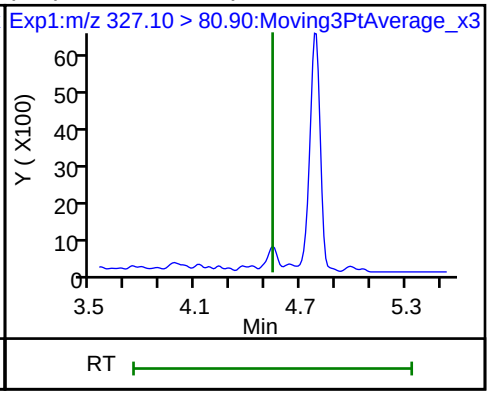
36 Perfluoro(4-methoxybutanoic acid (ND)



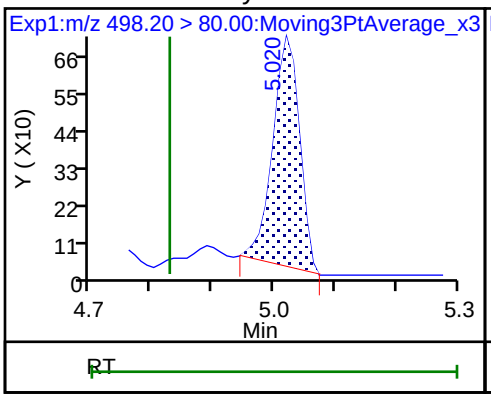
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



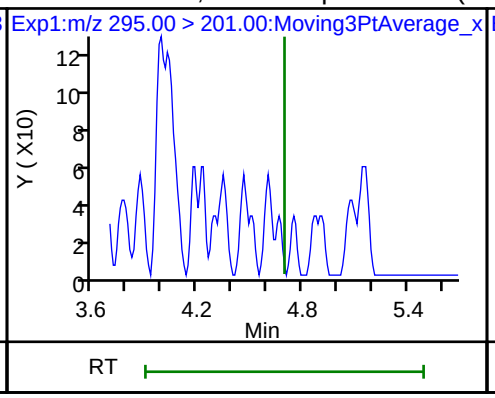
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



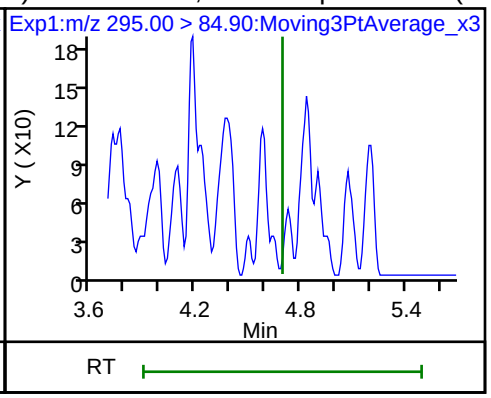
37 Tauroursodeoxycholic acid



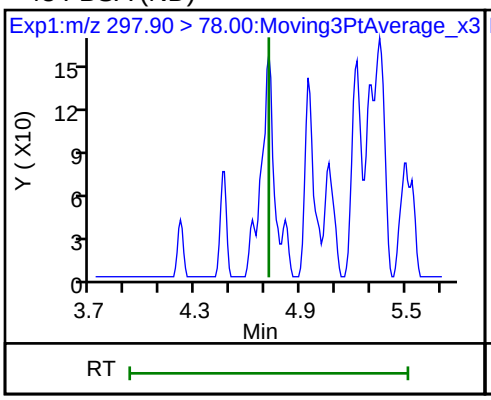
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



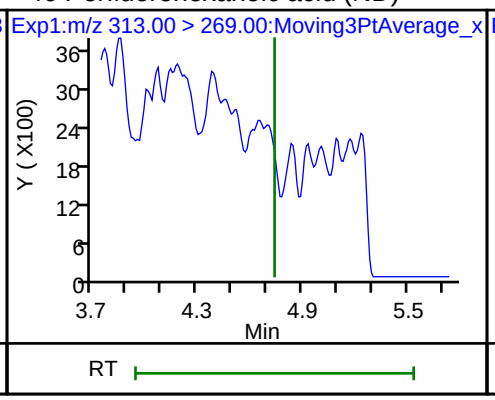
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



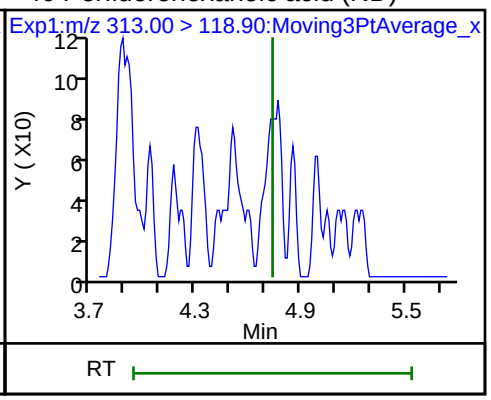
48 FBSA (ND)



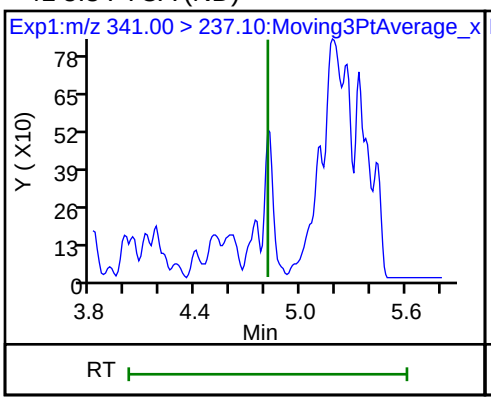
40 Perfluorohexanoic acid (ND)



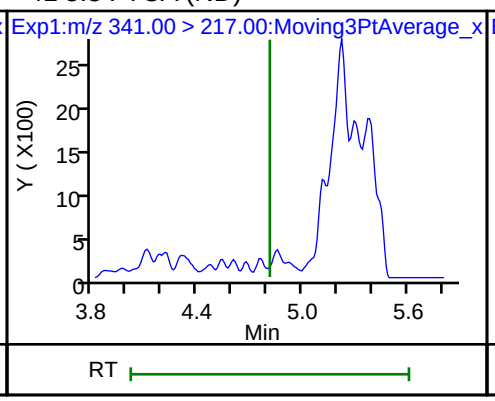
40 Perfluorohexanoic acid (ND)



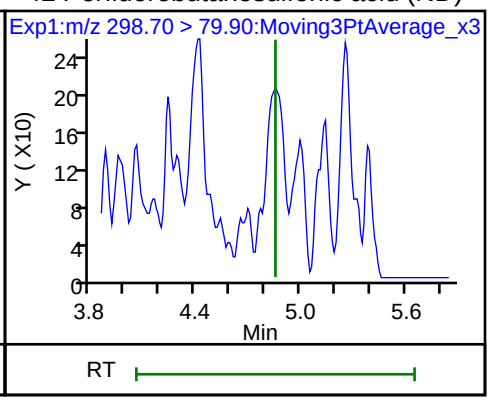
41 5:3 FTCA (ND)



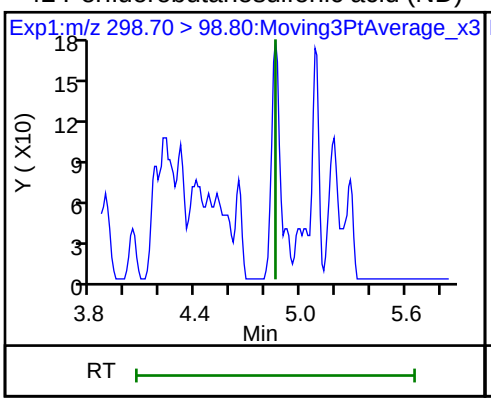
41 5:3 FTCA (ND)



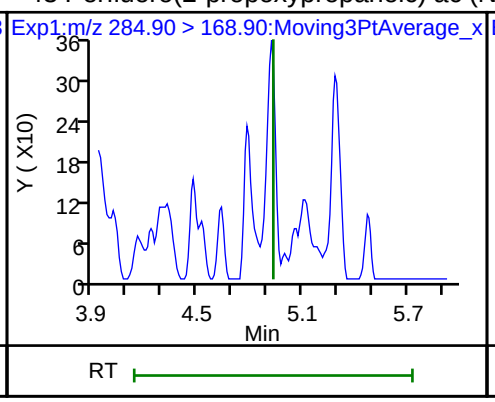
42 Perfluorobutanesulfonic acid (ND)



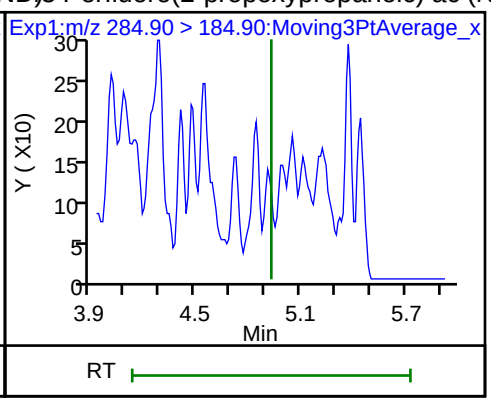
42 Perfluorobutanesulfonic acid (ND)



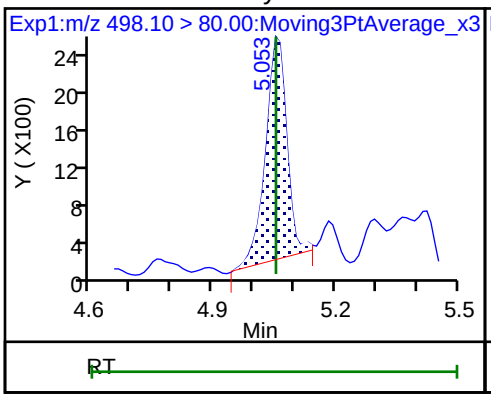
43 Perfluoro(2-propoxypropanoic) ac (ND)



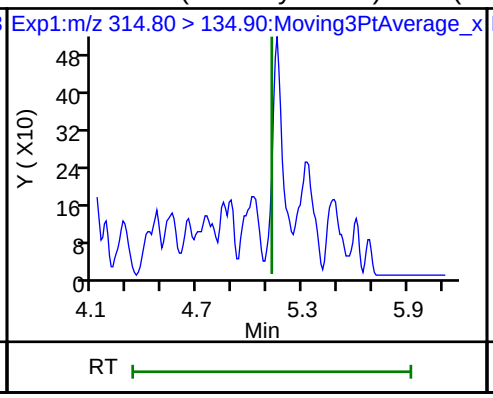
43 Perfluoro(2-propoxypropanoic) ac (ND)



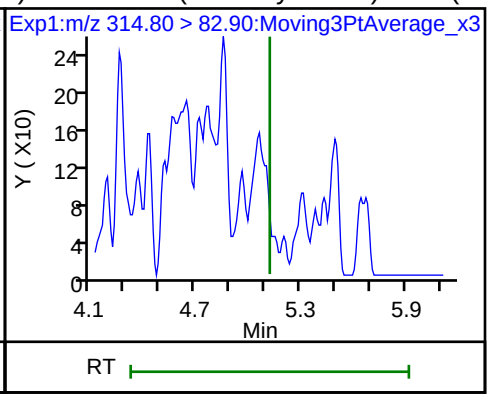
44 Taurochenodeoxycholic acid



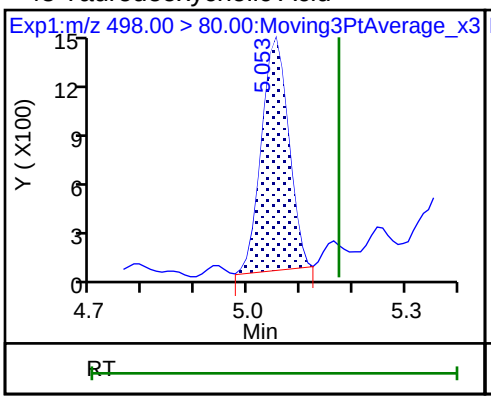
46 Perfluoro (2-ethoxyethane) sulfo (ND)



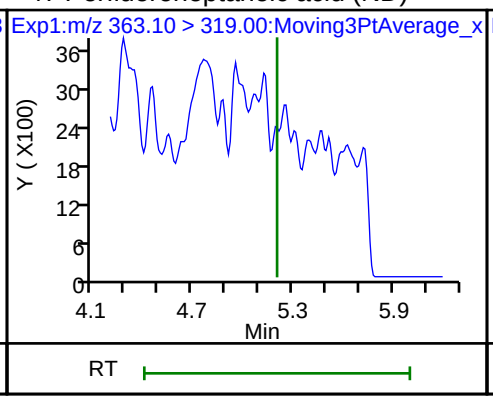
46 Perfluoro (2-ethoxyethane) sulfo (ND)



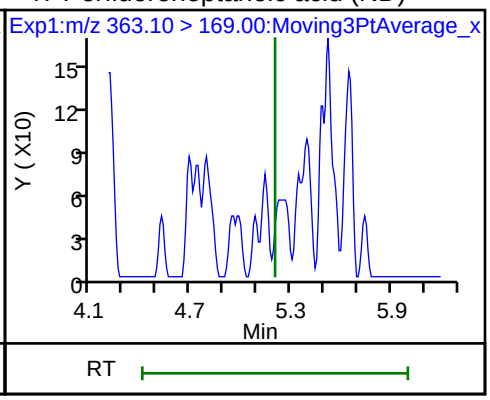
45 Taurodeoxycholic Acid



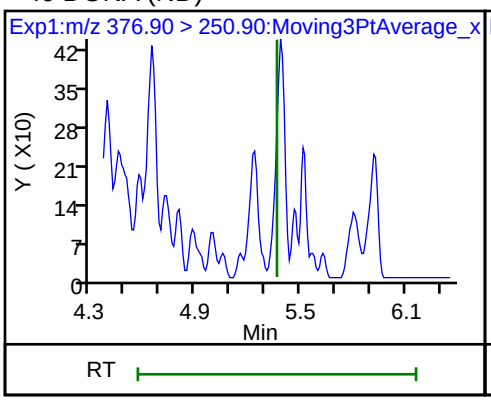
47 Perfluoroheptanoic acid (ND)



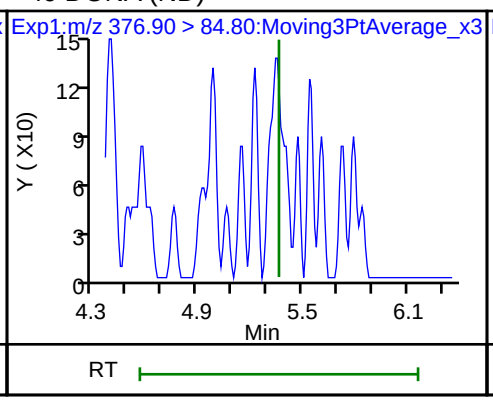
47 Perfluoroheptanoic acid (ND)



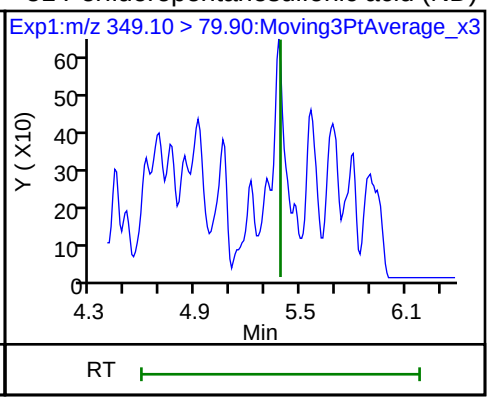
49 DONA (ND)



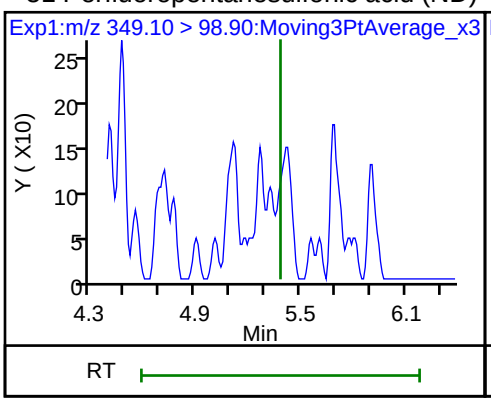
49 DONA (ND)



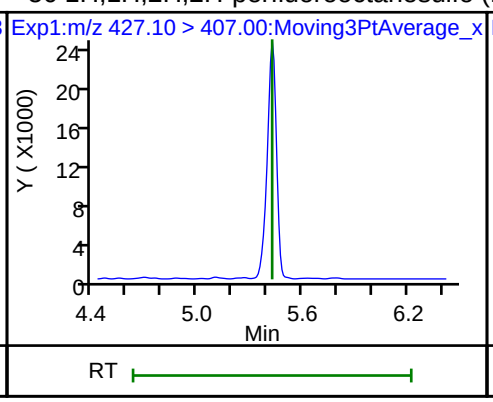
51 Perfluoropentanesulfonic acid (ND)



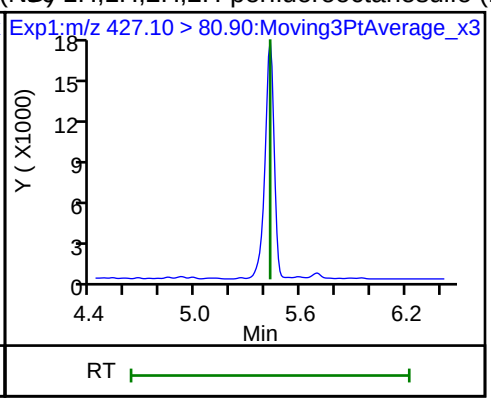
51 Perfluoropentanesulfonic acid (ND)



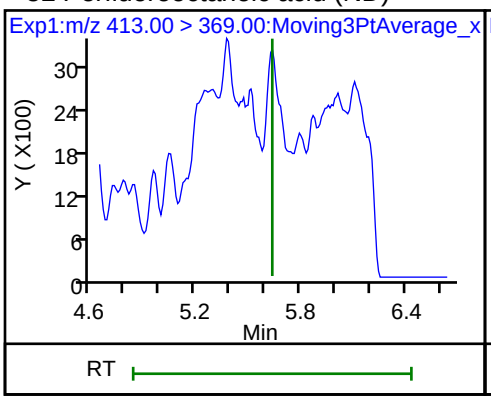
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



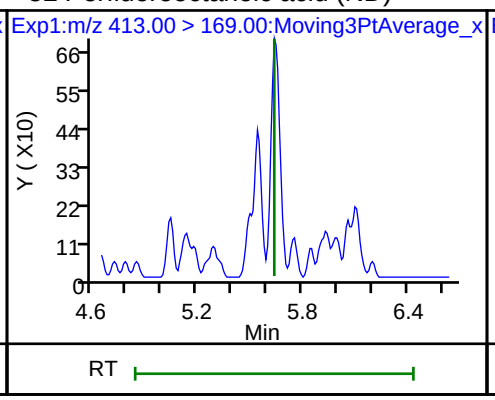
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



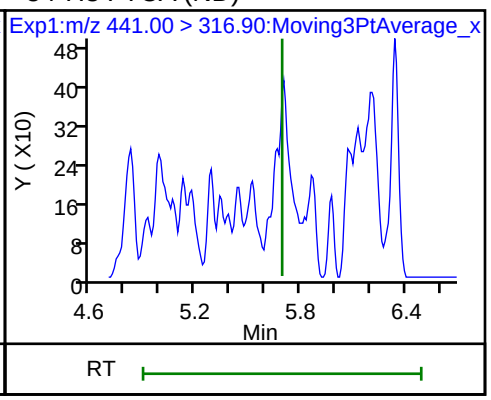
52 Perfluorooctanoic acid (ND)



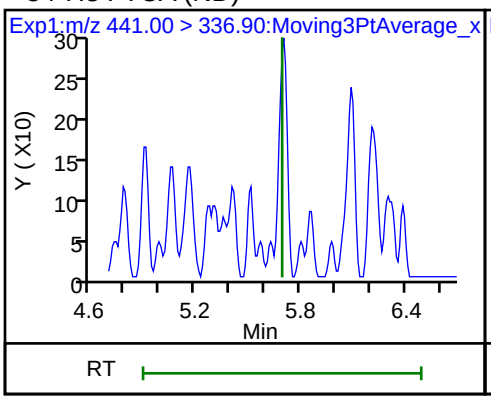
52 Perfluorooctanoic acid (ND)



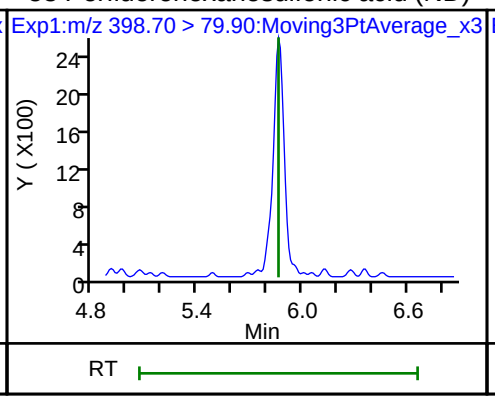
54 7:3 FTCA (ND)



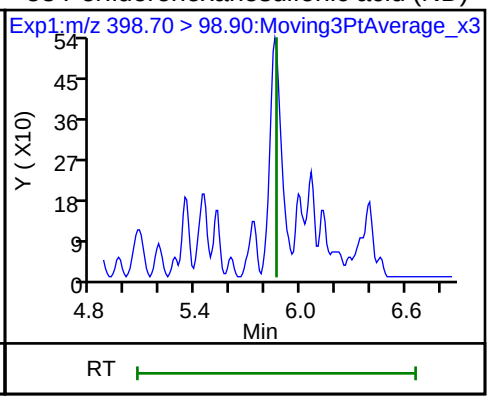
54 7:3 FTCA (ND)



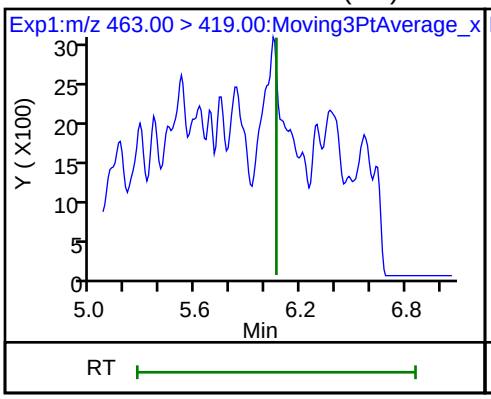
53 Perfluorohexanesulfonic acid (ND)



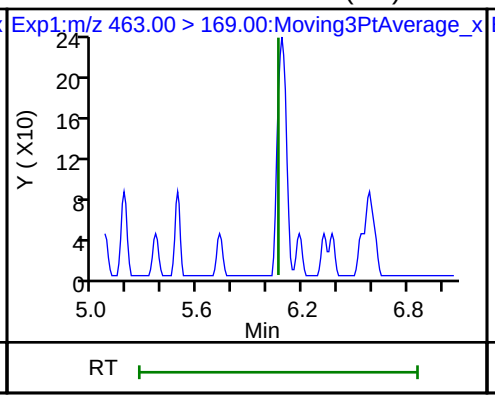
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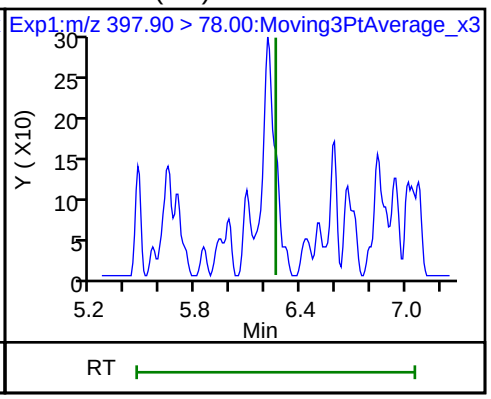
55 Perfluorononanoic acid (ND)



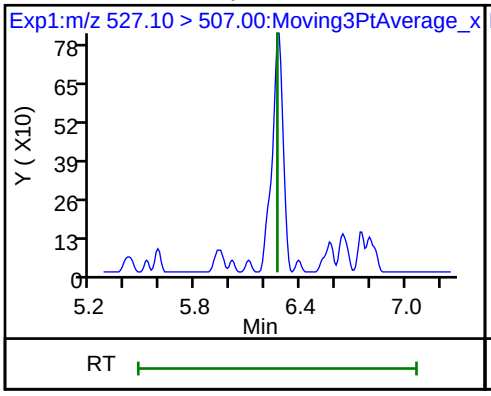
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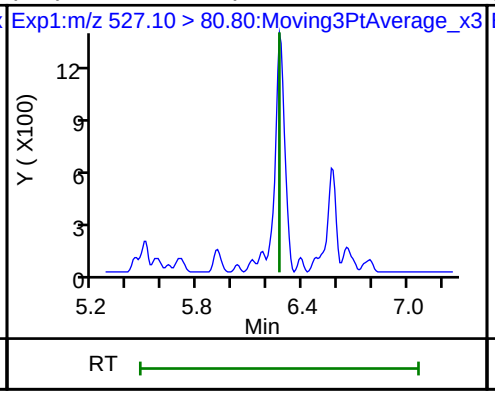
62 FHxSA (ND)



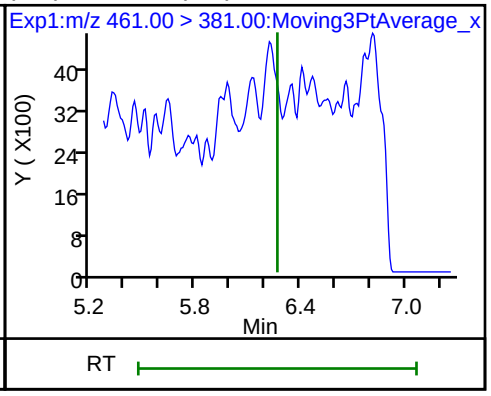
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



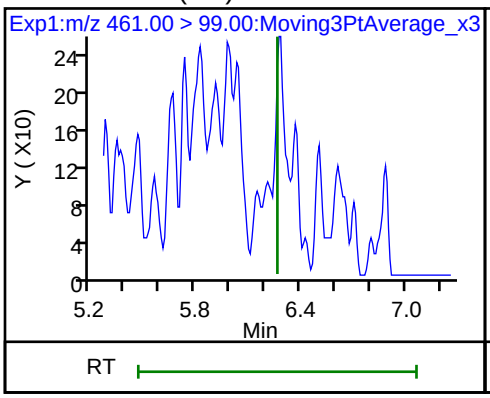
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



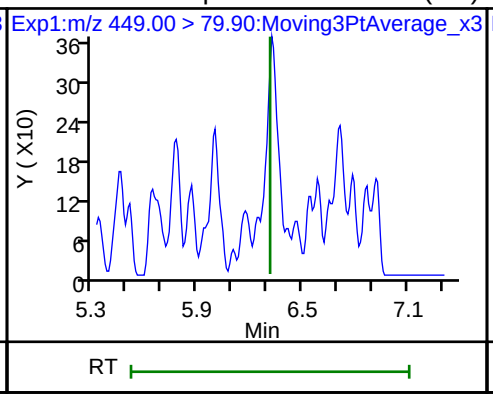
57 PFECHS (ND)



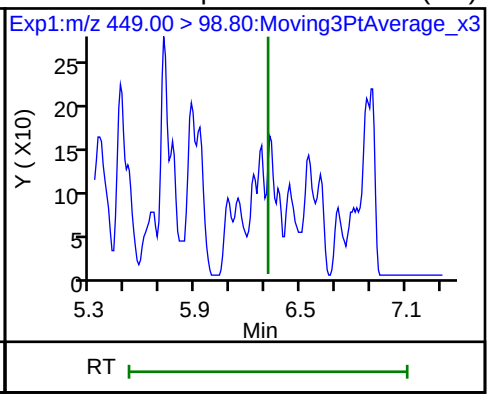
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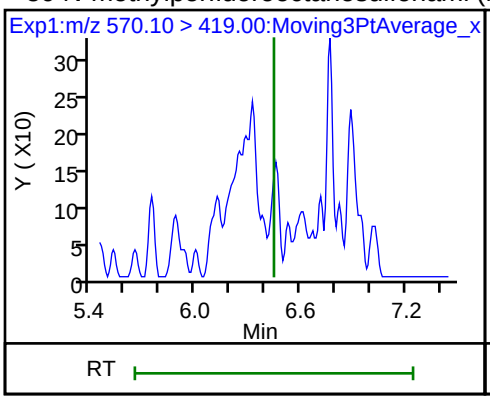
58 Perfluoroheptanesulfonic acid (ND)



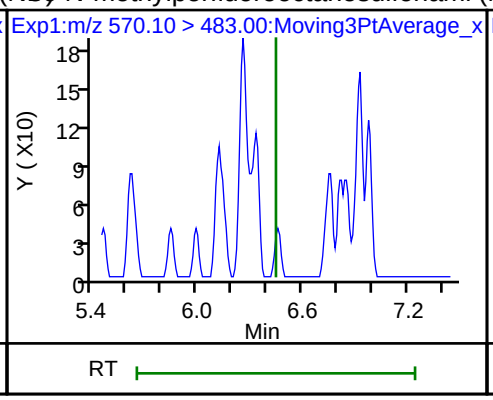
58 Perfluoroheptanesulfonic acid (ND)



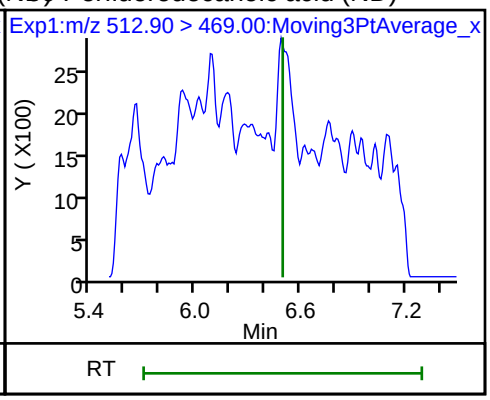
59 N-methylperfluorooctanesulfonami (ND)



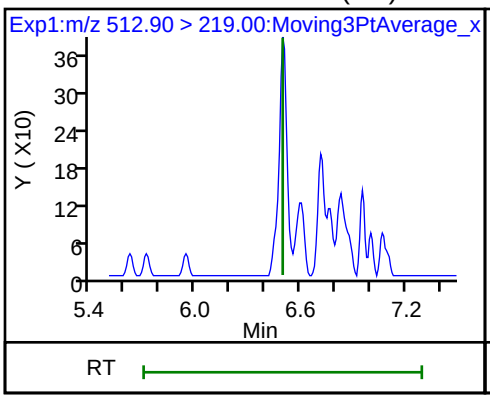
59 N-methylperfluorooctanesulfonami (ND)



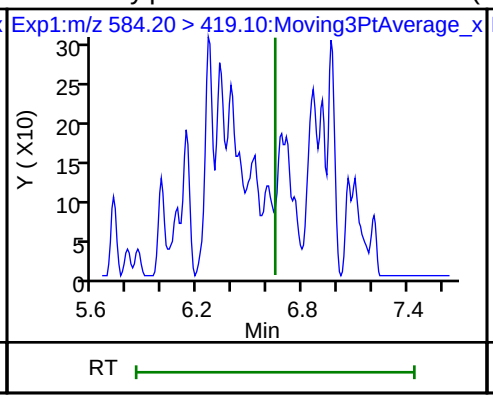
60 Perfluorodecanoic acid (ND)



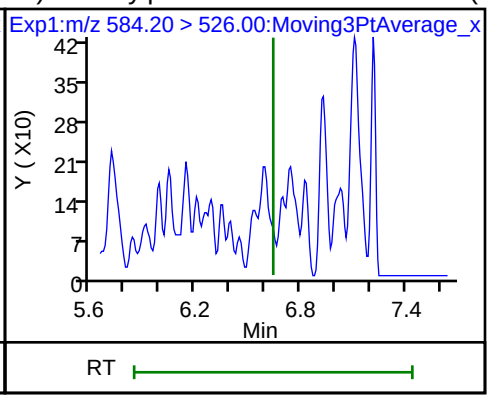
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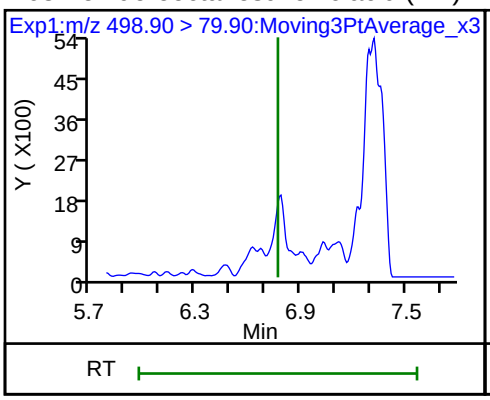
61 N-ethylperfluorooctanesulfonamid (ND)



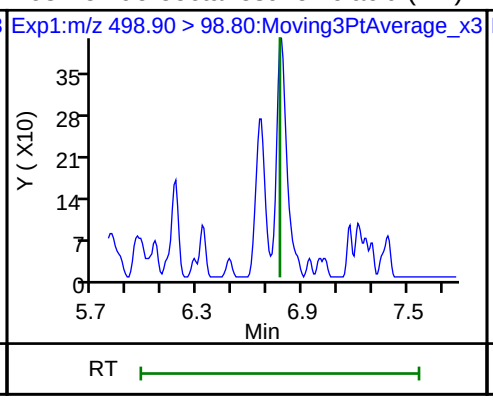
61 N-ethylperfluorooctanesulfonamid (ND)



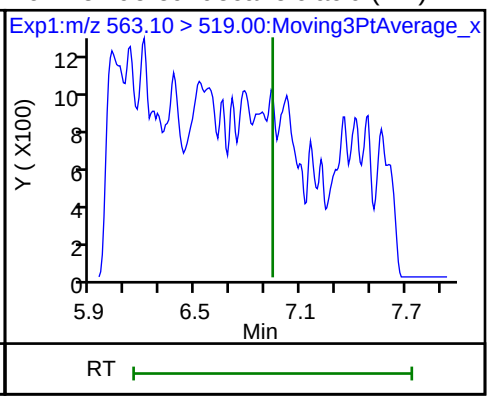
63 Perfluorooctanesulfonic acid (ND)



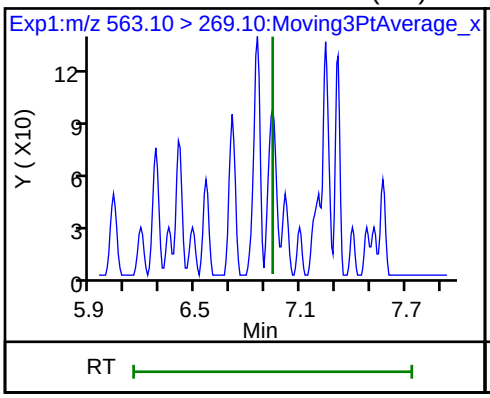
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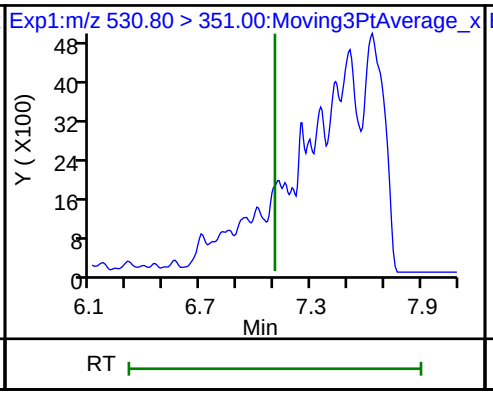
64 Perfluoroundecanoic acid (ND)



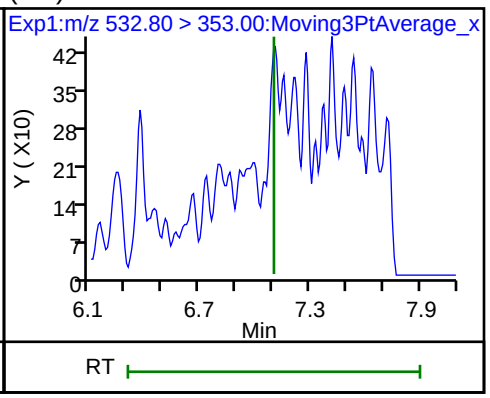
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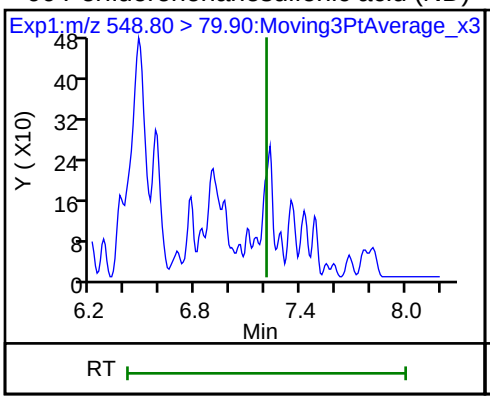
65 9-Chlorohexadecafluoro-3-oxanona (ND)



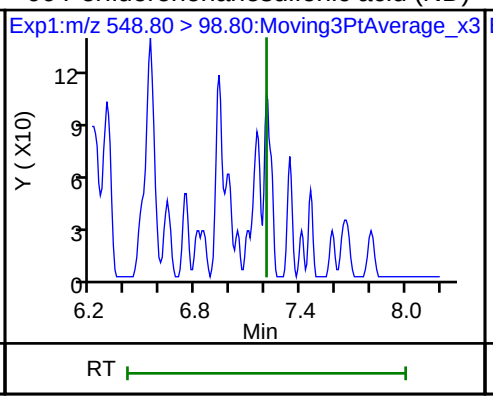
65 9-Chlorohexadecafluoro-3-oxanona (ND)



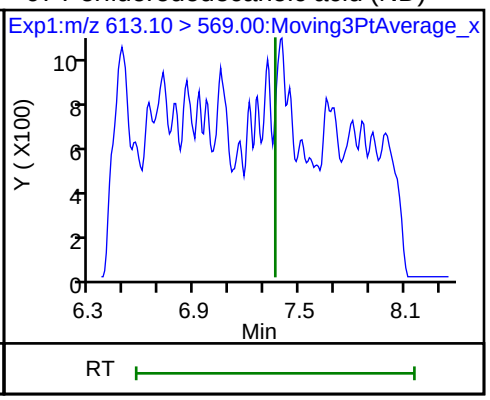
66 Perfluorononanesulfonic acid (ND)



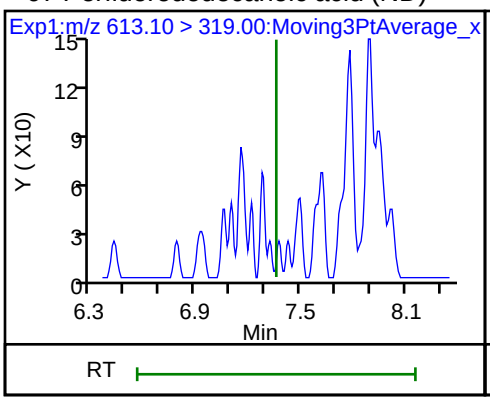
66 Perfluorononanesulfonic acid (ND)



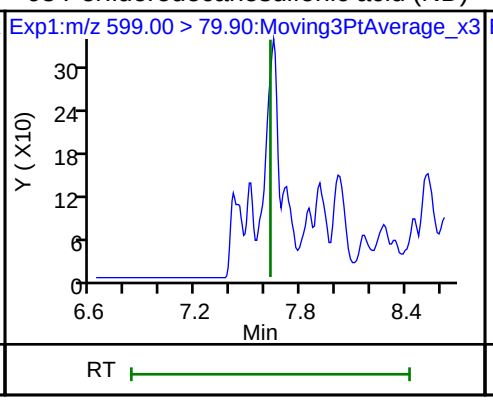
67 Perfluorododecanoic acid (ND)



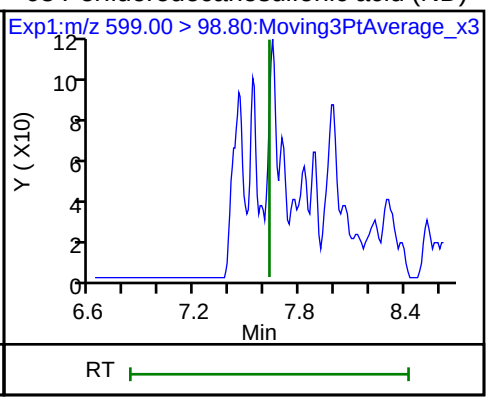
67 Perfluorododecanoic acid (ND)



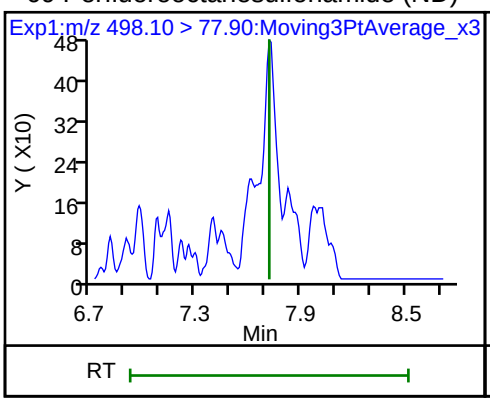
68 Perfluorodecanesulfonic acid (ND)



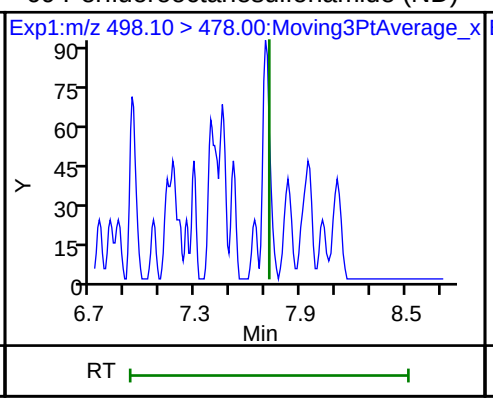
68 Perfluorodecanesulfonic acid (ND)



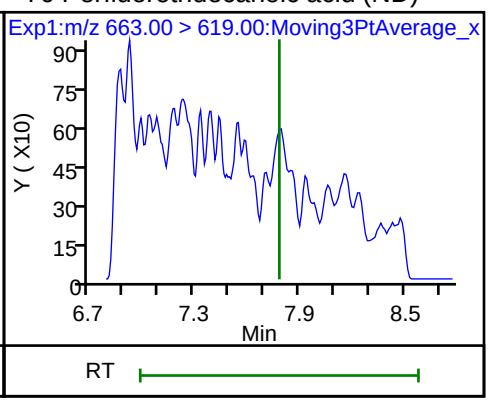
69 Perfluorooctanesulfonamide (ND)



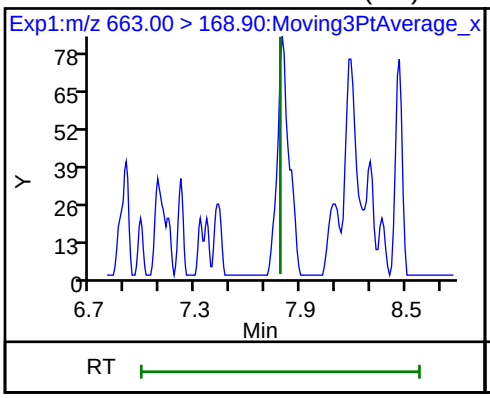
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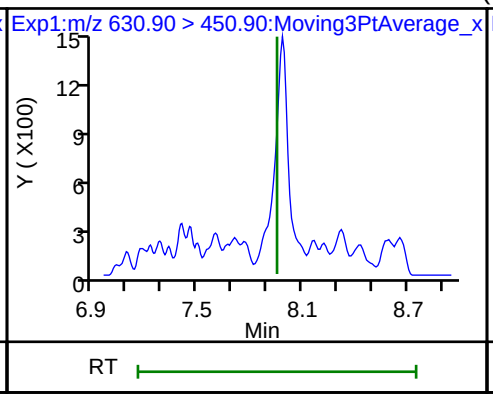
70 Perfluorotridecanoic acid (ND)



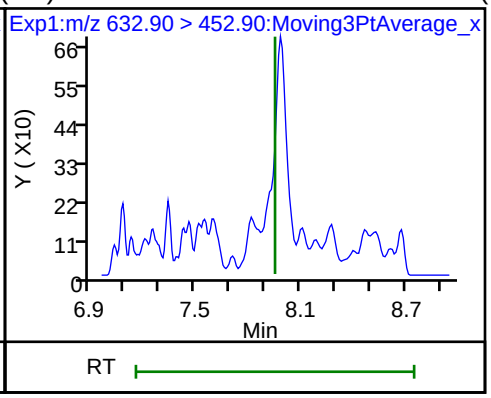
70 Perfluorotridecanoic acid (ND)



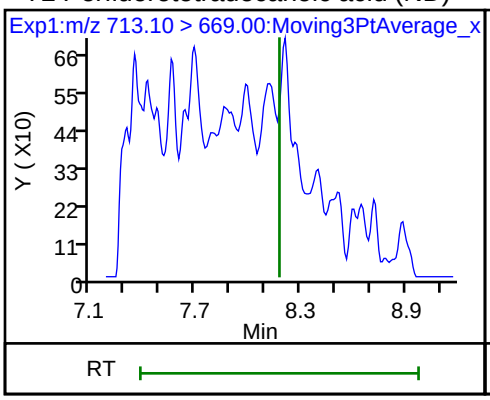
71 11-Chloroeicosafluoro-3-oxaundec (ND)



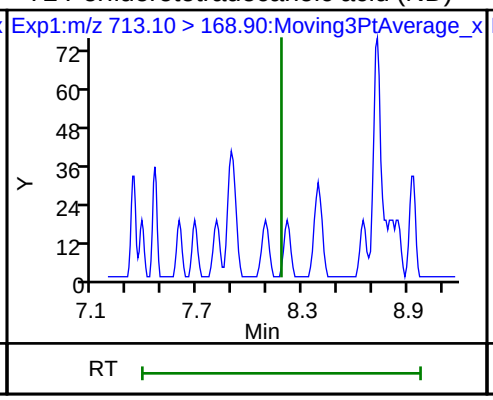
71 11-Chloroeicosafluoro-3-oxaundec (ND)



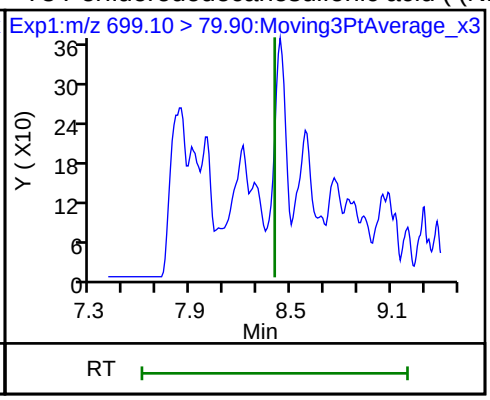
72 Perfluorotetradecanoic acid (ND)



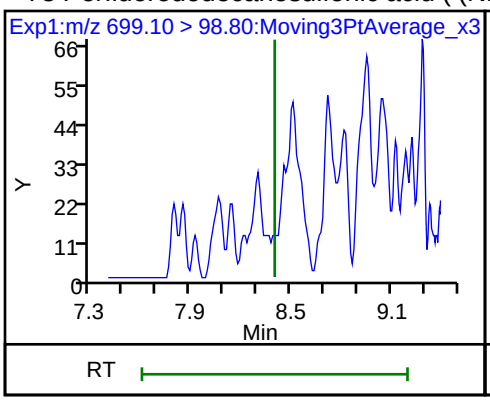
72 Perfluorotetradecanoic acid (ND)



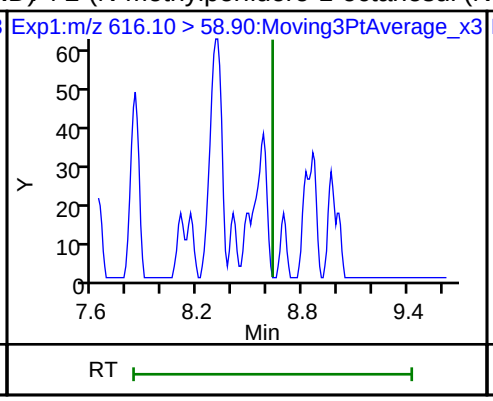
73 Perfluorododecanesulfonic acid ((ND)



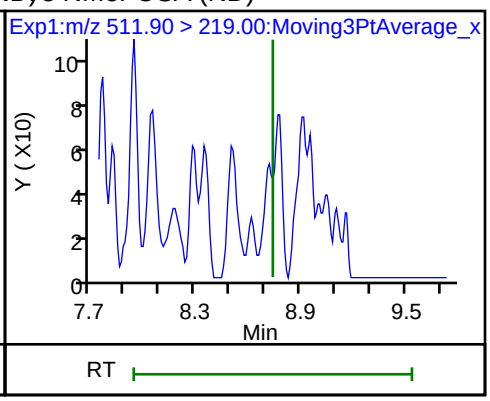
73 Perfluorododecanesulfonic acid ((ND)



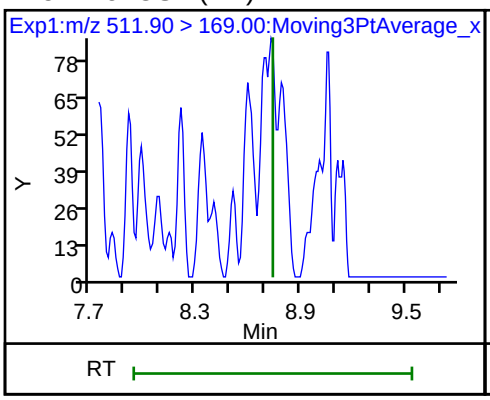
74 2-(N-methylperfluoro-1-octanesul (ND)



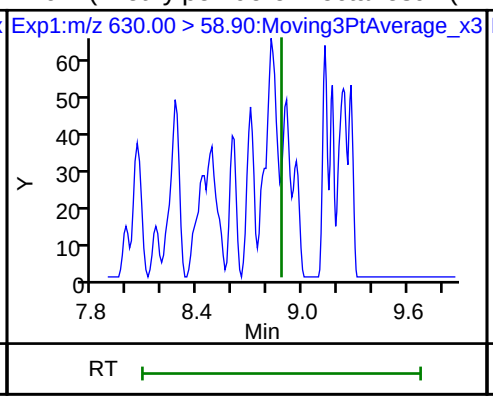
75 NMeFOSA (ND)



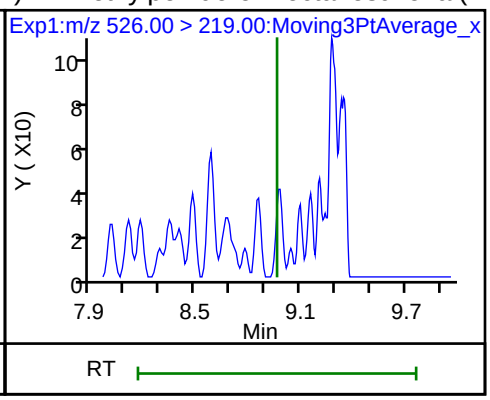
75 NMeFOSA (ND)



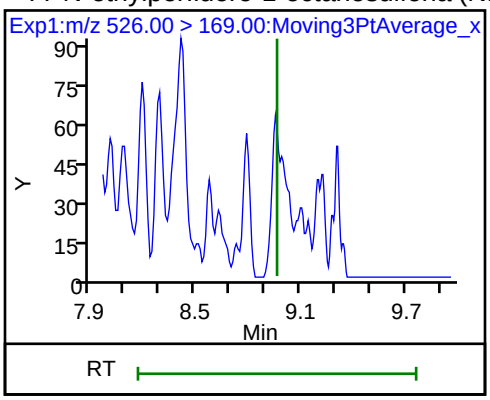
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: ICB 240-626514/8

Matrix: Water | Lab File ID: 2024_09_10ICALinj08.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/10/2024 18:48

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 626514 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.10	U	0.10	0.0019
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.10	U	0.10	0.00077
307-24-4	Perfluorohexanoic acid (PFHxA)	0.10	U	0.10	0.00040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.10	U	0.10	0.00027
335-67-1	Perfluorooctanoic acid (PFOA)	0.10	U	0.10	0.00038
375-95-1	Perfluorononanoic acid (PFNA)	0.10	U	0.10	0.00032
335-76-2	Perfluorodecanoic acid (PFDA)	0.10	U	0.10	0.00025
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.00456	J	0.10	0.00020
307-55-1	Perfluorododecanoic acid (PFDoA)	0.10	U	0.10	0.00025
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.10	U	0.10	0.00033
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.00741	J	0.10	0.00018
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.10	0.00038
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.10	U	0.10	0.00036
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.10	U	0.10	0.00042
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.10	U	0.10	0.00023
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.00582	J	0.10	0.00053
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.10	U	0.10	0.00030
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.10	U	0.10	0.00029
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.10	U	0.10	0.00094
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.10	U	0.10	0.0011
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.10	U	0.10	0.0012
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.10	U	0.10	0.00029
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.10	U	0.10	0.00057
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.10	U	0.10	0.00029
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00297	J	0.10	0.00067

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 240-626514/8

Matrix: Water Lab File ID: 2024_09_10ICALinj08.d

Analysis Method: 1633 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 09/10/2024 18:48

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 626514 Units: ng/mL

Preparation Batch No.: Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.10	U	0.10	0.00062
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.10	U	0.10	0.0023
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.10	U	0.10	0.0016
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.10	U	0.10	0.0014
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.10	U	0.10	0.00046
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.10	U	0.10	0.00027
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.10	U	0.10	0.0012
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.10	U	0.10	0.0010
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.10	U	0.10	0.0016
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.10	U	0.10	0.00054
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.10	U	0.10	0.00096
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.10	U	0.10	0.0092
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.10	U	0.10	0.017
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.10	U	0.10	0.00020
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.10	U	0.10	0.00023

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: ICB 240-626514/8

Matrix: Water | Lab File ID: 2024_09_10ICALinj08.d

Analysis Method: 1633 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 0(mL) | Date Analyzed: 09/10/2024 18:48

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 626514 | Units: ng/mL

Preparation Batch No.: | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	101		10-130
2283397-79-3	13C5 PFPeA	104		35-150
2328024-54-8	13C5 PFHxA	105		55-150
2328024-55-9	13C4 PFHpA	105		55-150
1350614-84-4	13C8 PFOA	90.3		60-140
2283397-80-6	13C9 PFNA	99.8		55-140
2328024-56-0	13C6 PFDA	102		50-140
STL02580	13C7 PFUnA	96.6		30-140
STL02116	13C2 PFTeDA	98.4		10-130
2708218-83-9	13C3 PFBS	100		55-150
2708218-85-1	13C3 PFHxS	102		55-150
2265893-05-6	13C8 PFOS	99.6		45-140
STL01056	13C8 FOSA	102		30-130
1400690-70-1	d3-NMeFOSAA	103		45-200
1265205-97-7	d5-NEtFOSAA	106		10-200
STL02395	M2-4:2 FTS	110		60-200
STL02279	M2-6:2 FTS	108		60-200
STL02280	M2-8:2 FTS	106		50-200
STL02255	13C3 HFPO-DA	108		25-160
STL02277	d7-N-MeFOSE-M	104		10-150
STL02278	d9-N-EtFOSE-M	102		10-150
STL02704	d5-NEtPFOSA	99.6		10-130
STL02705	d3-NMePFOSA	103		15-130
STL02703	13C2-PFDoDA	98.4		10-150

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 10-Sep-2024 18:48:00 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICB
Misc. Info.: Plate: 2 Rack: 1 240-0146069-008
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 11-Sep-2024 10:02:37 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1627

First Level Reviewer: ZB6G Date: 11-Sep-2024 09:50:19
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.576	-0.003		2413804	1.25			886	
* 2 13C2 PFHxA										
315.10 > 270.00	4.754	4.750	0.004		1366609	0.6250			7330	
* 3 13C4 PFOA										
417.10 > 172.00	5.652	5.648	0.004		281665	0.6250			1341	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.872	0.006		1853110	0.5913			9147	
* 5 13C5 PFNA										
468.00 > 423.00	6.086	6.081	0.005		1075532	0.3125			2093	
* 6 13C2 PFDA										
515.10 > 470.10	6.521	6.517	0.004		809189	0.3125			2435	
* 7 13C4 PFOS										
502.80 > 79.90	6.791	6.788	0.003		1629593	0.5975	Target=4.00		3520	
502.80 > 98.90	6.791	6.788	0.003		400992		4.06(2.00-6.00)		1988	
D 8 13C4 PFBA										
216.80 > 171.90	3.573	3.568	0.005	1.000	5516652	2.52		101	19127	
D 9 13C5 PFPeA										
268.30 > 223.00	4.225	4.229	-0.004	0.889	2229911	1.30		104	8202	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.555	4.550	0.005	0.775	1341647	1.28	Target=0.29	110	5618	
329.10 > 309.00	4.555	4.550	0.005	0.775	3527640		0.38(0.14-0.43)	110	1009	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.750	-0.006	0.998	2023375	0.6586	Target=40.21	105	5771	
318.00 > 120.30	4.744	4.750	-0.006	0.998	55615		36.38(20.11-60.32)	105	783	
D 12 13C3 PFBS										
302.10 > 79.90	4.882	4.878	0.004	0.831	1951531	0.5824	Target=3.28	100	4963	
302.10 > 98.90	4.871	4.878	-0.007	0.829	593876		3.29(1.64-4.92)	100	2098	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.947	4.943	0.004	1.040	2378043	2.69	Target=1.86	108	6991	
286.90 > 184.90	4.947	4.943	0.004	1.040	1198212		1.98(0.93-2.78)	108	1767	
D 14 13C4 PFHpA										
367.10 > 322.00	5.218	5.215	0.003	1.098	2096947	0.6535		105	7264	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.440	5.436	0.004	0.925	1534322	1.28	Target=0.38	108	3070	
429.10 > 409.00	5.440	5.436	0.004	0.925	3378108		0.45(0.19-0.57)	108	6947	
D 16 13C8 PFOA										
421.10 > 376.00	5.652	5.648	0.004	1.000	2005774	0.5642		90.3	5971	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.872	0.006	1.000	1985835	0.6036	Target=3.25	102	5287	
402.10 > 98.80	5.878	5.872	0.006	1.000	577114		3.44(1.63-4.88)	102	1975	
D 18 13C9 PFNA										
472.10 > 427.00	6.086	6.081	0.005	1.000	841438	0.3117		99.8	2400	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.280	6.277	0.003	1.069	1043716	1.27	Target=0.33	106	4309	
529.10 > 509.00	6.280	6.277	0.003	1.069	2667230		0.39(0.16-0.49)	106	5823	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.462	6.458	0.004	0.952	1630297	1.29		103	5299	
D 21 13C6 PFDA										
519.10 > 474.10	6.521	6.517	0.004	1.000	792826	0.3181		102	2614	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.657	6.653	0.004	0.980	1652438	1.33		106	2808	
D 23 13C8 PFOS										
507.10 > 79.90	6.791	6.788	0.003	1.000	1672288	0.5951	Target=4.26	99.6	3080	
507.10 > 98.90	6.791	6.788	0.003	1.000	437239		3.82(2.13-6.39)	99.6	1315	
D 24 13C7 PFUnA										
570.00 > 525.10	6.959	6.957	0.002	1.067	740549	0.3020		96.6	1495	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.388	7.384	0.004	1.133	711758	0.3075		98.4	1764	
D 26 13C8 FOSA										
506.10 > 77.80	7.726	7.732	-0.006	1.138	1917835	0.6359		102	6134	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.205	8.202	0.003	1.258	406907	0.3075		98.4	1094	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.611	8.608	0.003	1.268	2916910	6.53		104	1060	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.724	8.731	-0.007	1.285	383343	0.6446		103	1727	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.860	-0.007	1.304	3483254	6.35		102	1499	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.950	8.948	0.002	1.318	373294	0.6227		99.6	305	
44 Taurochenodeoxycholic acid										7
498.10 > 80.00	5.067	5.067	0.0	0.746	2144	0.000766			5.4	7
LOD = 0.001000										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Taurodeoxycholic Acid										7
498.00 > 80.00	5.067	5.187	-0.120	0.746	1455	0.000520			2.6	7
LOD = 0.001000										
59 N-methylperfluorooctanesulfonami										R7M
570.10 > 419.00	6.482	6.469	0.013	1.003	4275	0.002975	Target=1.69		16.4	R7M
570.10 > 483.00	6.482	6.469	0.013	1.003	1343		3.18(0.85-2.54)		6.5	M
LOD = 0.0125										
63 Perfluorooctanesulfonic acid										R7M
498.90 > 79.90	6.791	6.788	0.003	1.000	20497	0.005821	Target=4.80		10.3	R7M
498.90 > 98.80	6.800	6.788	0.012	1.001	2627		7.80(2.40-7.20)		13.3	M
LOD = 0.0116										
64 Perfluoroundecanoic acid										7Ma
563.10 > 519.00	6.967	6.965	0.002	1.001	9747	0.004561	Target=6.10		2.5	7a
563.10 > 269.10	6.967	6.965	0.002	1.001	2089		4.67(3.05-9.15)		15.7	M
LOD = 0.0125										
72 Perfluorotetradecanoic acid										7Ma
713.10 > 669.00	8.217	8.213	0.004	1.001	12086	0.007405	Target=6.82		5.9	7a
713.10 > 168.90	8.205	8.213	-0.008	1.000	1403		8.61(3.41-10.24)		22.2	M
LOD = 0.0125										

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- 7 - Failed Limit of Detection

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

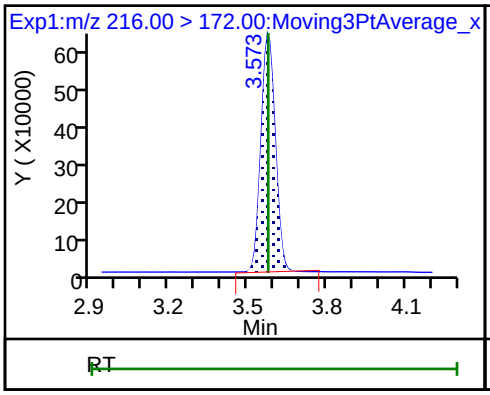
CCB_00029 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2024 10:03:39 Chrom Revision: 2.3 26-Aug-2024 17:14:48

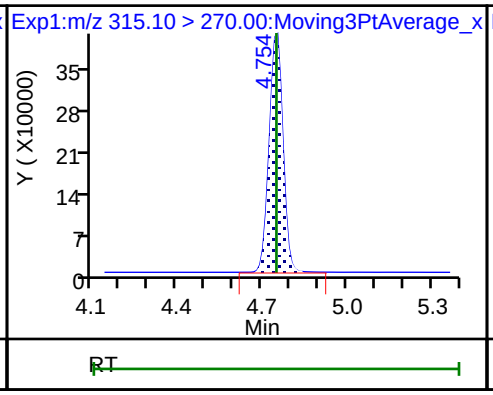
Eurofins Cleveland

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Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

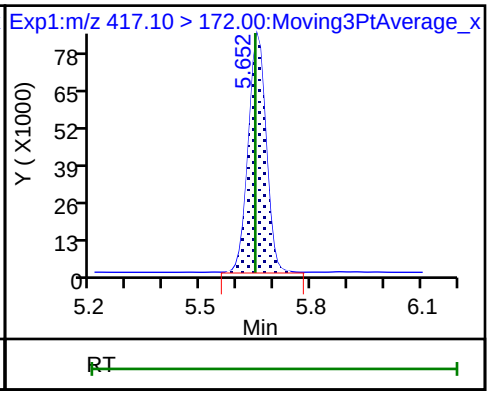
* 1 13C3-PFBA



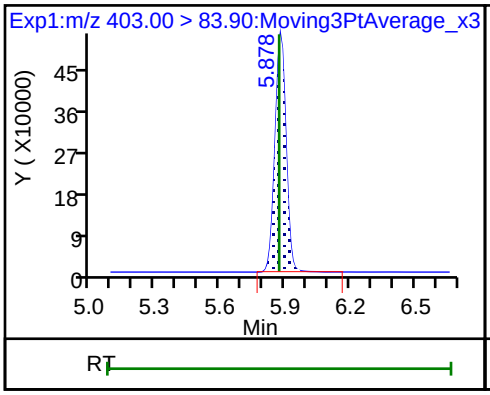
* 2 13C2 PFHxA



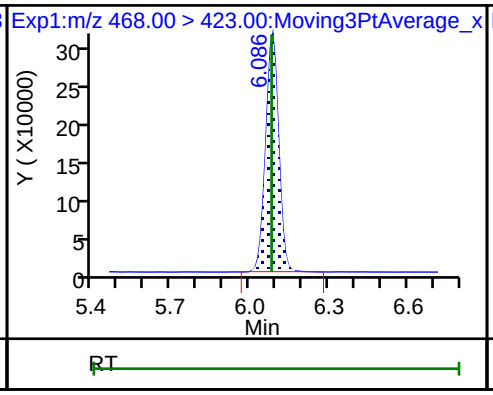
* 3 13C4 PFOA



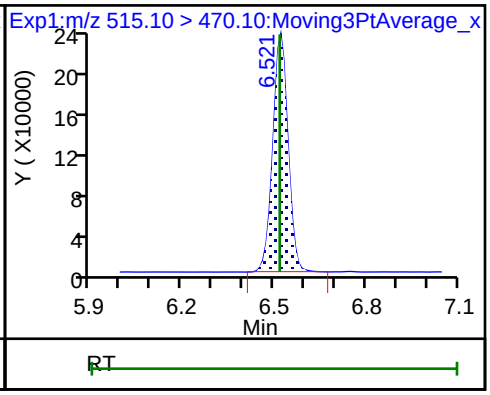
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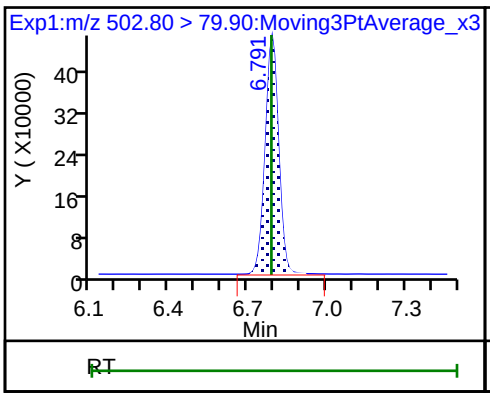
* 5 13C5 PFNA



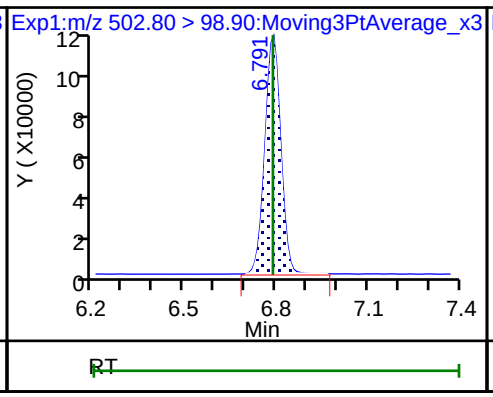
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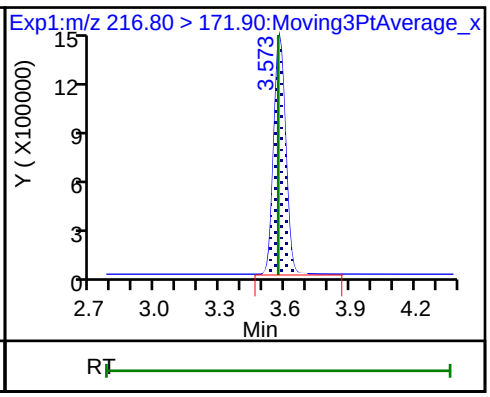
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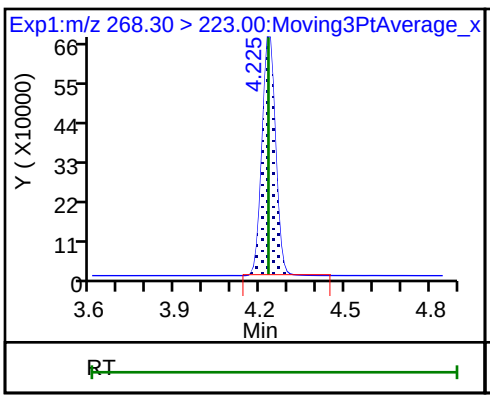
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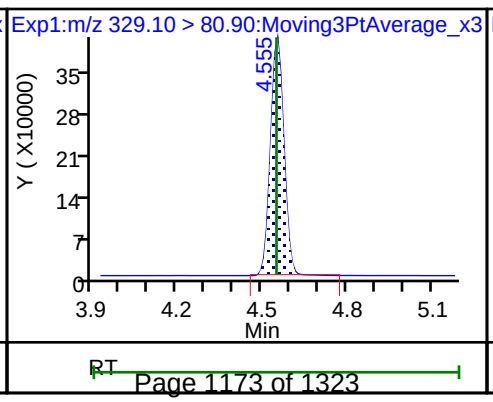
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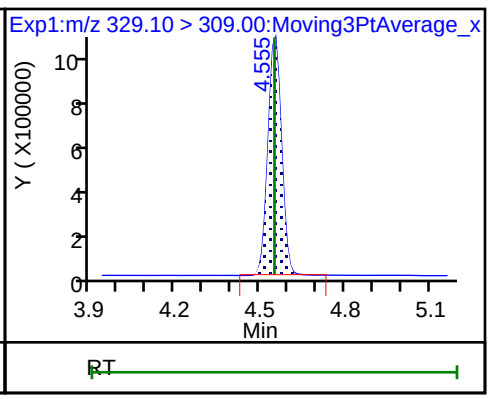
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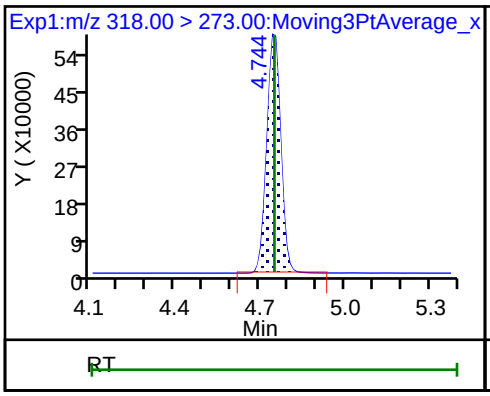
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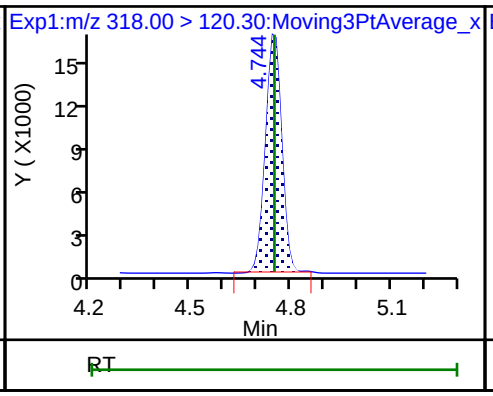
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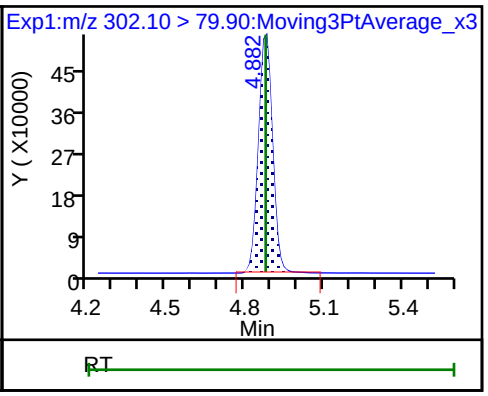
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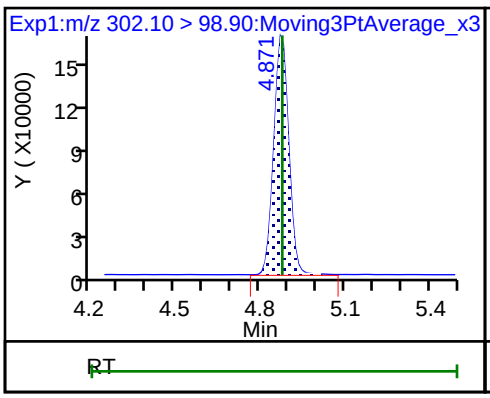
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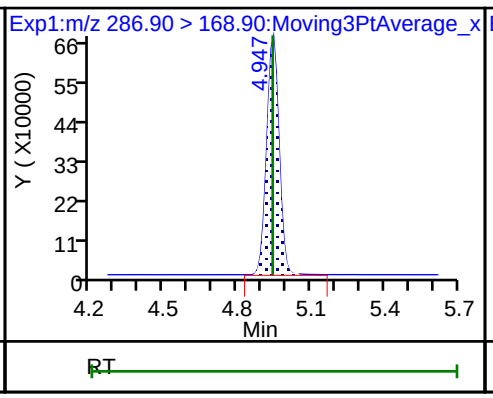
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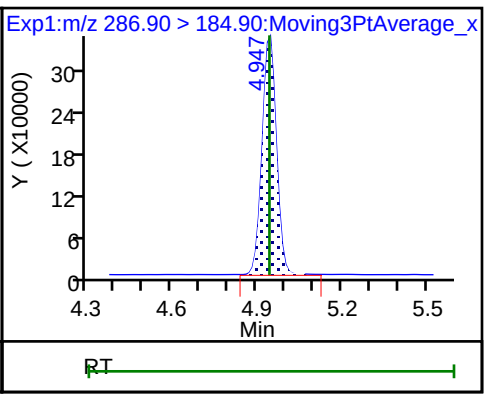
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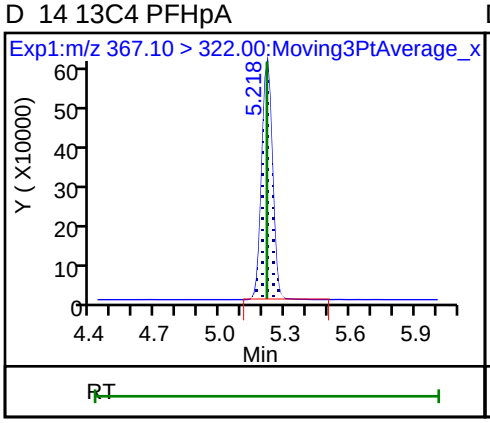
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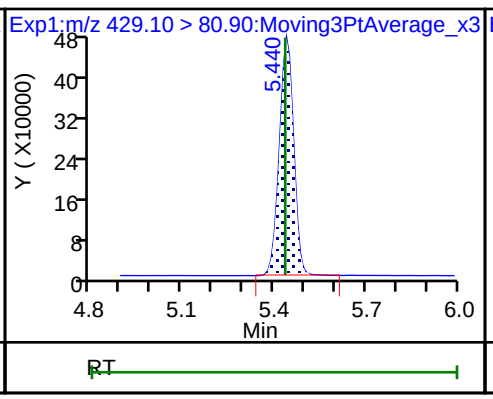
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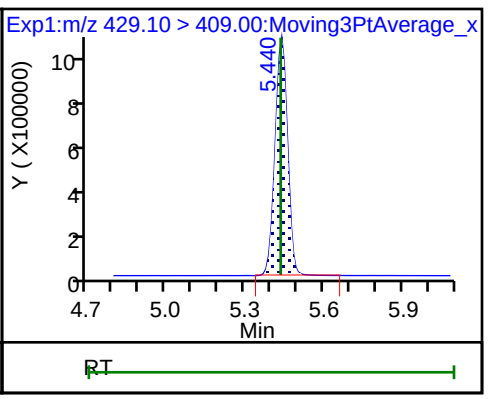
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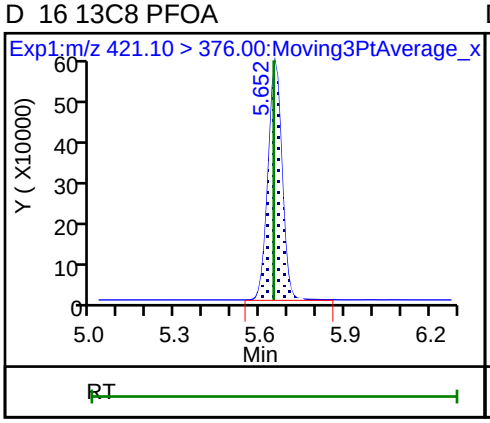
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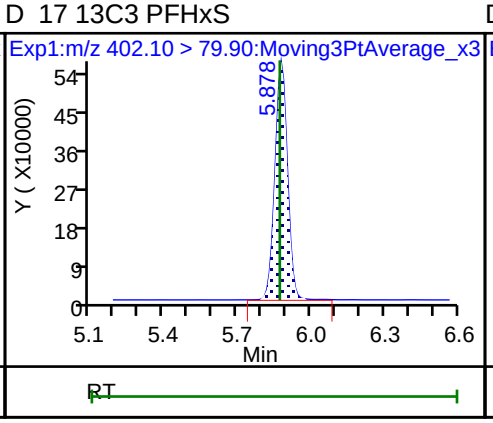
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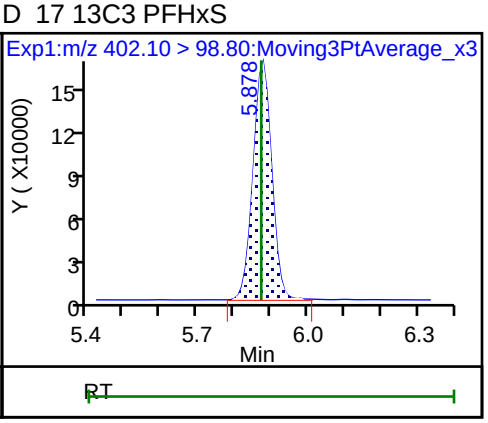
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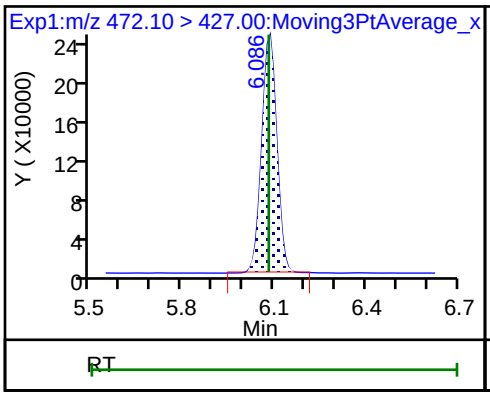
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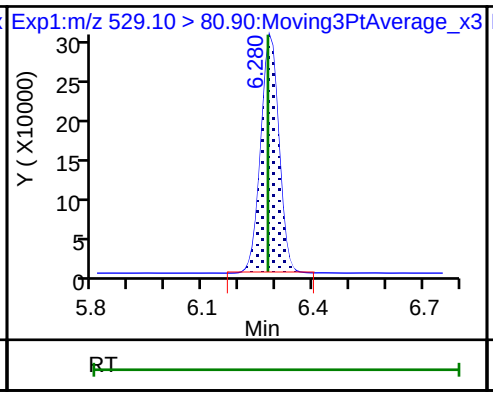
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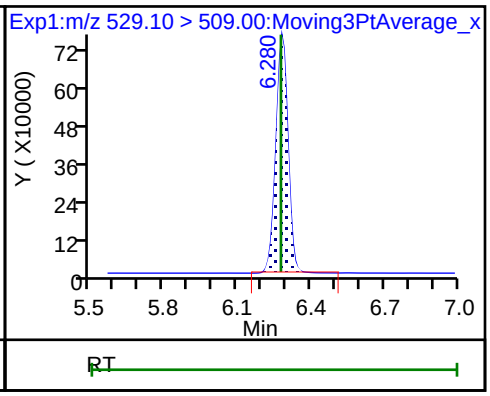
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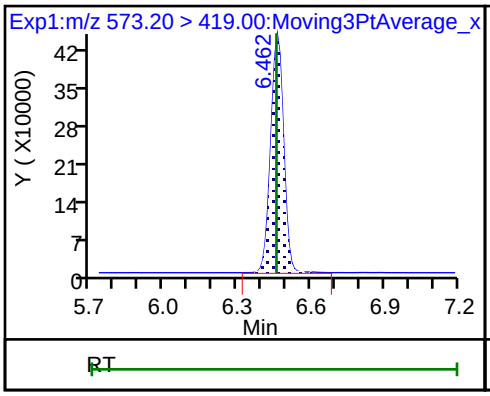
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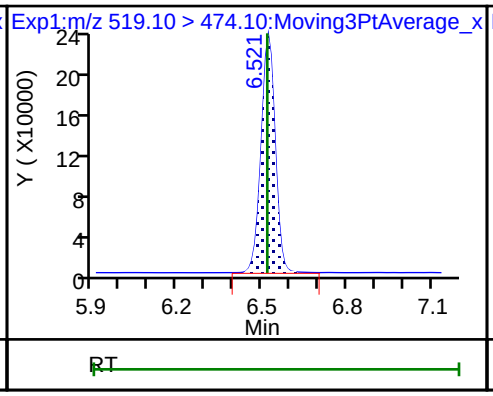
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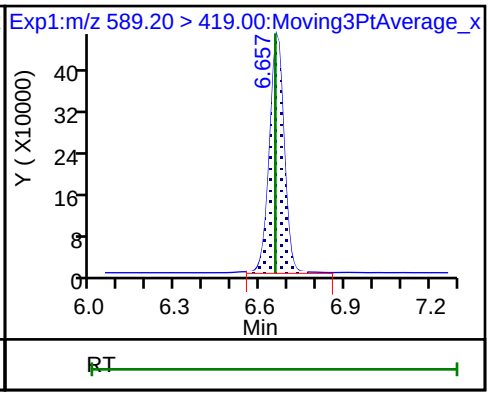
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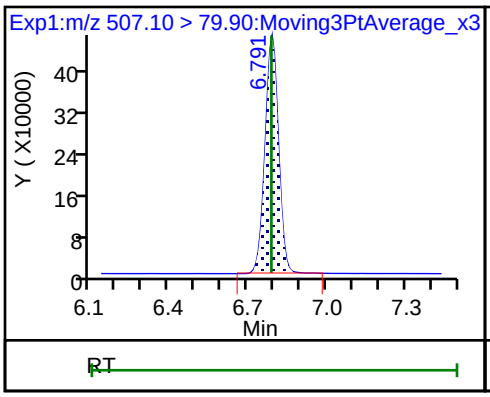
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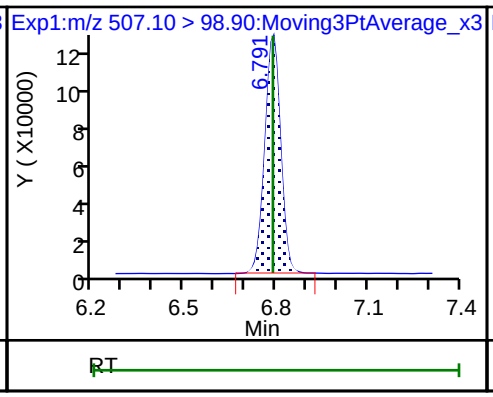
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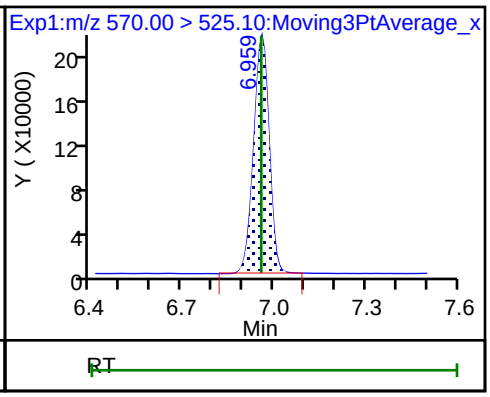
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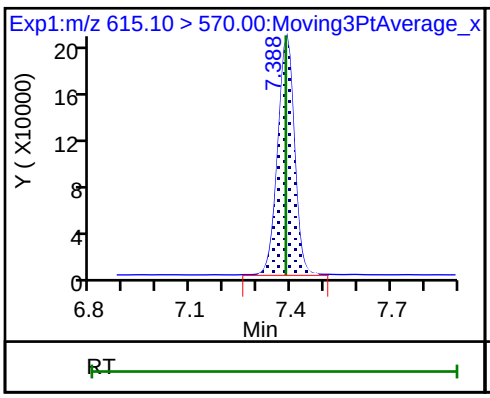
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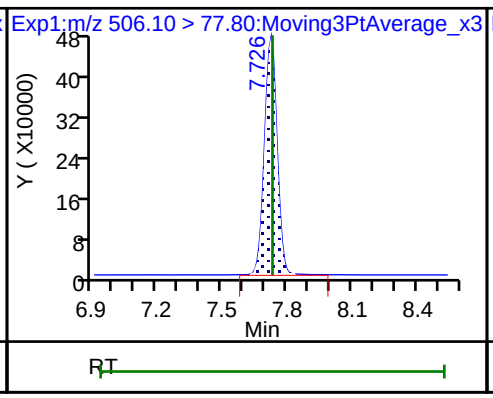
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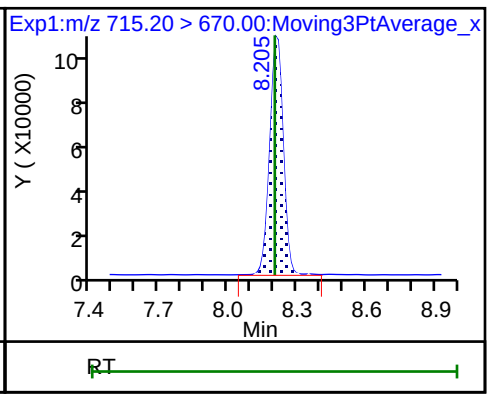
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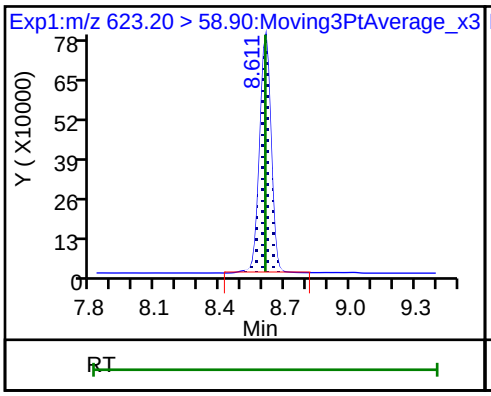
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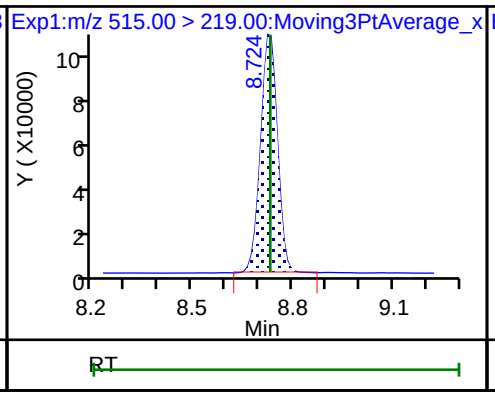
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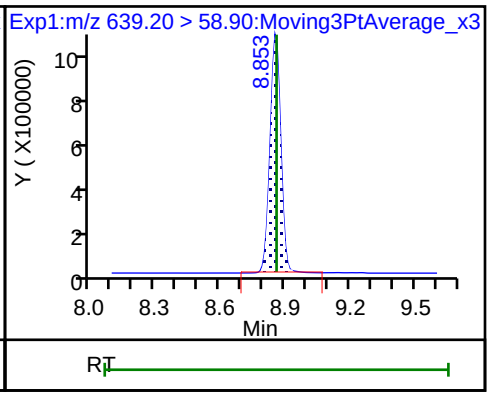
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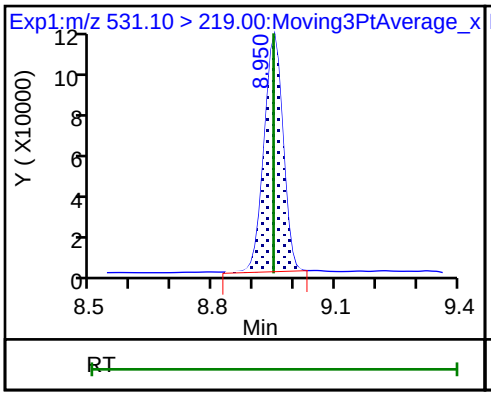
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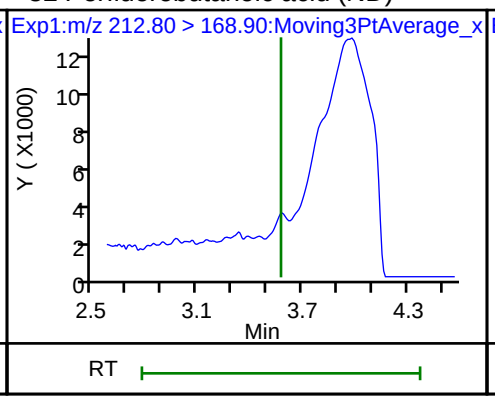
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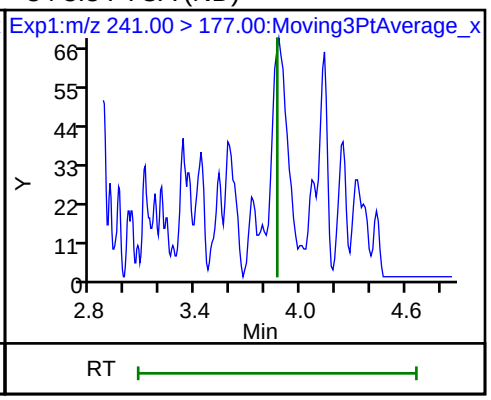
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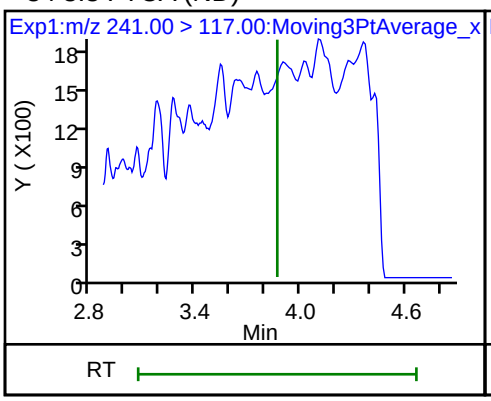
32 Perfluorobutanoic acid (ND)



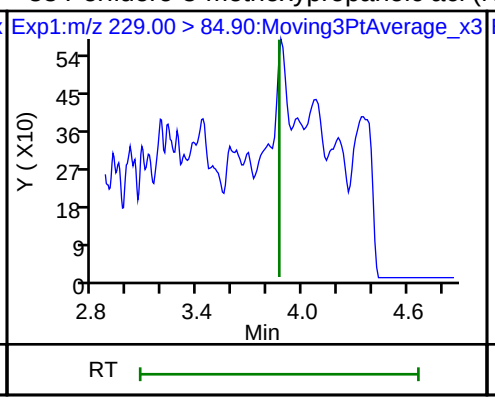
34 3:3 FTCA (ND)



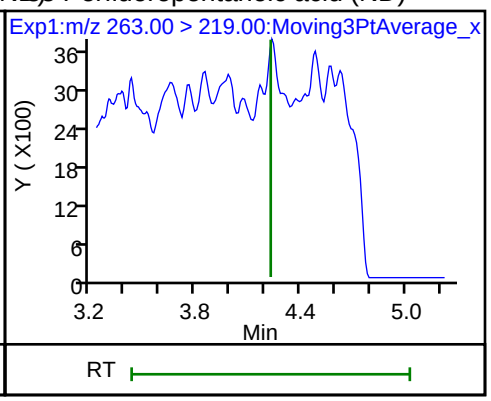
34 3:3 FTCA (ND)



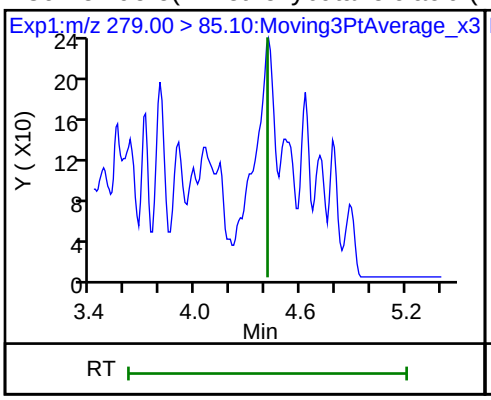
33 Perfluoro-3-methoxypropanoic aci (ND)



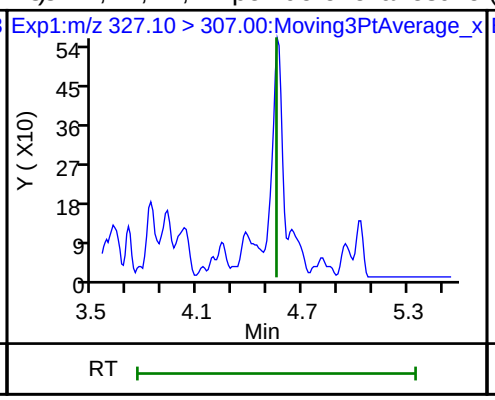
35 Perfluoropentanoic acid (ND)



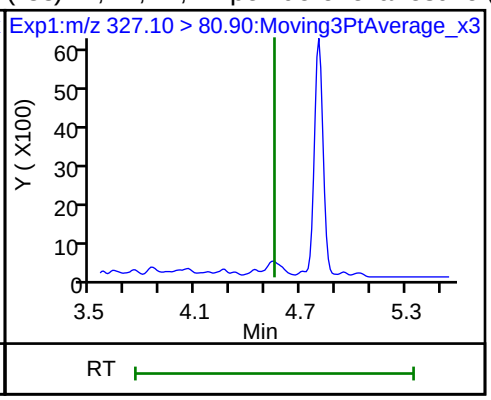
36 Perfluoro(4-methoxybutanoic acid (ND)



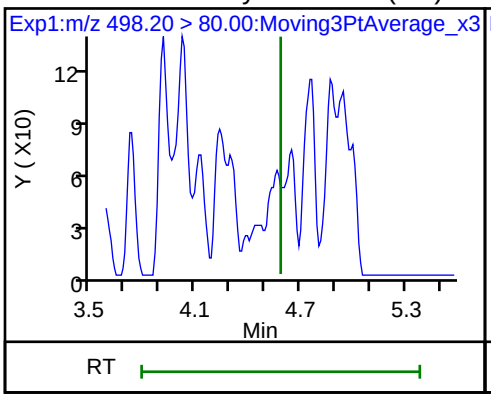
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



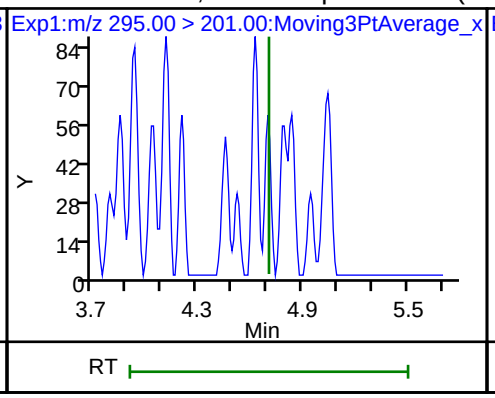
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



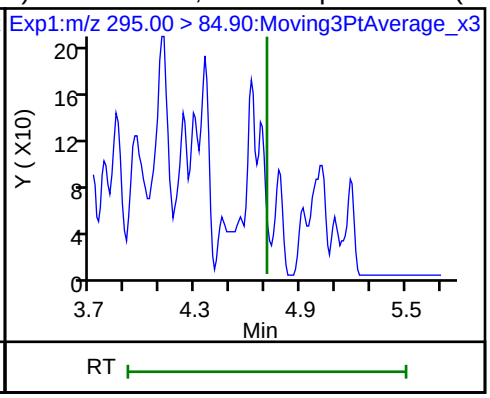
37 Tauroursodeoxycholic acid (ND)



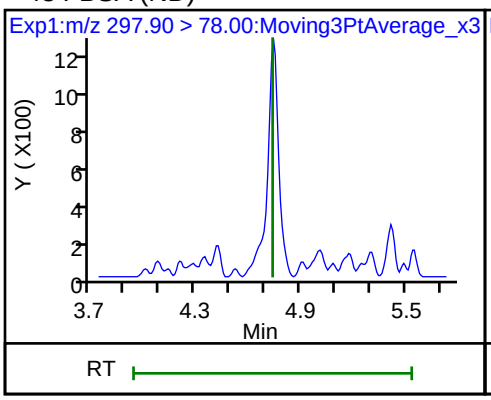
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



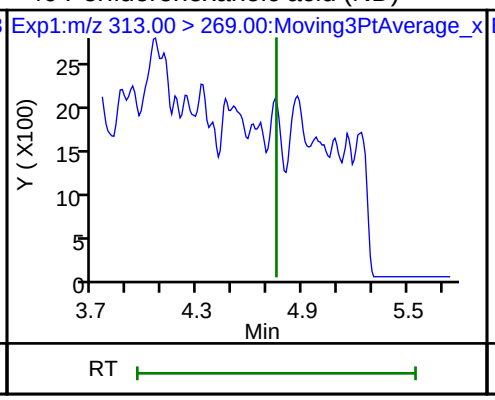
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



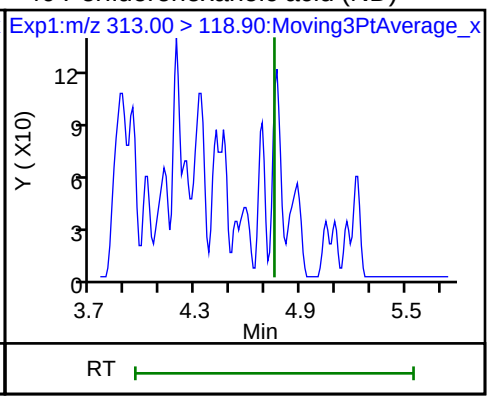
48 FBSA (ND)



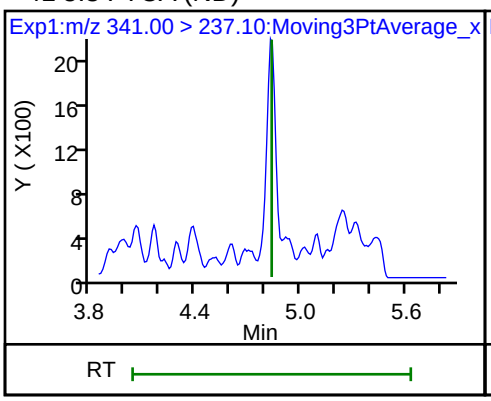
40 Perfluorohexanoic acid (ND)



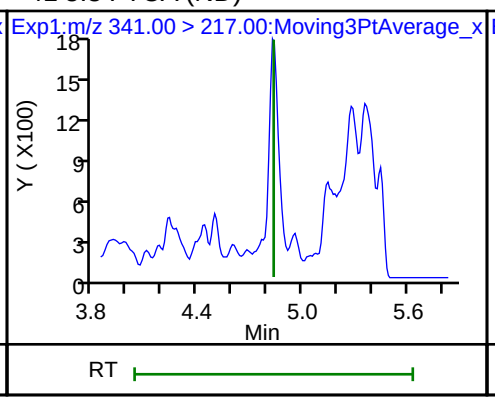
40 Perfluorohexanoic acid (ND)



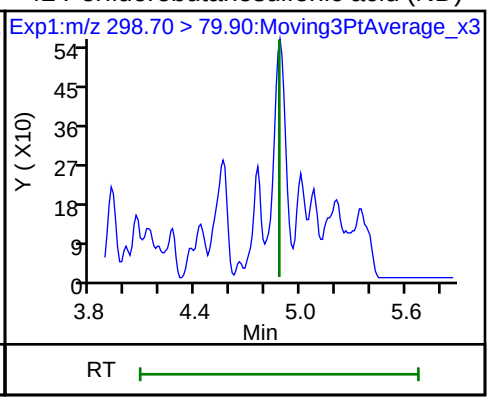
41 5:3 FTCA (ND)



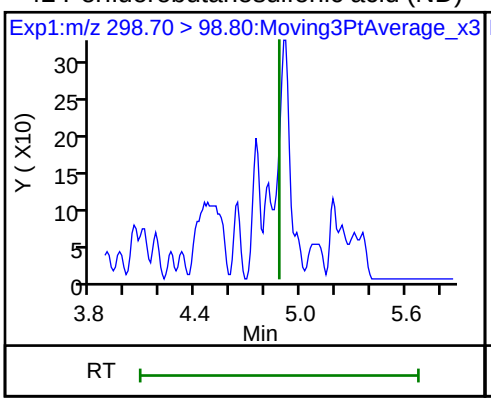
41 5:3 FTCA (ND)



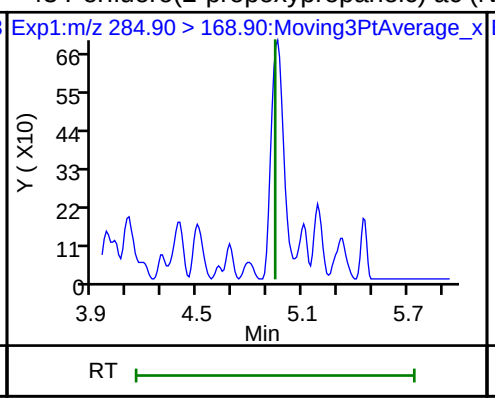
42 Perfluorobutanesulfonic acid (ND)



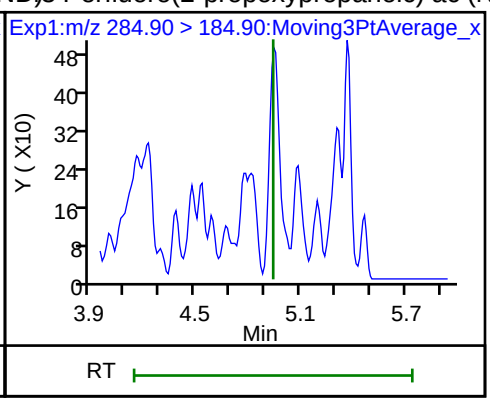
42 Perfluorobutanesulfonic acid (ND)



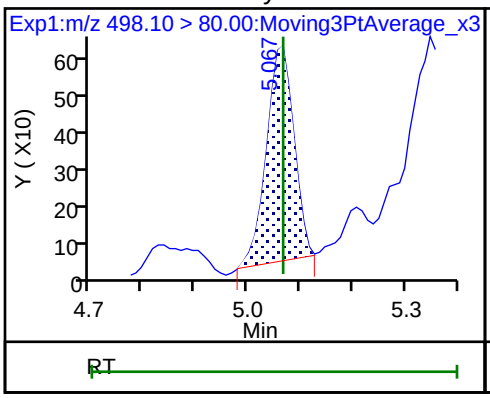
43 Perfluoro(2-propoxypropanoic) ac (ND)



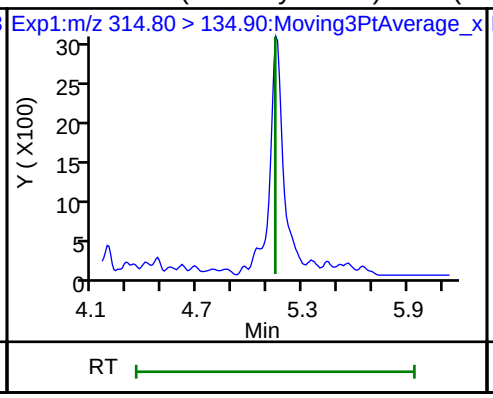
43 Perfluoro(2-propoxypropanoic) ac (ND)



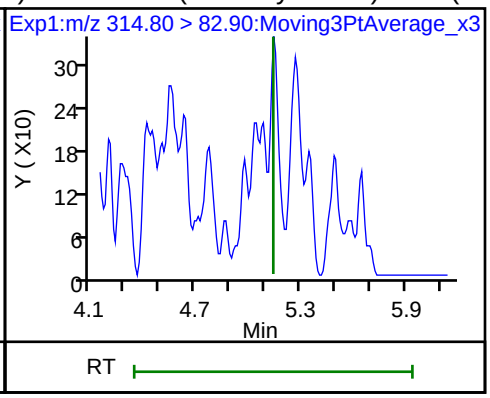
44 Taurochenodeoxycholic acid



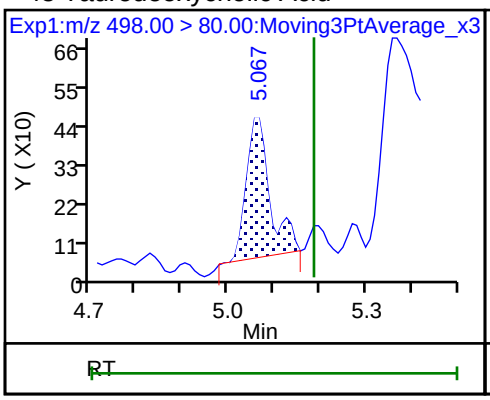
46 Perfluoro (2-ethoxyethane) sulfo (ND)



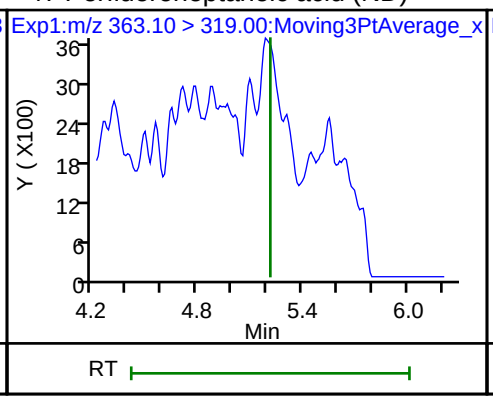
46 Perfluoro (2-ethoxyethane) sulfo (ND)



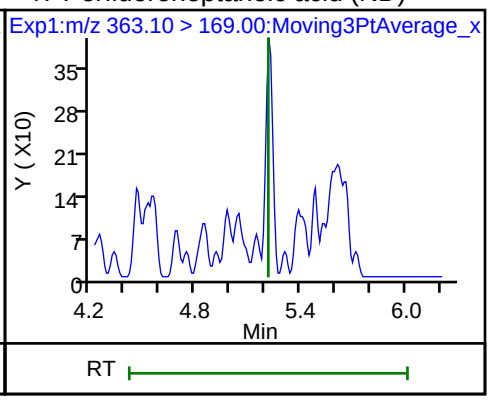
45 Taurodeoxycholic Acid



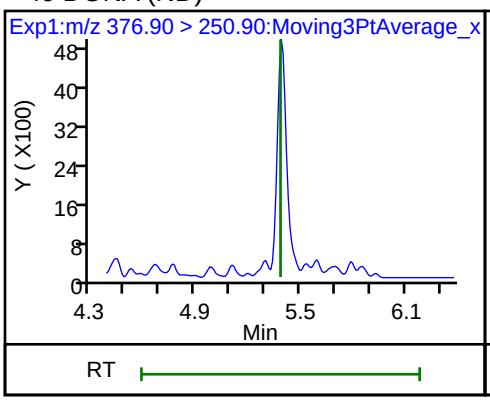
47 Perfluoroheptanoic acid (ND)



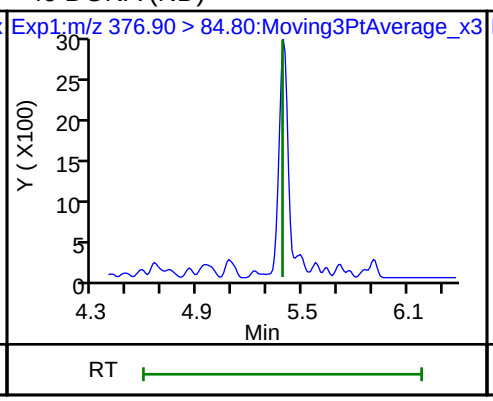
47 Perfluoroheptanoic acid (ND)



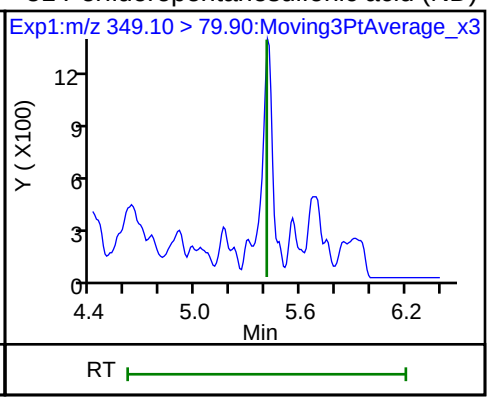
49 DONA (ND)



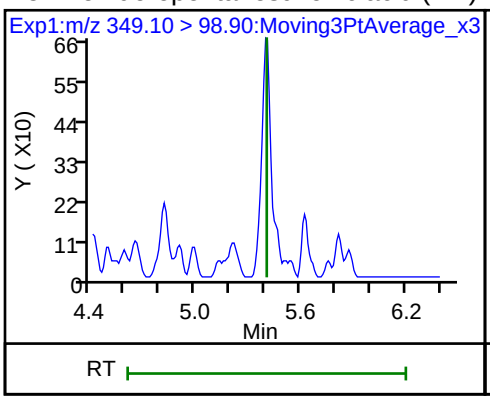
49 DONA (ND)



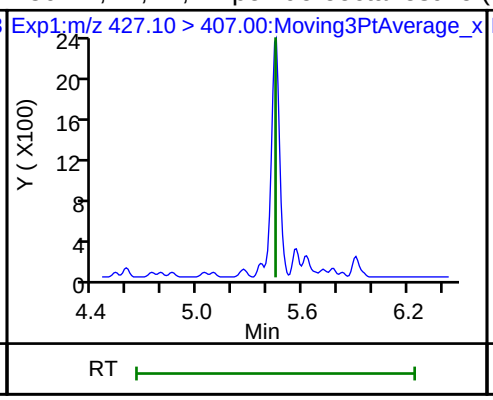
51 Perfluoropentanesulfonic acid (ND)



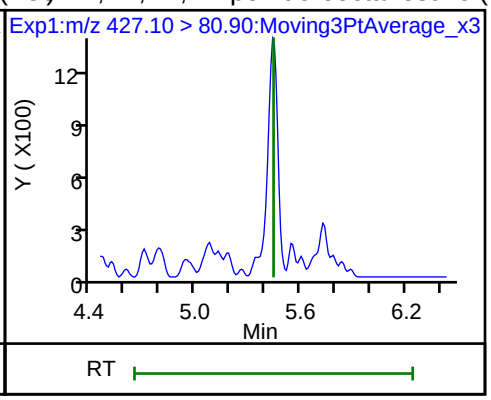
51 Perfluoropentanesulfonic acid (ND)



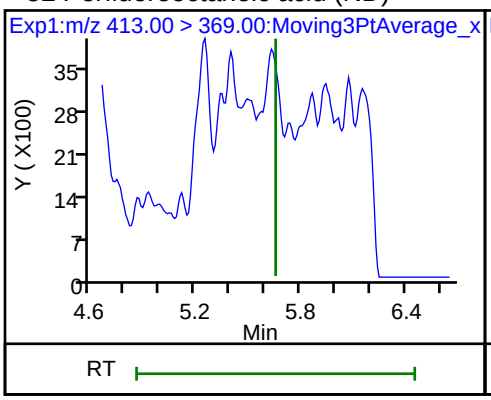
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



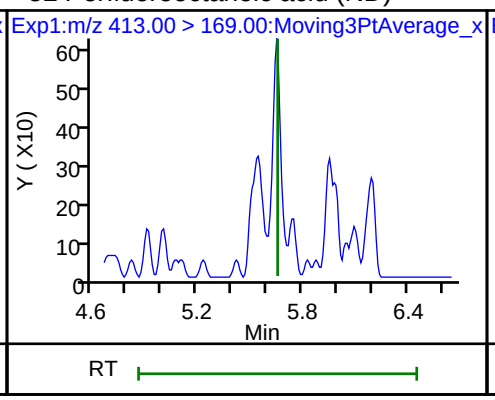
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



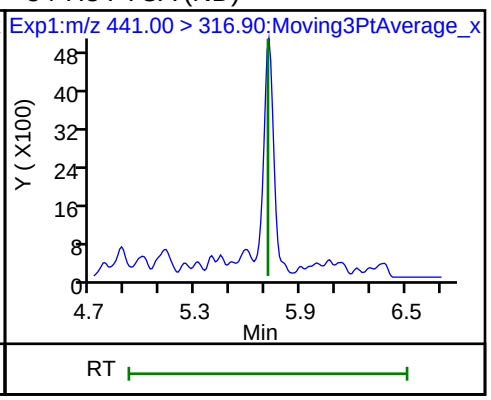
52 Perfluorooctanoic acid (ND)



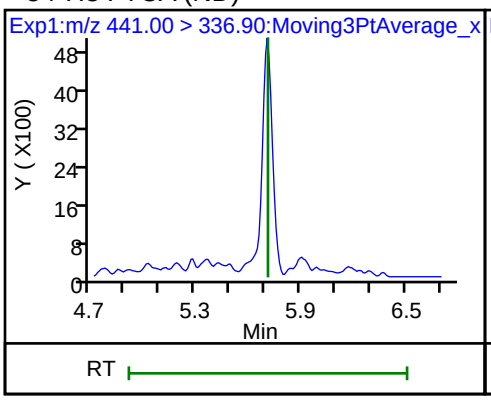
52 Perfluorooctanoic acid (ND)



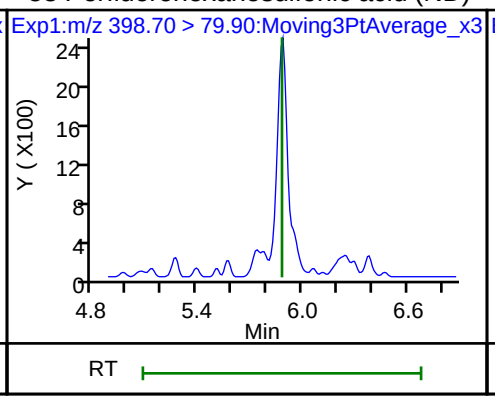
54 7:3 FTCA (ND)



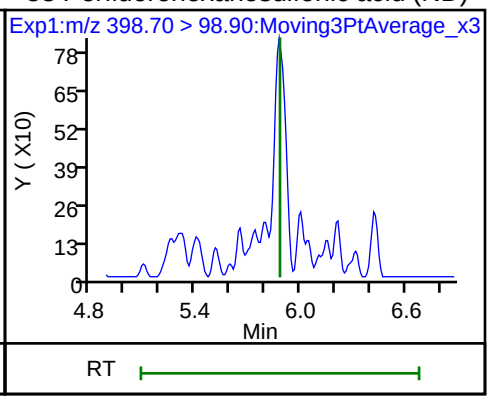
54 7:3 FTCA (ND)



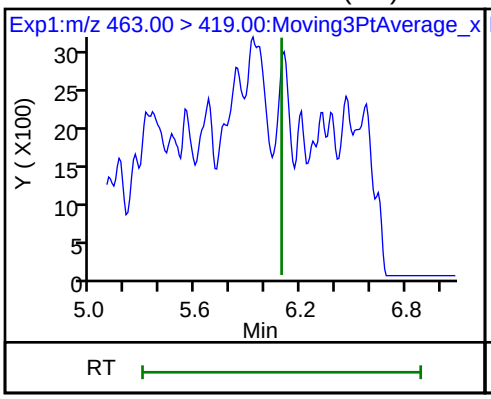
53 Perfluorohexanesulfonic acid (ND)



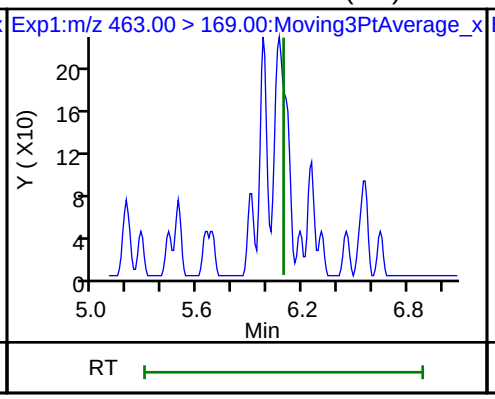
53 Perfluorohexanesulfonic acid (ND)



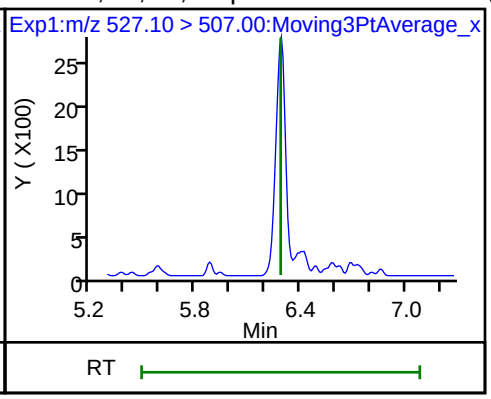
55 Perfluorononanoic acid (ND)



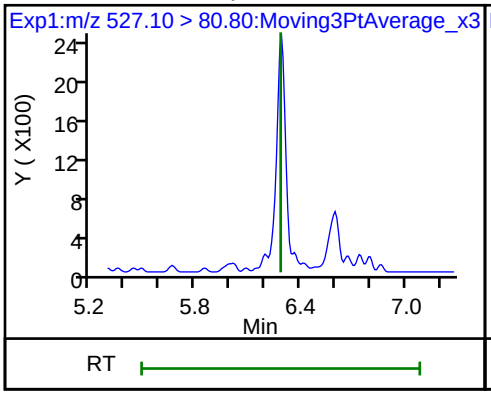
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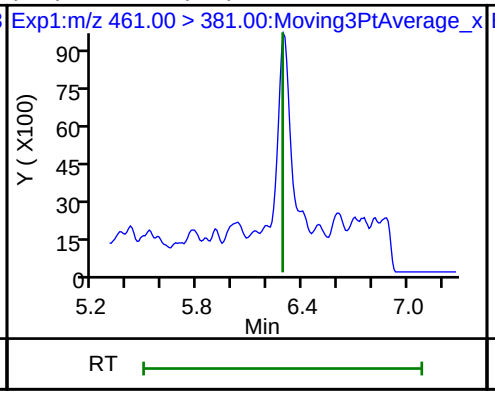
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



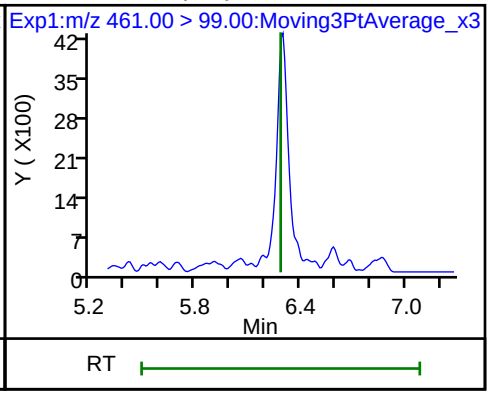
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



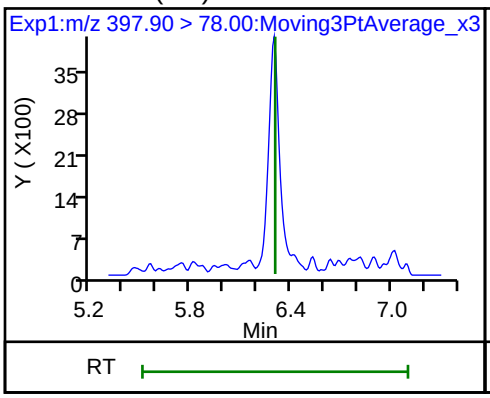
57 PFECHS (ND)



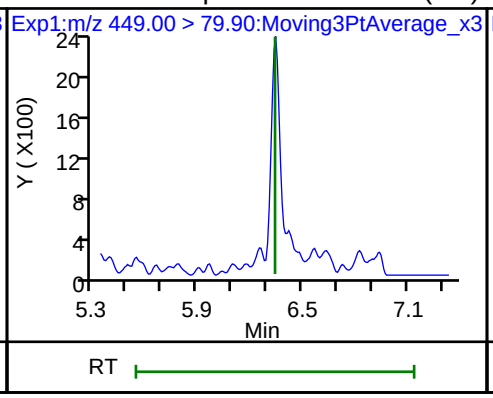
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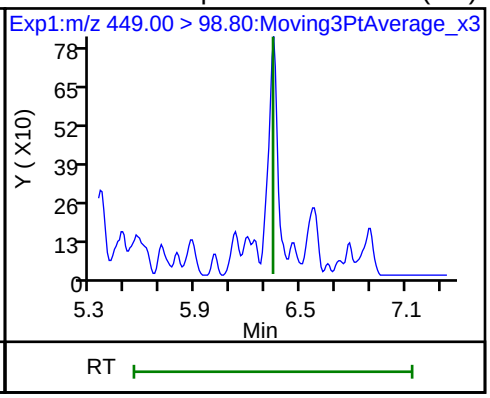
62 FHxSA (ND)



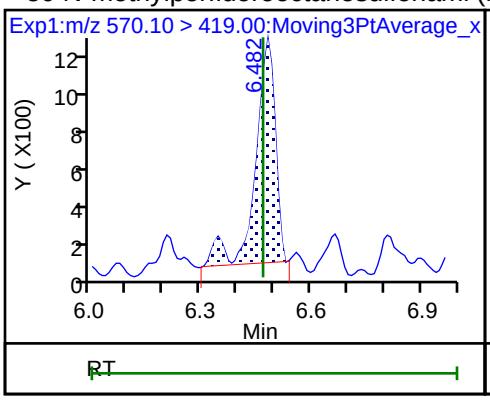
58 Perfluoroheptanesulfonic acid (ND)



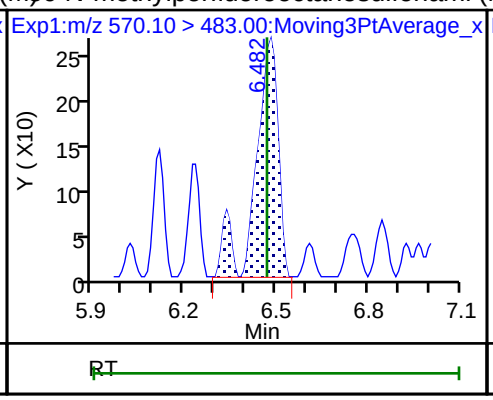
58 Perfluoroheptanesulfonic acid (ND)



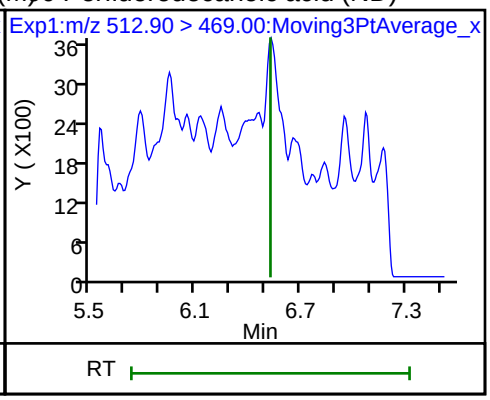
59 N-methylperfluorooctanesulfonami (M)



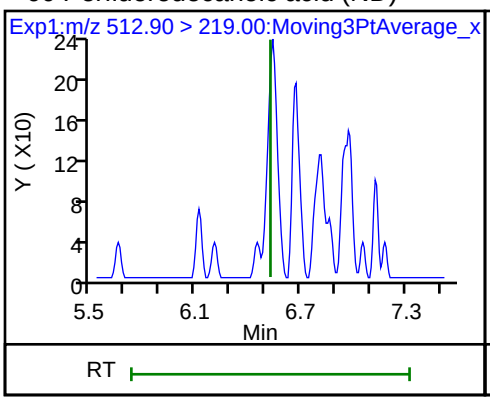
59 N-methylperfluorooctanesulfonami (M)



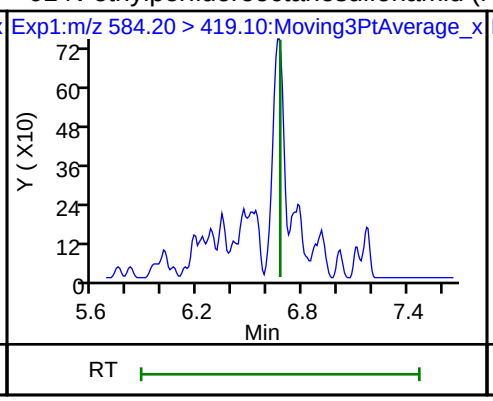
60 Perfluorodecanoic acid (ND)



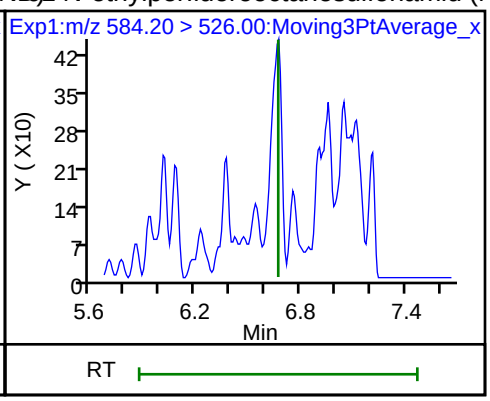
60 Perfluorodecanoic acid (ND)



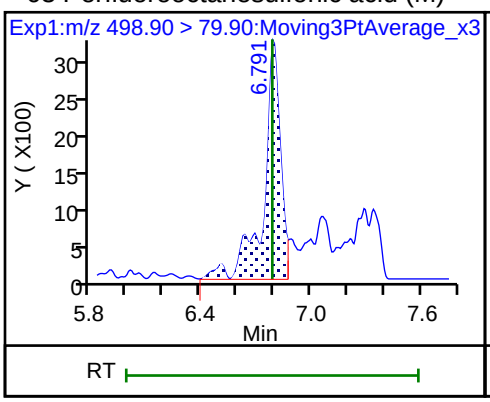
61 N-ethylperfluorooctanesulfonamid (ND)



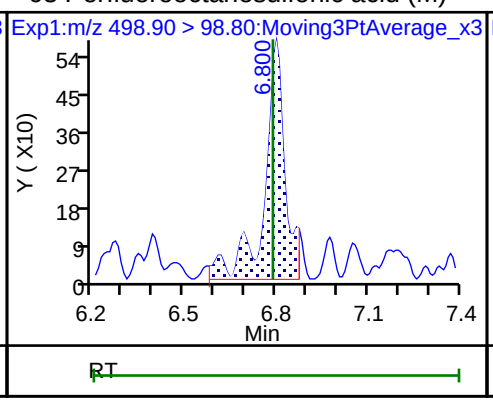
61 N-ethylperfluorooctanesulfonamid (ND)



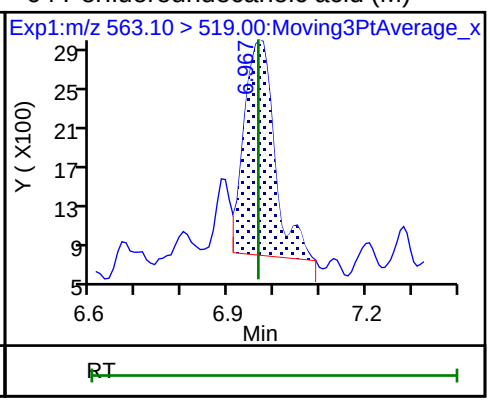
63 Perfluorooctanesulfonic acid (M)



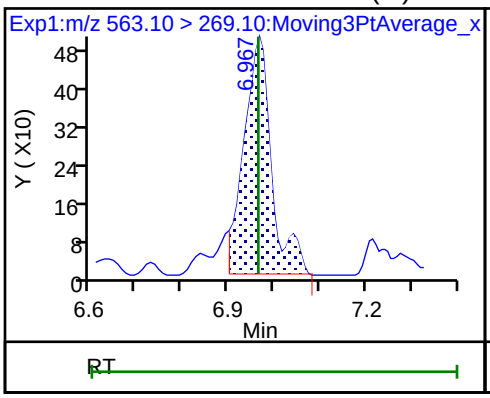
63 Perfluorooctanesulfonic acid (M)



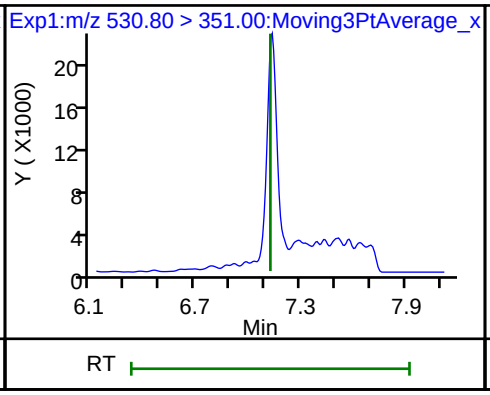
64 Perfluoroundecanoic acid (M)



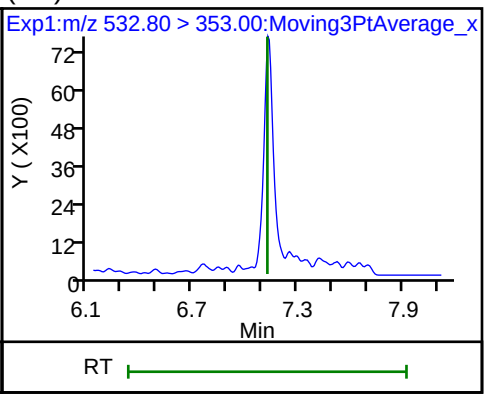
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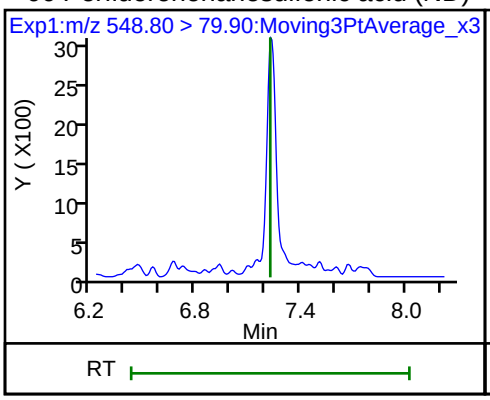
65 9-Chlorohexadecafluoro-3-oxanona (M)



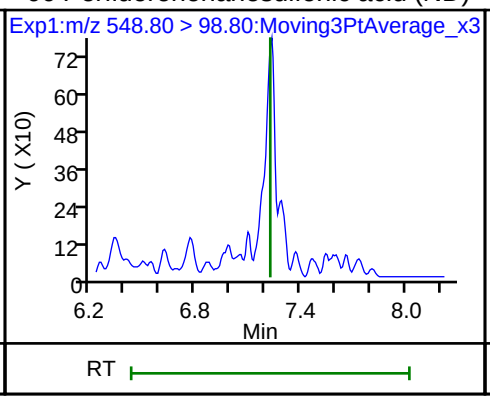
65 9-Chlorohexadecafluoro-3-oxanona (ND)



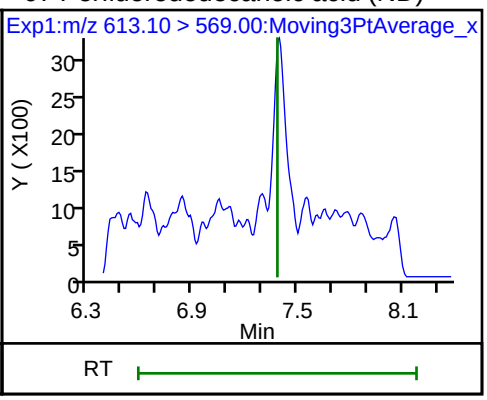
66 Perfluorononanesulfonic acid (ND)



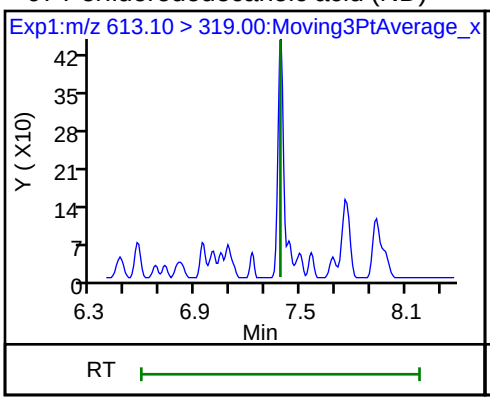
66 Perfluorononanesulfonic acid (ND)



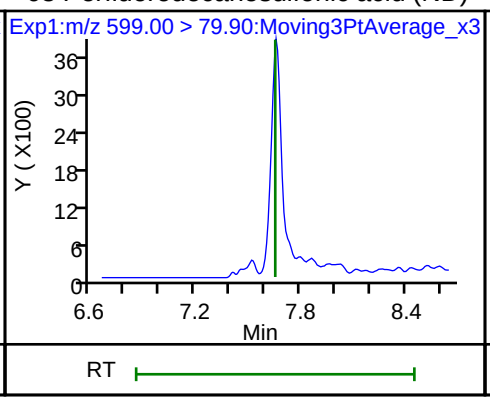
67 Perfluorododecanoic acid (ND)



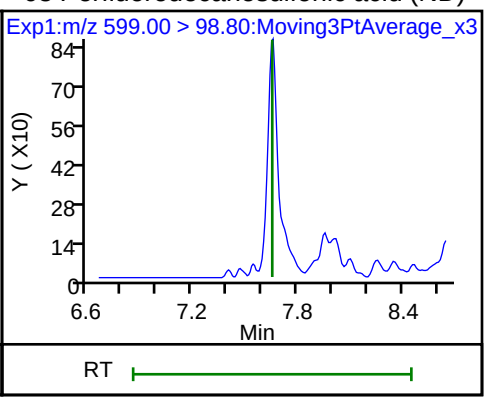
67 Perfluorododecanoic acid (ND)



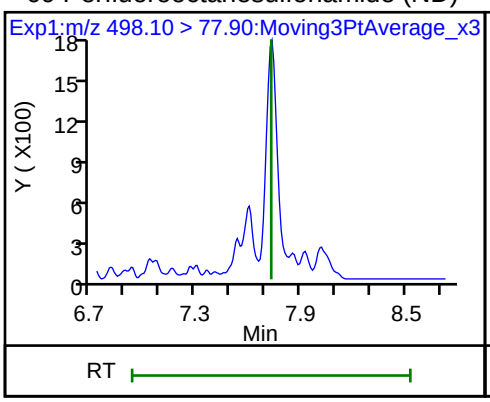
68 Perfluorodecanesulfonic acid (ND)



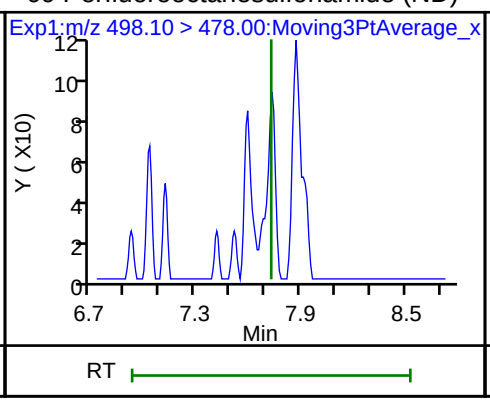
68 Perfluorodecanesulfonic acid (ND)



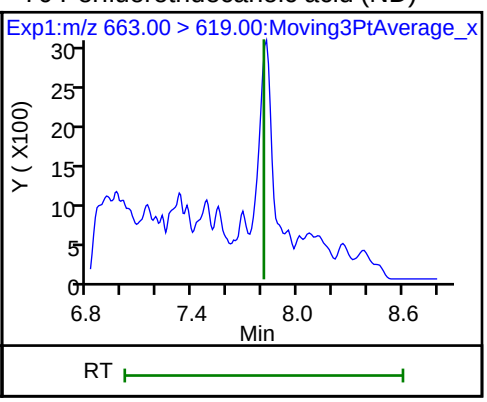
69 Perfluorooctanesulfonamide (ND)



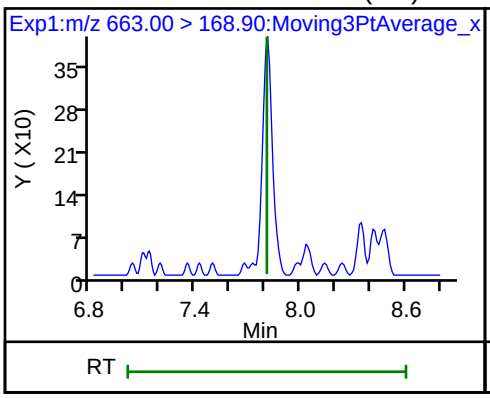
69 Perfluorooctanesulfonamide (ND)



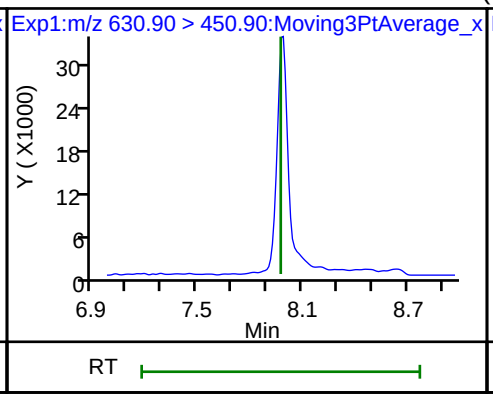
70 Perfluorotridecanoic acid (ND)



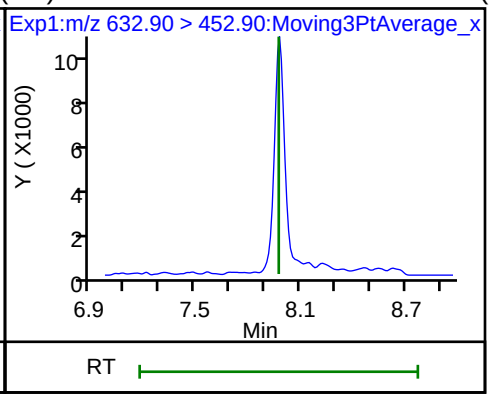
70 Perfluorotridecanoic acid (ND)



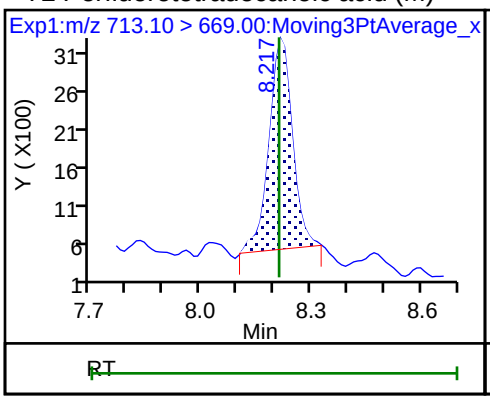
71 11-Chloroeicosafluoro-3-oxaundec (ND)



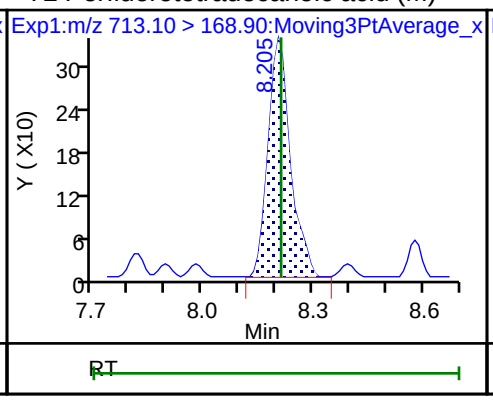
71 11-Chloroeicosafluoro-3-oxaundec (ND)



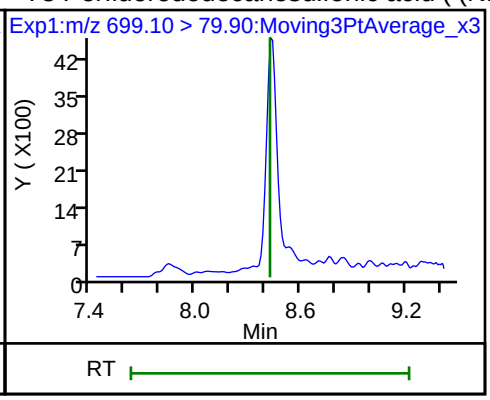
72 Perfluorotetradecanoic acid (M)



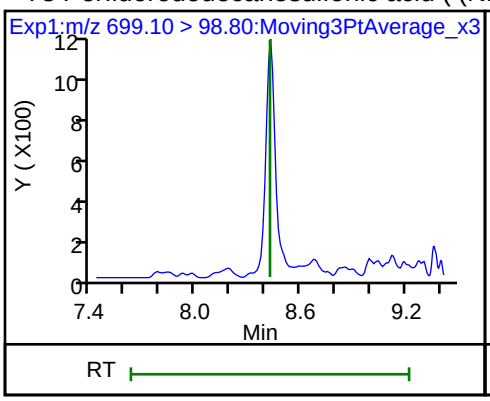
72 Perfluorotetradecanoic acid (M)



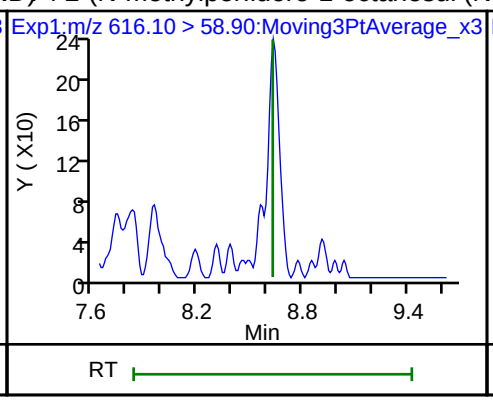
73 Perfluorododecanesulfonic acid ((ND)



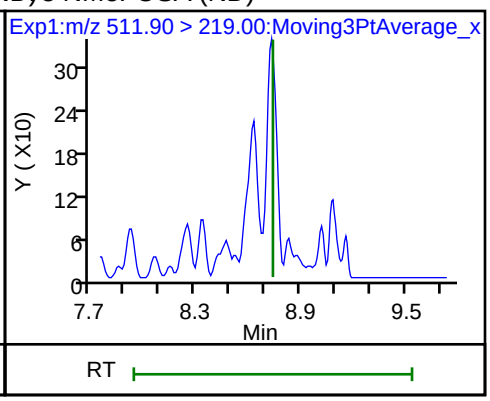
73 Perfluorododecanesulfonic acid ((ND)



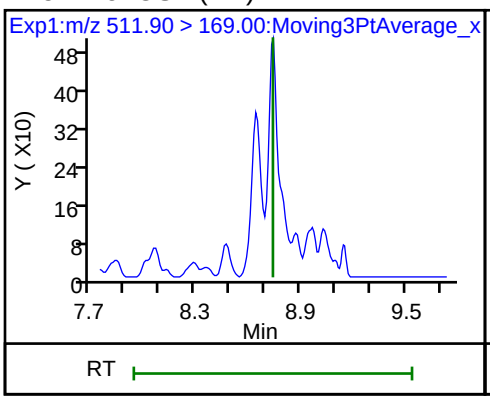
74 2-(N-methylperfluoro-1-octanesul (ND)



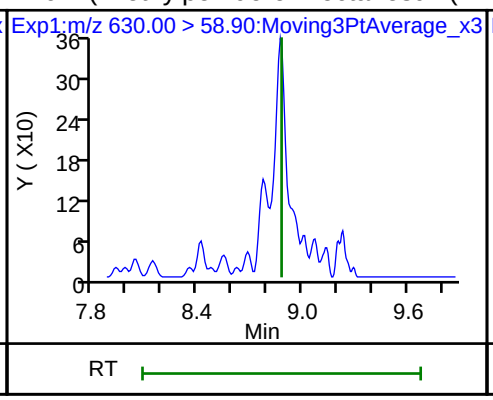
75 NMeFOSA (ND)



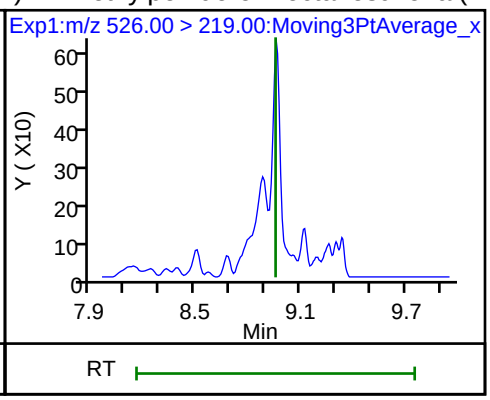
75 NMeFOSA (ND)



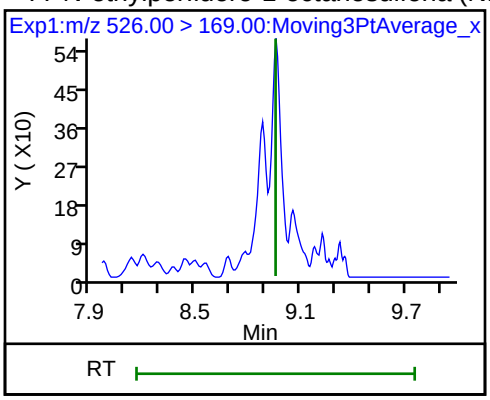
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

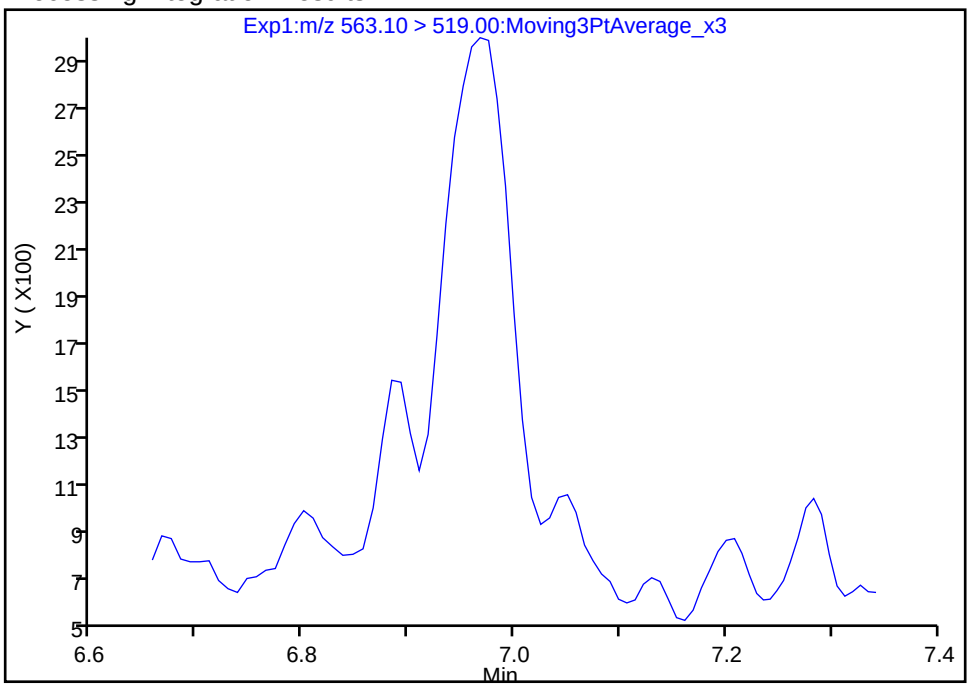
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d
Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

64 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

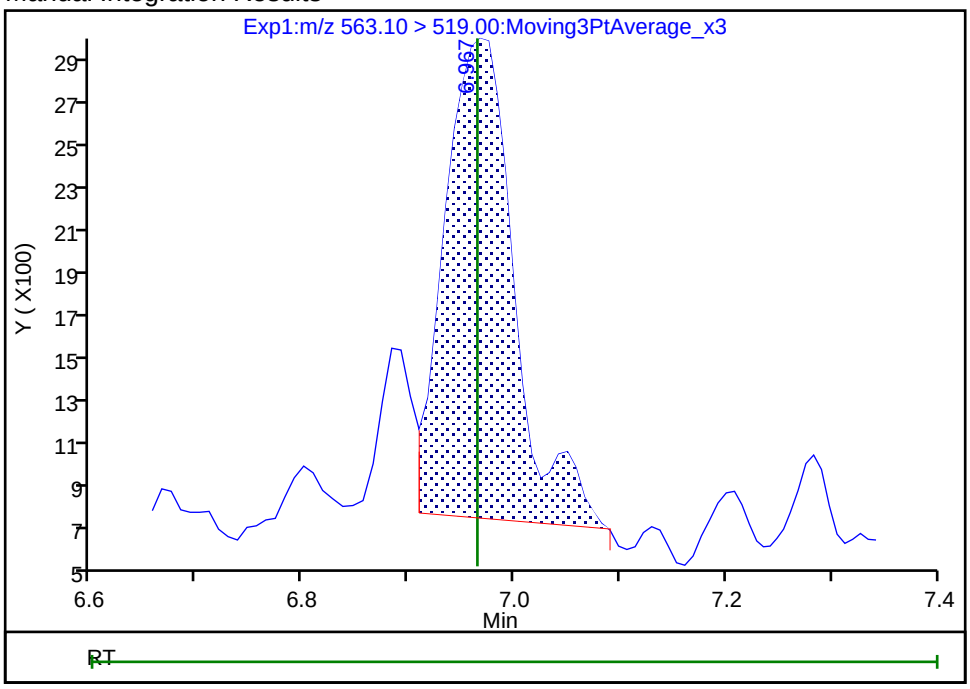
Not Detected
Expected RT: 6.96

Processing Integration Results



Manual Integration Results

RT: 6.97
Area: 9747
Amount: 0.004561
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:49:14 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

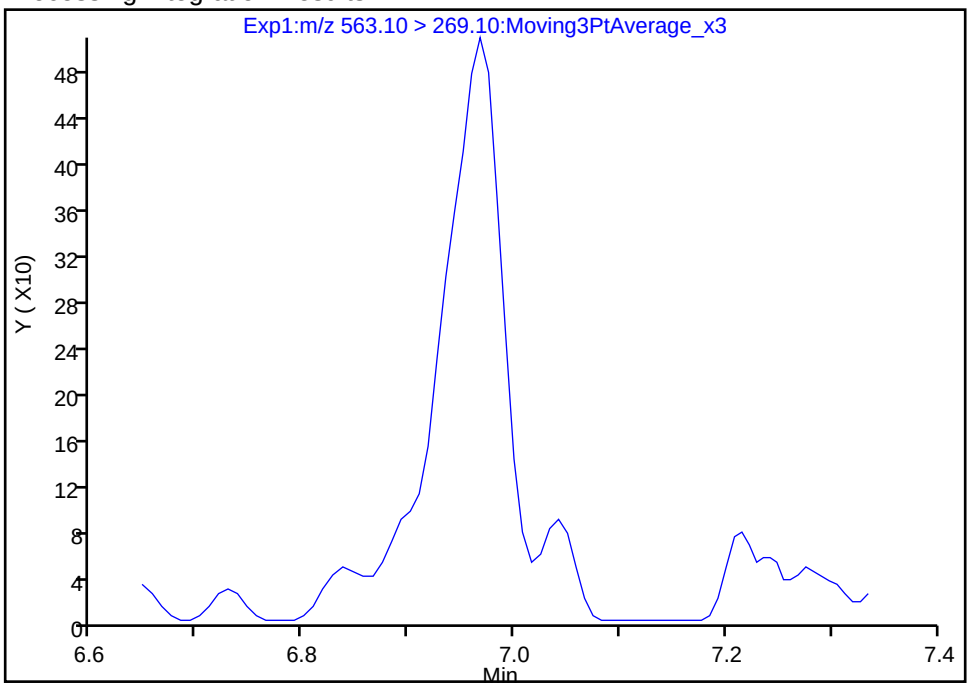
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Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

64 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

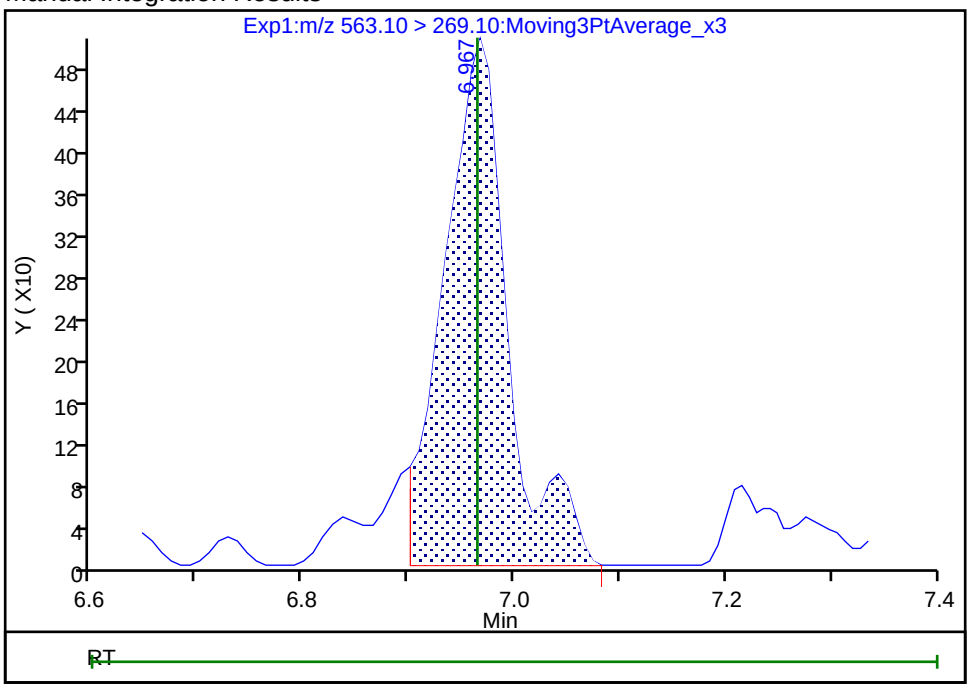
Not Detected
Expected RT: 6.96

Processing Integration Results



Manual Integration Results

RT: 6.97
Area: 2089
Amount: 0.004561
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:49:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

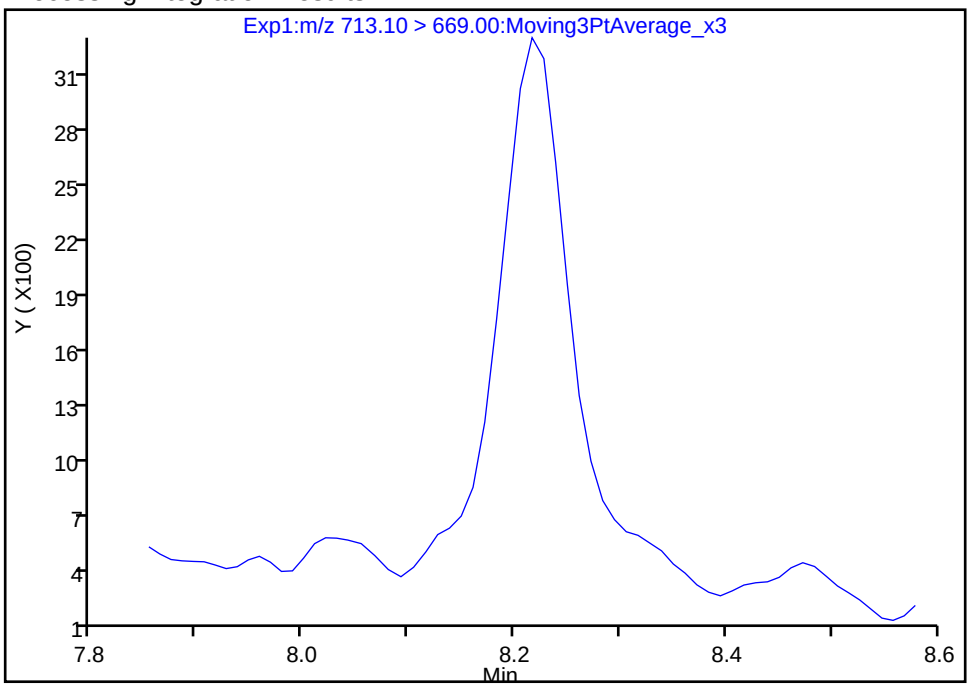
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d
Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

72 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

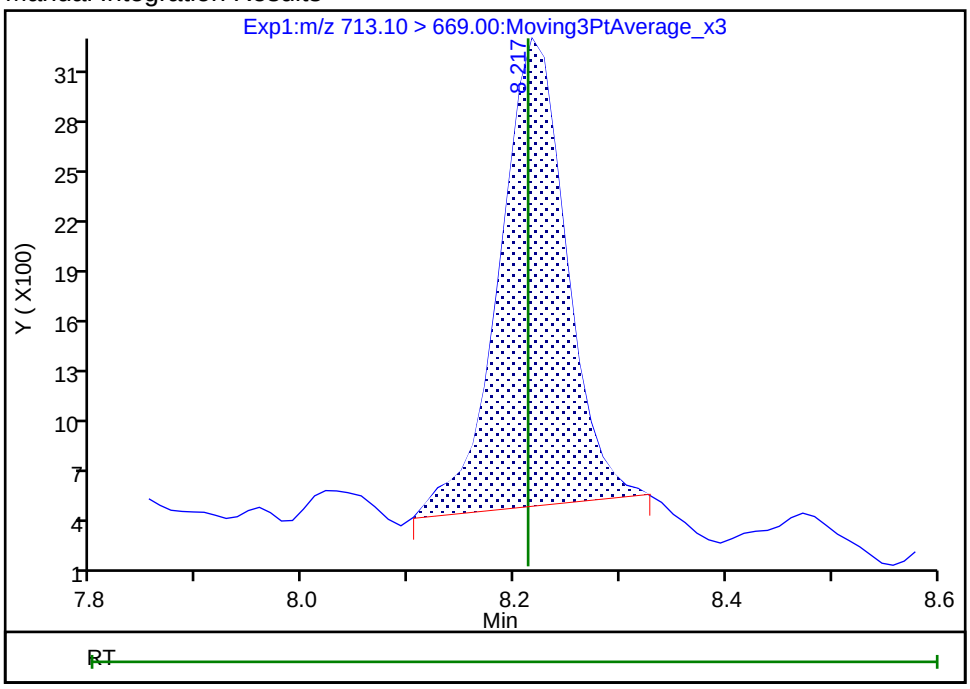
Not Detected
Expected RT: 8.21

Processing Integration Results



Manual Integration Results

RT: 8.22
Area: 12086
Amount: 0.007405
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:49:51 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

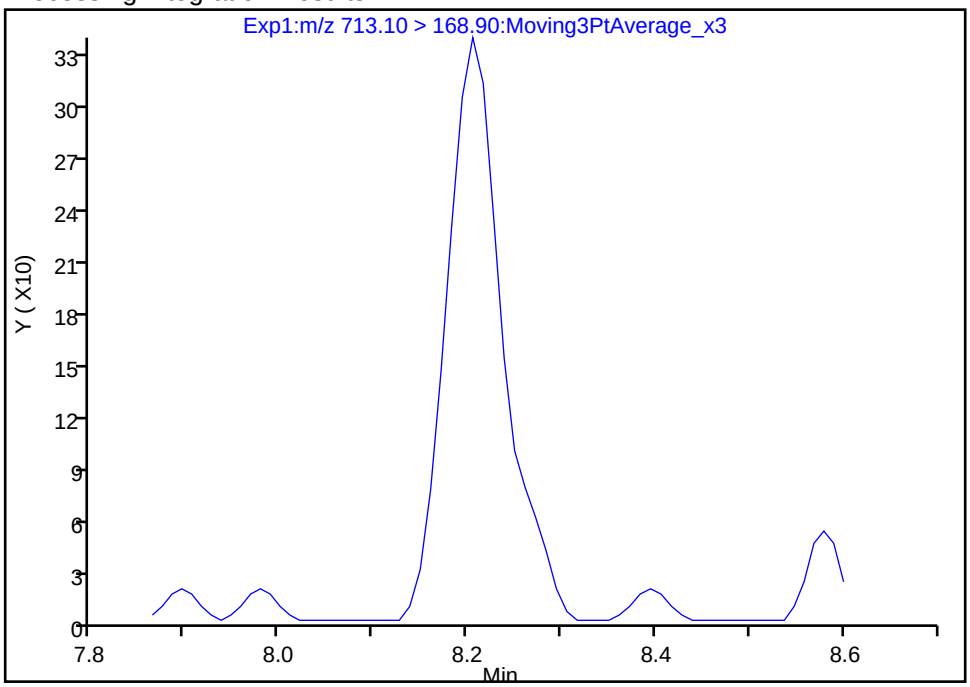
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d
Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

72 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

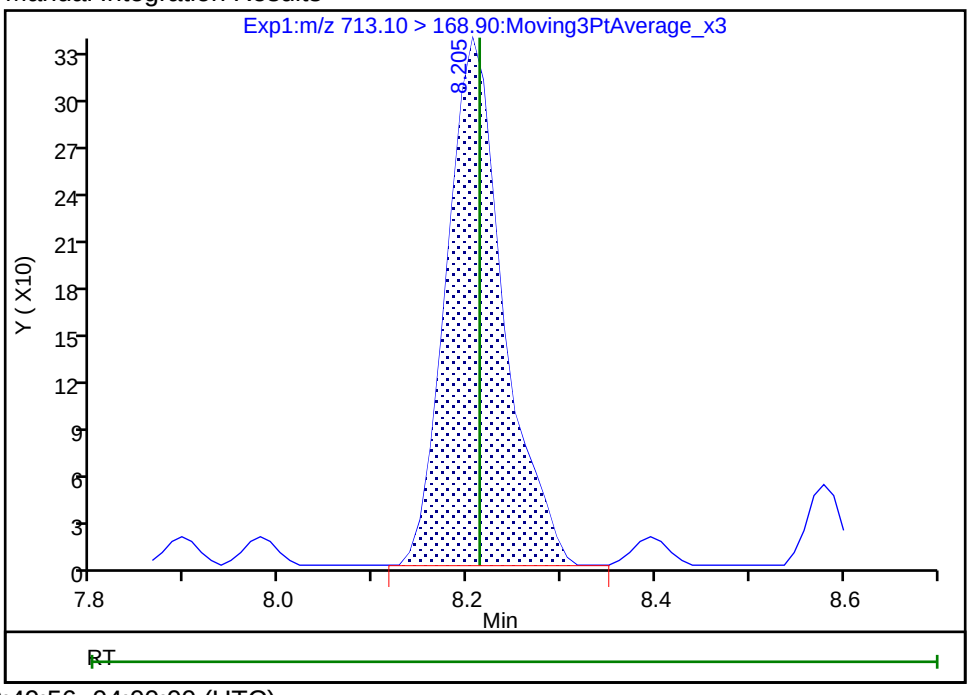
Not Detected
Expected RT: 8.21

Processing Integration Results



Manual Integration Results

RT: 8.21
Area: 1403
Amount: 0.007405
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:49:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

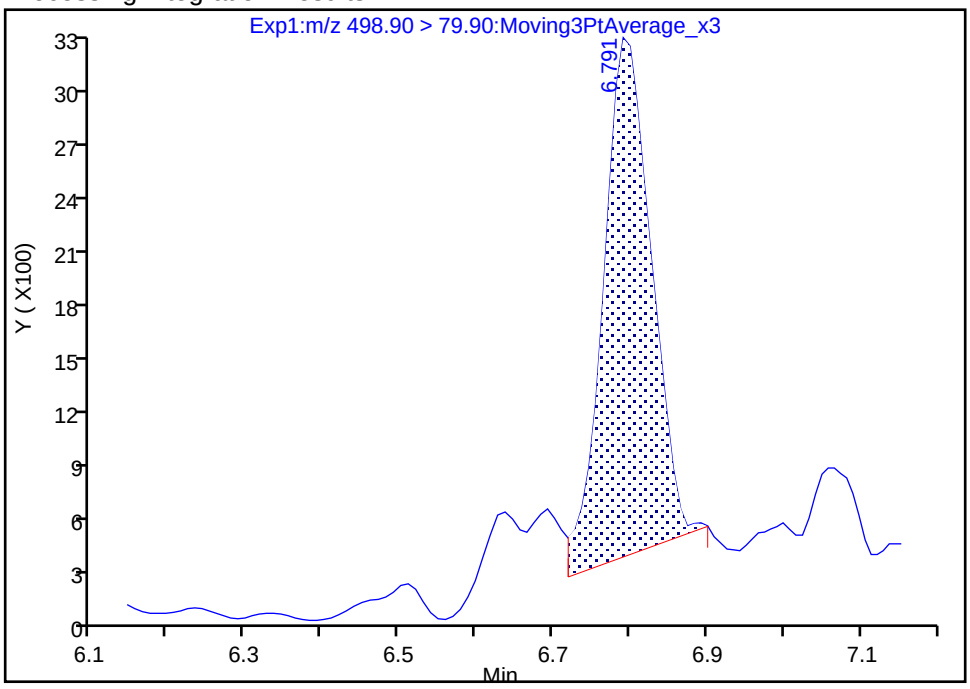
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Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

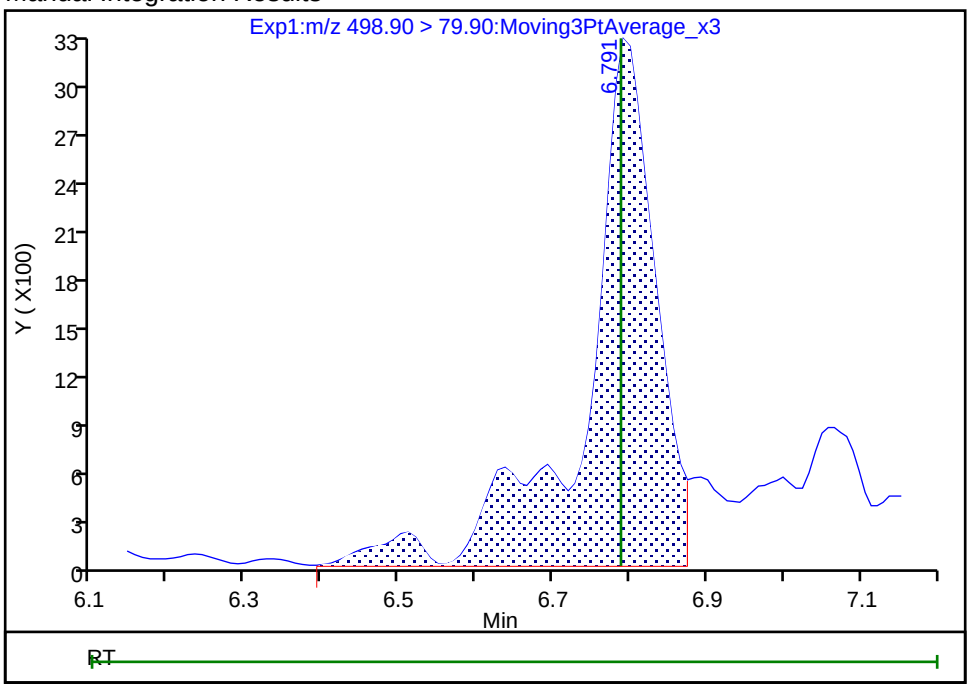
Processing Integration Results

RT: 6.79
Area: 12342
Amount: 0.003505
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 20497
Amount: 0.005821
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:48:23 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

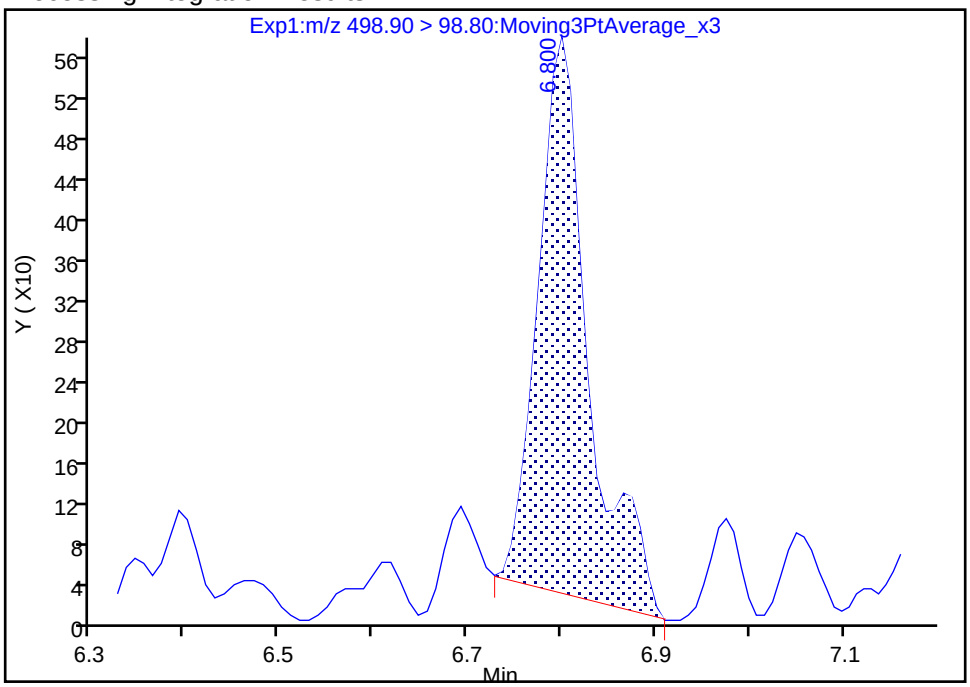
Data File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d
Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

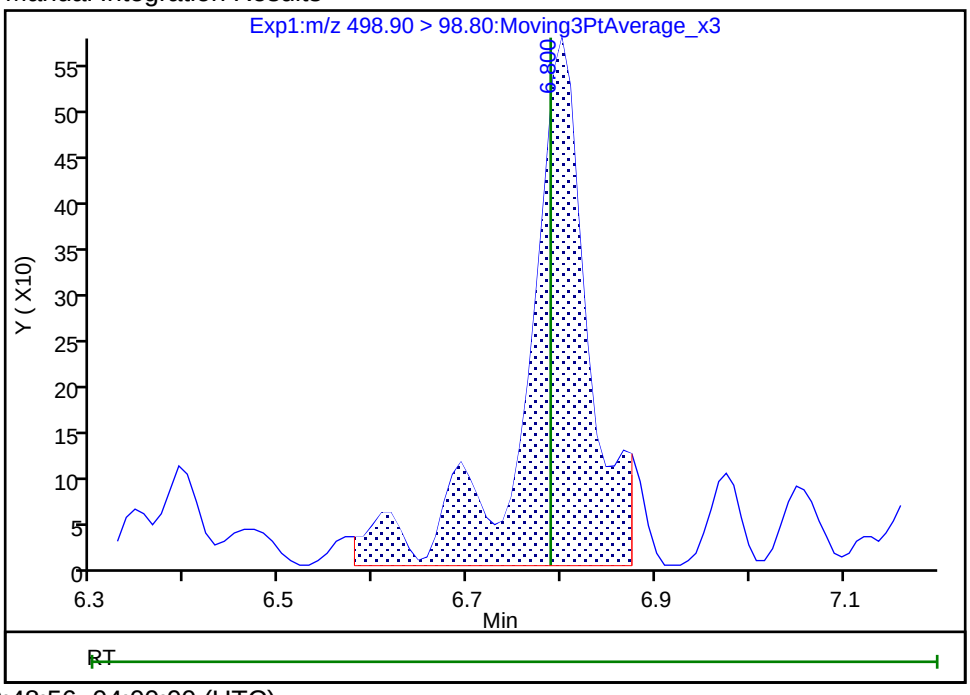
Processing Integration Results

RT: 6.80
Area: 2040
Amount: 0.003505
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 2627
Amount: 0.005821
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:48:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

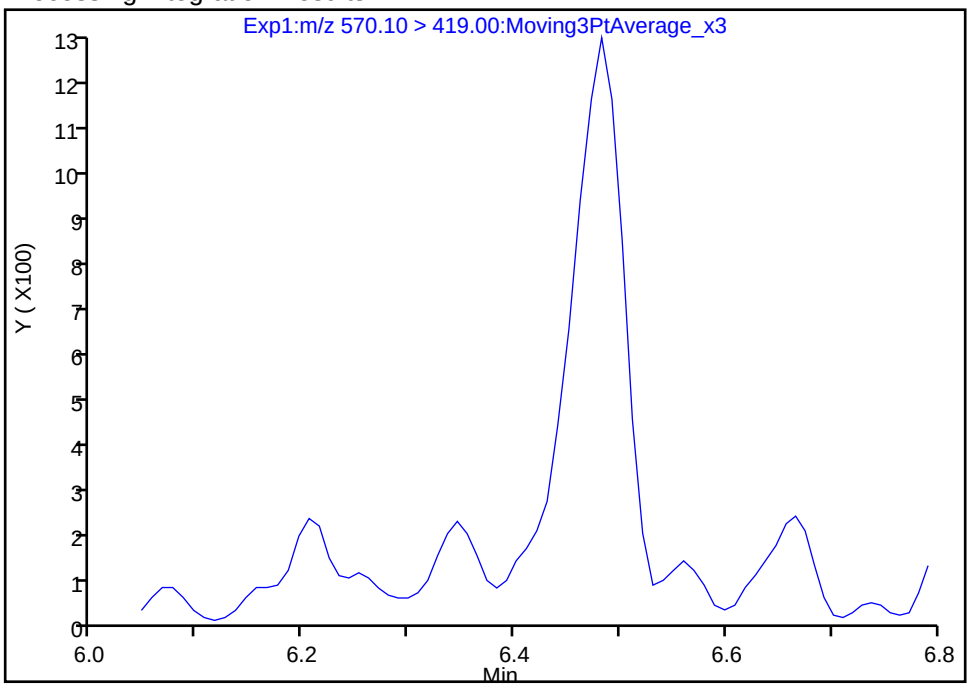
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj08.d				
Injection Date:	10-Sep-2024 18:48:00	Instrument ID:	LCMS04		
Lims ID:	ICB				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	35	Worklist Smp#:	8
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

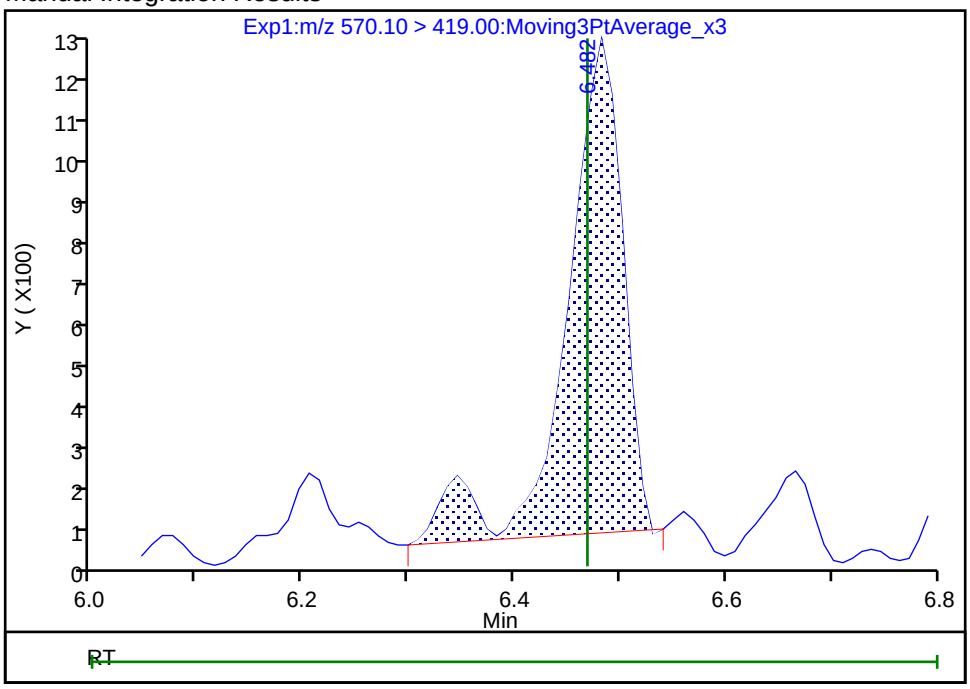
Processing Integration Results

Not Detected
Expected RT: 6.47



Manual Integration Results

RT: 6.48
Area: 4275
Amount: 0.002975
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:47:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

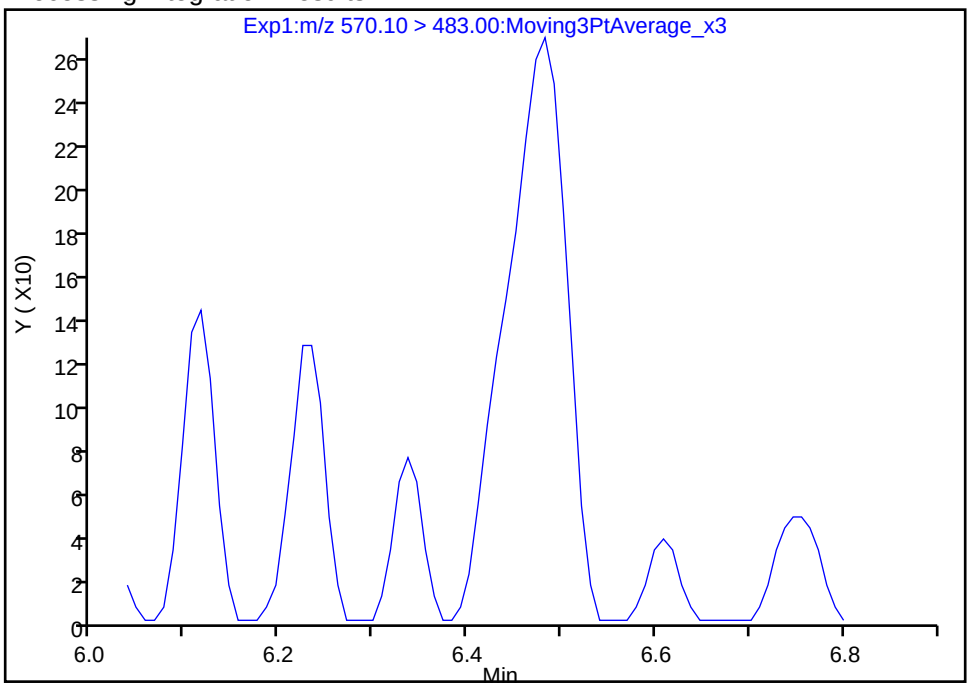
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Injection Date: 10-Sep-2024 18:48:00 Instrument ID: LCMS04
Lims ID: ICB
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 35 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

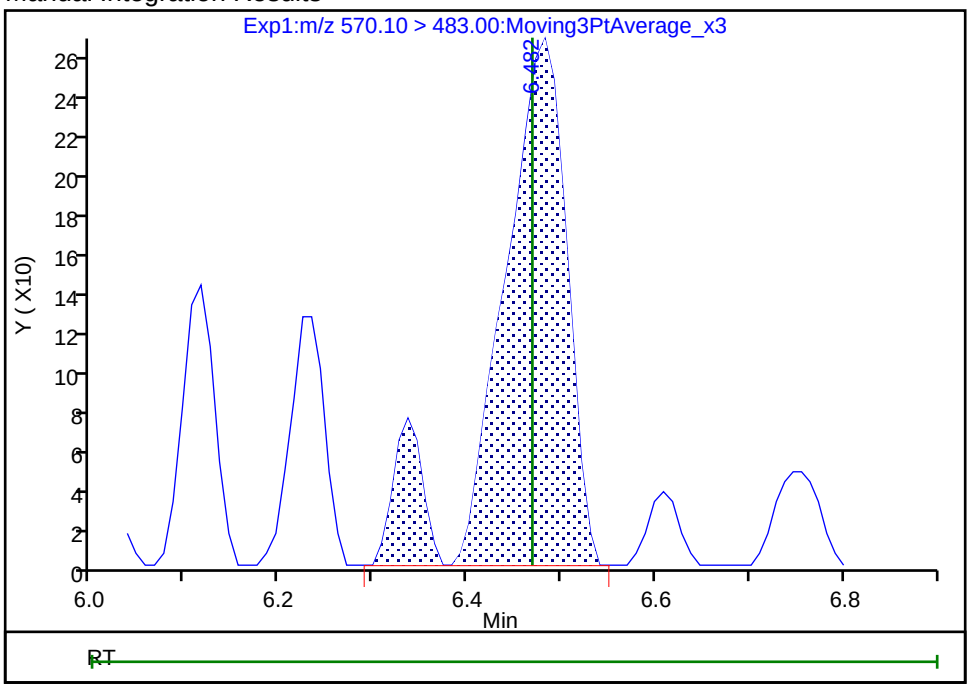
Not Detected
Expected RT: 6.47

Processing Integration Results



Manual Integration Results

RT: 6.48
Area: 1343
Amount: 0.002975
Amount Units: ng/ml



Reviewer: ZB6G, 11-Sep-2024 09:47:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-627485/3-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj36.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:19

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	107.3		8.00	2.13
2706-90-3	Perfluoropentanoic acid (PFPeA)	53.80		4.00	1.00
307-24-4	Perfluorohexanoic acid (PFHxA)	28.65		2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	28.18		2.00	0.50
335-67-1	Perfluorooctanoic acid (PFOA)	29.31		2.00	0.50
375-95-1	Perfluorononanoic acid (PFNA)	25.77		2.00	0.50
335-76-2	Perfluorodecanoic acid (PFDA)	26.59		2.00	0.50
2058-94-8	Perfluoroundecanoic acid (PFUnA)	27.26		2.00	0.50
307-55-1	Perfluorododecanoic acid (PFDoA)	23.56		2.00	0.50
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	23.41		2.00	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	26.17		2.00	0.50
375-73-5	Perfluorobutanesulfonic acid (PFBS)	24.73		2.00	0.50
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	27.11		2.00	0.50
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	25.63		2.00	0.52
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	25.75		2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	22.89		2.00	0.50
68259-12-1	Perfluorononanesulfonic acid (PFNS)	23.47		2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	17.98		2.00	0.50
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	95.35		8.00	2.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	103.5		8.00	2.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	100.9		8.00	2.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	29.44		2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	29.72		2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	30.74		2.00	0.50
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	27.27		2.00	0.62

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-627485/3-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj36.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:19

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.91		2.00	0.52
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	257.2		20.0	5.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	277.1		20.0	5.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	101.3		8.00	2.00
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	106.4		8.00	2.00
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	50.54		4.00	1.00
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	61.26		4.00	1.22
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	91.23		8.00	2.00
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	88.02		8.00	2.00
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	51.10		4.00	1.00
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	115.7		10.0	2.50
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	537.8		50.0	12.5
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	598.2		50.0	14.9
335-77-3	Perfluorodecanesulfonic acid (PFDS)	23.20		2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	50.13		4.00	1.00

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-627485/3-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj36.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:19

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	91.1		10-130
2283397-79-3	13C5 PFPeA	84.1		40-150
2328024-54-8	13C5 PFHxA	79.2		40-150
2328024-55-9	13C4 PFHpA	81.5		40-150
1350614-84-4	13C8 PFOA	83.9		30-140
2283397-80-6	13C9 PFNA	103		30-140
2328024-56-0	13C6 PFDA	107		20-140
STL02580	13C7 PFUnA	96.0		20-140
STL02116	13C2 PFTeDA	72.2		10-130
2708218-83-9	13C3 PFBS	97.3		25-150
2708218-85-1	13C3 PFHxS	101		25-150
2265893-05-6	13C8 PFOS	106		20-140
STL01056	13C8 FOSA	98.0		10-130
1400690-70-1	d3-NMeFOSAA	107		10-200
1265205-97-7	d5-NEtFOSAA	108		10-200
STL02395	M2-4:2 FTS	137		25-200
STL02279	M2-6:2 FTS	125		25-200
STL02280	M2-8:2 FTS	126		25-200
STL02255	13C3 HFPO-DA	84.7		25-160
STL02277	d7-N-MeFOSE-M	97.4		10-150
STL02278	d9-N-EtFOSE-M	86.5		10-150
STL02704	d5-NEtPFOSA	69.8		10-130
STL02705	d3-NMePFOSA	75.3		10-130
STL02703	13C2-PFDoDA	93.7		10-150

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Lims ID: LCS 240-627485/3-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Sep-2024 00:19:58 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: LCS 240-627485/3-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-036
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:53:40 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:53:40
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.565	3.544	0.021		1901877	1.25			845	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.719	0.014		1404253	0.6250			6944	
* 3 13C4 PFOA										
417.10 > 172.00	5.643	5.629	0.014		270140	0.6250			1264	
* 4 18O2 PFHxS										
403.00 > 83.90	5.868	5.843	0.025		1400018	0.5913			3222	
* 5 13C5 PFNA										
468.00 > 423.00	6.077	6.052	0.025		825071	0.3125			1220	
* 6 13C2 PFDA										
515.10 > 470.10	6.512	6.488	0.024		639357	0.3125			1194	
* 7 13C4 PFOS										
502.80 > 79.90	6.783	6.761	0.022		1214947	0.5975	Target=4.00		2464	
502.80 > 98.90	6.783	6.761	0.022		316126		3.84(2.00-6.00)		1178	
D 8 13C4 PFBA										
216.80 > 171.90	3.565	3.544	0.021	1.000	3931934	2.28		91.1	12497	
D 9 13C5 PFPeA										
268.30 > 223.00	4.215	4.202	0.013	0.891	1852592	1.05		84.1	6353	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.534	4.530	0.004	0.773	1270204	1.60	Target=0.29	137	3583	
329.10 > 309.00	4.534	4.530	0.004	0.773	3904850		0.33(0.14-0.43)	137	1088	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.719	0.014	1.000	1561842	0.4947	Target=40.21	79.2	3945	
318.00 > 120.30	4.733	4.719	0.014	1.000	36887		42.34(20.11-60.32)	79.2	438	
D 12 13C3 PFBS										
302.10 > 79.90	4.860	4.846	0.014	0.828	1432124	0.5657	Target=3.28	97.3	1838	
302.10 > 98.90	4.860	4.846	0.014	0.828	468367		3.06(1.64-4.92)	97.3	2374	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.925	4.923	0.002	1.041	1924640	2.12	Target=1.86	84.7	4356	
286.90 > 184.90	4.925	4.923	0.002	1.041	1015101		1.90(0.93-2.78)	84.7	2481	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.194	0.013	1.100	1678964	0.5092		81.5	3470	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.430	5.416	0.014	0.925	1351096	1.49	Target=0.38	125	3027	
429.10 > 409.00	5.430	5.416	0.014	0.925	3604072		0.37(0.19-0.57)	125	4642	
D 16 13C8 PFOA										
421.10 > 376.00	5.643	5.619	0.024	1.000	1787505	0.5243		83.9	4237	
D 17 13C3 PFHxS										
402.10 > 79.90	5.868	5.843	0.025	1.000	1483954	0.5970	Target=3.25	101	2668	
402.10 > 98.80	5.868	5.843	0.025	1.000	440971		3.37(1.63-4.88)	101	1448	
D 18 13C9 PFNA										
472.10 > 427.00	6.077	6.052	0.025	1.000	667702	0.3225		103	1204	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.271	6.249	0.022	1.069	940313	1.51	Target=0.33	126	3361	
529.10 > 509.00	6.271	6.249	0.022	1.069	2740835		0.34(0.16-0.49)	126	5649	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.452	6.427	0.025	0.951	1263737	1.34		107	2991	
D 21 13C6 PFDA										
519.10 > 474.10	6.512	6.488	0.024	1.000	661366	0.3359		107	1363	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.648	6.624	0.024	0.980	1255538	1.36		108	2525	
D 23 13C8 PFOS										
507.10 > 79.90	6.783	6.752	0.031	1.000	1327755	0.6338	Target=4.26	106	544	
507.10 > 98.90	6.783	6.752	0.031	1.000	327945		4.05(2.13-6.39)	106	680	
D 24 13C7 PFUnA										
570.00 > 525.10	6.951	6.923	0.028	1.068	581019	0.2998		96.0	1015	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.389	7.353	0.036	1.135	535403	0.2928		93.7	988	
D 26 13C8 FOSA										
506.10 > 77.80	7.705	7.709	-0.004	1.136	1377042	0.6124		98.0	2355	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.217	8.179	0.039	1.262	236047	0.2258		72.2	519	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.601	8.607	-0.006	1.268	2028645	6.09		97.4	588	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.724	8.721	0.003	1.286	208732	0.4707		75.3	867	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.853	8.849	0.004	1.305	2211455	5.41		86.5	716	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.951	8.947	0.004	1.320	195029	0.4364		69.8	112	
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.573	3.559	0.014	1.002	4008858	2.68		107	24.0	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
34 3:3 FTCA										
241.00 > 177.00	3.851	3.842	0.009	0.914	258540	2.89	Target=1.06	92.5	2666	
241.00 > 117.00	3.851	3.842	0.009	0.914	249234		1.04(0.53-1.58)		64.5	
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.851	3.842	0.009	0.914	2551206	1.25		100	5088	
35 Perfluoropentanoic acid										
263.00 > 219.00	4.225	4.219	0.006	1.002	3054079	1.34		108	222	
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.395	4.388	0.007	1.043	2714854	1.26		101	5732	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.544	4.540	0.004	1.002	7748853	2.38	Target=1.34	102	22299	
327.10 > 80.90	4.544	4.540	0.004	1.002	5637235		1.37(0.67-2.01)		3603	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.691	4.696	-0.005	0.991	336138	1.53	Target=1.72	123	2100	
295.00 > 84.90	4.691	4.696	-0.005	0.991	212371		1.58(0.86-2.58)		710	
48 FBSA										
297.90 > 78.00	4.722	4.718	0.004	0.972	4514491	2.68		107	4932	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.744	4.739	0.005	1.002	1422446	0.7161	Target=14.20	115	163	
313.00 > 118.90	4.733	4.739	-0.006	1.000	102790		13.84(7.10-21.30)		578	
41 5:3 FTCA										
341.00 > 237.10	4.816	4.812	0.004	1.018	4756567	13.4	Target=1.54	86.1	3747	
341.00 > 217.00	4.816	4.812	0.004	1.018	3073566		1.55(0.77-2.31)		1207	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.871	4.856	0.015	1.002	1479304	0.6182	Target=3.31	112	2173	
298.70 > 98.80	4.871	4.856	0.015	1.002	426923		3.47(1.66-4.97)		1468	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.936	4.932	0.004	1.002	2147999	2.53	Target=1.99	101	4669	
284.90 > 184.90	4.936	4.932	0.004	1.002	1125560		1.91(1.00-2.99)		2027	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.126	5.123	0.003	1.083	9339370	1.28	Target=12.91	115	9637	
314.80 > 82.90	5.126	5.123	0.003	1.083	717188		13.02(6.46-19.37)		1726	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.207	5.204	0.003	1.000	2044886	0.7044	Target=3.56	113	230	
363.10 > 169.00	5.207	5.204	0.003	1.000	534258		3.83(1.78-5.34)		1779	
49 DONA										
376.90 > 250.90	5.379	5.365	0.014	1.092	10959979	2.66	Target=1.61	113	9006	
376.90 > 84.80	5.368	5.365	0.003	1.090	6585403		1.66(0.81-2.42)		9841	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.399	5.385	0.014	0.920	1747476	0.6779	Target=3.08	116	1639	
349.10 > 98.90	5.399	5.385	0.014	0.920	547022		3.19(1.54-4.63)		1537	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.430	5.425	0.005	1.000	7007442	2.59	Target=1.41	109	9493	
427.10 > 80.90	5.430	5.425	0.005	1.000	4597033		1.52(0.70-2.11)		7894	
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.652	5.638	0.014	1.002	1005319	0.7328	Target=1.93	117	107	M
413.00 > 169.00	5.643	5.638	0.005	1.000	497968		2.02(0.96-2.89)		728	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 7:3 FTCA										
441.00 > 316.90	5.699	5.694	0.005	1.204	5054444	15.0	Target=1.07	95.7	3205	
441.00 > 336.90	5.699	5.694	0.005	1.204	4840949		1.04(0.53-1.60)		6057	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.868	5.862	0.006	1.000	1373247	0.6408	Target=3.17	113	1135	M
398.70 > 98.90	5.868	5.862	0.006	1.000	392579		3.50(1.59-4.76)		614	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.077	6.061	0.016	1.000	1042654	0.6442	Target=4.77	103	129	M
463.00 > 169.00	6.077	6.061	0.016	1.000	206511		5.05(2.39-7.16)		353	M
62 FHxSA										
397.90 > 78.00	6.234	6.258	-0.024	1.062	6557794	2.60		104	4644	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.281	6.267	0.014	1.001	4934892	2.52	Target=1.35	105	4407	
527.10 > 80.80	6.271	6.267	0.004	1.000	3595084		1.37(0.67-2.02)		6883	
57 PFECHS										
461.00 > 381.00	6.281	6.267	0.014	1.070	5765962	1.36	Target=1.89	118	381	
461.00 > 99.00	6.281	6.267	0.014	1.070	2930804		1.97(0.94-2.83)		4272	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.327	6.314	0.013	0.933	1675872	0.6437	Target=3.87	108	1648	
449.00 > 98.80	6.327	6.314	0.013	0.933	411477		4.07(1.93-5.80)		764	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.462	6.447	0.015	1.002	759384	0.6817	Target=1.69	109	1010	M
570.10 > 483.00	6.452	6.447	0.005	1.000	460981		1.65(0.85-2.54)		816	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.521	6.498	0.023	1.001	1117165	0.6649	Target=5.10	106	173	
512.90 > 219.00	6.512	6.498	0.014	1.000	209402		5.34(2.55-7.66)		951	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.657	6.643	0.014	1.001	542973	0.6477	Target=1.49	104	821	M
584.20 > 526.00	6.657	6.643	0.014	1.001	376203		1.44(0.75-2.24)		400	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.792	6.770	0.022	1.001	1599559	0.5722	Target=4.80	98.7	1100	M
498.90 > 98.80	6.792	6.770	0.022	1.001	347415		4.60(2.40-7.20)		1062	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.959	6.940	0.019	1.001	1142344	0.6814	Target=6.10	109	358	
563.10 > 269.10	6.959	6.940	0.019	1.001	187599		6.09(3.05-9.15)		1071	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.130	7.103	0.027	1.448	8346464	2.28	Target=3.10	97.9	1120	
532.80 > 353.00	7.122	7.103	0.019	1.446	2627720		3.18(1.55-4.65)		2303	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.230	7.205	0.025	1.066	1242064	0.5867	Target=4.02	97.8	2687	
548.80 > 98.80	7.230	7.205	0.025	1.066	297296		4.18(2.01-6.03)		1357	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.396	7.361	0.035	1.001	999167	0.5891	Target=16.81	94.2	384	
613.10 > 319.00	7.389	7.361	0.028	1.000	59434		16.81(8.41-25.22)		545	
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.660	7.627	0.033	1.129	1389288	0.5799	Target=4.25	96.3	2243	
599.00 > 98.80	7.651	7.627	0.024	1.128	328932		4.22(2.12-6.37)		1916	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.716	7.720	-0.004	1.001	1523848	0.7360	Target=51.55	118	921	M
498.10 > 478.00	7.705	7.720	-0.015	1.000	31749		48.00(25.77-77.32)		157	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.811	7.784	0.027	0.951	875885	0.5853	Target=6.27	93.6	416	
663.00 > 168.90	7.811	7.784	0.027	0.951	135885		6.45(3.13-9.40)		740	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.990	7.954	0.036	1.622	7815510	2.20	Target=3.32	93.4	4399	
632.90 > 452.90	7.980	7.954	0.026	1.620	2399227		3.26(1.66-4.97)		3046	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.217	8.179	0.038	1.000	619521	0.6544	Target=6.82	105	391	
713.10 > 168.90	8.217	8.179	0.038	1.000	87024		7.12(3.41-10.24)		1069	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.440	8.402	0.038	1.244	911834	0.4496	Target=4.61	74.3	1127	
699.10 > 98.80	8.440	8.402	0.038	1.244	207157		4.40(2.30-6.91)		1124	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.622	8.628	-0.006	1.002	308773	6.43		103	692	M
75 NMeFOSA										M
511.90 > 219.00	8.734	8.741	-0.007	1.001	241645	0.7429	Target=0.70	119	621	M
511.90 > 169.00	8.724	8.741	-0.017	1.000	350779		0.69(0.35-1.05)		947	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.873	8.879	-0.006	1.002	331051	6.93		111	983	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.960	8.965	-0.005	1.001	236548	0.7686	Target=0.71	123	643	M
526.00 > 169.00	8.951	8.965	-0.014	1.000	332267		0.71(0.35-1.06)		522	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 08:53:42 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d

Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04

Lims ID: LCS 240-627485/3-A

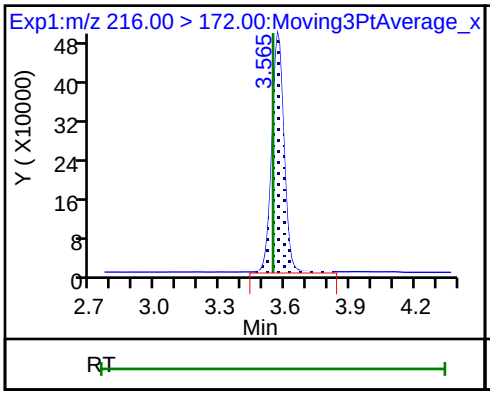
Client ID:

Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36

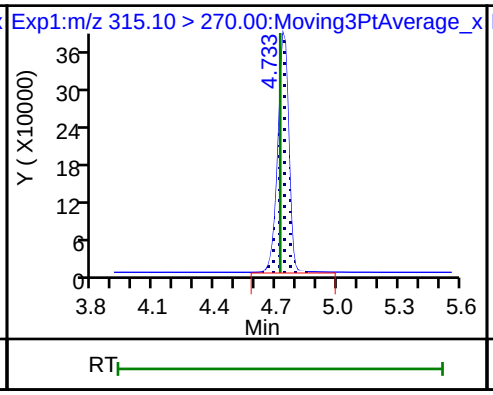
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Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

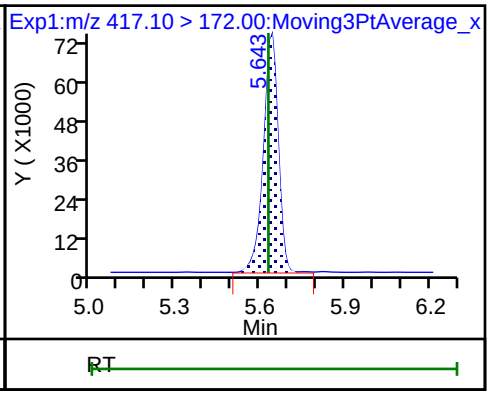
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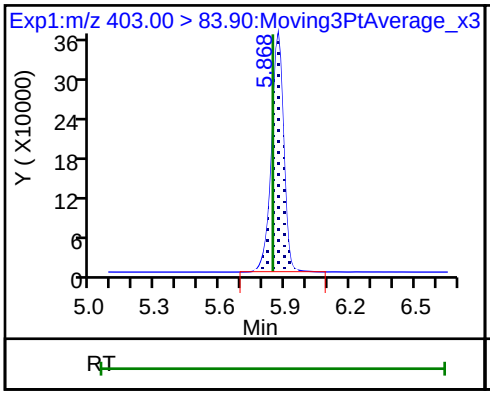
* 2 13C2 PFHxA



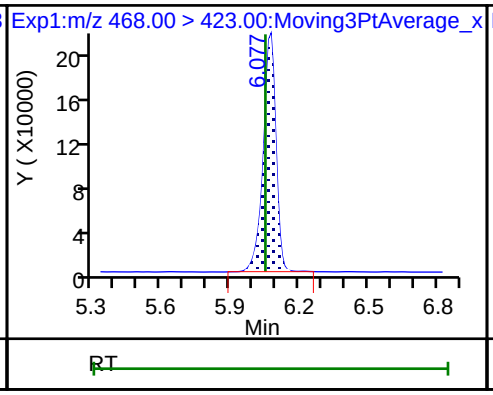
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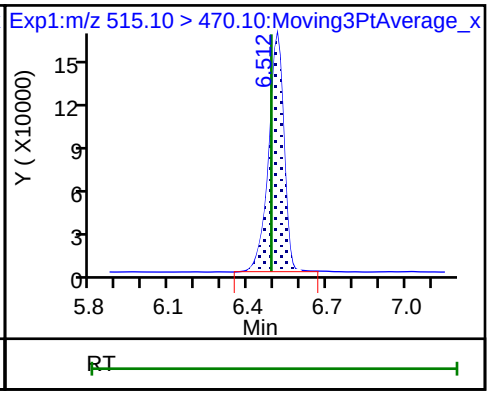
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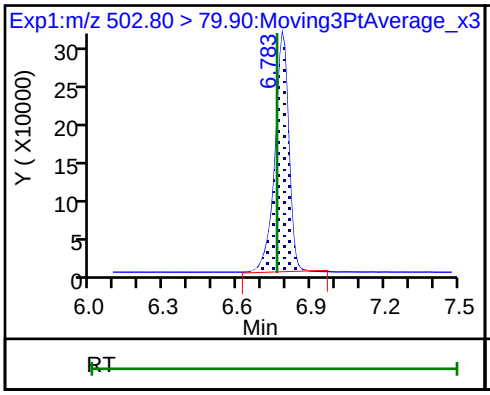
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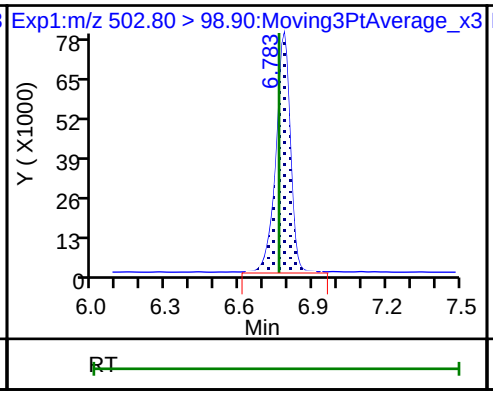
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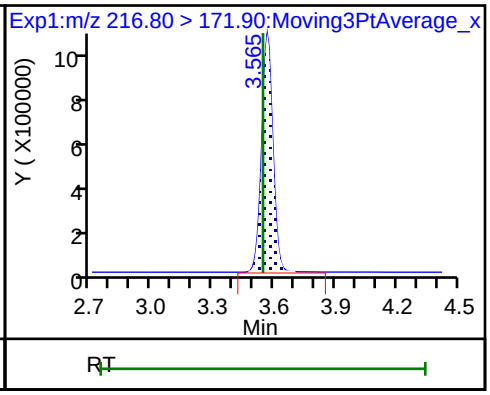
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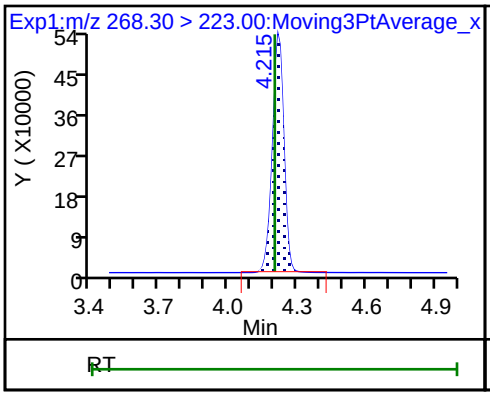
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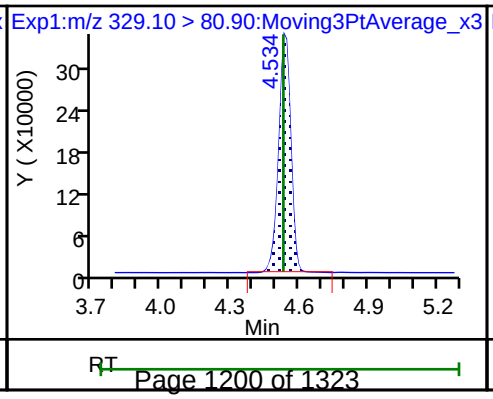
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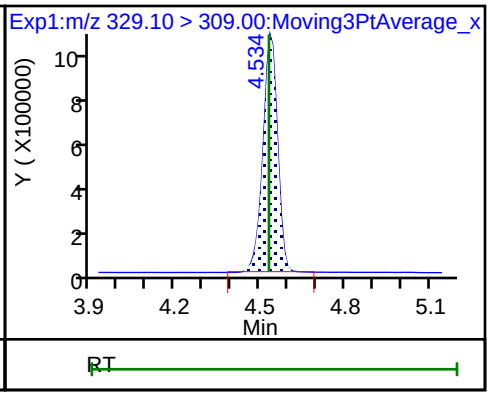
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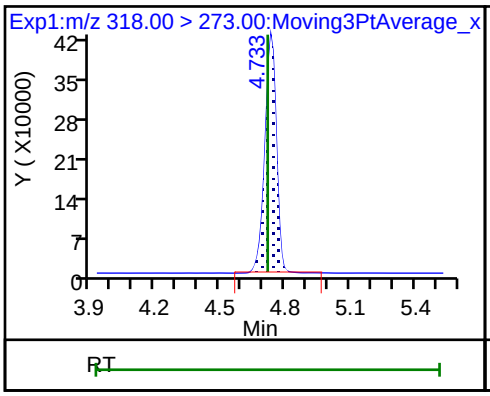
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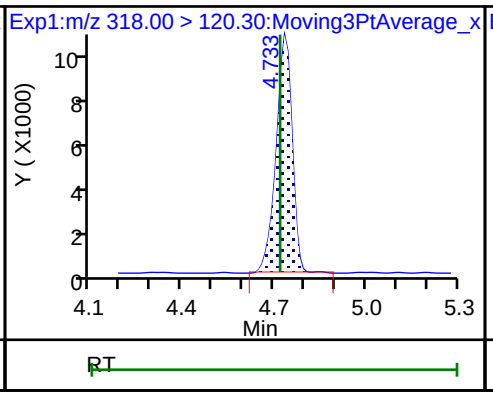
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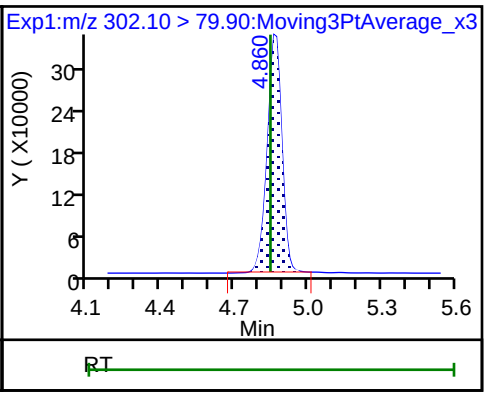
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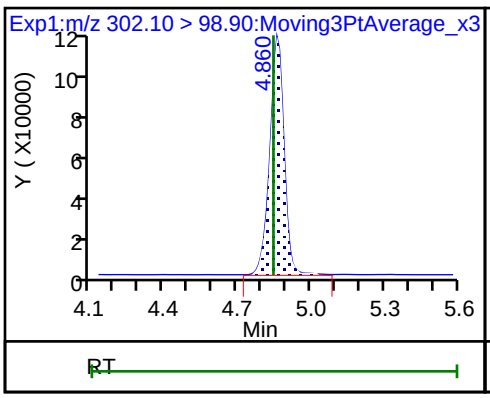
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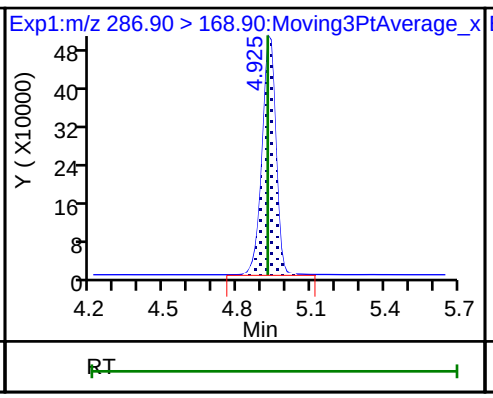
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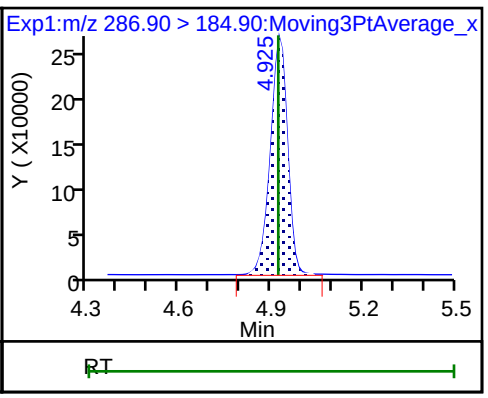
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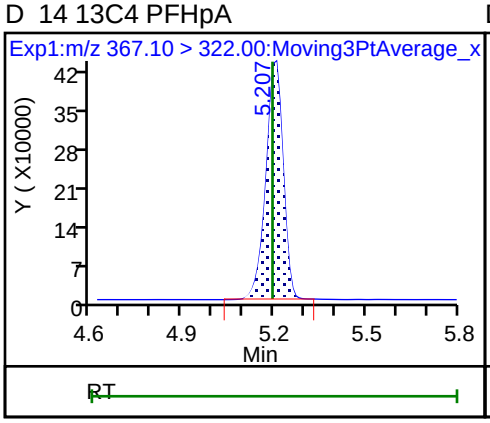
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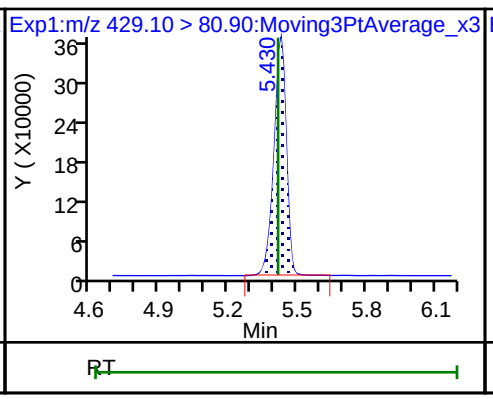
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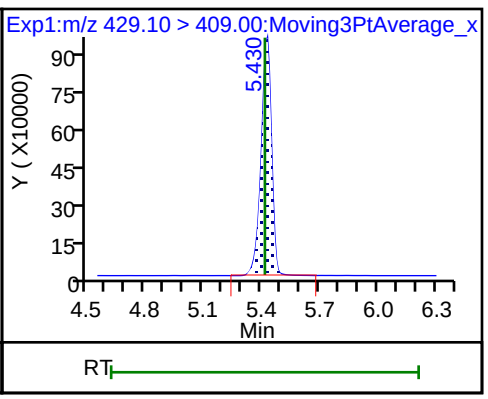
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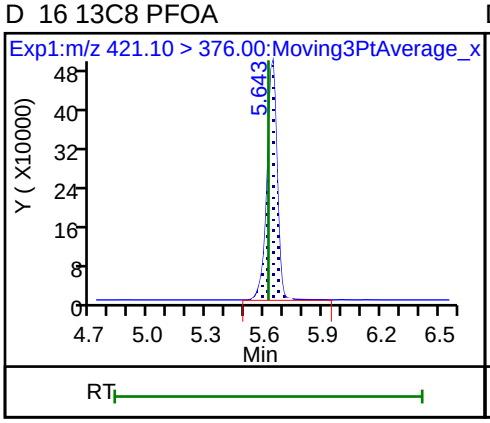
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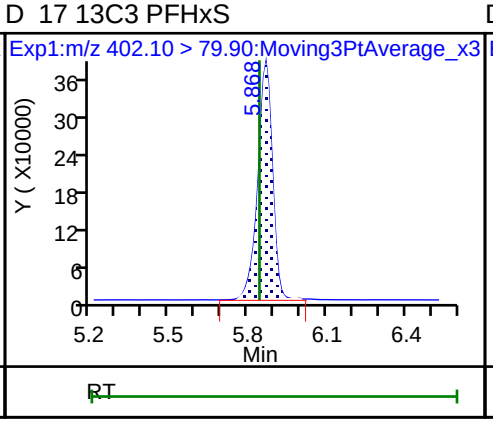
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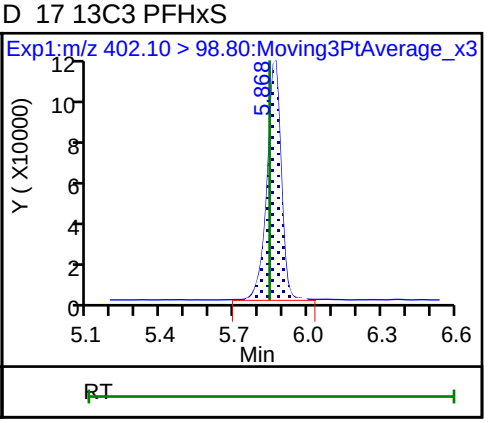
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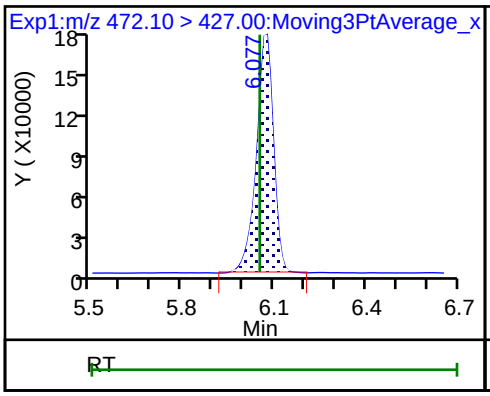
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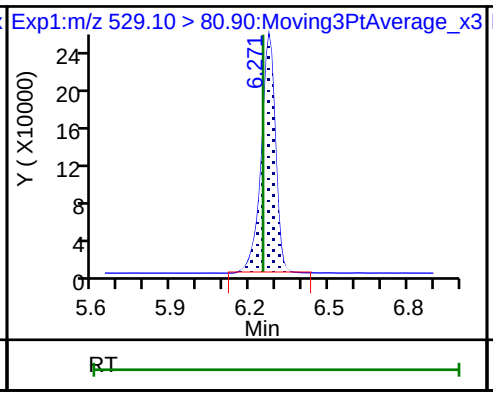
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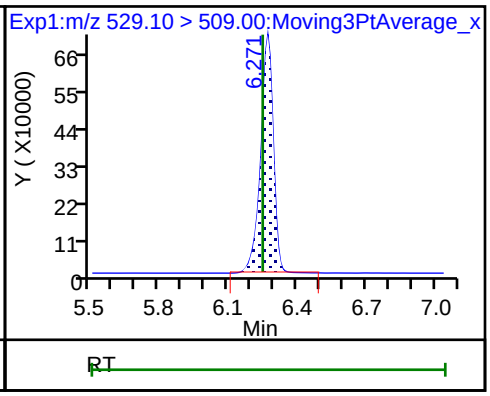
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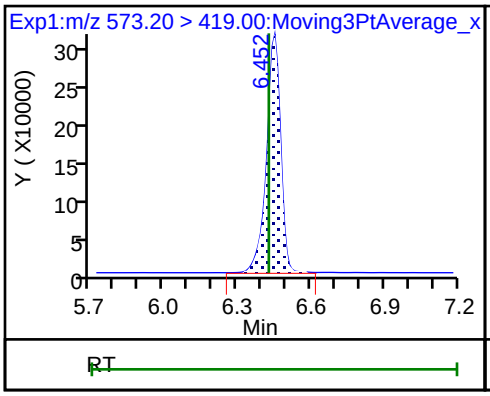
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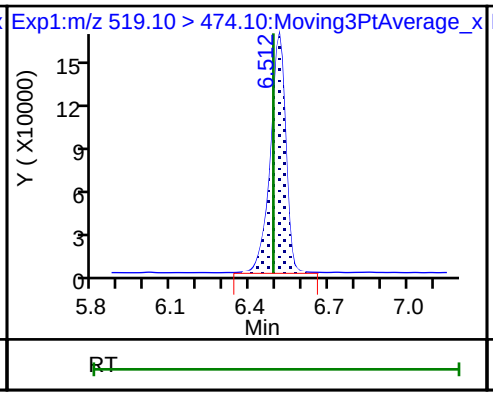
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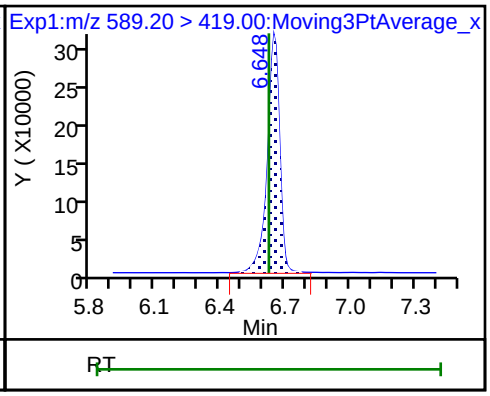
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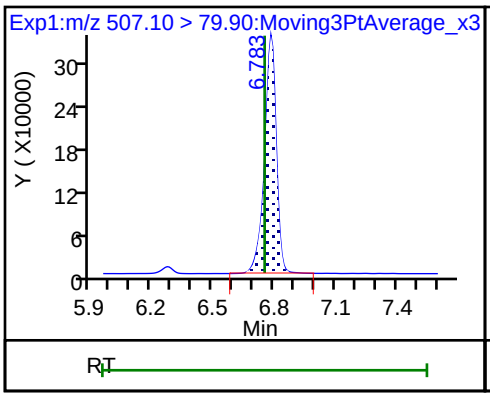
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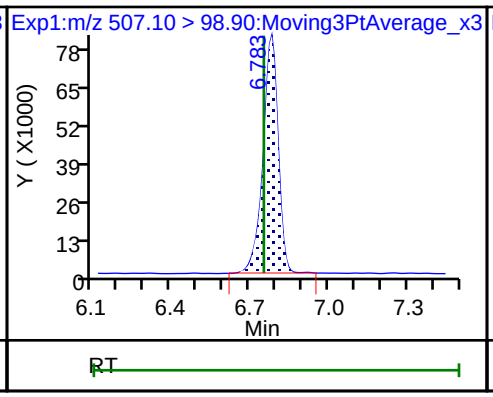
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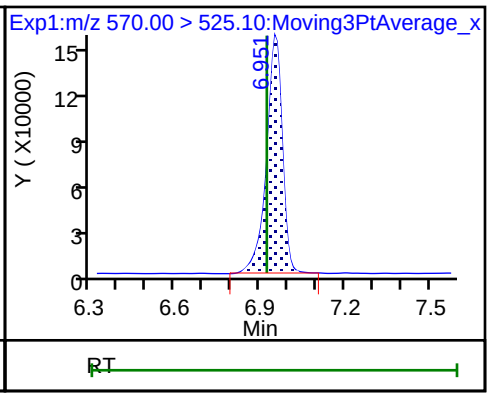
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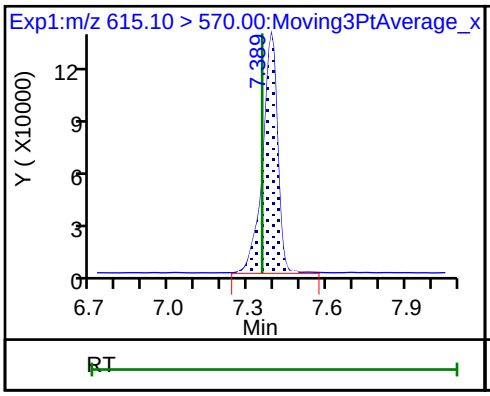
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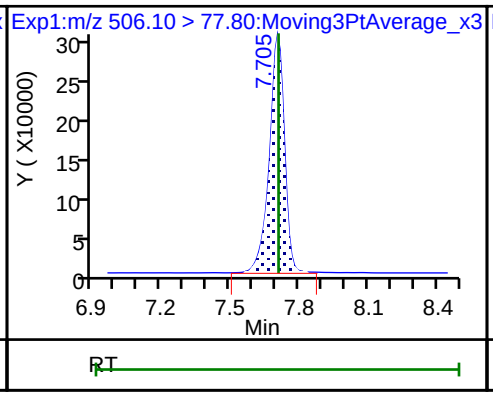
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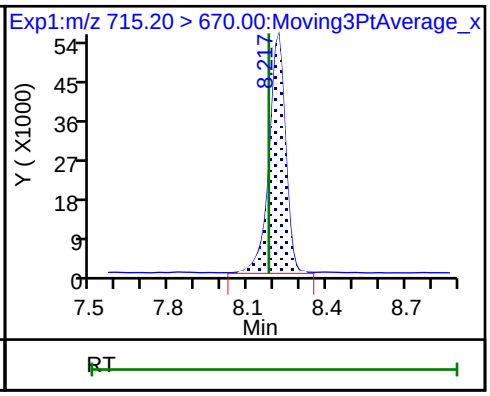
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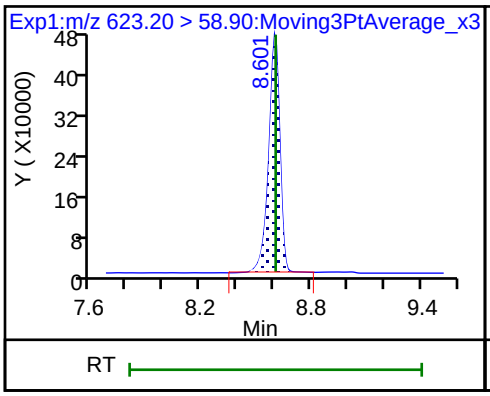
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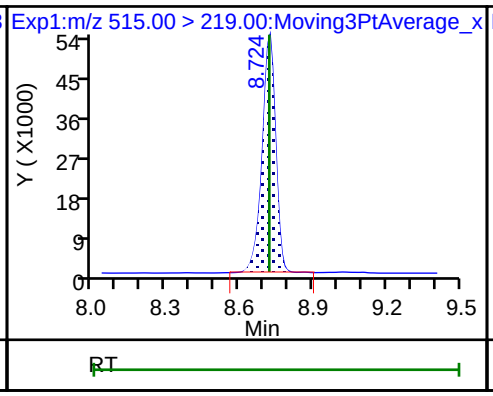
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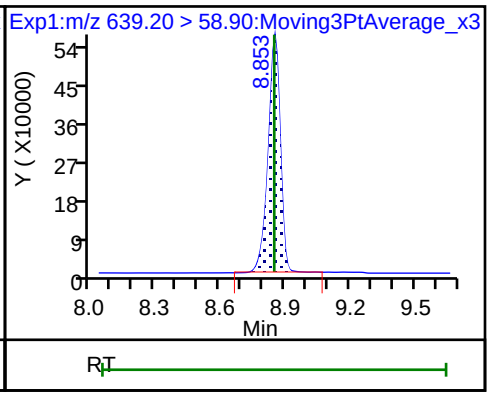
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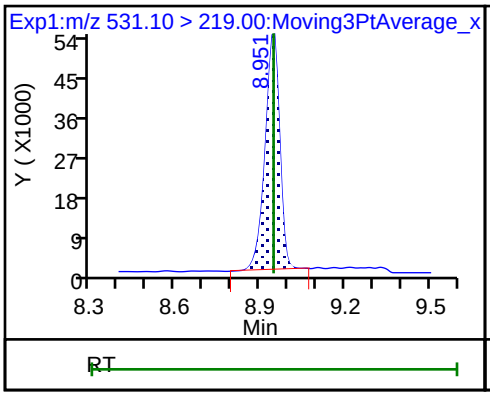
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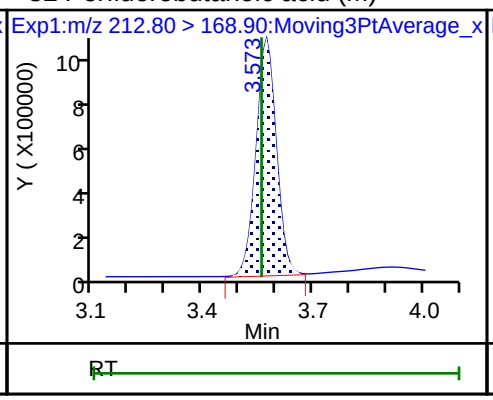
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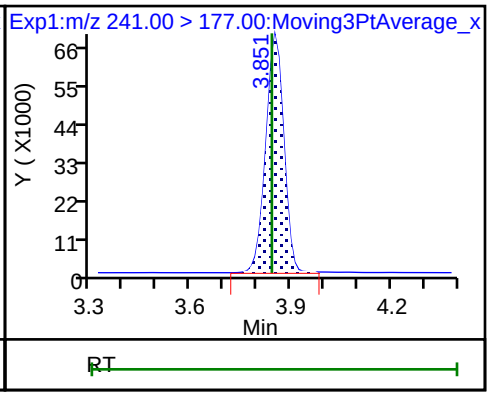
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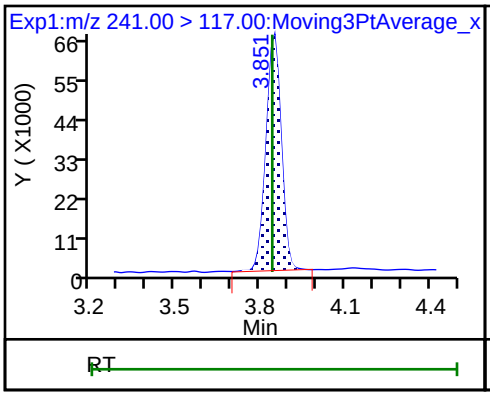
32 Perfluorobutanoic acid (M)



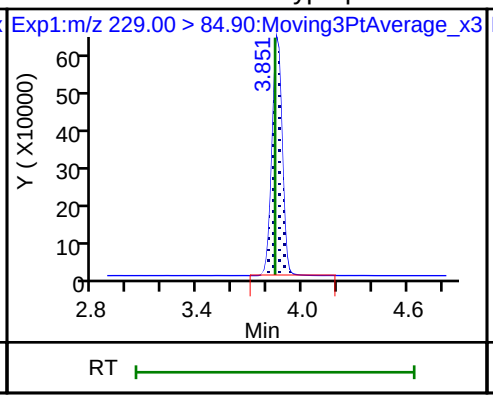
34 3:3 FTCA



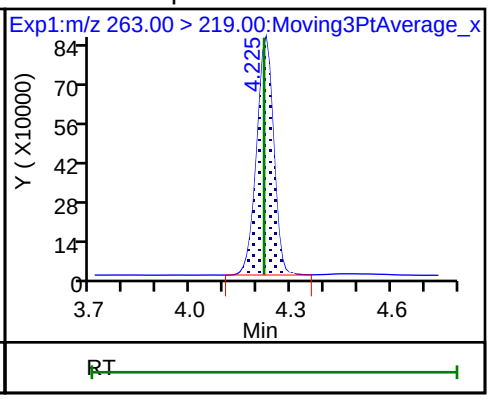
34 3:3 FTCA



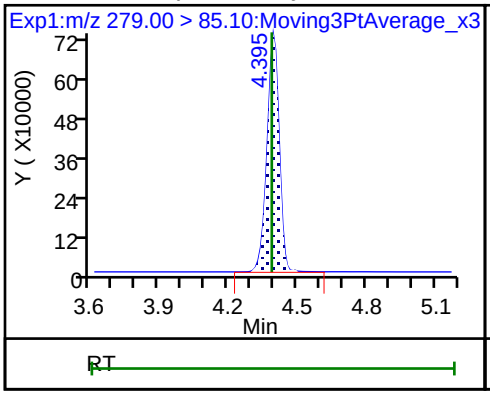
33 Perfluoro-3-methoxypropanoic aci



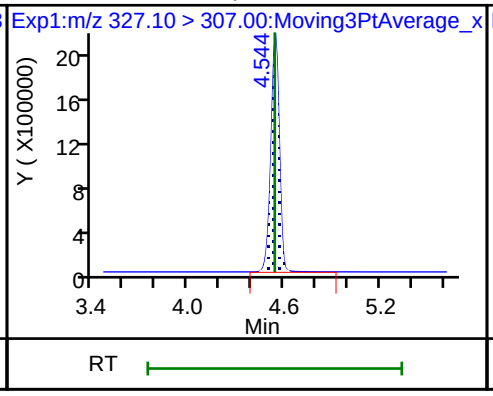
35 Perfluoropentanoic acid



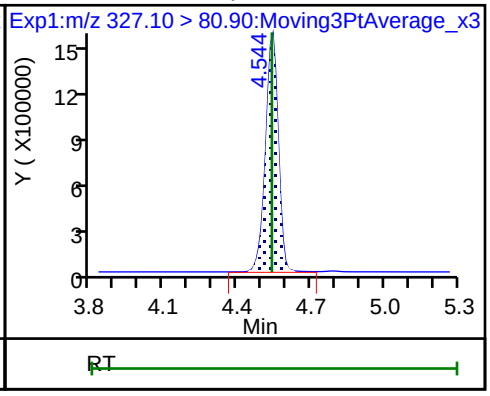
36 Perfluoro(4-methoxybutanoic acid



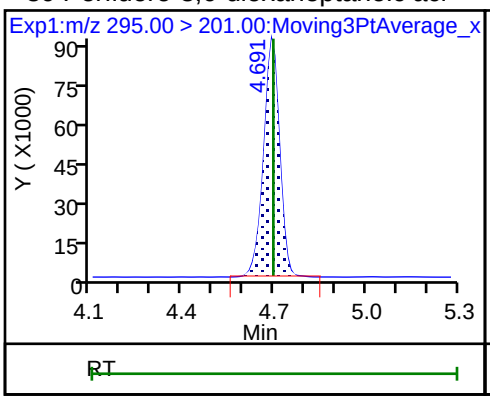
38 1H,1H,2H,2H-perfluorohexanesulfo



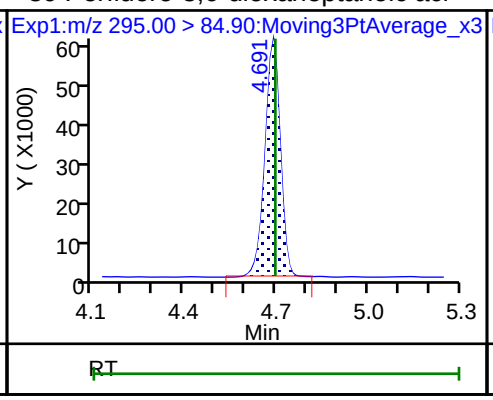
38 1H,1H,2H,2H-perfluorohexanesulfo



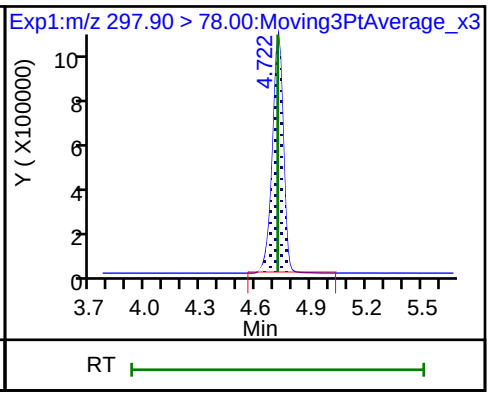
39 Perfluoro-3,6-dioxaheptanoic aci



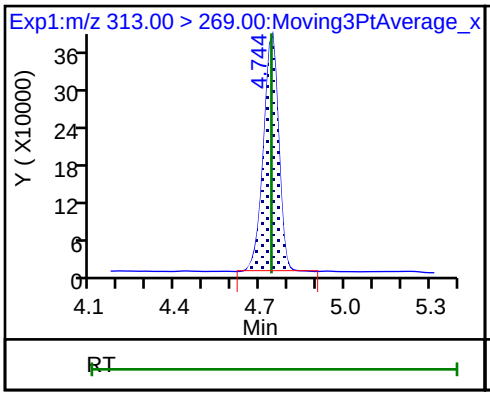
39 Perfluoro-3,6-dioxaheptanoic aci



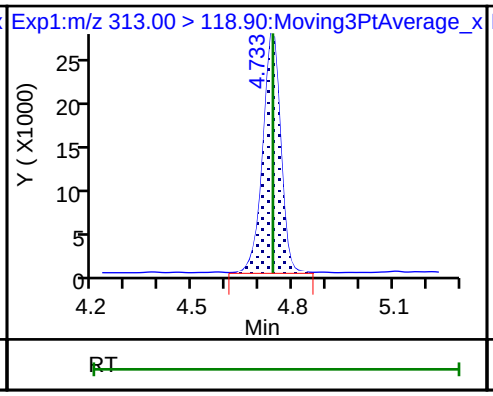
48 FBSA



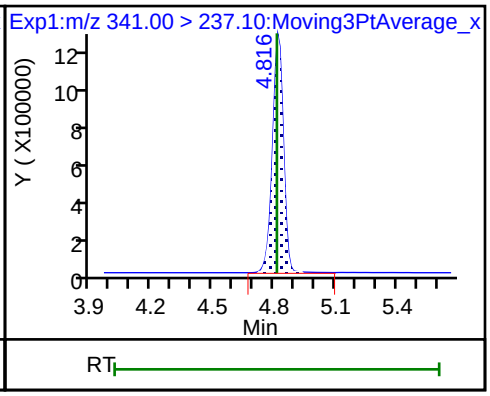
40 Perfluorohexanoic acid



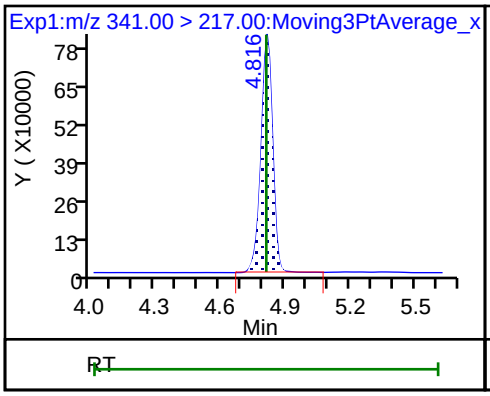
40 Perfluorohexanoic acid



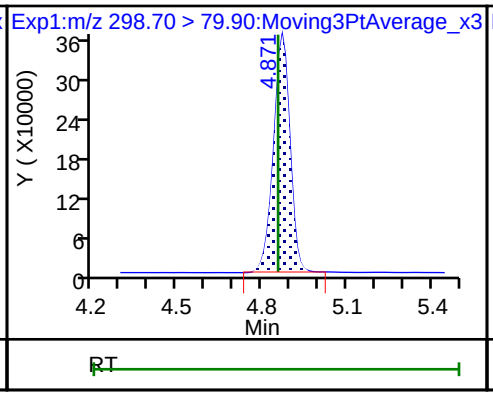
41 5:3 FTCA



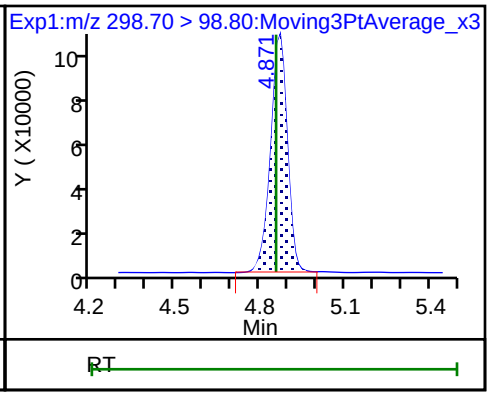
41 5:3 FTCA



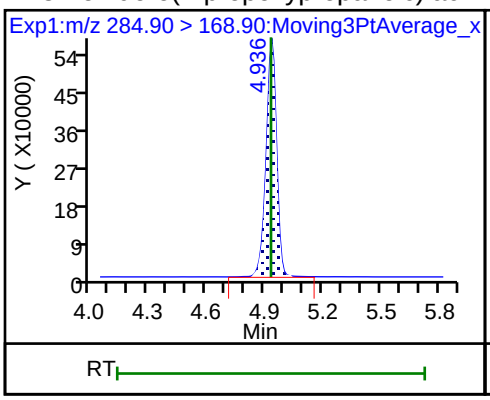
42 Perfluorobutanesulfonic acid



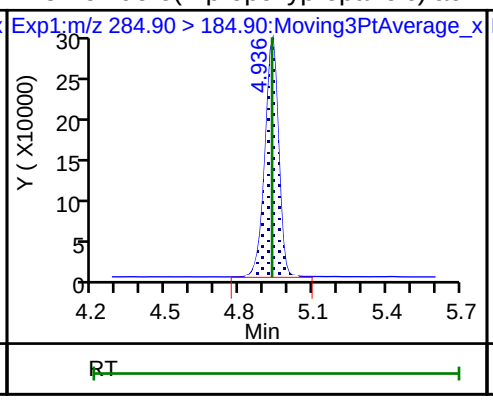
42 Perfluorobutanesulfonic acid



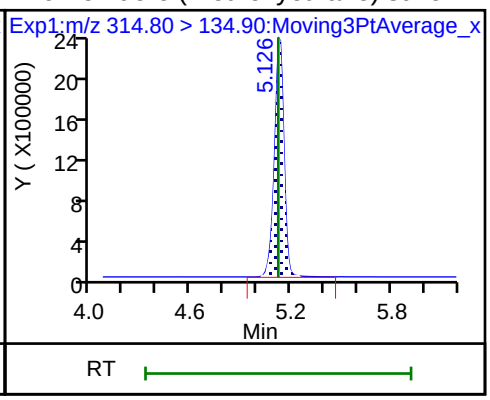
43 Perfluoro(2-propoxypropanoic) ac



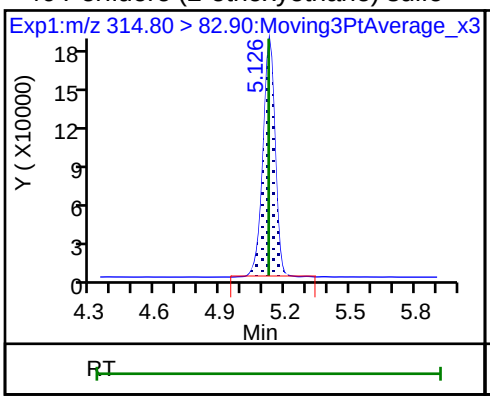
43 Perfluoro(2-propoxypropanoic) ac



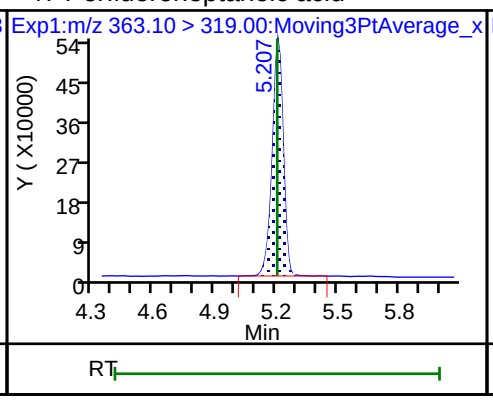
46 Perfluoro (2-ethoxyethane) sulfo



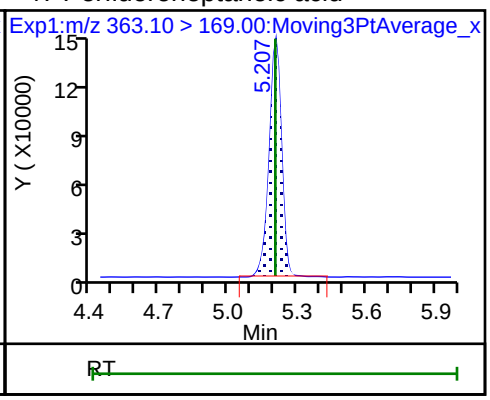
46 Perfluoro (2-ethoxyethane) sulfo



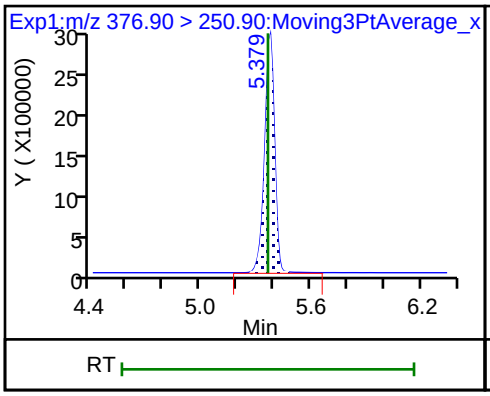
47 Perfluoroheptanoic acid



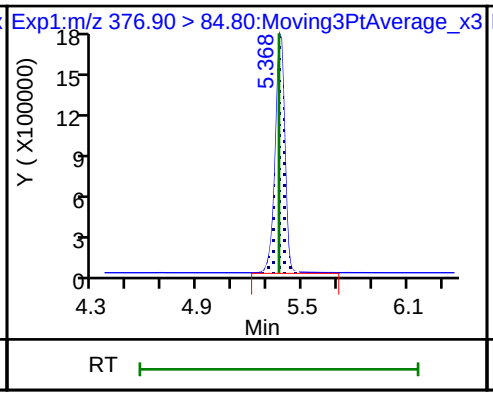
47 Perfluoroheptanoic acid



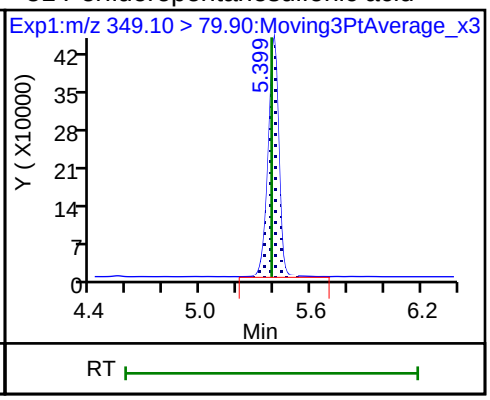
49 DONA



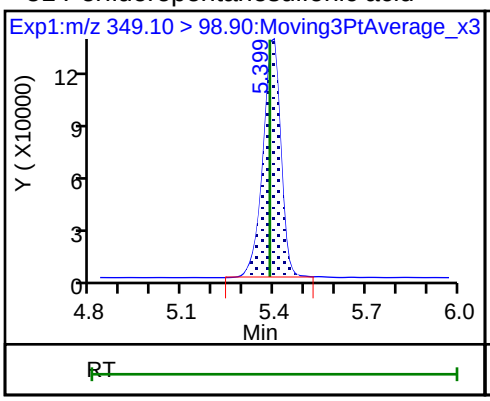
49 DONA



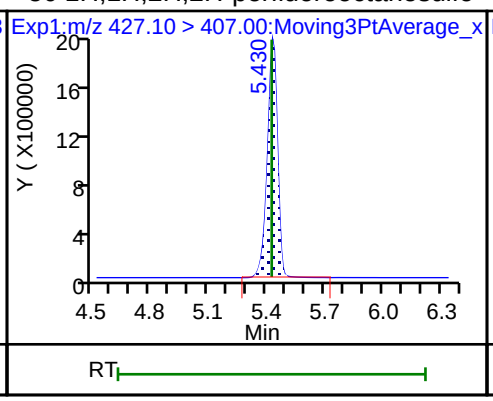
51 Perfluoropentanesulfonic acid



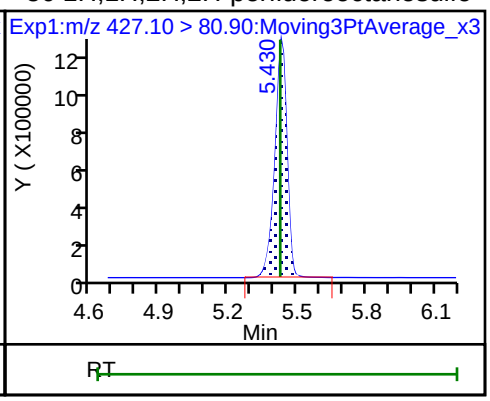
51 Perfluoropentanesulfonic acid



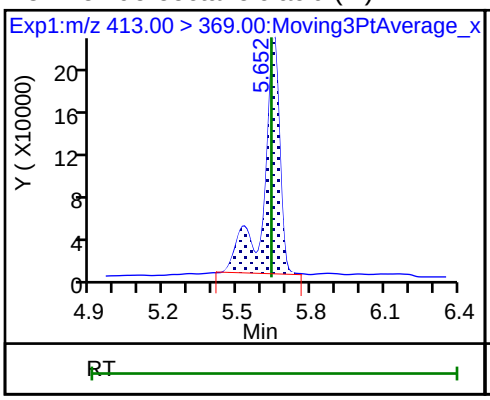
50 1H,1H,2H,2H-perfluorooctanesulfo



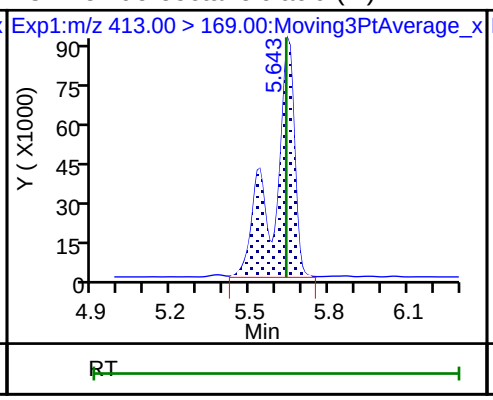
50 1H,1H,2H,2H-perfluorooctanesulfo



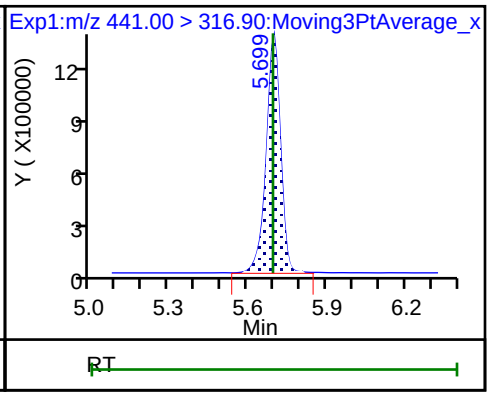
52 Perfluorooctanoic acid (M)



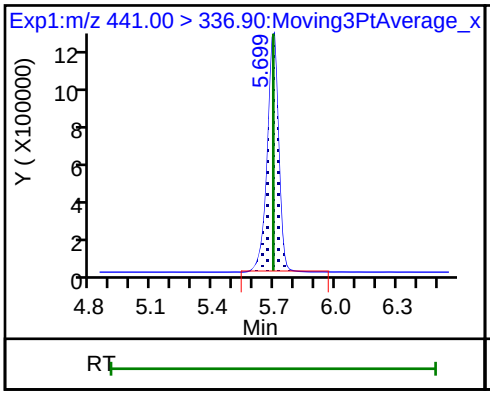
52 Perfluorooctanoic acid (M)



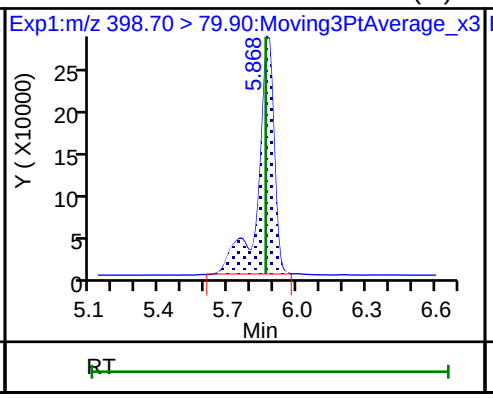
54 7:3 FTCA



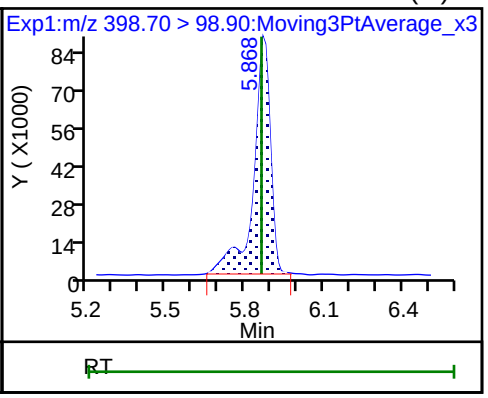
54 7:3 FTCA



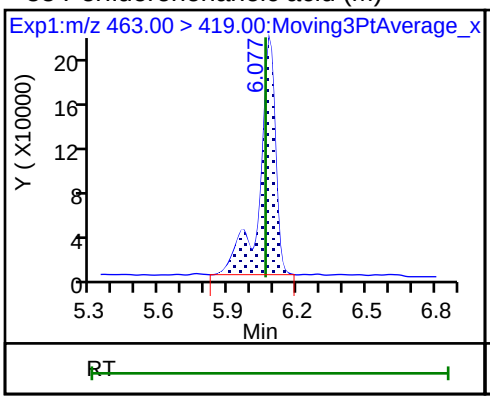
53 Perfluorohexanesulfonic acid (M)



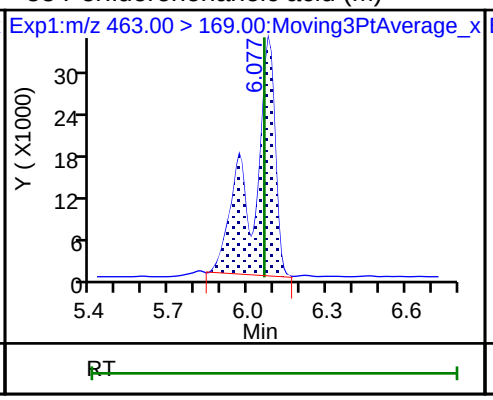
53 Perfluorohexanesulfonic acid (M)



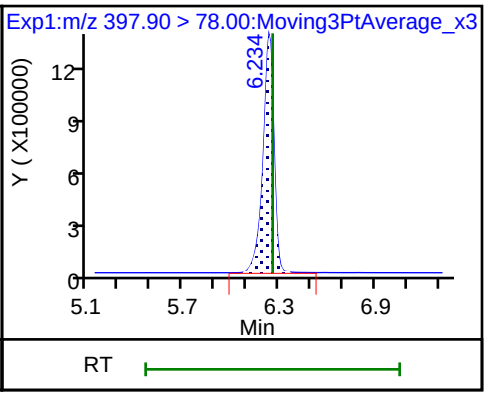
55 Perfluorononanoic acid (M)



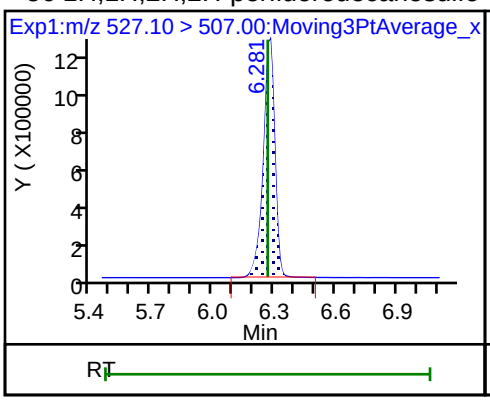
55 Perfluorononanoic acid (M)



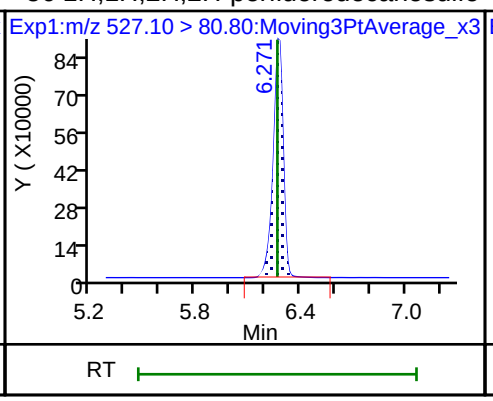
62 FHxSA



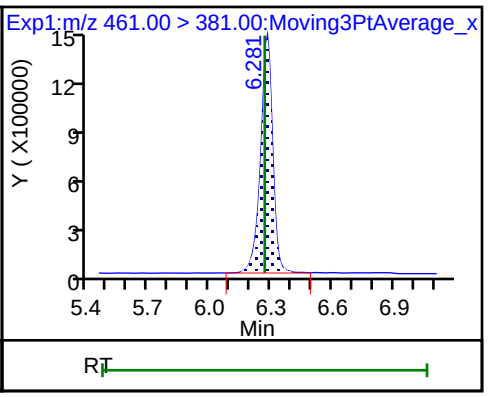
56 1H,1H,2H,2H-perfluorodecanesulfo



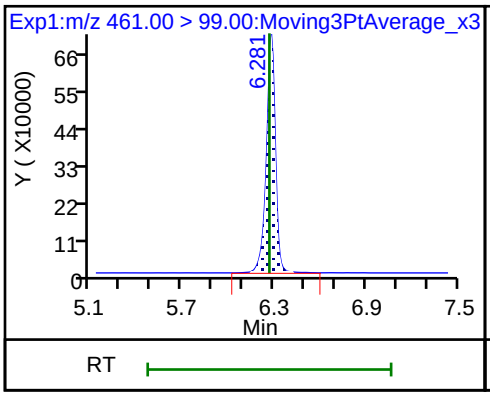
56 1H,1H,2H,2H-perfluorodecanesulfo



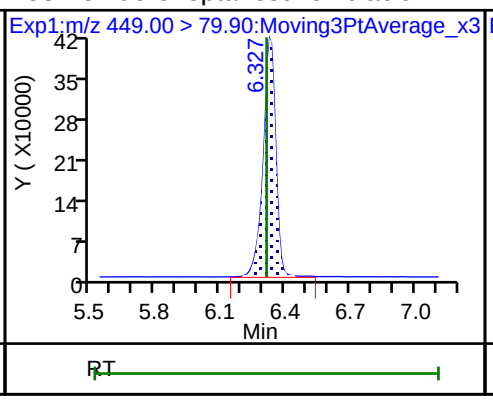
57 PFECHS



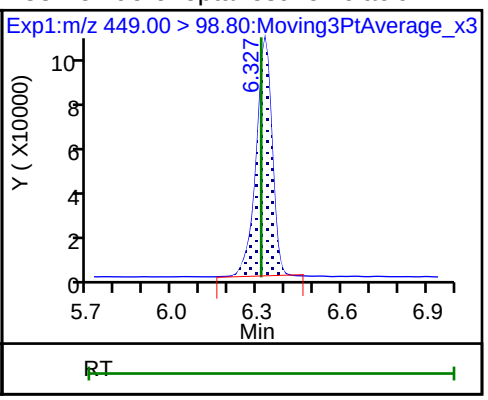
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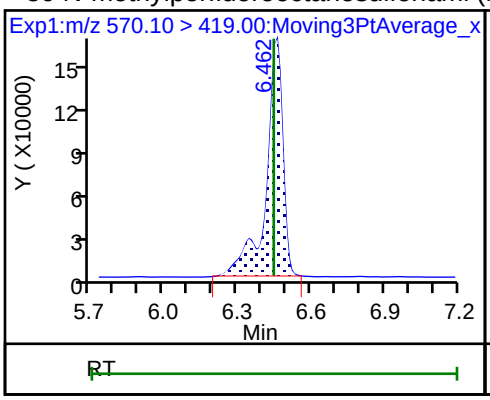
58 Perfluoroheptanesulfonic acid



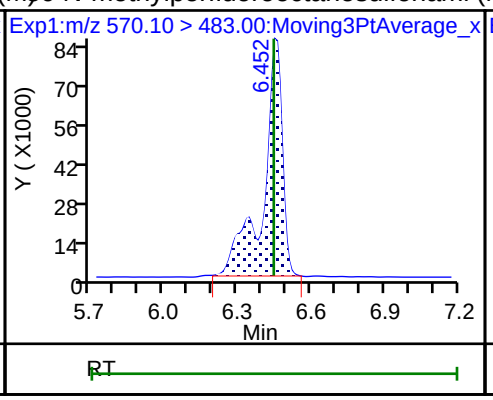
58 Perfluoroheptanesulfonic acid



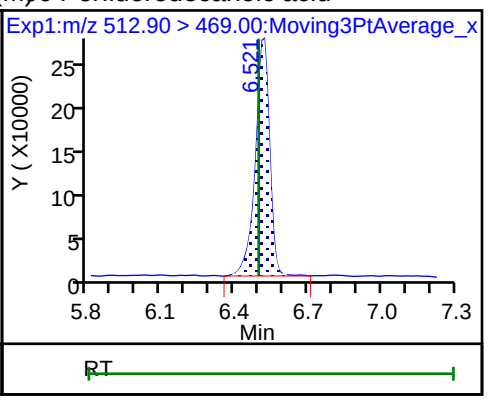
59 N-methylperfluorooctanesulfonami (M)



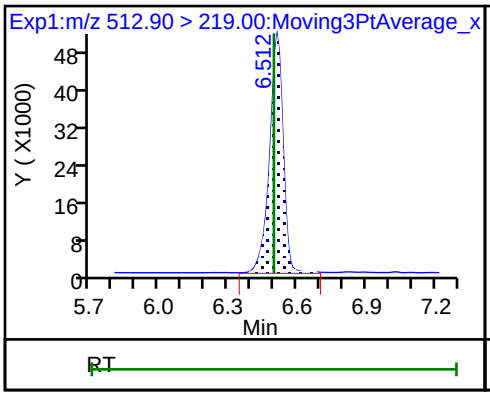
59 N-methylperfluorooctanesulfonami (M)



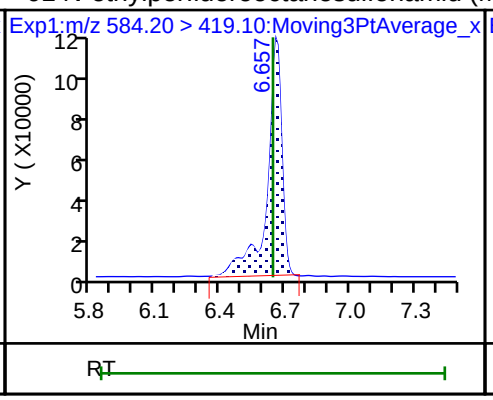
60 Perfluorodecanoic acid



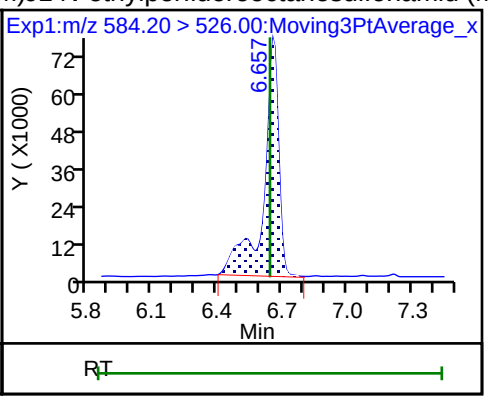
60 Perfluorodecanoic acid



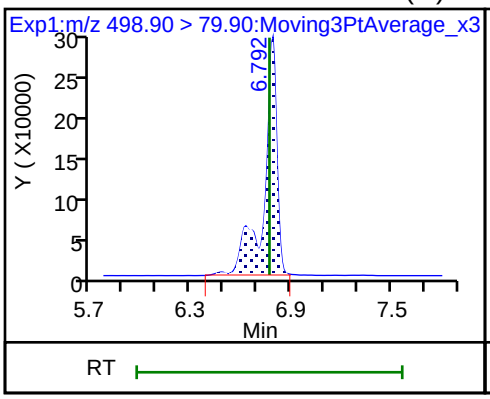
61 N-ethylperfluorooctanesulfonamid (M)



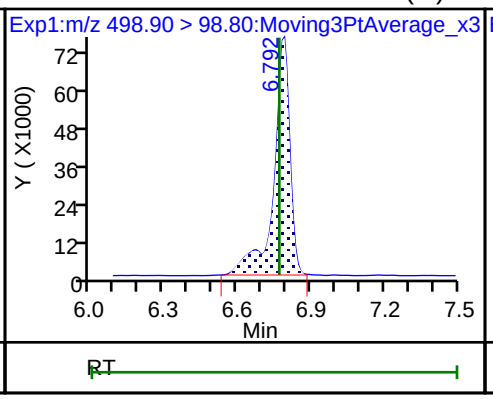
61 N-ethylperfluorooctanesulfonamid (M)



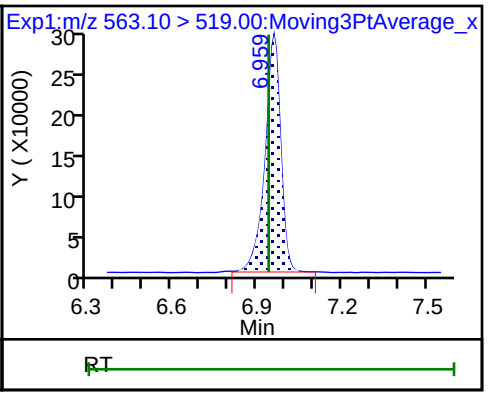
63 Perfluorooctanesulfonic acid (M)



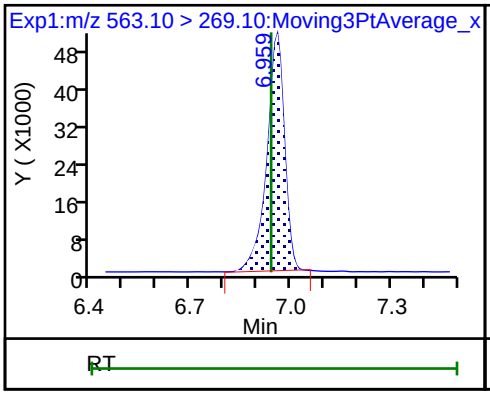
63 Perfluorooctanesulfonic acid (M)



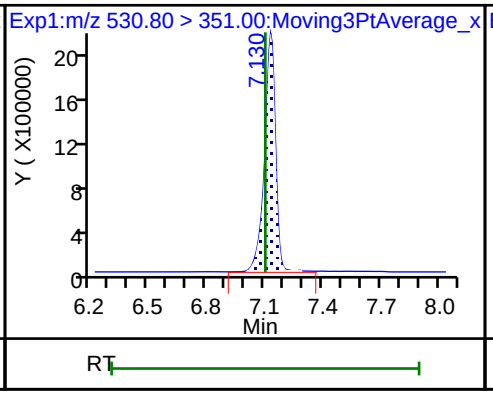
64 Perfluoroundecanoic acid



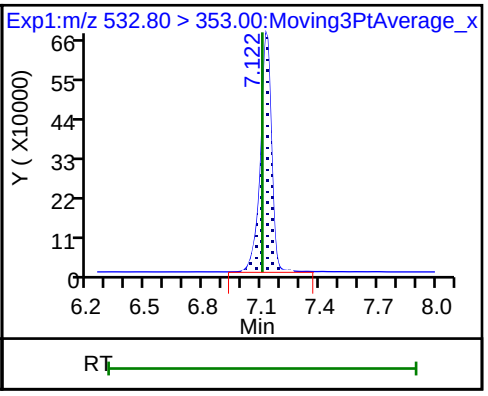
64 Perfluoroundecanoic acid



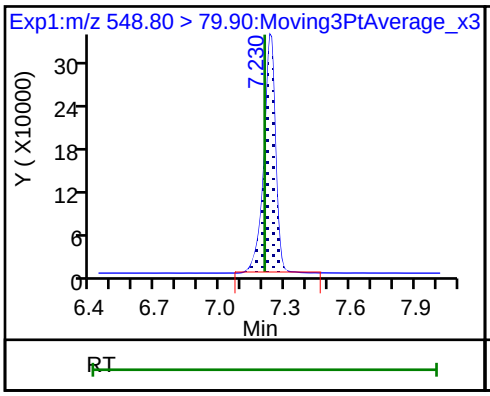
65 9-Chlorohexadecafluoro-3-oxanona



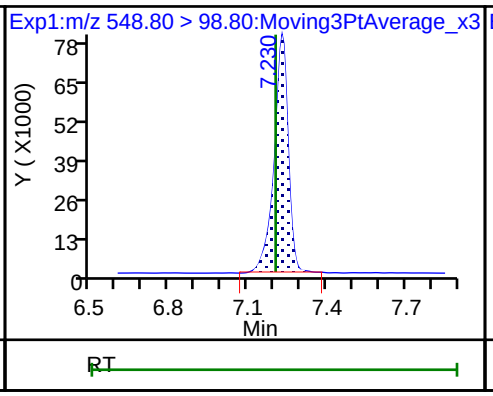
65 9-Chlorohexadecafluoro-3-oxanona



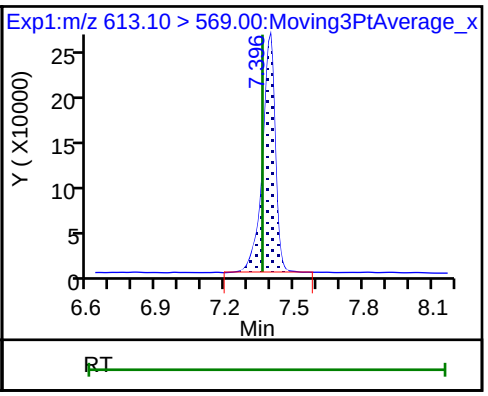
66 Perfluorononanesulfonic acid



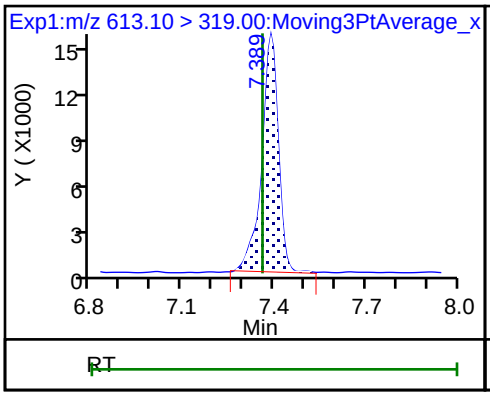
66 Perfluorononanesulfonic acid



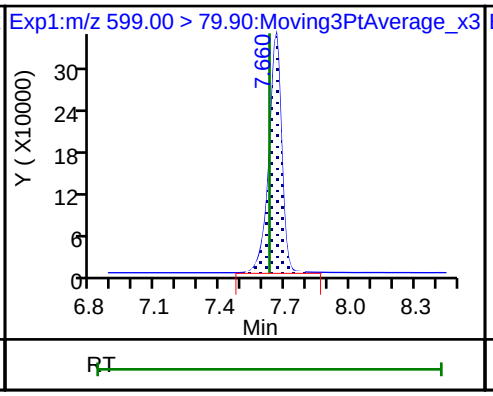
67 Perfluorododecanoic acid



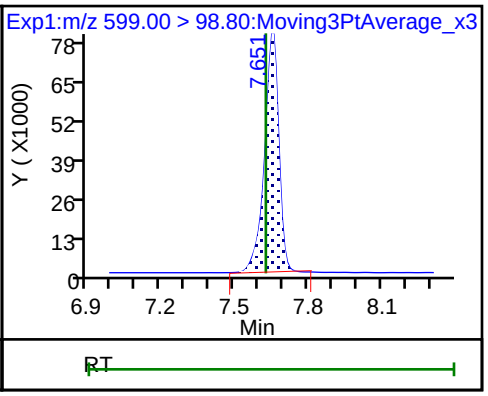
67 Perfluorododecanoic acid



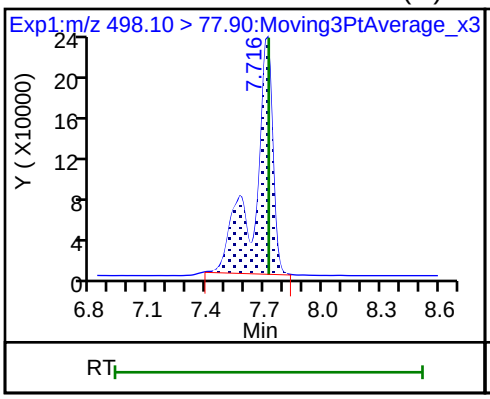
68 Perfluorodecanesulfonic acid



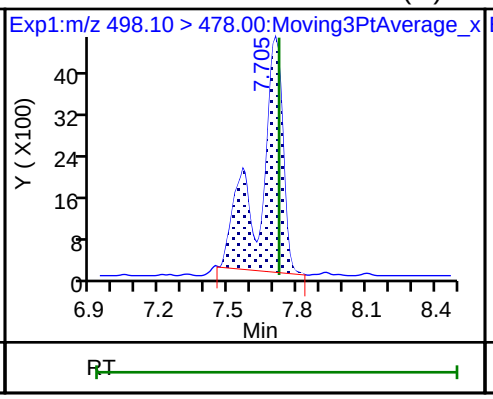
68 Perfluorodecanesulfonic acid



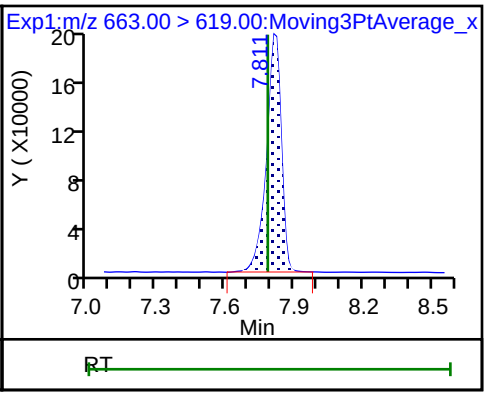
69 Perfluorooctanesulfonamide (M)



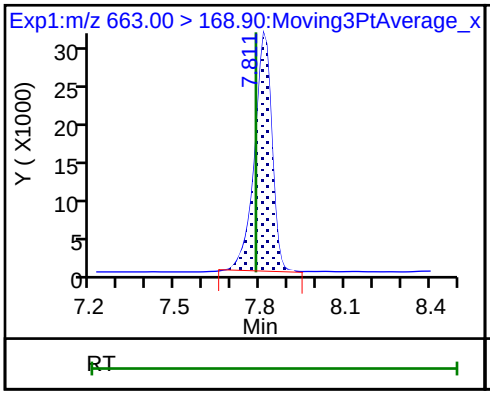
69 Perfluorooctanesulfonamide (M)



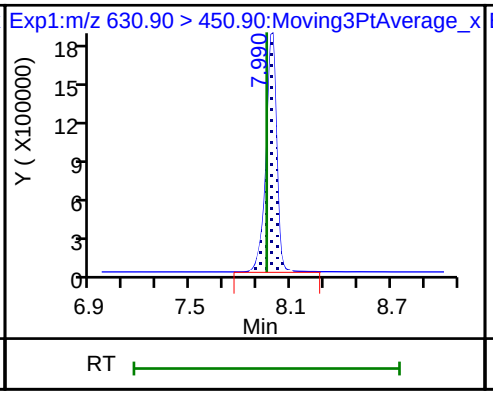
70 Perfluorotridecanoic acid



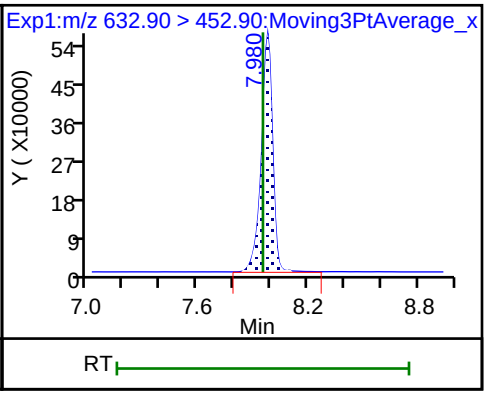
70 Perfluorotridecanoic acid



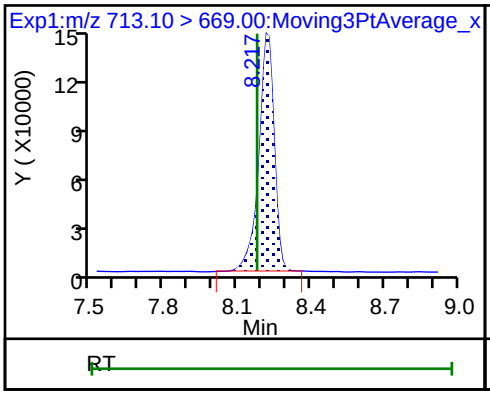
71 11-Chloroeicosafluoro-3-oxaundec



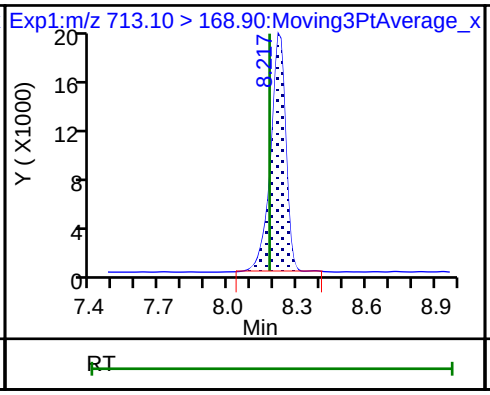
71 11-Chloroeicosafluoro-3-oxaundec



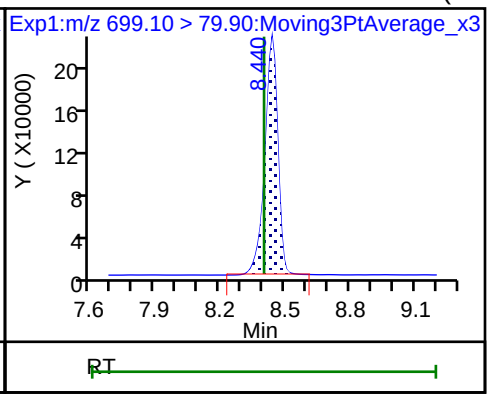
72 Perfluorotetradecanoic acid



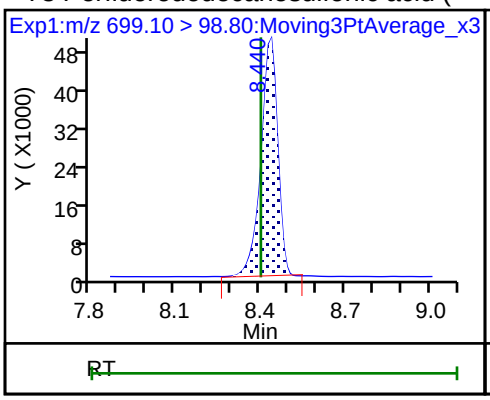
72 Perfluorotetradecanoic acid



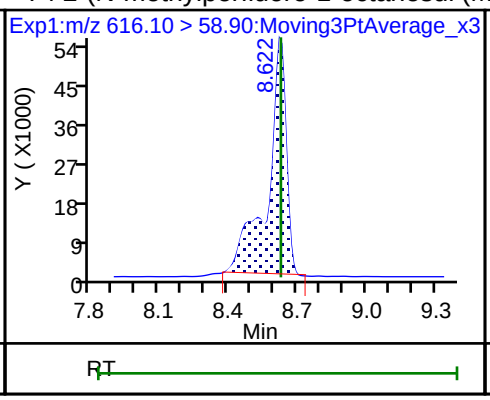
73 Perfluorododecanesulfonic acid (



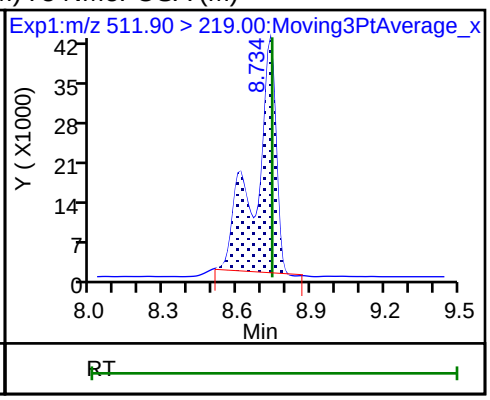
73 Perfluorododecanesulfonic acid (



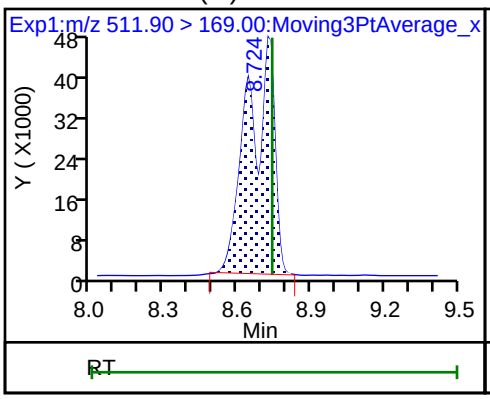
74 2-(N-methylperfluoro-1-octanesul (M)



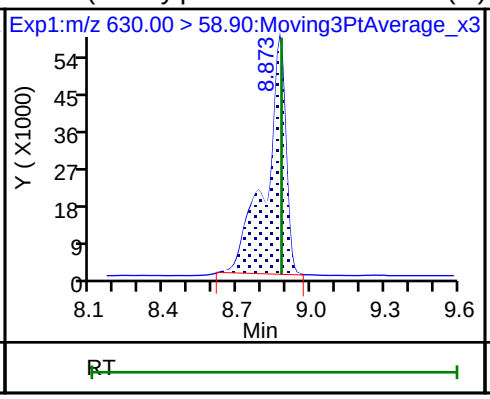
75 NMeFOSA (M)



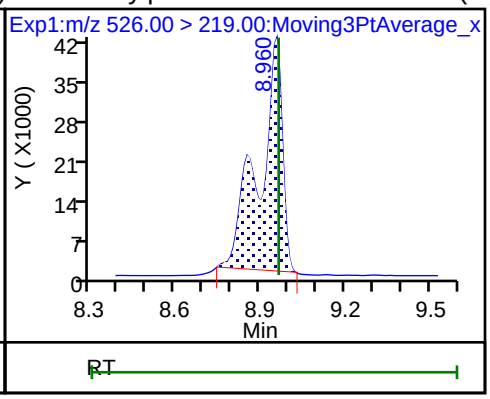
75 NMeFOSA (M)



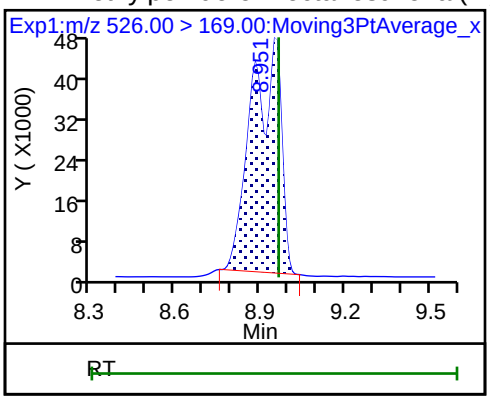
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Eurofins Cleveland

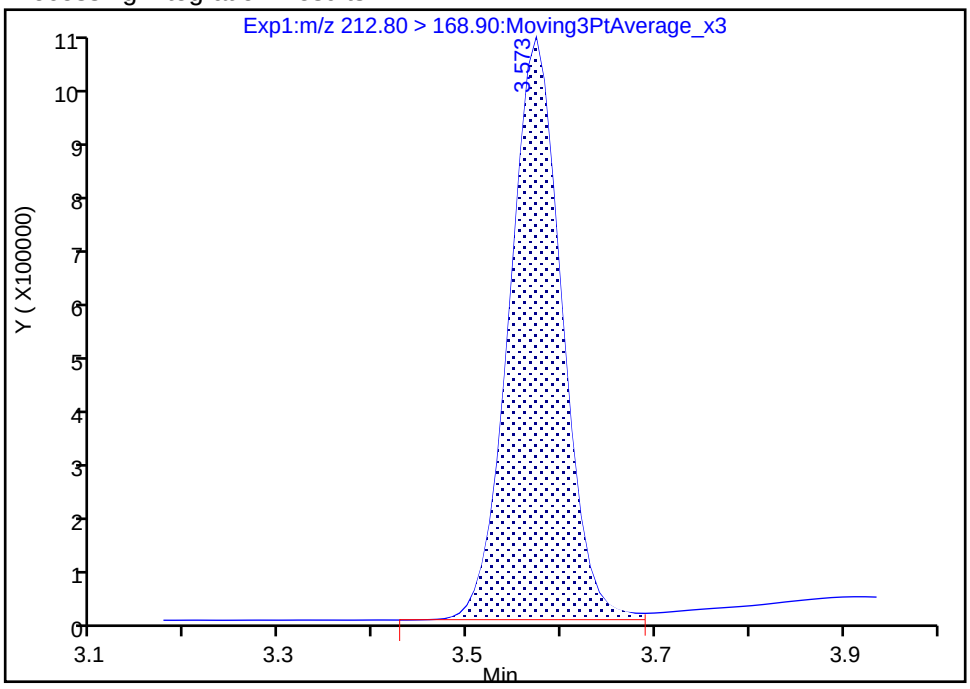
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

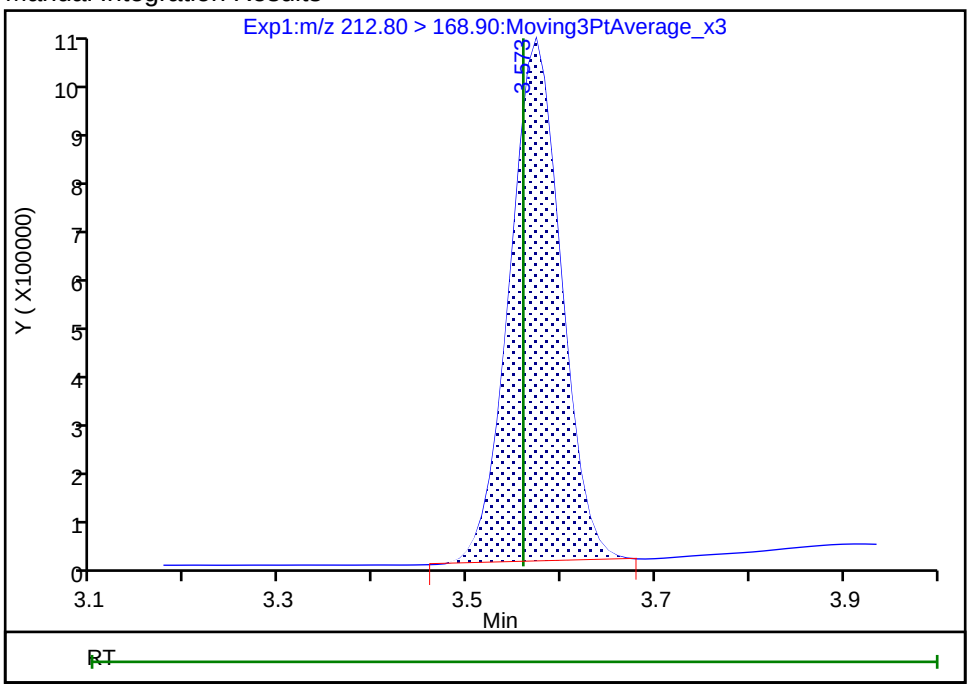
Processing Integration Results

RT: 3.57
Area: 4108592
Amount: 2.749627
Amount Units: ng/ml



Manual Integration Results

RT: 3.57
Area: 4008858
Amount: 2.682881
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:50:18 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

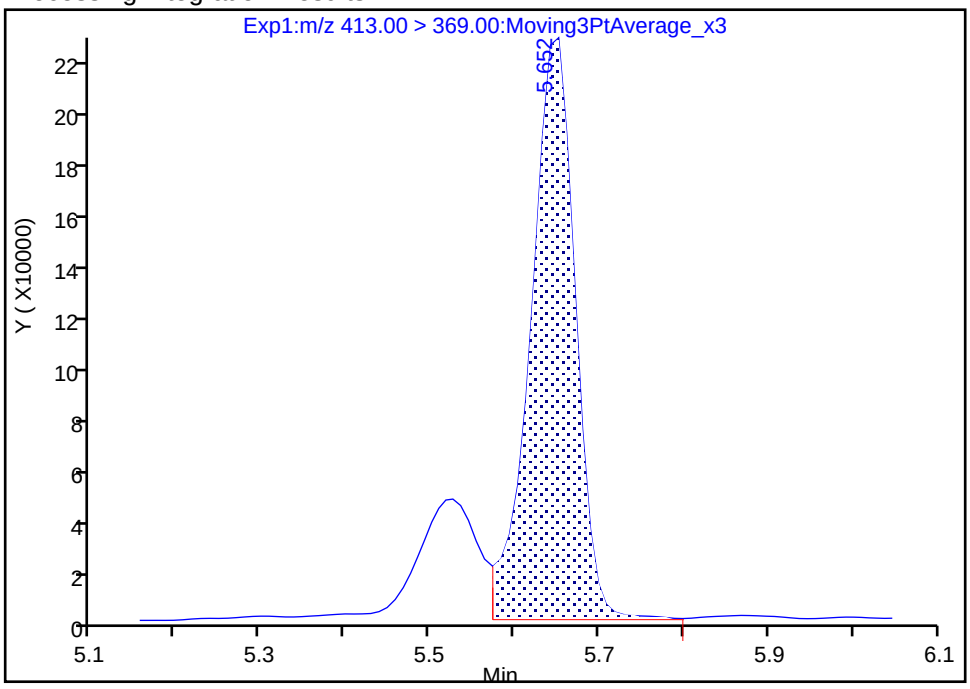
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

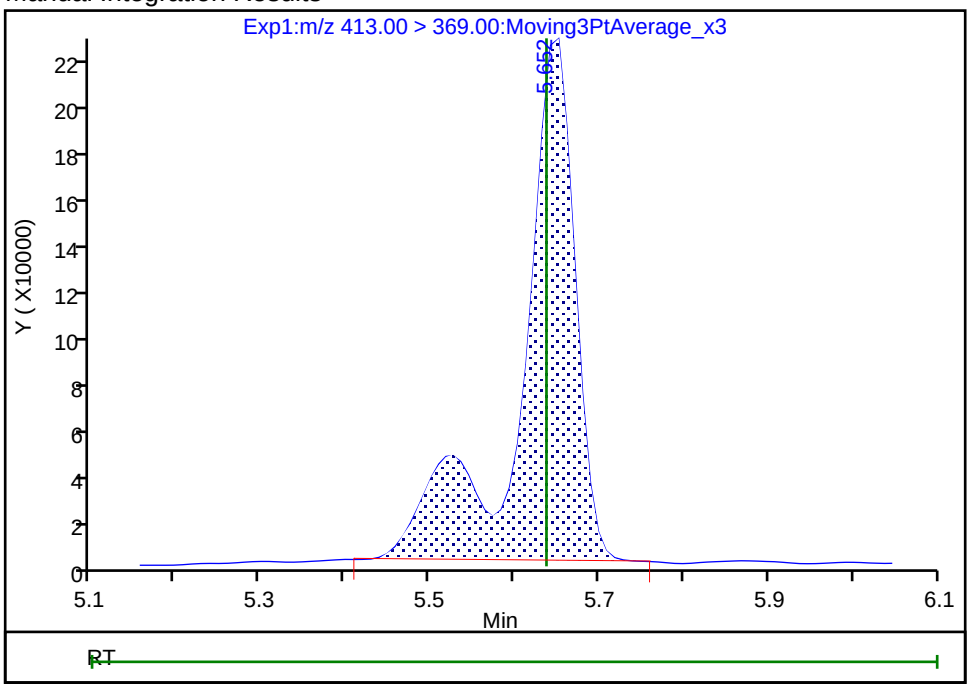
Processing Integration Results

RT: 5.65
Area: 814673
Amount: 0.593804
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 1005319
Amount: 0.732763
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:50:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

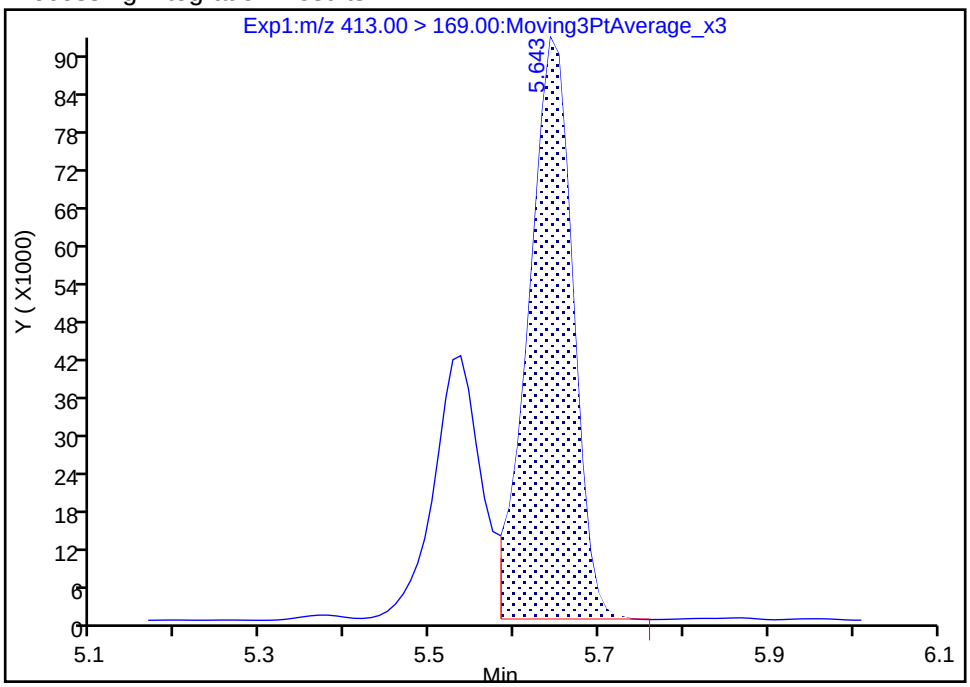
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d				
Injection Date:	19-Sep-2024 00:19:58	Instrument ID:	LCMS04		
Lims ID:	LCS 240-627485/3-A				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	36
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

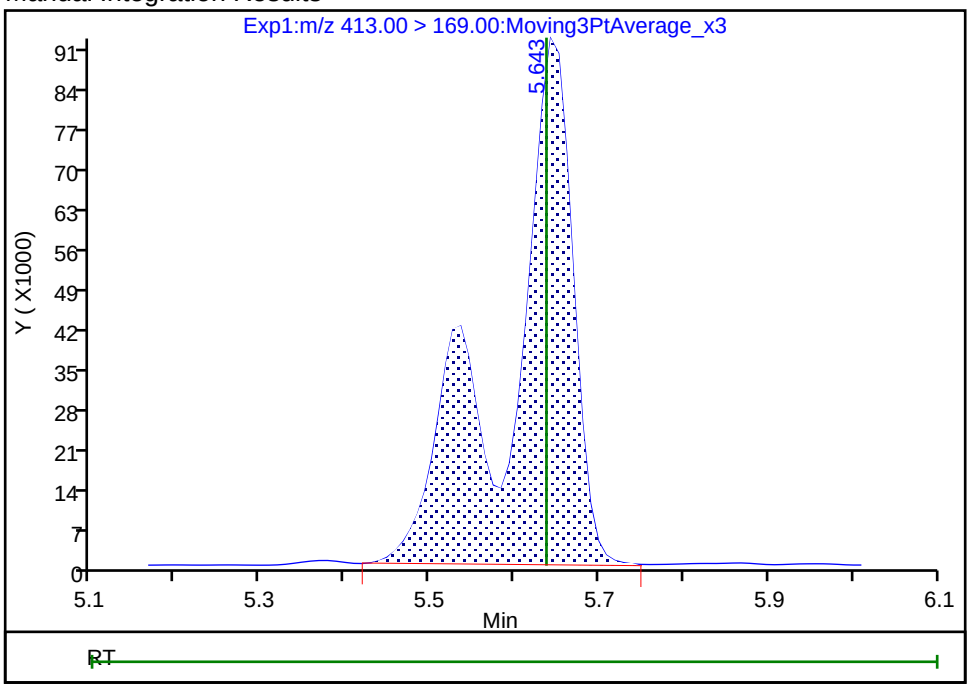
Processing Integration Results

RT: 5.64
Area: 336275
Amount: 0.593804
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 497968
Amount: 0.732763
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:50:41 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

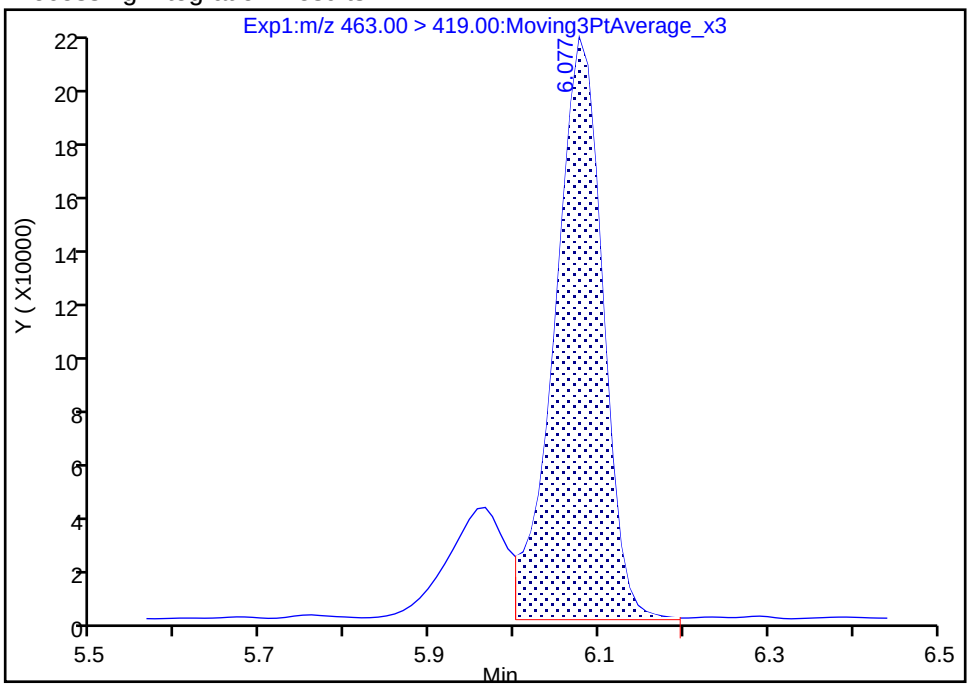
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

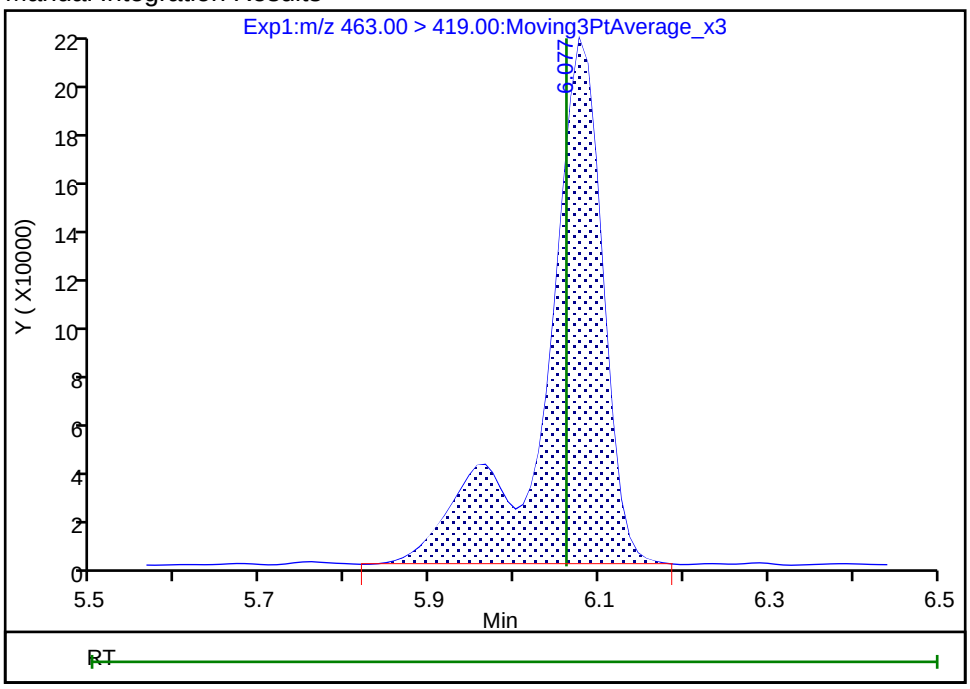
Processing Integration Results

RT: 6.08
Area: 859105
Amount: 0.530788
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 1042654
Amount: 0.644192
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

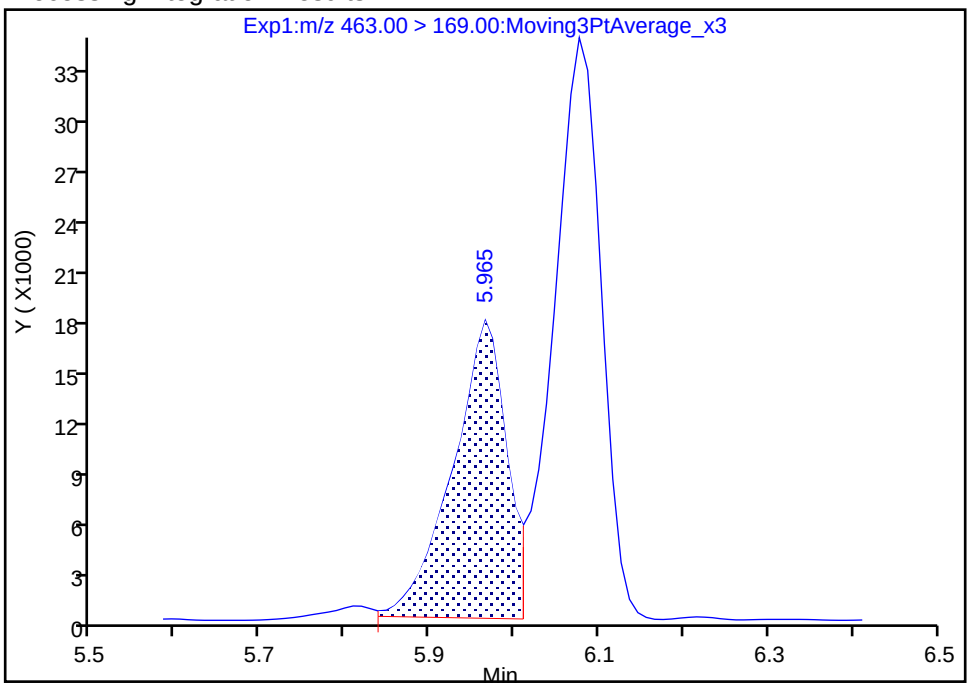
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

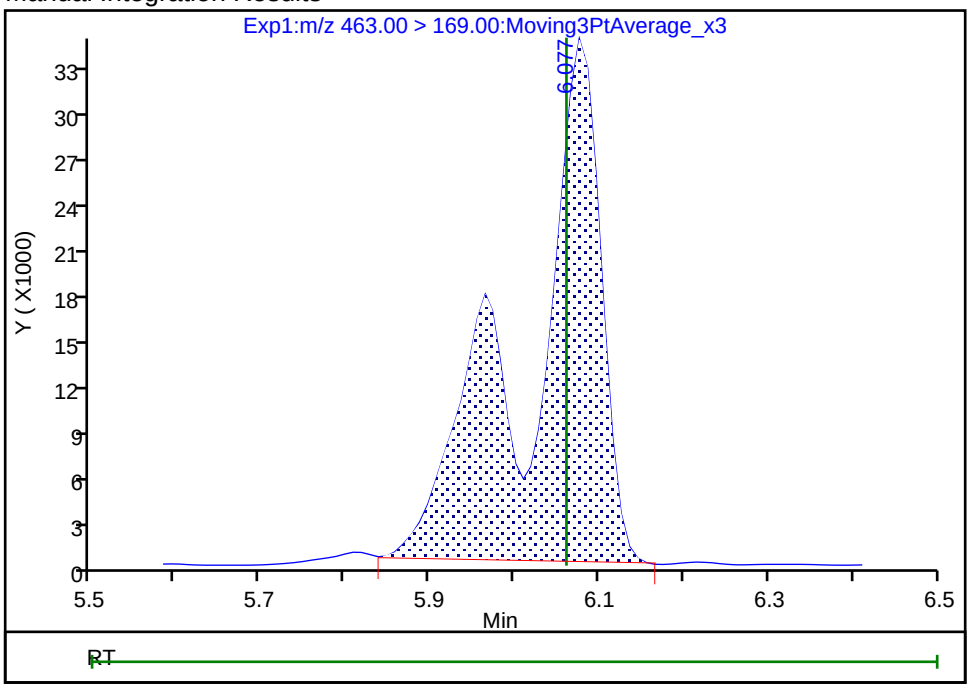
Processing Integration Results

RT: 5.97
Area: 77470
Amount: 0.530788
Amount Units: ng/ml



Manual Integration Results

RT: 6.08
Area: 206511
Amount: 0.644192
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

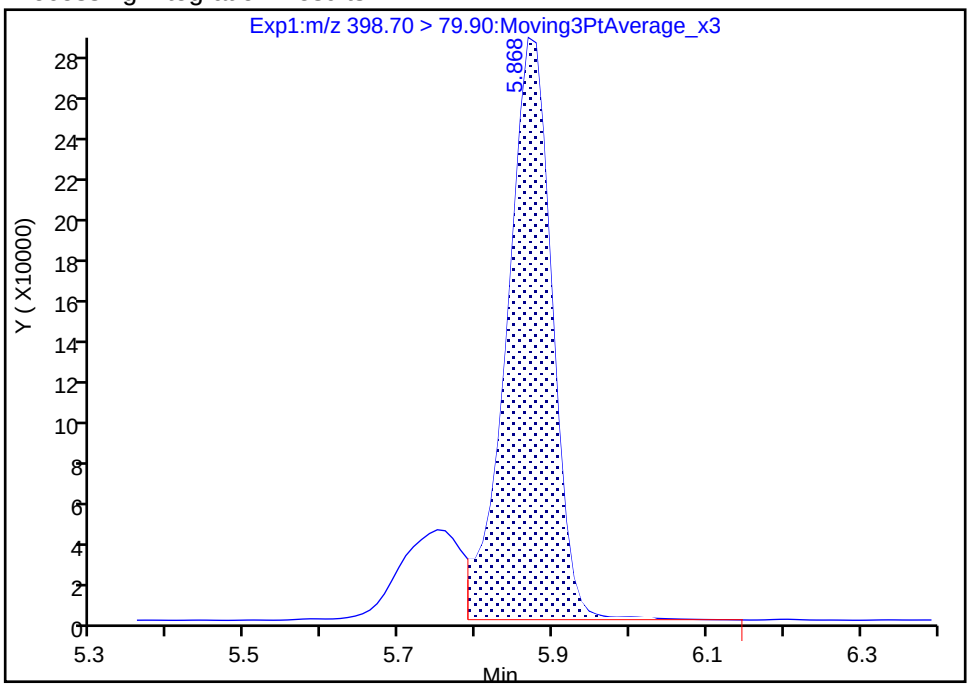
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

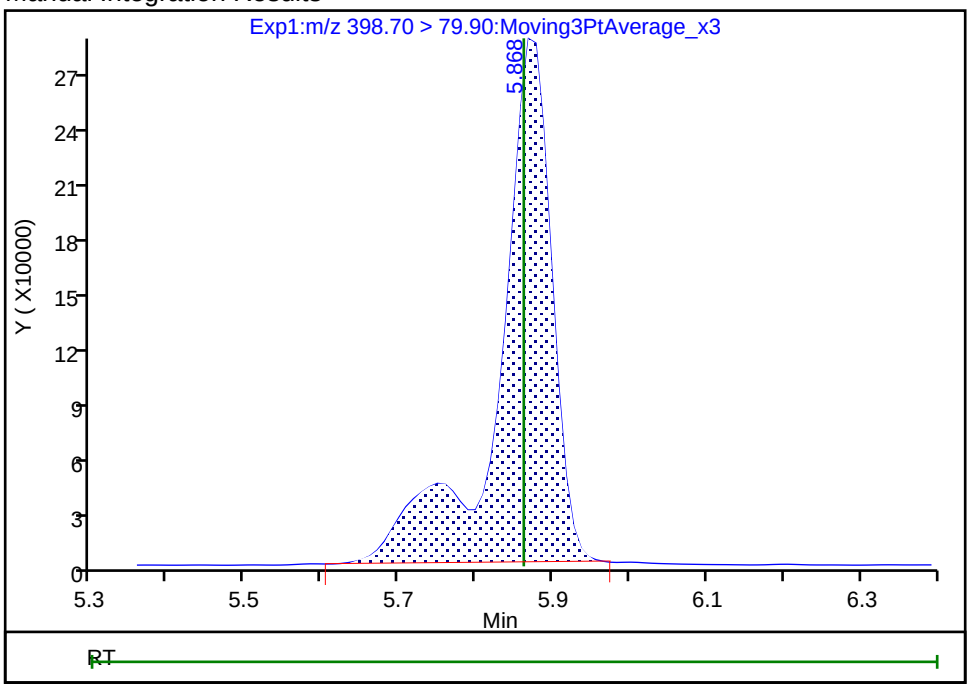
Processing Integration Results

RT: 5.87
Area: 1162552
Amount: 0.542514
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 1373247
Amount: 0.640837
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:50:49 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

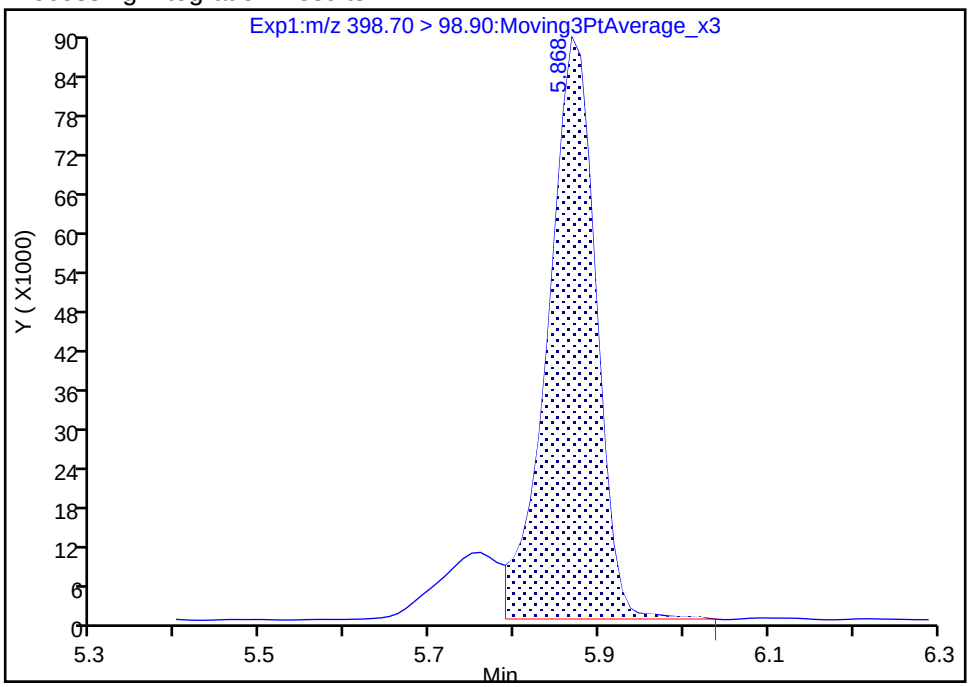
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

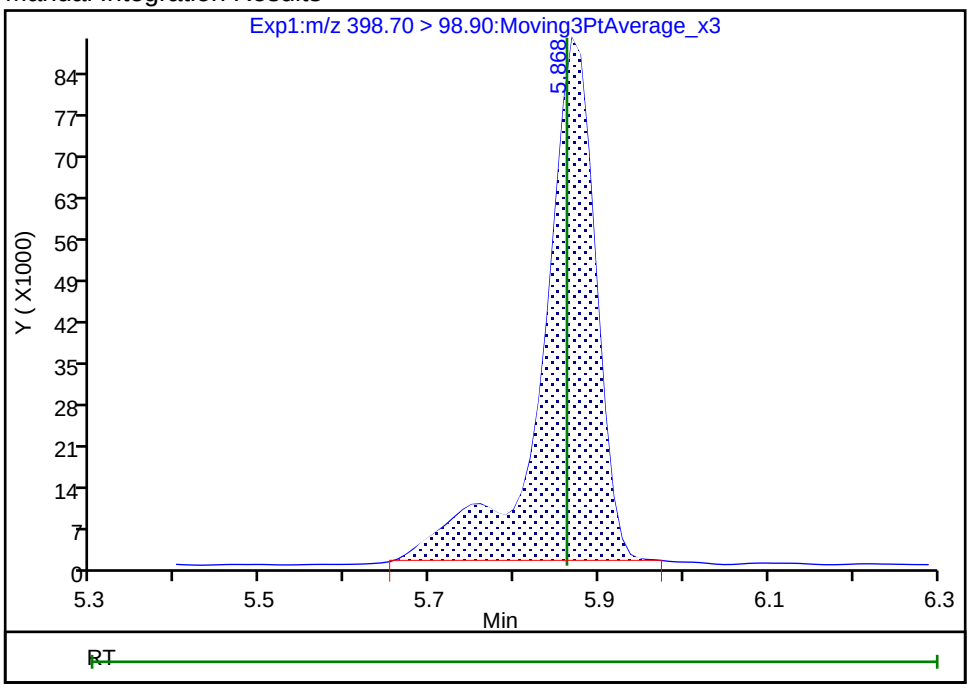
Processing Integration Results

RT: 5.87
Area: 352275
Amount: 0.542514
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 392579
Amount: 0.640837
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:50:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

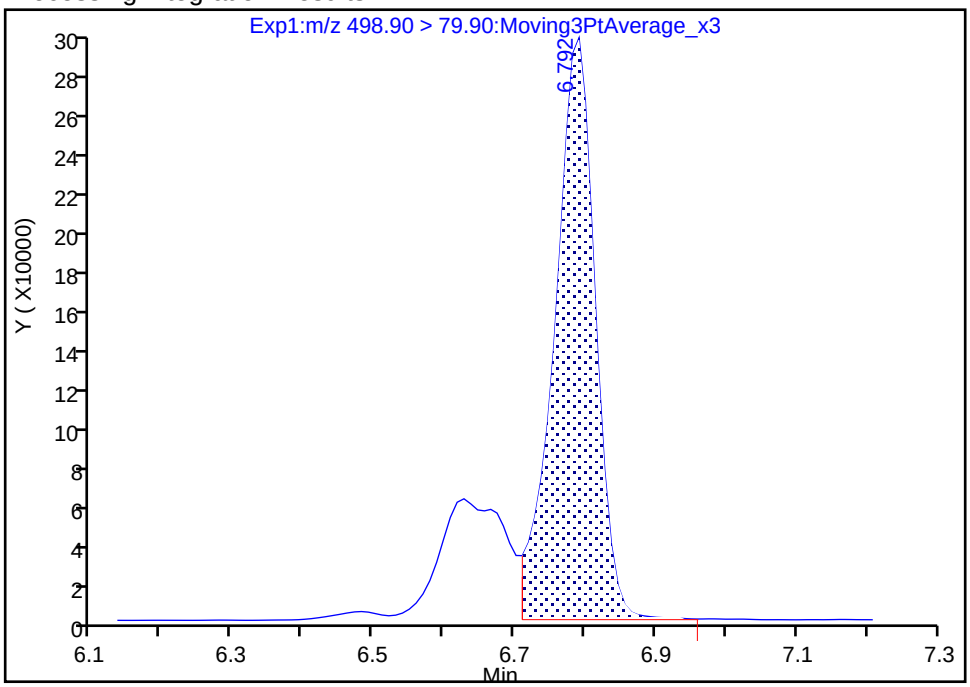
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

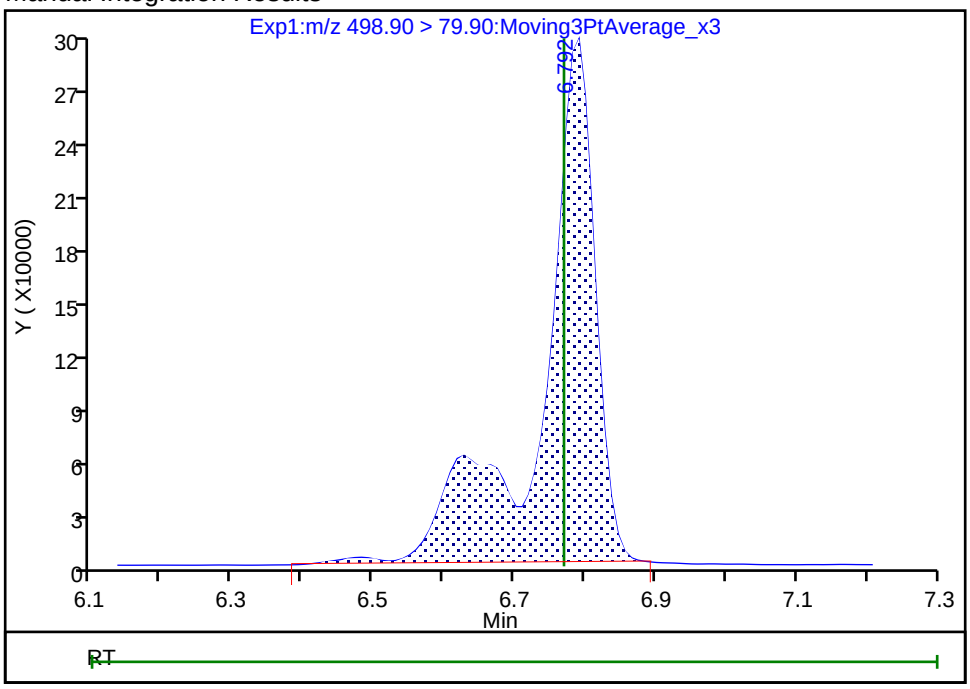
Processing Integration Results

RT: 6.79
Area: 1196625
Amount: 0.428049
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 1599559
Amount: 0.572184
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:45 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

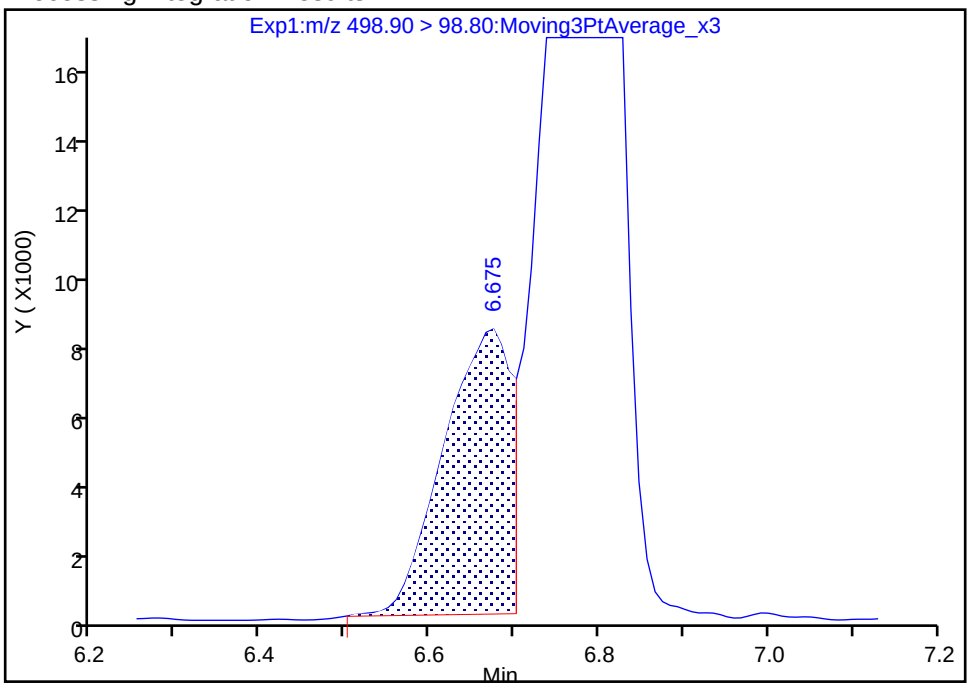
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

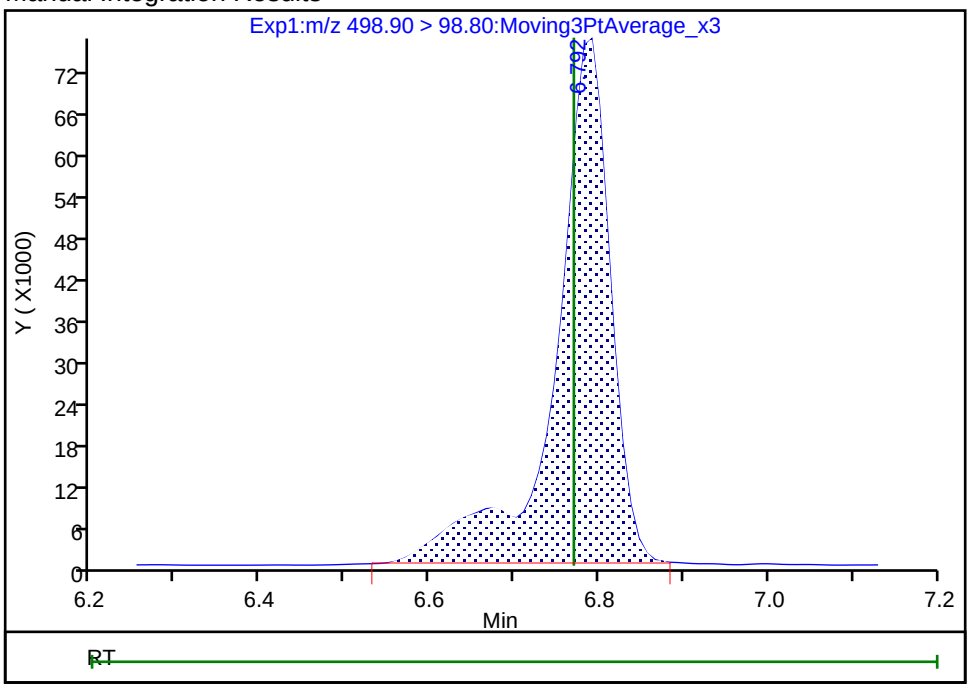
Processing Integration Results

RT: 6.68
Area: 44788
Amount: 0.428049
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 347415
Amount: 0.572184
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:50 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

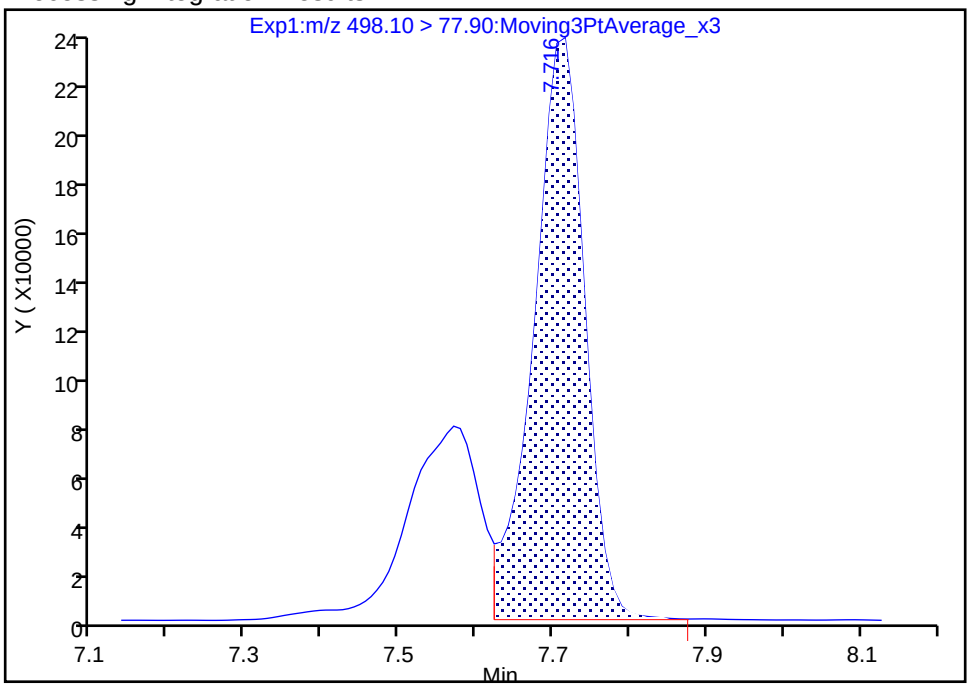
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

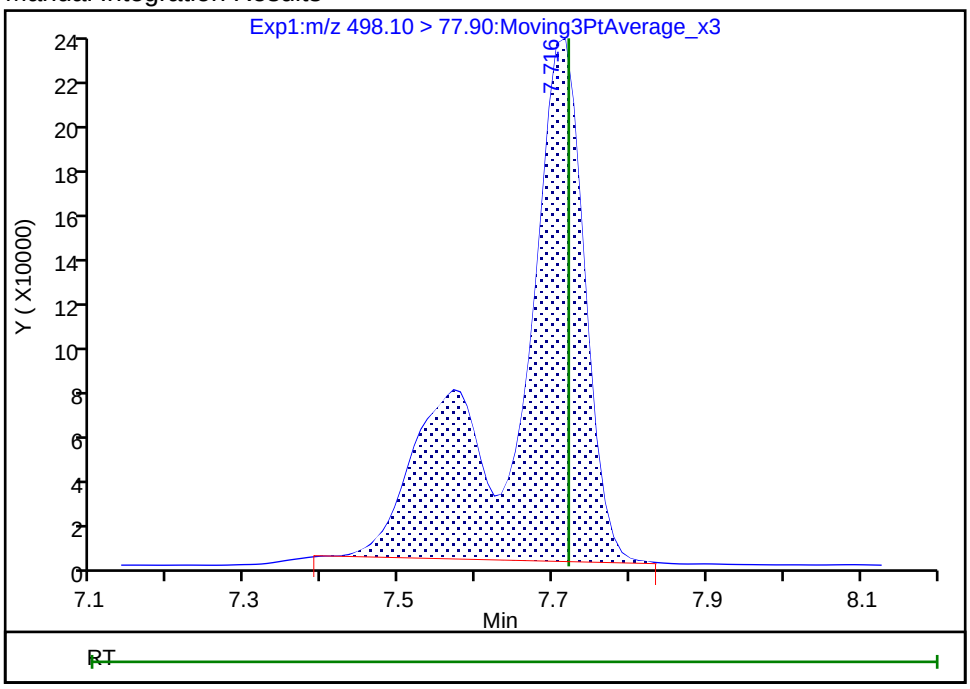
Processing Integration Results

RT: 7.72
Area: 1079214
Amount: 0.521243
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 1523848
Amount: 0.735995
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

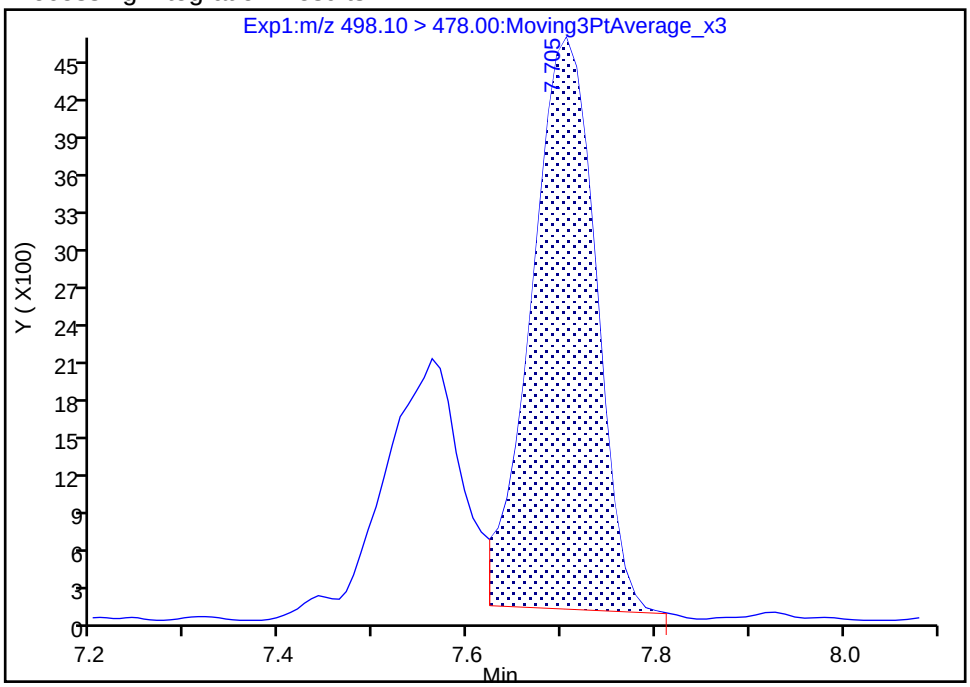
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

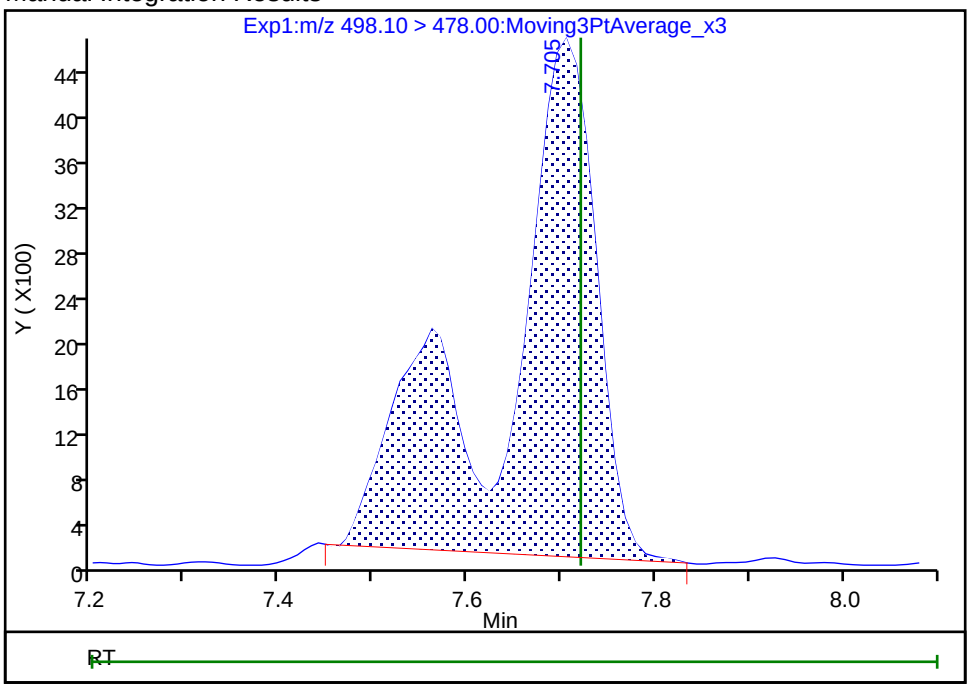
Processing Integration Results

RT: 7.71
Area: 21451
Amount: 0.521243
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 31749
Amount: 0.735995
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

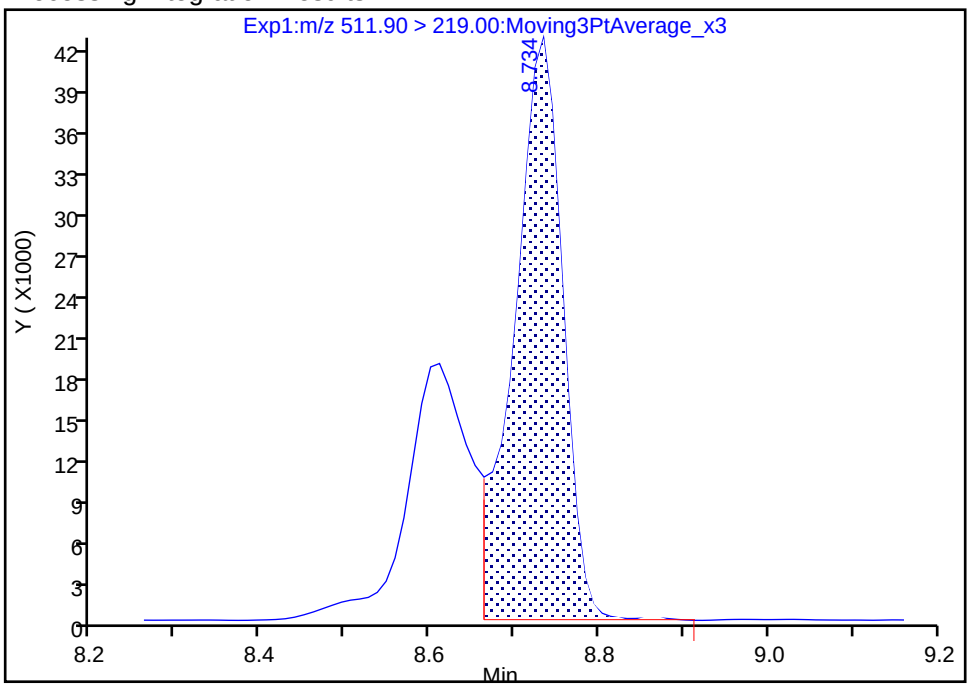
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

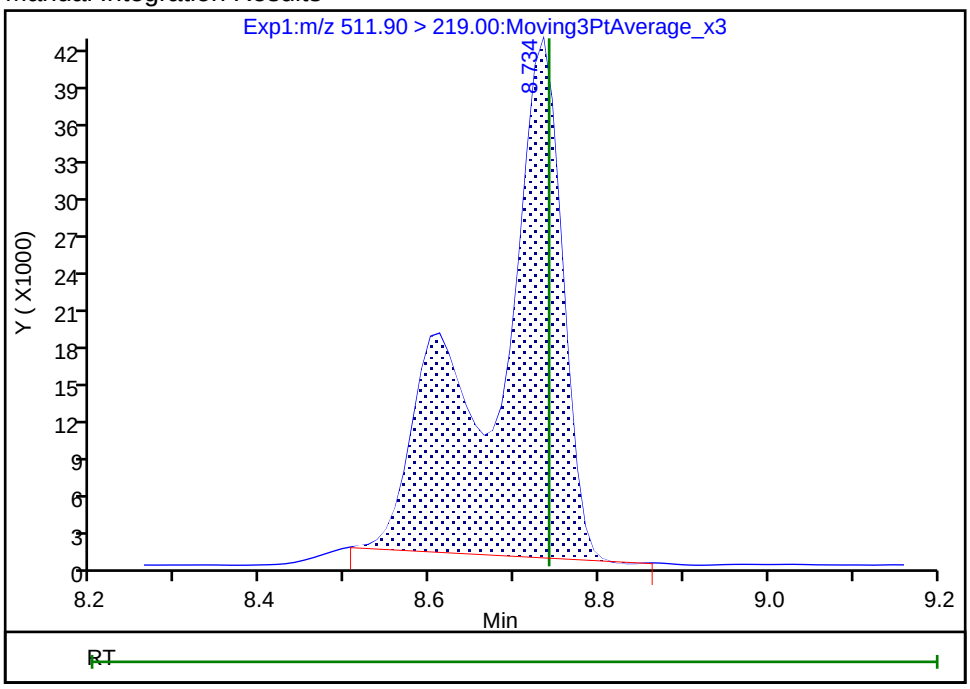
Processing Integration Results

RT: 8.73
Area: 167349
Amount: 0.514523
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 241645
Amount: 0.742949
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:24 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

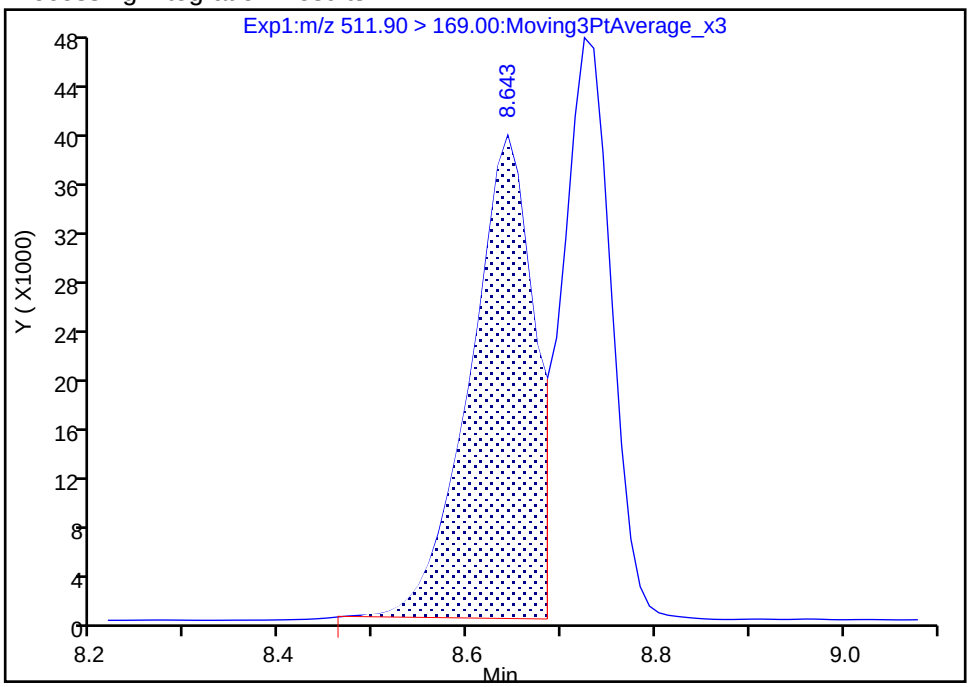
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Injection Date:	19-Sep-2024 00:19:58	Instrument ID:	LCMS04		
Lims ID:	LCS 240-627485/3-A				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	36
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

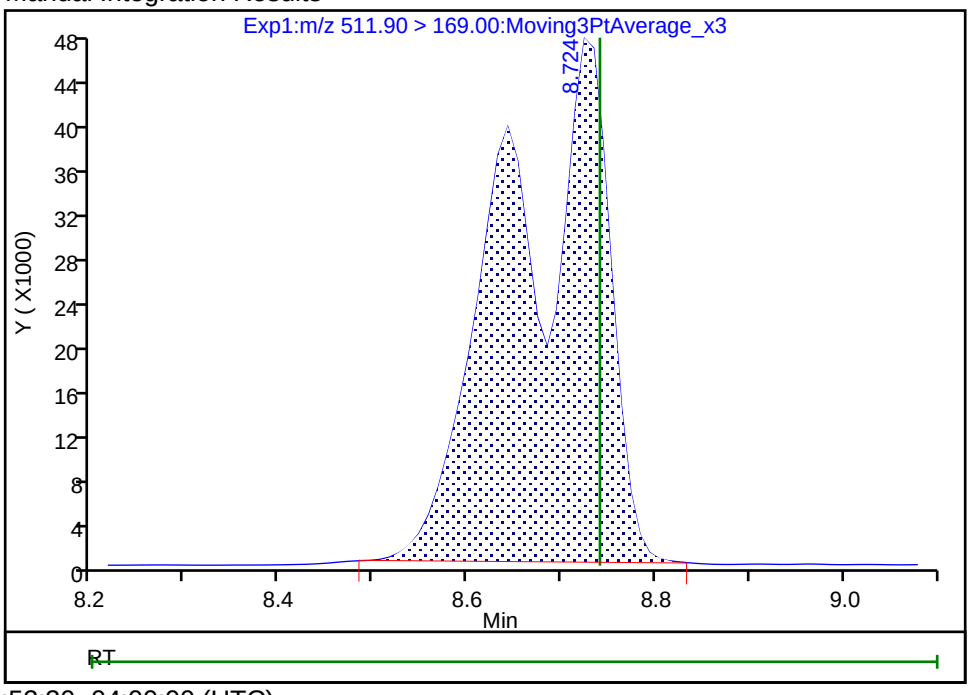
Processing Integration Results

RT: 8.64
Area: 182756
Amount: 0.514523
Amount Units: ng/ml



Manual Integration Results

RT: 8.72
Area: 350779
Amount: 0.742949
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:30 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

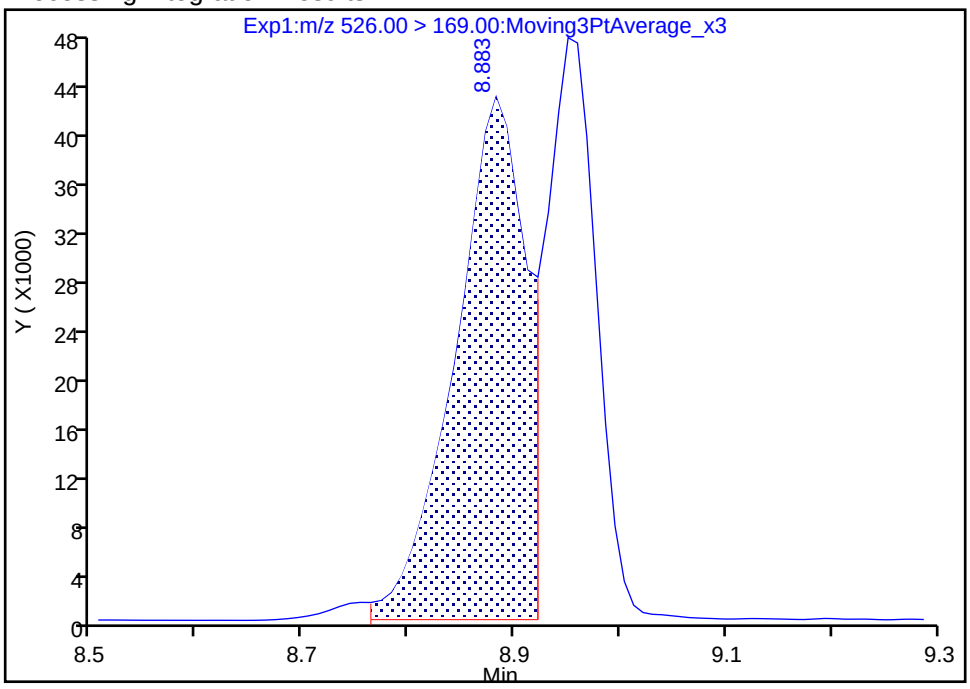
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

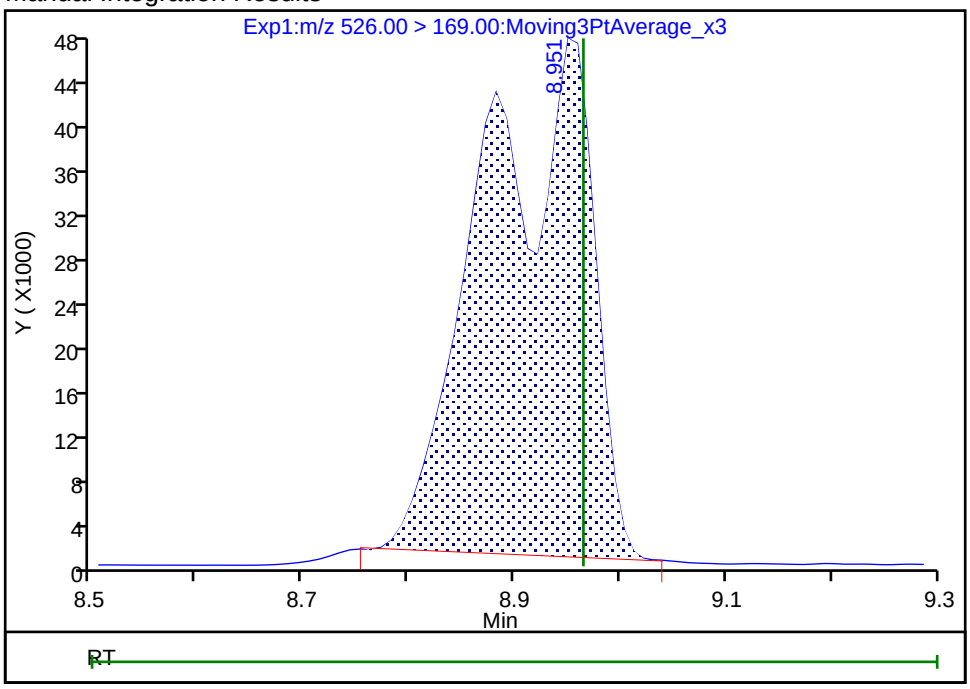
Processing Integration Results

RT: 8.88
Area: 194998
Amount: 0.491009
Amount Units: ng/ml



Manual Integration Results

RT: 8.95
Area: 332267
Amount: 0.768560
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

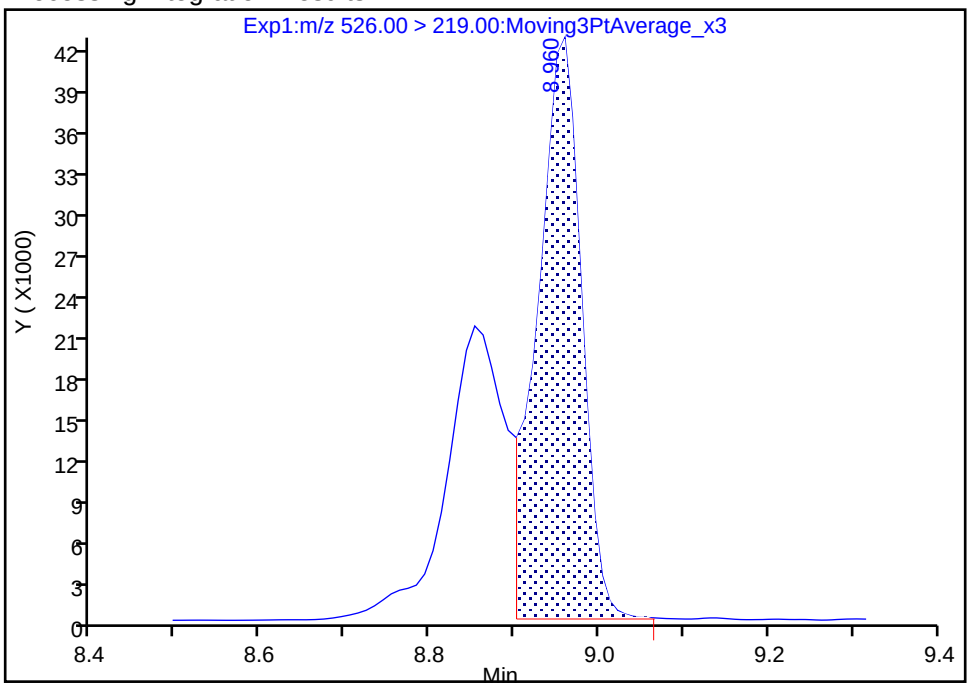
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

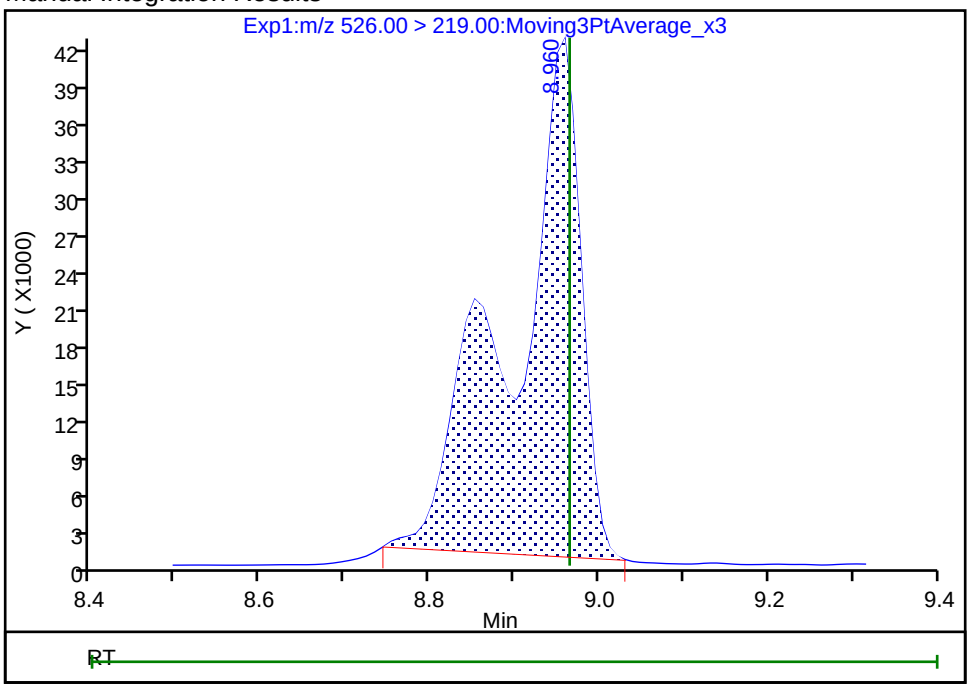
Processing Integration Results

RT: 8.96
Area: 151123
Amount: 0.491009
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 236548
Amount: 0.768560
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:53:01 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

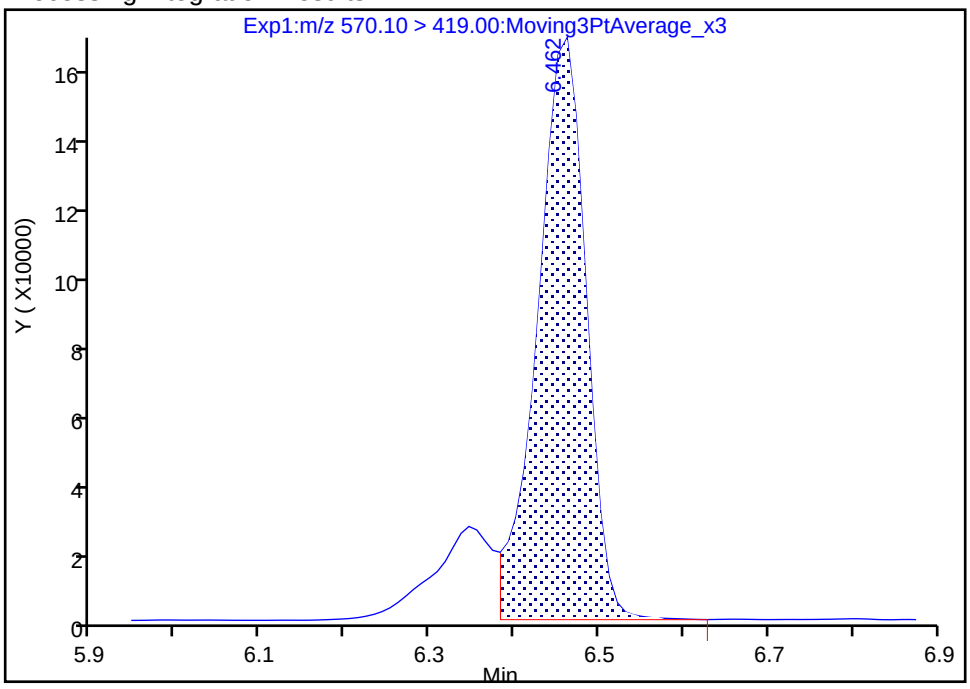
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

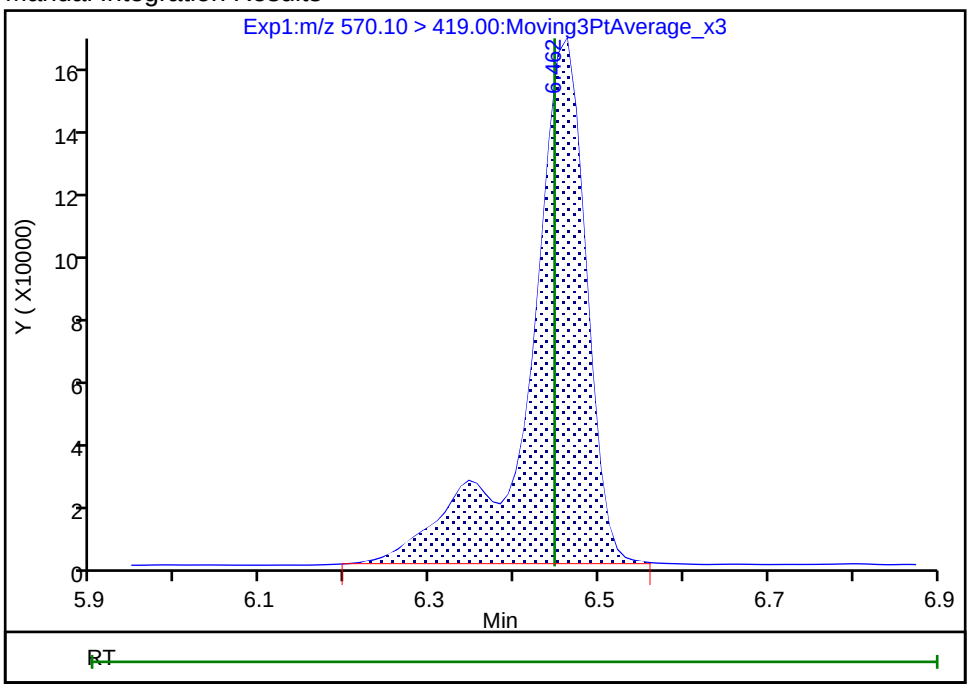
Processing Integration Results

RT: 6.46
Area: 643619
Amount: 0.577781
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 759384
Amount: 0.681704
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:21 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

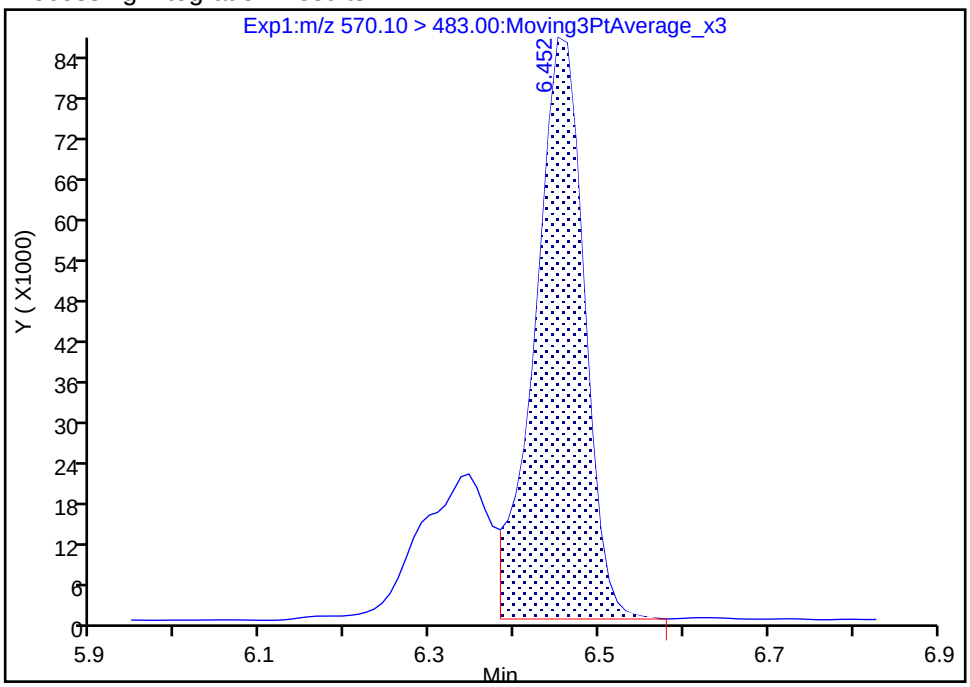
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Lims ID:	LCS 240-627485/3-A				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	32	Worklist Smp#:	36
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

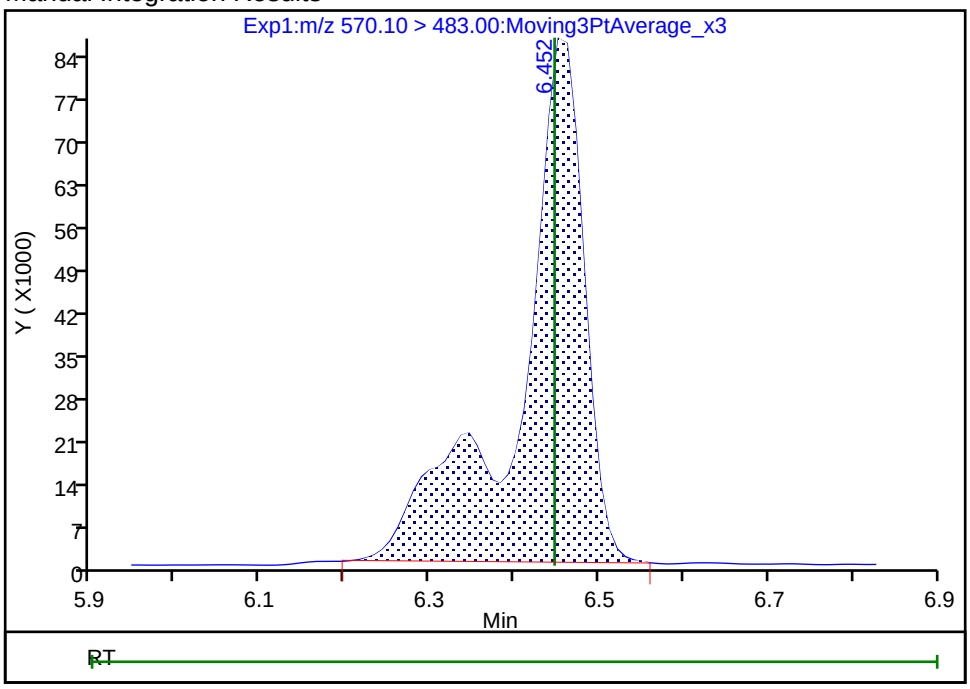
Processing Integration Results

RT: 6.45
Area: 347186
Amount: 0.577781
Amount Units: ng/ml



Manual Integration Results

RT: 6.45
Area: 460981
Amount: 0.681704
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:26 -04:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

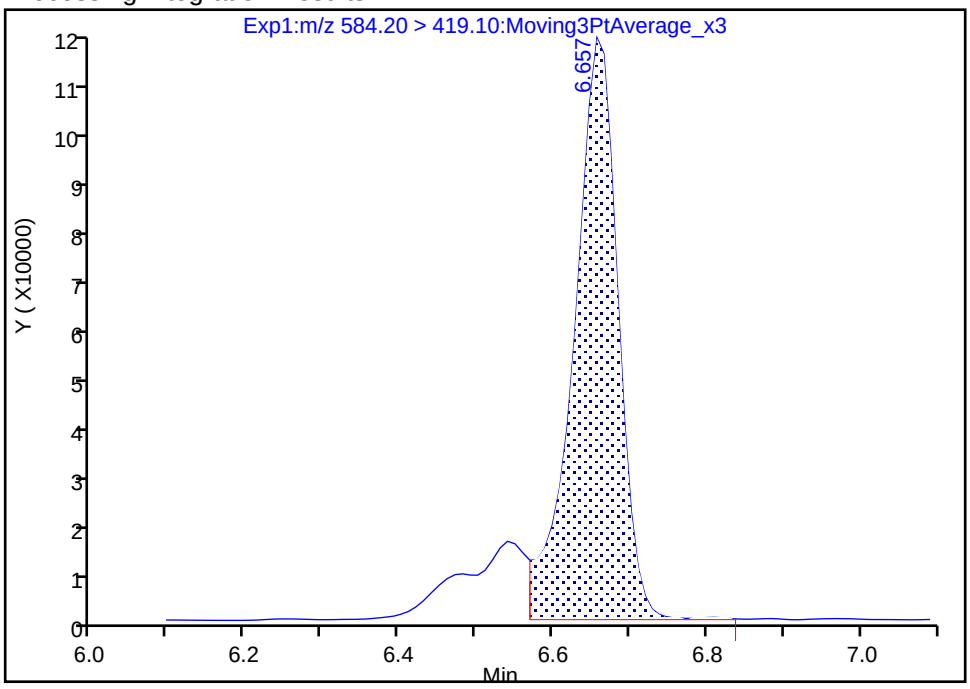
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Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

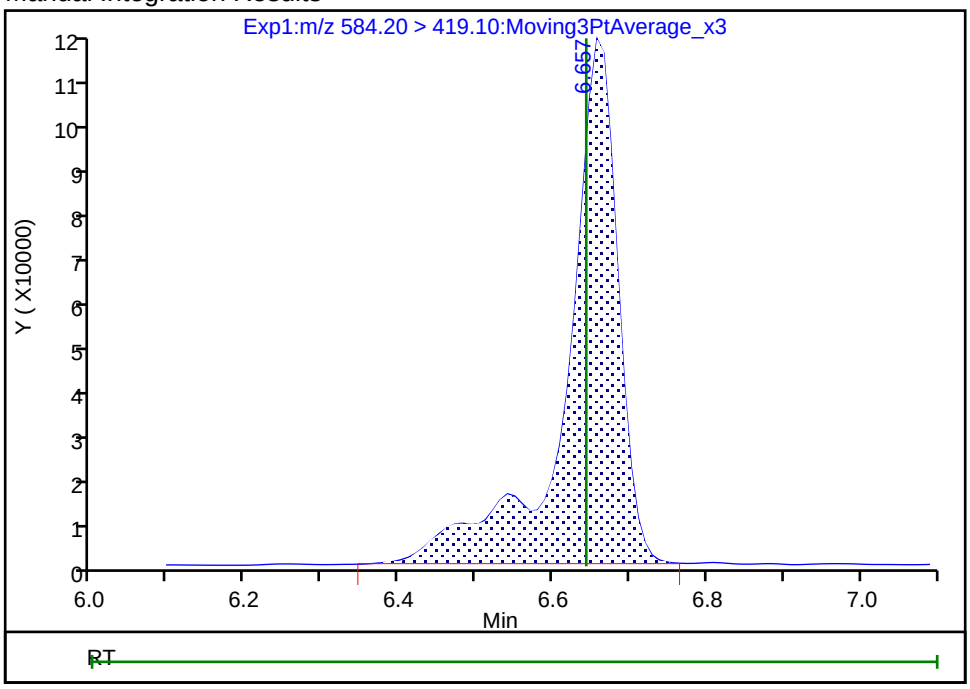
Processing Integration Results

RT: 6.66
Area: 457533
Amount: 0.545766
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 542973
Amount: 0.647682
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:33 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

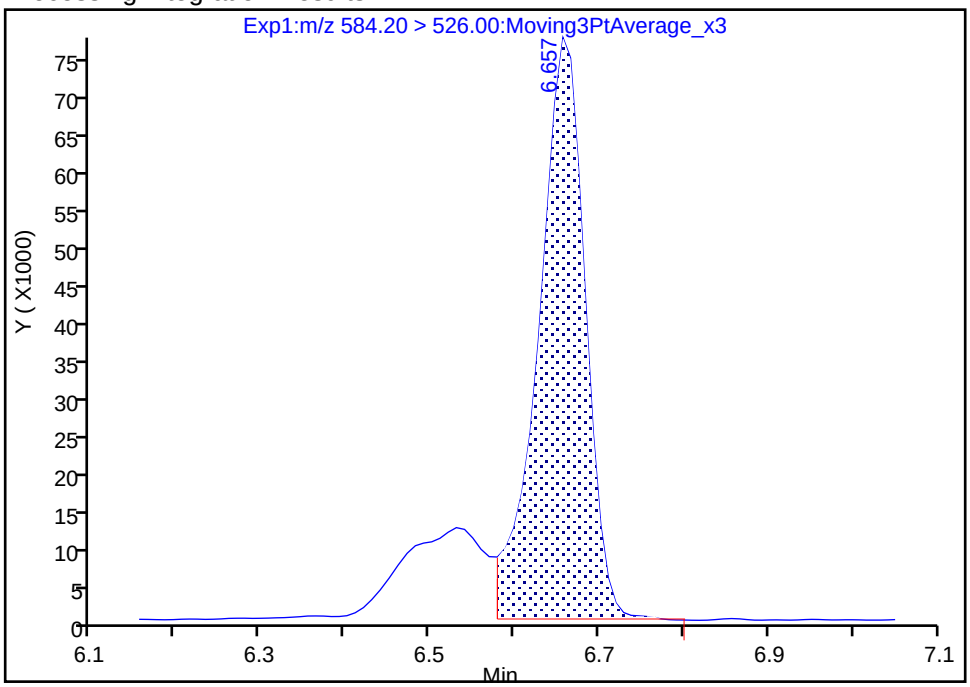
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

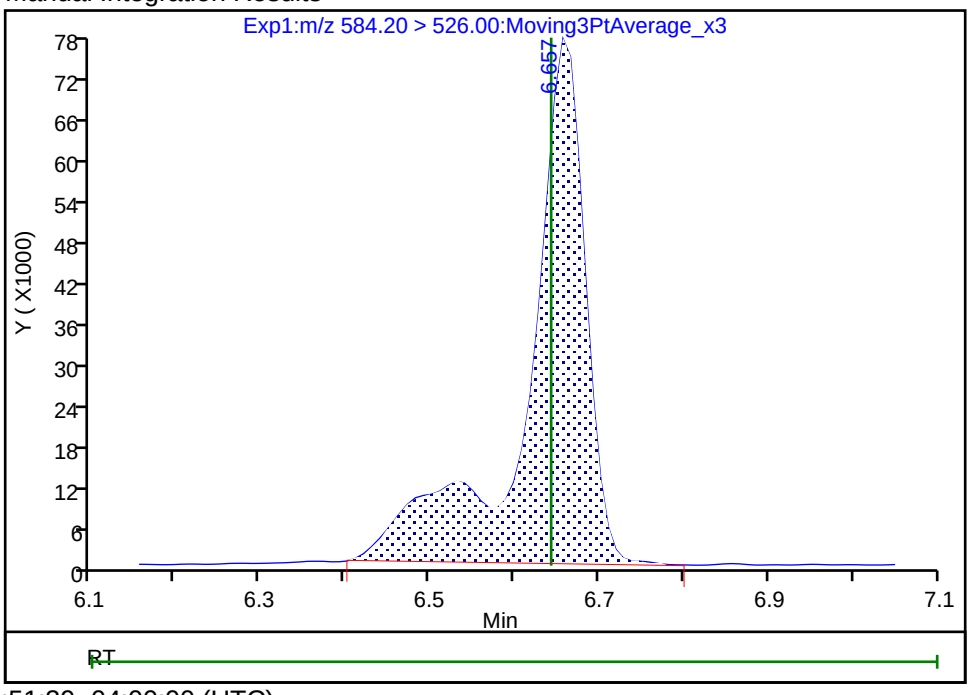
Processing Integration Results

RT: 6.66
Area: 297356
Amount: 0.545766
Amount Units: ng/ml



Manual Integration Results

RT: 6.66
Area: 376203
Amount: 0.647682
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:51:39 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

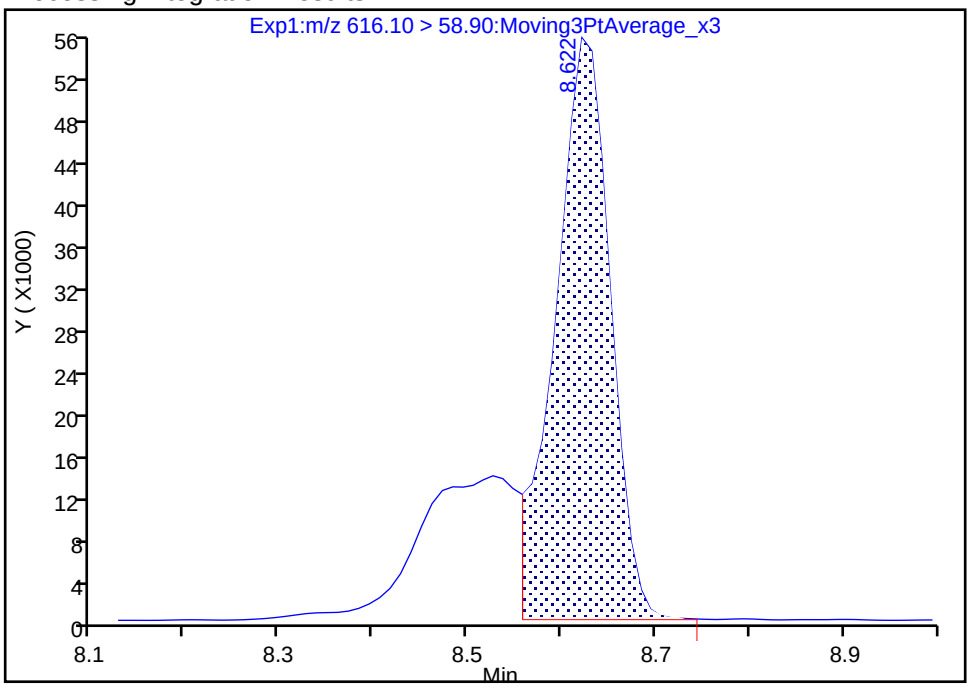
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

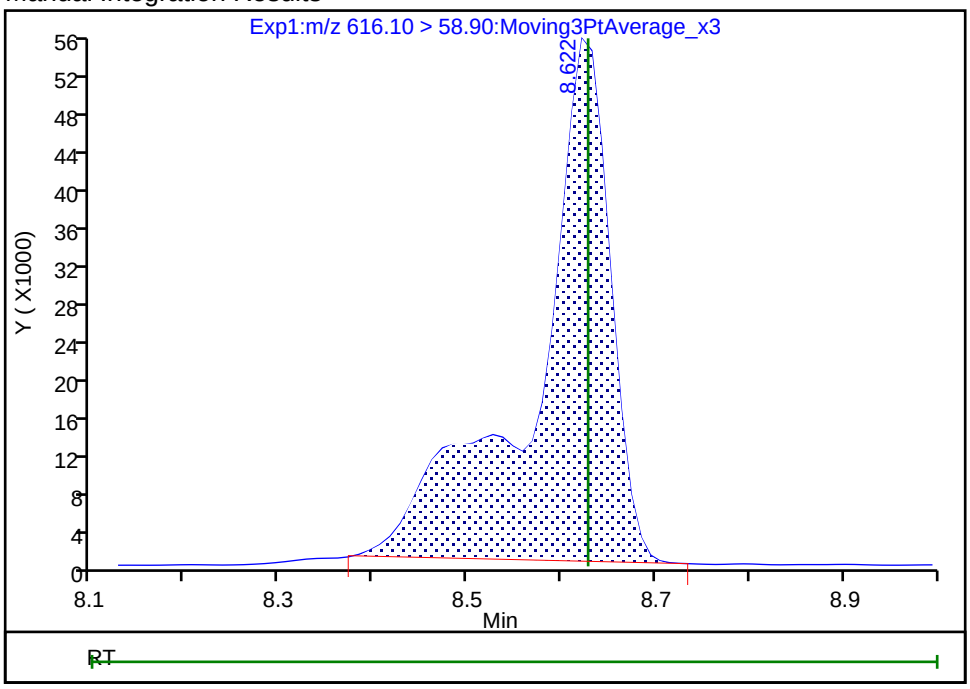
Processing Integration Results

RT: 8.62
Area: 222808
Amount: 4.639359
Amount Units: ng/ml



Manual Integration Results

RT: 8.62
Area: 308773
Amount: 6.429342
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:17 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

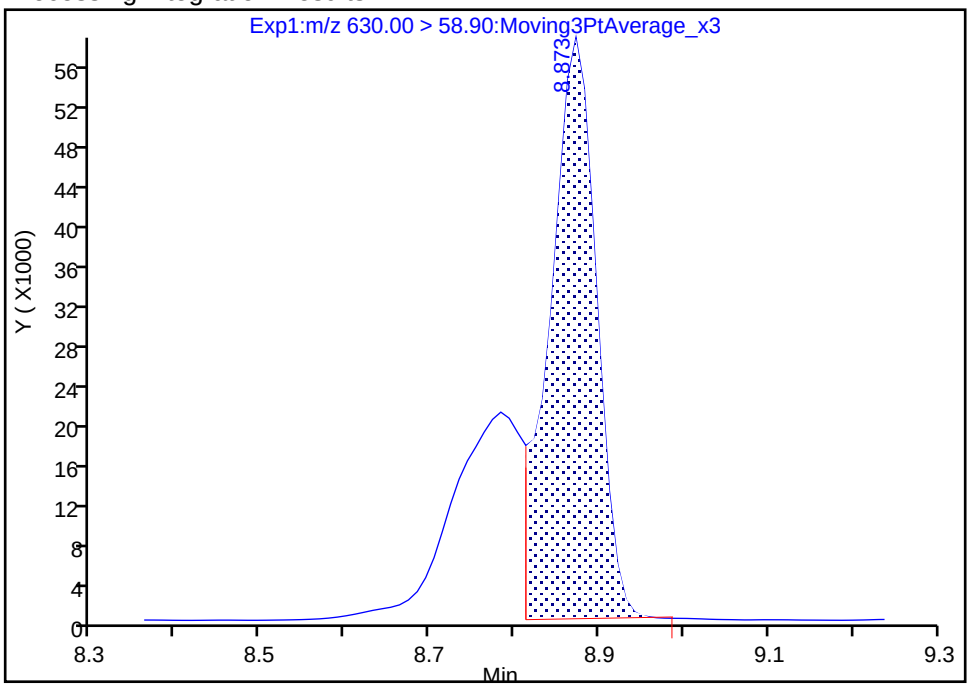
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj36.d
Injection Date: 19-Sep-2024 00:19:58 Instrument ID: LCMS04
Lims ID: LCS 240-627485/3-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 32 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

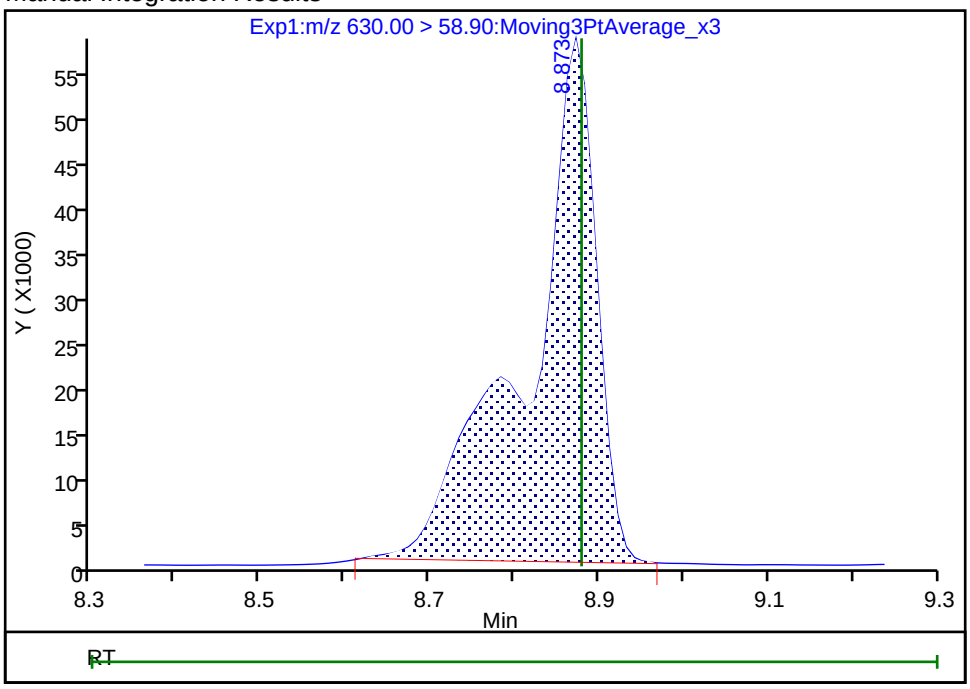
Processing Integration Results

RT: 8.87
Area: 221557
Amount: 4.636724
Amount Units: ng/ml



Manual Integration Results

RT: 8.87
Area: 331051
Amount: 6.928204
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:52:36 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 240-627485/2-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj35.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	8.073		8.00	2.13
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.221		4.00	1.00
307-24-4	Perfluorohexanoic acid (PFHxA)	2.471		2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.136		2.00	0.50
335-67-1	Perfluorooctanoic acid (PFOA)	2.189		2.00	0.50
375-95-1	Perfluorononanoic acid (PFNA)	2.207		2.00	0.50
335-76-2	Perfluorodecanoic acid (PFDA)	2.360		2.00	0.50
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.871	J	2.00	0.50
307-55-1	Perfluorododecanoic acid (PFDoA)	1.914	J	2.00	0.50
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.912	J	2.00	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	2.468		2.00	0.50
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.837	J	2.00	0.50
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	2.062		2.00	0.50
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.090		2.00	0.52
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	1.940	J	2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.874	J	2.00	0.50
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.870	J	2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.564	J	2.00	0.50
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.596	J	8.00	2.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.867	J	8.00	2.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	8.544		8.00	2.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	2.346		2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	2.425		2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.106		2.00	0.50
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.047		2.00	0.62

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 240-627485/2-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj35.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.093		2.00	0.52
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	21.64		20.0	5.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	19.28	J	20.0	5.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	8.241		8.00	2.00
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.827		8.00	2.00
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	4.244		4.00	1.00
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.446		4.00	1.22
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	7.366	J	8.00	2.00
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	7.458	J	8.00	2.00
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.842	J	4.00	1.00
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	9.412	J	10.0	2.50
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	41.83	J	50.0	12.5
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	47.94	J	50.0	14.9
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.962	J	2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.969	J	4.00	1.00

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 240-627485/2-A

Matrix: Water | Lab File ID: 2024_09_18solidwatinj35.d

Analysis Method: 1633 | Date Collected:

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 125(mL) | Date Analyzed: 09/19/2024 00:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	91.4		10-130
2283397-79-3	13C5 PFPeA	81.5		40-150
2328024-54-8	13C5 PFHxA	77.5		40-150
2328024-55-9	13C4 PFHpA	81.6		40-150
1350614-84-4	13C8 PFOA	86.5		30-140
2283397-80-6	13C9 PFNA	97.1		30-140
2328024-56-0	13C6 PFDA	110		20-140
STL02580	13C7 PFUnA	100		20-140
STL02116	13C2 PFTeDA	73.2		10-130
2708218-83-9	13C3 PFBS	103		25-150
2708218-85-1	13C3 PFHxS	96.8		25-150
2265893-05-6	13C8 PFOS	104		20-140
STL01056	13C8 FOSA	103		10-130
1400690-70-1	d3-NMeFOSAA	108		10-200
1265205-97-7	d5-NEtFOSAA	115		10-200
STL02395	M2-4:2 FTS	142		25-200
STL02279	M2-6:2 FTS	138		25-200
STL02280	M2-8:2 FTS	124		25-200
STL02255	13C3 HFPO-DA	77.2		25-160
STL02277	d7-N-MeFOSE-M	100		10-150
STL02278	d9-N-EtFOSE-M	95.8		10-150
STL02704	d5-NEtPFOSA	73.2		10-130
STL02705	d3-NMePFOSA	75.3		10-130
STL02703	13C2-PFDoDA	92.4		10-150

Report Date: 19-Sep-2024 08:49:16 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Lims ID: LLCS 240-627485/2-A
Client ID:
Sample Type: LLCS
Inject. Date: 19-Sep-2024 00:06:22 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: LLCS 240-627485/2-A
Misc. Info.: Plate: 1 Rack: 1 240-0146375-035
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 08:46:53 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 08:49:15
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.573	3.544	0.029		1867653	1.25			810	
* 2 13C2 PFHxA										
315.10 > 270.00	4.744	4.719	0.025		1429183	0.6250			4044	
* 3 13C4 PFOA										
417.10 > 172.00	5.652	5.629	0.023		240861	0.6250			2296	
* 4 18O2 PFHxS										
403.00 > 83.90	5.878	5.843	0.035		1361862	0.5913			2050	
* 5 13C5 PFNA										
468.00 > 423.00	6.076	6.052	0.024		871502	0.3125			1096	
* 6 13C2 PFDA										
515.10 > 470.10	6.520	6.488	0.032		640904	0.3125			1191	
* 7 13C4 PFOS										
502.80 > 79.90	6.791	6.761	0.030		1168649	0.5975	Target=4.00		2210	
502.80 > 98.90	6.791	6.761	0.030		292817		3.99(2.00-6.00)		1245	
D 8 13C4 PFBA										
216.80 > 171.90	3.565	3.544	0.021	0.998	3875721	2.29		91.4	11787	
D 9 13C5 PFPeA										
268.30 > 223.00	4.225	4.202	0.023	0.891	1827739	1.02		81.5	6060	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.544	4.530	0.014	0.773	1281247	1.66	Target=0.29	142	3856	
329.10 > 309.00	4.544	4.530	0.014	0.773	3704155		0.35(0.14-0.43)	142	1067	
D 11 13C5 PFHxA										
318.00 > 273.00	4.744	4.719	0.025	1.000	1555651	0.4842	Target=40.21	77.5	3217	
318.00 > 120.30	4.744	4.719	0.025	1.000	41098		37.85(20.11-60.32)	77.5	375	
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.846	0.025	0.829	1478024	0.6002	Target=3.28	103	2584	
302.10 > 98.90	4.871	4.846	0.025	0.829	431955		3.42(1.64-4.92)	103	1993	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.923	0.013	1.040	1785260	1.93	Target=1.86	77.2	5339	
286.90 > 184.90	4.936	4.923	0.013	1.040	1020460		1.75(0.93-2.78)	77.2	2323	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.194	0.013	1.098	1711689	0.5101		81.6	3681	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.440	5.416	0.024	0.925	1444736	1.64	Target=0.38	138	5876	
429.10 > 409.00	5.430	5.416	0.014	0.924	3223927		0.45(0.19-0.57)	138	5321	
D 16 13C8 PFOA										
421.10 > 376.00	5.652	5.619	0.033	1.000	1643222	0.5405		86.5	3128	
D 17 13C3 PFHxS										
402.10 > 79.90	5.878	5.843	0.035	1.000	1384081	0.5724	Target=3.25	96.8	3433	
402.10 > 98.80	5.868	5.843	0.025	0.998	421142		3.29(1.63-4.88)	96.8	1825	
D 18 13C9 PFNA										
472.10 > 427.00	6.076	6.052	0.024	1.000	663343	0.3033		97.1	1263	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.280	6.249	0.031	1.068	895715	1.48	Target=0.33	124	2751	
529.10 > 509.00	6.280	6.249	0.031	1.068	2381306		0.38(0.16-0.49)	124	5242	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.451	6.427	0.024	0.950	1224004	1.35		108	3574	
D 21 13C6 PFDA										
519.10 > 474.10	6.520	6.488	0.032	1.000	681254	0.3451		110	1909	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.656	6.624	0.032	0.980	1285569	1.44		115	2768	
D 23 13C8 PFOS										
507.10 > 79.90	6.791	6.752	0.039	1.000	1252329	0.6215	Target=4.26	104	1427	
507.10 > 98.90	6.791	6.752	0.039	1.000	307598		4.07(2.13-6.39)	104	781	
D 24 13C7 PFUnA										
570.00 > 525.10	6.958	6.923	0.035	1.067	608422	0.3132		100	1242	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.395	7.353	0.042	1.134	529395	0.2888		92.4	852	
D 26 13C8 FOSA										
506.10 > 77.80	7.713	7.709	0.004	1.136	1390400	0.6429		103	2982	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.226	8.179	0.048	1.262	239735	0.2288		73.2	556	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.609	8.607	0.002	1.268	2009529	6.27		100	586	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.733	8.721	0.012	1.286	200712	0.4706		75.3	828	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.861	8.849	0.012	1.305	2357348	5.99		95.8	677	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.947	0.002	1.318	196785	0.4577		73.2	115	
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.573	3.559	0.014	1.002	297270	0.2018		101	1.8	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
34 3:3 FTCA										M
241.00 > 177.00	3.863	3.842	0.021	0.914	20755	0.2353	Target=1.06	94.1	350	
241.00 > 117.00	3.851	3.842	0.009	0.912	20238		1.03(0.53-1.58)		4.8	M
33 Perfluoro-3-methoxypropanoic aci										
229.00 > 84.90	3.863	3.842	0.021	0.914	199279	0.0992		99.2	421	
35 Perfluoropentanoic acid										M
263.00 > 219.00	4.225	4.219	0.006	1.000	236417	0.1055		106	17.7	M
36 Perfluoro(4-methoxybutanoic acid										
279.00 > 85.10	4.405	4.388	0.017	1.043	224916	0.1061		106	996	
38 1H,1H,2H,2H-perfluorohexanesulfo										
327.10 > 307.00	4.544	4.540	0.004	1.000	622689	0.1899	Target=1.34	102	2120	
327.10 > 80.90	4.544	4.540	0.004	1.000	457826		1.36(0.67-2.01)		415	
39 Perfluoro-3,6-dioxaheptanoic aci										
295.00 > 201.00	4.701	4.696	0.005	0.991	24298	0.1111	Target=1.72	111	238	
295.00 > 84.90	4.701	4.696	0.005	0.991	15752		1.54(0.86-2.58)		66.2	
48 FBSA										
297.90 > 78.00	4.733	4.718	0.015	0.972	349805	0.2011		101	1121	
40 Perfluorohexanoic acid										
313.00 > 269.00	4.744	4.739	0.005	1.000	122224	0.0618	Target=14.20	124	13.8	
313.00 > 118.90	4.744	4.739	0.005	1.000	7839		15.59(7.10-21.30)		63.0	
41 5:3 FTCA										
341.00 > 237.10	4.827	4.812	0.015	1.018	368494	1.05	Target=1.54	83.7	486	
341.00 > 217.00	4.827	4.812	0.015	1.018	250418		1.47(0.77-2.31)		126	
42 Perfluorobutanesulfonic acid										
298.70 > 79.90	4.882	4.856	0.026	1.002	113450	0.0459	Target=3.31	104	342	
298.70 > 98.80	4.871	4.856	0.015	1.000	34294		3.31(1.66-4.97)		135	
43 Perfluoro(2-propoxypropanoic) ac										
284.90 > 168.90	4.946	4.932	0.014	1.002	162064	0.2060	Target=1.99	103	533	
284.90 > 184.90	4.936	4.932	0.004	1.000	91231		1.78(1.00-2.99)		284	
46 Perfluoro (2-ethoxyethane) sulfo										
314.80 > 134.90	5.136	5.123	0.013	1.083	699548	0.0961	Target=12.91	108	1546	
314.80 > 82.90	5.136	5.123	0.013	1.083	50610		13.82(6.46-19.37)		125	
47 Perfluoroheptanoic acid										
363.10 > 319.00	5.218	5.204	0.014	1.002	158021	0.0534	Target=3.56	107	18.3	
363.10 > 169.00	5.207	5.204	0.003	1.000	41204		3.84(1.78-5.34)		146	
49 DONA										
376.90 > 250.90	5.379	5.365	0.014	1.090	843029	0.2207	Target=1.61	117	1792	
376.90 > 84.80	5.379	5.365	0.014	1.090	541808		1.56(0.81-2.42)		1899	
51 Perfluoropentanesulfonic acid										
349.10 > 79.90	5.410	5.385	0.025	0.920	123964	0.0516	Target=3.08	110	163	
349.10 > 98.90	5.399	5.385	0.014	0.919	44153		2.81(1.54-4.63)		182	
50 1H,1H,2H,2H-perfluorooctanesulfo										
427.10 > 407.00	5.440	5.425	0.015	1.000	569586	0.1967	Target=1.41	104	1886	
427.10 > 80.90	5.440	5.425	0.015	1.000	383991		1.48(0.70-2.11)		1061	
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.652	5.638	0.014	1.000	69007	0.0547	Target=1.93	109	7.4	M
413.00 > 169.00	5.652	5.638	0.014	1.000	39998		1.73(0.96-2.89)		97.3	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 7:3 FTCA										
441.00 > 316.90	5.708	5.694	0.014	1.203	403410	1.20	Target=1.07	95.9	740	
441.00 > 336.90	5.699	5.694	0.005	1.201	389686		1.04(0.53-1.60)		1126	
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.862	0.016	1.000	104445	0.0523	Target=3.17	115	373	M
398.70 > 98.90	5.878	5.862	0.016	1.000	33803		3.09(1.59-4.76)		88.3	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.085	6.061	0.024	1.002	88722	0.0552	Target=4.77	110	11.7	M
463.00 > 169.00	6.085	6.061	0.024	1.002	15636		5.67(2.39-7.16)		47.6	M
62 FHxSA										
397.90 > 78.00	6.252	6.258	-0.006	1.064	516647	0.2196		110	1174	
56 1H,1H,2H,2H-perfluorodecanesulfo										
527.10 > 507.00	6.280	6.267	0.013	1.000	397931	0.2136	Target=1.35	111	1114	
527.10 > 80.80	6.280	6.267	0.013	1.000	270800		1.47(0.67-2.02)		1406	
57 PFECHS										
461.00 > 381.00	6.289	6.267	0.022	1.070	435793	0.1101	Target=1.89	119	32.2	
461.00 > 99.00	6.289	6.267	0.022	1.070	217983		2.00(0.94-2.83)		465	
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.336	6.314	0.022	0.933	119084	0.0485	Target=3.87	102	267	
449.00 > 98.80	6.336	6.314	0.022	0.933	36188		3.29(1.93-5.80)		92.9	
59 N-methylperfluorooctanesulfonami										M
570.10 > 419.00	6.461	6.447	0.014	1.002	55211	0.0512	Target=1.69	102	136	M
570.10 > 483.00	6.461	6.447	0.014	1.002	33925		1.63(0.85-2.54)		131	M
60 Perfluorodecanoic acid										
512.90 > 469.00	6.520	6.498	0.022	1.000	102131	0.0590	Target=5.10	118	14.4	
512.90 > 219.00	6.520	6.498	0.022	1.000	19677		5.19(2.55-7.66)		91.6	
61 N-ethylperfluorooctanesulfonamid										M
584.20 > 419.10	6.665	6.643	0.022	1.001	44909	0.0523	Target=1.49	105	89.9	M
584.20 > 526.00	6.665	6.643	0.022	1.001	28581		1.57(0.75-2.24)		60.6	M
63 Perfluorooctanesulfonic acid										M
498.90 > 79.90	6.799	6.770	0.029	1.001	123507	0.0468	Target=4.80	101	147	M
498.90 > 98.80	6.791	6.770	0.021	1.000	26610		4.64(2.40-7.20)		143	M
64 Perfluoroundecanoic acid										
563.10 > 519.00	6.966	6.940	0.026	1.001	82109	0.0468	Target=6.10	93.5	26.5	
563.10 > 269.10	6.966	6.940	0.026	1.001	14337		5.73(3.05-9.15)		105	
65 9-Chlorohexadecafluoro-3-oxanona										
530.80 > 351.00	7.137	7.103	0.034	1.446	625086	0.1841	Target=3.10	98.8	106	
532.80 > 353.00	7.129	7.103	0.026	1.444	205866		3.04(1.55-4.65)		227	
66 Perfluorononanesulfonic acid										
548.80 > 79.90	7.241	7.205	0.036	1.066	93333	0.0467	Target=4.02	97.4	379	
548.80 > 98.80	7.235	7.205	0.030	1.065	24184		3.86(2.01-6.03)		134	
67 Perfluorododecanoic acid										
613.10 > 569.00	7.395	7.361	0.034	1.000	80264	0.0479	Target=16.81	95.7	31.7	
613.10 > 319.00	7.395	7.361	0.034	1.000	5843		13.74(8.41-25.22)		52.0	
68 Perfluorodecanesulfonic acid										
599.00 > 79.90	7.666	7.627	0.039	1.129	110808	0.0490	Target=4.25	102	307	
599.00 > 98.80	7.658	7.627	0.031	1.128	24052		4.61(2.12-6.37)		205	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
69 Perfluorooctanesulfonamide										M
498.10 > 77.90	7.724	7.720	0.004	1.001	122603	0.0586	Target=51.55	117	216	M
498.10 > 478.00	7.713	7.720	-0.007	1.000	2890		42.42(25.77-77.32)		18.8	M
70 Perfluorotridecanoic acid										
663.00 > 619.00	7.820	7.784	0.036	0.951	71301	0.0478	Target=6.27	95.6	37.0	
663.00 > 168.90	7.820	7.784	0.036	0.951	12802		5.57(3.13-9.40)		127	
71 11-Chloroeicosafluoro-3-oxaundec										
630.90 > 450.90	7.988	7.954	0.034	1.618	614228	0.1864	Target=3.32	99.0	814	
632.90 > 452.90	7.988	7.954	0.034	1.618	187160		3.28(1.66-4.97)		392	
72 Perfluorotetradecanoic acid										
713.10 > 669.00	8.226	8.179	0.047	1.000	59317	0.0617	Target=6.82	123	42.9	
713.10 > 168.90	8.226	8.179	0.047	1.000	6202		9.56(3.41-10.24)		74.9	
73 Perfluorododecanesulfonic acid (										
699.10 > 79.90	8.449	8.402	0.046	1.244	74780	0.0391	Target=4.61	80.8	115	
699.10 > 98.80	8.437	8.402	0.035	1.243	16156		4.63(2.30-6.91)		153	
74 2-(N-methylperfluoro-1-octanesul										M
616.10 > 58.90	8.631	8.628	0.003	1.002	25732	0.5409		108	167	M
75 NMeFOSA										M
511.90 > 219.00	8.742	8.741	0.001	1.001	18963	0.0606	Target=0.70	121	114	M
511.90 > 169.00	8.733	8.741	-0.008	1.000	26395		0.72(0.35-1.05)		125	M
76 2-(N-ethylperfluoro-1-octanesulf										M
630.00 > 58.90	8.881	8.879	0.002	1.002	24556	0.4821		96.4	167	M
77 N-ethylperfluoro-1-octanesulfona										M
526.00 > 219.00	8.967	8.965	0.002	1.002	16349	0.0526	Target=0.71	105	102	M
526.00 > 169.00	8.958	8.965	-0.007	1.001	25960		0.63(0.35-1.06)		99.9	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

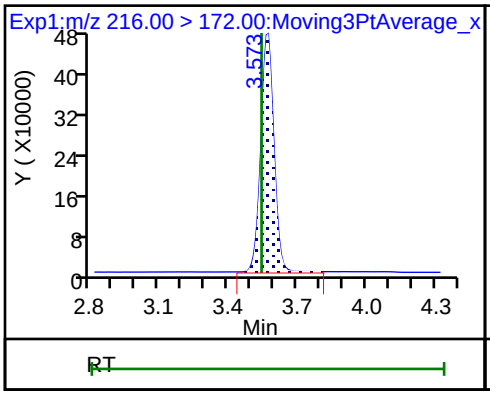
PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 08:49:16 Chrom Revision: 2.3 26-Aug-2024 17:14:48

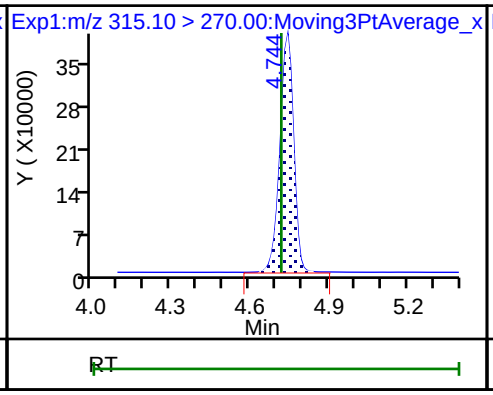
Eurofins Cleveland

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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

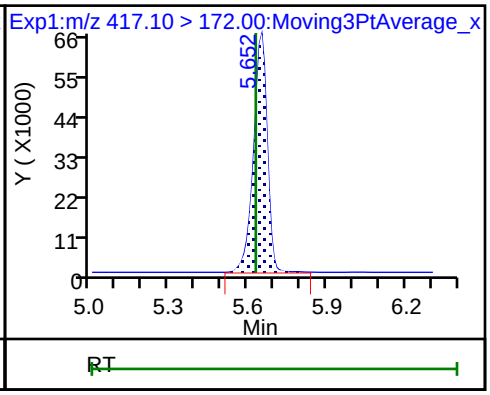
* 1 13C3-PFBA



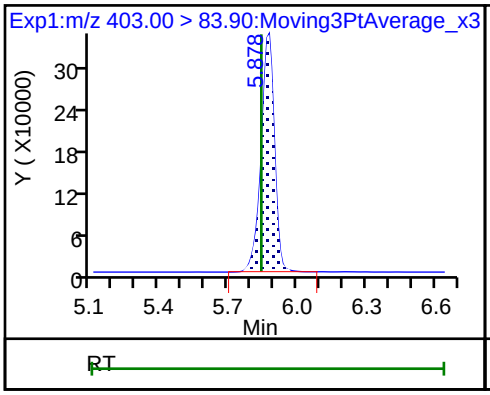
* 2 13C2 PFHxA



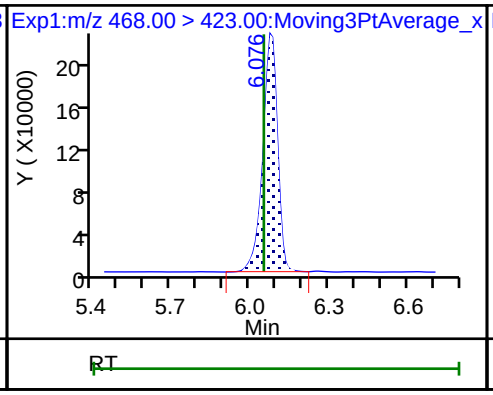
* 3 13C4 PFOA



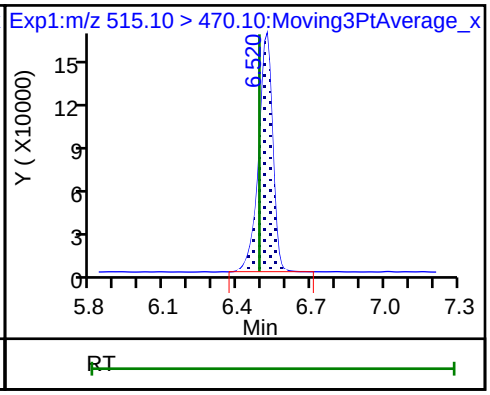
* 4 18O2 PFHxS



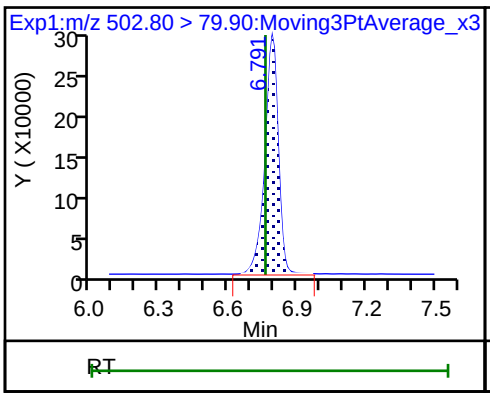
* 5 13C5 PFNA



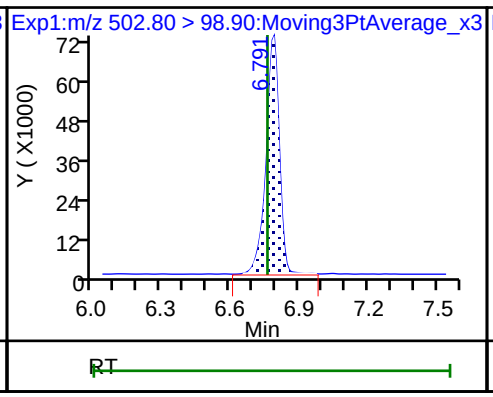
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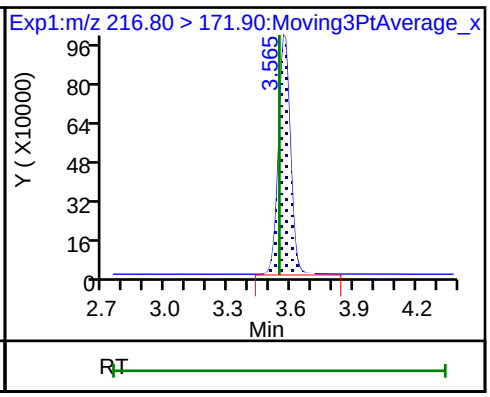
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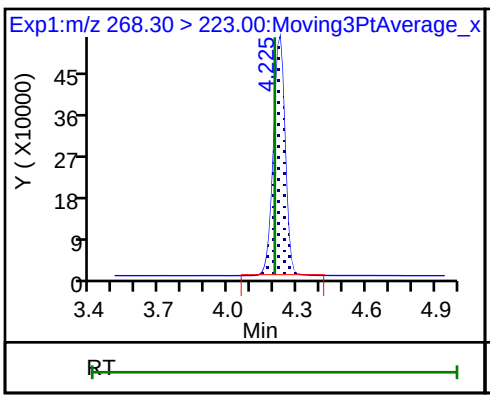
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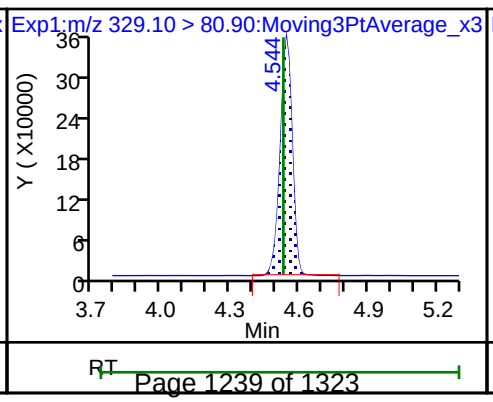
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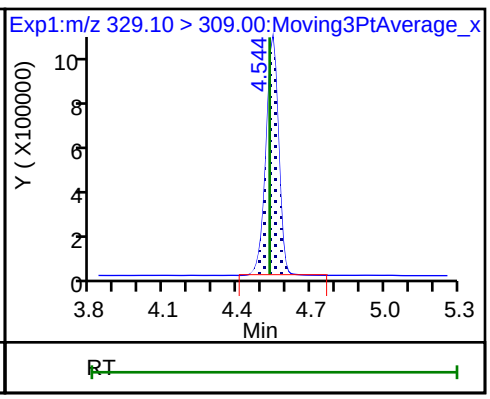
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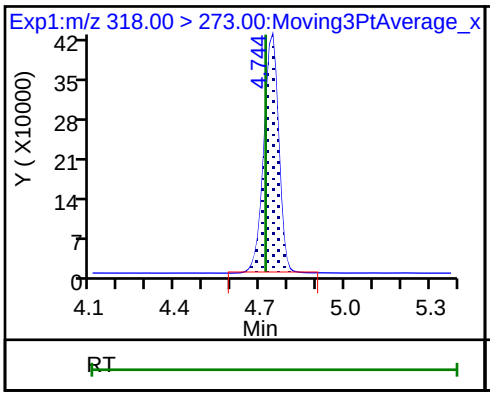
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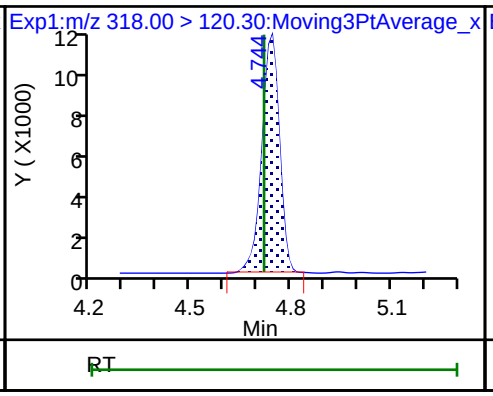
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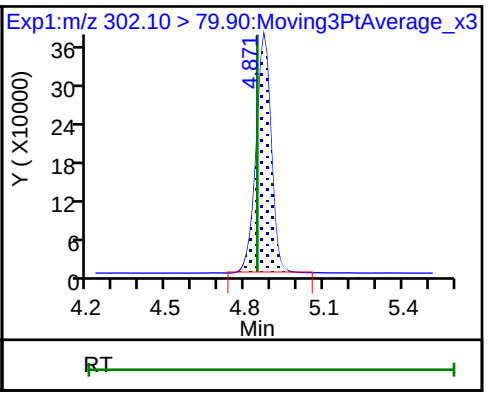
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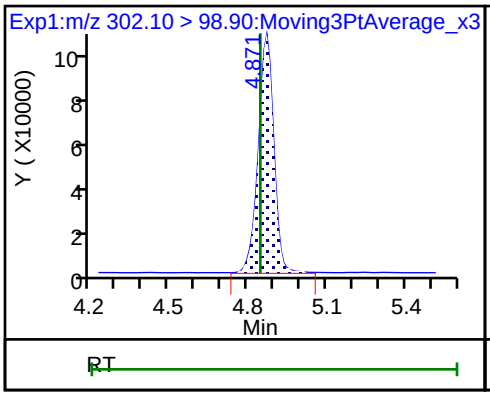
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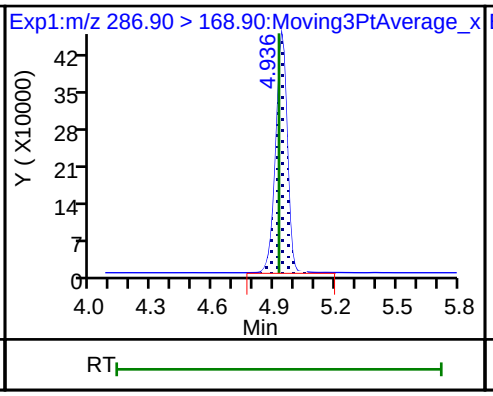
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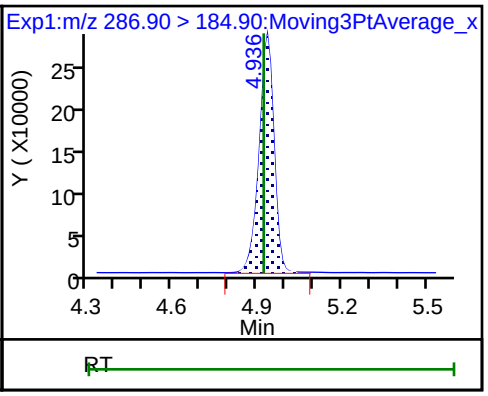
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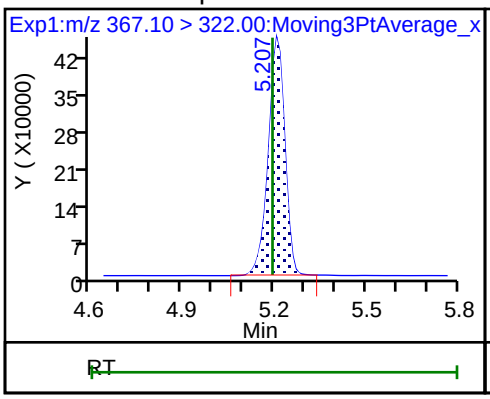
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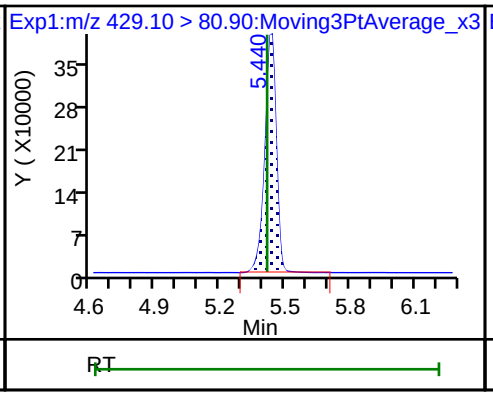
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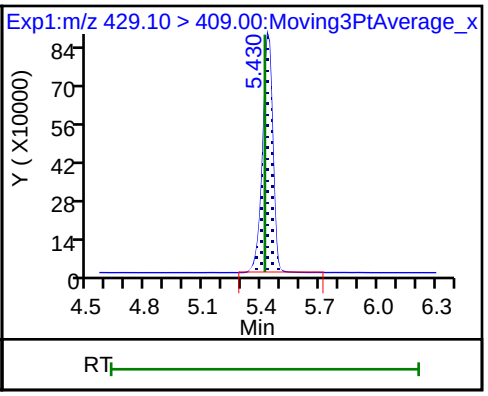
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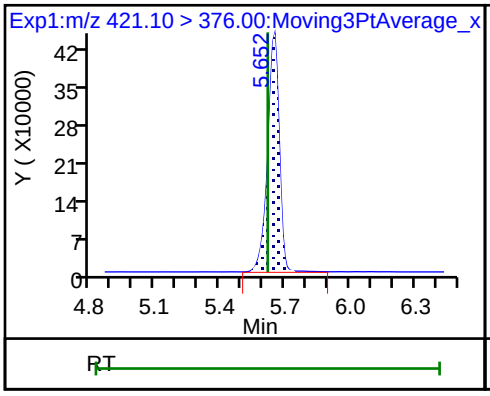
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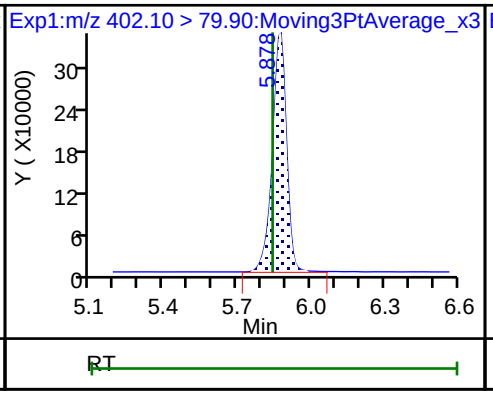
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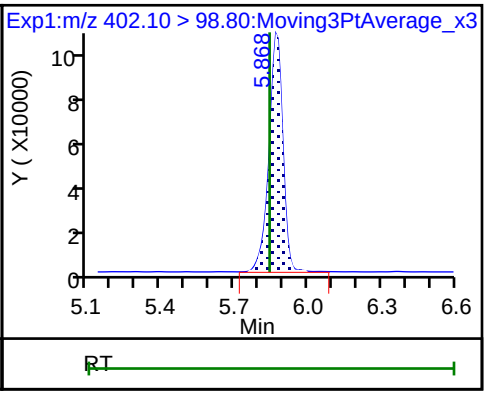
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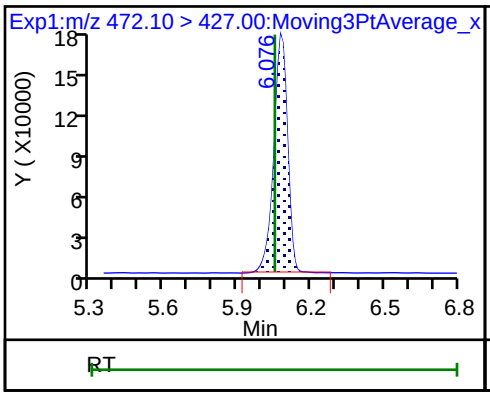
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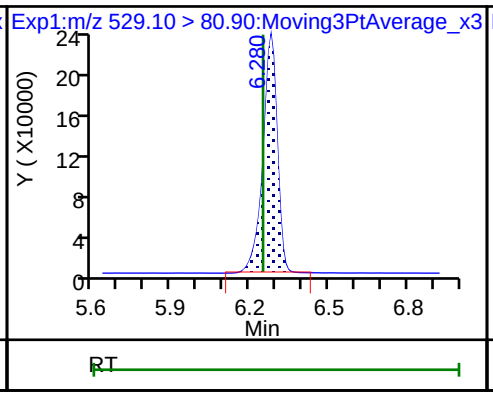
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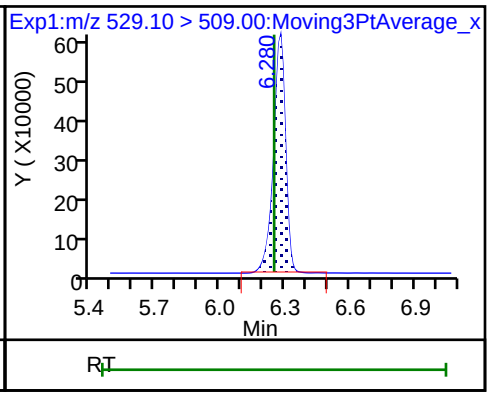
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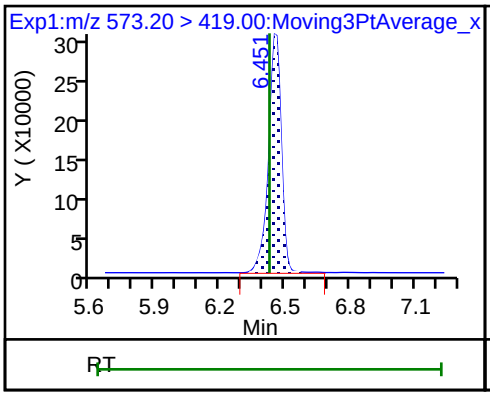
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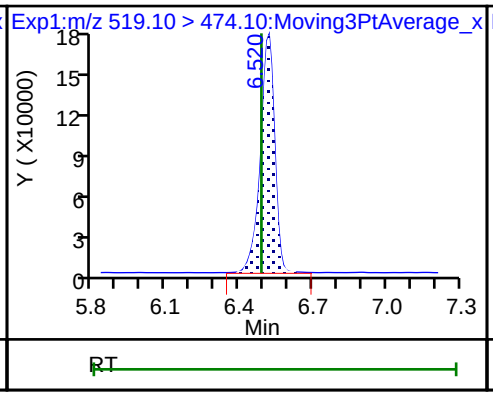
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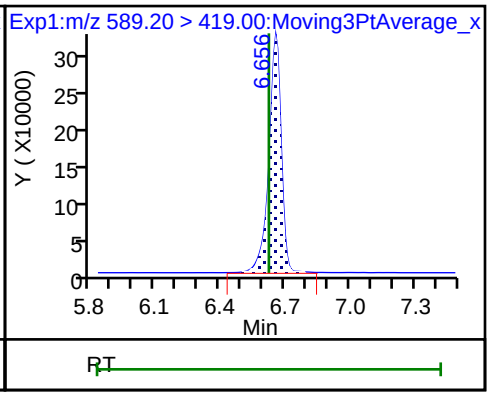
D 20 d3-NMeFOSAA



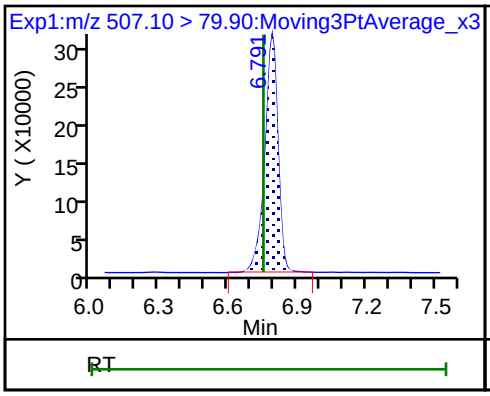
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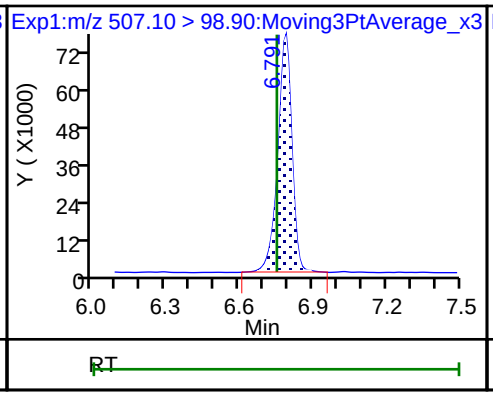
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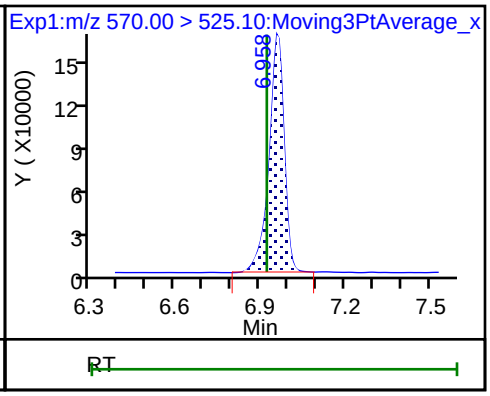
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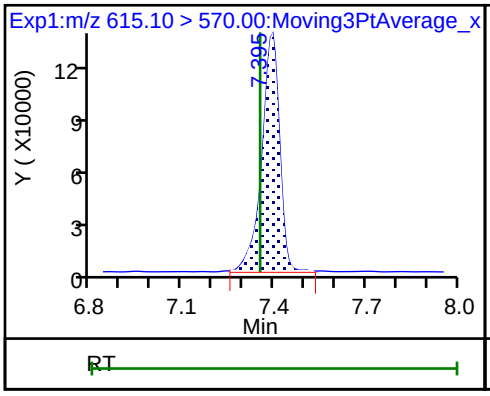
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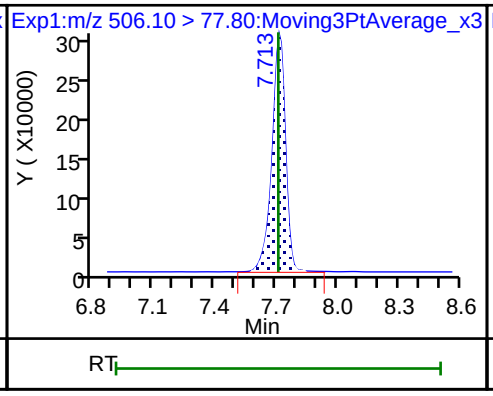
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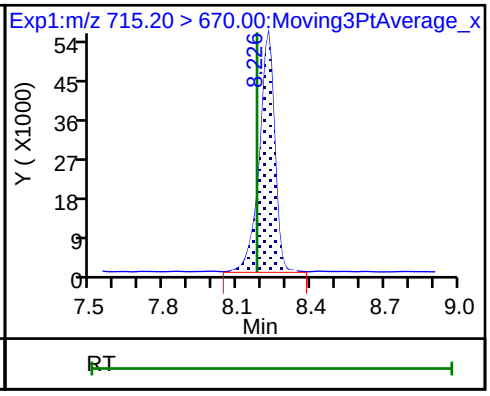
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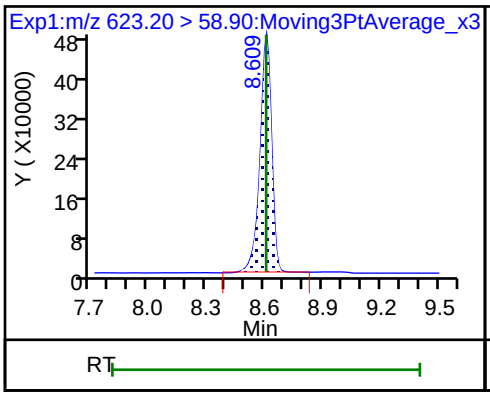
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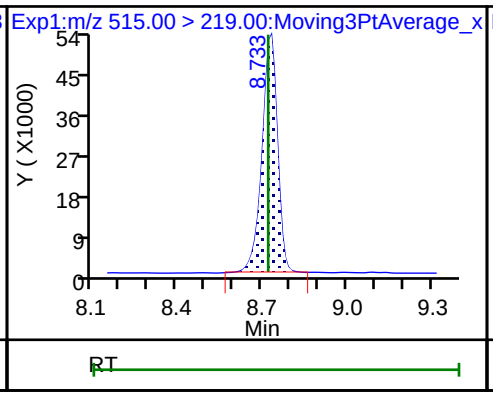
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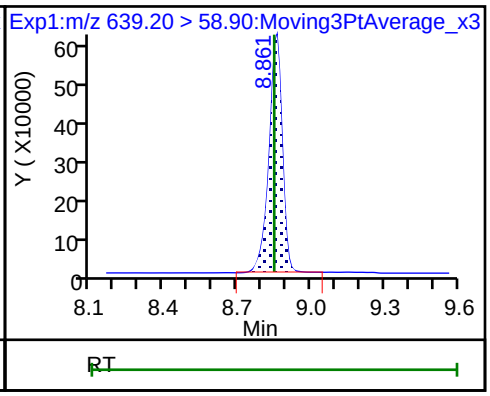
D 28 d7-N-MeFOSE-M



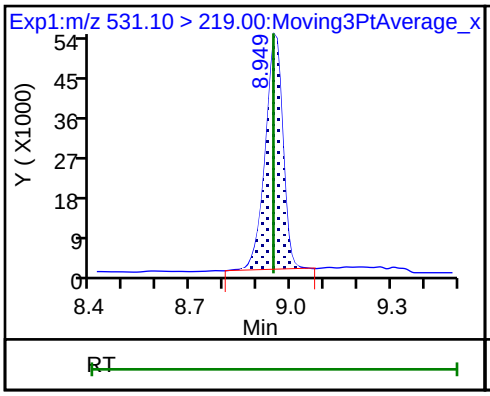
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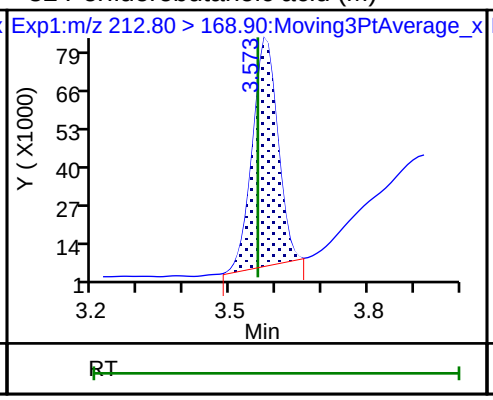
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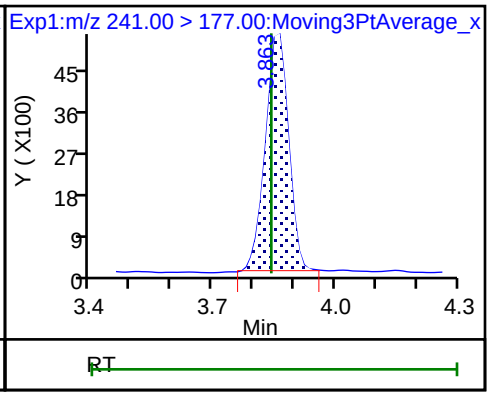
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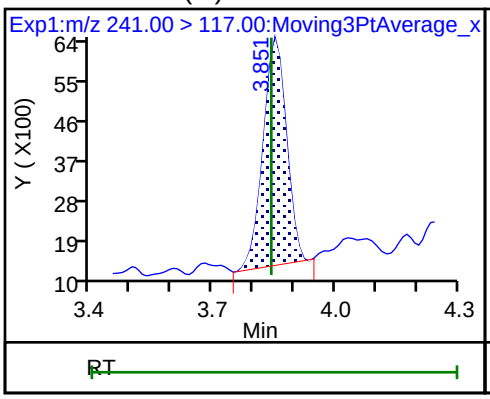
32 Perfluorobutanoic acid (M)



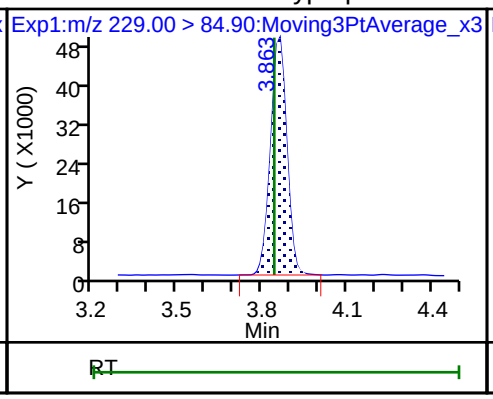
34 3:3 FTCA



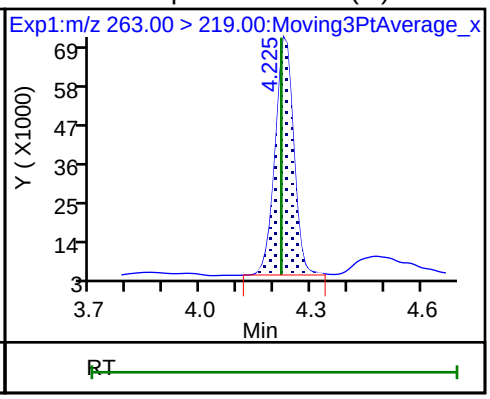
34 3:3 FTCA (M)



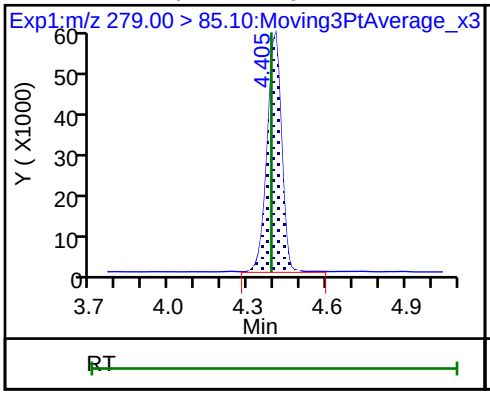
33 Perfluoro-3-methoxypropanoic aci



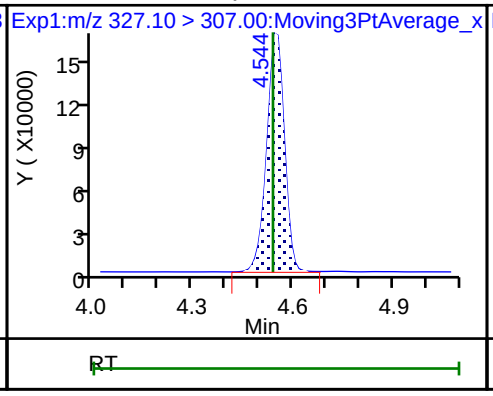
35 Perfluoropentanoic acid (M)



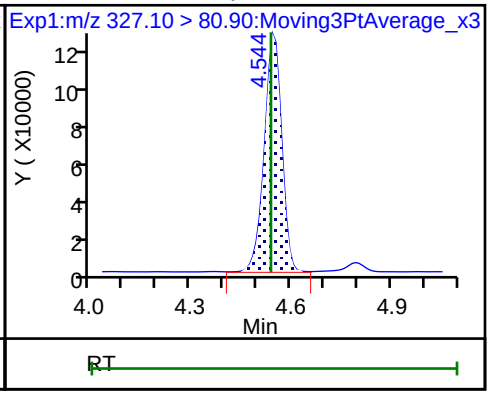
36 Perfluoro(4-methoxybutanoic acid



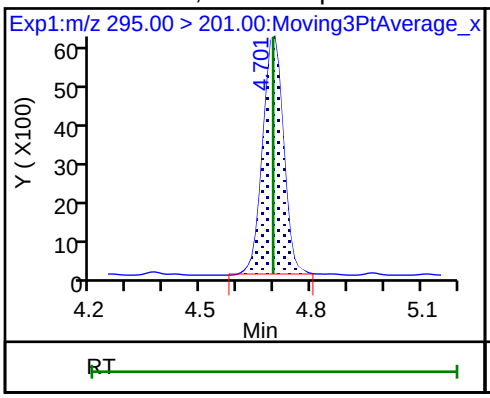
38 1H,1H,2H,2H-perfluorohexanesulfo



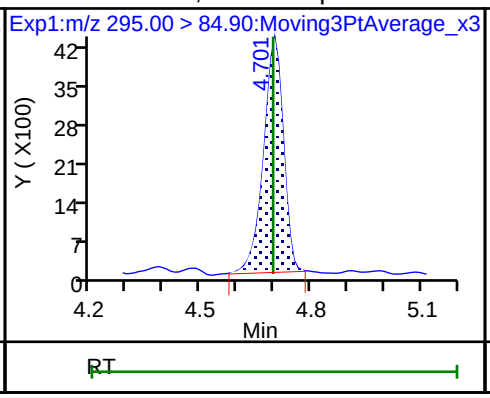
38 1H,1H,2H,2H-perfluorohexanesulfo



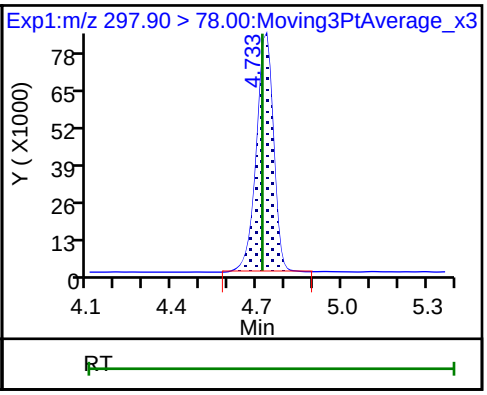
39 Perfluoro-3,6-dioxaheptanoic aci



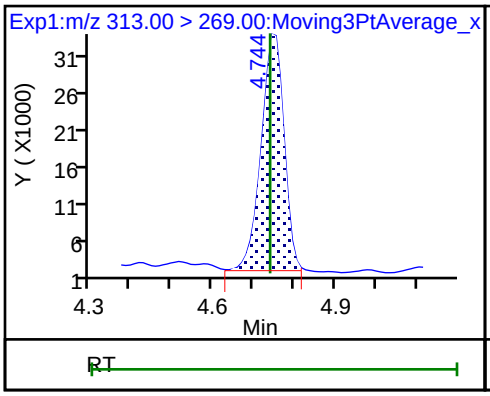
39 Perfluoro-3,6-dioxaheptanoic aci



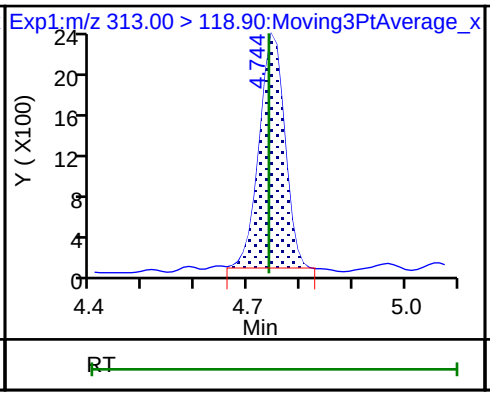
48 FBSA



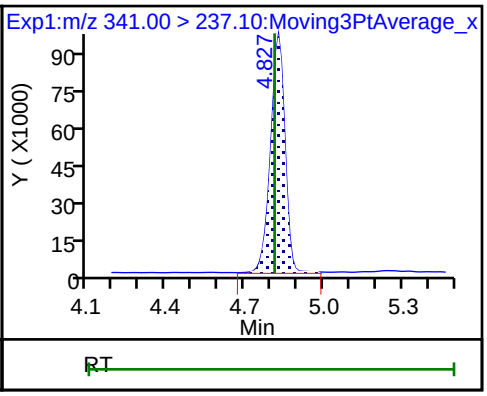
40 Perfluorohexanoic acid



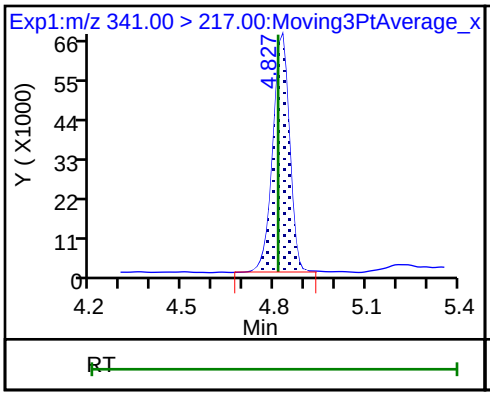
40 Perfluorohexanoic acid



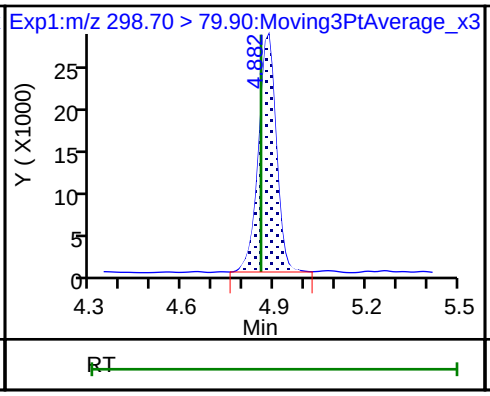
41 5:3 FTCA



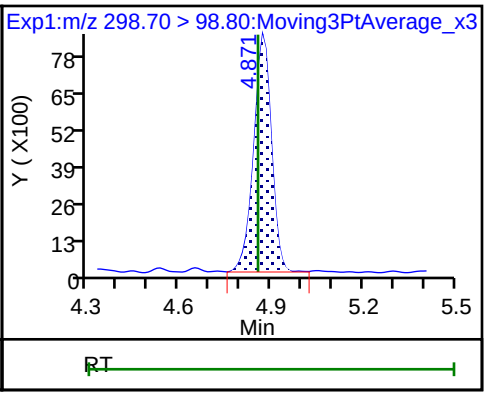
41 5:3 FTCA



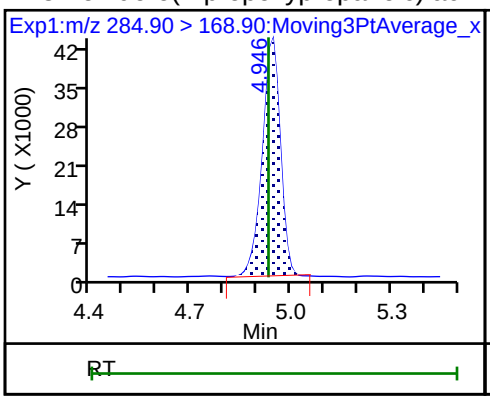
42 Perfluorobutanesulfonic acid



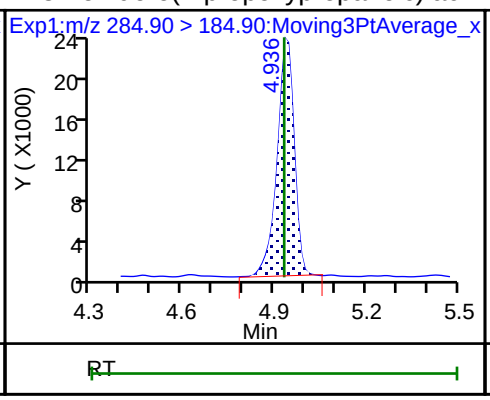
42 Perfluorobutanesulfonic acid



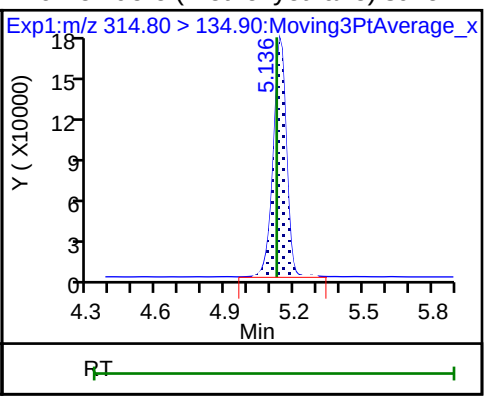
43 Perfluoro(2-propoxypropanoic) ac



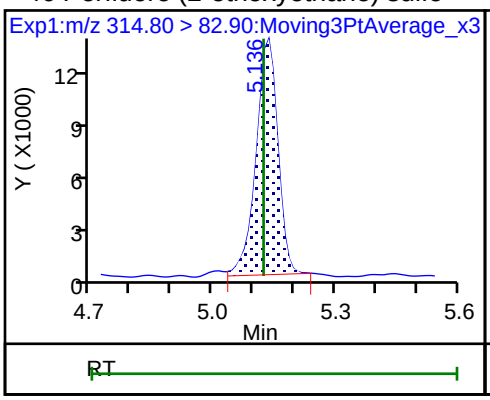
43 Perfluoro(2-propoxypropanoic) ac



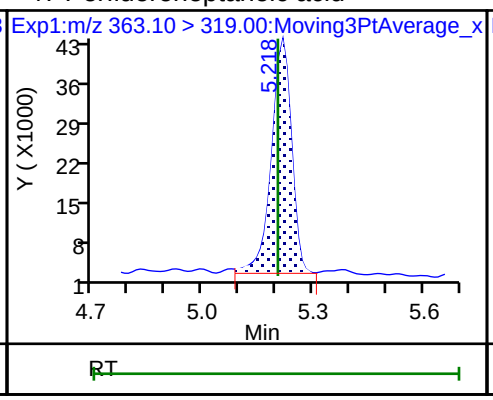
46 Perfluoro (2-ethoxyethane) sulfo



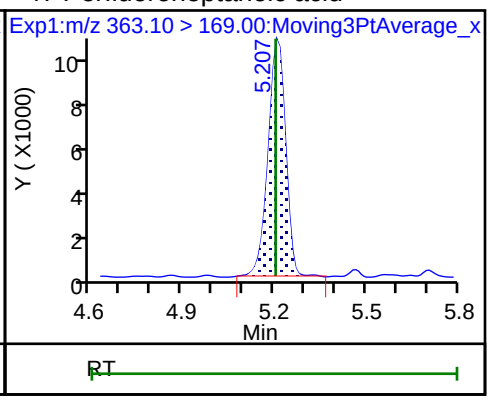
46 Perfluoro (2-ethoxyethane) sulfo



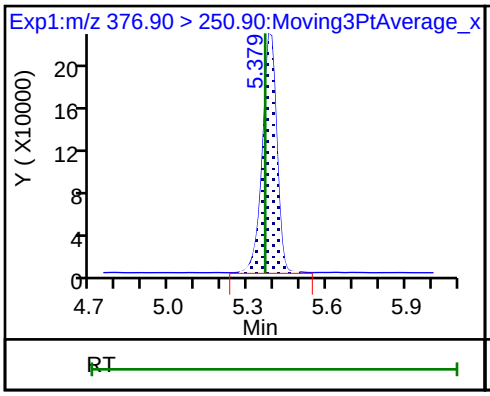
47 Perfluoroheptanoic acid



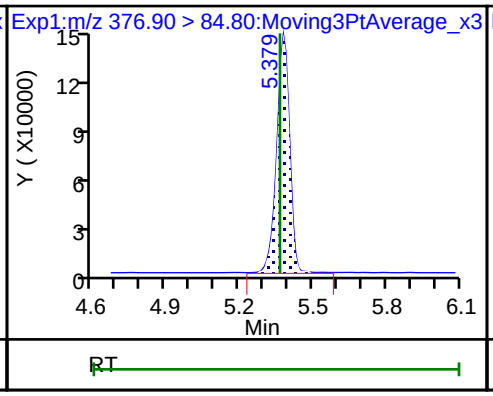
47 Perfluoroheptanoic acid



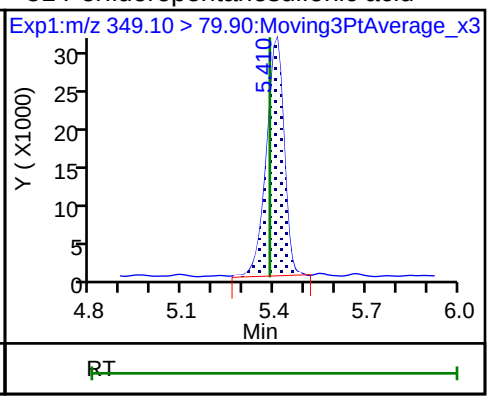
49 DONA



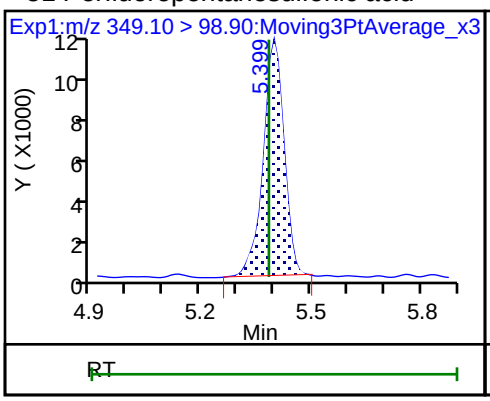
49 DONA



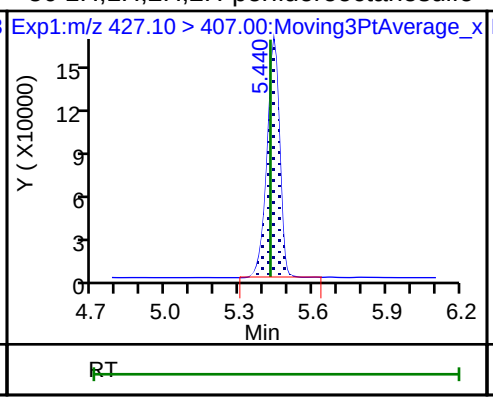
51 Perfluoropentanesulfonic acid



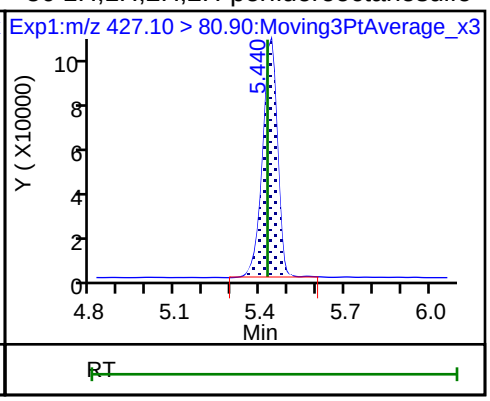
51 Perfluoropentanesulfonic acid



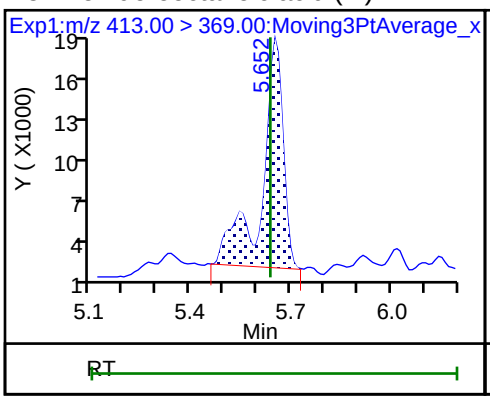
50 1H,1H,2H,2H-perfluorooctanesulfo



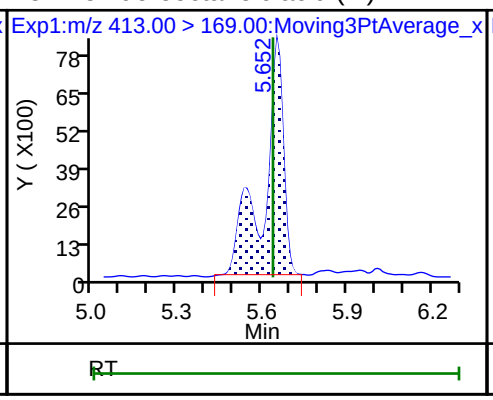
50 1H,1H,2H,2H-perfluorooctanesulfo



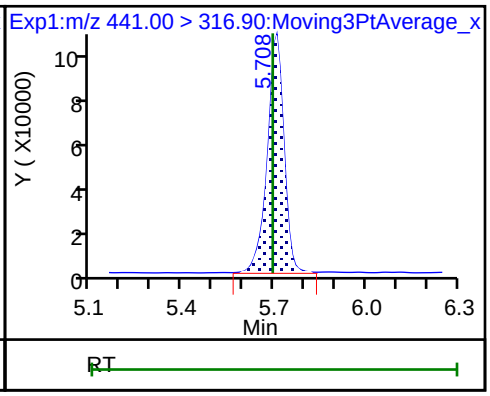
52 Perfluorooctanoic acid (M)



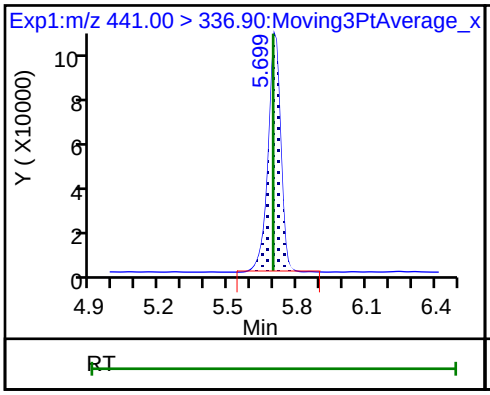
52 Perfluorooctanoic acid (M)



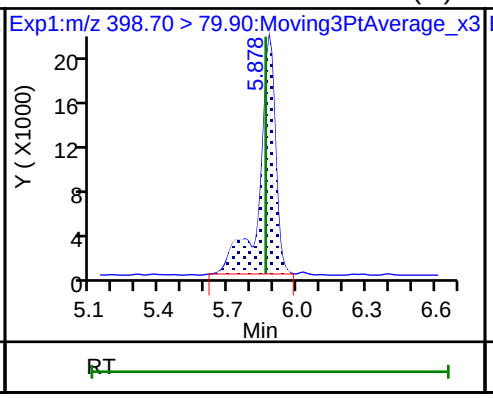
54 7:3 FTCA



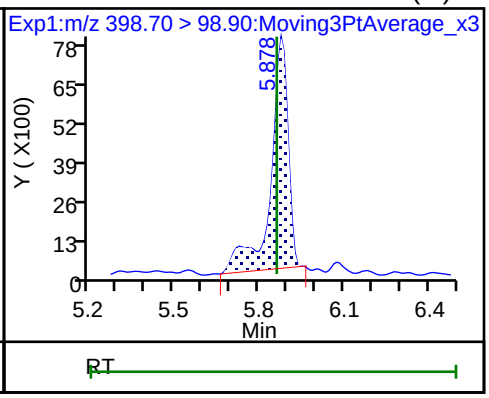
54 7:3 FTCA



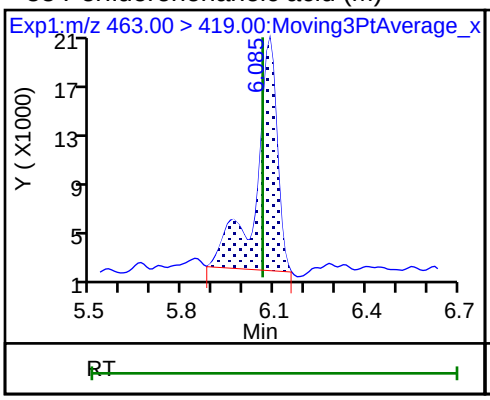
53 Perfluorohexanesulfonic acid (M)



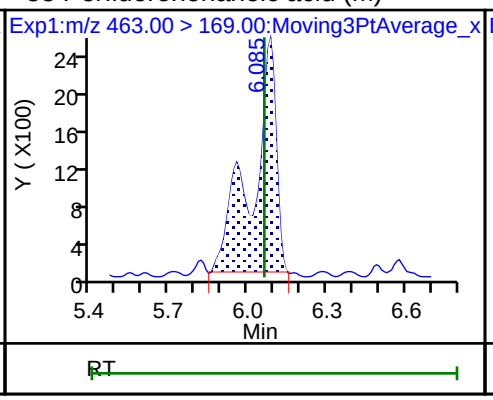
53 Perfluorohexanesulfonic acid (M)



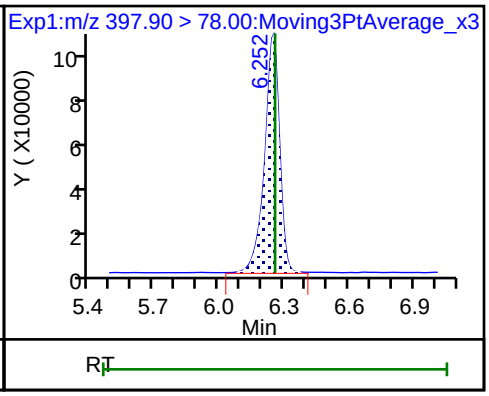
55 Perfluorononanoic acid (M)



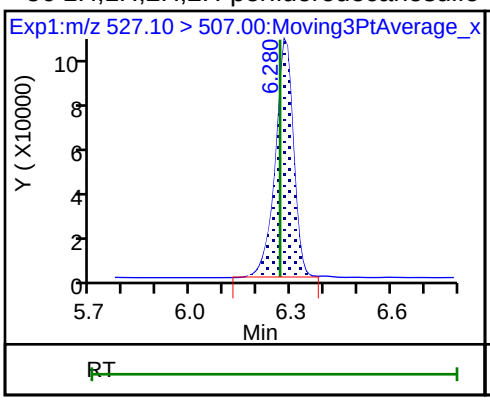
55 Perfluorononanoic acid (M)



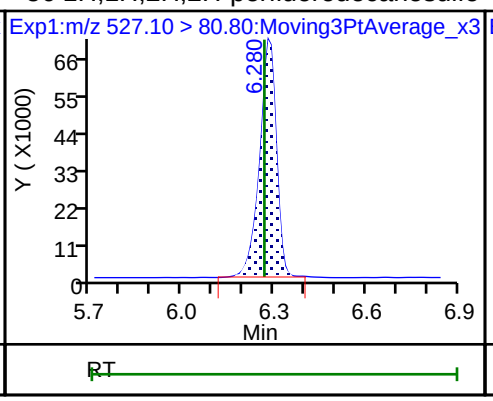
62 FHxSA



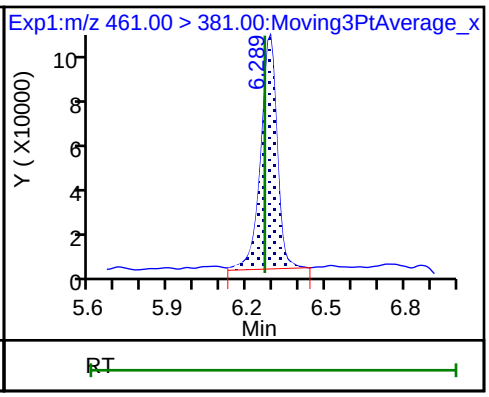
56 1H,1H,2H,2H-perfluorodecanesulfo



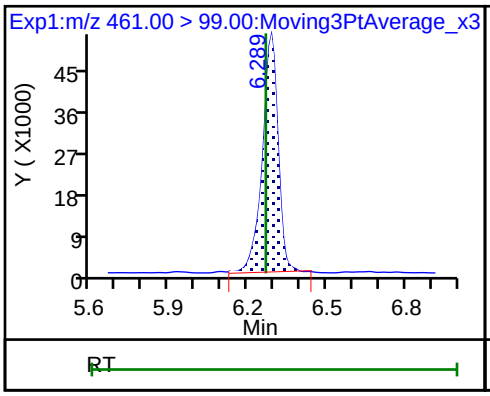
56 1H,1H,2H,2H-perfluorodecanesulfo



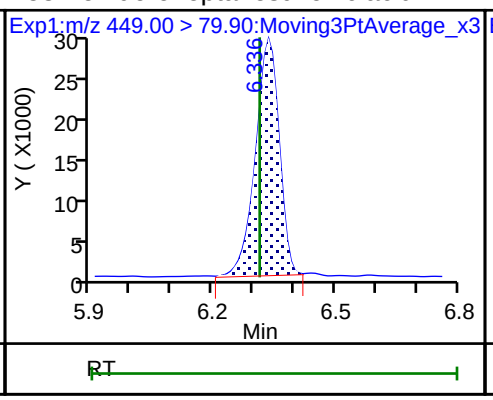
57 PFECHS



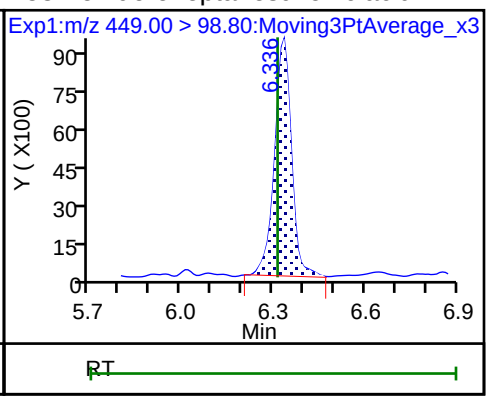
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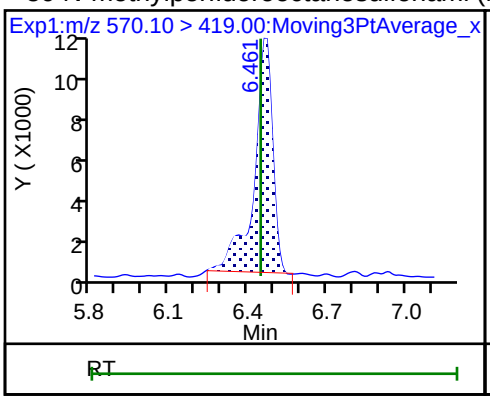
58 Perfluoroheptanesulfonic acid



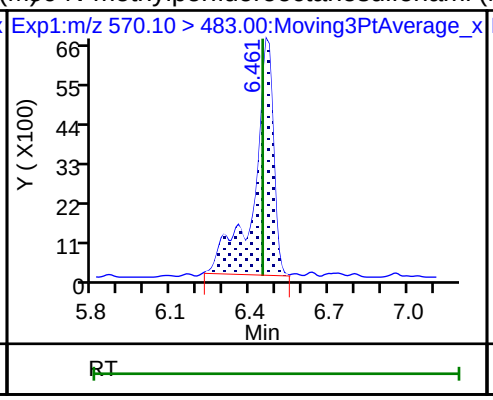
58 Perfluoroheptanesulfonic acid



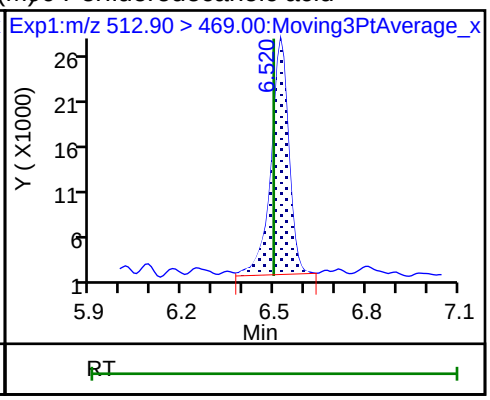
59 N-methylperfluorooctanesulfonami (M)



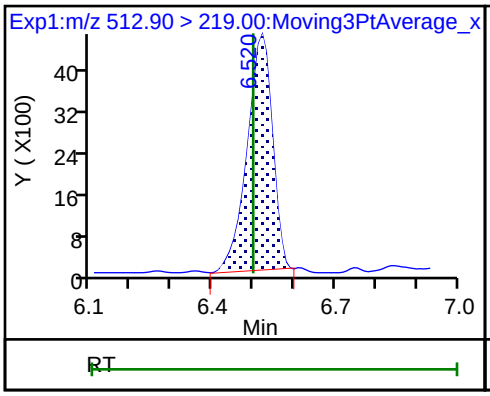
59 N-methylperfluorooctanesulfonami (M)



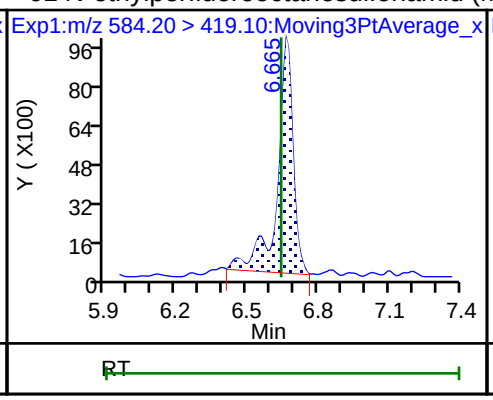
60 Perfluorodecanoic acid



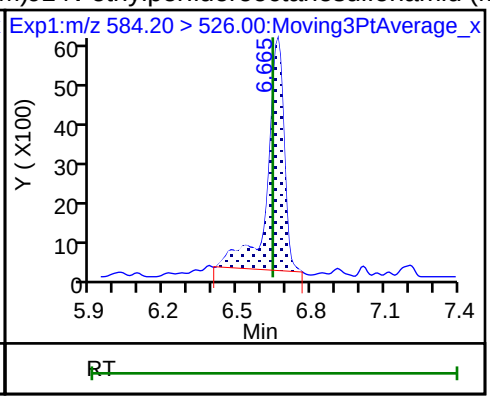
60 Perfluorodecanoic acid



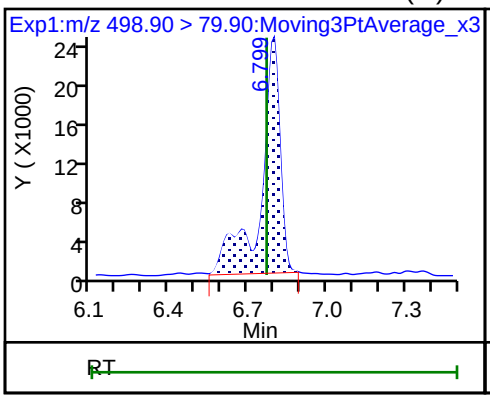
61 N-ethylperfluorooctanesulfonamid (M)



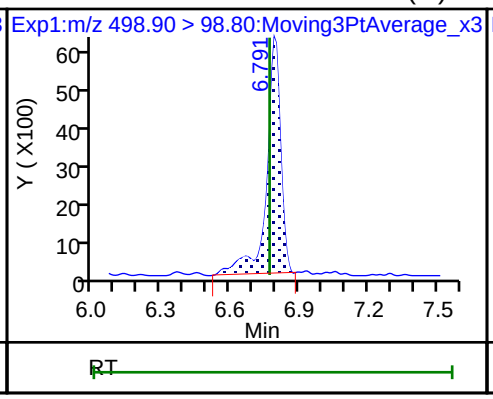
61 N-ethylperfluorooctanesulfonamid (M)



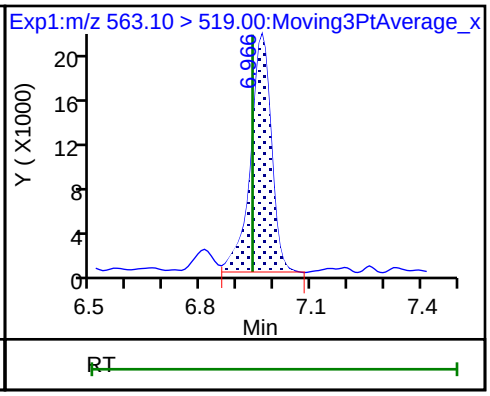
63 Perfluorooctanesulfonic acid (M)



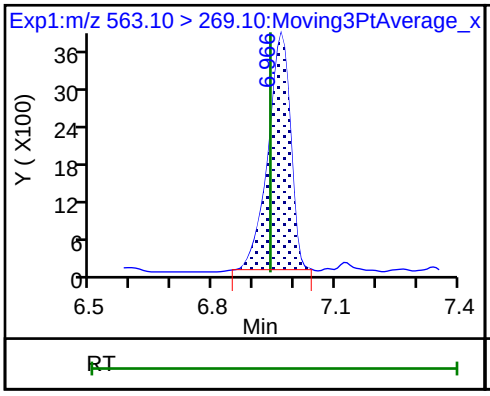
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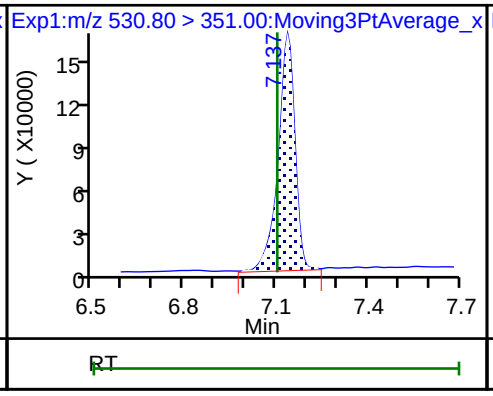
64 Perfluoroundecanoic acid



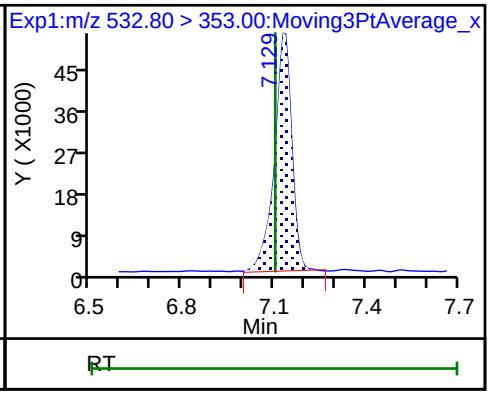
64 Perfluoroundecanoic acid



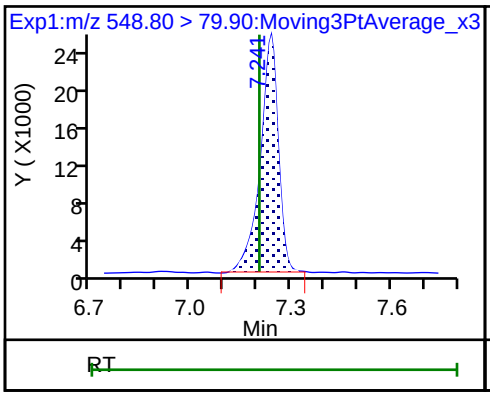
65 9-Chlorohexadecafluoro-3-oxanona



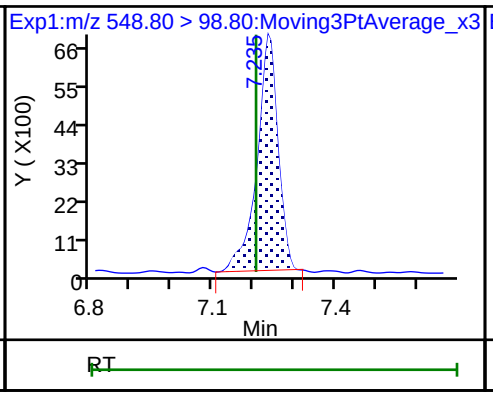
65 9-Chlorohexadecafluoro-3-oxanona



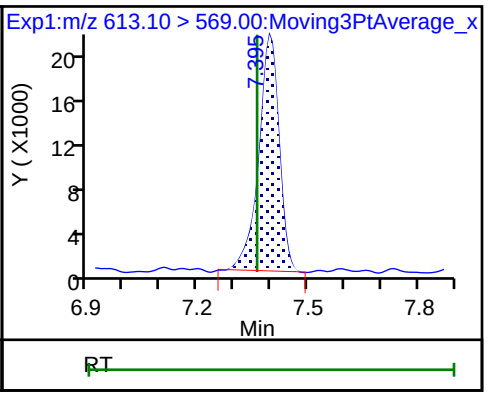
66 Perfluorononanesulfonic acid



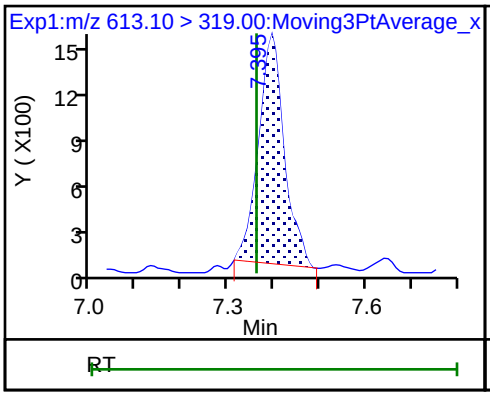
66 Perfluorononanesulfonic acid



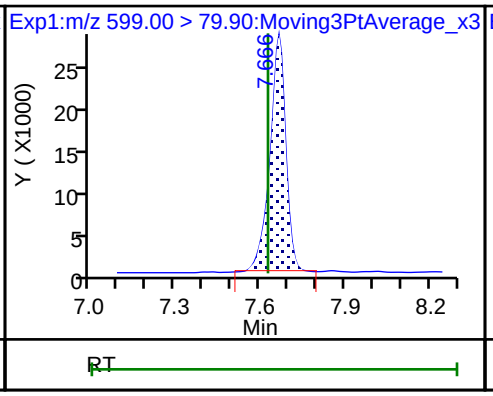
67 Perfluorododecanoic acid



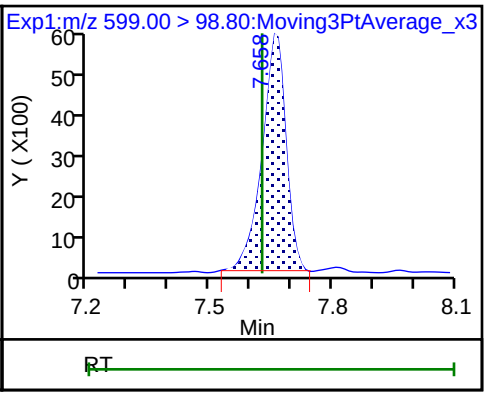
67 Perfluorododecanoic acid



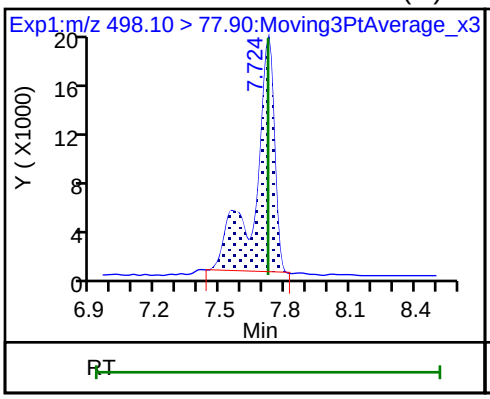
68 Perfluorodecanesulfonic acid



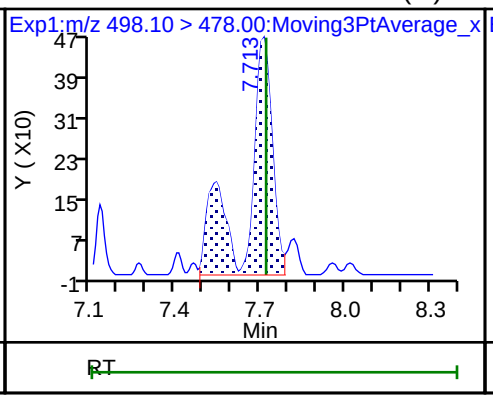
68 Perfluorodecanesulfonic acid



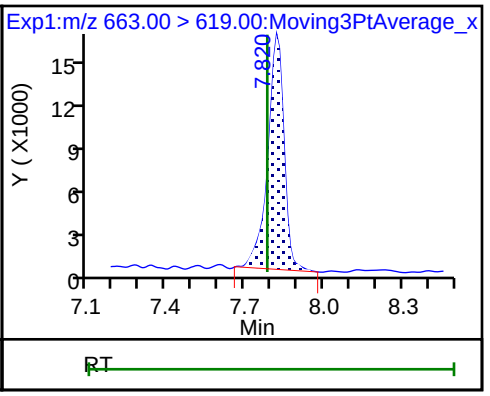
69 Perfluorooctanesulfonamide (M)



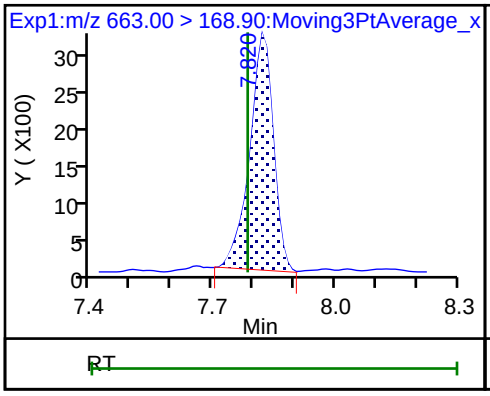
69 Perfluorooctanesulfonamide (M)



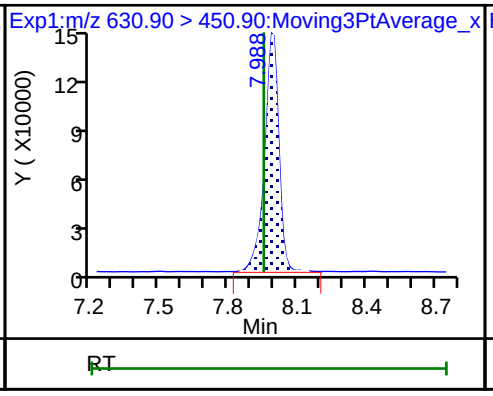
70 Perfluorotridecanoic acid



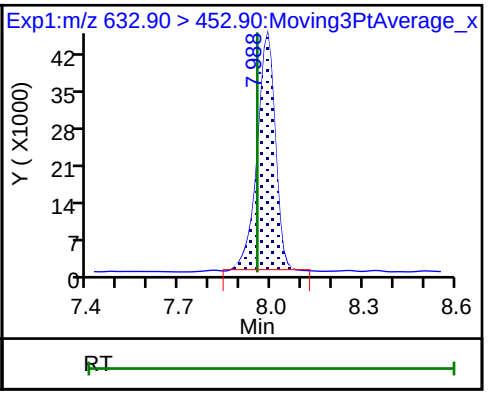
70 Perfluorotridecanoic acid



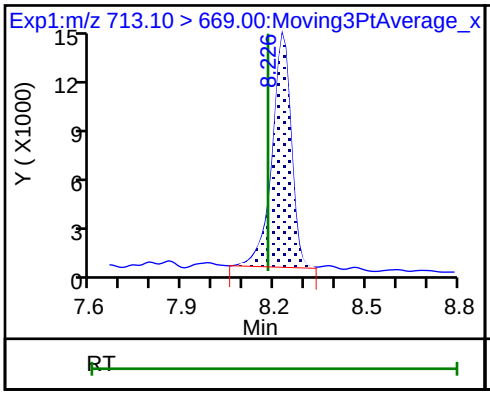
71 11-Chloroeicosafluoro-3-oxaundec



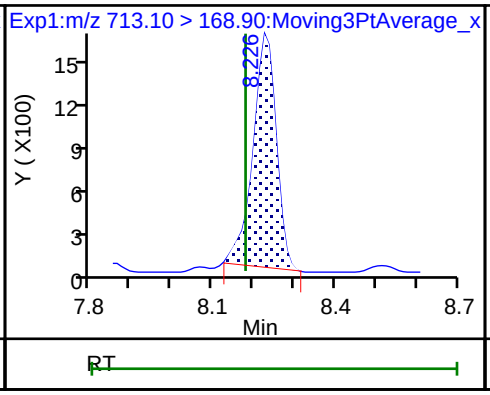
71 11-Chloroeicosafluoro-3-oxaundec



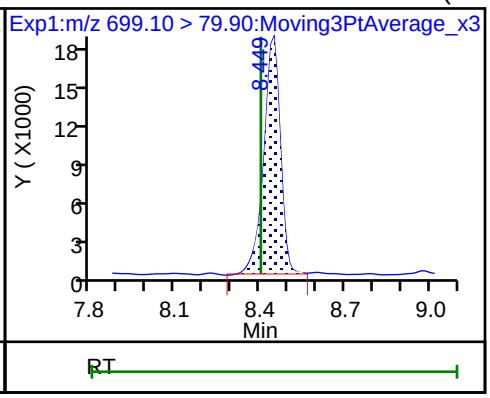
72 Perfluorotetradecanoic acid



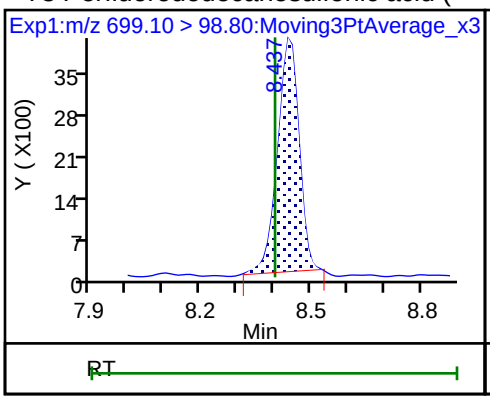
72 Perfluorotetradecanoic acid



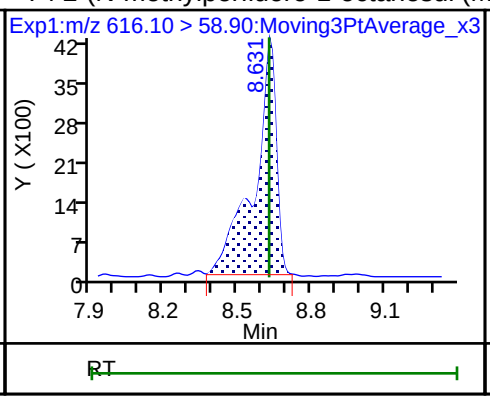
73 Perfluorododecanesulfonic acid (



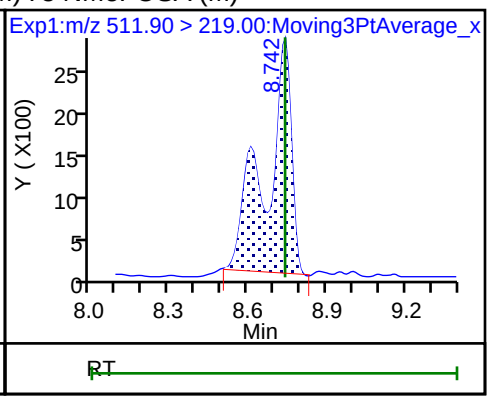
73 Perfluorododecanesulfonic acid (



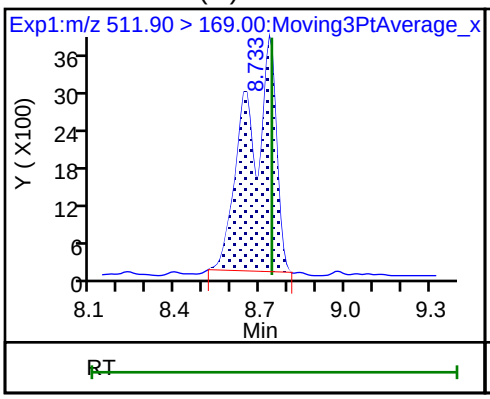
74 2-(N-methylperfluoro-1-octanesul (M)



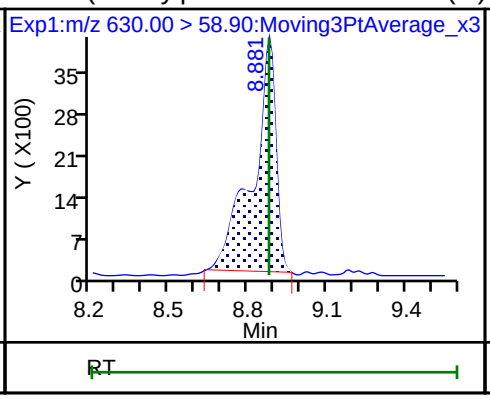
75 NMeFOSA (M)



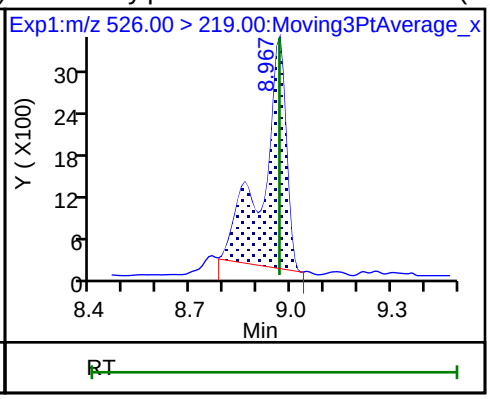
75 NMeFOSA (M)



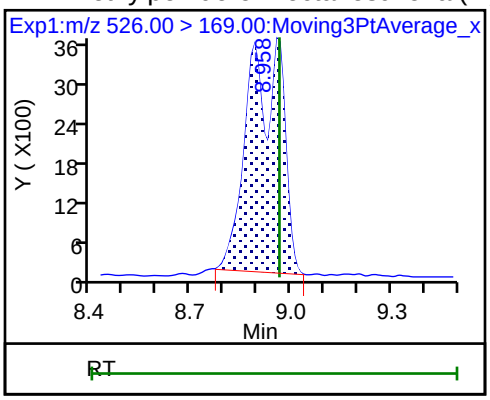
76 2-(N-ethylperfluoro-1-octanesulf (M)



77 N-ethylperfluoro-1-octanesulfona (M)



77 N-ethylperfluoro-1-octanesulfona (M)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

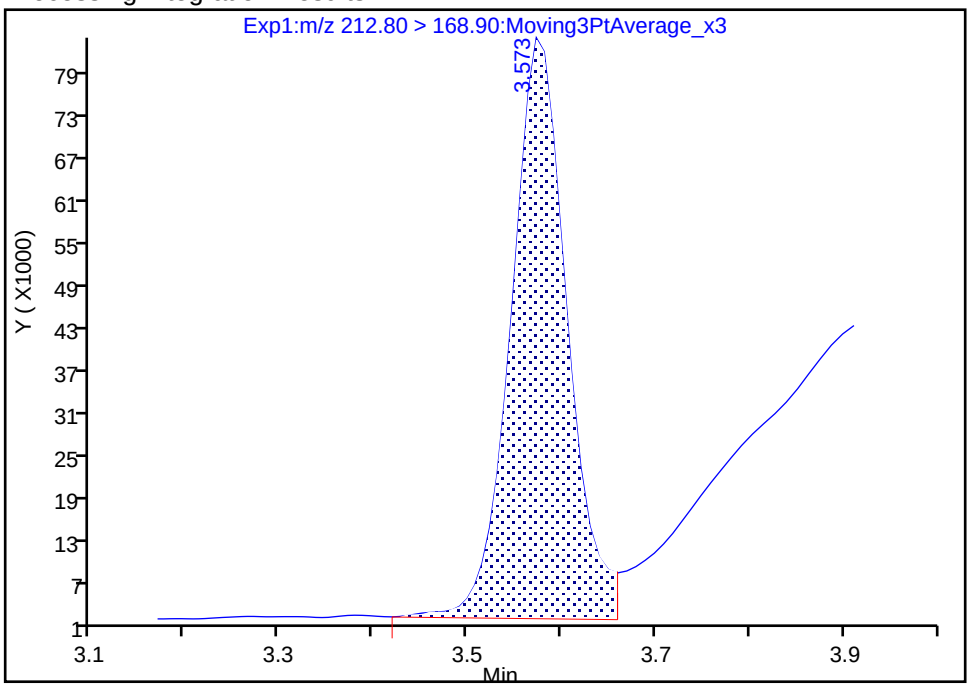
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

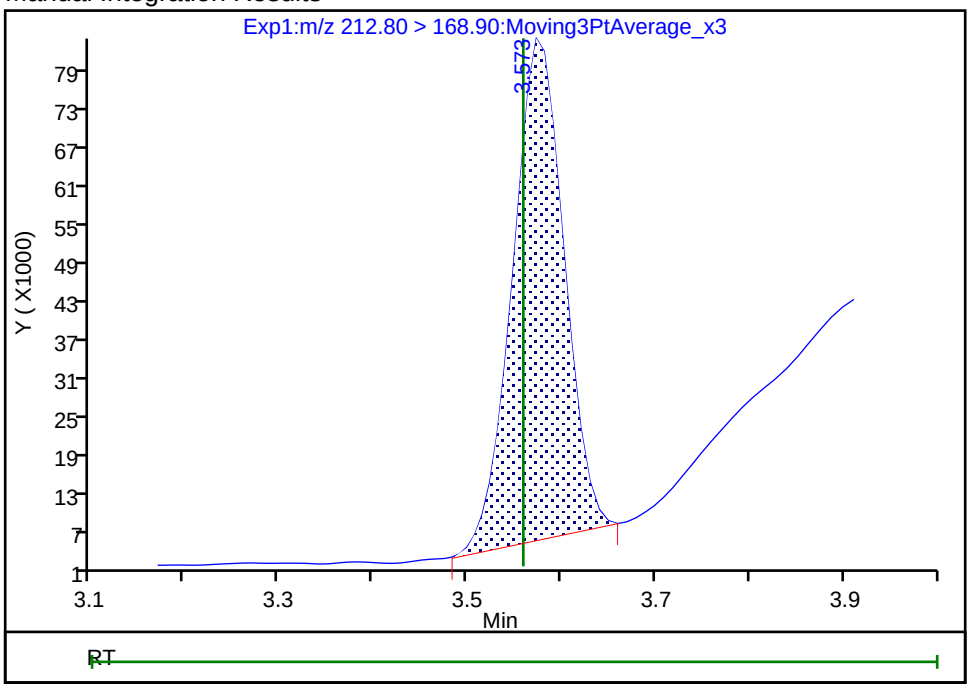
Processing Integration Results

RT: 3.57
Area: 340663
Amount: 0.231291
Amount Units: ng/ml



Manual Integration Results

RT: 3.57
Area: 297270
Amount: 0.201830
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:43:37 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

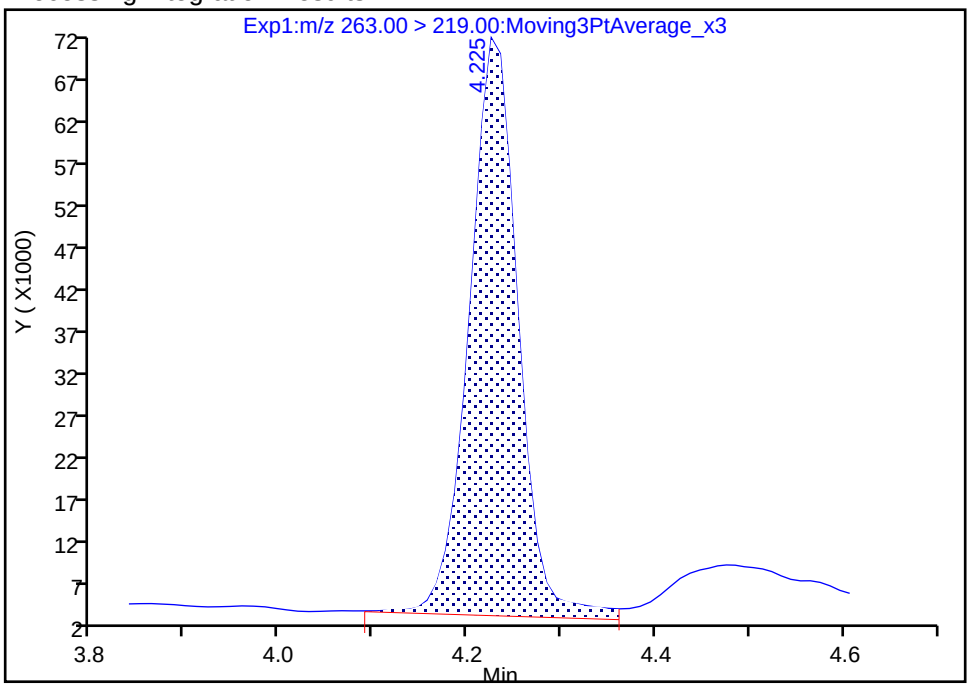
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

35 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

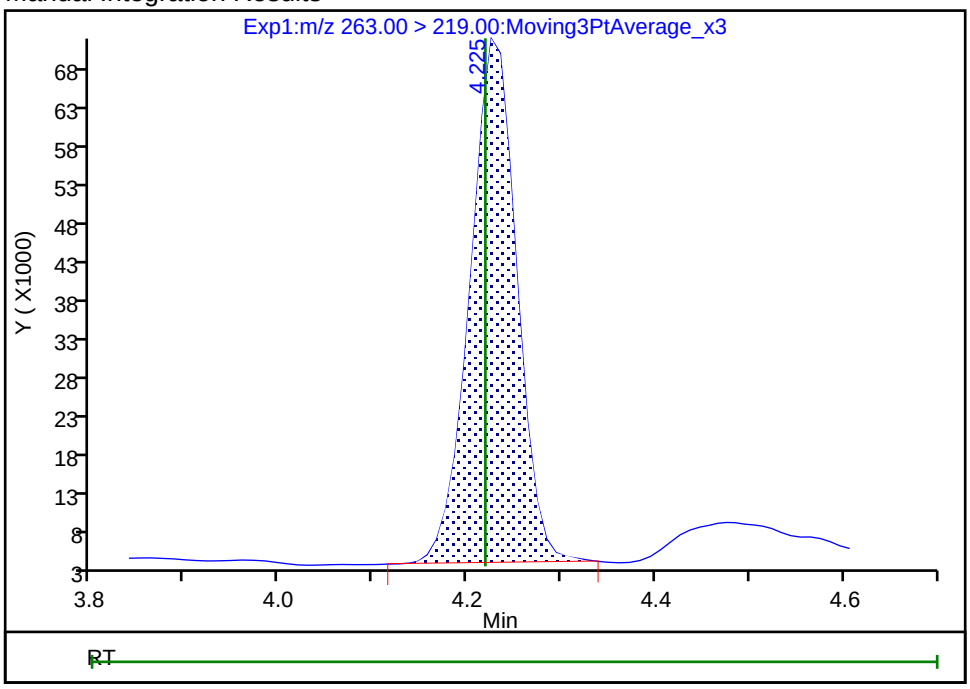
Processing Integration Results

RT: 4.23
Area: 249393
Amount: 0.111318
Amount Units: ng/ml



Manual Integration Results

RT: 4.23
Area: 236417
Amount: 0.105526
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:43:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

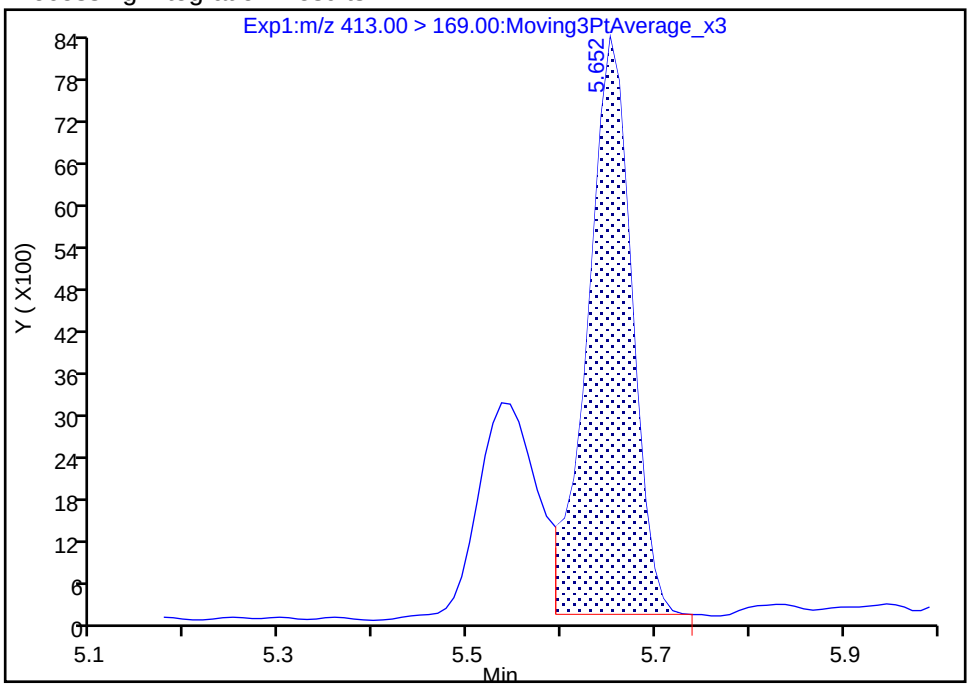
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

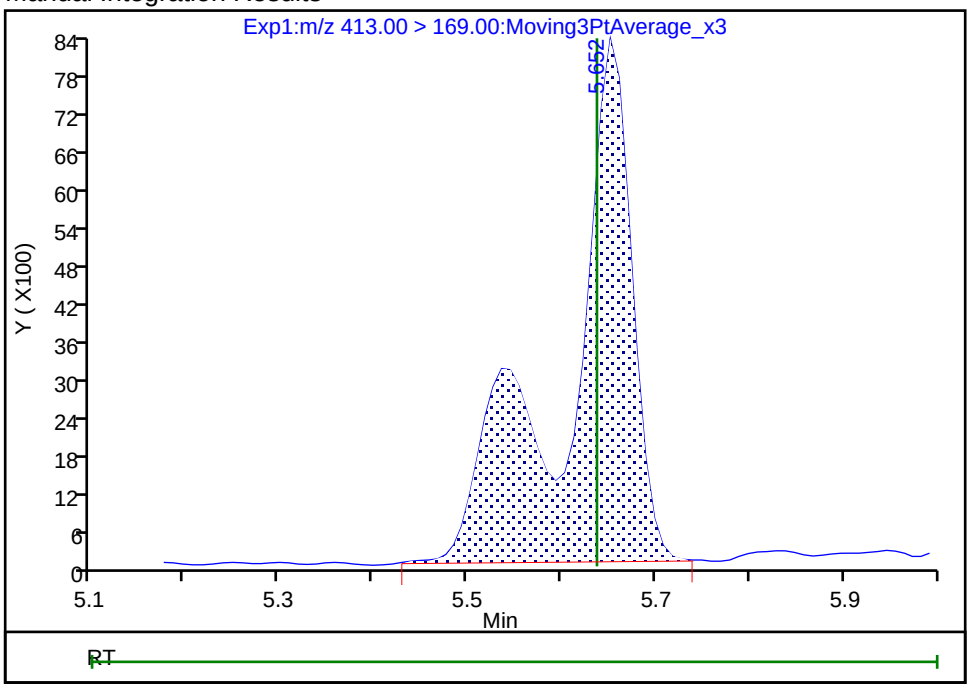
Processing Integration Results

RT: 5.65
Area: 26860
Amount: 0.049550
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 39998
Amount: 0.054715
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

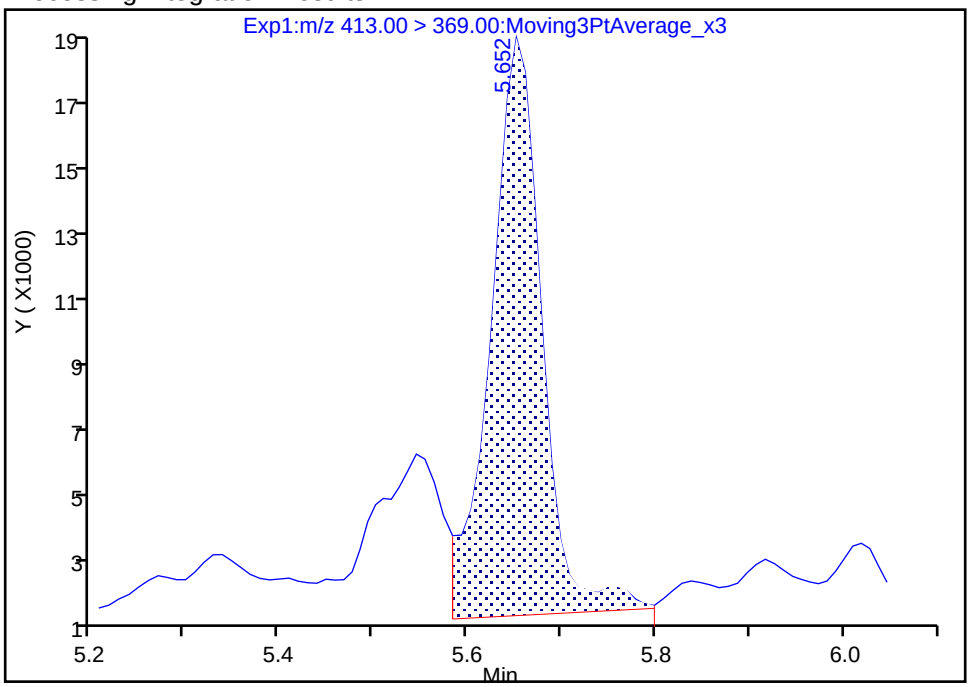
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

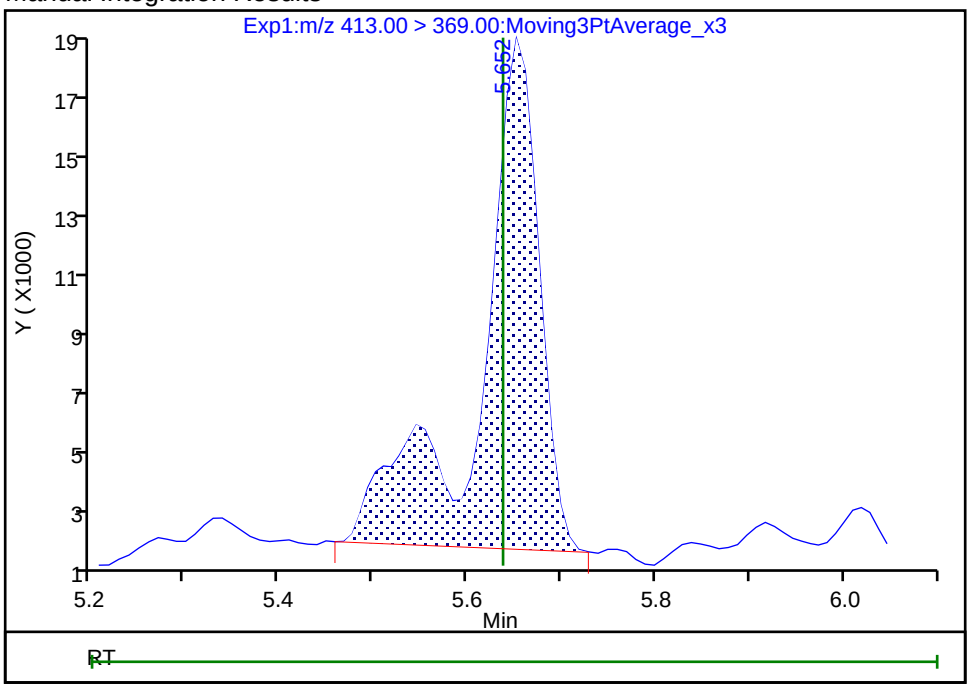
Processing Integration Results

RT: 5.65
Area: 62493
Amount: 0.049550
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 69007
Amount: 0.054715
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

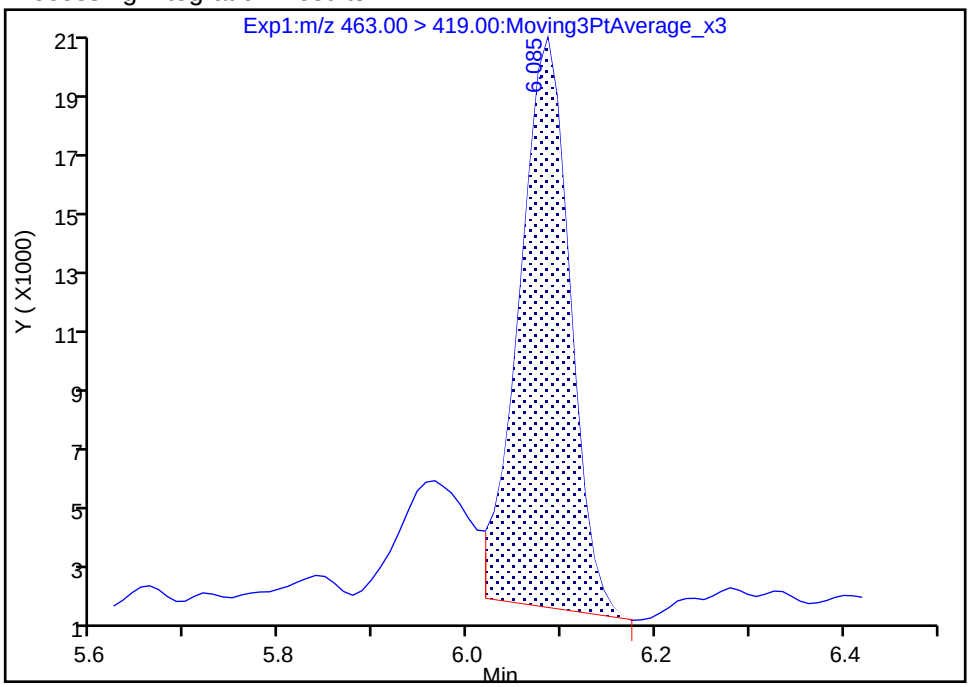
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

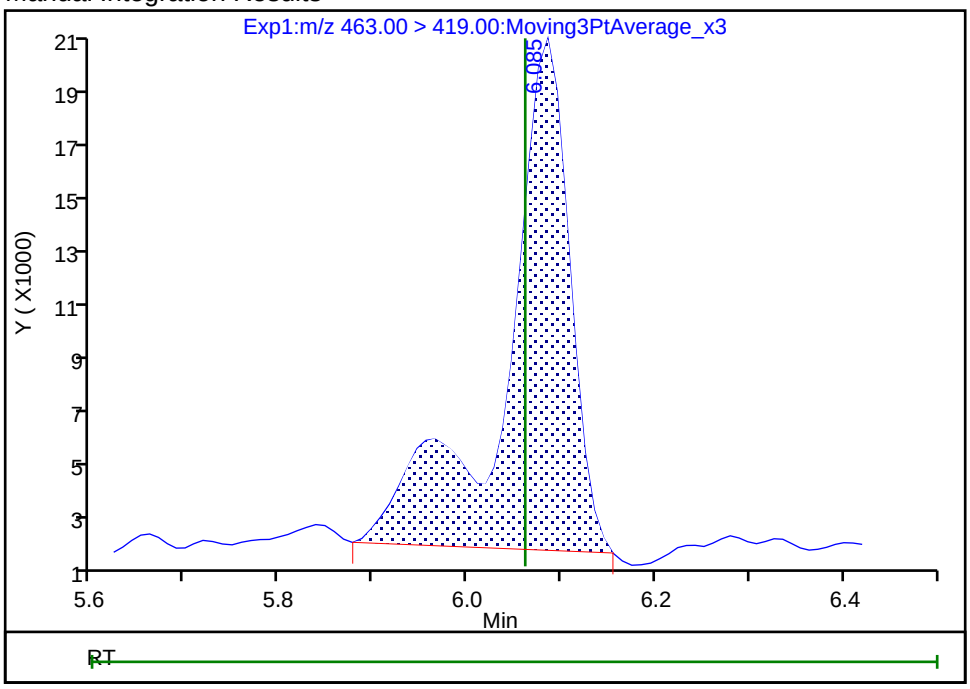
RT: 6.09
Area: 69876
Amount: 0.043456
Amount Units: ng/ml

Processing Integration Results



RT: 6.09
Area: 88722
Amount: 0.055176
Amount Units: ng/ml

Manual Integration Results



Reviewer: EBY5, 19-Sep-2024 08:44:41 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

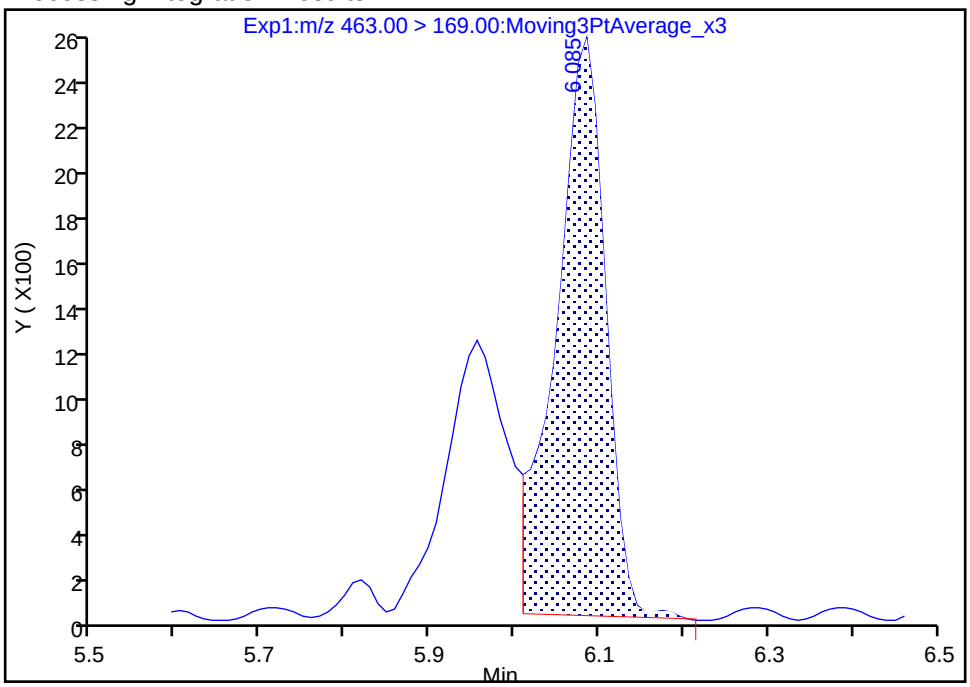
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Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

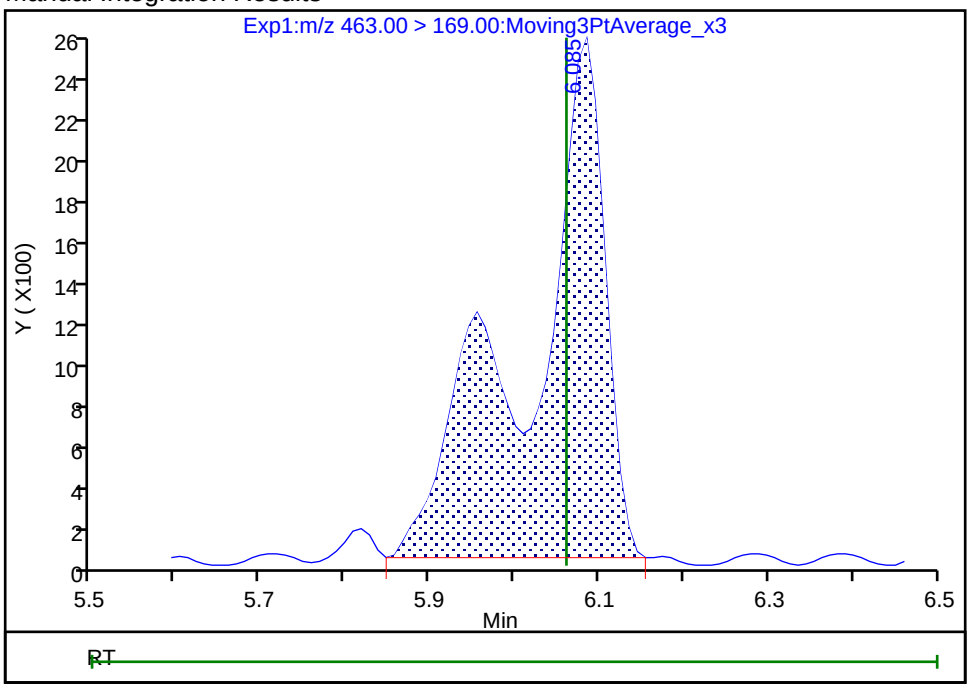
Processing Integration Results

RT: 6.09
Area: 10110
Amount: 0.043456
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 15636
Amount: 0.055176
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:47 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

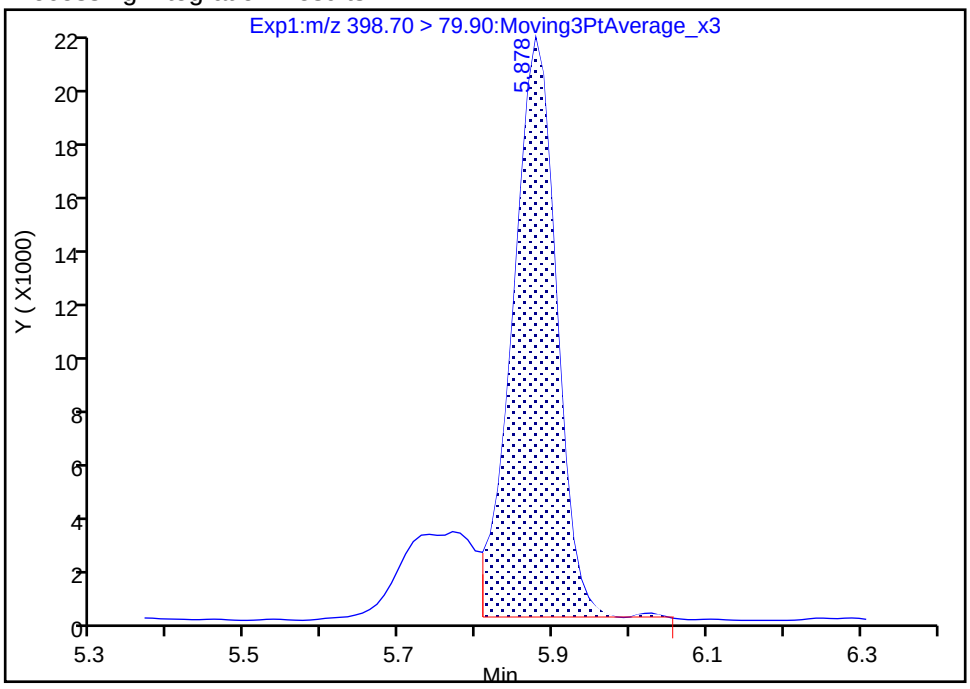
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

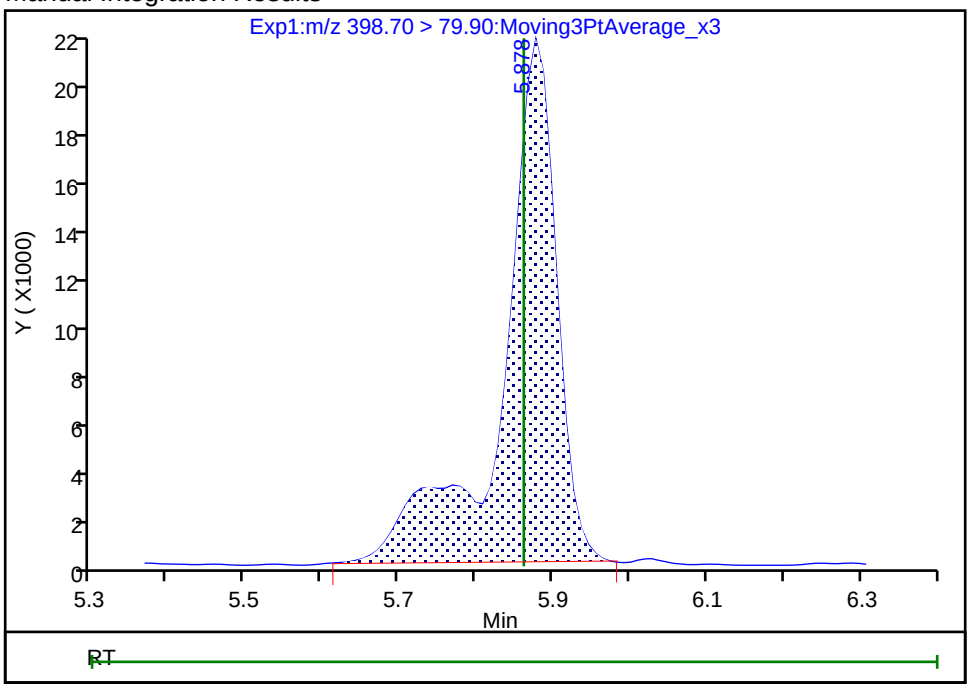
Processing Integration Results

RT: 5.88
Area: 84357
Amount: 0.042206
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 104445
Amount: 0.052257
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:27 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

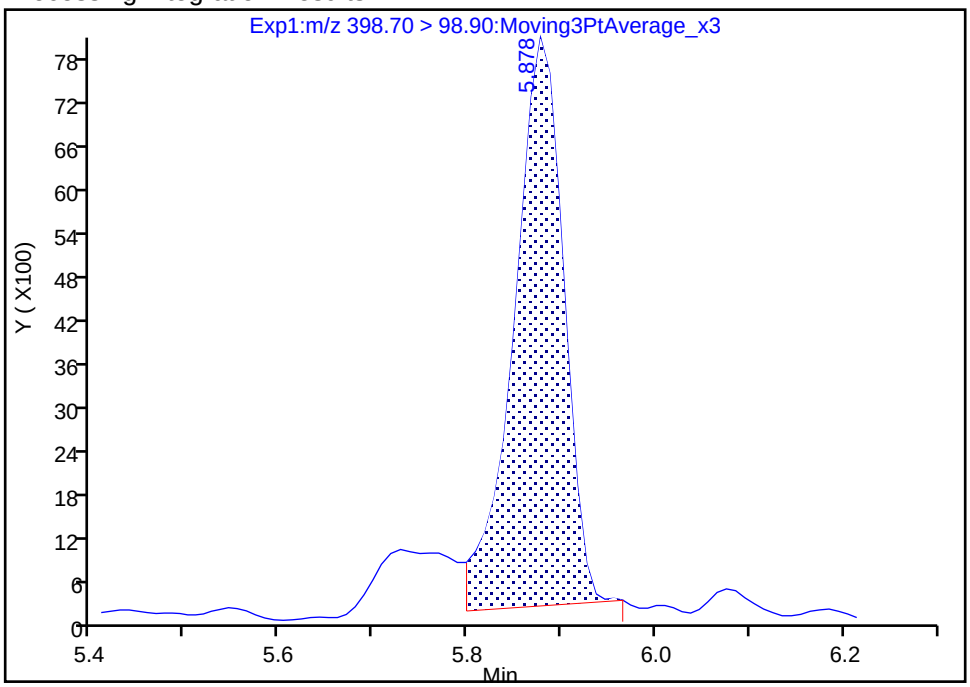
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

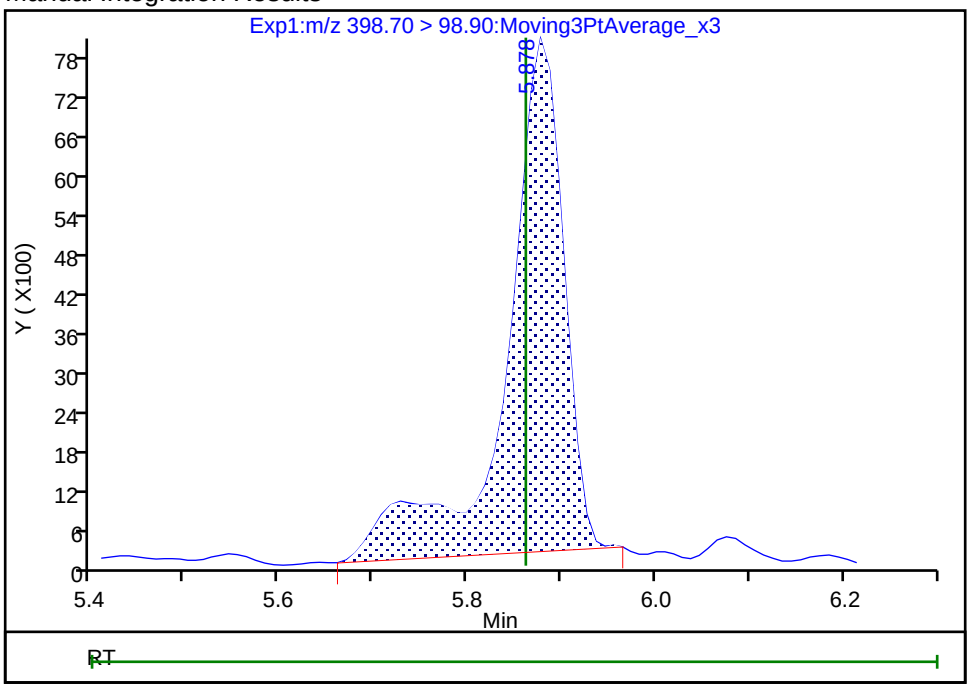
Processing Integration Results

RT: 5.88
Area: 28782
Amount: 0.042206
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 33803
Amount: 0.052257
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

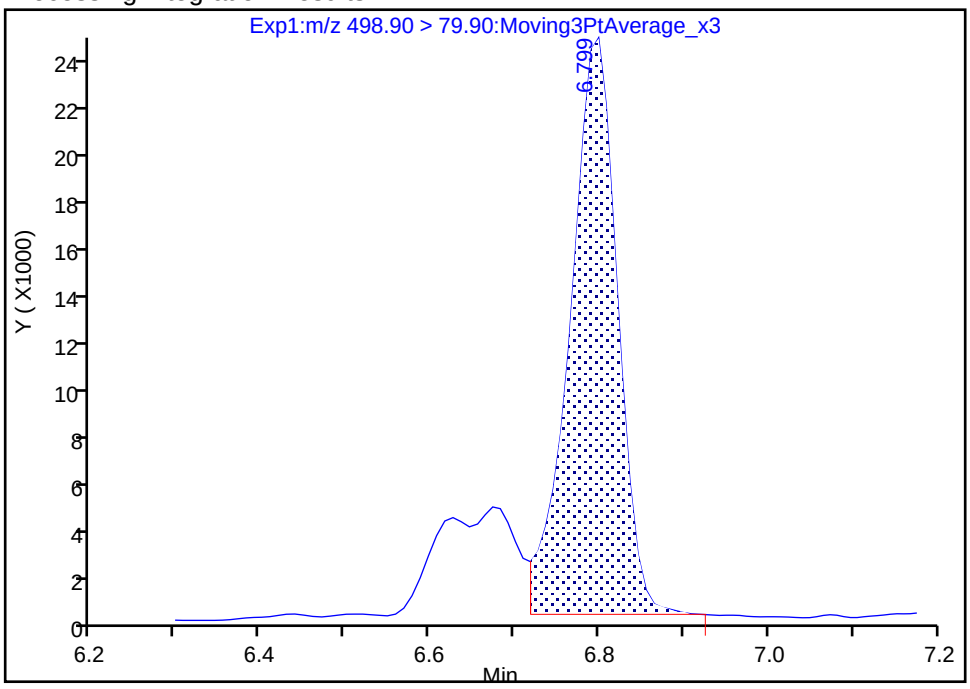
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d				
Injection Date:	19-Sep-2024 00:06:22	Instrument ID:	LCMS04		
Lims ID:	LLCS 240-627485/2-A				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	35
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

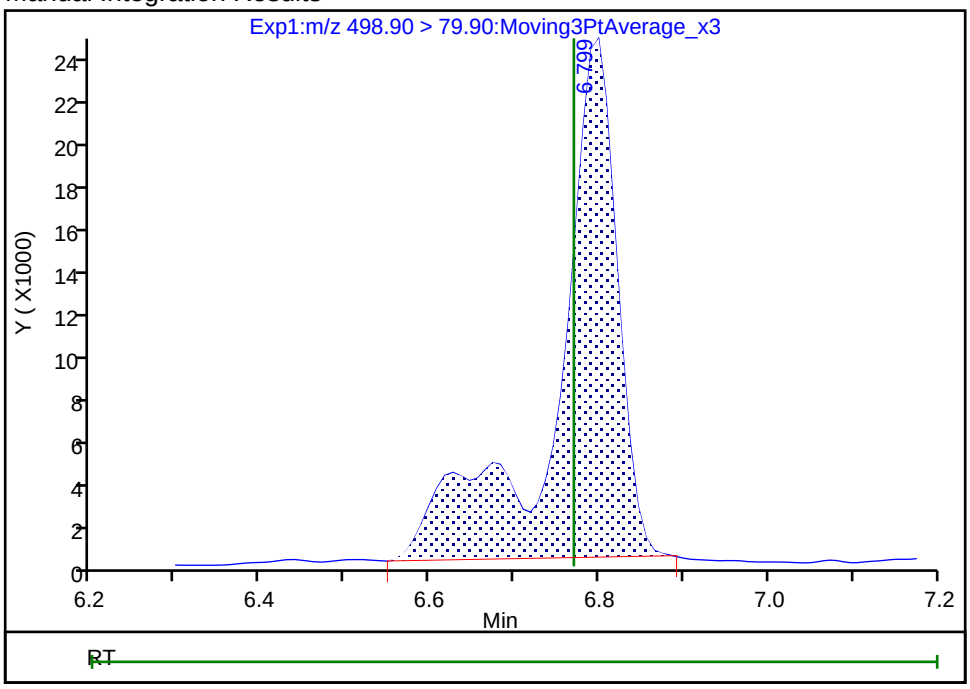
Processing Integration Results

RT: 6.80
Area: 95783
Amount: 0.036327
Amount Units: ng/ml



Manual Integration Results

RT: 6.80
Area: 123507
Amount: 0.046841
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:30 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

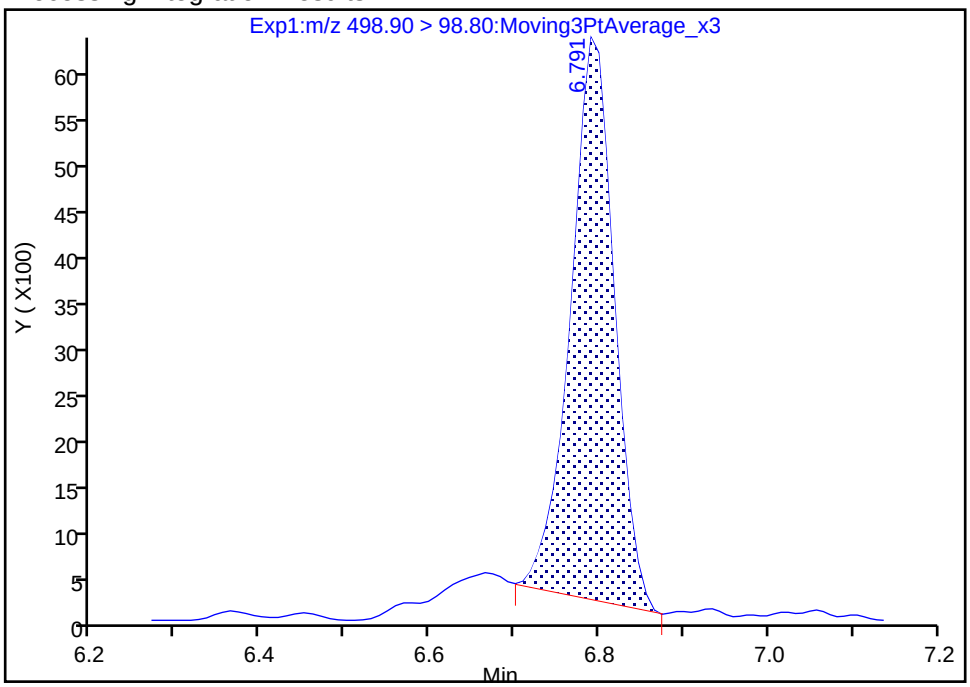
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

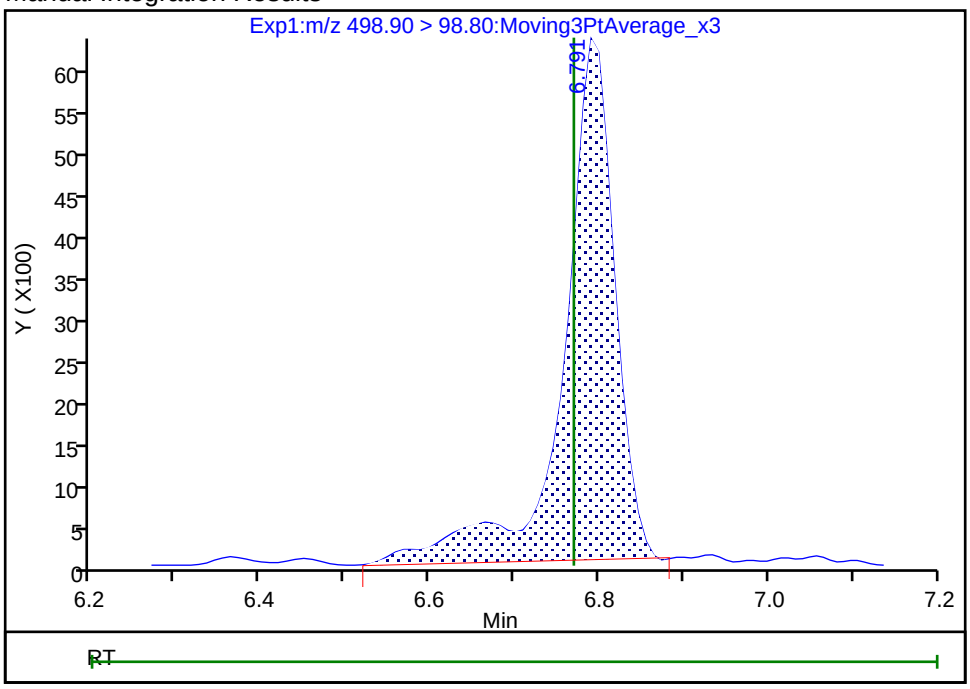
Processing Integration Results

RT: 6.79
Area: 21921
Amount: 0.036327
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 26610
Amount: 0.046841
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

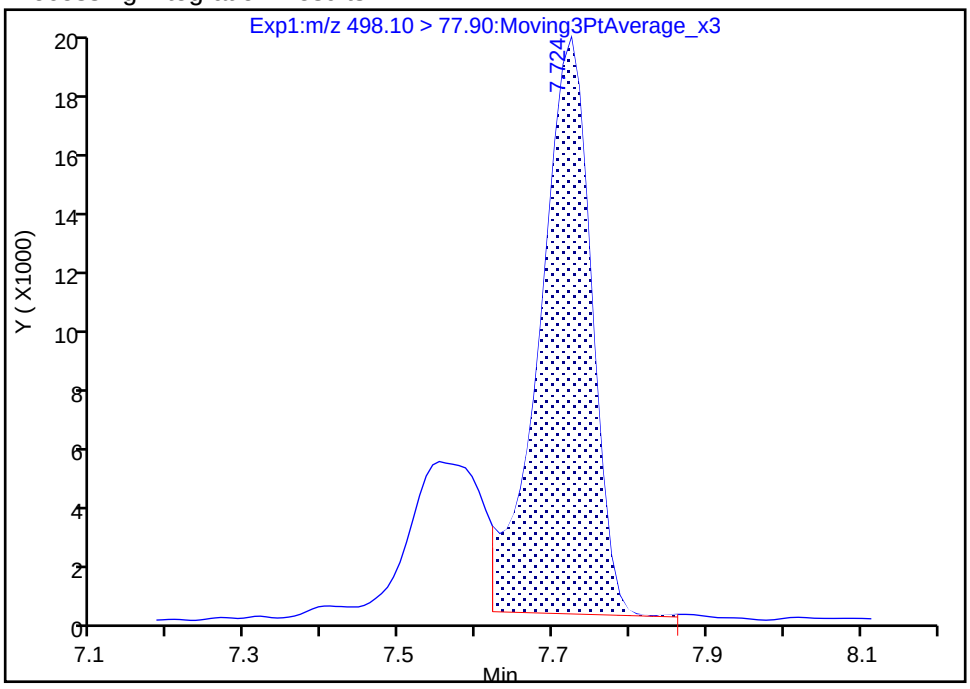
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

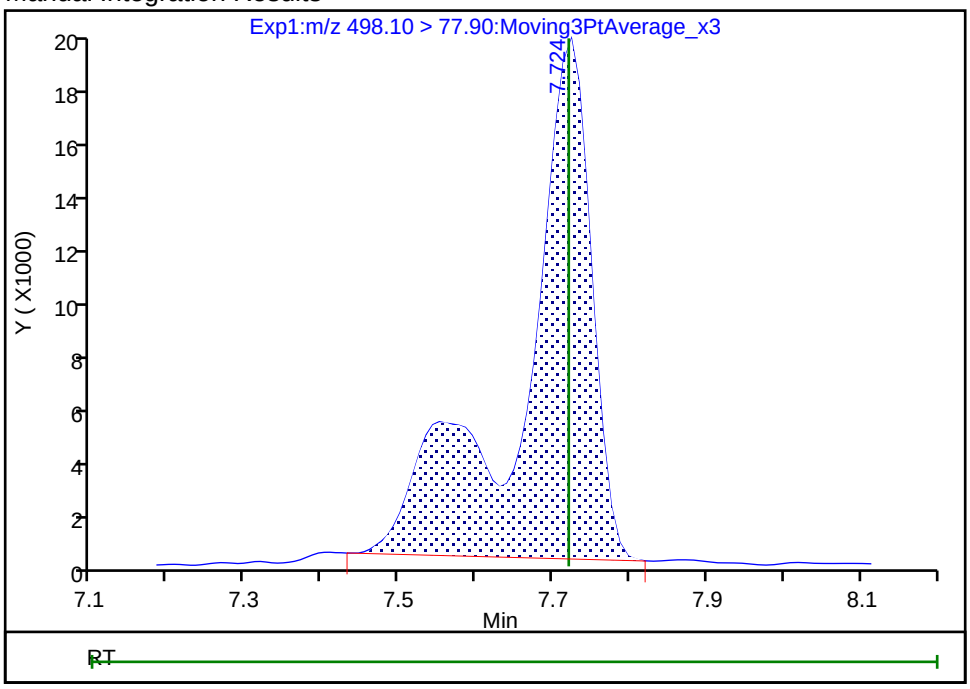
Processing Integration Results

RT: 7.72
Area: 91092
Amount: 0.043573
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 122603
Amount: 0.058646
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

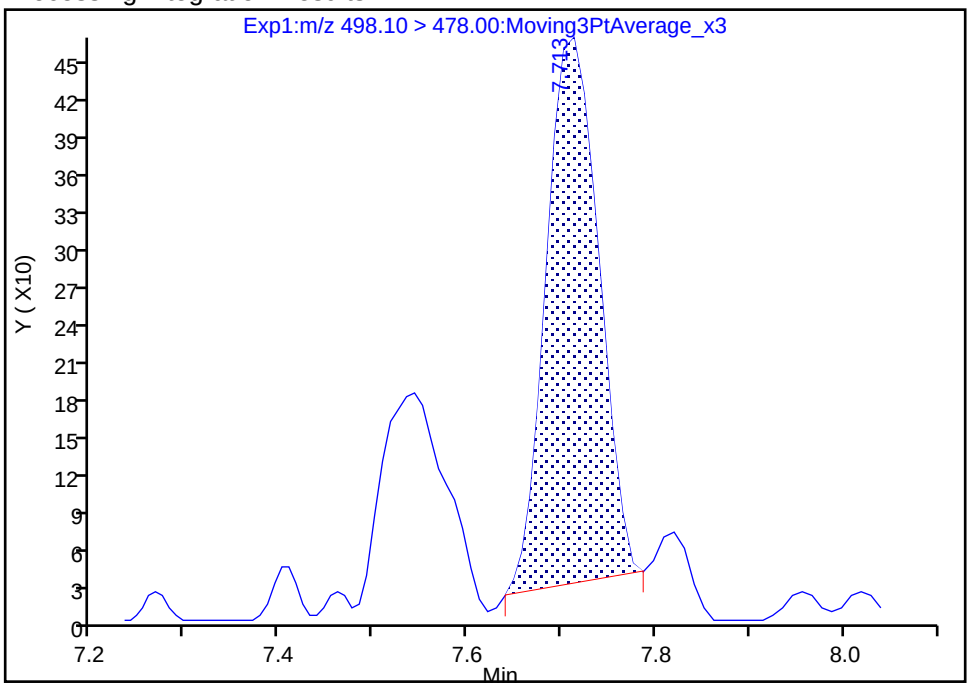
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

69 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 2

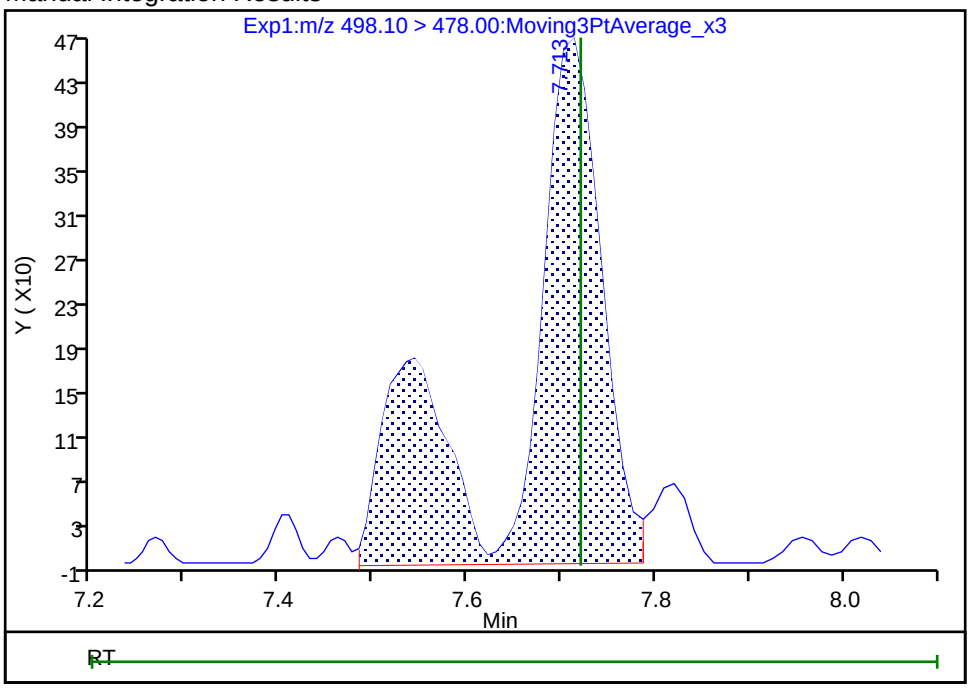
Processing Integration Results

RT: 7.71
Area: 1712
Amount: 0.043573
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 2890
Amount: 0.058646
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:58 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

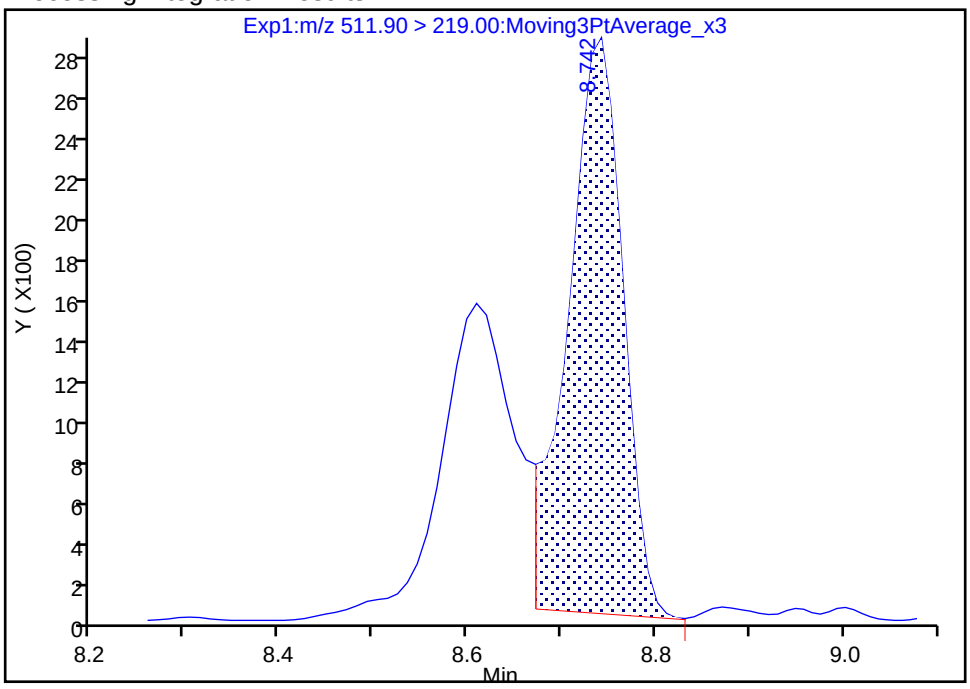
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Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 1

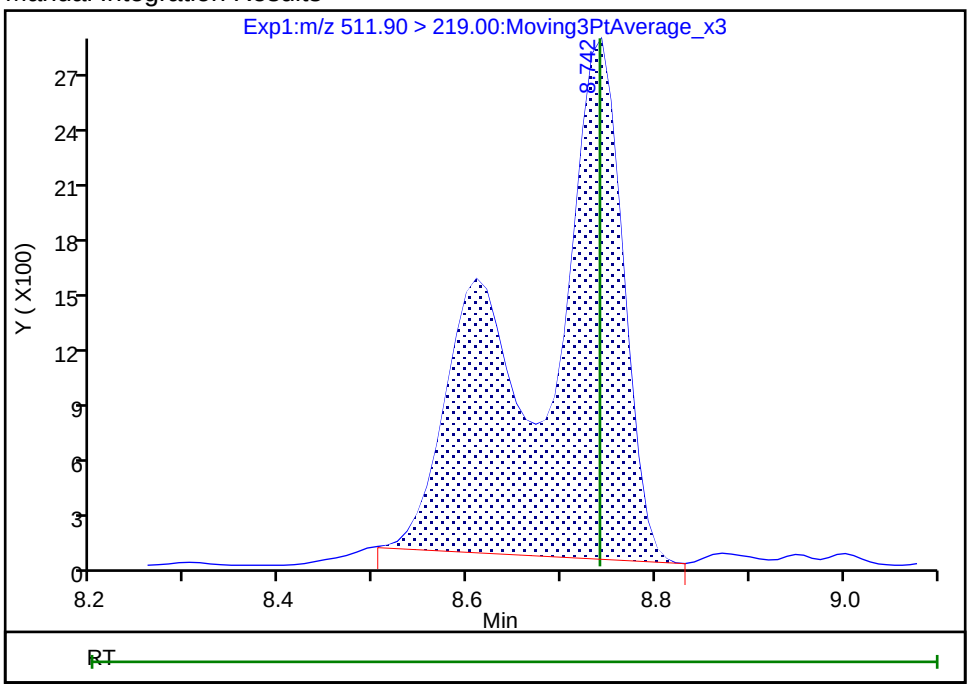
Processing Integration Results

RT: 8.74
Area: 11490
Amount: 0.036738
Amount Units: ng/ml



Manual Integration Results

RT: 8.74
Area: 18963
Amount: 0.060632
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:22 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

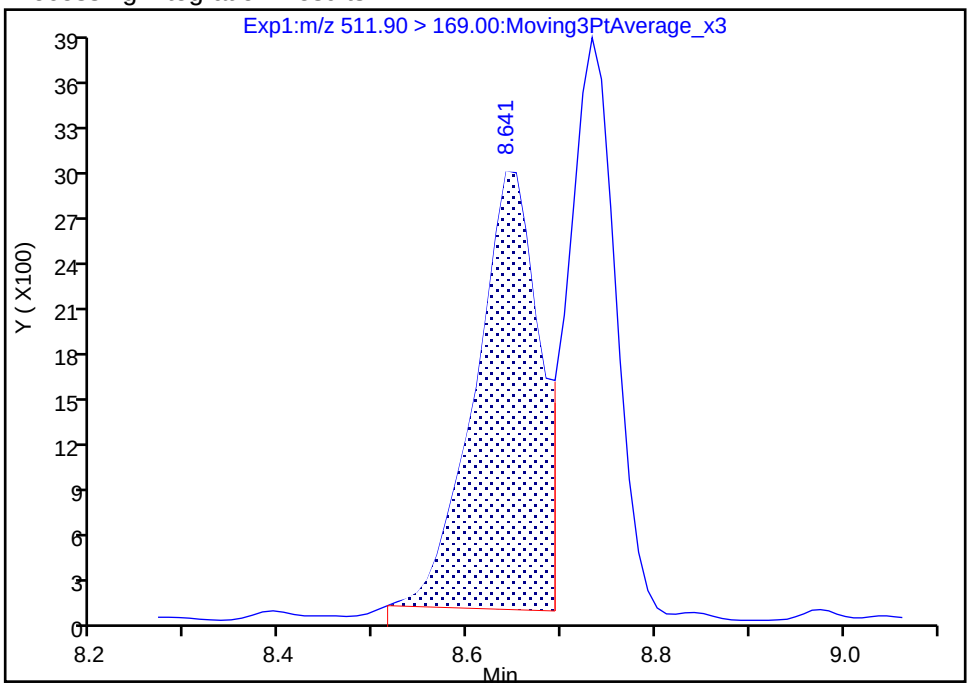
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

75 NMeFOSA, CAS: 31506-32-8

Signal: 2

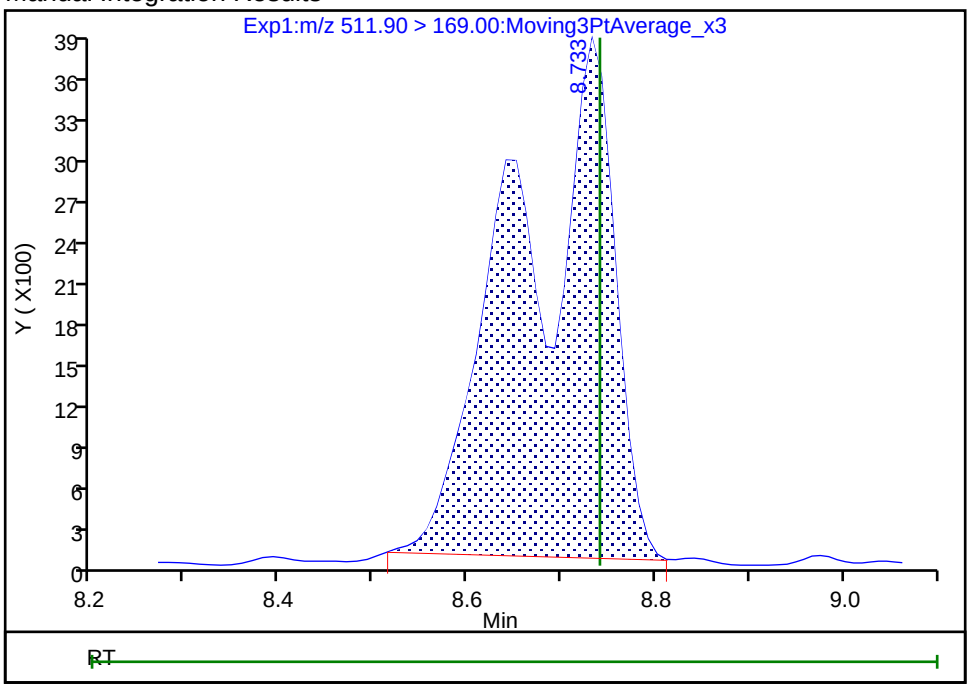
Processing Integration Results

RT: 8.64
Area: 13505
Amount: 0.036738
Amount Units: ng/ml



Manual Integration Results

RT: 8.73
Area: 26395
Amount: 0.060632
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:29 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

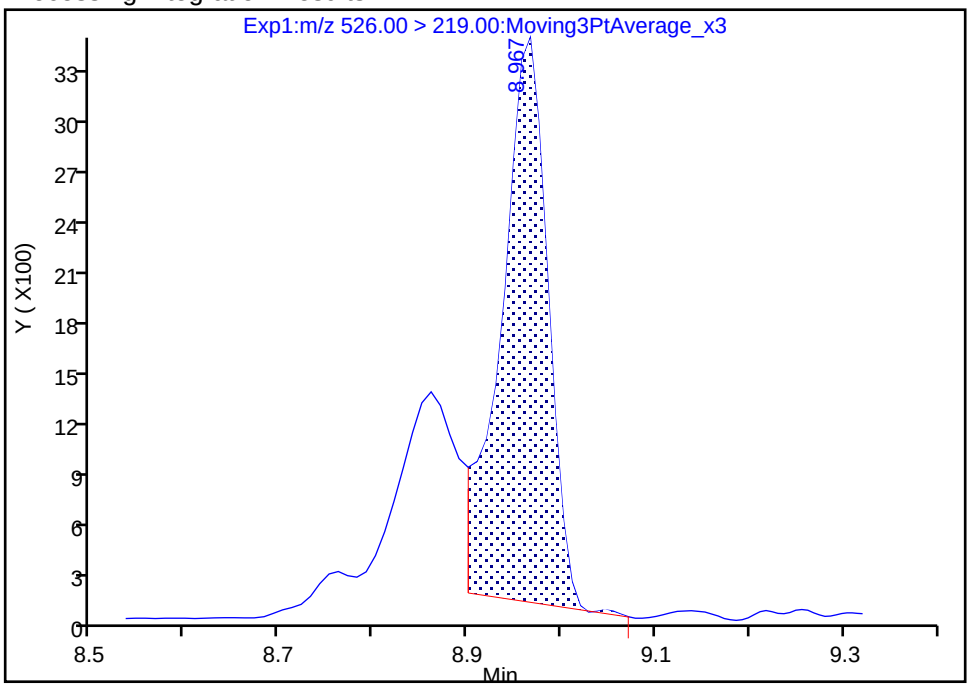
Data File:	\\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d				
Injection Date:	19-Sep-2024 00:06:22	Instrument ID:	LCMS04		
Lims ID:	LLCS 240-627485/2-A				
Client ID:					
Operator ID:	CANPFAS4	ALS Bottle#:	31	Worklist Smp#:	35
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	1633_LCMS04	Limit Group:	LC - 1633 ICAL		
Column:		Detector	EXP1		

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 1

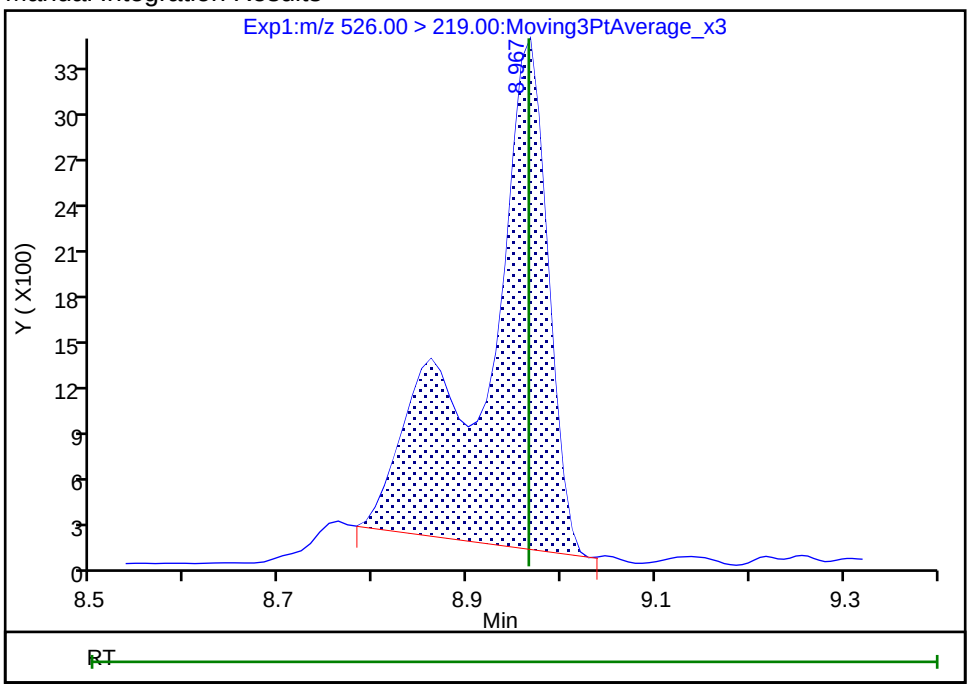
Processing Integration Results

RT: 8.97
Area: 11662
Amount: 0.037553
Amount Units: ng/ml



Manual Integration Results

RT: 8.97
Area: 16349
Amount: 0.052645
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:42 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

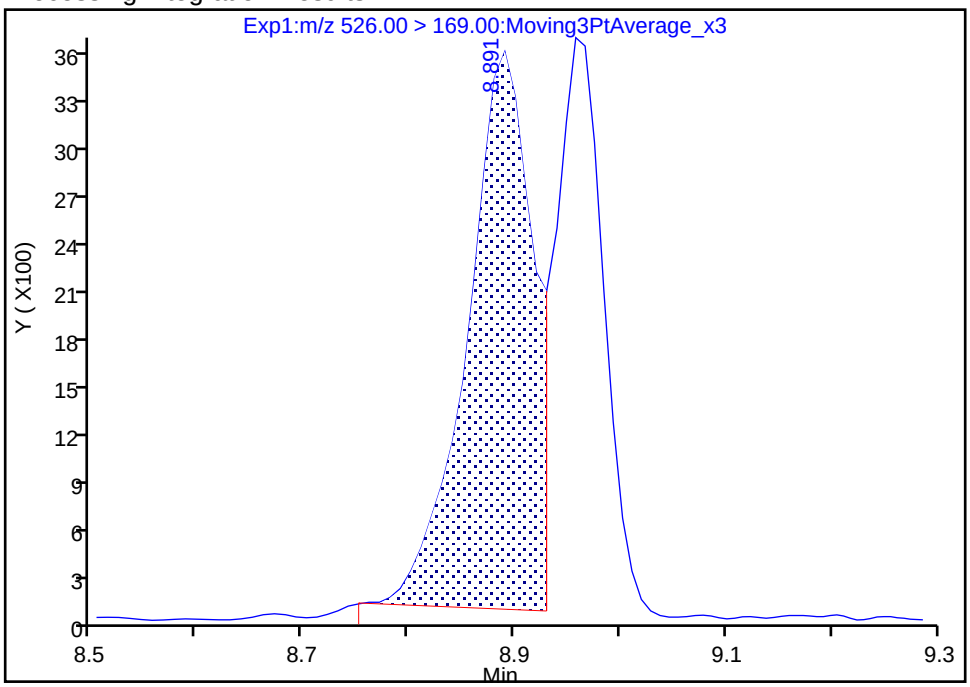
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

77 N-ethylperfluoro-1-octanesulfona, CAS: 4151-50-2

Signal: 2

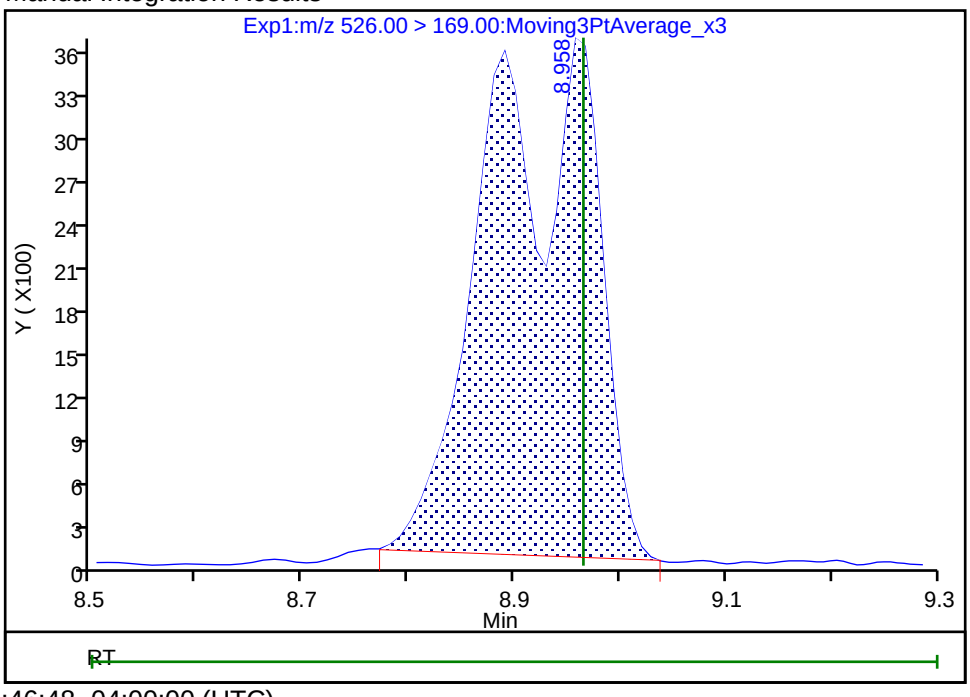
Processing Integration Results

RT: 8.89
Area: 14926
Amount: 0.037553
Amount Units: ng/ml



Manual Integration Results

RT: 8.96
Area: 25960
Amount: 0.052645
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:48 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

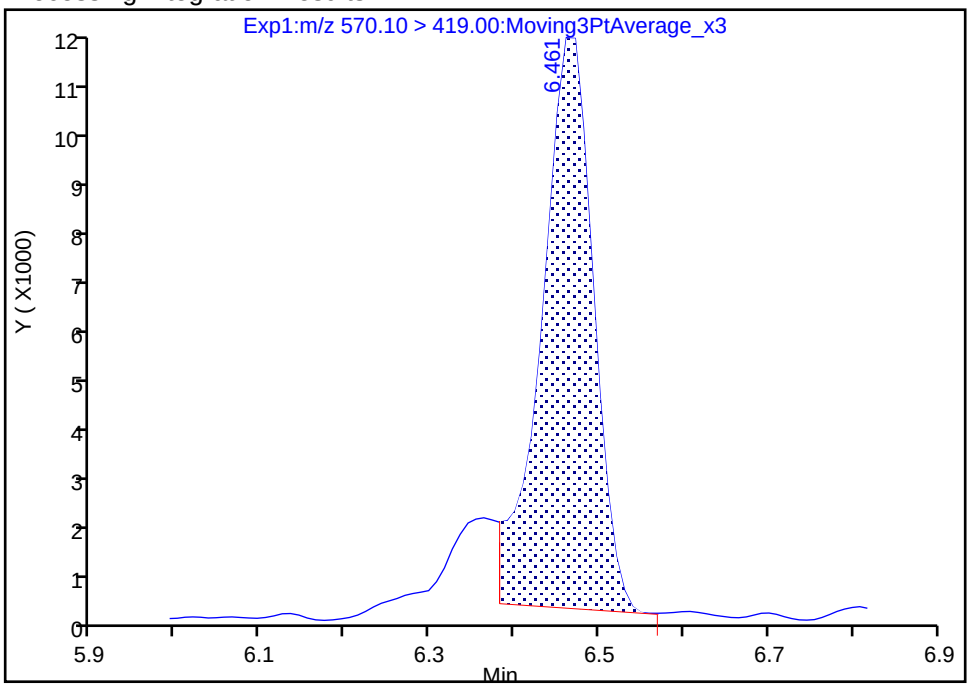
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

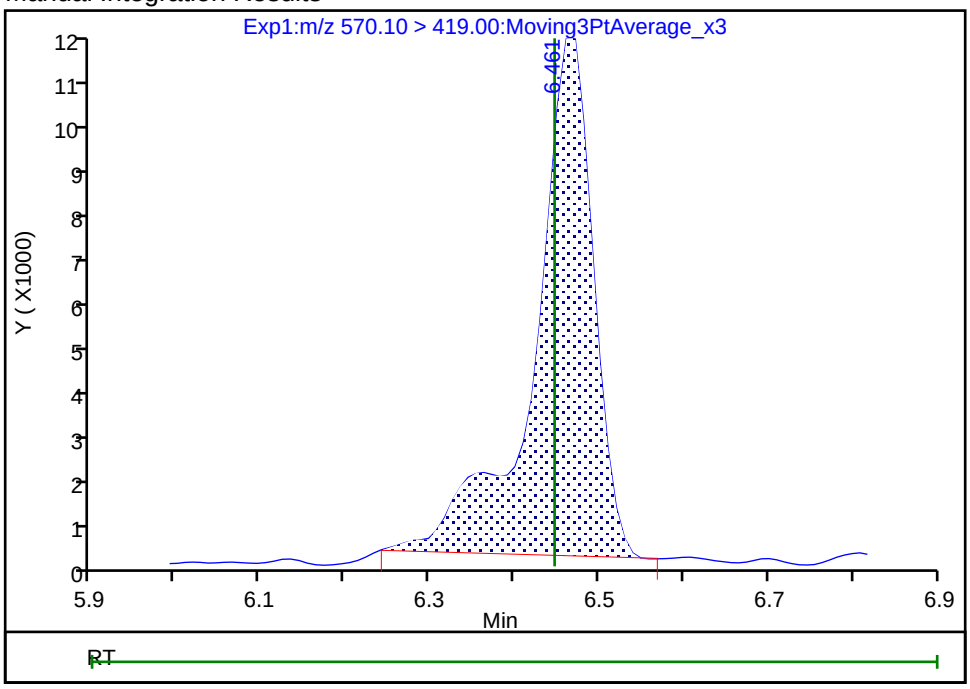
Processing Integration Results

RT: 6.46
Area: 47831
Amount: 0.044332
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 55211
Amount: 0.051172
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:44:56 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

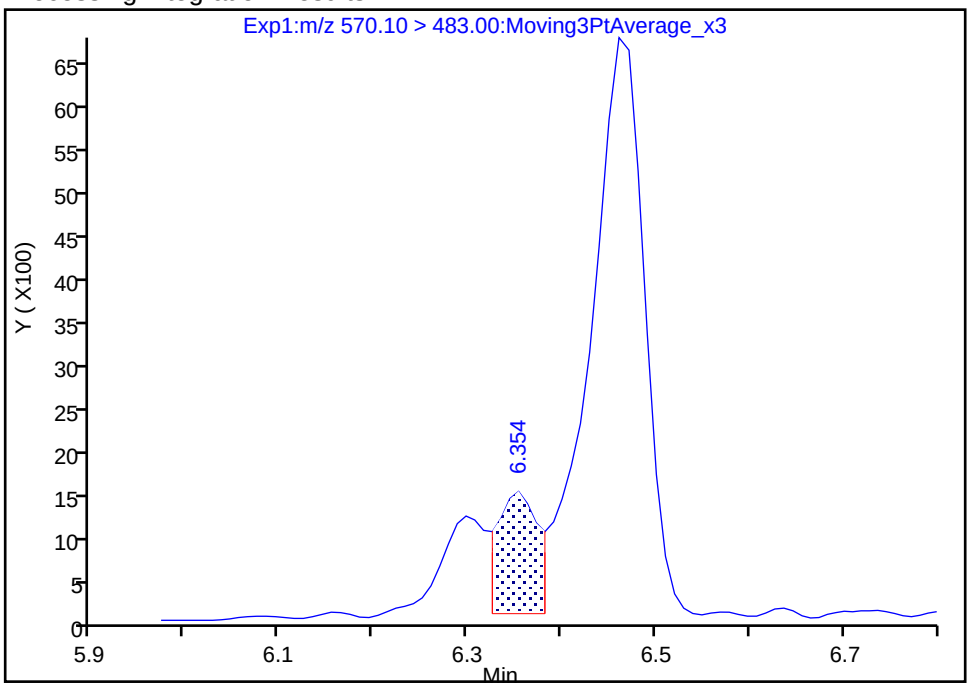
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

59 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 2

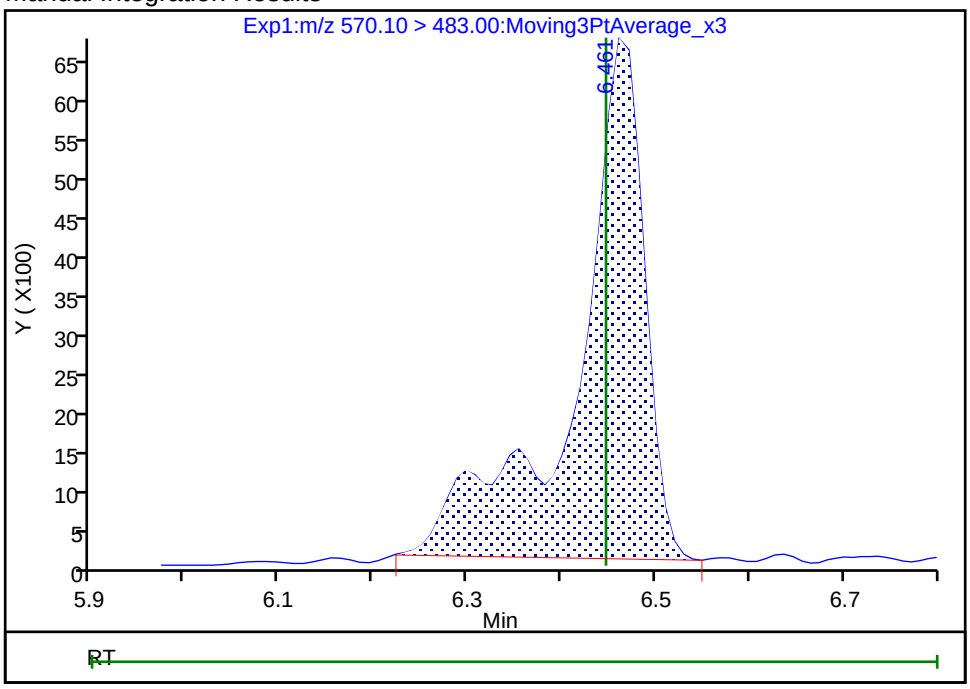
Processing Integration Results

RT: 6.35
Area: 3982
Amount: 0.044332
Amount Units: ng/ml



Manual Integration Results

RT: 6.46
Area: 33925
Amount: 0.051172
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:04 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

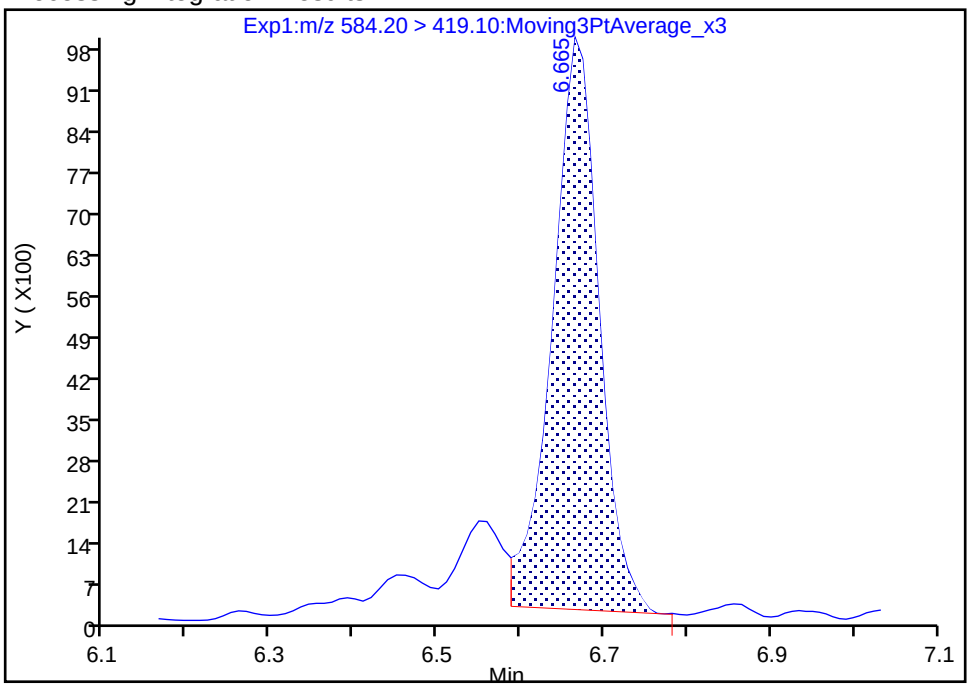
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

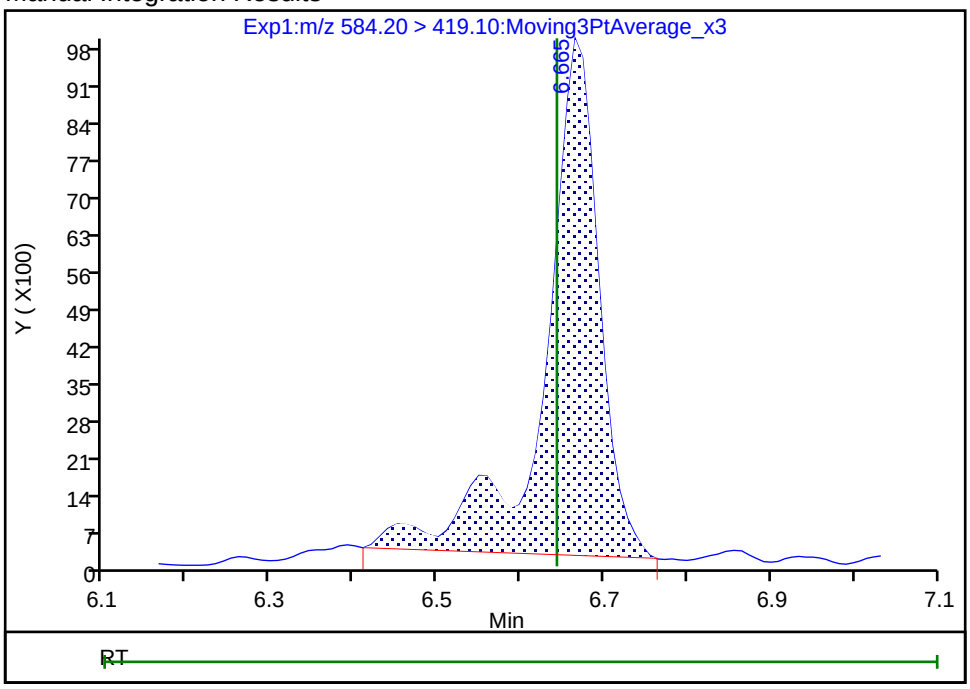
Processing Integration Results

RT: 6.67
Area: 38063
Amount: 0.044343
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 44909
Amount: 0.052318
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

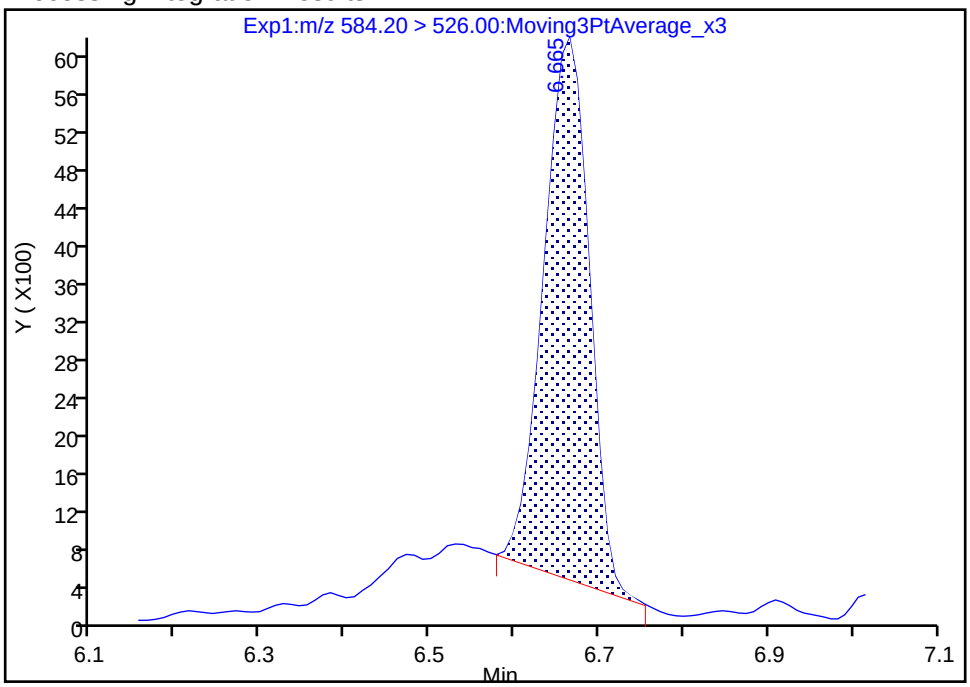
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

61 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 2

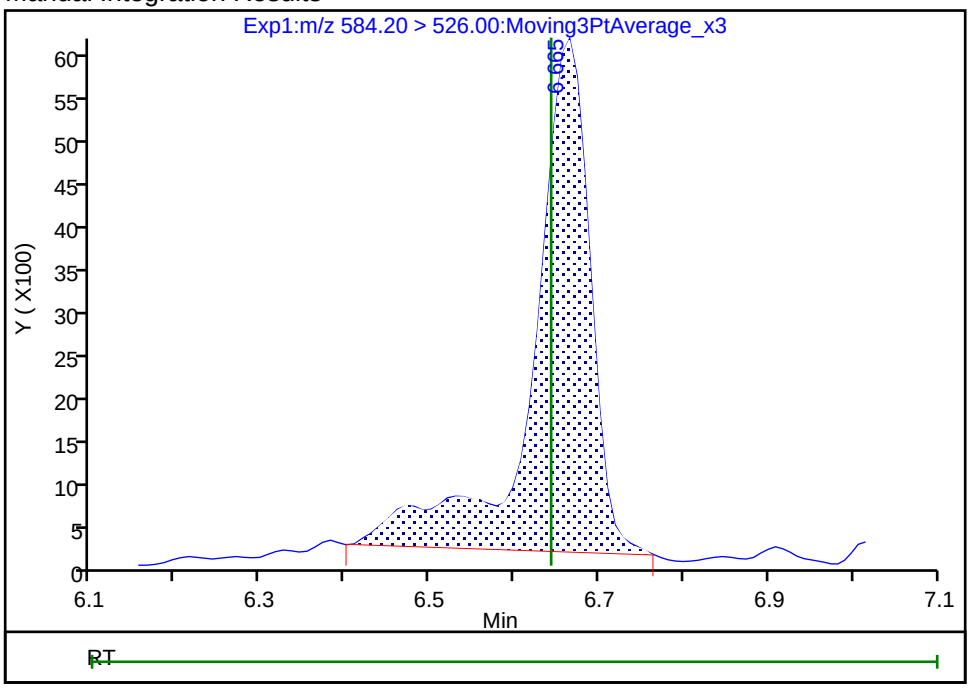
Processing Integration Results

RT: 6.67
Area: 21389
Amount: 0.044343
Amount Units: ng/ml



Manual Integration Results

RT: 6.67
Area: 28581
Amount: 0.052318
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:45:18 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

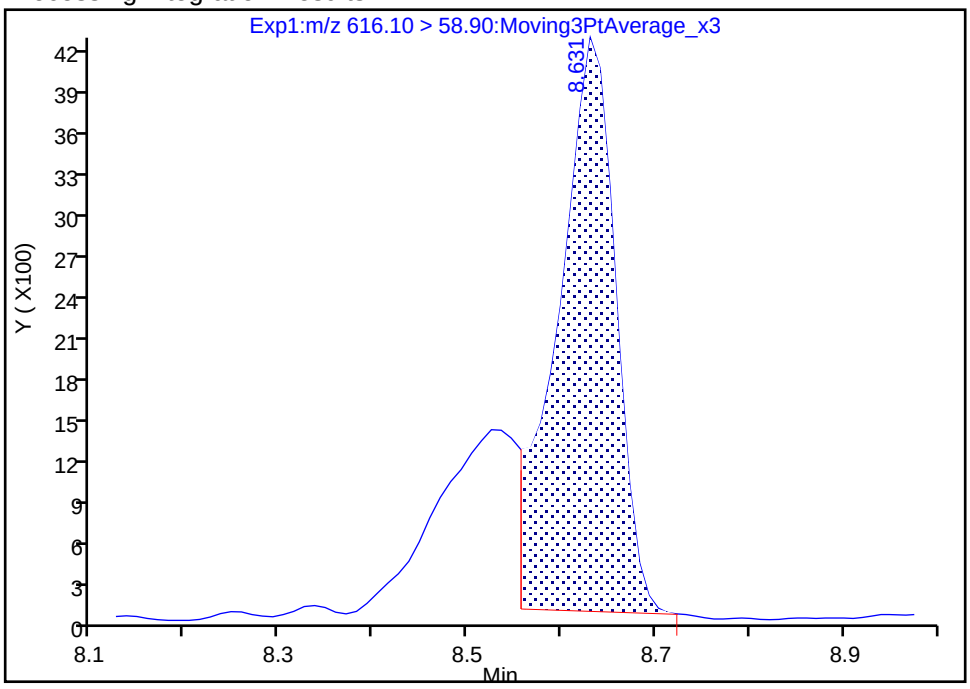
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

74 2-(N-methylperfluoro-1-octanesul, CAS: 24448-09-7

Signal: 1

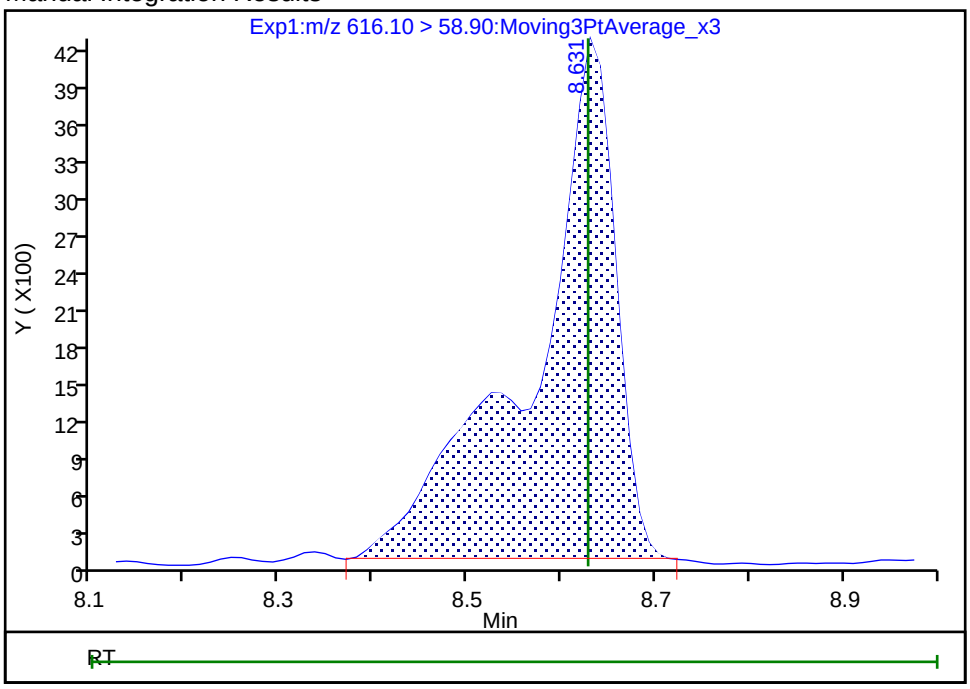
Processing Integration Results

RT: 8.63
Area: 17669
Amount: 0.371408
Amount Units: ng/ml



Manual Integration Results

RT: 8.63
Area: 25732
Amount: 0.540894
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins Cleveland

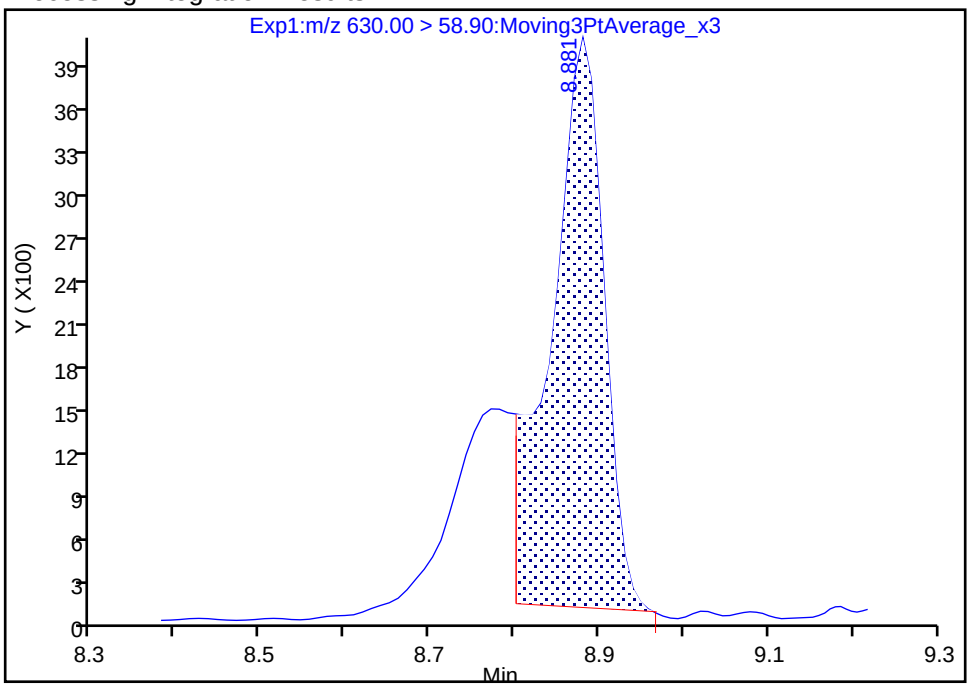
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

76 2-(N-ethylperfluoro-1-octanesulf, CAS: 1691-99-2

Signal: 1

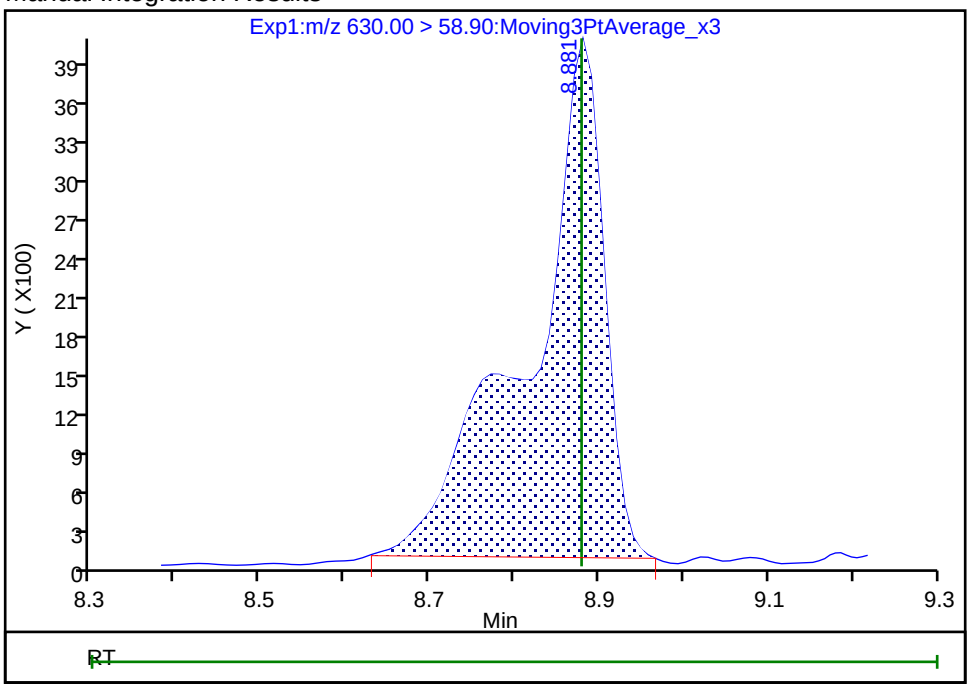
Processing Integration Results

RT: 8.88
Area: 17373
Amount: 0.341079
Amount Units: ng/ml



Manual Integration Results

RT: 8.88
Area: 24556
Amount: 0.482101
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:46:36 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

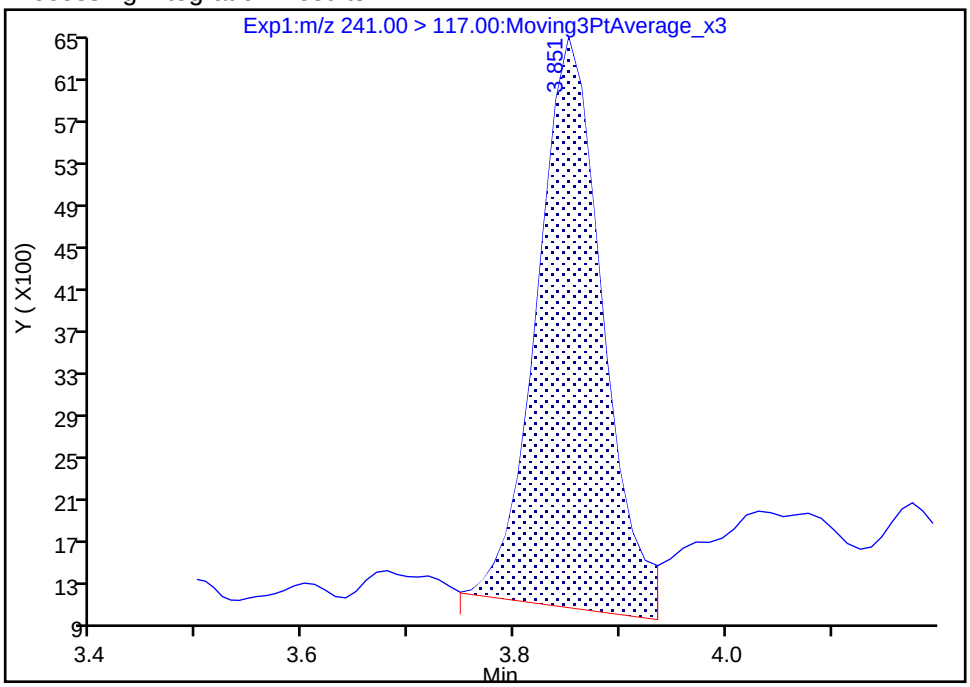
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj35.d
Injection Date: 19-Sep-2024 00:06:22 Instrument ID: LCMS04
Lims ID: LLCS 240-627485/2-A
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 31 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

34 3:3 FTCA, CAS: 356-02-5

Signal: 2

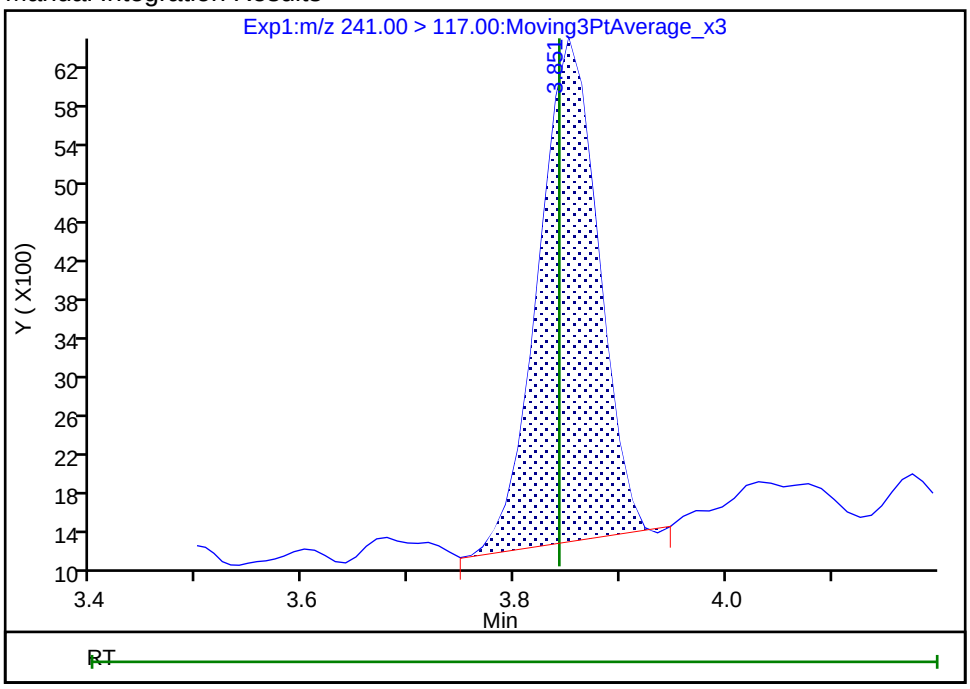
Processing Integration Results

RT: 3.85
Area: 23431
Amount: 0.235289
Amount Units: ng/ml



Manual Integration Results

RT: 3.85
Area: 20238
Amount: 0.235289
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 08:43:47 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P DU | Lab Sample ID: 460-311364-2 DU

Matrix: Water | Lab File ID: 2024_09_18solidwatinj50.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 145.9(mL) | Date Analyzed: 09/19/2024 03:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	3.141	J	6.85	1.82
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.735	J	3.43	0.86
307-24-4	Perfluorohexanoic acid (PFHxA)	2.220		1.71	0.43
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.645	J	1.71	0.43
335-67-1	Perfluorooctanoic acid (PFOA)	23.34		1.71	0.43
375-95-1	Perfluorononanoic acid (PFNA)	2.301		1.71	0.43
335-76-2	Perfluorodecanoic acid (PFDA)	1.71	U	1.71	0.43
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.71	U	1.71	0.43
307-55-1	Perfluorododecanoic acid (PFDoA)	1.71	U	1.71	0.43
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.71	U	1.71	0.43
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.71	U	1.71	0.43
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.095		1.71	0.43
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.71	U	1.71	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	3.005		1.71	0.44
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.518		1.71	0.43
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	33.55		1.71	0.43
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.71	U	1.71	0.43
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.71	U	1.71	0.43
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	6.85	U	6.85	1.71
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	6.85	U	6.85	1.71
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	6.85	U	6.85	1.71
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.71	U	1.71	0.43
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.71	U	1.71	0.43
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.71	U	1.71	0.43
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.71	U	1.71	0.53

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P DU | Lab Sample ID: 460-311364-2 DU

Matrix: Water | Lab File ID: 2024_09_18solidwatinj50.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 145.9(mL) | Date Analyzed: 09/19/2024 03:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.71	U	1.71	0.45
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	17.1	U	17.1	4.28
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	17.1	U	17.1	4.28
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	6.85	U	6.85	1.71
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.85	U	6.85	1.71
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.43	U	3.43	0.86
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.43	U	3.43	1.05
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	6.85	U	6.85	1.71
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	6.85	U	6.85	1.71
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.43	U	3.43	0.86
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.57	U	8.57	2.14
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	42.8	U	42.8	10.7
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	42.8	U	42.8	12.8
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.71	U	1.71	0.43
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	3.43	U	3.43	0.86

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Cleveland | Job No.: 460-311364-1

SDG No.:

Client Sample ID: RXMW-5_P DU | Lab Sample ID: 460-311364-2 DU

Matrix: Water | Lab File ID: 2024_09_18solidwatinj50.d

Analysis Method: 1633 | Date Collected: 09/13/2024 13:30

Extraction Method: 1633 | Date Extracted: 09/18/2024 10:06

Sample wt/vol: 145.9(mL) | Date Analyzed: 09/19/2024 03:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: | ID:

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

Cleanup Factor:

Analysis Batch No.: 627555 | Units: ng/L

Preparation Batch No.: 627485 | Instrument ID: LCMS04

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	104		10-130
2283397-79-3	13C5 PFPeA	105		35-150
2328024-54-8	13C5 PFHxA	86.5		55-150
2328024-55-9	13C4 PFHpA	104		55-150
1350614-84-4	13C8 PFOA	91.7		60-140
2283397-80-6	13C9 PFNA	120		55-140
2328024-56-0	13C6 PFDA	116		50-140
STL02580	13C7 PFUnA	108		30-140
STL02116	13C2 PFTeDA	80.4		10-130
2708218-83-9	13C3 PFBS	136		55-150
2708218-85-1	13C3 PFHxS	118		55-150
2265893-05-6	13C8 PFOS	120		45-140
STL01056	13C8 FOSA	111		30-130
1400690-70-1	d3-NMeFOSAA	108		45-200
1265205-97-7	d5-NEtFOSAA	114		10-200
STL02395	M2-4:2 FTS	155		60-200
STL02279	M2-6:2 FTS	151		60-200
STL02280	M2-8:2 FTS	150		50-200
STL02255	13C3 HFPO-DA	87.3		25-160
STL02277	d7-N-MeFOSE-M	107		10-150
STL02278	d9-N-EtFOSE-M	88.8		10-150
STL02704	d5-NEtPFOSA	75.6		10-130
STL02705	d3-NMePFOSA	79.8		15-130
STL02703	13C2-PFDoDA	107		10-150

Report Date: 19-Sep-2024 11:49:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Lims ID: 460-311364-A-2-A DU
Client ID:
Sample Type: DU
Inject. Date: 19-Sep-2024 03:30:22 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 460-311364-A-2-A DU
Misc. Info.: Plate: 1 Rack: 1 240-0146375-050
Operator ID: CANPFAS4 Instrument ID: LCMS04

Method: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\1633_LCMS04.m
Limit Group: LC - 1633 ICAL
Last Update: 19-Sep-2024 11:48:59 Calib Date: 10-Sep-2024 18:34:24
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\LCMS04\20240910-146069.b\2024_09_10ICALinj07.d

Column 1 : Det: EXP1
Process Host: CTX1618

First Level Reviewer: EBY5 Date: 19-Sep-2024 11:48:59
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 1 13C3-PFBA										
216.00 > 172.00	3.564	3.551	0.013		1501732	1.25			269	
* 2 13C2 PFHxA										
315.10 > 270.00	4.733	4.729	0.004		1220788	0.6250			780	
* 3 13C4 PFOA										
417.10 > 172.00	5.642	5.628	0.014		242146	0.6250			1050	
* 4 18O2 PFHxS										
403.00 > 83.90	5.868	5.852	0.016		1237282	0.5913			2566	
* 5 13C5 PFNA										
468.00 > 423.00	6.076	6.061	0.015		758053	0.3125			980	
* 6 13C2 PFDA										
515.10 > 470.10	6.511	6.498	0.013		593836	0.3125			1251	
* 7 13C4 PFOS										
502.80 > 79.90	6.791	6.761	0.030		1112164	0.5975	Target=4.00		491	
502.80 > 98.90	6.782	6.761	0.021		288492		3.86(2.00-6.00)		1065	
D 8 13C4 PFBA										
216.80 > 171.90	3.564	3.551	0.013	1.000	3535831	2.59		104	12948	
D 9 13C5 PFPeA										
268.30 > 223.00	4.215	4.209	0.006	0.891	2008952	1.31		105	426	
D 10 M2-4:2 FTS										
329.10 > 80.90	4.544	4.529	0.015	0.774	1265015	1.81	Target=0.29	155	23.1	
329.10 > 309.00	4.534	4.529	0.005	0.773	3365344		0.38(0.14-0.43)	155	884	
D 11 13C5 PFHxA										
318.00 > 273.00	4.733	4.729	0.004	1.000	1483561	0.5405	Target=40.21	86.5	513	
318.00 > 120.30	4.733	4.729	0.004	1.000	35362		41.95(20.11-60.32)	86.5	112	
D 12 13C3 PFBS										
302.10 > 79.90	4.871	4.856	0.015	0.830	1774866	0.7934	Target=3.28	136	28.7	
302.10 > 98.90	4.860	4.856	0.004	0.828	484530		3.66(1.64-4.92)	136	654	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 13 13C3 HFPO-DA										
286.90 > 168.90	4.936	4.922	0.014	1.043	1723278	2.18	Target=1.86	87.3	3445	
286.90 > 184.90	4.925	4.922	0.003	1.041	981365		1.76(0.93-2.78)	87.3	312	
D 14 13C4 PFHpA										
367.10 > 322.00	5.207	5.193	0.014	1.100	1863421	0.6501		104	3853	
D 15 M2-6:2 FTS										
429.10 > 80.90	5.430	5.416	0.014	0.925	1438944	1.79	Target=0.38	151	167	
429.10 > 409.00	5.430	5.416	0.014	0.925	3244981		0.44(0.19-0.57)	151	4689	
D 16 13C8 PFOA										
421.10 > 376.00	5.642	5.628	0.014	1.000	1751829	0.5732		91.7	3706	
D 17 13C3 PFHxS										
402.10 > 79.90	5.868	5.852	0.016	1.000	1531206	0.6971	Target=3.25	118	159	
402.10 > 98.80	5.868	5.852	0.016	1.000	427780		3.58(1.63-4.88)	118	816	
D 18 13C9 PFNA										
472.10 > 427.00	6.076	6.061	0.015	1.000	712258	0.3744		120	1648	
D 19 M2-8:2 FTS										
529.10 > 80.90	6.270	6.258	0.012	1.069	987815	1.80	Target=0.33	150	767	
529.10 > 509.00	6.270	6.258	0.012	1.069	2451206		0.40(0.16-0.49)	150	4675	
D 20 d3-NMeFOSAA										
573.20 > 419.00	6.451	6.437	0.014	0.950	1160930	1.35		108	3183	
D 21 13C6 PFDA										
519.10 > 474.10	6.511	6.498	0.013	1.000	663009	0.3625		116	1596	
D 22 d5-NEtFOSAA										
589.20 > 419.00	6.656	6.634	0.022	0.980	1210468	1.43		114	2078	
D 23 13C8 PFOS										
507.10 > 79.90	6.791	6.761	0.030	1.000	1375154	0.7171	Target=4.26	120	201	
507.10 > 98.90	6.782	6.761	0.021	0.999	335635		4.10(2.13-6.39)	120	540	
D 24 13C7 PFUnA										
570.00 > 525.10	6.958	6.932	0.026	1.069	606078	0.3368		108	1432	
D 25 13C2-PFDoDA										
615.10 > 570.00	7.394	7.361	0.033	1.136	567804	0.3343		107	1256	
D 26 13C8 FOSA										
506.10 > 77.80	7.712	7.720	-0.008	1.136	1425760	0.6927		111	3187	
D 27 13C2 PFTeDA										
715.20 > 670.00	8.225	8.179	0.046	1.263	244002	0.2513		80.4	562	
D 28 d7-N-MeFOSE-M										
623.20 > 58.90	8.599	8.607	-0.008	1.266	2040635	6.69		107	564	
D 29 d3-NMePFOSA										
515.00 > 219.00	8.723	8.731	-0.008	1.285	202499	0.4989		79.8	891	
D 30 d9-N-EtFOSE-M										
639.20 > 58.90	8.851	8.859	-0.008	1.303	2078714	5.55		88.8	663	
D 31 d5-NEtPFOSA										
531.10 > 219.00	8.949	8.956	-0.007	1.318	193297	0.4724		75.6	117	
32 Perfluorobutanoic acid										M
212.80 > 168.90	3.573	3.559	0.014	1.002	123146	0.0916			0.8	M
35 Perfluoropentanoic acid										M
263.00 > 219.00	4.225	4.219	0.006	1.002	124702	0.0506			0.5	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorohexanoic acid										M
313.00 > 269.00	4.744	4.739	0.005	1.002	122204	0.0648	Target=14.20		0.8	M
313.00 > 118.90	4.733	4.739	-0.006	1.000	9863		12.39(7.10-21.30)		4.7	
42 Perfluorobutanesulfonic acid										M
298.70 > 79.90	4.871	4.856	0.015	1.000	267854	0.0903	Target=3.31		3.8	M
298.70 > 98.80	4.871	4.856	0.015	1.000	83946		3.19(1.66-4.97)		63.7	
47 Perfluoroheptanoic acid										M
363.10 > 319.00	5.207	5.204	0.003	1.000	154617	0.0480	Target=3.56		1.7	M
363.10 > 169.00	5.207	5.204	0.003	1.000	48046		3.22(1.78-5.34)		28.1	
51 Perfluoropentanesulfonic acid										7M
349.10 > 79.90	5.399	5.385	0.014	0.920	20017	0.007525	Target=3.08		0.3	7M
349.10 > 98.90	5.399	5.385	0.014	0.920	12162		1.65(1.54-4.63)		1.8	
LOD = 0.0117										
52 Perfluorooctanoic acid										M
413.00 > 369.00	5.652	5.638	0.014	1.002	915864	0.6812	Target=1.93		24.3	M
413.00 > 169.00	5.642	5.638	0.004	1.000	429790		2.13(0.96-2.89)		478	M
53 Perfluorohexanesulfonic acid										M
398.70 > 79.90	5.878	5.862	0.016	1.002	193855	0.0877	Target=3.17		28.1	M
398.70 > 98.90	5.868	5.862	0.006	1.000	56397		3.44(1.59-4.76)		109	M
55 Perfluorononanoic acid										M
463.00 > 419.00	6.085	6.061	0.024	1.002	115944	0.0672	Target=4.77		5.5	M
463.00 > 169.00	6.085	6.061	0.024	1.002	24083		4.81(2.39-7.16)		60.4	M
58 Perfluoroheptanesulfonic acid										
449.00 > 79.90	6.336	6.314	0.022	0.933	198165	0.0735	Target=3.87		10.5	
449.00 > 98.80	6.326	6.314	0.012	0.932	57740		3.43(1.93-5.80)		42.3	
63 Perfluorooctanesulfonic acid										RM
498.90 > 79.90	6.627	6.770	-0.143	0.976	2834869	0.9791	Target=4.80		199	RM
498.90 > 98.80	6.791	6.770	0.021	1.000	387462		7.32(2.40-7.20)		463	M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

PFAS NIS Mix_00023 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 19-Sep-2024 11:49:01 Chrom Revision: 2.3 26-Aug-2024 17:14:48

Eurofins Cleveland

Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d

Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04

Lims ID: 460-311364-A-2-A DU

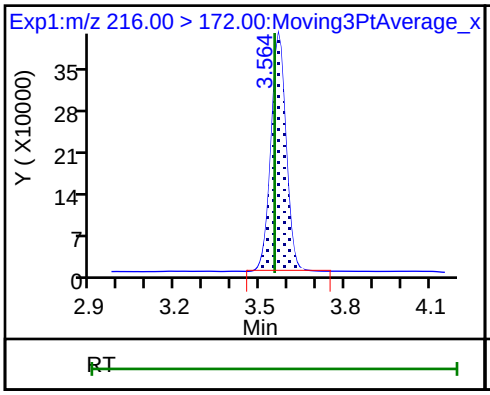
Client ID:

Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50

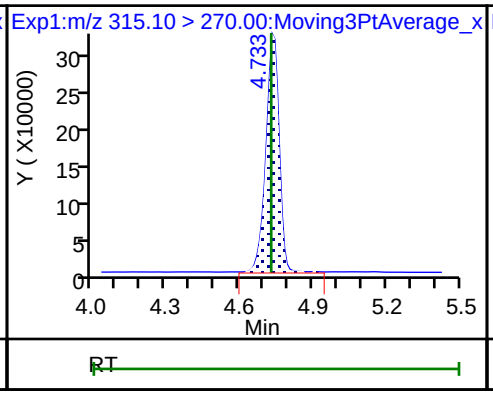
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL

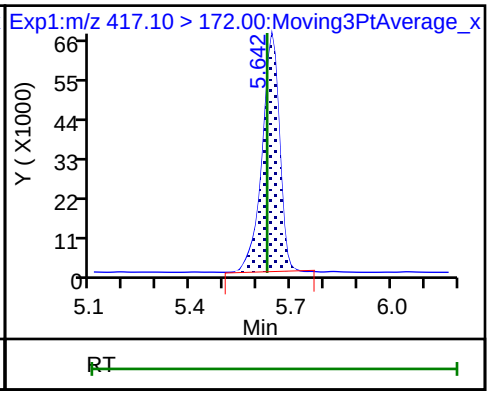
* 1 13C3-PFBA



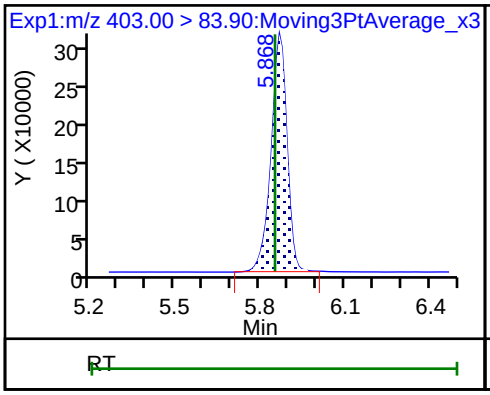
* 2 13C2 PFHxA



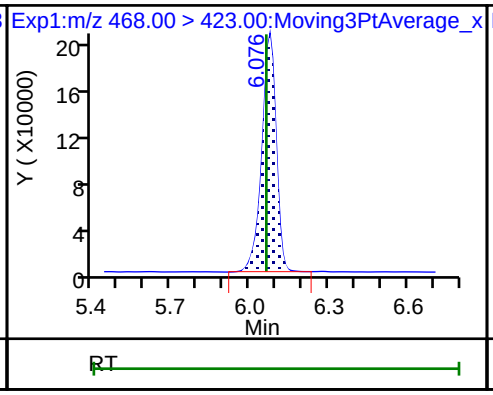
* 3 13C4 PFOA



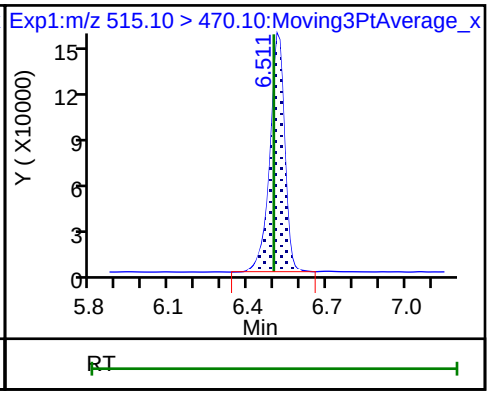
* 4 18O2 PFHxS



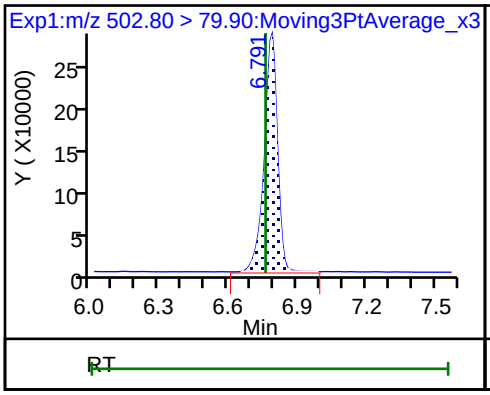
* 5 13C5 PFNA



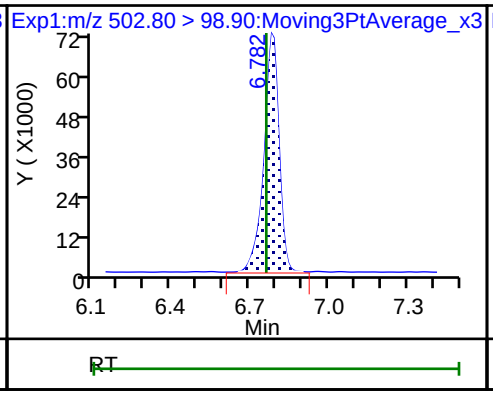
* 6 13C2 PFDA



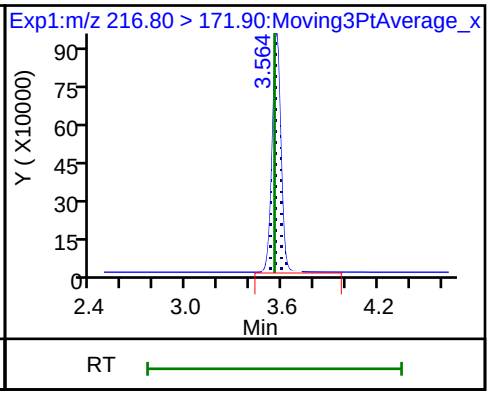
* 7 13C4 PFOS



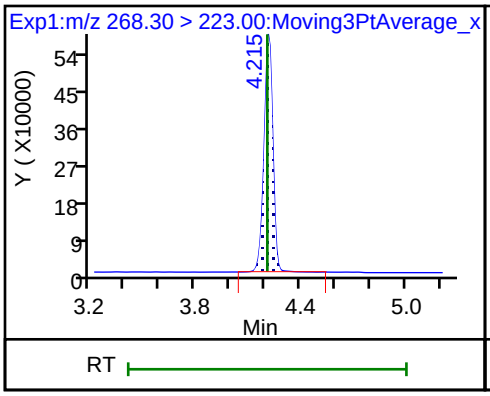
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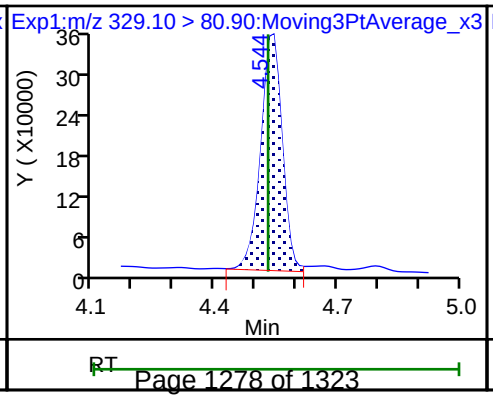
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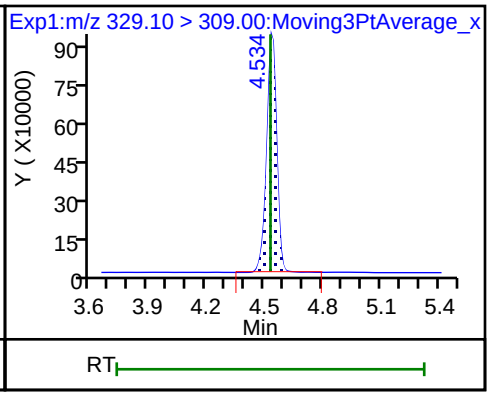
D 9 13C5 PFPeA



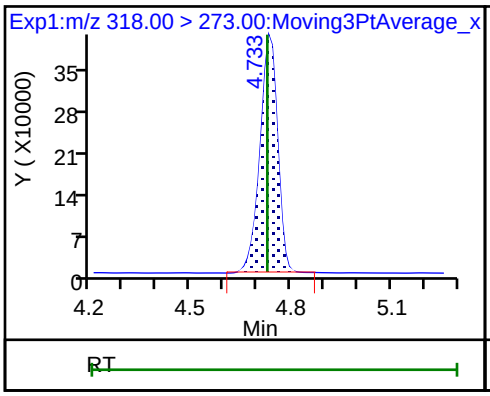
D 10 M2-4:2 FTS



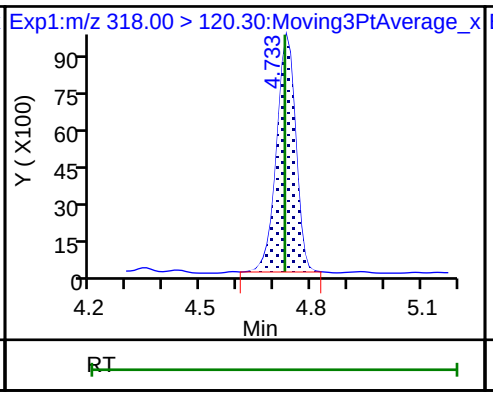
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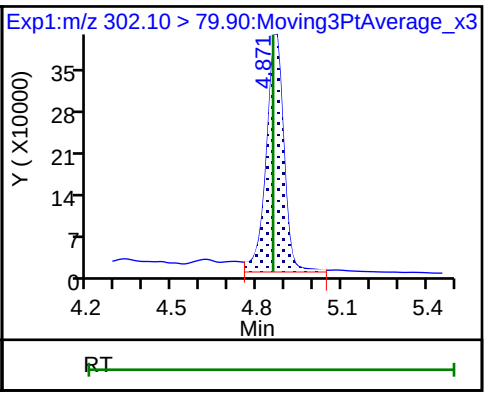
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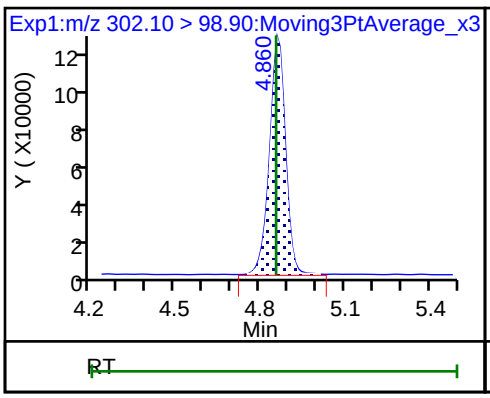
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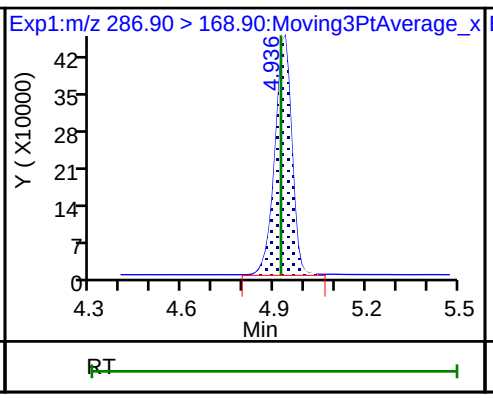
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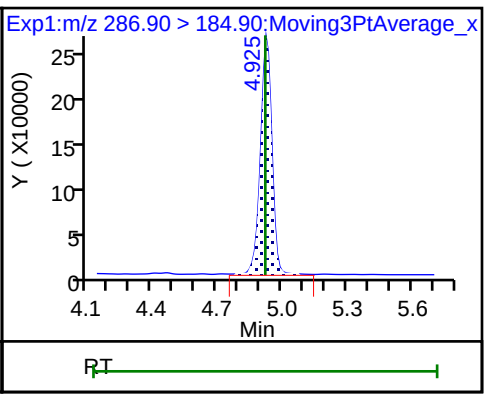
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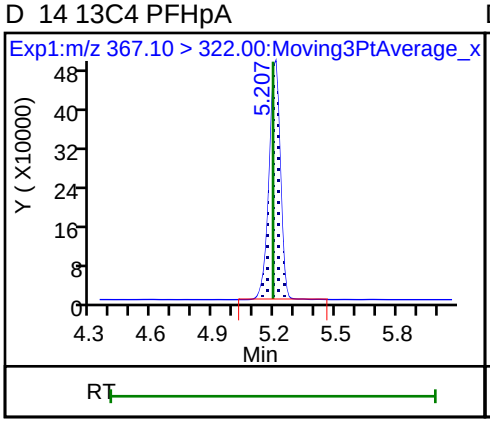
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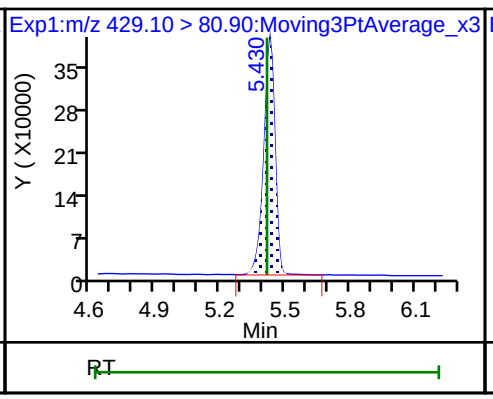
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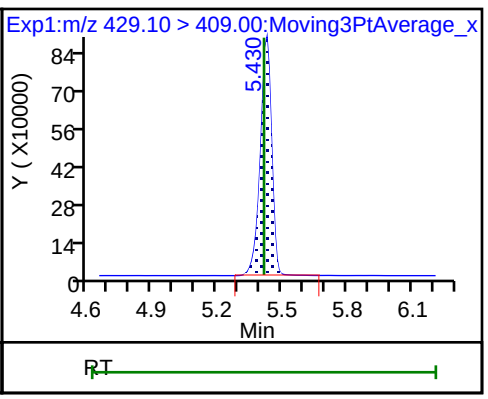
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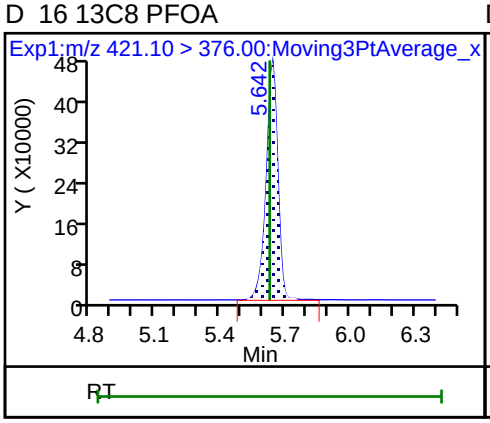
D 15 M2-6:2 FTS



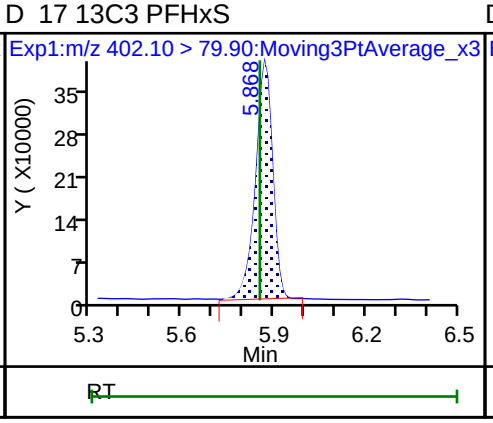
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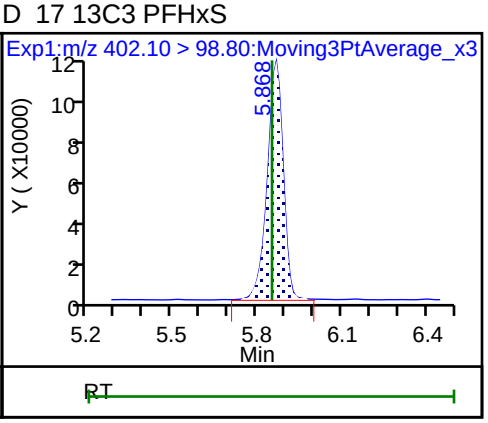
D 16 13C8 PFOA



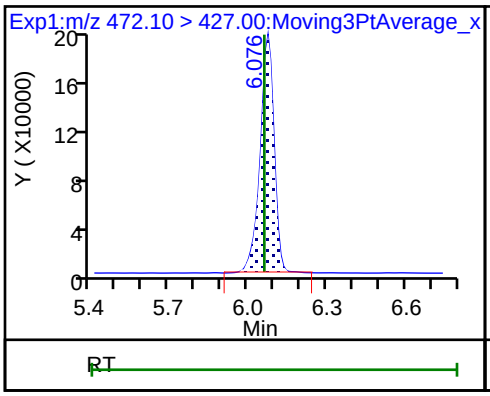
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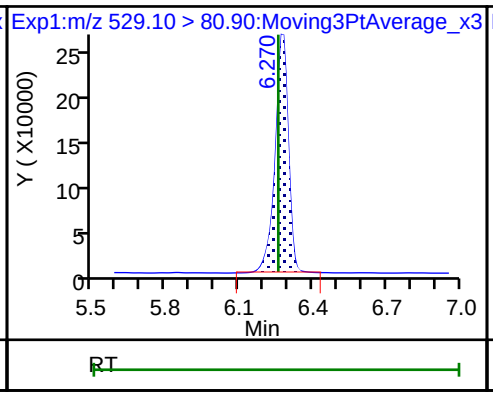
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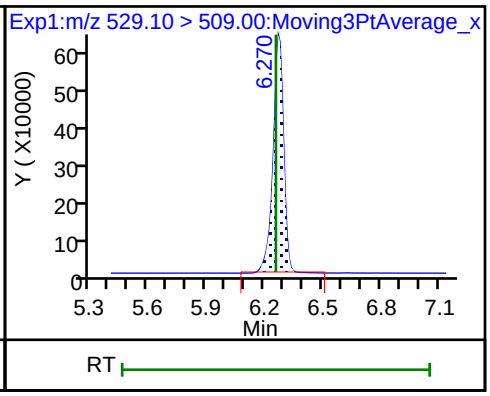
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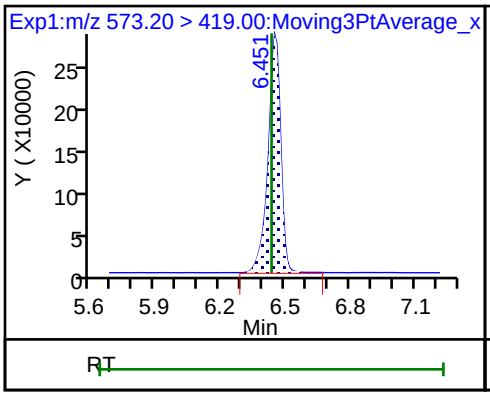
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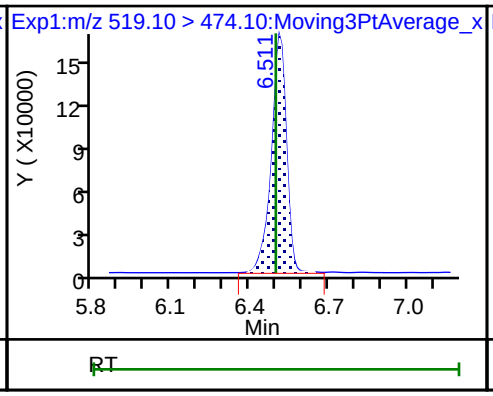
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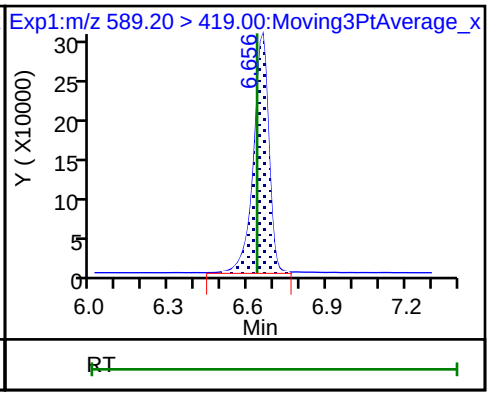
D 20 d3-NMeFOSAA



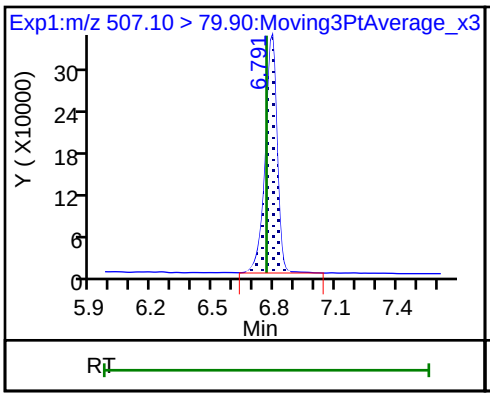
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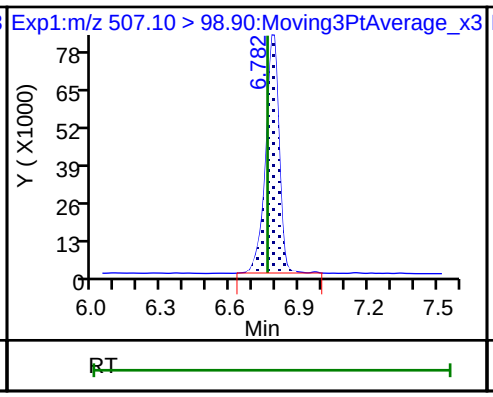
D 22 d5-NEtFOSAA



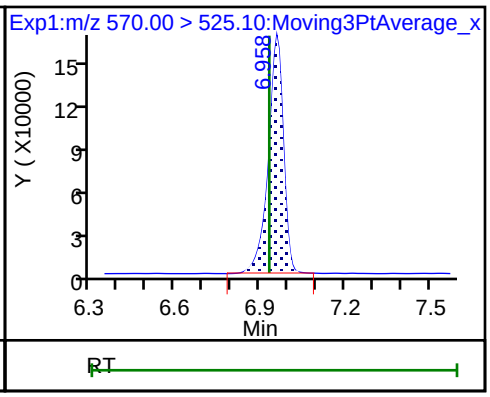
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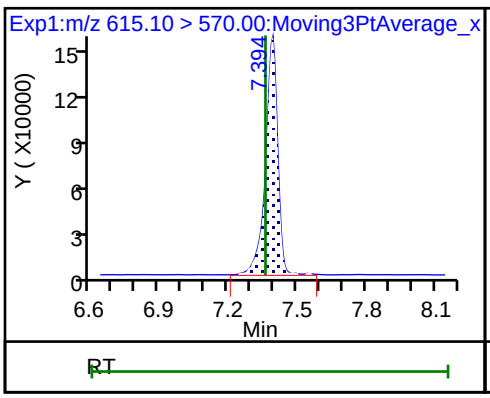
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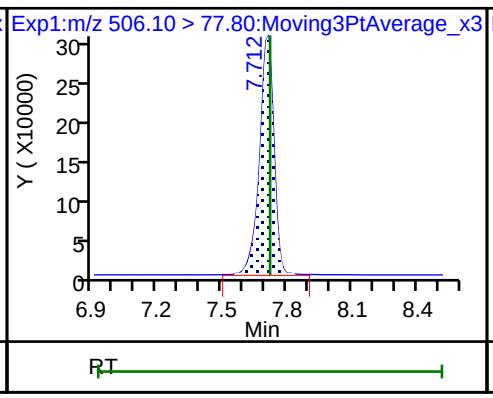
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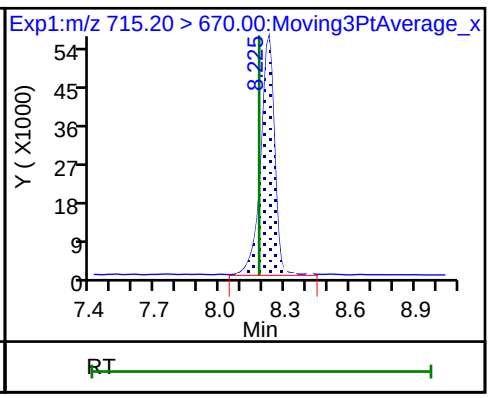
D 25 13C2-PFDoDA



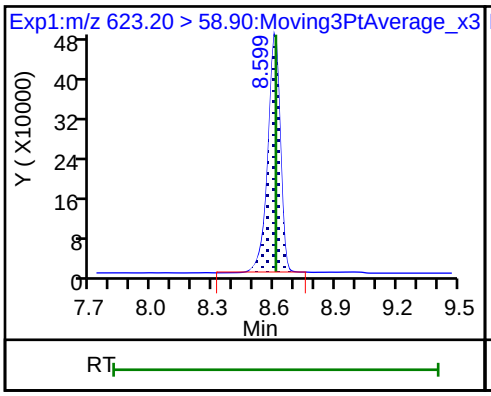
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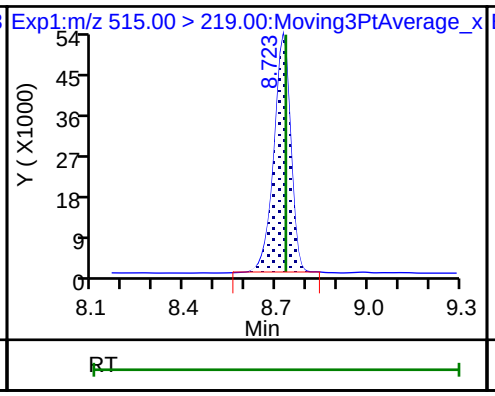
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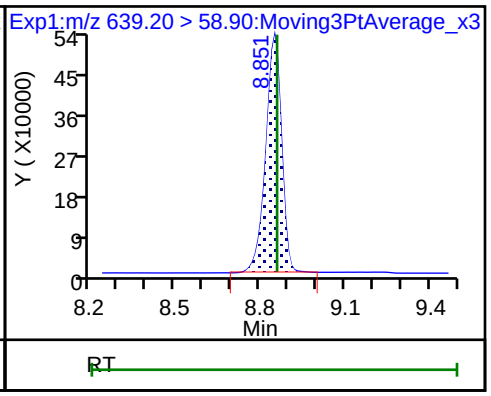
D 28 d7-N-MeFOSE-M



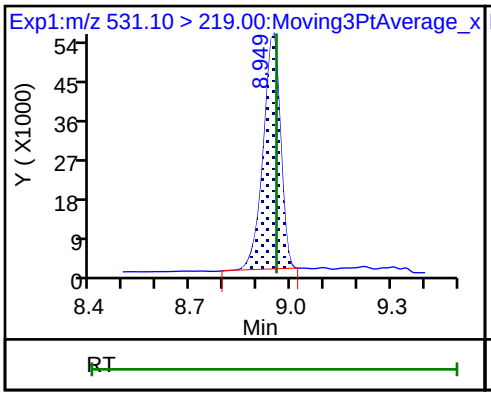
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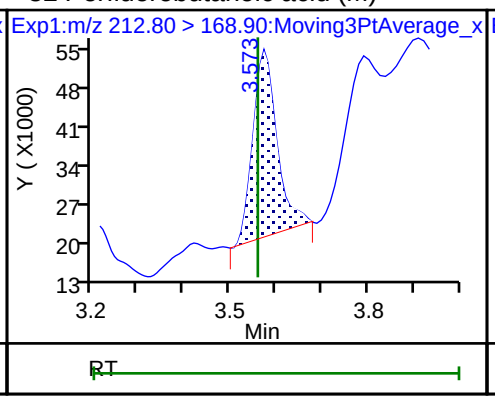
D 30 d9-N-EtFOSE-M



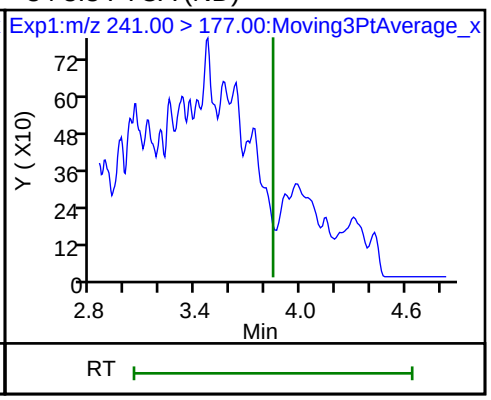
D 31 d5-NEtPFOSA



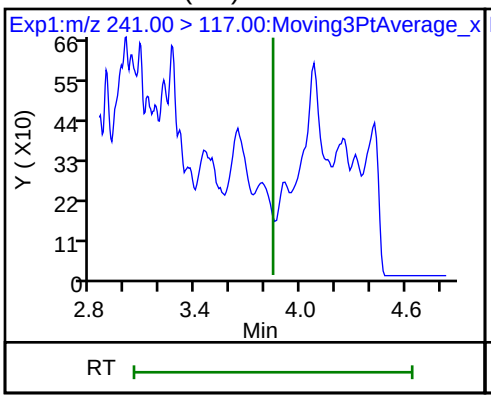
32 Perfluorobutanoic acid (M)



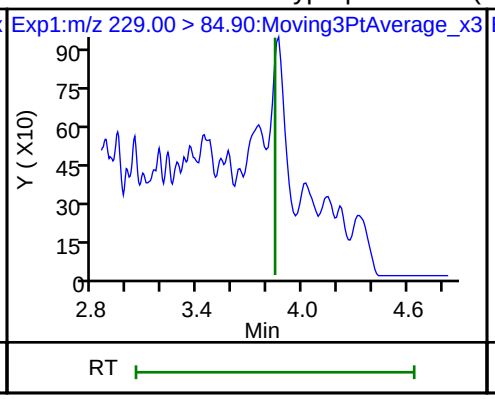
34 3:3 FTCA (ND)



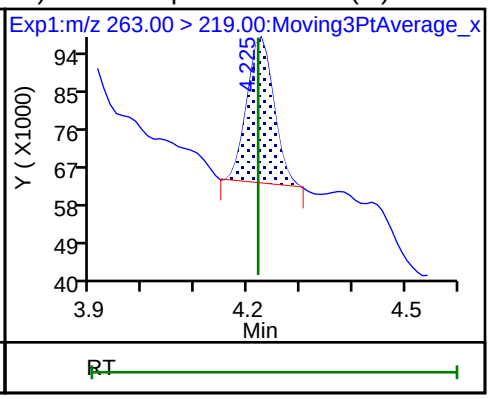
34 3:3 FTCA (ND)



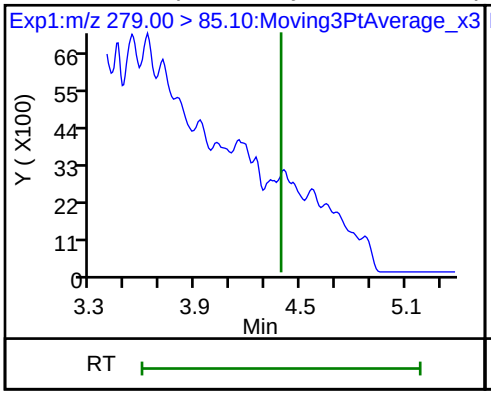
33 Perfluoro-3-methoxypropanoic aci (ND)



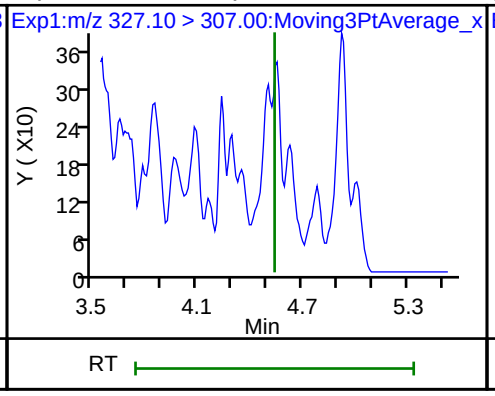
35 Perfluoropentanoic acid (M)



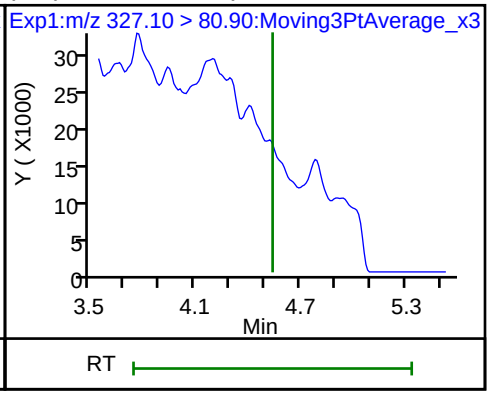
36 Perfluoro(4-methoxybutanoic acid (ND)



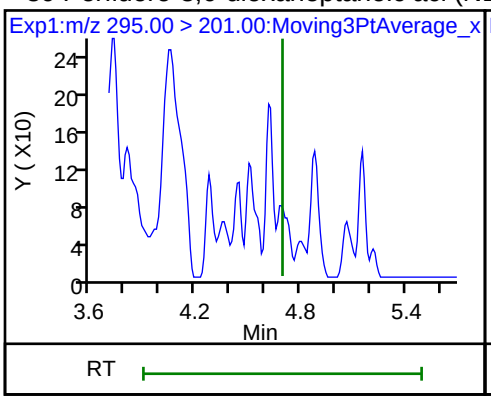
38 1H,1H,2H,2H-perfluorohexanesulfo (ND)



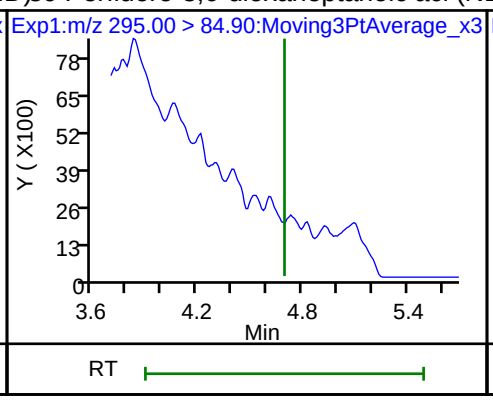
39 1H,1H,2H,2H-perfluorohexanesulfo (ND)



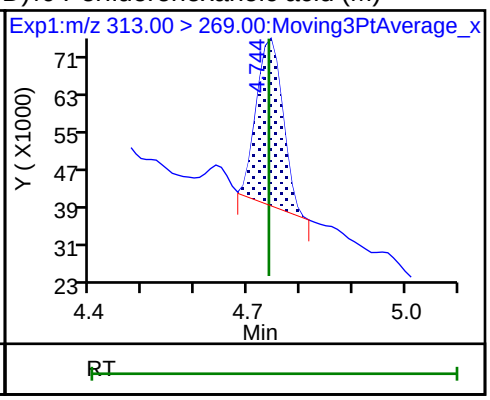
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



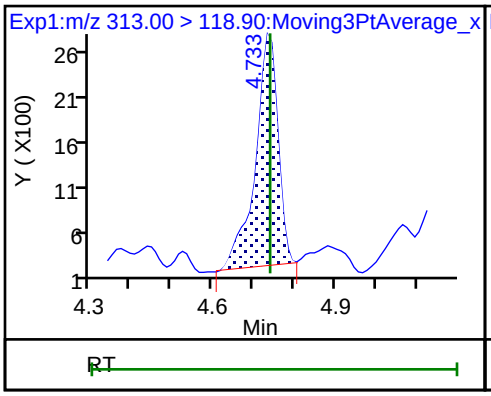
39 Perfluoro-3,6-dioxaheptanoic aci (ND)



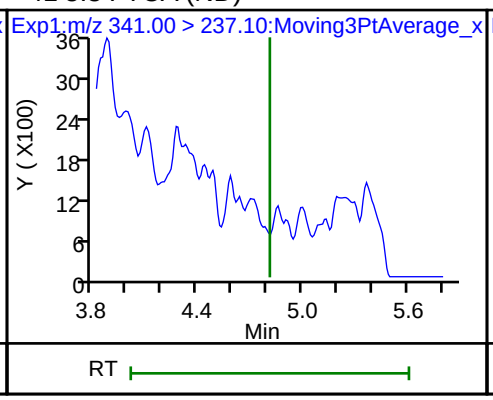
40 Perfluorohexanoic acid (M)



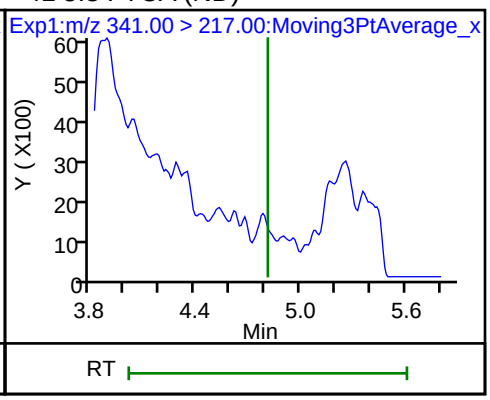
40 Perfluorohexanoic acid



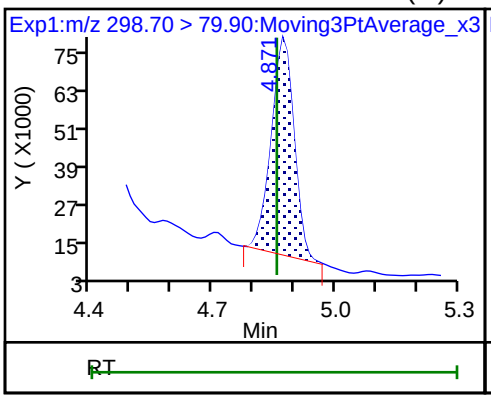
41 5:3 FTCA (ND)



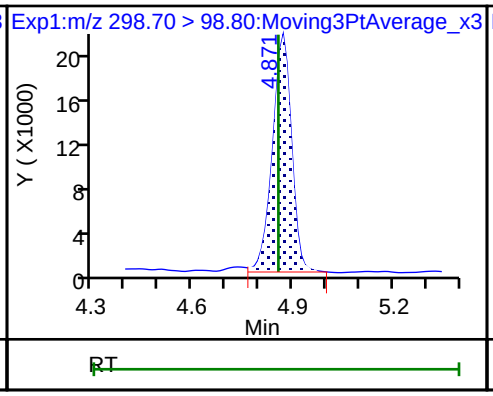
41 5:3 FTCA (ND)



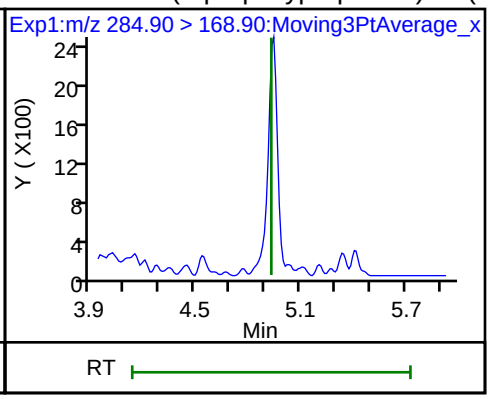
42 Perfluorobutanesulfonic acid (M)



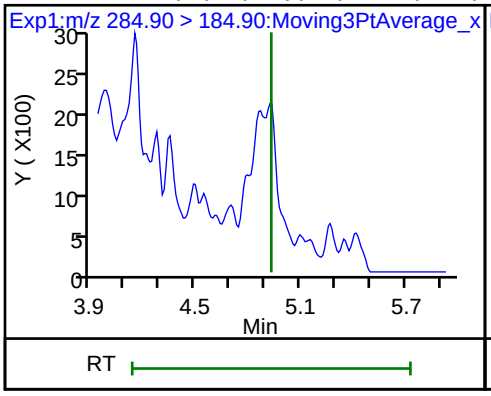
42 Perfluorobutanesulfonic acid



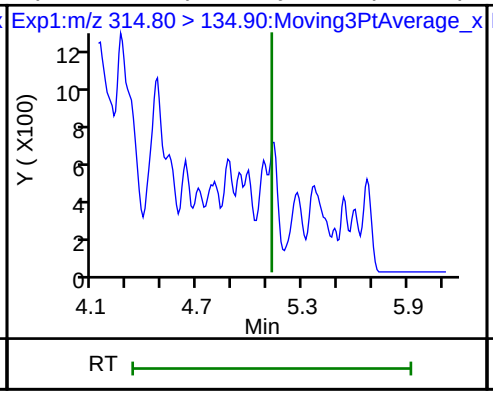
43 Perfluoro(2-propoxypropanoic) ac (ND)



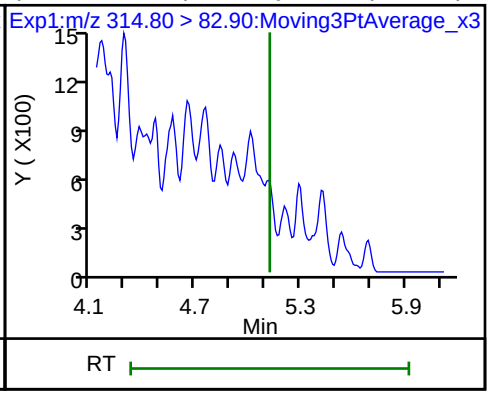
43 Perfluoro(2-propoxypropanoic) ac (ND)



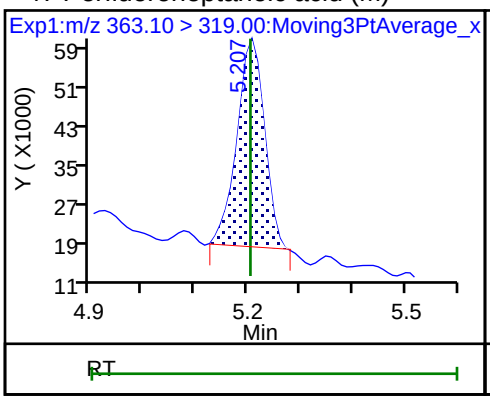
46 Perfluoro (2-ethoxyethane) sulfo (ND)



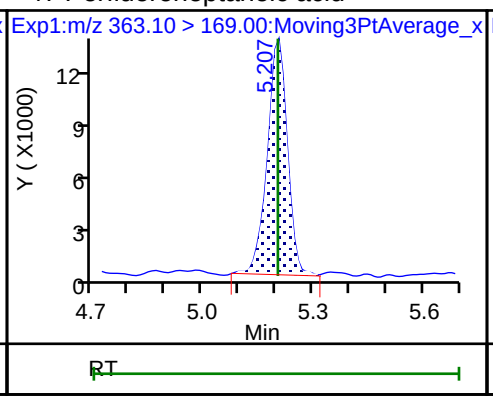
46 Perfluoro (2-ethoxyethane) sulfo (ND)



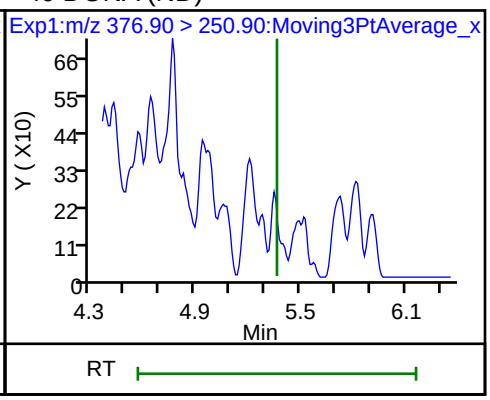
47 Perfluoroheptanoic acid (M)



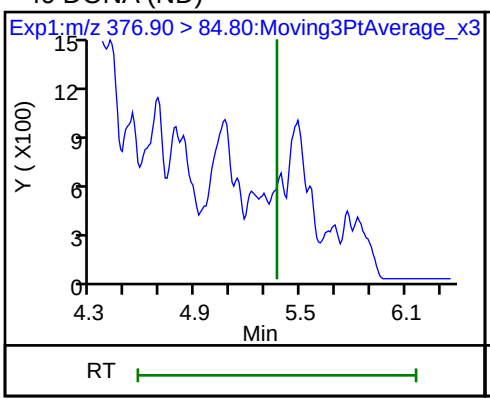
47 Perfluoroheptanoic acid



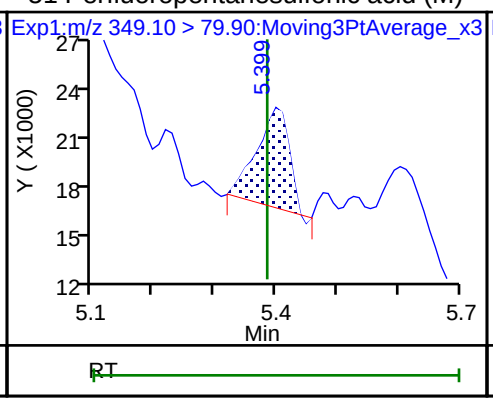
49 DONA (ND)



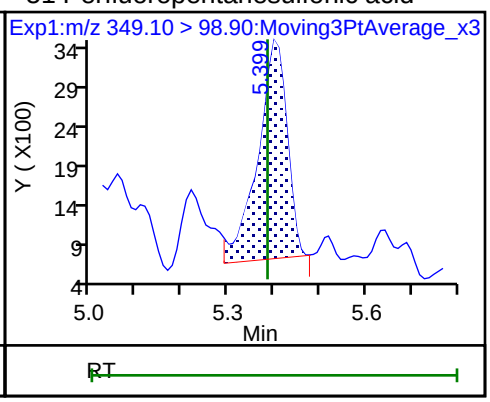
49 DONA (ND)



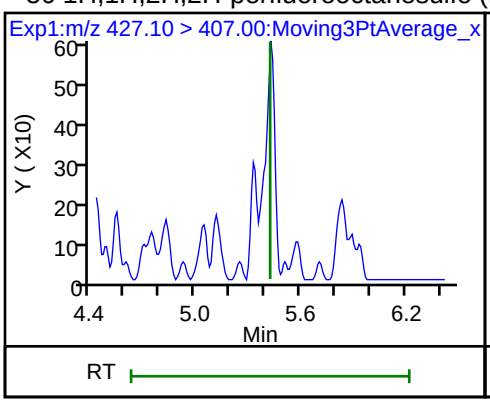
51 Perfluoropentanesulfonic acid (M)



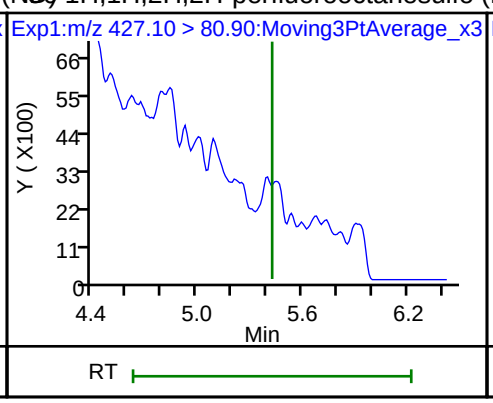
51 Perfluoropentanesulfonic acid



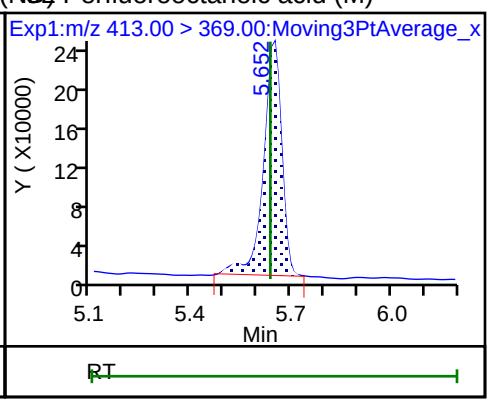
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



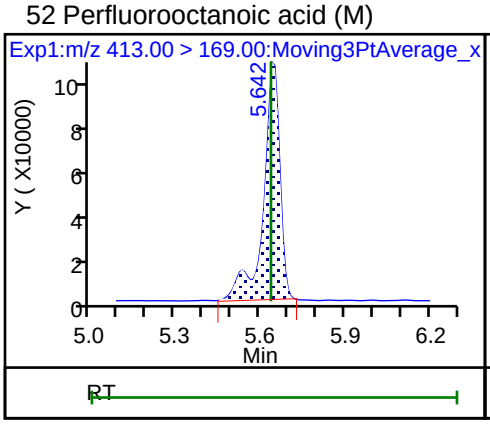
50 1H,1H,2H,2H-perfluorooctanesulfo (ND)



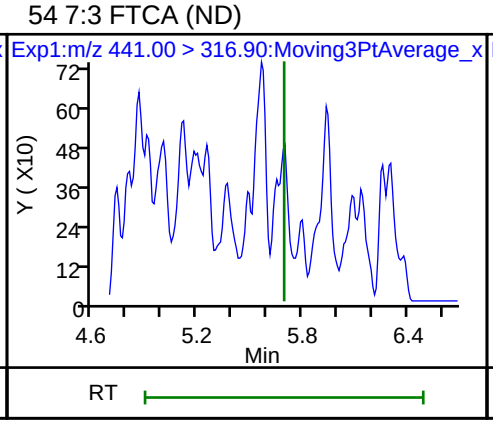
52 Perfluorooctanoic acid (M)



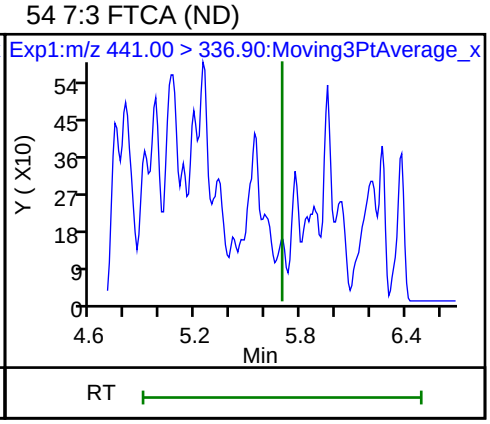
52 Perfluorooctanoic acid (M)



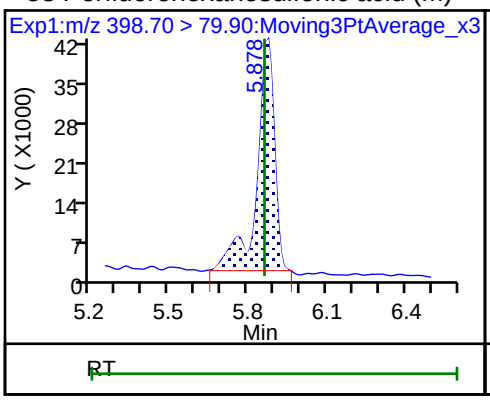
54 7:3 FTCA (ND)



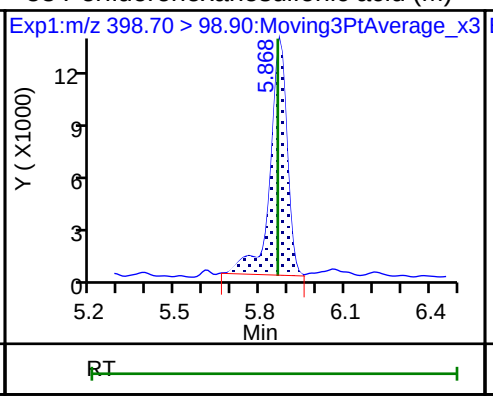
54 7:3 FTCA (ND)



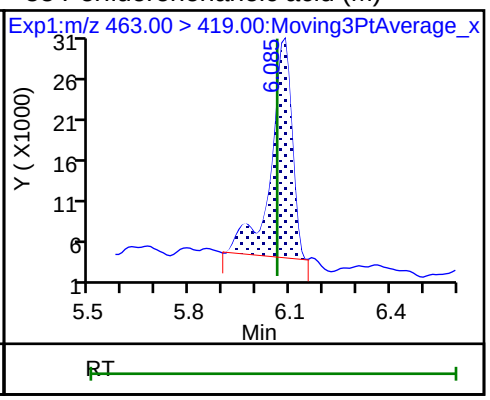
53 Perfluorohexanesulfonic acid (M)



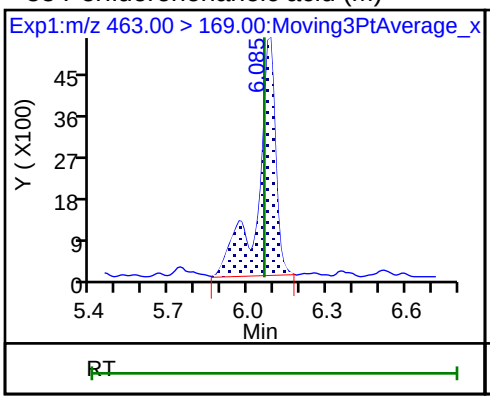
53 Perfluorohexanesulfonic acid (M)



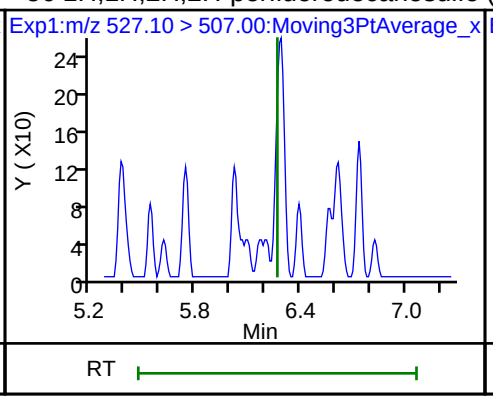
55 Perfluorononanoic acid (M)



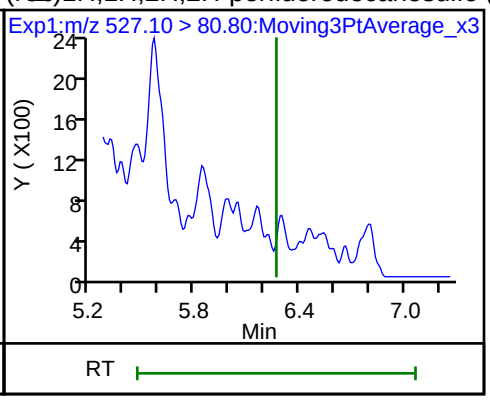
55 Perfluorononanoic acid (M)



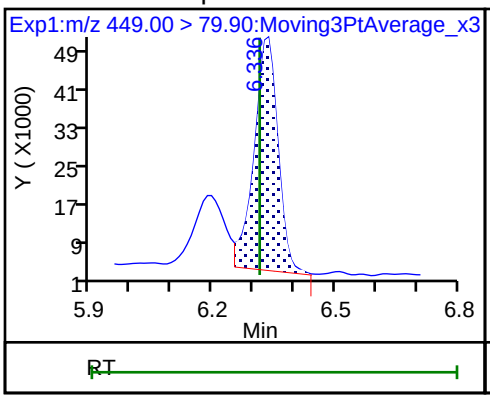
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



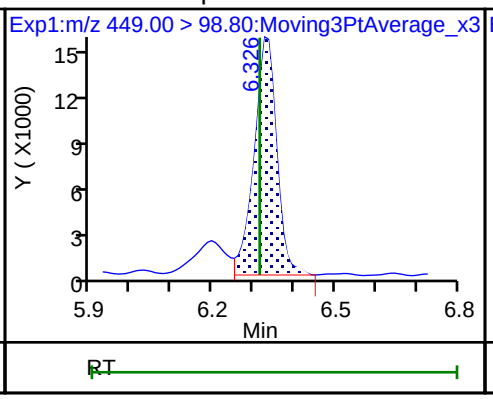
56 1H,1H,2H,2H-perfluorodecanesulfo (ND)



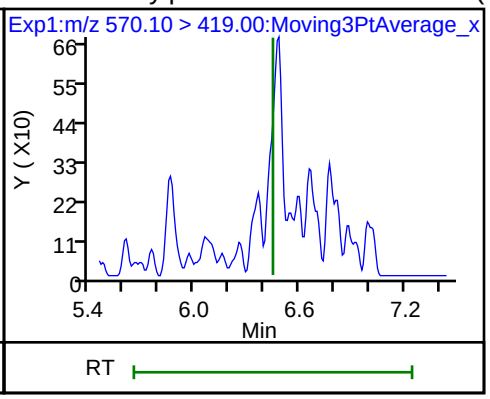
58 Perfluoroheptanesulfonic acid



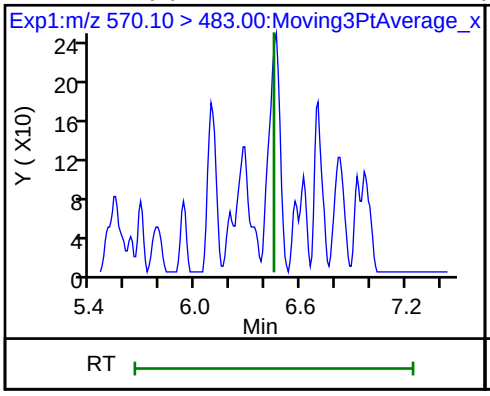
58 Perfluoroheptanesulfonic acid



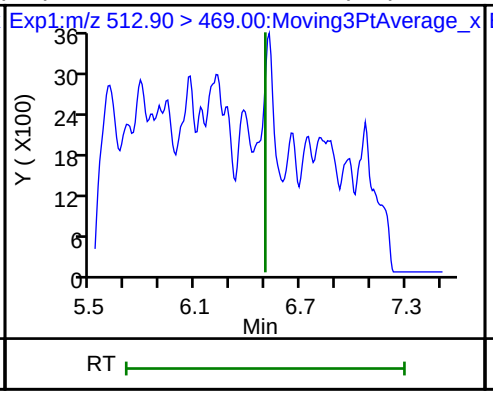
59 N-methylperfluorooctanesulfonami (ND)



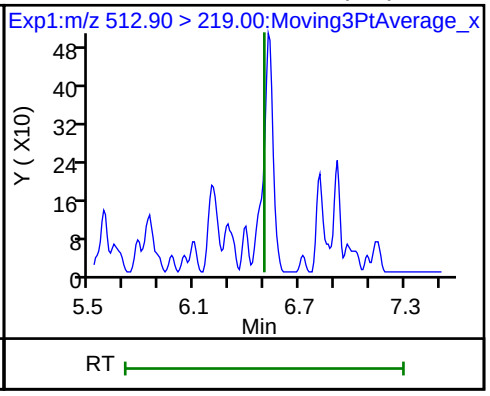
59 N-methylperfluorooctanesulfonami (ND)



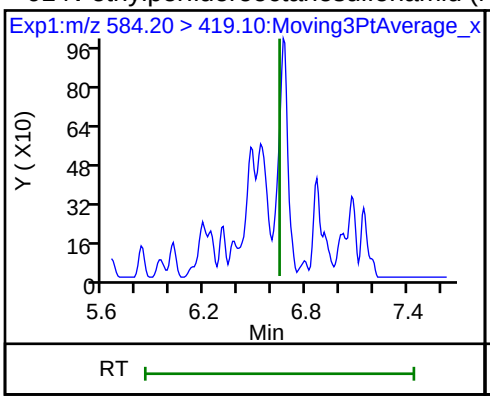
60 Perfluorodecanoic acid (ND)



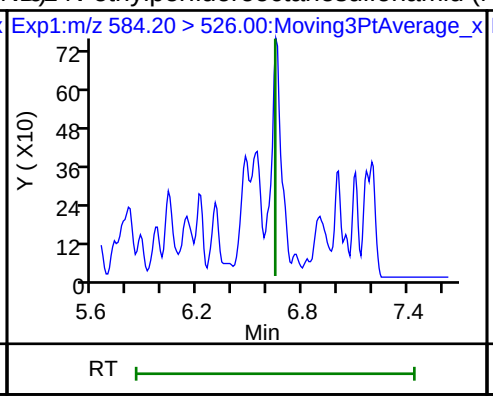
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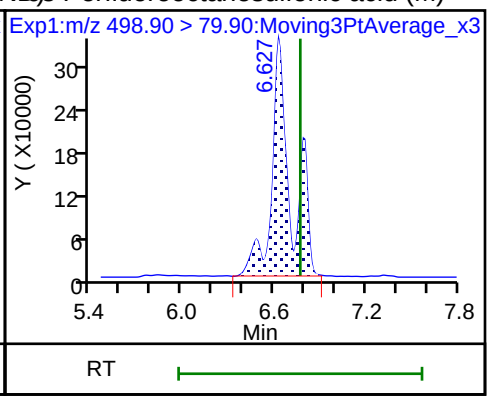
61 N-ethylperfluorooctanesulfonamid (ND)



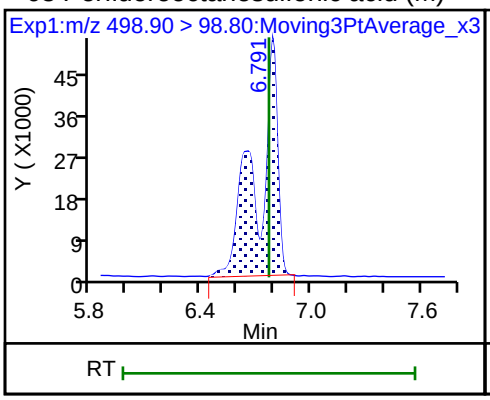
61 N-ethylperfluorooctanesulfonamid (ND)



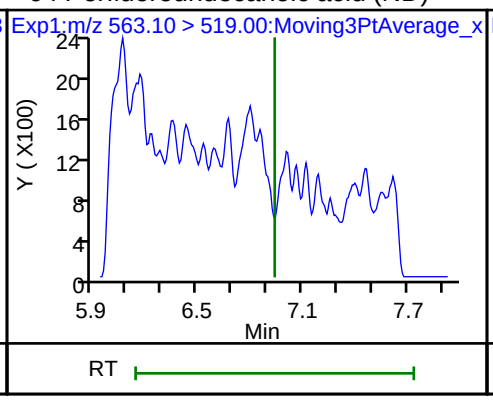
63 Perfluorooctanesulfonic acid (M)



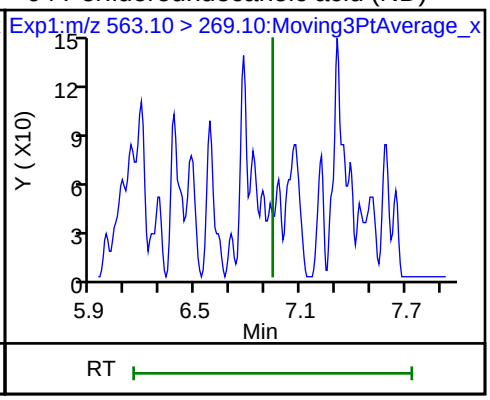
63 Perfluorooctanesulfonic acid (M)



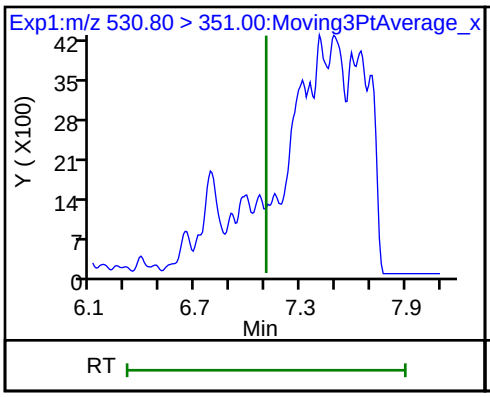
64 Perfluoroundecanoic acid (ND)



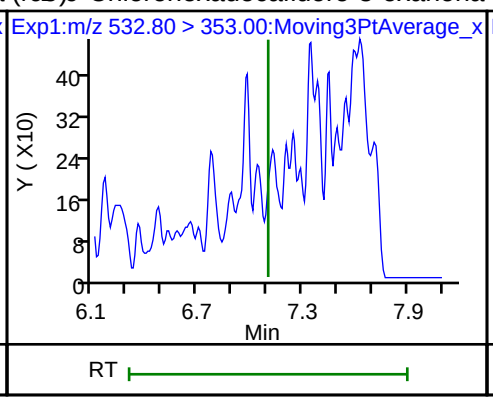
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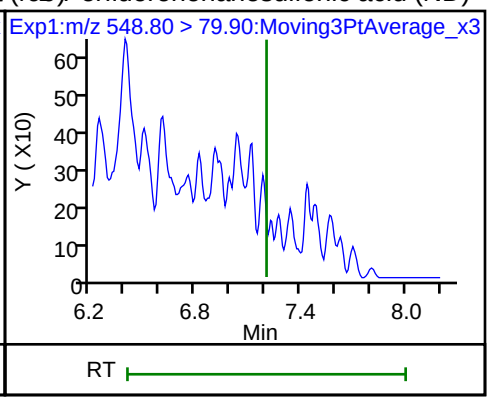
65 9-Chlorohexadecafluoro-3-oxanona (ND)



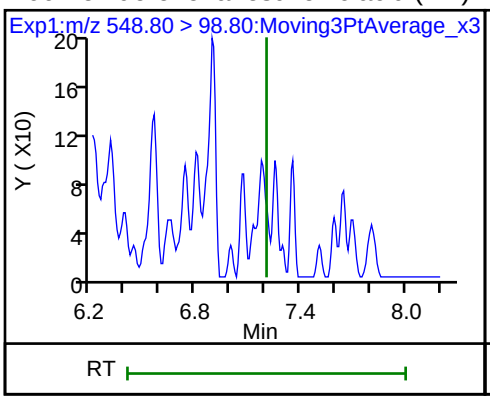
65 9-Chlorohexadecafluoro-3-oxanona (ND)



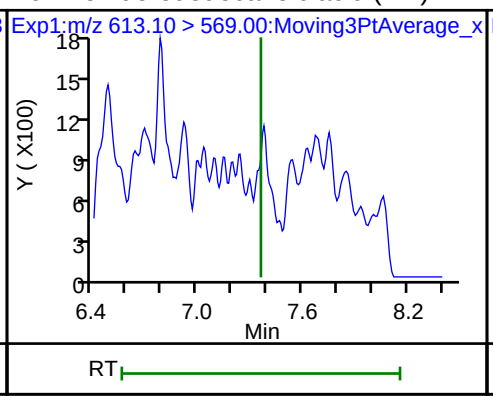
66 Perfluorononanesulfonic acid (ND)



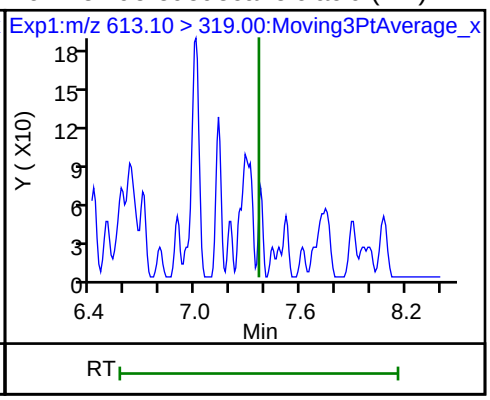
66 Perfluorononanesulfonic acid (ND)



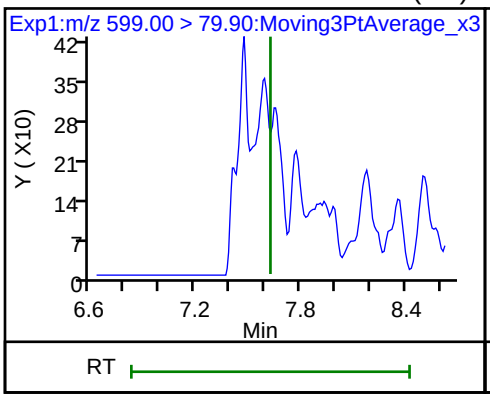
67 Perfluorododecanoic acid (ND)



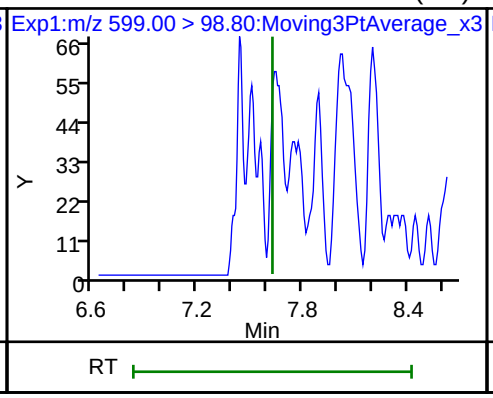
67 Perfluorododecanoic acid (ND)



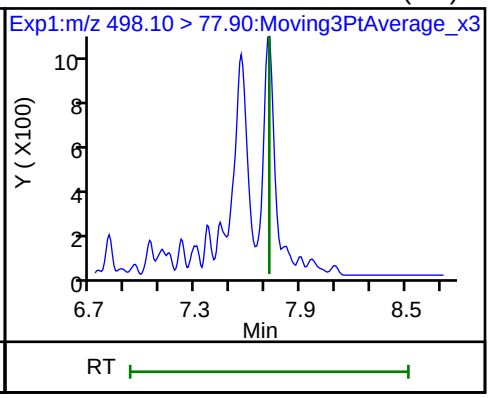
68 Perfluorodecanesulfonic acid (ND)



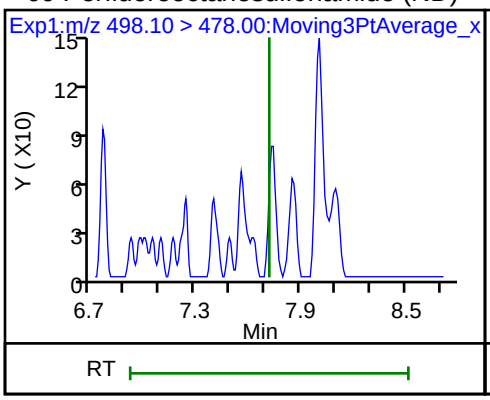
68 Perfluorodecanesulfonic acid (ND)



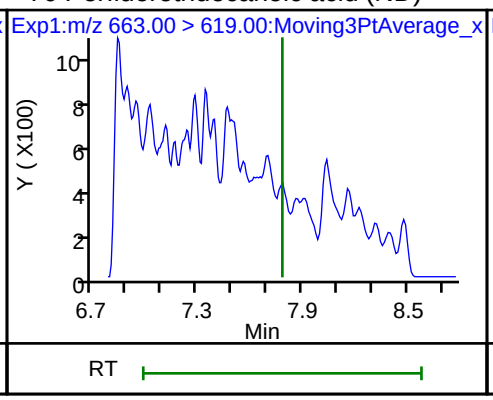
69 Perfluorooctanesulfonamide (ND)



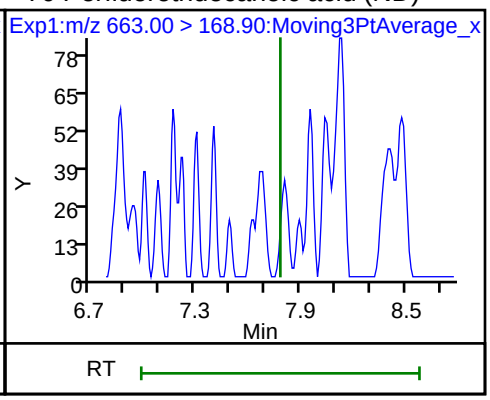
69 Perfluorooctanesulfonamide (ND)



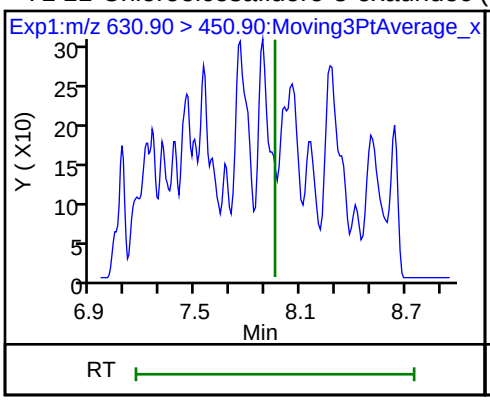
70 Perfluorotridecanoic acid (ND)



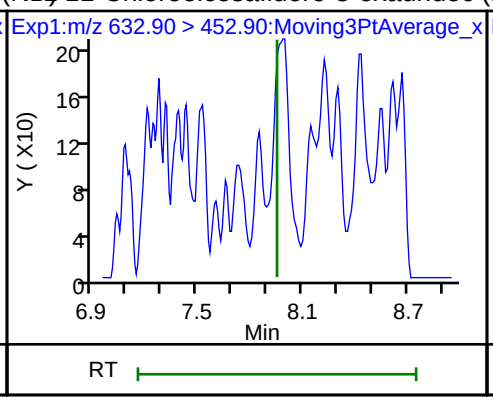
70 Perfluorotridecanoic acid (ND)



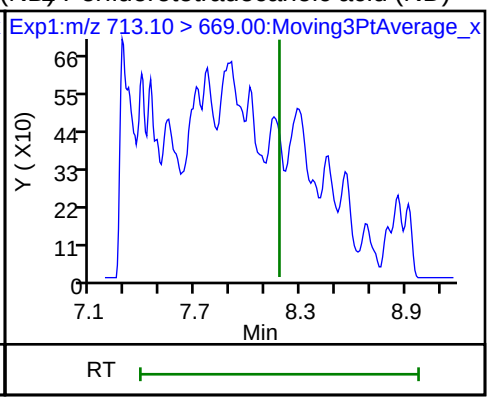
71 11-Chloroeicosafluoro-3-oxaundec (ND)



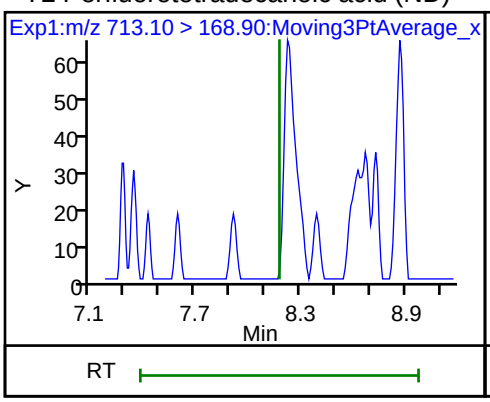
71 11-Chloroeicosafluoro-3-oxaundec (ND)



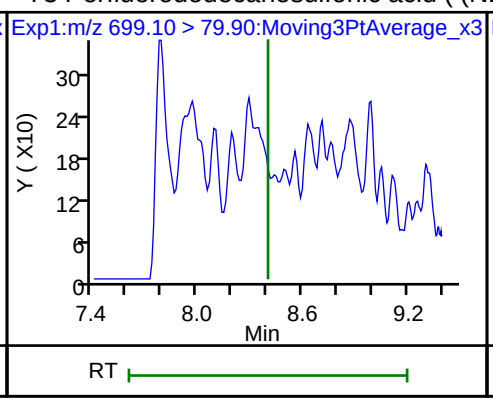
72 Perfluorotetradecanoic acid (ND)



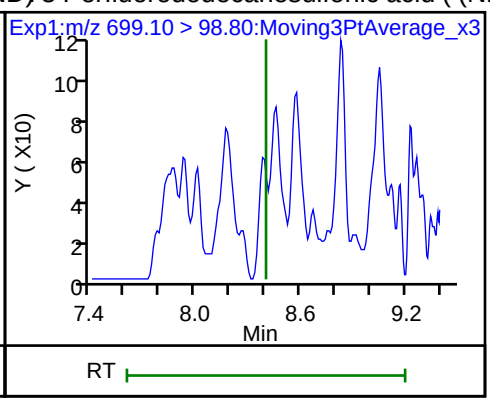
72 Perfluorotetradecanoic acid (ND)



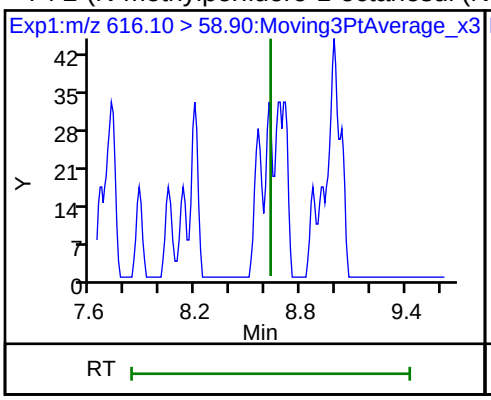
73 Perfluorododecanesulfonic acid ((ND)



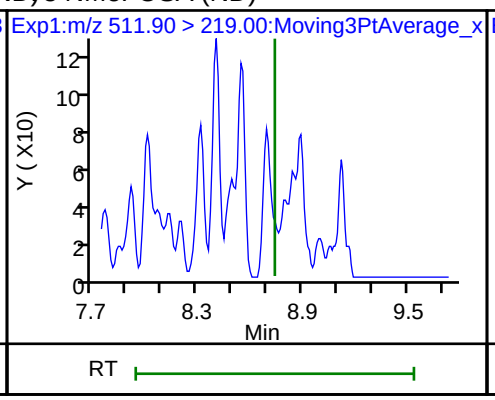
73 Perfluorododecanesulfonic acid ((ND)



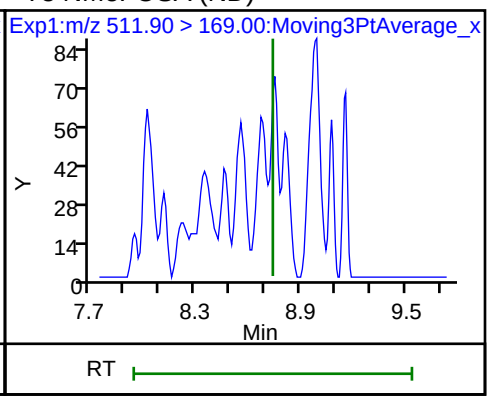
74 2-(N-methylperfluoro-1-octanesul (ND)



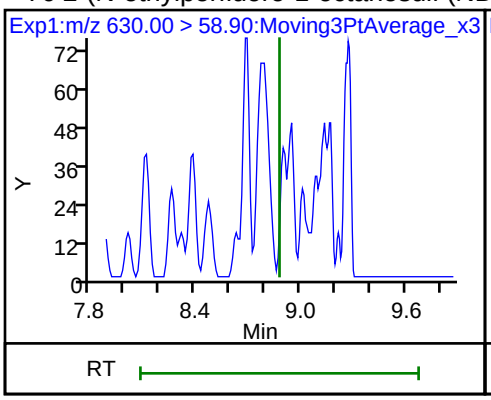
75 NMeFOSA (ND)



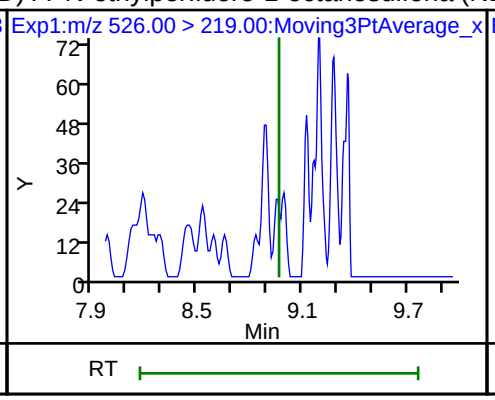
75 NMeFOSA (ND)



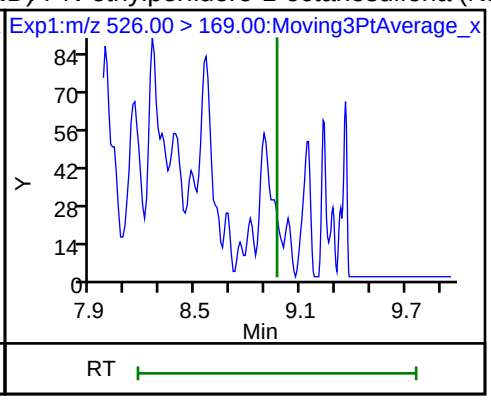
76 2-(N-ethylperfluoro-1-octanesulf (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



77 N-ethylperfluoro-1-octanesulfona (ND)



Manual Integration/User Assign Peak Report

Eurofins Cleveland

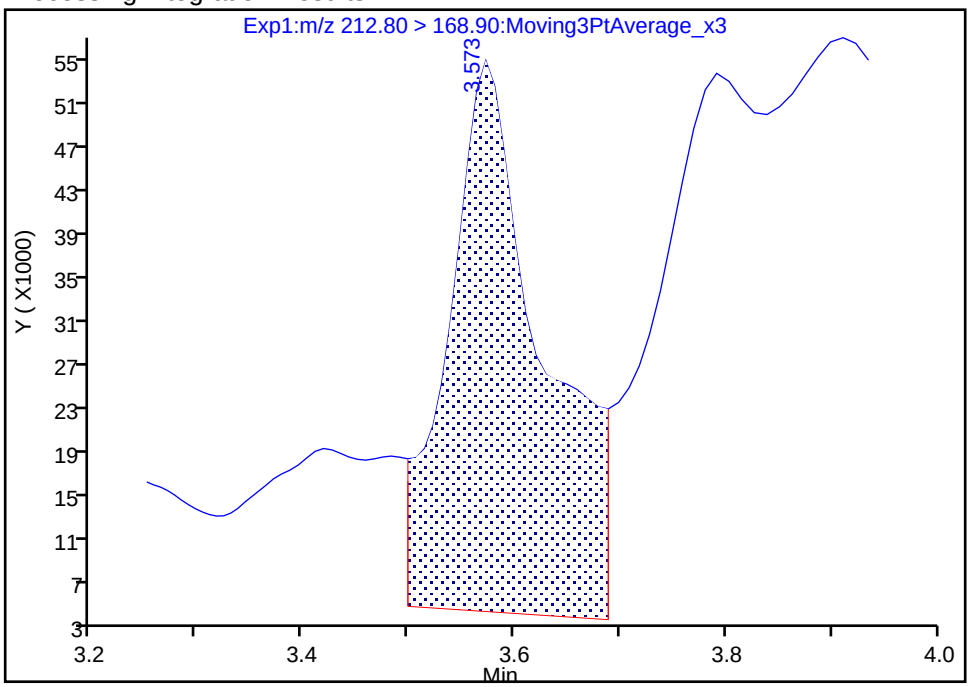
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

32 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

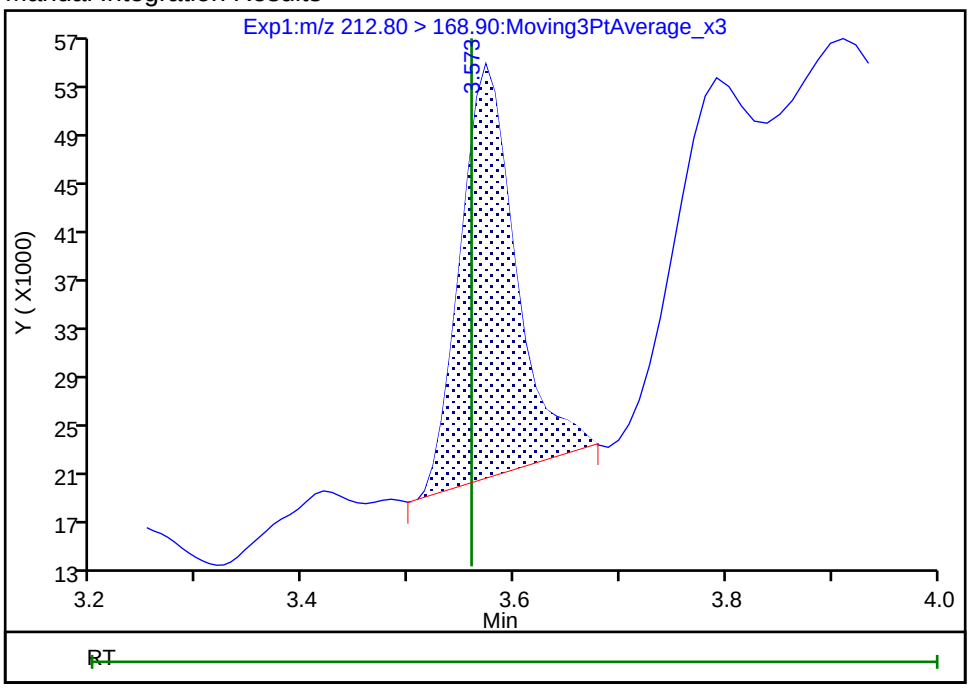
RT: 3.57
Area: 308571
Amount: 0.229642
Amount Units: ng/ml

Processing Integration Results



RT: 3.57
Area: 123146
Amount: 0.091646
Amount Units: ng/ml

Manual Integration Results



Reviewer: EBY5, 19-Sep-2024 11:46:35 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

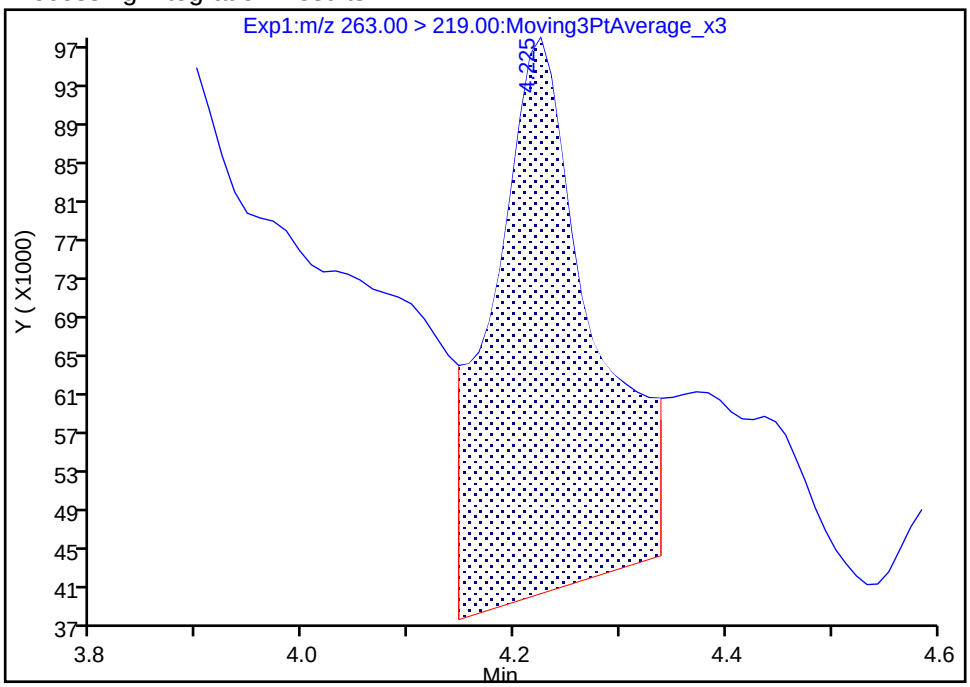
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

35 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

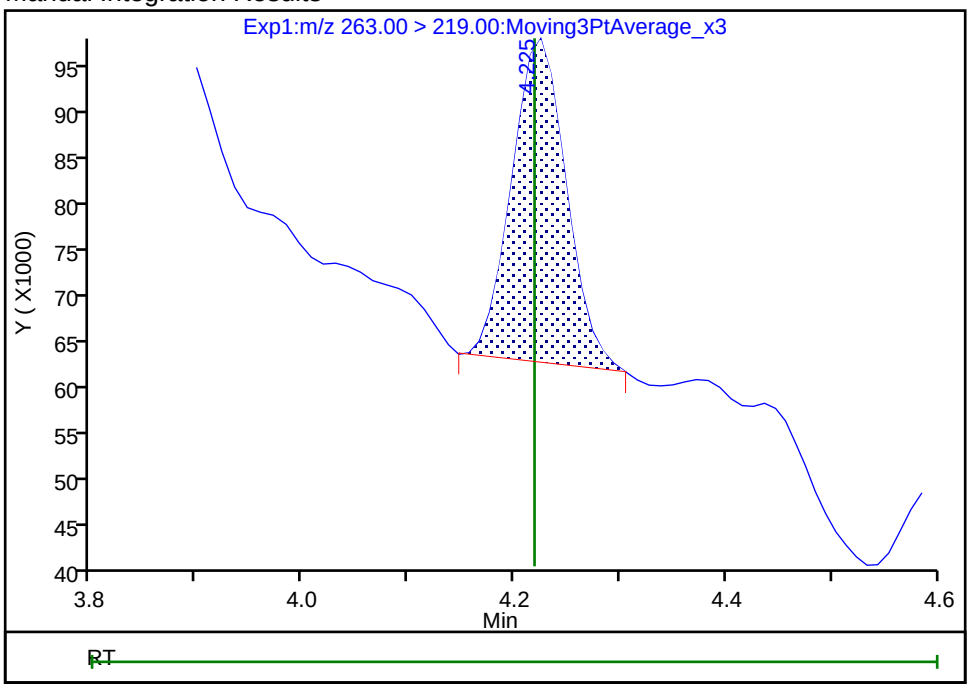
Processing Integration Results

RT: 4.22
Area: 374257
Amount: 0.151983
Amount Units: ng/ml



Manual Integration Results

RT: 4.22
Area: 124702
Amount: 0.050641
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:46:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

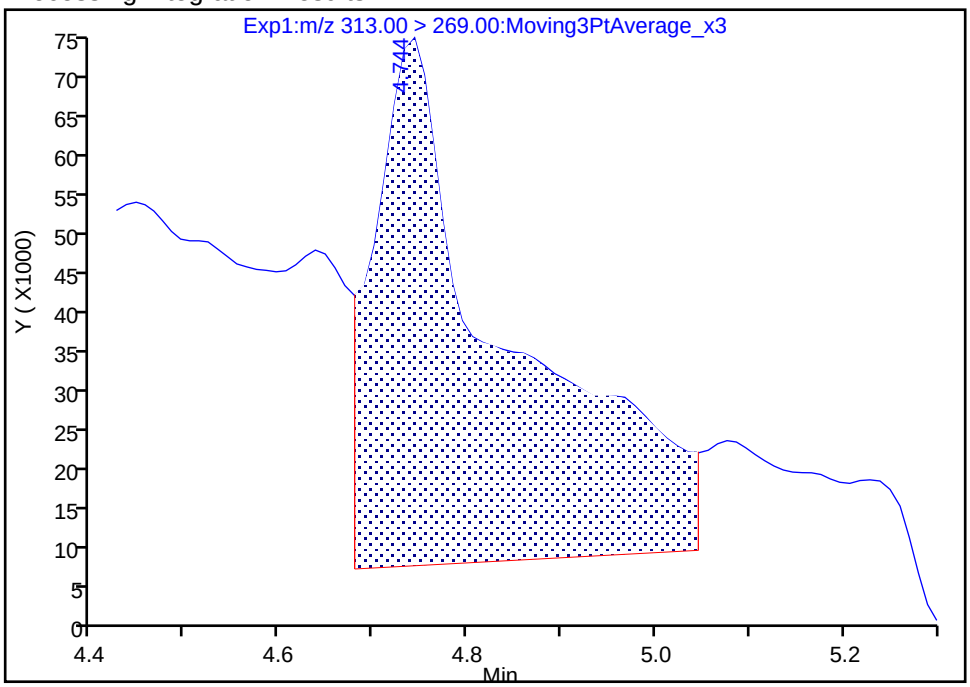
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

40 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

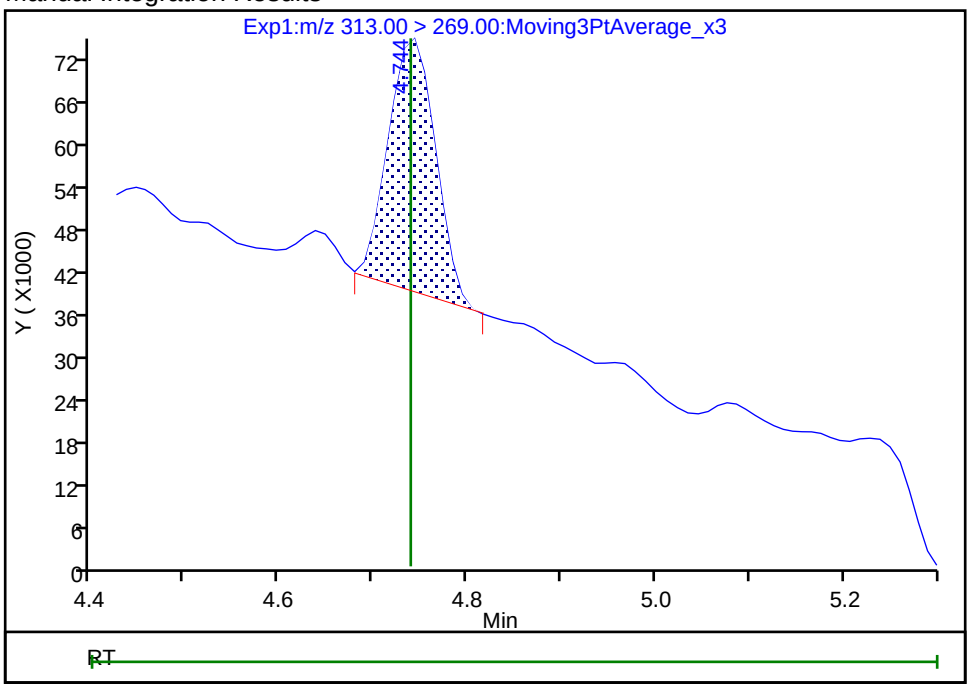
Processing Integration Results

RT: 4.74
Area: 658381
Amount: 0.348956
Amount Units: ng/ml



Manual Integration Results

RT: 4.74
Area: 122204
Amount: 0.064771
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:46:55 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

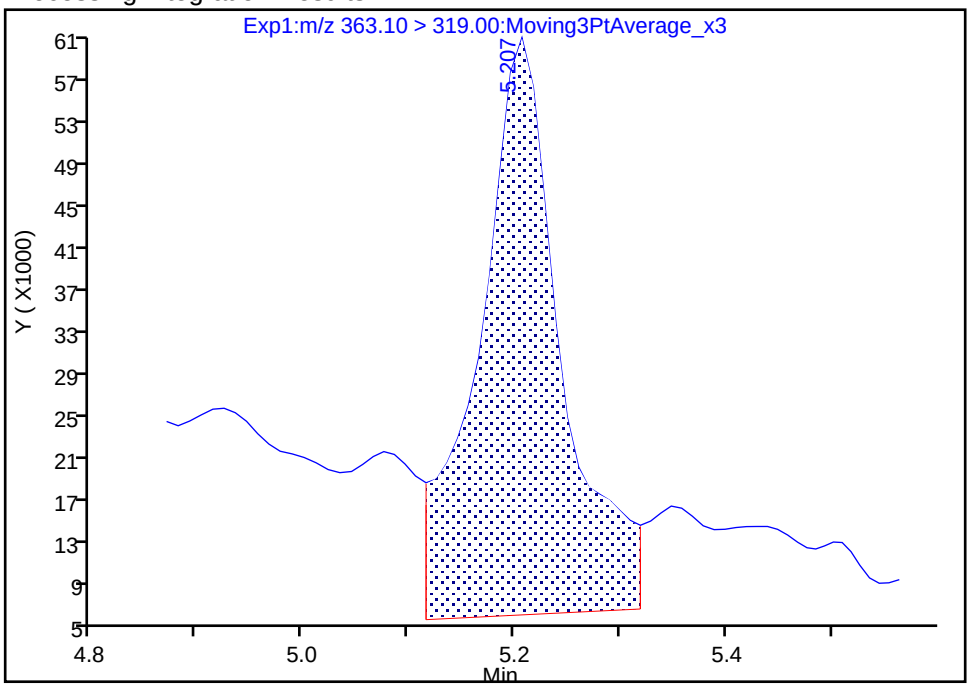
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

47 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

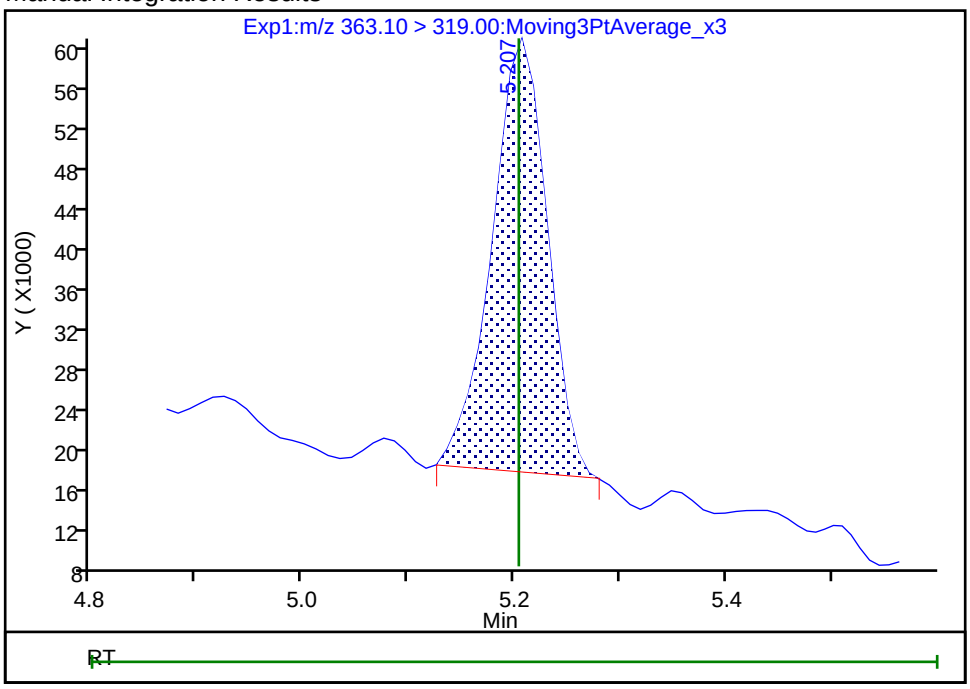
RT: 5.21
Area: 297642
Amount: 0.092378
Amount Units: ng/ml

Processing Integration Results



RT: 5.21
Area: 154617
Amount: 0.047988
Amount Units: ng/ml

Manual Integration Results



Reviewer: EBY5, 19-Sep-2024 11:47:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

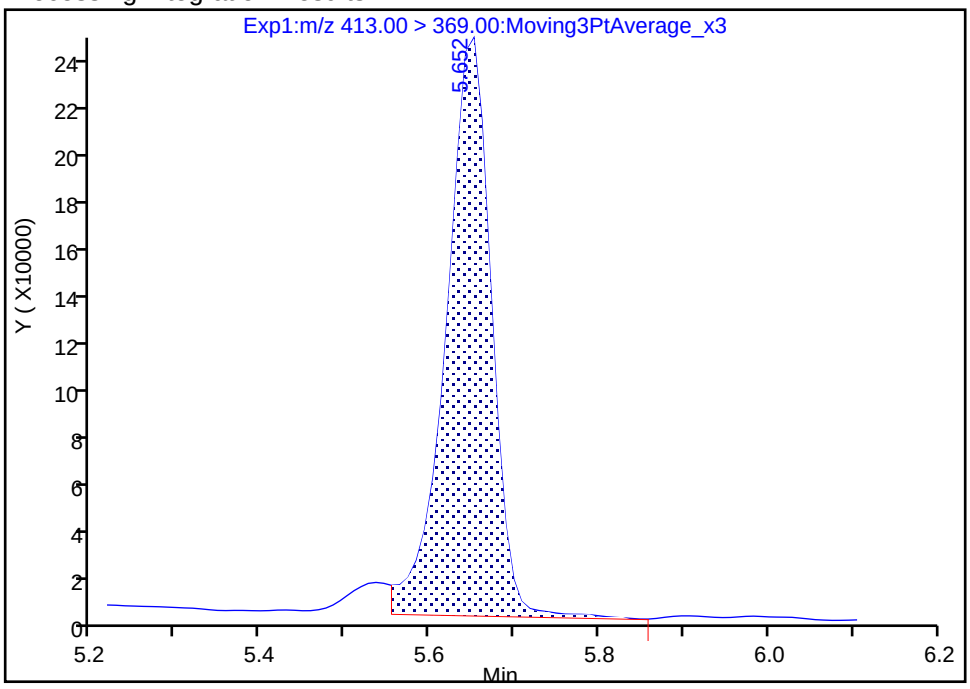
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

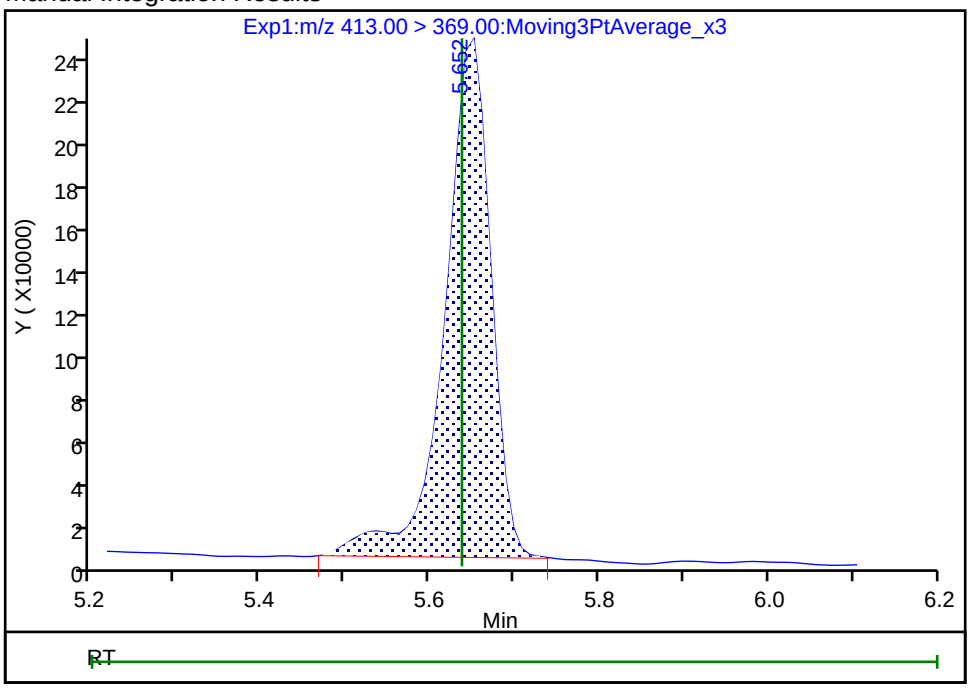
Processing Integration Results

RT: 5.65
Area: 911152
Amount: 0.677651
Amount Units: ng/ml



Manual Integration Results

RT: 5.65
Area: 915864
Amount: 0.681155
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:47:38 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

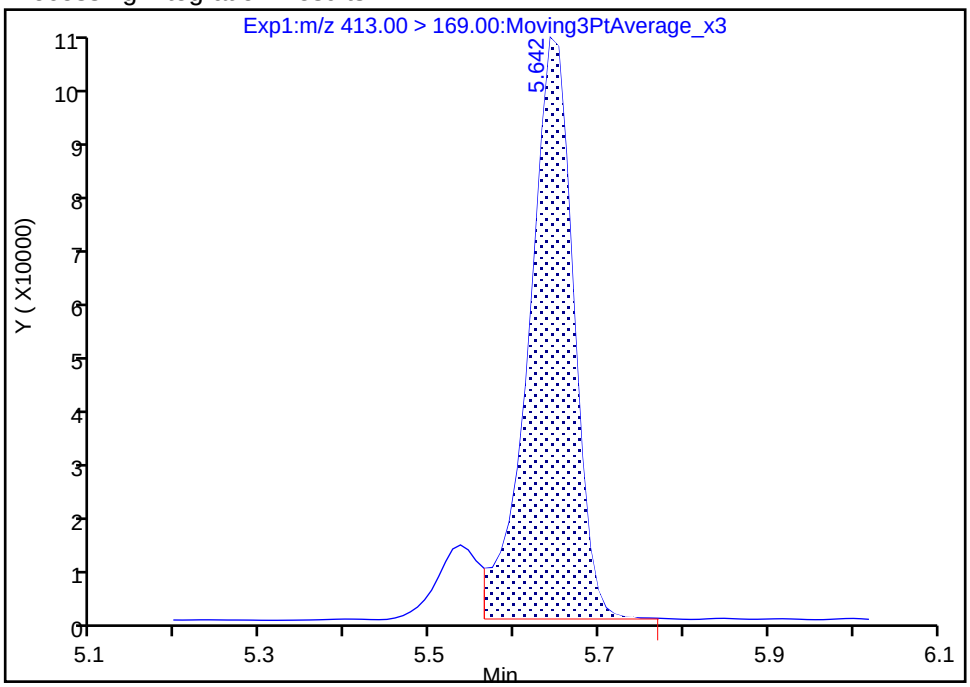
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

52 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

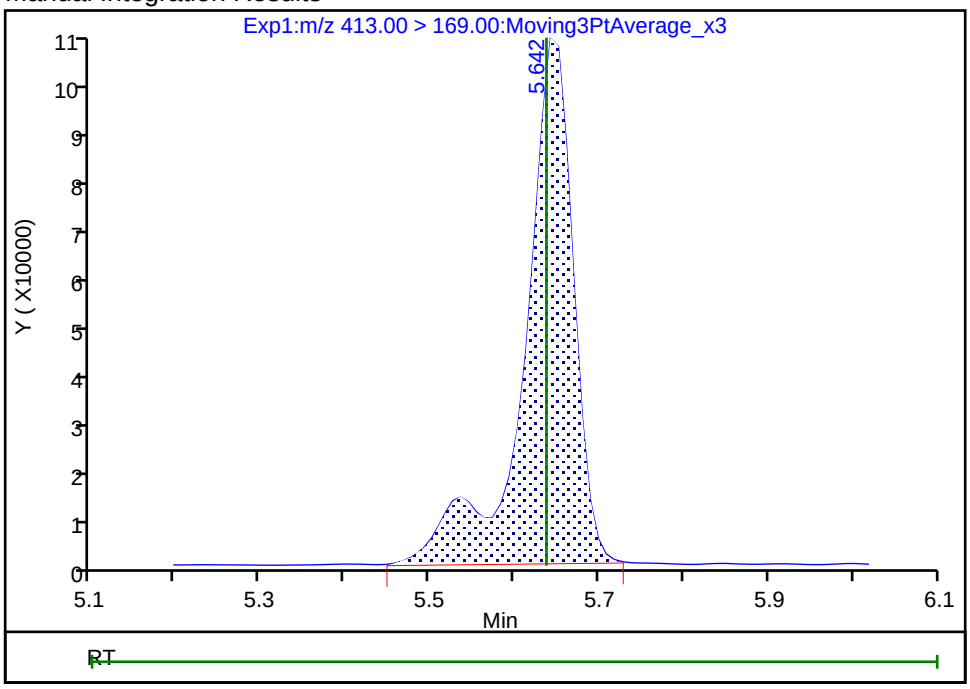
Processing Integration Results

RT: 5.64
Area: 387098
Amount: 0.677651
Amount Units: ng/ml



Manual Integration Results

RT: 5.64
Area: 429790
Amount: 0.681155
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:47:44 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

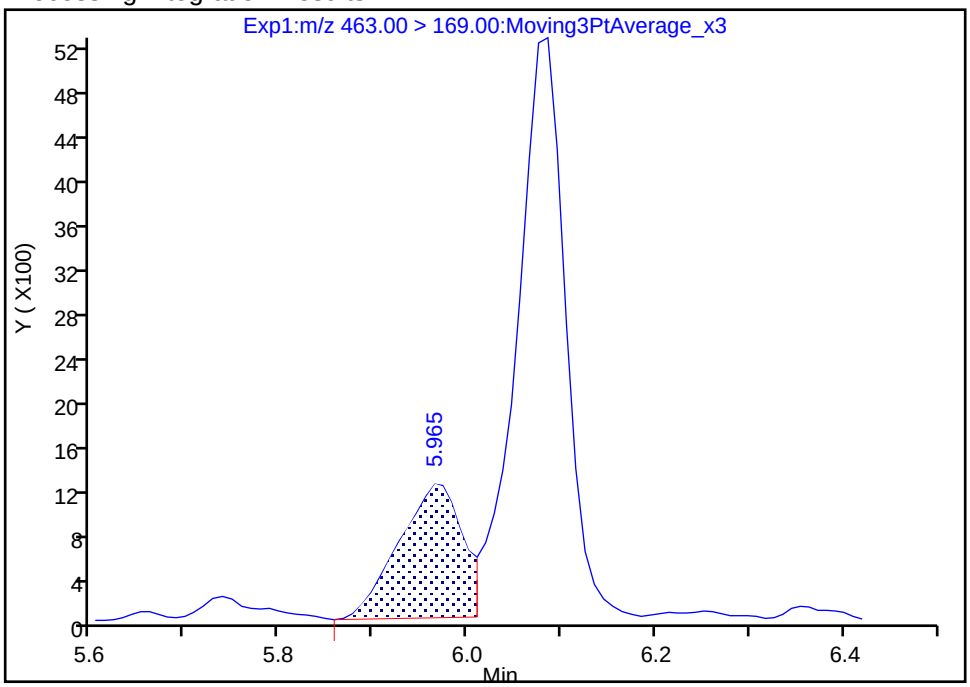
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

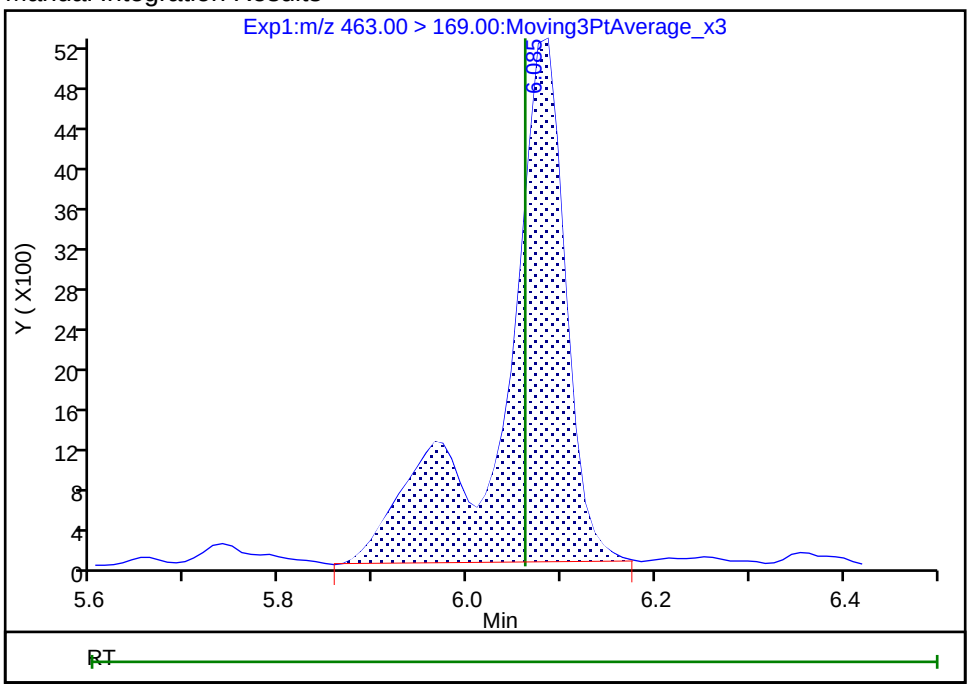
Processing Integration Results

RT: 5.97
Area: 5602
Amount: 0.065110
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 24083
Amount: 0.067153
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:48:13 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

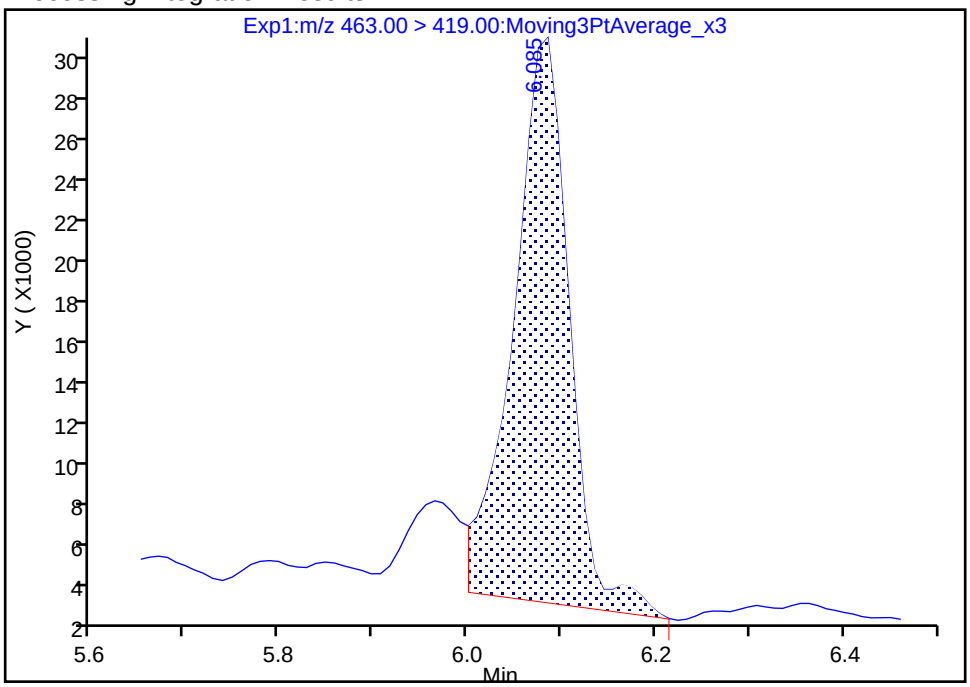
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

55 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

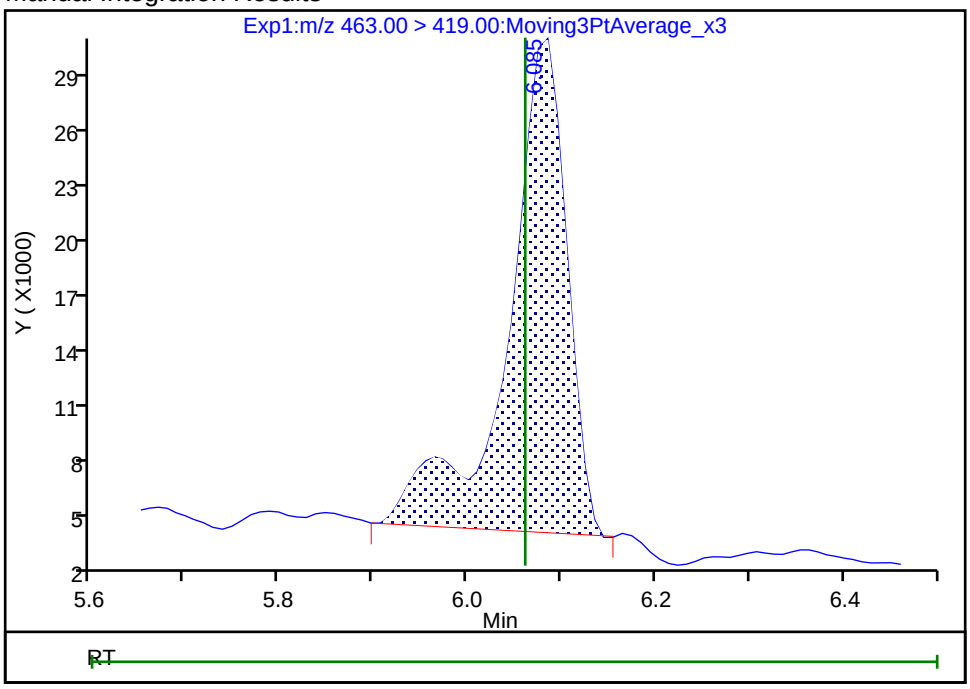
Processing Integration Results

RT: 6.09
Area: 112415
Amount: 0.065110
Amount Units: ng/ml



Manual Integration Results

RT: 6.09
Area: 115944
Amount: 0.067153
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:48:19 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

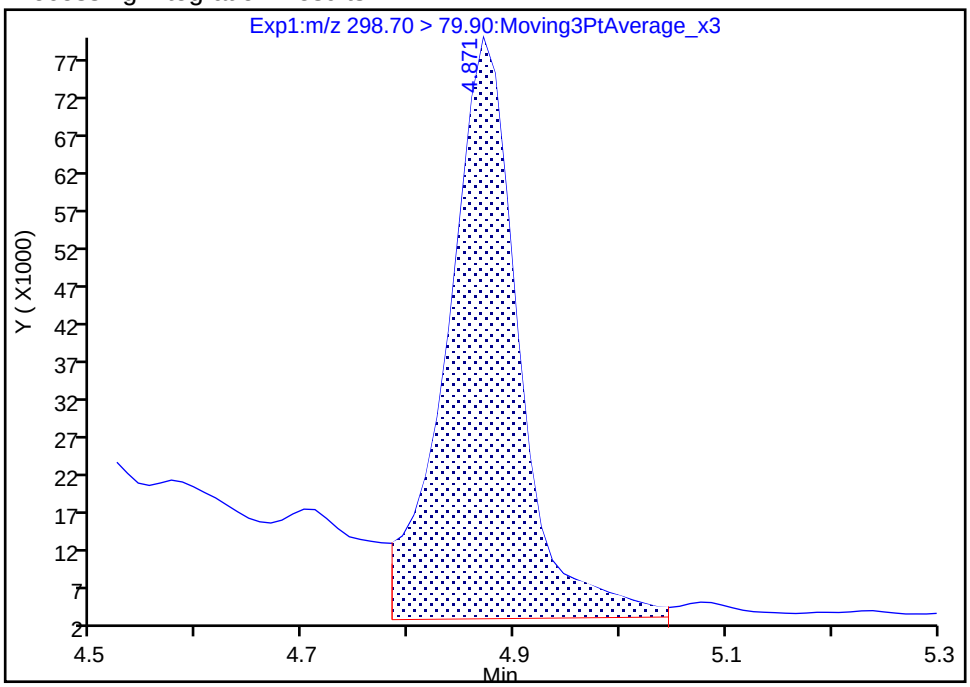
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

42 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

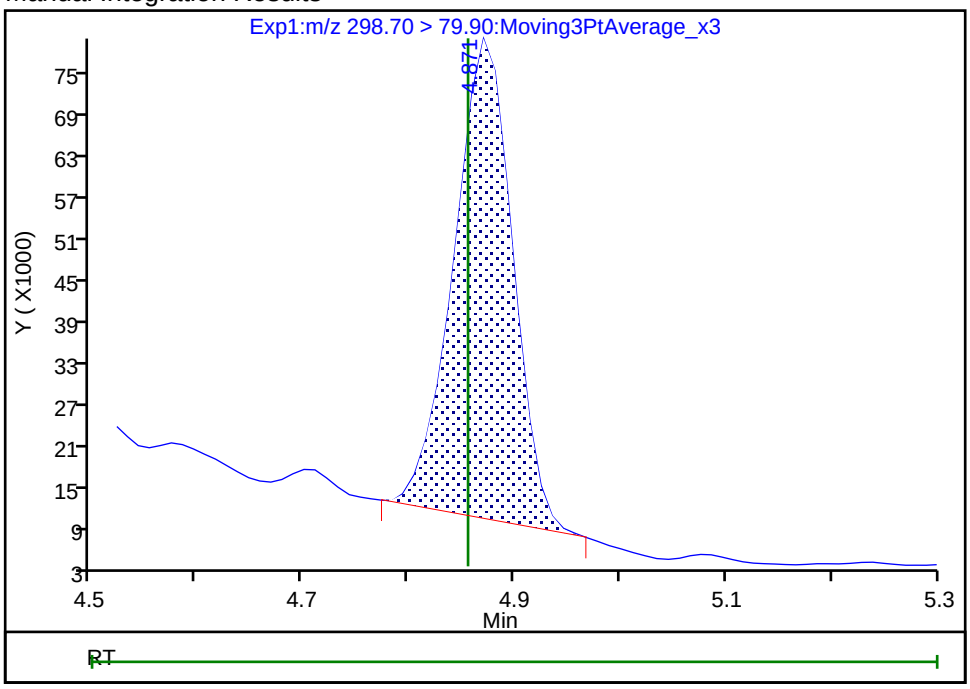
RT: 4.87
Area: 358348
Amount: 0.120828
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 267854
Amount: 0.090315
Amount Units: ng/ml

Manual Integration Results



Reviewer: EBY5, 19-Sep-2024 11:47:07 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Cleveland

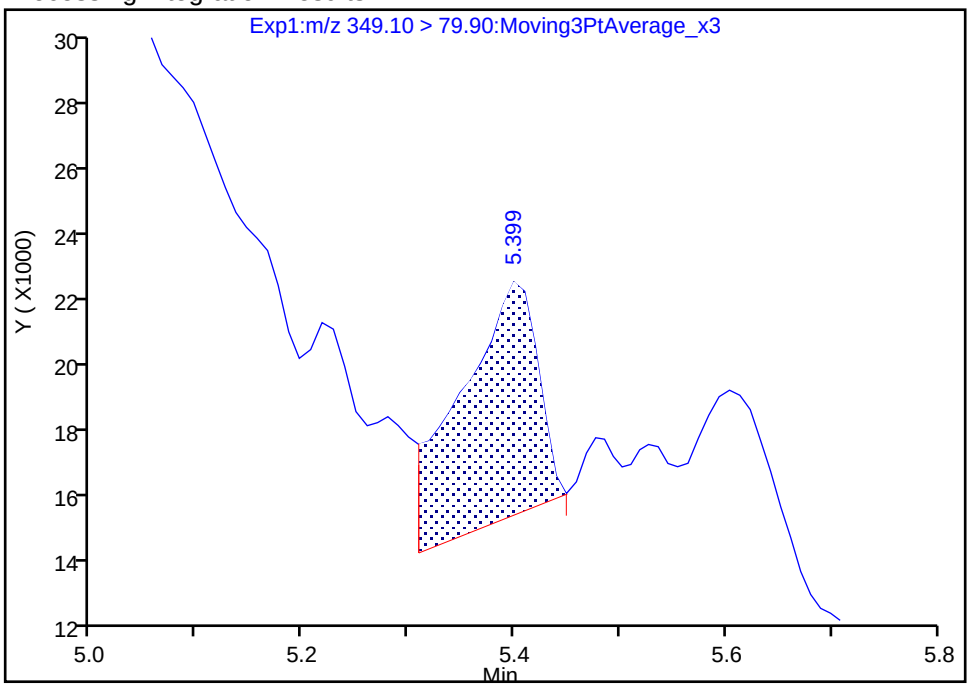
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

51 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 1

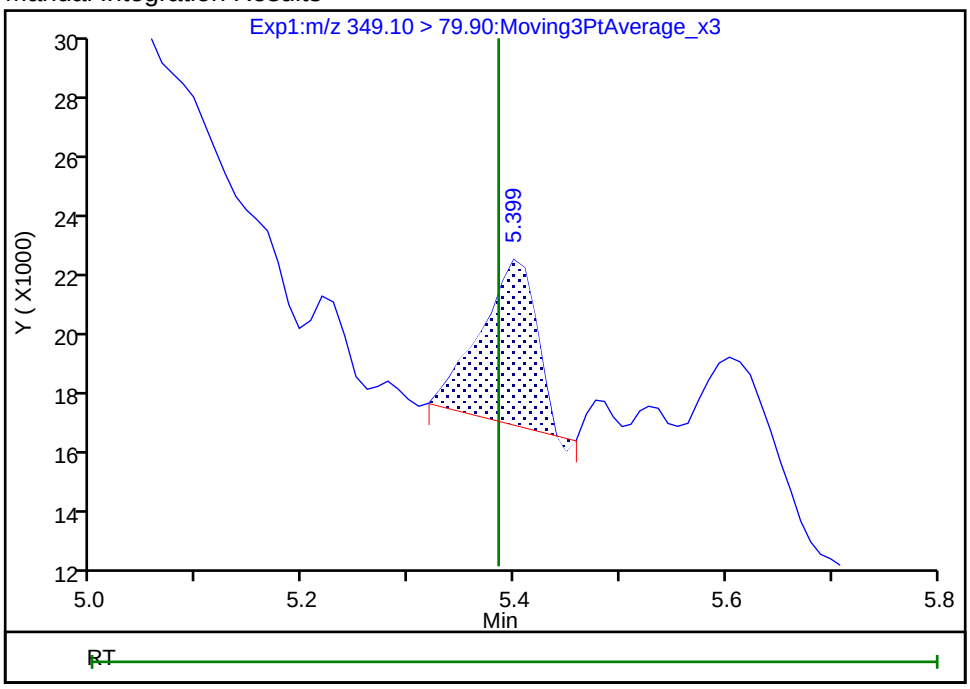
Processing Integration Results

RT: 5.40
Area: 36605
Amount: 0.013761
Amount Units: ng/ml



Manual Integration Results

RT: 5.40
Area: 20017
Amount: 0.007525
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:47:28 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Cleveland

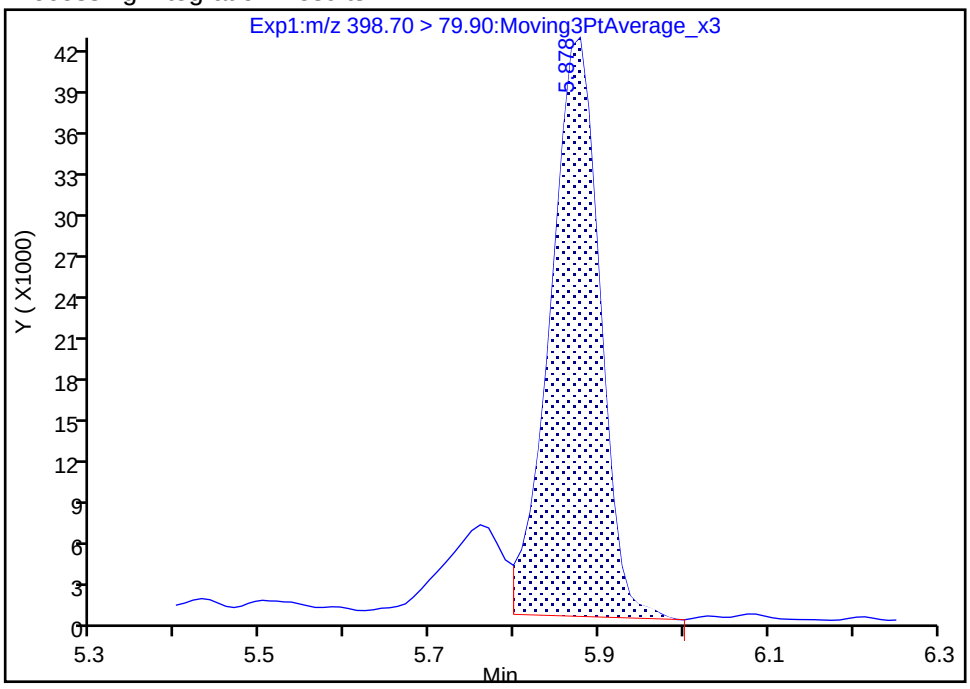
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

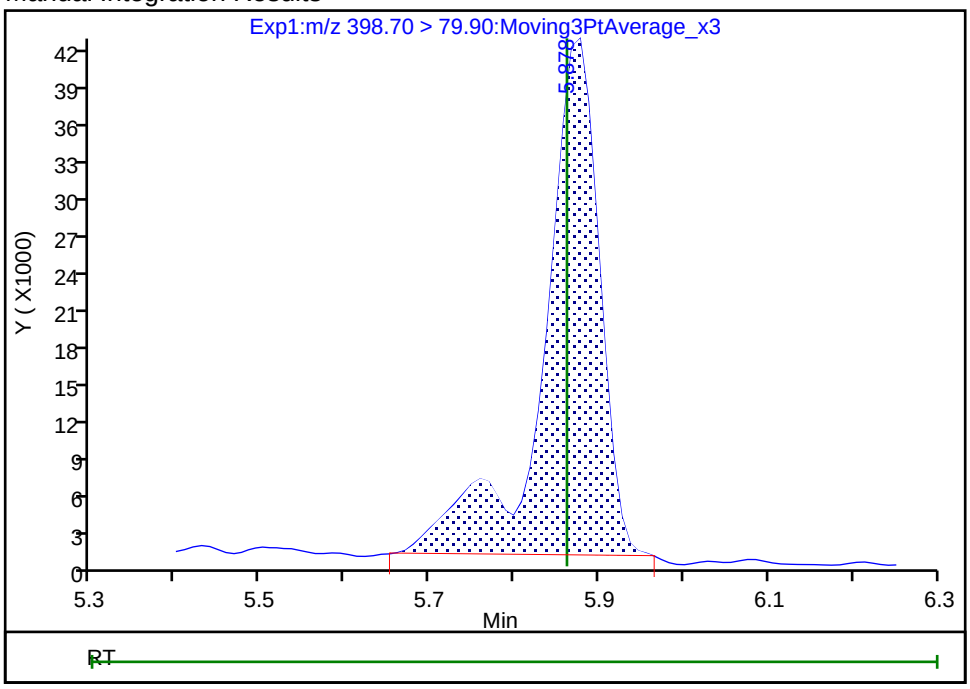
Processing Integration Results

RT: 5.88
Area: 171442
Amount: 0.077536
Amount Units: ng/ml



Manual Integration Results

RT: 5.88
Area: 193855
Amount: 0.087672
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:47:53 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

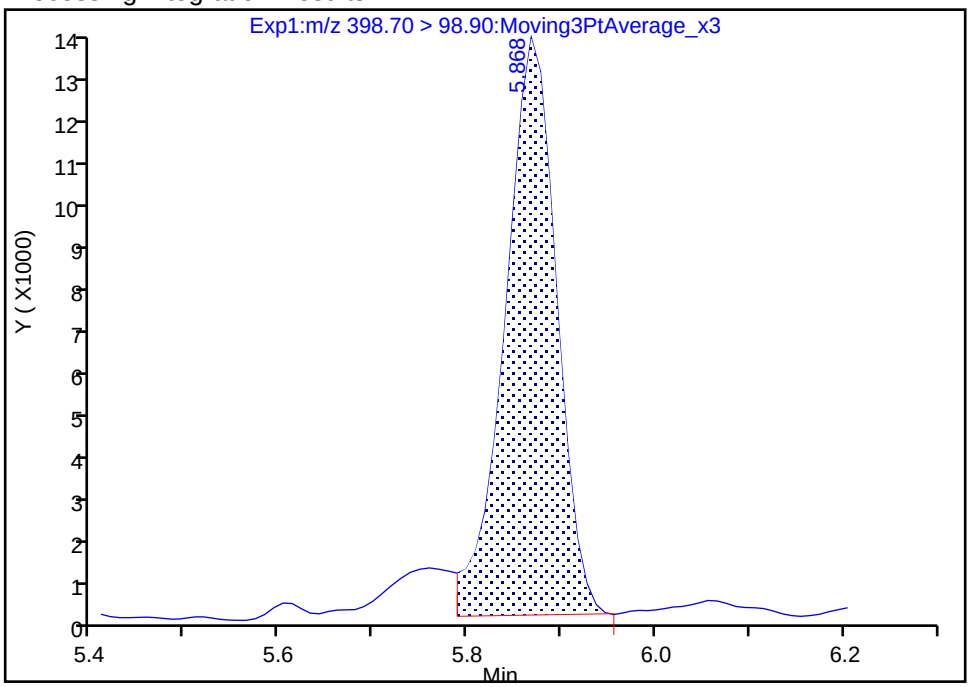
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

53 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

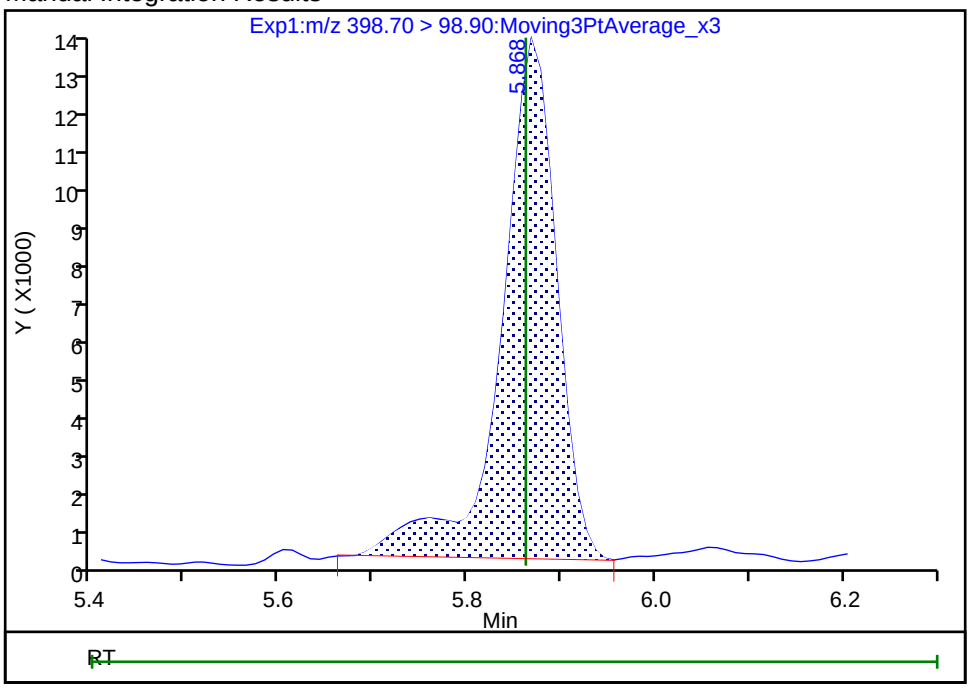
Processing Integration Results

RT: 5.87
Area: 52464
Amount: 0.077536
Amount Units: ng/ml



Manual Integration Results

RT: 5.87
Area: 56397
Amount: 0.087672
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:47:59 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

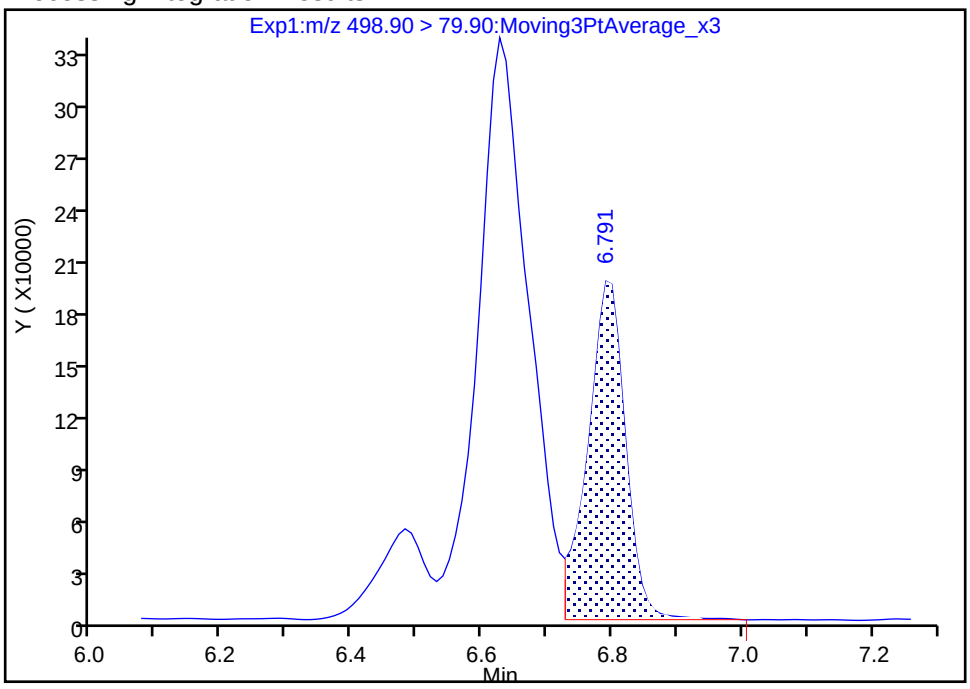
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

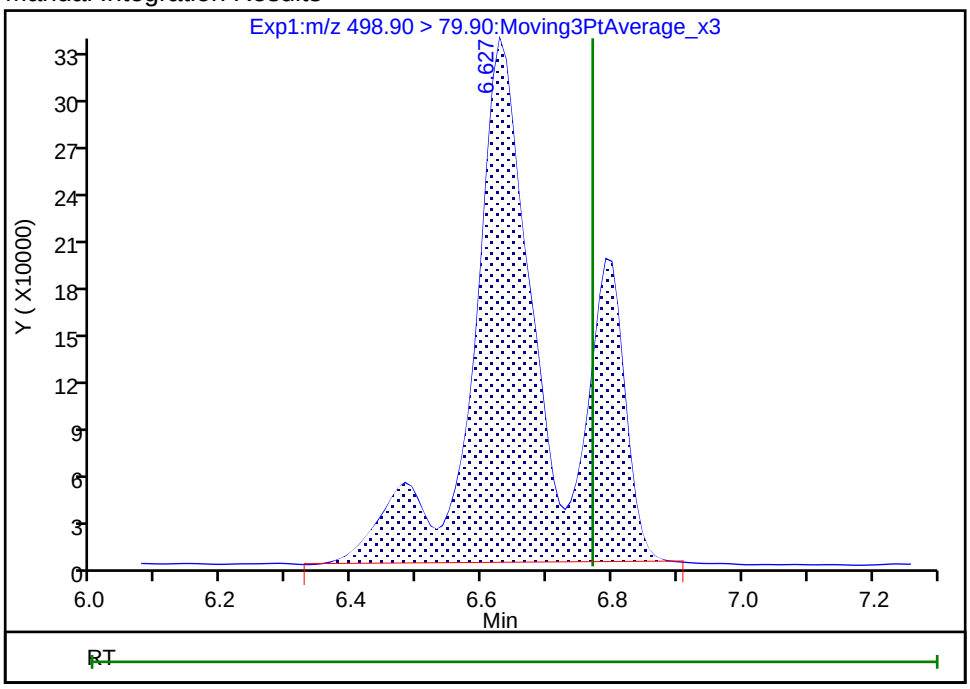
Processing Integration Results

RT: 6.79
Area: 784185
Amount: 0.270845
Amount Units: ng/ml



Manual Integration Results

RT: 6.63
Area: 2834869
Amount: 0.979119
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:48:34 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins Cleveland

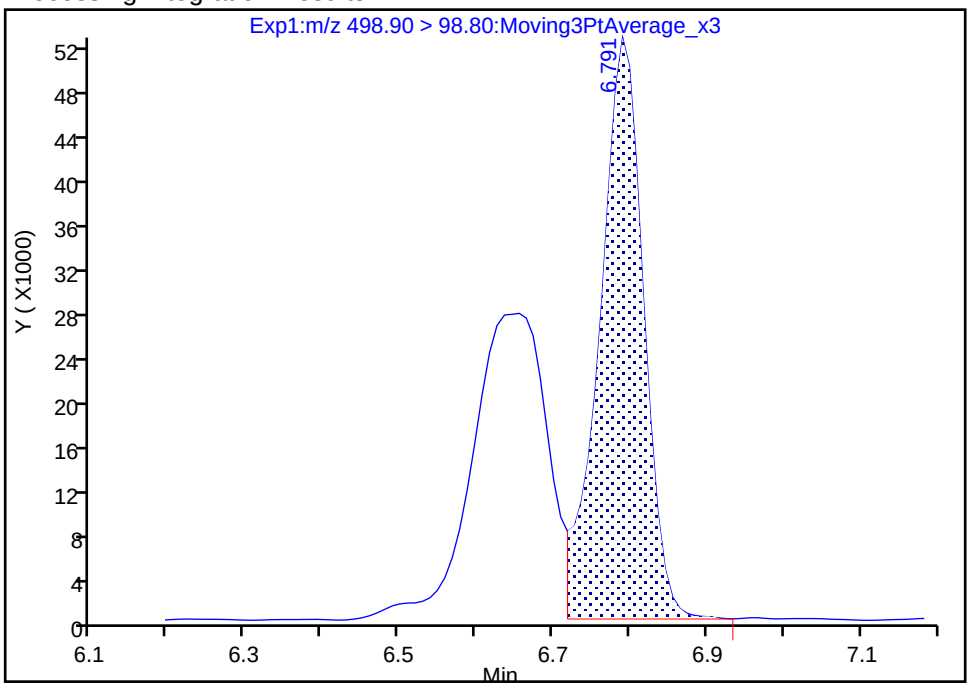
Data File: \\chromfs\Canton\ChromData\LCMS04\20240918-146375.b\2024_09_18solidwatinj50.d
Injection Date: 19-Sep-2024 03:30:22 Instrument ID: LCMS04
Lims ID: 460-311364-A-2-A DU
Client ID:
Operator ID: CANPFAS4 ALS Bottle#: 46 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 1633_LCMS04 Limit Group: LC - 1633 ICAL
Column: Detector EXP1

63 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

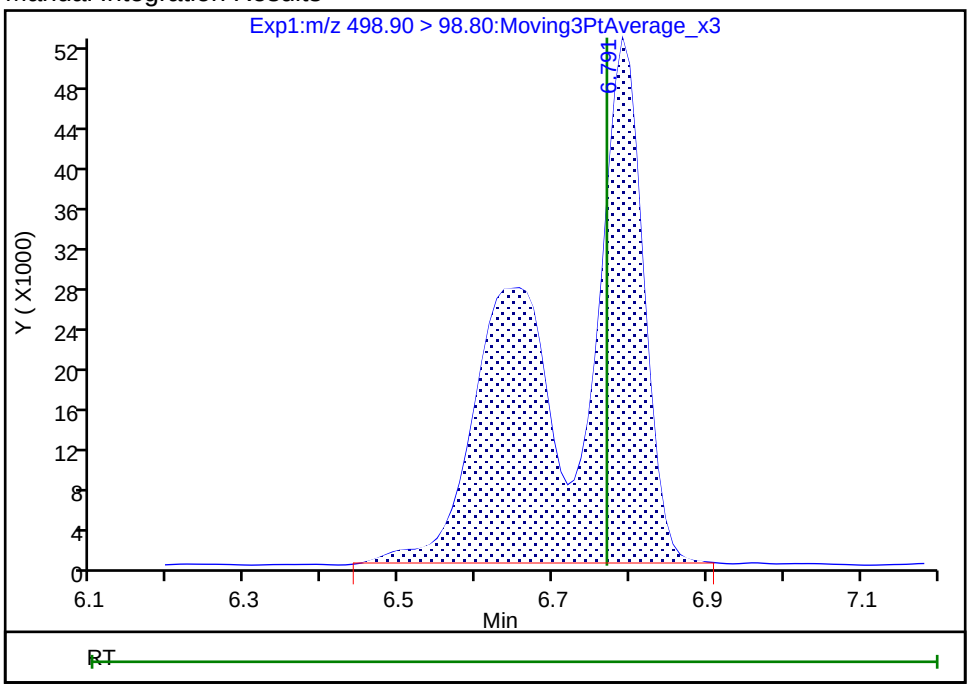
Processing Integration Results

RT: 6.79
Area: 205811
Amount: 0.270845
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 387462
Amount: 0.979119
Amount Units: ng/ml



Reviewer: EBY5, 19-Sep-2024 11:48:40 -04:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Isomers

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Start Date: 09/10/2024 17:12

Analysis Batch Number: 626514 End Date: 09/11/2024 04:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 240-626514/1		09/10/2024 17:12	1	2024_09_10ICALinj01.d	
IC 240-626514/2		09/10/2024 17:26	1	2024_09_10ICALinj02.d	
IC 240-626514/3		09/10/2024 17:39	1	2024_09_10ICALinj03.d	
IC 240-626514/4		09/10/2024 17:53	1	2024_09_10ICALinj04.d	
ICISAV 240-626514/5		09/10/2024 18:07	1	2024_09_10ICALinj05.d	
IC 240-626514/6		09/10/2024 18:20	1	2024_09_10ICALinj06.d	
IC 240-626514/7		09/10/2024 18:34	1	2024_09_10ICALinj07.d	
ICB 240-626514/8		09/10/2024 18:48	1	2024_09_10ICALinj08.d	
ICV 240-626514/9		09/10/2024 19:01	1	2024_09_10ICALinj09.d	
WDM 240-626514/10		09/10/2024 19:15	1	2024_09_10ICALinj10.d	
ZZZZZ (QC)		09/10/2024 19:28	1		
ZZZZZ (QC)		09/10/2024 19:42	1		
ZZZZZ (QC)		09/10/2024 19:56	1		
ZZZZZ (Client)		09/10/2024 20:09	1		
ZZZZZ (Client)		09/10/2024 20:23	1		
ZZZZZ (Client)		09/10/2024 20:36	1		
ZZZZZ (Client)		09/10/2024 20:50	1		
ZZZZZ (Client)		09/10/2024 21:04	1		
ZZZZZ (Client)		09/10/2024 21:17	1		
ZZZZZ (Client)		09/10/2024 21:31	1		
CCVIS 240-626514/21		09/10/2024 21:44	1		
CCB 240-626514/22		09/10/2024 21:58	1		
ZZZZZ (Client)		09/10/2024 22:12	1		
ZZZZZ (Client)		09/10/2024 22:25	1		
ZZZZZ (Client)		09/10/2024 22:39	1		
ZZZZZ (Client)		09/10/2024 22:52	1		
ZZZZZ (Client)		09/10/2024 23:06	1		
ZZZZZ (Client)		09/10/2024 23:20	1		
ZZZZZ (Client)		09/10/2024 23:33	1		
ZZZZZ (Client)		09/10/2024 23:47	1		
ZZZZZ (Client)		09/11/2024 00:00	1		
ZZZZZ (Client)		09/11/2024 00:14	1		
CCV 240-626514/33		09/11/2024 00:28	1		
CCB 240-626514/34		09/11/2024 00:41	1		
ZZZZZ (Client)		09/11/2024 00:55	1		
ZZZZZ (Client)		09/11/2024 01:08	1		
ZZZZZ (Client)		09/11/2024 01:22	1		
ZZZZZ (QC)		09/11/2024 01:36	1		
ZZZZZ (Client)		09/11/2024 01:49	10		
ZZZZZ (Client)		09/11/2024 02:03	10		
ZZZZZ (Client)		09/11/2024 02:16	10		

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Start Date: 09/10/2024 17:12

Analysis Batch Number: 626514 End Date: 09/11/2024 04:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ (Client)		09/11/2024 02:30	10		
ZZZZZ (Client)		09/11/2024 02:44	10		
ZZZZZ (Client)		09/11/2024 02:57	10		
CCV 240-626514/45		09/11/2024 03:11	1		
CCB 240-626514/46		09/11/2024 03:24	1		
ZZZZZ (Client)		09/11/2024 03:38	10		
ZZZZZ (Client)		09/11/2024 03:52	10		
ZZZZZ (Client)		09/11/2024 04:05	10		
ZZZZZ (Client)		09/11/2024 04:19	50		
CCV 240-626514/51		09/11/2024 04:32	1		
CCB 240-626514/52		09/11/2024 04:46	1		

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Start Date: 09/18/2024 16:37

Analysis Batch Number: 627555 End Date: 09/19/2024 04:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 240-627555/2 CCVL		09/18/2024 16:37	1	2024_09_18solid watinj02.d	
CCV 240-627555/3		09/18/2024 16:51	1		
WDM 240-627555/4		09/18/2024 17:04	1	2024_09_18solid watinj04.d	
CCB 240-627555/5		09/18/2024 17:18	1		
ZZZZZ (QC)		09/18/2024 17:31	1		
ZZZZZ (QC)		09/18/2024 17:45	1		
ZZZZZ (QC)		09/18/2024 17:59	1		
ZZZZZ (Client)		09/18/2024 18:12	1		
ZZZZZ (Client)		09/18/2024 18:26	1		
ZZZZZ (Client)		09/18/2024 18:39	1		
ZZZZZ (Client)		09/18/2024 18:53	1		
ZZZZZ (QC)		09/18/2024 19:07	1		
ZZZZZ (QC)		09/18/2024 19:20	1		
ZZZZZ (Client)		09/18/2024 19:34	1		
CCV 240-627555/16		09/18/2024 19:47	1		
CCB 240-627555/17		09/18/2024 20:01	1		
ZZZZZ (Client)		09/18/2024 20:15	1		
ZZZZZ (Client)		09/18/2024 20:28	1		
ZZZZZ (Client)		09/18/2024 20:42	1		
ZZZZZ (Client)		09/18/2024 20:55	1		
ZZZZZ (Client)		09/18/2024 21:09	1		
ZZZZZ (Client)		09/18/2024 21:23	1		
ZZZZZ (Client)		09/18/2024 21:36	1		
ZZZZZ (Client)		09/18/2024 21:50	1		
ZZZZZ (Client)		09/18/2024 22:03	1		
ZZZZZ (Client)		09/18/2024 22:17	1		
CCV 240-627555/28		09/18/2024 22:31	1	2024_09_18solid watinj28.d	
CCB 240-627555/29		09/18/2024 22:44	1	2024_09_18solid watinj29.d	
ZZZZZ (Client)		09/18/2024 22:58	1		
ZZZZZ (Client)		09/18/2024 23:11	1		
ZZZZZ (Client)		09/18/2024 23:25	1		
ZZZZZ (QC)		09/18/2024 23:39	1		
MB 240-627485/1-A		09/18/2024 23:52	1	2024_09_18solid watinj34.d	
LLCS 240-627485/2-A		09/19/2024 00:06	1	2024_09_18solid watinj35.d	
LCS 240-627485/3-A		09/19/2024 00:19	1	2024_09_18solid watinj36.d	
460-311364-1	RXMW-1_P	09/19/2024 00:33	1	2024_09_18solid watinj37.d	
460-311364-2	RXMW-5_P	09/19/2024 00:47	1	2024_09_18solid watinj38.d	
460-311364-3	FB_09132024_P	09/19/2024 01:00	1	2024_09_18solid watinj39.d	
CCV 240-627555/40		09/19/2024 01:14	1	2024_09_18solid watinj40.d	
CCB 240-627555/41		09/19/2024 01:27	1	2024_09_18solid watinj41.d	

1633

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Instrument ID: LCMS04 Start Date: 09/18/2024 16:37

Analysis Batch Number: 627555 End Date: 09/19/2024 04:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ (Client)		09/19/2024 01:41	1		
ZZZZZ (Client)		09/19/2024 01:55	1		
ZZZZZ (Client)		09/19/2024 02:08	1		
ZZZZZ (Client)		09/19/2024 02:22	1		
ZZZZZ (Client)		09/19/2024 02:35	1		
ZZZZZ (Client)		09/19/2024 02:49	1		
ZZZZZ (Client)		09/19/2024 03:03	1		
ZZZZZ (Client)		09/19/2024 03:16	1		
460-311364-2 DU	RXMW-5_P DU	09/19/2024 03:30	1	2024_09_18solid watinj50.d	
ZZZZZ (Client)		09/19/2024 03:43	10		
CCV 240-627555/52		09/19/2024 03:57	1	2024_09_18solid watinj52.d	
CCB 240-627555/53		09/19/2024 04:11	1	2024_09_18solid watinj53.d	
ZZZZZ (Client)		09/19/2024 04:24	10		
CCV 240-627555/55		09/19/2024 04:38	1		
CCB 240-627555/56		09/19/2024 04:51	1		

1633

PFAS BATCH WORKSHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Batch Number: 626514 Batch Start Date: 09/10/24 17:12 Batch Analyst: Deng, Lingzhu

Batch Method: 1633 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	CAL 1 00019	CAL 2 00017	CAL 3 00013	CAL 4 00020	CAL 5 00013	CAL 6 00014
IC 240-626514/1		1633			1 mL					
IC 240-626514/2		1633				1 mL				
IC 240-626514/3		1633					1 mL			
IC 240-626514/4		1633						1 mL		
ICISAV 240-626514/5		1633							1 mL	
IC 240-626514/6		1633								1 mL
IC 240-626514/7		1633								
ICB 240-626514/8		1633								
ICV 240-626514/9		1633								
WDM 240-626514/10		1633								

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	CAL 7 00013	CCB 00029	ICV CAL4 00033	WDM 00018		
IC 240-626514/1		1633								
IC 240-626514/2		1633								
IC 240-626514/3		1633								
IC 240-626514/4		1633								
ICISAV 240-626514/5		1633								
IC 240-626514/6		1633								
IC 240-626514/7		1633			1 mL					
ICB 240-626514/8		1633				1 mL				
ICV 240-626514/9		1633					1 mL			
WDM 240-626514/10		1633						1 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Batch Number: 626514 Batch Start Date: 09/10/24 17:12 Batch Analyst: Deng, Lingzhu

Batch Method: 1633 Batch End Date:

Batch Notes	
Mobile Phase ID	A:7102905; B:6535620
Filter ID	6689630
Syringe ID	6566534
Centrifuge Tube ID	6569067

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Batch Number: 627485 Batch Start Date: 09/18/24 10:05 Batch Analyst: Bearshak, Carrie L

Batch Method: 1633 Batch End Date: 09/18/24 15:30

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	AdjustedpH
MB 240-627485/1		1633, 1633					125 mL	5 mL	6.5 SU	4 SU
LLCS 240-627485/2		1633, 1633					125 mL	5 mL	6.5 SU	4 SU
LCS 240-627485/3		1633, 1633					125 mL	5 mL	6.5 SU	4 SU
460-311364-C-1	RXMW-1_P	1633, 1633	Water	T	175.56 g	15.65 g	159.9 mL	5 mL	7.5 SU	4 SU
460-311364-B-2	RXMW-5_P	1633, 1633	Water	T	175.84 g	15.50 g	160.3 mL	5 mL	7.5 SU	4 SU
460-311364-A-3	FB_09132024_P	1633, 1633	Water	T	163.86 g	15.74 g	148.1 mL	5 mL	6.5 SU	4 SU
460-311364-A-2 DU	RXMW-5_P	1633, 1633		T	161.44 g	15.52 g	145.9 mL	5 mL	7.5 SU	4 SU

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	5%FormicAmt	50%FormicAmt	3%NH4OHAmt	30%NH4OHAmt	PFAS EIS Mix 00025	PFAS Native B 00027
MB 240-627485/1		1633, 1633			6 drops	0 drops	0 drops	0 drops	25 uL	
LLCS 240-627485/2		1633, 1633			6 drops	0 drops	0 drops	0 drops	25 uL	200 uL
LCS 240-627485/3		1633, 1633			6 drops	0 drops	0 drops	0 drops	25 uL	
460-311364-C-1	RXMW-1_P	1633, 1633	Water	T	0 drops	4 drops	0 drops	0 drops	25 uL	
460-311364-B-2	RXMW-5_P	1633, 1633	Water	T	0 drops	4 drops	0 drops	0 drops	25 uL	
460-311364-A-3	FB_09132024_P	1633, 1633	Water	T	6 drops	0 drops	0 drops	0 drops	25 uL	
460-311364-A-2 DU	RXMW-5_P	1633, 1633		T	0 drops	4 drops	0 drops	0 drops	25 uL	

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	PFAS Native M 00026	AnalysisComment				
MB 240-627485/1		1633, 1633				11.3				
LLCS 240-627485/2		1633, 1633				11.6				
LCS 240-627485/3		1633, 1633			200 uL	11.4				
460-311364-C-1	RXMW-1_P	1633, 1633	Water	T		12.3				
460-311364-B-2	RXMW-5_P	1633, 1633	Water	T		12.4				
460-311364-A-3	FB_09132024_P	1633, 1633	Water	T		11.2				
460-311364-A-2 DU	RXMW-5_P	1633, 1633		T		12.2				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Batch Number: 627485 Batch Start Date: 09/18/24 10:05 Batch Analyst: Bearshak, Carrie L

Batch Method: 1633 Batch End Date: 09/18/24 15:30

Batch Notes	
pH Indicator ID	7021530
Manifold ID	6834286/6834287
First Start time	09/18/2024 11:00
First End time	09/18/2024 12:45
SPE Cartridge Type	Oasis Wax PFAS 200mg 60um GCB
SPE Cartridge Lot ID	6967470
SPE Cartridge Conditioner #1 ID	7112109
SPE Cartridge Conditioner #2 ID	7112076
Extraction Filter ID #	7086905
Balance ID	B057
Balance is Level? (Y/N)	yes
Pipette/Syringe/Dispenser ID	PFAS-008/PFAS-006
Pipette Tip Lot ID	7115704/7115695
Transfer Pipette Lot #	6569007
Methanol ID	7091255
H2O ID	7091256
Solvent Name	MeOH
Solvent Lot #	7091255
Rinse Solvent Name	MeOH w/ 1%*** NH4OH
Rinse Solvent Lot	7105820
Acid used for pH adjustment	5% & 50% Formic Acid
Acid Used for pH Adjustment ID	6579595
5% Formic Acid Reagent ID	7015995
50% Formic Acid Reagent ID	7109011
Acetic Acid ID	6728608
Analyst ID - Reagent Drop	CB
Analyst ID - Reagent Drop Witness	MJ
Analyst ID - IS Reagent Drop	MJ
Analyst ID - IS Reagent Drop Witness	KV

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Cleveland Job No.: 460-311364-1

SDG No.:

Batch Number: 627485 Batch Start Date: 09/18/24 10:05 Batch Analyst: Bearshak, Carrie L

Batch Method: 1633 Batch End Date: 09/18/24 15:30

QC Bottle Lot ID	6995525
MeOH/MQH2O/NH4OH/AA	7115702
Beaker Lot ID	31422002
Pipette ID	PFAS-008/PFAS-006/PFAS-015
Vial Lot Number	7053804
Caps	7069183

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Subcontract Data

Shipping and Receiving Documents

Eurofins Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Phone (732) 549-3679

NYC 222

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: EMERY LONGAMP	Lab PM: Flannery, Elizabeth J	Carrier Tracking No(s):	COC No: 460-185739-121603 1
Client Contact: Lauren Dolginko	Phone: 704-770-6813	E-Mail: Elizabeth.Flannery@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Roux Environmental Eng & Geology DPC	PWSID:	Analysis Requested		Job #: 311364
Address: 209 Shafter St	Due Date Requested: STANDARD			Preservation Codes: N - None
City: Islandia	TAT Requested (days): Standard			
State, Zip: NY, 11749	Compliance Project: Δ Yes Δ No			
Phone: 631-232-2600	PO #: Purchase Order Requested			
Email: ldolginko@rouxinc.com	WO #: 2828 W 28th Street			Other:
Project Name: 2828 W 28th Street	Project #: 46044510			
Site: 2828 W 28TH ST	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1633 - 1633 Standard List of 40	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
PXMW-1_P	9/13/24	1205	G	W	N	N	X	3	
PXMW-5_P	"	1330	G	W	N	N	X	3	
FB_09132024_P	"	1220	G	W	N	N	X	3	

460-311364 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature] EL	9/13/24 1435	Roux	[signature]	9/13/24 1450	ET
2		Date/Time	Company	Received by	Date/Time 9-13-24 17:00	Company ET
3	[signature]	Date/Time 9-13-24 19:00	Company ET	Received by [signature]	Date/Time 9/13 1915	Company ETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks

MOS ER 11/13-11/14

Ver: 05/06/2024

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 311364

Number of Coolers: 2 IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.1 °C	1.3 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	1.2 °C	1.4 °C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: MH Date: 9-13-24

Eurofins Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Flannery Elizabeth J	Carrier Tracking No(s):	COC No: 460-72143.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Elizabeth.Flannery@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP New York		Job #: 460-311364-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 9/26/2024			
City: Barberton	TAT Requested (days):			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: 2828 W 28th St	Project #: 46044510			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

Other: PFAS R087-060

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1633/1633_SPE 1633 Standard List of 40	1633_DRAFT_TSS	Total Number of containers	Special Instructions/Note:
		Preservation Code:								
RXMW-1_P (460-311364-1)	9/13/24	12:05 Eastern	G	Water			X	X	2	
RXMW-5_P (460-311364-2)	9/13/24	13:30 Eastern	G	Water			X	X	2	
FB_09132024_P (460-311364-3)	9/13/24	12:20 Eastern	G	Water			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/16/24 1900	EET EL	KATHARINE MARTIN	9/17/24 930	EUL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Eurofins Site Name _____ Cooler unpacked by: KM

Cooler Received on 9/17/24 Opened on _____

FedEx: 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # (3) Foam Box Client Cooler Box Other _____

Packing material used. (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 22 (CF -0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	(Yes)	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC442471
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

_____

_____

_____

_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved. _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form			
Cooler Description (Circle)	**IR Gun # (Circle)**	**Observed Temp °C**	**Corrected Temp °C**	**Coolant (Circle)**
(EC) Client Box Other	IR GUN #: 22	2.8	2.7	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.4	2.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	

Part # 158469-494 MTW EXP 04/25

ORIGIN ID:LDJA (732) 549-3900
DIAA NIMER
EUROFINS EDISON
777 NEW DURHAM ROAD

EDISON, NJ 08817
UNITED STATES US

SHIP DATE: 16SEP24
ACTWGT: 46.50 LB
CAD: 0618092/CAFE3808

BILL SENDER

TO **SHIPPING/RECEIVING**
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 497-9396
REF: 8460-186198
PO: YES

FedEx Express

2 of 2
MPS# 0263 **6553 1012 9622**
Mstr# 6553 1012 9611 0201

TUE - 17 SEP 10:30A
PRIORITY OVERNIGHT

NX CAKA

44203
OH-US **CLE**

Eurofins Edison
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Flannery Elizabeth J	Carrier Tracking No(s):	COC No: 460-72143.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Elizabeth.Flannery@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): NELAP New York		Job #: 460-311364-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 9/26/2024			Preservation Codes.
City: Barberton	TAT Requested (days):			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: 2828 W 28th St	Project #: 46044510			
Site:	SSOW#:			Other:

Analysis Requested

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1633/1633_SPE 1633 Standard List of 40	1633_DRAFT_TSS	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X			X	PFAS R087-060
RXMW-1_P (460-311364-1)	9/13/24	12:05 Eastern	G	Water			X	X	2	
RXMW-5_P (460-311364-2)	9/13/24	13:30 Eastern	G	Water			X	X	3	
FB_09132024_P (460-311364-3)	9/13/24	12:20 Eastern	G	Water			X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/16/24 1900	EET EL	KATHARINE MARTIN	9/17/24 930	EUL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client Eurofins Site Name

Cooler unpacked by: KM

Cooler Received on 9/17/24 Opened on 9/17/24

FedEx: 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours. Drop-off Date/Time Storage Location

Eurofins Cooler # (6) Foam Box Client Cooler Box Other

Packing material used. (Bubble Wrap) Foam Plastic Bag None Other

COOLANT (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 22 (CF -0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	(Yes)	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes No	NA pH Strip Lot# HC442471
14 Were VOAs on the COC?	Yes	(No)
15 Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No	NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved. Preservative(s) added/Lot number(s).

VOA Sample Preservation - Date/Time VOAs Frozen.

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form			
Cooler Description (Circle)	**IR Gun # (Circle)**	**Observed Temp °C**	**Corrected Temp °C**	**Coolant (Circle)**
(EC) Client Box Other	IR GUN #: 22	2.8	2.7	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	2.4	2.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
☐ See Temperature Excursion Form				

Part # 158469-494 MTW EXP 04/25

ORIGIN ID:LDJA (732) 549-3900
DIAA NIMER
EUROFINS EDISON
777 NEW DURHAM ROAD

EDISON, NJ 08817
UNITED STATES US

SHIP DATE 16SEP24
ACTWGT 46.50 LB
CAD 0619092/CAFE3808

BILL SENDER

TO **SHIPPING/RECEIVING**
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 497-9396
PO: YES
REF: 8460-186198

FedEx Express

J24102311220l1e

2 of 2
MPS# 0263 6553 1012 9622
Mstr# 6553 1012 9611 0201

TUE - 17 SEP 10:30A
PRIORITY OVERNIGHT

NX CAKA

44203
OH-US **CLE**

Login Sample Receipt Checklist

Client: Roux Environmental Eng & Geology DPC

Job Number: 460-311364-1

Login Number: 311364
List Number: 1
Creator: Casallas, Angela C

List Source: Eurofins Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
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	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	