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ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/23/2026 9:08 AM

JOB DESCRIPTION

Sea Park North - 2828 W 28th Street

JOB NUMBER

460-344895-1

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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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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Job Narrative
460-344895-1

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 2/16/2026 5:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.3°C.

Method 1633A - Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A
Samples RXMW-6_P (460-344895-1), RXMW-6_P (460-344895-1MS), RXMW-6_P (460-344895-1MSD) and FB_02162026_P (460-344895-2) were analyzed for Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A. The samples were prepared on 2/18/2026 and analyzed on 2/19/2026.

The recovery for a target analyte(s) 3-Perfluoropropylpropanoic acid (3:3 FTCA) in the laboratory control spike samples associated with the following samples: RXMW-6_P (460-344895-1) and FB_02162026_P (460-344895-2) is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the sample, the data is reported.

Target analyte(s) N-methylperfluorooctane sulfonamide (NMeFOSA) were detected in the method blank associated with the following samples: RXMW-6_P (460-344895-1) and FB_02162026_P (460-344895-2). Since the native analyte is not detected in the sample, the data is reported.

The recovery for labeled isotope(s) 13C5 PFPeA, 13C3 PFBS and 13C2 4:2 FTS were outside QC acceptance criteria in sample FB_02162026_P (460-344895-2). Since the labeled isotope recoveries were greater than or equal to 5% and the signal to noise was greater than 10:1, therefore, the data is reported.

The transition mass ratio for Perfluorononanoic acid (PFNA) in sample RXMW-6_P (460-344895-1) in analytical batch 410-770716 was outside of the established ratio limits. However, analyst judgment was used to positively identify the analyte. The analyte is flagged appropriately to identify this exceedance

Sample Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
460-344895-1	RXMW-6_P	Water	02/16/26 13:00	02/16/26 17:50	New York
460-344895-2	FB_02162026_P	Water	02/16/26 15:00	02/16/26 17:50	New York

Detection Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.06		2.97	0.82	ng/L	1		1633A	Total/NA
Perfluoropentanoic acid (PFPeA)	2.61		1.48	0.44	ng/L	1		1633A	Total/NA
Perfluorohexanoic acid (PFHxA)	2.12		1.48	0.37	ng/L	1		1633A	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.95		1.48	0.59	ng/L	1		1633A	Total/NA
Perfluorooctanoic acid (PFOA)	12.0		1.48	0.67	ng/L	1		1633A	Total/NA
Perfluorononanoic acid (PFNA)	3.49	I	1.48	0.37	ng/L	1		1633A	Total/NA
Perfluorodecanoic acid (PFDA)	1.27	J	1.48	0.37	ng/L	1		1633A	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.59		1.48	0.37	ng/L	1		1633A	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.93	J	1.48	0.59	ng/L	1		1633A	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14.1		1.48	0.96	ng/L	1		1633A	Total/NA

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Date Collected: 02/16/26 13:00
Matrix: Water

Date Received: 02/16/26 17:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.06**		2.97	0.82	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoropentanoic acid (PFPeA)	**2.61**		1.48	0.44	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorohexanoic acid (PFHxA)	**2.12**		1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoroheptanoic acid (PFHpA)	**1.95**		1.48	0.59	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorooctanoic acid (PFOA)	**12.0**		1.48	0.67	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorononanoic acid (PFNA)	**3.49**	**I**	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorodecanoic acid (PFDA)	**1.27**	**J**	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoroundecanoic acid (PFUnA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorododecanoic acid (PFDoA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorotridecanoic acid (PFTrDA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorotetradecanoic acid (PFTeDA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorobutanesulfonic acid (PFBS)	**1.59**		1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoropentanesulfonic acid (PFPeS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorohexanesulfonic acid (PFHxS)	**0.93**	**J**	1.48	0.59	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoroheptanesulfonic acid (PFHpS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorooctanesulfonic acid (PFOS)	**14.1**		1.48	0.96	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorononanesulfonic acid (PFNS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorodecanesulfonic acid (PFDS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorododecanesulfonic acid (PFDoS)	1.48	U	1.48	0.44	ng/L		02/18/26 15:35	02/19/26 04:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.97	U	2.97	0.74	ng/L		02/18/26 15:35	02/19/26 04:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.97	U	2.97	0.74	ng/L		02/18/26 15:35	02/19/26 04:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.97	U	2.97	0.74	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluorooctanesulfonamide (PFOSA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.48	U	1.48	0.82	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.41	U	7.41	2.97	ng/L		02/18/26 15:35	02/19/26 04:32	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	7.41	U	7.41	2.97	ng/L		02/18/26 15:35	02/19/26 04:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.48	U	1.48	1.04	ng/L		02/18/26 15:35	02/19/26 04:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1
Date Collected: 02/16/26 13:00
Matrix: Water
Date Received: 02/16/26 17:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.48	U	1.48	0.37	ng/L		02/18/26 15:35	02/19/26 04:32	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	2.97	U *	2.97	0.74	ng/L		02/18/26 15:35	02/19/26 04:32	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.41	U	7.41	2.08	ng/L		02/18/26 15:35	02/19/26 04:32	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.41	U	7.41	1.85	ng/L		02/18/26 15:35	02/19/26 04:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*61.9*		*5 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C5 PFPeA	*65.6*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C5 PFHxA	*75.6*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C4 PFHpA	*76.5*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C8 PFOA	*88.5*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C9 PFNA	*97.1*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C6 PFDA	*81.8*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C7 PFUnA	*85.8*		*30 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C2 PFTeDA	*67.6*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C3 PFBS	*76.9*		*40 - 135*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C3 PFHxS	*82.4*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C8 PFOS	*96.0*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C8 FOSA	*87.7*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d3-NMeFOSAA	*96.7*		*40 - 170*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d5-NEtFOSAA	*119*		*25 - 135*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C2 4:2 FTS	*123*		*40 - 200*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C2 6:2 FTS	*120*		*40 - 200*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C2 8:2 FTS	*86.7*		*40 - 300*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C3 HFPO-DA	*67.6*		*40 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d7-N-MeFOSE-M	*72.1*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d9-N-EtFOSE-M	*69.2*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d5-NEtPFOSA	*71.7*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
d3-NMePFOSA	*71.3*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*
13C2 PFDoA	*78.4*		*10 - 130*	*02/18/26 15:35*	*02/19/26 04:32*	*1*

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2
Date Collected: 02/16/26 15:00
Matrix: Water
Date Received: 02/16/26 17:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.31	U	3.31	0.91	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoropentanoic acid (PFPeA)	1.65	U	1.65	0.50	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorohexanoic acid (PFHxA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoroheptanoic acid (PFHpA)	1.65	U	1.65	0.66	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorooctanoic acid (PFOA)	1.65	U	1.65	0.74	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorononanoic acid (PFNA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorodecanoic acid (PFDA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

Date Collected: 02/16/26 15:00
Matrix: Water
Date Received: 02/16/26 17:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorododecanoic acid (PFDoA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorotridecanoic acid (PFTrDA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorotetradecanoic acid (PFTeDA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorobutanesulfonic acid (PFBS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoropentanesulfonic acid (PFPeS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorohexanesulfonic acid (PFHxS)	1.65	U	1.65	0.66	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoroheptanesulfonic acid (PFHpS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorooctanesulfonic acid (PFOS)	1.65	U	1.65	1.07	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorononanesulfonic acid (PFNS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorodecanesulfonic acid (PFDS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorododecanesulfonic acid (PFDoS)	1.65	U	1.65	0.50	ng/L		02/18/26 15:35	02/19/26 05:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	3.31	U	3.31	0.83	ng/L		02/18/26 15:35	02/19/26 05:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.31	U	3.31	0.83	ng/L		02/18/26 15:35	02/19/26 05:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	3.31	U	3.31	0.83	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluorooctanesulfonamide (PFOSA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.65	U	1.65	0.91	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.27	U	8.27	3.31	ng/L		02/18/26 15:35	02/19/26 05:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	8.27	U	8.27	3.31	ng/L		02/18/26 15:35	02/19/26 05:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.65	U	1.65	1.16	ng/L		02/18/26 15:35	02/19/26 05:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.65	U	1.65	0.41	ng/L		02/18/26 15:35	02/19/26 05:13	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.31	U *	3.31	0.83	ng/L		02/18/26 15:35	02/19/26 05:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	8.27	U	8.27	2.31	ng/L		02/18/26 15:35	02/19/26 05:13	1

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

Date Collected: 02/16/26 15:00
Matrix: Water
Date Received: 02/16/26 17:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.27	U	8.27	2.07	ng/L		02/18/26 15:35	02/19/26 05:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*30.9*		*5 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C5 PFPeA	*37.6*	*	*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C5 PFHxA	*43.9*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C4 PFHpA	*51.5*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C8 PFOA	*45.4*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C9 PFNA	*48.3*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C6 PFDA	*54.3*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C7 PFUnA	*70.9*		*30 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C2 PFTeDA	*71.5*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C3 PFBS	*37.2*	*	*40 - 135*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C3 PFHxS	*41.4*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C8 PFOS	*60.5*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C8 FOSA	*55.6*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d3-NMeFOSAA	*74.9*		*40 - 170*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d5-NEtFOSAA	*105*		*25 - 135*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C2 4:2 FTS	*35.4*	*	*40 - 200*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C2 6:2 FTS	*46.9*		*40 - 200*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C2 8:2 FTS	*52.1*		*40 - 300*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C3 HFPO-DA	*42.6*		*40 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d7-N-MeFOSE-M	*62.9*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d9-N-EtFOSE-M	*73.7*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d5-NEtPFOSA	*62.3*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
d3-NMePFOSA	*56.4*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*
13C2 PFDoA	*70.6*		*10 - 130*	*02/18/26 15:35*	*02/19/26 05:13*	*1*

Isotope Dilution Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
460-344895-1	RXMW-6_P	61.9	65.6	75.6	76.5	88.5	97.1	81.8	85.8
460-344895-1 MS	RXMW-6_P	65.5	66.1	73.1	81.6	93.5	91.0	83.3	79.8
460-344895-1 MSD	RXMW-6_P	60.2	69.2	70.7	81.5	86.4	98.7	102	104
460-344895-2	FB_02162026_P	30.9	37.6 *	43.9	51.5	45.4	48.3	54.3	70.9
LCS 410-770909/2-A	Lab Control Sample	122	116	121	121	122	107	97.4	94.0
LLCS 410-770909/3-A	Lab Control Sample	122	123	123	130	124	112	95.2	91.5
MB 410-770909/1-A	Method Blank	110	110	108	113	111	101	87.8	87.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)	M242FTS (40-200)
460-344895-1	RXMW-6_P	67.6	76.9	82.4	96.0	87.7	96.7	119	123
460-344895-1 MS	RXMW-6_P	75.5	77.5	85.6	93.1	82.2	91.4	109	117
460-344895-1 MSD	RXMW-6_P	100	66.6	81.5	108	101	114	122	111
460-344895-2	FB_02162026_P	71.5	37.2 *	41.4	60.5	55.6	74.9	105	35.4 *
LCS 410-770909/2-A	Lab Control Sample	80.3	121	108	106	130	118	113	121
LLCS 410-770909/3-A	Lab Control Sample	75.5	125	113	109	125	117	112	128
MB 410-770909/1-A	Method Blank	81.8	111	99.8	95.4	124	105	106	112

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)	PFDoA (10-130)
460-344895-1	RXMW-6_P	120	86.7	67.6	72.1	69.2	71.7	71.3	78.4
460-344895-1 MS	RXMW-6_P	110	80.7	69.9	74.2	84.8	74.2	72.0	74.5
460-344895-1 MSD	RXMW-6_P	111	110	71.4	86.3	77.8	92.8	94.1	92.4
460-344895-2	FB_02162026_P	46.9	52.1	42.6	62.9	73.7	62.3	56.4	70.6
LCS 410-770909/2-A	Lab Control Sample	118	104	112	75.8	71.6	94.5	98.6	86.0
LLCS 410-770909/3-A	Lab Control Sample	126	110	125	68.1	62.5	94.8	99.1	81.9
MB 410-770909/1-A	Method Blank	116	95.1	110	66.4	61.2	85.6	87.4	78.7

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 = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M

Isotope Dilution Summary

Client: Roux Environmental Eng & Geology DPC

Job ID: 460-344895-1

Project/Site: Sea Park North - 2828 W 28th Street

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

d3NMFSA = d3-NMePFOSA

PFDoA = 13C2 PFDoA

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

Lab Sample ID: MB 410-770909/1-A
Matrix: Water
Analysis Batch: 771230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 770909

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.00	U	4.00	1.10	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoropentanoic acid (PFPeA)	2.00	U	2.00	0.60	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorohexanoic acid (PFHxA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.90	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorotridecanoic acid (PFTrDA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorotetradecanoic acid (PFTeDA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoropentanesulfonic acid (PFPeS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorohexanesulfonic acid (PFHxS)	2.00	U	2.00	0.80	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoroheptanesulfonic acid (PFHpS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.30	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorononanesulfonic acid (PFNS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorododecanesulfonic acid (PFDoS)	2.00	U	2.00	0.60	ng/L		02/18/26 15:35	02/19/26 20:16	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.00	U	4.00	1.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.00	U	4.00	1.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.00	U	4.00	1.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluorooctanesulfonamide (PFOSA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.718	J	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	U	2.00	1.10	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	10.0	U	10.0	4.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	10.0	U	10.0	4.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	U	2.00	1.40	ng/L		02/18/26 15:35	02/19/26 20:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1

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

Lab Sample ID: MB 410-770909/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	U	2.00	0.50	ng/L		02/18/26 15:35	02/19/26 20:16	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	U	4.00	1.00	ng/L		02/18/26 15:35	02/19/26 20:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	10.0	U	10.0	2.80	ng/L		02/18/26 15:35	02/19/26 20:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	10.0	U	10.0	2.50	ng/L		02/18/26 15:35	02/19/26 20:16	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*110*		*5 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C5 PFPeA	*110*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C5 PFHxA	*108*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C4 PFHpA	*113*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C8 PFOA	*111*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C9 PFNA	*101*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C6 PFDA	*87.8*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C7 PFUnA	*87.4*		*30 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C2 PFTeDA	*81.8*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C3 PFBS	*111*		*40 - 135*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C3 PFHxS	*99.8*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C8 PFOS	*95.4*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C8 FOSA	*124*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d3-NMeFOSAA	*105*		*40 - 170*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d5-NEtFOSAA	*106*		*25 - 135*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C2 4:2 FTS	*112*		*40 - 200*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C2 6:2 FTS	*116*		*40 - 200*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C2 8:2 FTS	*95.1*		*40 - 300*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C3 HFPO-DA	*110*		*40 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d7-N-MeFOSE-M	*66.4*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d9-N-EtFOSE-M	*61.2*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d5-NEtPFOSA	*85.6*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
d3-NMePFOSA	*87.4*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*
13C2 PFDoA	*78.7*		*10 - 130*	*02/18/26 15:35*	*02/19/26 20:16*	*1*

Lab Sample ID: LCS 410-770909/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	68.72		ng/L		86	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	36.70		ng/L		92	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.61		ng/L		92	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	35.57		ng/L		89	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	36.58		ng/L		91	70 - 150
Perfluorononanoic acid (PFNA)	40.0	36.37		ng/L		91	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	39.51		ng/L		99	70 - 140

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

Lab Sample ID: LCS 410-770909/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	39.40		ng/L		99	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	36.97		ng/L		92	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	35.41		ng/L		89	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	31.05		ng/L		78	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	31.63		ng/L		89	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	36.69		ng/L		98	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.96		ng/L		88	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	35.28		ng/L		92	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	35.70		ng/L		96	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	31.81		ng/L		83	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	31.02		ng/L		80	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	22.55		ng/L		58	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	72.58		ng/L		97	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	74.54		ng/L		98	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	70.54		ng/L		92	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	35.09		ng/L		88	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	38.83		ng/L		97	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.52		ng/L		96	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	33.51		ng/L		84	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.99		ng/L		90	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	190.6		ng/L		95	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	198.7		ng/L		99	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	28.63		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	35.18		ng/L		93	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	41.05		ng/L		103	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	37.02		ng/L		93	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	35.83		ng/L		90	50 - 150

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

Lab Sample ID: LCS 410-770909/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			37.4	33.07		ng/L		89	70 - 155		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			37.8	32.79		ng/L		87	55 - 160		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			35.7	28.32		ng/L		79	70 - 140		
3-Perfluoropropylpropanoic acid (3:3 FTCA)			80.0	81.85		ng/L		102	65 - 130		
3-Perfluoropentylpropanoic acid (5:3 FTCA)			200	156.2		ng/L		78	70 - 135		
3-Perfluoroheptylpropanoic acid (7:3 FTCA)			200	147.5		ng/L		74	50 - 145		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*122*		*5 - 130*
13C5 PFPeA	*116*		*40 - 130*
13C5 PFHxA	*121*		*40 - 130*
13C4 PFHpA	*121*		*40 - 130*
13C8 PFOA	*122*		*40 - 130*
13C9 PFNA	*107*		*40 - 130*
13C6 PFDA	*97.4*		*40 - 130*
13C7 PFUnA	*94.0*		*30 - 130*
13C2 PFTeDA	*80.3*		*10 - 130*
13C3 PFBS	*121*		*40 - 135*
13C3 PFHxS	*108*		*40 - 130*
13C8 PFOS	*106*		*40 - 130*
13C8 FOSA	*130*		*40 - 130*
d3-NMeFOSAA	*118*		*40 - 170*
d5-NEtFOSAA	*113*		*25 - 135*
13C2 4:2 FTS	*121*		*40 - 200*
13C2 6:2 FTS	*118*		*40 - 200*
13C2 8:2 FTS	*104*		*40 - 300*
13C3 HFPO-DA	*112*		*40 - 130*
d7-N-MeFOSE-M	*75.8*		*10 - 130*
d9-N-EtFOSE-M	*71.6*		*10 - 130*
d5-NEtPFOSA	*94.5*		*10 - 130*
d3-NMePFOSA	*98.6*		*10 - 130*
13C2 PFDoA	*86.0*		*10 - 130*

Lab Sample ID: LLCS 410-770909/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorobutanoic acid (PFBA)			8.00	7.545		ng/L		94	70 - 140		
Perfluoropentanoic acid (PFPeA)			4.00	4.148		ng/L		104	65 - 135		
Perfluorohexanoic acid (PFHxA)			4.00	4.361		ng/L		109	70 - 145		
Perfluoroheptanoic acid (PFHpA)			4.00	3.995		ng/L		100	70 - 150		
Perfluorooctanoic acid (PFOA)			4.00	4.242		ng/L		106	70 - 150		

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

Lab Sample ID: LLCS 410-770909/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanoic acid (PFNA)	4.00	3.747		ng/L		94	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.139		ng/L		103	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.307		ng/L		108	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	3.891		ng/L		97	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	3.981		ng/L		100	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.391		ng/L		85	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.456		ng/L		97	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.140		ng/L		110	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.517		ng/L		96	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.762		ng/L		99	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.678		ng/L		99	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.324		ng/L		86	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.078		ng/L		80	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.310		ng/L		60	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	7.689		ng/L		102	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.178		ng/L		107	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.948		ng/L		117	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	3.967		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.993		ng/L		100	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.922		ng/L		98	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.677		ng/L		92	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.384		ng/L		110	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.70		ng/L		109	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.63		ng/L		108	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.296		ng/L		110	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.862		ng/L		102	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.404		ng/L		110	55 - 140
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.947		ng/L		99	60 - 150

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

Lab Sample ID: LLCS 410-770909/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 771230
Prep Batch: 770909

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.162		ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	3.74	3.660		ng/L		98	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	3.78	3.179		ng/L		84	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.004		ng/L		84	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	10.66	*	ng/L		133	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	22.70		ng/L		113	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	20.92		ng/L		105	50 - 145

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C4 PFBA	*122*		*5 - 130*
13C5 PFPeA	*123*		*40 - 130*
13C5 PFHxA	*123*		*40 - 130*
13C4 PFHpA	*130*		*40 - 130*
13C8 PFOA	*124*		*40 - 130*
13C9 PFNA	*112*		*40 - 130*
13C6 PFDA	*95.2*		*40 - 130*
13C7 PFUnA	*91.5*		*30 - 130*
13C2 PFTeDA	*75.5*		*10 - 130*
13C3 PFBS	*125*		*40 - 135*
13C3 PFHxS	*113*		*40 - 130*
13C8 PFOS	*109*		*40 - 130*
13C8 FOSA	*125*		*40 - 130*
d3-NMeFOSAA	*117*		*40 - 170*
d5-NEtFOSAA	*112*		*25 - 135*
13C2 4:2 FTS	*128*		*40 - 200*
13C2 6:2 FTS	*126*		*40 - 200*
13C2 8:2 FTS	*110*		*40 - 300*
13C3 HFPO-DA	*125*		*40 - 130*
d7-N-MeFOSE-M	*68.1*		*10 - 130*
d9-N-EtFOSE-M	*62.5*		*10 - 130*
d5-NEtPFOSA	*94.8*		*10 - 130*
d3-NMePFOSA	*99.1*		*10 - 130*
13C2 PFDoA	*81.9*		*10 - 130*

Lab Sample ID: 460-344895-1 MS
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	5.06		60.2	62.97		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	2.61		30.1	31.27		ng/L		95	65 - 135
Perfluorohexanoic acid (PFHxA)	2.12		30.1	33.97		ng/L		106	70 - 145

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

Lab Sample ID: 460-344895-1 MS
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	1.95		30.1	34.89		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	12.0		30.1	42.31		ng/L		101	70 - 150
Perfluorononanoic acid (PFNA)	3.49	I	30.1	28.23		ng/L		82	70 - 150
Perfluorodecanoic acid (PFDA)	1.27	J	30.1	27.88		ng/L		88	70 - 140
Perfluoroundecanoic acid (PFUnA)	1.48	U	30.1	33.94		ng/L		113	70 - 145
Perfluorododecanoic acid (PFDoA)	1.48	U	30.1	32.25		ng/L		107	70 - 140
Perfluorotridecanoic acid (PFTrDA)	1.48	U	30.1	27.82		ng/L		92	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	1.48	U	30.1	26.45		ng/L		88	60 - 140
Perfluorobutanesulfonic acid (PFBS)	1.59		26.7	24.39		ng/L		85	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	1.48	U	28.3	25.68		ng/L		91	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	0.93	J	27.5	25.78		ng/L		91	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	1.48	U	28.7	25.98		ng/L		90	70 - 150
Perfluorooctanesulfonic acid (PFOS)	14.1		28.0	39.32		ng/L		90	55 - 150
Perfluorononanesulfonic acid (PFNS)	1.48	U	29.0	23.96		ng/L		83	65 - 145
Perfluorodecanesulfonic acid (PFDS)	1.48	U	29.0	24.30		ng/L		84	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	1.48	U	29.2	21.43		ng/L		73	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.97	U	56.5	53.75		ng/L		95	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.97	U	57.3	52.41		ng/L		91	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.97	U	57.8	56.33		ng/L		97	60 - 150
Perfluorooctanesulfonamide (PFOSA)	1.48	U	30.1	26.36		ng/L		88	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.48	U	30.1	29.18		ng/L		97	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.48	U	30.1	27.61		ng/L		92	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.48	U	30.1	26.30		ng/L		87	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.48	U	30.1	27.44		ng/L		91	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.41	U	151	140.0		ng/L		93	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	7.41	U	151	137.1		ng/L		91	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.48	U	22.6	21.66		ng/L		96	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.48	U	28.5	29.68		ng/L		104	65 - 145
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.48	U	30.1	29.75		ng/L		99	55 - 140

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

Lab Sample ID: 460-344895-1 MS
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.48	U	30.1	28.22		ng/L		94	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.48	U	30.1	26.31		ng/L		87	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.48	U	28.1	23.79		ng/L		85	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.48	U	28.4	23.09		ng/L		81	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.48	U	26.9	23.56		ng/L		88	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	2.97	U *	60.2	54.54		ng/L		91	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.41	U	151	152.6		ng/L		101	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.41	U	151	140.9		ng/L		94	50 - 145

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*65.5*		*5 - 130*
13C5 PFPeA	*66.1*		*40 - 130*
13C5 PFHxA	*73.1*		*40 - 130*
13C4 PFHpA	*81.6*		*40 - 130*
13C8 PFOA	*93.5*		*40 - 130*
13C9 PFNA	*91.0*		*40 - 130*
13C6 PFDA	*83.3*		*40 - 130*
13C7 PFUnA	*79.8*		*30 - 130*
13C2 PFTeDA	*75.5*		*10 - 130*
13C3 PFBS	*77.5*		*40 - 135*
13C3 PFHxS	*85.6*		*40 - 130*
13C8 PFOS	*93.1*		*40 - 130*
13C8 FOSA	*82.2*		*40 - 130*
d3-NMeFOSAA	*91.4*		*40 - 170*
d5-NEtFOSAA	*109*		*25 - 135*
13C2 4:2 FTS	*117*		*40 - 200*
13C2 6:2 FTS	*110*		*40 - 200*
13C2 8:2 FTS	*80.7*		*40 - 300*
13C3 HFPO-DA	*69.9*		*40 - 130*
d7-N-MeFOSE-M	*74.2*		*10 - 130*
d9-N-EtFOSE-M	*84.8*		*10 - 130*
d5-NEtPFOSA	*74.2*		*10 - 130*
d3-NMePFOSA	*72.0*		*10 - 130*
13C2 PFDoA	*74.5*		*10 - 130*

Lab Sample ID: 460-344895-1 MSD
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	5.06		60.6	62.07		ng/L		94	70 - 140	1	30

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

Lab Sample ID: 460-344895-1 MSD
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)	2.61		30.3	29.95		ng/L		90	65 - 135	4	30
Perfluorohexanoic acid (PFHxA)	2.12		30.3	35.51		ng/L		110	70 - 145	4	30
Perfluoroheptanoic acid (PFHpA)	1.95		30.3	32.72		ng/L		101	70 - 150	6	30
Perfluorooctanoic acid (PFOA)	12.0		30.3	41.56		ng/L		97	70 - 150	2	30
Perfluorononanoic acid (PFNA)	3.49	I	30.3	26.00		ng/L		74	70 - 150	8	30
Perfluorodecanoic acid (PFDA)	1.27	J	30.3	33.74		ng/L		107	70 - 140	19	30
Perfluoroundecanoic acid (PFUnA)	1.48	U	30.3	30.48		ng/L		101	70 - 145	11	30
Perfluorododecanoic acid (PFDoA)	1.48	U	30.3	30.73		ng/L		101	70 - 140	5	30
Perfluorotridecanoic acid (PFTrDA)	1.48	U	30.3	24.88		ng/L		82	65 - 140	11	30
Perfluorotetradecanoic acid (PFTeDA)	1.48	U	30.3	24.74		ng/L		82	60 - 140	7	30
Perfluorobutanesulfonic acid (PFBS)	1.59		26.9	25.03		ng/L		87	60 - 145	3	30
Perfluoropentanesulfonic acid (PFPeS)	1.48	U	28.5	21.45		ng/L		75	65 - 140	18	30
Perfluorohexanesulfonic acid (PFHxS)	0.93	J	27.7	23.42		ng/L		81	65 - 145	10	30
Perfluoroheptanesulfonic acid (PFHpS)	1.48	U	28.9	25.49		ng/L		88	70 - 150	2	30
Perfluorooctanesulfonic acid (PFOS)	14.1		28.2	39.37		ng/L		90	55 - 150	0	30
Perfluorononanesulfonic acid (PFNS)	1.48	U	29.2	25.42		ng/L		87	65 - 145	6	30
Perfluorodecanesulfonic acid (PFDS)	1.48	U	29.2	25.76		ng/L		88	60 - 145	6	30
Perfluorododecanesulfonic acid (PFDoS)	1.48	U	29.4	21.15		ng/L		72	50 - 145	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.97	U	56.9	52.62		ng/L		93	70 - 145	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.97	U	57.7	51.51		ng/L		89	65 - 155	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.97	U	58.2	55.36		ng/L		95	60 - 150	2	30
Perfluorooctanesulfonamide (PFOSA)	1.48	U	30.3	26.43		ng/L		87	70 - 145	0	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	1.48	U	30.3	28.57		ng/L		94	60 - 150	2	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.48	U	30.3	27.48		ng/L		91	65 - 145	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.48	U	30.3	24.72		ng/L		82	50 - 140	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.48	U	30.3	26.34		ng/L		87	70 - 145	4	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.41	U	152	132.8		ng/L		88	70 - 145	5	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	7.41	U	152	131.7		ng/L		87	70 - 135	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.48	U	22.7	21.10		ng/L		93	70 - 140	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.48	U	28.7	27.21		ng/L		95	65 - 145	9	30

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

Lab Sample ID: 460-344895-1 MSD
Client Sample ID: RXMW-6_P
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 770716
Prep Batch: 770909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.48	U	30.3	28.26		ng/L		93	55 - 140	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.48	U	30.3	26.37		ng/L		87	60 - 150	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.48	U	30.3	29.35		ng/L		97	50 - 150	11	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.48	U	28.3	24.26		ng/L		86	70 - 155	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.48	U	28.6	24.41		ng/L		85	55 - 160	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.48	U	27.0	24.01		ng/L		89	70 - 140	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	2.97	U *	60.6	55.15		ng/L		91	65 - 130	1	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.41	U	152	156.9		ng/L		104	70 - 135	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.41	U	152	182.3		ng/L		120	50 - 145	26	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*60.2*		*5 - 130*
13C5 PFPeA	*69.2*		*40 - 130*
13C5 PFHxA	*70.7*		*40 - 130*
13C4 PFHpA	*81.5*		*40 - 130*
13C8 PFOA	*86.4*		*40 - 130*
13C9 PFNA	*98.7*		*40 - 130*
13C6 PFDA	*102*		*40 - 130*
13C7 PFUnA	*104*		*30 - 130*
13C2 PFTeDA	*100*		*10 - 130*
13C3 PFBS	*66.6*		*40 - 135*
13C3 PFHxS	*81.5*		*40 - 130*
13C8 PFOS	*108*		*40 - 130*
13C8 FOSA	*101*		*40 - 130*
d3-NMeFOSAA	*114*		*40 - 170*
d5-NEtFOSAA	*122*		*25 - 135*
13C2 4:2 FTS	*111*		*40 - 200*
13C2 6:2 FTS	*111*		*40 - 200*
13C2 8:2 FTS	*110*		*40 - 300*
13C3 HFPO-DA	*71.4*		*40 - 130*
d7-N-MeFOSE-M	*86.3*		*10 - 130*
d9-N-EtFOSE-M	*77.8*		*10 - 130*
d5-NEtPFOSA	*92.8*		*10 - 130*
d3-NMePFOSA	*94.1*		*10 - 130*
13C2 PFDoA	*92.4*		*10 - 130*

Definitions/Glossary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

Qualifiers

LCMS

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	Isotope Dilution analyte is outside acceptance limits.
I	Ion ratio outside 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

Analysis Batch: 770716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-344895-1	RXMW-6_P	Total/NA	Water	1633A	770909
460-344895-2	FB_02162026_P	Total/NA	Water	1633A	770909
460-344895-1 MS	RXMW-6_P	Total/NA	Water	1633A	770909
460-344895-1 MSD	RXMW-6_P	Total/NA	Water	1633A	770909

Prep Batch: 770909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-344895-1	RXMW-6_P	Total/NA	Water	1633A	
460-344895-2	FB_02162026_P	Total/NA	Water	1633A	
MB 410-770909/1-A	Method Blank	Total/NA	Water	1633A	
LCS 410-770909/2-A	Lab Control Sample	Total/NA	Water	1633A	
LLCS 410-770909/3-A	Lab Control Sample	Total/NA	Water	1633A	
460-344895-1 MS	RXMW-6_P	Total/NA	Water	1633A	
460-344895-1 MSD	RXMW-6_P	Total/NA	Water	1633A	

Analysis Batch: 771230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-770909/1-A	Method Blank	Total/NA	Water	1633A	770909
LCS 410-770909/2-A	Lab Control Sample	Total/NA	Water	1633A	770909
LLCS 410-770909/3-A	Lab Control Sample	Total/NA	Water	1633A	770909

Lab Chronicle

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Date Collected: 02/16/26 13:00
Matrix: Water
Date Received: 02/16/26 17:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633A			770909	V3FW	ELLE	02/18/26 15:35
Total/NA	Analysis	1633A		1	770716	XBL5	ELLE	02/19/26 04:32

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

Date Collected: 02/16/26 15:00
Matrix: Water
Date Received: 02/16/26 17:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633A			770909	V3FW	ELLE	02/18/26 15:35
Total/NA	Analysis	1633A		1	770716	XBL5	ELLE	02/19/26 05:13

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Roux Environmental Eng & Geology DPC
Job ID: 460-344895-1
Project/Site: Sea Park North - 2828 W 28th Street

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-26

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
1633_125_CAL1_00072	03/09/26	11/12/25	Methanol, Lot 9472110292533A	10 mL	1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
1633_125_CAL1_00072	03/09/26	11/12/25	Methanol, Lot 9472110292533A	10 mL	1633_125_IN_B_00019	0.2 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0446 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.0481 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.05 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.05 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0473 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0465 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.047 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.05 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.05 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.05 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.05 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.05 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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)	0.05 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.0938 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.0952 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0456 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.0477 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.05 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.0467 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.0472 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.1 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.0482 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.0485 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.096 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.05 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.05 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.05 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0444 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.25 ng/mL
							Perfluorobutanoic acid (PFBA)	0.1 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.05 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0375 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.05 ng/mL
							Perfluorodecanoic acid (PFDA)	0.05 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotetradecanoic acid (PFTeDA)	0.05 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.25 ng/mL
					1633_125_SS_00190	0.05 mL	d3-NMePFOSA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C8 FOSA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							13C3 PFBS	1.864 ng/mL
							13C7 PFUnA	2 ng/mL
							13C3-PFPrA	2 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							d7-N-MeFOSE-M	5 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C4 PFHpA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C4 PFBA	2 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
.1633_125_IN_B_00019	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	1633_125_IN_A_00089	0.1 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluorononanesulfonic acid (PFNS)	2.405 ng/mL
							Perfluorooctanoic acid (PFOA)	2.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	2.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.365 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.325 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	2.35 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.5 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	2.28 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	2.385 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.335 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	2.41 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	2.425 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.8 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	2.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	2.22 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluoroheptanoic acid (PFHpA)	2.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.875 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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)	12.5 ng/mL
							Perfluorononanoic acid (PFNA)	2.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	2.5 ng/mL
							Perfluorodecanoic acid (PFDA)	2.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	2.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5 ng/mL
..1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
...PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
...PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
...PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
...PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
...PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
...PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
...PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
...PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
...PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
...PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
...PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
...PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
...PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
...PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
...PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
...PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
...PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
...PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
...PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
...PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
...PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
...PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
...PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
...PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
...PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
...PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
...PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
...PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
...PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
...PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
...PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
...PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
...PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
...PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
...PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
...PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
...PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
...PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_SS_00190	05/11/26	11/11/25	Methanol, Lot EK350-US	25 mL	PFC_ST_04597	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_04769	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05001	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05002	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05016	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05037	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05059	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05061	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05074	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05078	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05107	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05111	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05121	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05153	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05167	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05176	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05191	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05195	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05200	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05207	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05214	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05217	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05236	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05251	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
					PFC_ST_05259	0.5 mL	d5-NEtFOSAA	1000 ng/mL
..PFC_ST_04597	11/11/26	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_04769	11/11/26	Wellington Laboratories, Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50000 ng/mL
..PFC_ST_05001	11/11/26	Wellington Laboratories, Lot dNEtFOSA1124M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05002	11/11/26	Wellington Laboratories, Lot M8FOSA0525I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05016	11/11/26	Wellington Laboratories, Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50000 ng/mL
..PFC_ST_05037	11/11/26	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05059	11/11/26	Wellington Laboratories, Lot M3PFHxS0425			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05061	11/11/26	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05074	11/11/26	Wellington Laboratories, Lot M7PFUdA0725			(Purchased Reagent)		13C7 PFUnA	50000 ng/mL
..PFC_ST_05078	11/11/26	Cambridge Isotope Laboratories, Inc, Lot SEDG-006			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05107	10/27/26	Wellington Laboratories, Lot M242FTS0725			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05111	11/11/26	Wellington Laboratories, Lot M262FTS0625			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05121	11/11/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05153	11/11/26	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05167	11/11/26	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05176	11/11/26	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05191	11/11/26	Wellington Laboratories, Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50000 ng/mL
..PFC_ST_05195	11/11/26	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05200	11/11/26	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05207	11/11/26	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05214	11/11/26	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05217	11/11/26	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05236	11/11/26	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05251	11/11/26	Wellington Laboratories, Lot d9NEtFOSE0425M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
..PFC_ST_05259	11/11/26	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
1633_125_CAL1_00080	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_B_00019	0.2 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.0446 ng/mL
							bis(trifluoromethane)sulfonimide	0.04895 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.0481 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.05 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.05 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0473 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0465 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.047 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.05 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.05 ng/mL

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					Reagent ID	Volume Added		
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.05 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.05 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.05 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.05 ng/mL
							PFECHS	0.0462 ng/mL
							FBSA	0.05 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.0938 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.0952 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0456 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.0477 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.05 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.0467 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.0472 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.1 ng/mL
							FHxSA	0.05 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.0482 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.0485 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.096 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.05 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.05 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.05 ng/mL
							Perfluorooctadecanoic acid	0.05 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0444 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.25 ng/mL
							Perfluoropropionic acid	0.25 ng/mL
							Perfluorobutanoic acid (PFBA)	0.1 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoroheptanoic acid (PFHpA)	0.05 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0375 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.25 ng/mL
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.05 ng/mL
							Perfluorodecanoic acid (PFDA)	0.05 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.05 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.25 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL

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					Reagent ID	Volume Added		
.1633_125_IN_B_00019	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	1633_125_IN_A_00089	0.1 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							bis(trifluoromethane)sulfonimide	2.4475 ng/mL
							Perfluorononanesulfonic acid (PFNS)	2.405 ng/mL
							Perfluorooctanoic acid (PFOA)	2.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	2.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.365 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.325 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	2.35 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							PFECHS	2.31 ng/mL
							FBSA	2.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	2.28 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	2.385 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.335 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36 ng/mL

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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)	5 ng/mL
							FHxSA	2.5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	2.41 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	2.425 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.8 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	2.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	2.5 ng/mL
							Perfluorooctadecanoic acid	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	2.22 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5 ng/mL
							Perfluoropropionic acid	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluoroheptanoic acid (PFHpA)	2.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.875 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Perfluorononanoic acid (PFNA)	2.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	2.5 ng/mL
							Perfluorodecanoic acid (PFDA)	2.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	2.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5 ng/mL
..1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL

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Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
...PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
...PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
...PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
...PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
...PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
...PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
...PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
...PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
...PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
...PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
...PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
...PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
...PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
...PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
...PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
...PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
...PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
...PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
...PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
...PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
...PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
...PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
...PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
...PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
...PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
...PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
...PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
...PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
...PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
...PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
...PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
...PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
...PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
...PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
...PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
...PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
...PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
...PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
...PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
...PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
...PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
...PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
...PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
...PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL2_00036	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_B_00019	0.5 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.1115 ng/mL
							bis(trifluoromethane)sulfonimide	0.122375 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.12025 ng/mL
							Perfluorooctanoic acid (PFOA)	0.125 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.125 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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)	0.125 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.11825 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.11625 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.1175 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.125 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.125 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.125 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.125 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.125 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.125 ng/mL
							PFECHS	0.1155 ng/mL
							FBSA	0.125 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.2345 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.238 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.625 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.114 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.11925 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.125 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.11675 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.118 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.25 ng/mL
							FHxSA	0.125 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.1205 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.12125 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.24 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoropentanoic acid (PFPeA)	0.125 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.125 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.125 ng/mL
							Perfluorooctadecanoic acid	0.125 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.111 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.625 ng/mL
							Perfluoropropionic acid	0.625 ng/mL
							Perfluorobutanoic acid (PFBA)	0.25 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.125 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.09375 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.625 ng/mL
							Perfluorononanoic acid (PFNA)	0.125 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.125 ng/mL
							Perfluorodecanoic acid (PFDA)	0.125 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.125 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.625 ng/mL
					1633_125_IS_00081	0.05 mL	13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							18O2 PFHxS	1.896 ng/mL
							13C3-PFBA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C2 PFHxA	5 ng/mL
							13C4 PFOA	5 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_B_00019	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	1633_125_IN_A_00089	0.1 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							bis(trifluoromethane)sulfonimide	2.4475 ng/mL
							Perfluorononanesulfonic acid (PFNS)	2.405 ng/mL
							Perfluorooctanoic acid (PFOA)	2.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	2.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.365 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.325 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	2.35 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							PFECHS	2.31 ng/mL
							FBSA	2.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorohexanesulfonic acid (PFHxS)	2.28 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	2.385 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.335 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	5 ng/mL
							FHxSA	2.5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	2.41 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	2.425 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.8 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	2.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	2.5 ng/mL
							Perfluorooctadecanoic acid	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	2.22 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5 ng/mL
							Perfluoropropionic acid	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluoroheptanoic acid (PFHpA)	2.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.875 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Perfluorononanoic acid (PFNA)	2.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	2.5 ng/mL
							Perfluorodecanoic acid (PFDA)	2.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	2.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5 ng/mL
..1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
...PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
...PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
...PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
...PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
...PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
...PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
...PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
...PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
...PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
...PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
...PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
...PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
...PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
...PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
...PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
...PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
...PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
...PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
...PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
...PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
...PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
...PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
...PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
...PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
...PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
...PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
...PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
...PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
...PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
...PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
...PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
...PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
...PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
...PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
...PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
...PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
...PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
...PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
...PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
...PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
...PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
...PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
...PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
...PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00081	04/28/26	10/29/25	Methanol, Lot 253669	10 mL	PFC_ST_04183	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_04184	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_04195	0.08 mL	18O2 PFHxS	379.2 ng/mL
					PFC_ST_04248	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_04261	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_04290	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_04469	0.2 mL	13C4 PFOA	1000 ng/mL
..PFC_ST_04183	08/11/26	Wellington Laboratories, Lot MPFNA1024			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_04184	08/11/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_04195	08/11/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
..PFC_ST_04248	06/04/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_04261	08/08/26	Wellington Laboratories, Lot MPFOS0325			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_04290	08/11/26	Wellington Laboratories, Lot MPFHxA1124			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_04469	08/11/26	Wellington Laboratories, Lot MPFOA1124			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
1633_125_CAL3_00036	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.02 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.446 ng/mL
							bis(trifluoromethane)sulfonimide	0.4895 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.481 ng/mL
							Perfluorooctanoic acid (PFOA)	0.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	0.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.473 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.465 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.47 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	0.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	0.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	0.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.5 ng/mL
							PFECHS	0.462 ng/mL
							FBSA	0.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.938 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.952 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.456 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.477 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	0.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.467 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.472 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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)	1 ng/mL
							FHxSA	0.5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.482 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.485 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.96 ng/mL
							Perfluoropentanoic acid (PFPeA)	0.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	0.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	0.5 ng/mL
							Perfluorooctadecanoic acid	0.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.444 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	2.5 ng/mL
							Perfluoropropionic acid	2.5 ng/mL
							Perfluorobutanoic acid (PFBA)	1 ng/mL
							Perfluoroheptanoic acid (PFHpA)	0.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.375 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.5 ng/mL
							Perfluorononanoic acid (PFNA)	0.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	0.5 ng/mL
							Perfluorodecanoic acid (PFDA)	0.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	0.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	2.5 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL4_00082	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
1633_125_CAL4_00082	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.04 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.892 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorononanesulfonic acid (PFNS)	0.962 ng/mL
							Perfluorooctanoic acid (PFOA)	1 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.946 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.93 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.94 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	1 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.876 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.904 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.912 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.954 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	1 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.934 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.944 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	2 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.964 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.97 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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-Perfluorodecane sulfonic acid (8:2 FTS)	1.92 ng/mL
							Perfluoropentanoic acid (PFPeA)	1 ng/mL
							Perfluorohexanoic acid (PFHxA)	1 ng/mL
							Perfluorododecanoic acid (PFDoA)	1 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.888 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	5 ng/mL
							Perfluorobutanoic acid (PFBA)	2 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.75 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5 ng/mL
							Perfluorononanoic acid (PFNA)	1 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1 ng/mL
							Perfluorodecanoic acid (PFDA)	1 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	5 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL

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Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL4_00083	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.04 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.892 ng/mL
							bis(trifluoromethane)sulfonimide	0.979 ng/mL
							Perfluorononanesulfonic acid (PFNS)	0.962 ng/mL
							Perfluorooctanoic acid (PFOA)	1 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.946 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.93 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	0.94 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	1 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1 ng/mL
							PFECHS	0.924 ng/mL
							FBSA	1 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.876 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.904 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.912 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	0.954 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	1 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.934 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.944 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	2 ng/mL
							FHxSA	1 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	0.964 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	0.97 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92 ng/mL
							Perfluoropentanoic acid (PFPeA)	1 ng/mL
							Perfluorohexanoic acid (PFHxA)	1 ng/mL
							Perfluorododecanoic acid (PFDoA)	1 ng/mL
							Perfluorooctadecanoic acid	1 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.888 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	5 ng/mL
							Perfluoropropionic acid	5 ng/mL
							Perfluorobutanoic acid (PFBA)	2 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoroheptanoic acid (PFHpA)	1 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.75 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	5 ng/mL
							Perfluorononanoic acid (PFNA)	1 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1 ng/mL
							Perfluorodecanoic acid (PFDA)	1 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	5 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL5_00038	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.1 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							bis(trifluoromethane)sulfonimide	2.4475 ng/mL
							Perfluorononanesulfonic acid (PFNS)	2.405 ng/mL
							Perfluorooctanoic acid (PFOA)	2.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	2.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.365 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.325 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	2.35 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	2.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	2.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							PFECHS	2.31 ng/mL
							FBSA	2.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.69 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.76 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.5 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	2.28 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	2.385 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	2.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.335 ng/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.36 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	5 ng/mL
							FHxSA	2.5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	2.41 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	2.425 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.8 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	2.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	2.5 ng/mL
							Perfluorooctadecanoic acid	2.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	2.22 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	12.5 ng/mL
							Perfluoropropionic acid	12.5 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluoroheptanoic acid (PFHpA)	2.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.875 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.5 ng/mL
							Perfluorononanoic acid (PFNA)	2.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	2.5 ng/mL
							Perfluorodecanoic acid (PFDA)	2.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	2.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	12.5 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL6_00037	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.2 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	4.46 ng/mL
							bis(trifluoromethane)sulfonimide	4.895 ng/mL
							Perfluorononanesulfonic acid (PFNS)	4.81 ng/mL
							Perfluorooctanoic acid (PFOA)	5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.73 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	4.65 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	4.7 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	5 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotridecanoic acid (PFTrDA)	5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5 ng/mL
							PFECHS	4.62 ng/mL
							FBSA	5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.38 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	9.52 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	4.56 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	4.77 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	4.67 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	4.72 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	10 ng/mL
							FHxSA	5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	4.82 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	4.85 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.6 ng/mL
							Perfluoropentanoic acid (PFPeA)	5 ng/mL
							Perfluorohexanoic acid (PFHxA)	5 ng/mL
							Perfluorododecanoic acid (PFDoA)	5 ng/mL
							Perfluorooctadecanoic acid	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	4.44 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	25 ng/mL
							Perfluoropropionic acid	25 ng/mL
							Perfluorobutanoic acid (PFBA)	10 ng/mL
							Perfluoroheptanoic acid (PFHpA)	5 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.75 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	25 ng/mL
							Perfluorononanoic acid (PFNA)	5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	5 ng/mL
							Perfluorodecanoic acid (PFDA)	5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	25 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
1633_125_CAL7_00039	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_A_00089	0.4 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	8.92 ng/mL
							bis(trifluoromethane)sulfonimide	9.79 ng/mL
							Perfluorononanesulfonic acid (PFNS)	9.62 ng/mL
							Perfluorooctanoic acid (PFOA)	10 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	10 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.46 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	9.3 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	9.4 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	10 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	10 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	10 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	10 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10 ng/mL
							PFECHS	9.24 ng/mL
							FBSA	10 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	18.76 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	19.04 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	9.12 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	9.54 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	10 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	9.34 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9.44 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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)	20 ng/mL
							FHxSA	10 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	9.64 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	9.7 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	19.2 ng/mL
							Perfluoropentanoic acid (PFPeA)	10 ng/mL
							Perfluorohexanoic acid (PFHxA)	10 ng/mL
							Perfluorododecanoic acid (PFDoA)	10 ng/mL
							Perfluorooctadecanoic acid	10 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	8.88 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50 ng/mL
							Perfluoropropionic acid	50 ng/mL
							Perfluorobutanoic acid (PFBA)	20 ng/mL
							Perfluoroheptanoic acid (PFHpA)	10 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	7.5 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50 ng/mL
							Perfluorononanoic acid (PFNA)	10 ng/mL
							Perfluoroundecanoic acid (PFUnA)	10 ng/mL
							Perfluorodecanoic acid (PFDA)	10 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	10 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	50 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_A_00089	03/20/26	11/04/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03447	0.025 mL	bis(trifluoromethane)sulfonimide	244.75 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03936	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04388	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04690	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_04729	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04801	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04947	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03447	03/20/26	AccuStandard, Lot 224061564			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	97900 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03936	11/04/26	Wellington Laboratories, Lot brNMeFOSE0225			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04388	05/22/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04690	10/15/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_04729	11/04/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04801	11/04/26	Wellington Laboratories, Lot brNEtFOSE0225			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04947	11/04/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_CAL8_00034	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IN_8_00010	2 mL	Perfluorooctanoic acid (PFOA)	50 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	35.475 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	46.5 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	47 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	45.6 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	47.7 ng/mL
							Perfluoropentanoic acid (PFPeA)	50 ng/mL
							Perfluorohexanoic acid (PFHxA)	50 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	44.4 ng/mL
							Perfluorobutanoic acid (PFBA)	100 ng/mL
							Perfluoroheptanoic acid (PFHpA)	50 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50 ng/mL
							Perfluorononanoic acid (PFNA)	50 ng/mL
					1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
					1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
.1633_125_IN_8_00010	05/04/26	11/04/25	Methanol, Lot EK250-US	10 mL	PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03665	0.0375 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	177.375 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.05 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	250 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
1633_125_ICV_00034	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_IS_00085	0.05 mL	13C3-PFBA	2 ng/mL
							13C5 PFNA	2 ng/mL
							13C2 PFDA	2 ng/mL
							13C4 PFOS	1.916 ng/mL
							13C4 PFOA	5 ng/mL
							13C2 PFHxA	5 ng/mL
							18O2 PFHxS	1.896 ng/mL
.1633_125_IS_00085	04/28/26	11/12/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05201	0.2 mL	13C4 PFOA	1000 ng/mL
					PFC_ST_05211	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05201	11/12/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
..PFC_ST_05211	11/12/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
1633_125_ICV_00034	03/09/26	01/20/26	Methanol, Lot 109223010726B	10 mL	1633_125_SS_00211	0.05 mL	d7-N-MeFOSE-M	5 ng/mL
							13C4 PFHpA	2 ng/mL
							13C8 PFOA	2 ng/mL
							13C6 PFDA	2 ng/mL
							13C7 PFUnA	2 ng/mL
							13C2 PFDoA	2 ng/mL
							13C2 PFTeDA	2 ng/mL
							13C3 PFHxS	1.896 ng/mL
							d3-NMePFOSA	2 ng/mL
							13C3 HFPO-DA	2 ng/mL
							13C4 PFBA	2 ng/mL
							13C5 PFHxA	2 ng/mL
							13C9 PFNA	2 ng/mL
							13C8 PFOS	1.916 ng/mL
							13C3-PFPrA	2 ng/mL
							d5-NEtPFOSA	2 ng/mL
							13C5 PFPeA	2 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2 8:2 FTS	4.8 ng/mL
							13C3 PFBS	1.864 ng/mL
							d3-NMeFOSAA	5 ng/mL
							d5-NEtFOSAA	5 ng/mL
							13C2 4:2 FTS	4.69 ng/mL
							13C2 6:2 FTS	4.76 ng/mL
							13C8 FOSA	2 ng/mL
							d9-N-EtFOSE-M	5 ng/mL
					PFC_ST_05090	50 uL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	4.715 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.8 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.685 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.755 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	31.25 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	31.25 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	6.25 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4.725 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	4.665 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.2525 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	12.54 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.2515 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	1.2505 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	12.515 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.25 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.5 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.23 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	2.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

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
							Perfluorobutanesulfonic acid (PFBS)	1.11 ng/mL
							Perfluorobutanoic acid (PFBA)	5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	1.205 ng/mL
							Perfluorodecanoic acid (PFDA)	1.25 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	1.21 ng/mL
							Perfluorododecanoic acid (PFDoA)	1.25 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	1.19 ng/mL
							Perfluoroheptanoic acid (PFHpA)	1.25 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	1.1405 ng/mL
							Perfluorohexanoic acid (PFHxA)	1.25 ng/mL
							Perfluorononanesulfonic acid (PFNS)	1.2 ng/mL
							Perfluorononanoic acid (PFNA)	1.249 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	1.255 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1.16 ng/mL
							Perfluorooctanoic acid (PFOA)	1.2515 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	1.175 ng/mL
							Perfluoropentanoic acid (PFPeA)	2.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	1.25 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	1.25 ng/mL
							Perfluoroundecanoic acid (PFUnA)	1.25 ng/mL
.1633_125_SS_00211	07/19/26	01/19/26	Methanol, Lot EK350-US	25 mL	PFC_ST_05275	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05300	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05310	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05325	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05332	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05335	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05354	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05463	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05473	0.2 mL	13C4 PFBA	400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05477	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05480	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05486	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05500	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05534	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05560	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05583	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05590	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05614	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05643	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05701	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05846	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05878	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
..PFC_ST_05275	01/19/27	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
..PFC_ST_05300	01/08/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
..PFC_ST_05310	01/19/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
..PFC_ST_05325	01/08/27	Wellington Laboratories Inc., Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50 ug/mL
..PFC_ST_05332	01/08/27	Wellington Laboratories Inc., Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50 ug/mL
..PFC_ST_05335	01/08/27	Wellington Laboratories Inc., Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
..PFC_ST_05354	01/08/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
..PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
..PFC_ST_05463	01/08/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
..PFC_ST_05473	01/08/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
..PFC_ST_05477	01/08/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
..PFC_ST_05480	01/08/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
..PFC_ST_05486	01/08/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
..PFC_ST_05500	01/19/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
..PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
..PFC_ST_05534	01/08/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
..PFC_ST_05560	12/31/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
..PFC_ST_05583	01/13/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
..PFC_ST_05590	01/19/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
..PFC_ST_05614	01/19/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
..PFC_ST_05643	01/19/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
..PFC_ST_05701	01/19/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
..PFC_ST_05846	01/19/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05878	01/19/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
.PFC_ST_05090	10/06/26	Wellington, Lot 1633STK0625			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	943 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	960 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	937 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	951 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	6250 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	6250 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	1250 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	945 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	933 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1000 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	250.5 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2508 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250.3 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	250.1 ng/mL
							N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2503 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	500 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	446 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	500 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	500 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
							Perfluorobutanoic acid (PFBA)	1000 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	241 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorodecanoic acid (PFDA)	250 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	242 ng/mL
							Perfluorododecanoic acid (PFDoA)	250 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	238 ng/mL
							Perfluoroheptanoic acid (PFHpA)	250 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	228.1 ng/mL
							Perfluorohexanoic acid (PFHxA)	250 ng/mL
							Perfluorononanesulfonic acid (PFNS)	240 ng/mL
							Perfluorononanoic acid (PFNA)	249.8 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	251 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	232 ng/mL
							Perfluorooctanoic acid (PFOA)	250.3 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
							Perfluoropentanoic acid (PFPeA)	500 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
							Perfluoroundecanoic acid (PFUnA)	250 ng/mL
1633_125_IS_00084	04/28/26	10/29/25	Methanol, Lot 253669	10 mL	PFC_ST_04183	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_04184	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_04195	0.08 mL	18O2 PFHxS	379.2 ng/mL
					PFC_ST_04248	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_04261	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_04290	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_04469	0.2 mL	13C4 PFOA	1000 ng/mL
.PFC_ST_04183	08/11/26	Wellington Laboratories, Lot MPFNA1024			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
.PFC_ST_04184	08/11/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
.PFC_ST_04195	08/11/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
.PFC_ST_04248	06/04/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
.PFC_ST_04261	08/08/26	Wellington Laboratories, Lot MPFOS0325			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
.PFC_ST_04290	08/11/26	Wellington Laboratories, Lot MPFHxA1124			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
.PFC_ST_04469	08/11/26	Wellington Laboratories, Lot MPFOA1124			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
1633_125_IS_V_00511	04/28/26	11/12/25	Methanol, Lot 251457	10 mL	1633_125_IS_00080	1 mL	13C5 PFNA	40 ng/mL
							13C2 PFDA	40 ng/mL
							18O2 PFHxS	37.92 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C3-PFBA	40 ng/mL
							13C4 PFOS	38.32 ng/mL
							13C2 PFHxA	100 ng/mL
							13C4 PFOA	100 ng/mL
.1633_125_IS_00080	04/28/26	10/29/25	Methanol, Lot 253669	10 mL	PFC_ST_04183	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_04184	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_04195	0.08 mL	18O2 PFHxS	379.2 ng/mL
					PFC_ST_04248	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_04261	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_04290	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_04469	0.2 mL	13C4 PFOA	1000 ng/mL
..PFC_ST_04183	08/11/26	Wellington Laboratories, Lot MPFNA1024			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_04184	08/11/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_04195	08/11/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
..PFC_ST_04248	06/04/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_04261	08/08/26	Wellington Laboratories, Lot MPFOS0325			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_04290	08/11/26	Wellington Laboratories, Lot MPFHxA1124			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_04469	08/11/26	Wellington Laboratories, Lot MPFOA1124			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
1633_125_IS_V_00610	06/30/26	02/17/26	Methanol, Lot 251457	10 mL	1633_125_IS_00093	1 mL	13C3-PFBA	40 ng/mL
							13C5 PFNA	40 ng/mL
							13C2 PFDA	40 ng/mL
							13C4 PFOS	38.32 ng/mL
							18O2 PFHxS	37.92 ng/mL
							13C2 PFHxA	100 ng/mL
							13C4 PFOA	100 ng/mL
.1633_125_IS_00093	06/30/26	12/31/25	Methanol, Lot 253669	10 mL	PFC_ST_04712	0.08 mL	13C3-PFBA	400 ng/mL
					PFC_ST_05025	0.08 mL	13C5 PFNA	400 ng/mL
					PFC_ST_05044	0.08 mL	13C2 PFDA	400 ng/mL
					PFC_ST_05137	0.08 mL	13C4 PFOS	383.2 ng/mL
					PFC_ST_05282	0.08 mL	18O2 PFHxS	379.2 ng/mL
					PFC_ST_05297	0.2 mL	13C2 PFHxA	1000 ng/mL
					PFC_ST_05307	0.2 mL	13C4 PFOA	1000 ng/mL
..PFC_ST_04712	08/11/26	Wellington Laboratories, Lot M3PFBA0125			(Purchased Reagent)		13C3-PFBA	50000 ng/mL
..PFC_ST_05025	11/12/26	Wellington Laboratories, Lot MPFNA0425			(Purchased Reagent)		13C5 PFNA	50000 ng/mL
..PFC_ST_05044	11/12/26	Wellington Laboratories, Lot MPFDA1024			(Purchased Reagent)		13C2 PFDA	50000 ng/mL
..PFC_ST_05137	11/12/26	Wellington Laboratories, Lot MPFOS0825			(Purchased Reagent)		13C4 PFOS	47900 ng/mL
..PFC_ST_05282	11/12/26	Wellington Laboratories, Lot MPFHxS0924			(Purchased Reagent)		18O2 PFHxS	47400 ng/mL
..PFC_ST_05297	12/31/26	Wellington Laboratories, Lot MPFHxA0825			(Purchased Reagent)		13C2 PFHxA	50000 ng/mL
..PFC_ST_05307	12/31/26	Wellington Laboratories, Lot MPFOA0525			(Purchased Reagent)		13C4 PFOA	50000 ng/mL
1633_125_MS_L_00127	06/30/26	12/31/25	Methanol, Lot EJ935-US	10 mL	1633_125_IN_A_00098	0.5 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	62.5 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	62.5 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	11.15 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorononanesulfonic acid (PFNS)	12.025 ng/mL
							Perfluorooctanoic acid (PFOA)	12.5 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	12.5 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	12.5 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	11.825 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	11.625 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	11.75 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	12.5 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	12.5 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	12.5 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	12.5 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	12.5 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	12.5 ng/mL
							PFECHS	11.55 ng/mL
							FBSA	12.5 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	23.45 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	23.8 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	11.4 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	11.925 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	12.5 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	11.675 ng/mL
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	11.8 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	25 ng/mL
							FHxSA	12.5 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	12.05 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorododecanesulfonic acid (PFDoS)	12.125 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	24 ng/mL
							Perfluoropentanoic acid (PFPeA)	12.5 ng/mL
							Perfluorohexanoic acid (PFHxA)	12.5 ng/mL
							Perfluorododecanoic acid (PFDoA)	12.5 ng/mL
							bis(trifluoromethane)sulfonimide	12.5125 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	11.1 ng/mL
							Perfluorobutanoic acid (PFBA)	25 ng/mL
							Perfluoroheptanoic acid (PFHpA)	12.5 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9.375 ng/mL
							Perfluorononanoic acid (PFNA)	12.5 ng/mL
							Perfluoroundecanoic acid (PFUnA)	12.5 ng/mL
							Perfluorodecanoic acid (PFDA)	12.5 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	12.5 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	62.5 ng/mL
							Perfluoropropionic acid	62.5 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	62.5 ng/mL
							Perfluorooctadecanoic acid	12.5 ng/mL
.1633_125_IN_A_00098	06/30/26	12/31/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_02966	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_02967	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04434	0.025 mL	bis(trifluoromethane)sulfonimide	250.25 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04949	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
					PFC_ST_04970	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_05446	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_05981	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
..PFC_ST_02966	12/31/26	Wellington Laboratories, Lot NMeFOSE1123M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_02967	12/31/26	Wellington Laboratories, Lot NEtFOSE1123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04434	11/04/26	AccuStandard, Lot 225031579			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	100.1 ug/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04949	12/08/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
..PFC_ST_04970	12/31/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_05446	12/08/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_05981	09/09/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
1633_125_MS_M_00150	06/30/26	12/31/25	Methanol, Lot EJ952-US	10 mL	1633_125_IN_A_00099	4 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	500 ng/mL
							N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	500 ng/mL
							Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	89.2 ng/mL
							Perfluorononanesulfonic acid (PFNS)	96.2 ng/mL
							Perfluorooctanoic acid (PFOA)	100 ng/mL
							Perfluorooctanesulfonamide (PFOSA)	100 ng/mL
							N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	100 ng/mL
							4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	94.6 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	93 ng/mL
							Perfluoropentanesulfonic acid (PFPeS)	94 ng/mL
							N-methylperfluorooctane sulfonamide (NMeFOSA)	100 ng/mL
							N-ethylperfluorooctane sulfonamide (NEtFOSA)	100 ng/mL
							N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	100 ng/mL
							Perfluorotridecanoic acid (PFTrDA)	100 ng/mL
							Perfluoro-3-methoxypropanoic acid (PFMPA)	100 ng/mL
							Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	100 ng/mL
							PFECHS	92.4 ng/mL
							FBSA	100 ng/mL
							1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	187.6 ng/mL
							1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	190.4 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	91.2 ng/mL
							Perfluoroheptanesulfonic acid (PFHpS)	95.4 ng/mL
							Perfluoro-4-methoxybutanoic acid (PFMBA)	100 ng/mL
							9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	93.4 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	94.4 ng/mL
							3-Perfluoropropylpropanoic acid (3:3 FTCA)	200 ng/mL
							FHxSA	100 ng/mL
							Perfluorodecanesulfonic acid (PFDS)	96.4 ng/mL
							Perfluorododecanesulfonic acid (PFDoS)	97 ng/mL
							1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	192 ng/mL
							Perfluoropentanoic acid (PFPeA)	100 ng/mL
							Perfluorohexanoic acid (PFHxA)	100 ng/mL
							Perfluorododecanoic acid (PFDoA)	100 ng/mL
							bis(trifluoromethane)sulfonimide	100.1 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	88.8 ng/mL
							Perfluorobutanoic acid (PFBA)	200 ng/mL
							Perfluoroheptanoic acid (PFHpA)	100 ng/mL
							Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	75 ng/mL
							Perfluorononanoic acid (PFNA)	100 ng/mL
							Perfluoroundecanoic acid (PFUnA)	100 ng/mL
							Perfluorodecanoic acid (PFDA)	100 ng/mL
							Perfluorotetradecanoic acid (PFTeDA)	100 ng/mL
							3-Perfluoropentylpropanoic acid (5:3 FTCA)	500 ng/mL
							Perfluoropropionic acid	500 ng/mL
							3-Perfluoroheptylpropanoic acid (7:3 FTCA)	500 ng/mL
							Perfluorooctadecanoic acid	100 ng/mL
.1633_125_IN_A_00099	06/30/26	12/31/25	Methanol, Lot EJ935-US	10 mL	PFC_ST_02966	0.25 mL	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	1250 ng/mL
					PFC_ST_02967	0.25 mL	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	1250 ng/mL
					PFC_ST_03140	0.05 mL	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	223 ng/mL
					PFC_ST_03527	0.05 mL	Perfluorononanesulfonic acid (PFNS)	240.5 ng/mL
					PFC_ST_03637	0.05 mL	Perfluorooctanoic acid (PFOA)	250 ng/mL
					PFC_ST_03642	0.05 mL	Perfluorooctanesulfonamide (PFOSA)	250 ng/mL

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_03656	0.05 mL	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	250 ng/mL
					PFC_ST_03665	0.05 mL	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	236.5 ng/mL
					PFC_ST_03678	0.05 mL	Perfluorooctanesulfonic acid (PFOS)	232.5 ng/mL
					PFC_ST_03698	0.05 mL	Perfluoropentanesulfonic acid (PFPeS)	235 ng/mL
					PFC_ST_03719	0.05 mL	N-methylperfluorooctane sulfonamide (NMeFOSA)	250 ng/mL
					PFC_ST_03720	0.05 mL	N-ethylperfluorooctane sulfonamide (NEtFOSA)	250 ng/mL
					PFC_ST_03735	0.05 mL	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	250 ng/mL
					PFC_ST_03739	0.05 mL	Perfluorotridecanoic acid (PFTrDA)	250 ng/mL
					PFC_ST_03768	0.05 mL	Perfluoro-3-methoxypropanoic acid (PFMPA)	250 ng/mL
					PFC_ST_03776	0.05 mL	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	250 ng/mL
					PFC_ST_03780	0.05 mL	PFECHS	231 ng/mL
					PFC_ST_03790	0.05 mL	FBSA	250 ng/mL
					PFC_ST_03923	0.1 mL	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	469 ng/mL
					PFC_ST_03928	0.1 mL	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	476 ng/mL
					PFC_ST_03946	0.05 mL	Perfluorohexanesulfonic acid (PFHxS)	228 ng/mL
					PFC_ST_03948	0.05 mL	Perfluoroheptanesulfonic acid (PFHpS)	238.5 ng/mL
					PFC_ST_03982	0.05 mL	Perfluoro-4-methoxybutanoic acid (PFMBA)	250 ng/mL
					PFC_ST_03987	0.05 mL	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	233.5 ng/mL
					PFC_ST_03988	0.05 mL	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	236 ng/mL
					PFC_ST_03990	0.1 mL	3-Perfluoropropylpropanoic acid (3:3 FTCA)	500 ng/mL
					PFC_ST_04012	0.05 mL	FHxSA	250 ng/mL
					PFC_ST_04048	0.05 mL	Perfluorodecanesulfonic acid (PFDS)	241 ng/mL
					PFC_ST_04051	0.05 mL	Perfluorododecanesulfonic acid (PFDoS)	242.5 ng/mL
					PFC_ST_04080	0.1 mL	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	480 ng/mL
					PFC_ST_04130	0.05 mL	Perfluoropentanoic acid (PFPeA)	250 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_04132	0.05 mL	Perfluorohexanoic acid (PFHxA)	250 ng/mL
					PFC_ST_04167	0.05 mL	Perfluorododecanoic acid (PFDoA)	250 ng/mL
					PFC_ST_04434	0.025 mL	bis(trifluoromethane)sulfonimide	250.25 ng/mL
					PFC_ST_04490	0.05 mL	Perfluorobutanesulfonic acid (PFBS)	222 ng/mL
					PFC_ST_04767	0.1 mL	Perfluorobutanoic acid (PFBA)	500 ng/mL
					PFC_ST_04774	0.05 mL	Perfluoroheptanoic acid (PFHpA)	250 ng/mL
					PFC_ST_04793	0.0375 mL	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	187.5 ng/mL
					PFC_ST_04804	0.05 mL	Perfluorononanoic acid (PFNA)	250 ng/mL
					PFC_ST_04807	0.05 mL	Perfluoroundecanoic acid (PFUnA)	250 ng/mL
					PFC_ST_04815	0.05 mL	Perfluorodecanoic acid (PFDA)	250 ng/mL
					PFC_ST_04858	0.05 mL	Perfluorotetradecanoic acid (PFTeDA)	250 ng/mL
					PFC_ST_04949	0.25 mL	3-Perfluoropentylpropanoic acid (5:3 FTCA)	1250 ng/mL
					PFC_ST_04970	0.25 mL	Perfluoropropionic acid	1250 ng/mL
					PFC_ST_05446	0.25 mL	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	1250 ng/mL
					PFC_ST_05981	0.05 mL	Perfluorooctadecanoic acid	250 ng/mL
..PFC_ST_02966	12/31/26	Wellington Laboratories, Lot NMeFOSE1123M			(Purchased Reagent)		N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	50000 ng/mL
..PFC_ST_02967	12/31/26	Wellington Laboratories, Lot NEtFOSE1123M			(Purchased Reagent)		N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	50000 ng/mL
..PFC_ST_03140	11/04/26	Wellington Laboratories, Lot PFEESA0524			(Purchased Reagent)		Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	44600 ng/mL
..PFC_ST_03527	11/04/26	Wellington Laboratories, Lot LPFNS0724			(Purchased Reagent)		Perfluorononanesulfonic acid (PFNS)	48100 ng/mL
..PFC_ST_03637	11/04/26	Wellington Laboratories, Lot br-PFOA0524			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50000 ng/mL
..PFC_ST_03642	09/09/26	Wellington Laboratories, Lot brFOSA0225			(Purchased Reagent)		Perfluorooctanesulfonamide (PFOSA)	50000 ng/mL
..PFC_ST_03656	11/04/26	Wellington Laboratories, Lot brNEtFOSAA0924			(Purchased Reagent)		N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50000 ng/mL
..PFC_ST_03665	11/04/26	Wellington Laboratories, Lot NaDONA1124			(Purchased Reagent)		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47300 ng/mL
..PFC_ST_03678	11/04/26	Wellington Laboratories, Lot br-PFOSK0924			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46500 ng/mL
..PFC_ST_03698	11/04/26	Wellington Laboratories, Lot LPFPeS0924			(Purchased Reagent)		Perfluoropentanesulfonic acid (PFPeS)	47000 ng/mL
..PFC_ST_03719	11/04/26	Wellington Laboratories, Lot brNMeFOSA0924			(Purchased Reagent)		N-methylperfluorooctane sulfonamide (NMeFOSA)	50000 ng/mL
..PFC_ST_03720	11/04/26	Wellington Laboratories, Lot brNEtFOSA1024			(Purchased Reagent)		N-ethylperfluorooctane sulfonamide (NEtFOSA)	50000 ng/mL
..PFC_ST_03735	11/04/26	Wellington Laboratories, Lot brNMeFOSAA0824			(Purchased Reagent)		N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_03739	11/04/26	Wellington Laboratories, Lot PFTrDA0724			(Purchased Reagent)		Perfluorotridecanoic acid (PFTrDA)	50000 ng/mL
..PFC_ST_03768	11/04/26	Wellington Laboratories, Lot PF4OPeA1024			(Purchased Reagent)		Perfluoro-3-methoxypropanoic acid (PFMPA)	50000 ng/mL
..PFC_ST_03776	11/04/26	Wellington Laboratories, Lot 36OPFHpA0424			(Purchased Reagent)		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50000 ng/mL
..PFC_ST_03780	11/04/26	Wellington Laboratoires, Lot PFECHS0225			(Purchased Reagent)		PFECHS	46200 ppb
..PFC_ST_03790	07/21/26	Wellington Laboratories, Lot FBSA0225I			(Purchased Reagent)		FBSA	50000 ng/mL
..PFC_ST_03923	11/04/26	Wellington Laboratories, Lot 42FTS0924			(Purchased Reagent)		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	46900 ng/mL
..PFC_ST_03928	10/15/26	Wellington Laboratories, Lot 62FTS0225			(Purchased Reagent)		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	47600 ng/mL
..PFC_ST_03946	11/04/26	Wellington Laboratories, Lot brPFHxSK0724			(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45600 ng/mL
..PFC_ST_03948	11/04/26	Wellington Laboratories, Lot LPFHpS1024			(Purchased Reagent)		Perfluoroheptanesulfonic acid (PFHpS)	47700 ng/mL
..PFC_ST_03982	11/04/26	Wellington Laboratories, Lot PF5OHxA0724			(Purchased Reagent)		Perfluoro-4-methoxybutanoic acid (PFMBA)	50000 ng/mL
..PFC_ST_03987	11/04/26	Wellington Laboratories, Lot 9ClPF3ONS0125			(Purchased Reagent)		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46700 ng/mL
..PFC_ST_03988	11/04/26	Wellington Laboratories, Lot 11ClPF3OUdS0125			(Purchased Reagent)		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47200 ng/mL
..PFC_ST_03990	11/04/26	Wellington Laboratories, Lot FPrPA1024			(Purchased Reagent)		3-Perfluoropropylpropanoic acid (3:3 FTCA)	50000 ng/mL
..PFC_ST_04012	11/04/26	Wellington Laboratories, Lot FHxSA0424I			(Purchased Reagent)		FHxSA	50000 ng/mL
..PFC_ST_04048	11/04/26	Wellington Laboratories, Lot LPFDS0624			(Purchased Reagent)		Perfluorodecanesulfonic acid (PFDS)	48200 ng/mL
..PFC_ST_04051	11/04/26	Wellington Laboratories, Lot LPFDoS1124			(Purchased Reagent)		Perfluorododecanesulfonic acid (PFDoS)	48500 ng/mL
..PFC_ST_04080	11/04/26	Wellington Laboratories, Lot 82FTS0624			(Purchased Reagent)		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	48000 ng/mL
..PFC_ST_04130	07/21/26	Wellington Laboratories, Lot PFPeA0924			(Purchased Reagent)		Perfluoropentanoic acid (PFPeA)	50000 ng/mL
..PFC_ST_04132	11/04/26	Wellington Laboratories, Lot PFHxA0325			(Purchased Reagent)		Perfluorohexanoic acid (PFHxA)	50000 ng/mL
..PFC_ST_04167	11/04/26	Wellington Laboratories, Lot PFDoA1124			(Purchased Reagent)		Perfluorododecanoic acid (PFDoA)	50000 ng/mL
..PFC_ST_04434	11/04/26	AccuStandard, Lot 225031579			(Purchased Reagent)		bis(trifluoromethane)sulfonimide	100.1 ug/mL
..PFC_ST_04490	11/04/26	Wellington Laboratories, Lot LPFBS0125			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44400 ng/mL
..PFC_ST_04767	11/04/26	Wellington Laboratories, Lot PFBA0625			(Purchased Reagent)		Perfluorobutanoic acid (PFBA)	50000 ng/mL
..PFC_ST_04774	11/04/26	Wellington Laboratories, Lot PFHpA1124			(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	50000 ng/mL
..PFC_ST_04793	11/04/26	Wellington Laboratories, Lot HFPODA0425			(Purchased Reagent)		Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	50000 ng/mL
..PFC_ST_04804	11/04/26	Wellington Laboratories, Lot br-PFNA0724			(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..PFC_ST_04807	11/04/26	Wellington Laboratories, Lot PFUdA0425			(Purchased Reagent)		Perfluoroundecanoic acid (PFUnA)	50000 ng/mL
..PFC_ST_04815	11/04/26	Wellington Laboratories, Lot PFDA0724			(Purchased Reagent)		Perfluorodecanoic acid (PFDA)	50000 ng/mL
..PFC_ST_04858	11/04/26	Wellington Laboratories, Lot PFTeDA0425			(Purchased Reagent)		Perfluorotetradecanoic acid (PFTeDA)	50000 ng/mL
..PFC_ST_04949	12/08/26	Wellington Laboratories, Lot FPePA0425			(Purchased Reagent)		3-Perfluoropentylpropanoic acid (5:3 FTCA)	50000 ng/mL
..PFC_ST_04970	12/31/26	Wellington Laboratories, Lot PFPrA0825			(Purchased Reagent)		Perfluoropropionic acid	50000 ng/mL
..PFC_ST_05446	12/08/26	Wellington Laboratories, Lot FHpPA1224			(Purchased Reagent)		3-Perfluoroheptylpropanoic acid (7:3 FTCA)	50000 ng/mL
..PFC_ST_05981	09/09/26	Wellington Laboratories, Lot PFODA0224			(Purchased Reagent)		Perfluorooctadecanoic acid	50000 ng/mL
1633_125_SS_00162	05/22/26	08/11/25	Methanol, Lot EK350-US	25 mL	PFC_ST_04192	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_04250	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_04255	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_04283	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_04296	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_04334	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_04358	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_04366	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_04485	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_04487	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_04489	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_04512	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_04530	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_04536	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_04563	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_04568	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_04605	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_04617	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
					PFC_ST_04627	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_04631	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_04652	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_04680	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_04687	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_04695	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_04713	0.5 mL	d3-NMeFOSAA	1000 ng/mL
.PFC_ST_04192	08/11/26	Wellington Laboratories, Lot M3PFBS0225			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
.PFC_ST_04250	05/22/26	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
.PFC_ST_04255	08/11/26	Wellington Laboratories, Lot MPFDoA1124			(Purchased Reagent)		13C2 PFDoA	50000 ng/mL
.PFC_ST_04283	08/11/26	Wellington Laboratories, Lot M5PFPeA1124			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
.PFC_ST_04296	07/28/26	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
.PFC_ST_04334	08/11/26	Wellington Laboratories, Lot M3PFHxS0425			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
.PFC_ST_04358	08/11/26	Wellington Laboratories, Lot M8PFOA0724			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
.PFC_ST_04366	08/11/26	Wellington Laboratories, Lot M7PFUdA1124			(Purchased Reagent)		13C7 PFUnA	50000 ng/mL
.PFC_ST_04485	08/11/26	Wellington Laboratories, Lot M5PFHxA1224			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
.PFC_ST_04487	08/11/26	Wellington Laboratories, Lot M9PFNA0325			(Purchased Reagent)		13C9 PFNA	50000 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.PFC_ST_04489	08/11/26	Wellington Laboratories, Lot M3HFPODA0125			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
.PFC_ST_04512	08/11/26	Wellington Laboratories, Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50000 ng/mL
.PFC_ST_04530	08/11/26	Wellington Laboratories, Lot M8FOSA0525I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
.PFC_ST_04536	08/11/26	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
.PFC_ST_04563	08/11/26	Wellington Laboratories, Lot M4PFHpA1024			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
.PFC_ST_04568	08/11/26	Wellington Laboratories, Lot M6PFDA0525			(Purchased Reagent)		13C6 PFDA	50000 ng/mL
.PFC_ST_04605	08/11/26	Wellington Laboratories, Lot MPFBA0924			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
.PFC_ST_04617	08/11/26	Wellington Laboratories, Lot d9NEtFOSE0425M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
.PFC_ST_04627	08/11/26	Wellington Laboratories, Lot M262FTS1224			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
.PFC_ST_04631	08/11/26	Wellington Laboratories, Lot M242FTS0125			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
.PFC_ST_04652	07/28/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
.PFC_ST_04680	08/11/26	Wellington Laboratories, Lot d5NEtFOSAA0125			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
.PFC_ST_04687	08/11/26	Wellington Laboratories, Lot d7NMeFOSE0425M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
.PFC_ST_04695	08/11/26	Wellington Laboratories, Lot dNEtFOSA1124M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
.PFC_ST_04713	08/11/26	Wellington Laboratories, Lot d3NMeFOSAA0525			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
1633_125_SS_00191	05/11/26	11/11/25	Methanol, Lot EK350-US	25 mL	PFC_ST_04597	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_04769	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05001	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05002	0.2 mL	13C8 FOSA	400 ng/mL
					PFC_ST_05016	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05037	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05059	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05061	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05074	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05078	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05107	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05111	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05121	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05153	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05167	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05176	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05191	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05195	0.2 mL	13C9 PFNA	400 ng/mL
					PFC_ST_05200	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05207	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05214	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05217	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05236	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05251	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
					PFC_ST_05259	0.5 mL	d5-NEtFOSAA	1000 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.PFC_ST_04597	11/11/26	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
.PFC_ST_04769	11/11/26	Wellington Laboratories, Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50000 ng/mL
.PFC_ST_05001	11/11/26	Wellington Laboratories, Lot dNEtFOSA1124M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
.PFC_ST_05002	11/11/26	Wellington Laboratories, Lot M8FOSA0525I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL
.PFC_ST_05016	11/11/26	Wellington Laboratories, Lot MPFDoA0525			(Purchased Reagent)		13C2 PFDoA	50000 ng/mL
.PFC_ST_05037	11/11/26	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
.PFC_ST_05059	11/11/26	Wellington Laboratories, Lot M3PFHxS0425			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
.PFC_ST_05061	11/11/26	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
.PFC_ST_05074	11/11/26	Wellington Laboratories, Lot M7PFUdA0725			(Purchased Reagent)		13C7 PFUnA	50000 ng/mL
.PFC_ST_05078	11/11/26	Cambridge Isotope Laboratories, Inc, Lot SEDG-006			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
.PFC_ST_05107	10/27/26	Wellington Laboratories, Lot M242FTS0725			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
.PFC_ST_05111	11/11/26	Wellington Laboratories, Lot M262FTS0625			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
.PFC_ST_05121	11/11/26	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
.PFC_ST_05153	11/11/26	Wellington Laboratories, Lot d7NMeFOSE0925M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
.PFC_ST_05167	11/11/26	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
.PFC_ST_05176	11/11/26	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
.PFC_ST_05191	11/11/26	Wellington Laboratories, Lot M6PFDA0925			(Purchased Reagent)		13C6 PFDA	50000 ng/mL
.PFC_ST_05195	11/11/26	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
.PFC_ST_05200	11/11/26	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
.PFC_ST_05207	11/11/26	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
.PFC_ST_05214	11/11/26	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
.PFC_ST_05217	11/11/26	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
.PFC_ST_05236	11/11/26	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
.PFC_ST_05251	11/11/26	Wellington Laboratories, Lot d9NEtFOSE0425M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
.PFC_ST_05259	11/11/26	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
1633_125_SS_00224	08/16/26	02/16/26	Methanol, Lot 253675	25 mL	PFC_ST_05339	0.2 mL	13C2 PFTeDA	400 ng/mL
					PFC_ST_05455	0.2 mL	d3-NMePFOSA	400 ng/mL
					PFC_ST_05485	0.2 mL	13C8 PFOS	383.2 ng/mL
					PFC_ST_05511	0.2 mL	d5-NEtPFOSA	400 ng/mL
					PFC_ST_05525	0.2 mL	13C6 PFDA	400 ng/mL
					PFC_ST_05531	0.2 mL	13C5 PFPeA	400 ng/mL
					PFC_ST_05577	0.2 mL	13C3 PFBS	372.8 ng/mL
					PFC_ST_05588	0.5 mL	d3-NMeFOSAA	1000 ng/mL
					PFC_ST_05610	0.5 mL	d5-NEtFOSAA	1000 ng/mL
					PFC_ST_05640	0.5 mL	13C2 4:2 FTS	938 ng/mL
					PFC_ST_05650	0.5 mL	13C2 8:2 FTS	960 ng/mL
					PFC_ST_05715	0.5 mL	13C2 6:2 FTS	952 ng/mL
					PFC_ST_05727	0.2 mL	13C3-PFPrA	400 ng/mL
					PFC_ST_05739	0.2 mL	13C3-PFDoS	400 ng/mL
					PFC_ST_05825	0.2 mL	13C9 PFNA	400 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					PFC_ST_05886	0.5 mL	d9-N-EtFOSE-M	1000 ng/mL
					PFC_ST_05892	0.5 mL	d7-N-MeFOSE-M	1000 ng/mL
					PFC_ST_05895	0.2 mL	13C3 HFPO-DA	400 ng/mL
					PFC_ST_05944	0.2 mL	13C4 PFBA	400 ng/mL
					PFC_ST_05953	0.2 mL	13C5 PFHxA	400 ng/mL
					PFC_ST_05956	0.2 mL	13C4 PFHpA	400 ng/mL
					PFC_ST_05960	0.2 mL	13C8 PFOA	400 ng/mL
					PFC_ST_05965	0.2 mL	13C2 PFDoA	400 ng/mL
					PFC_ST_05968	0.2 mL	13C7 PFUnA	400 ng/mL
					PFC_ST_05974	0.2 mL	13C3 PFHxS	379.2 ng/mL
					PFC_ST_05980	0.2 mL	13C8 FOSA	400 ng/mL
.PFC_ST_05339	01/08/27	Wellington Laboratories Inc., Lot M2PFTeDA0525			(Purchased Reagent)		13C2 PFTeDA	50 ug/mL
.PFC_ST_05455	01/19/27	Wellington Laboratories, Lot dNMeFOSA1024M			(Purchased Reagent)		d3-NMePFOSA	50000 ng/mL
.PFC_ST_05485	02/16/27	Wellington Laboratories, Lot M8PFOS1224			(Purchased Reagent)		13C8 PFOS	47900 ng/mL
.PFC_ST_05511	01/08/27	Wellington Laboratories, Lot dNEtFOSA1125M			(Purchased Reagent)		d5-NEtPFOSA	50000 ng/mL
.PFC_ST_05525	02/16/27	Wellington Laboratories Inc., Lot M6PFDA1125			(Purchased Reagent)		13C6 PFDA	50 ug/mL
.PFC_ST_05531	02/16/27	Wellington Laboratories, Lot M5PFPeA0825			(Purchased Reagent)		13C5 PFPeA	50000 ng/mL
.PFC_ST_05577	02/16/27	Wellington Laboratories, Lot M3PFBS0825			(Purchased Reagent)		13C3 PFBS	46600 ng/mL
.PFC_ST_05588	02/16/27	Wellington Laboratories, Lot d3NMeFOSAA0925			(Purchased Reagent)		d3-NMeFOSAA	50000 ng/mL
.PFC_ST_05610	02/16/27	Wellington Laboratories, Lot d5NEtFOSAA0525			(Purchased Reagent)		d5-NEtFOSAA	50000 ng/mL
.PFC_ST_05640	02/16/27	Wellington Laboratories, Lot M242FTS1225			(Purchased Reagent)		13C2 4:2 FTS	46900 ng/mL
.PFC_ST_05650	02/16/27	Wellington Laboratories, Lot M282FTS0425			(Purchased Reagent)		13C2 8:2 FTS	48000 ng/mL
.PFC_ST_05715	02/16/27	Wellington Laboratories, Lot M262FTS1125			(Purchased Reagent)		13C2 6:2 FTS	47600 ng/mL
.PFC_ST_05727	02/16/27	Cambridge Isotope Laboratories, Inc, Lot B003784			(Purchased Reagent)		13C3-PFPrA	50000 ng/mL
.PFC_ST_05739	02/06/27	LGC, Lot 1-H1536184MW			(Purchased Reagent)		13C3-PFDoS	50 ug/mL
.PFC_ST_05825	02/16/27	Wellington Laboratories, Lot M9PFNA0625			(Purchased Reagent)		13C9 PFNA	50000 ng/mL
.PFC_ST_05886	02/05/27	Wellington Laboratories, Lot d9NEtFOSE1025M			(Purchased Reagent)		d9-N-EtFOSE-M	50000 ng/g
.PFC_ST_05892	02/16/27	Wellington Laboratories, Lot d7NMeFOSE1225M			(Purchased Reagent)		d7-N-MeFOSE-M	50000 ng/mL
.PFC_ST_05895	02/16/27	Wellington Laboratories, Lot M3HFPODA0825			(Purchased Reagent)		13C3 HFPO-DA	50000 ng/mL
.PFC_ST_05944	02/06/27	Wellington Laboratories, Lot MPFBA0725			(Purchased Reagent)		13C4 PFBA	50000 ng/mL
.PFC_ST_05953	02/16/27	Wellington Laboratories, Lot M5PFHxA0925			(Purchased Reagent)		13C5 PFHxA	50000 ng/mL
.PFC_ST_05956	02/16/27	Wellington Laboratories, Lot M4PFHpA0725			(Purchased Reagent)		13C4 PFHpA	50000 ng/mL
.PFC_ST_05960	02/16/27	Wellington Laboratories, Lot M8PFOA0625			(Purchased Reagent)		13C8 PFOA	50000 ng/mL
.PFC_ST_05965	02/16/27	Wellington Laboratories Inc., Lot MPFDoA1225			(Purchased Reagent)		13C2 PFDoA	50000 ng/mL
.PFC_ST_05968	02/16/27	Wellington Laboratories, Lot M7PFUdA0925			(Purchased Reagent)		13C7 PFUnA	50000 ng/mL
.PFC_ST_05974	02/16/27	Wellington Laboratories, Lot M3PFHxS1025			(Purchased Reagent)		13C3 PFHxS	47400 ng/mL
.PFC_ST_05980	02/16/27	Wellington Laboratories, Lot M8FOSA1225I			(Purchased Reagent)		13C8 FOSA	50000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
1633_125_WDM_00018	05/12/26	11/12/25	Methanol, Lot 9472110292533A	10 mL	PFC_IN_01525	0.05 mL	Taurodeoxycholic Acid	25.3 ng/mL
							Taurochenodeoxycholic acid	23.7025 ng/mL
							Tauroursodeoxycholic acid	25.45 ng/mL
.PFC_IN_01525	08/02/26	11/12/25	Methanol, Lot EH850-US	5 mL	PFC_IN_01524	0.1 mL	Taurodeoxycholic Acid	5060 ng/mL
							Taurochenodeoxycholic acid	4740.5 ng/mL
							Tauroursodeoxycholic acid	5090 ng/mL
..PFC_IN_01524	08/02/26	11/12/25	Methanol, Lot EH850-US	4 mL	PFC_IN_01521	1 mL	Taurodeoxycholic Acid	253000 ng/mL
					PFC_IN_01522	1 mL	Taurochenodeoxycholic acid	237025 ng/mL
					PFC_IN_01523	1 mL	Tauroursodeoxycholic acid	254500 ng/mL
...PFC_IN_01521	09/29/26	11/12/25	Methanol, Lot EI950-US	50 mL	PFC_ST_TDCA_00005	0.0506 g	Taurodeoxycholic Acid	1012000 ng/mL
....PFC_ST_TDCA_00005	09/29/26	Sigma Aldrich, Lot SLCD5024			(Purchased Reagent)		Taurodeoxycholic Acid	1000000 mg/Kg
...PFC_IN_01522	08/02/26	11/12/25	Methanol, Lot EH850-US	50 mL	PFC_ST_TCDCA_00001	0.0499 g	Taurochenodeoxycholic acid	948100 ng/mL
....PFC_ST_TCDCA_00001	08/02/26	Sigma Aldrich, Lot SLCJ5790			(Purchased Reagent)		Taurochenodeoxycholic acid	950000 ppm
...PFC_IN_01523	09/30/26	11/12/25	Methanol, Lot EH850-US	50 mL	PFC_ST_TUDCA_00002	0.0509 g	Tauroursodeoxycholic acid	1018000 ng/mL
....PFC_ST_TUDCA_00002	09/30/26	Calbiochem, Lot 3847932			(Purchased Reagent)		Tauroursodeoxycholic acid	1000000 ppm
1633_125_WDM_00019	05/12/26	12/16/25	Methanol, Lot 9271712162533A	10 mL	PFC_IN_01525	0.05 mL	Taurodeoxycholic Acid	25.3 ng/mL
							Taurochenodeoxycholic acid	23.7025 ng/mL
							Tauroursodeoxycholic acid	25.45 ng/mL
.PFC_IN_01525	08/02/26	11/12/25	Methanol, Lot EH850-US	5 mL	PFC_IN_01524	0.1 mL	Taurodeoxycholic Acid	5060 ng/mL
							Taurochenodeoxycholic acid	4740.5 ng/mL
							Tauroursodeoxycholic acid	5090 ng/mL
..PFC_IN_01524	08/02/26	11/12/25	Methanol, Lot EH850-US	4 mL	PFC_IN_01521	1 mL	Taurodeoxycholic Acid	253000 ng/mL
					PFC_IN_01522	1 mL	Taurochenodeoxycholic acid	237025 ng/mL
					PFC_IN_01523	1 mL	Tauroursodeoxycholic acid	254500 ng/mL
...PFC_IN_01521	09/29/26	11/12/25	Methanol, Lot EI950-US	50 mL	PFC_ST_TDCA_00005	0.0506 g	Taurodeoxycholic Acid	1012000 ng/mL
....PFC_ST_TDCA_00005	09/29/26	Sigma Aldrich, Lot SLCD5024			(Purchased Reagent)		Taurodeoxycholic Acid	1000000 mg/Kg
...PFC_IN_01522	08/02/26	11/12/25	Methanol, Lot EH850-US	50 mL	PFC_ST_TCDCA_00001	0.0499 g	Taurochenodeoxycholic acid	948100 ng/mL
....PFC_ST_TCDCA_00001	08/02/26	Sigma Aldrich, Lot SLCJ5790			(Purchased Reagent)		Taurochenodeoxycholic acid	950000 ppm
...PFC_IN_01523	09/30/26	11/12/25	Methanol, Lot EH850-US	50 mL	PFC_ST_TUDCA_00002	0.0509 g	Tauroursodeoxycholic acid	1018000 ng/mL
....PFC_ST_TUDCA_00002	09/30/26	Calbiochem, Lot 3847932			(Purchased Reagent)		Tauroursodeoxycholic acid	1000000 ppm

Reagent

PFC_ST_02966

6020949
ID: PFC_ST_02969
Exp:09/19/28 Prpd VK3G Opn
Native NEtPFOSA Stock

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M
LOT NUMBER: NEtFOSA0923M
COMPOUND: N-Ethylperfluoro-1-octanesulfonamide

STRUCTURE:



CAS #: 4151-50-2

410-6020932

MOLECULAR FORMULA:	$C_{10}H_6F_{17}NO_2S$	**MOLECULAR WEIGHT:**	527.20
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/19/2023		
EXPIRY DATE: (mm/dd/yyyy)	09/19/2028		
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:** 10/04/2023 (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,...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:

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:

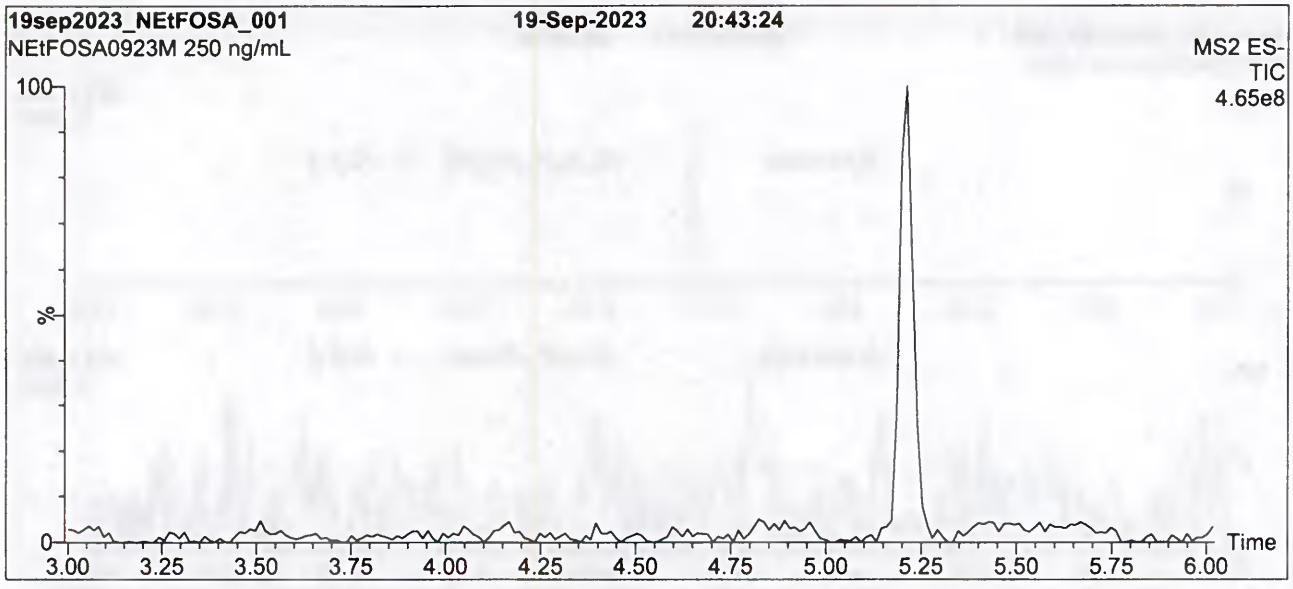
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

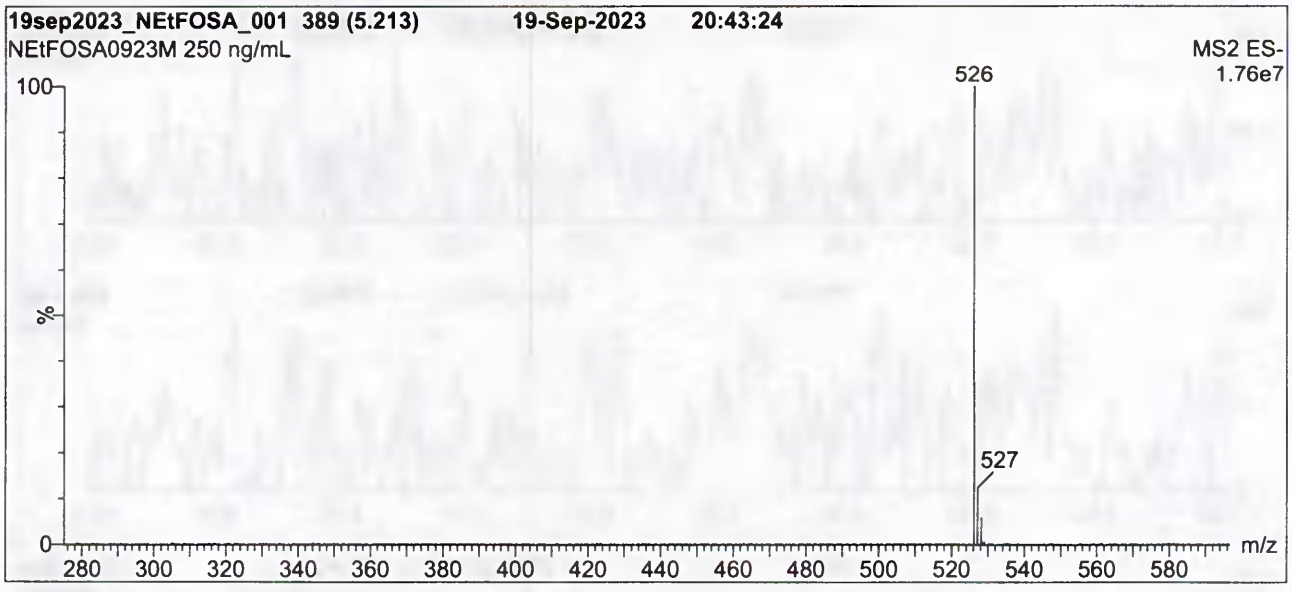
CALA Testing Accreditation No. A1226

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: **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 (275 - 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

Figure 2: **N-EtFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**

Conditions for Figure 2:

Injection: On-column (N-EtFOSA-M)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.34e-3

Collision Energy (eV) = 24

Reagent

PFC_ST_02967

ID: PFC_ST_02968
Exp:03/07/29 Prpd:VK3G Opn
Native NMePFOSA Stock

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-MeFOSA-M
LOT NUMBER: NMeFOSA0324M
COMPOUND: N-Methylperfluoro-1-octanesulfonamide
STRUCTURE:
CAS #: 31506-32-8



410-6020937

MOLECULAR FORMULA:	$C_9H_4F_{17}NO_2S$	**MOLECULAR WEIGHT:**	513.17
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	03/07/2024		
EXPIRY DATE: (mm/dd/yyyy)	03/07/2029		
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 <0.1% total of branched N-methylperfluorooctanesulfonamide isomers, and ~0.2% of N-methylperfluoro-1-heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/28/204
(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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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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: 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: 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

Figure 2: **N-MeFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**

Conditions for Figure 2:

Injection: On-column (N-MeFOSA-M)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.39e-3
Collision Energy (eV) = 24

Reagent

PFC_ST_03140

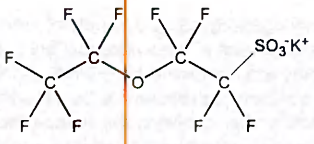
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFEESA **LOT NUMBER:** PFEESA0524

COMPOUND: Potassium perfluoro(2-ethoxyethane)sulfonate

STRUCTURE: **CAS #:** 117205-07-9



410-6223168

MOLECULAR FORMULA:	$C_4F_9O_4SK$	**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)	06/03/2024		
EXPIRY DATE: (mm/dd/yyyy)	06/03/2029		
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:** 06/19/2024 (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:

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:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

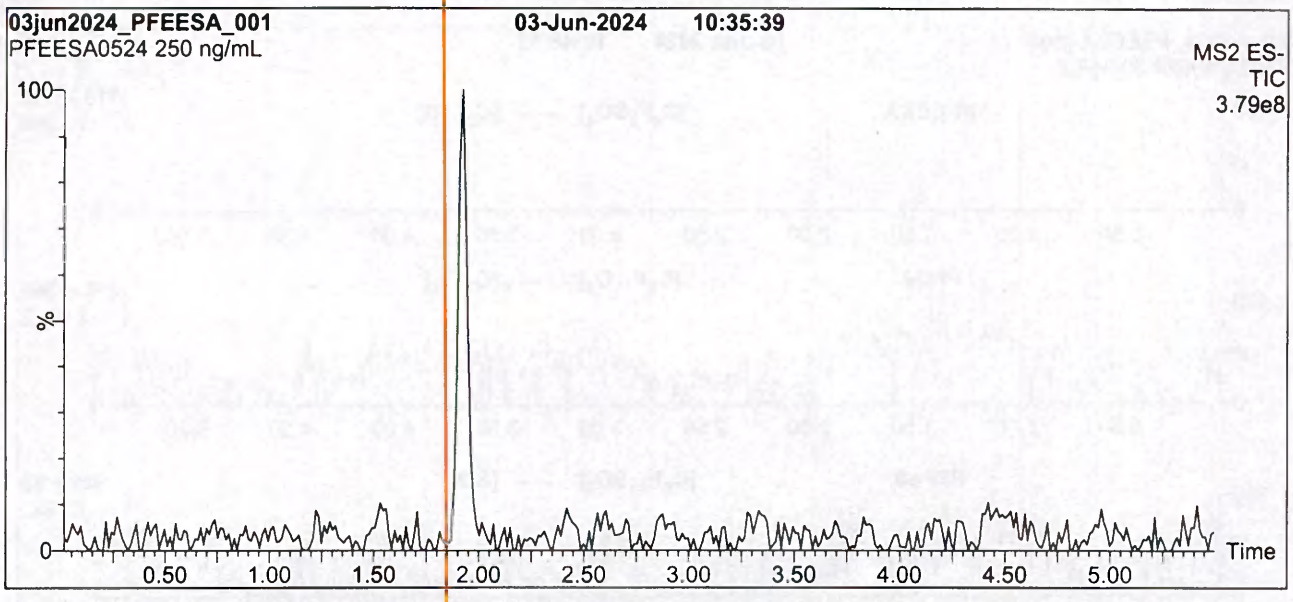
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

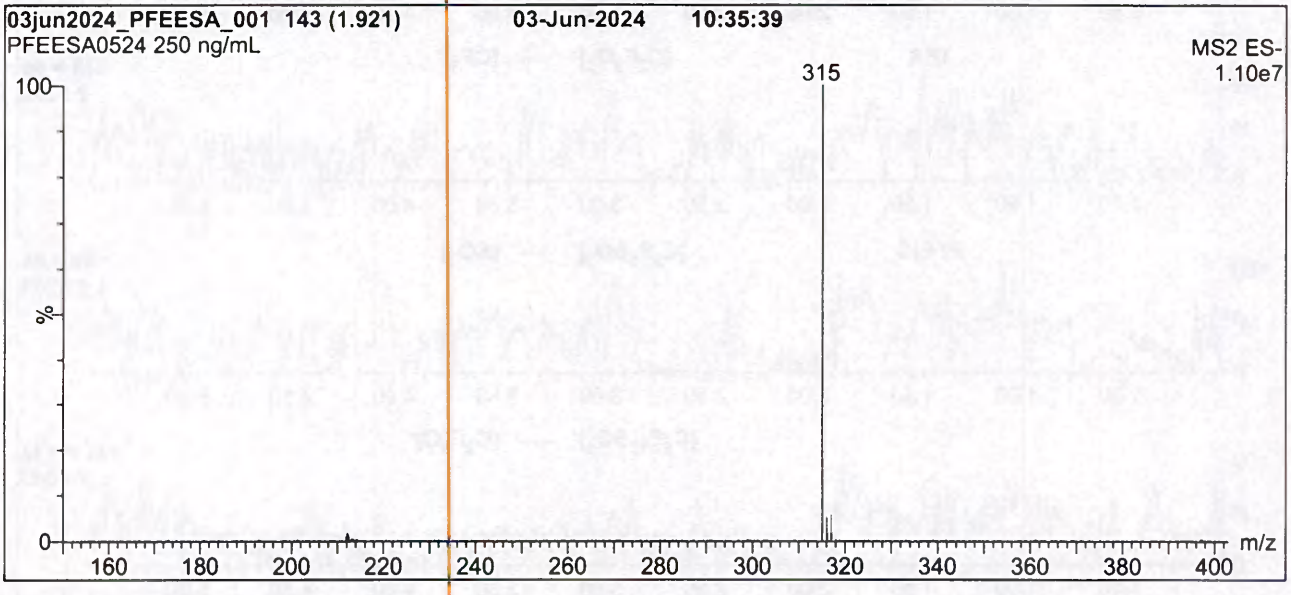
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED 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: 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

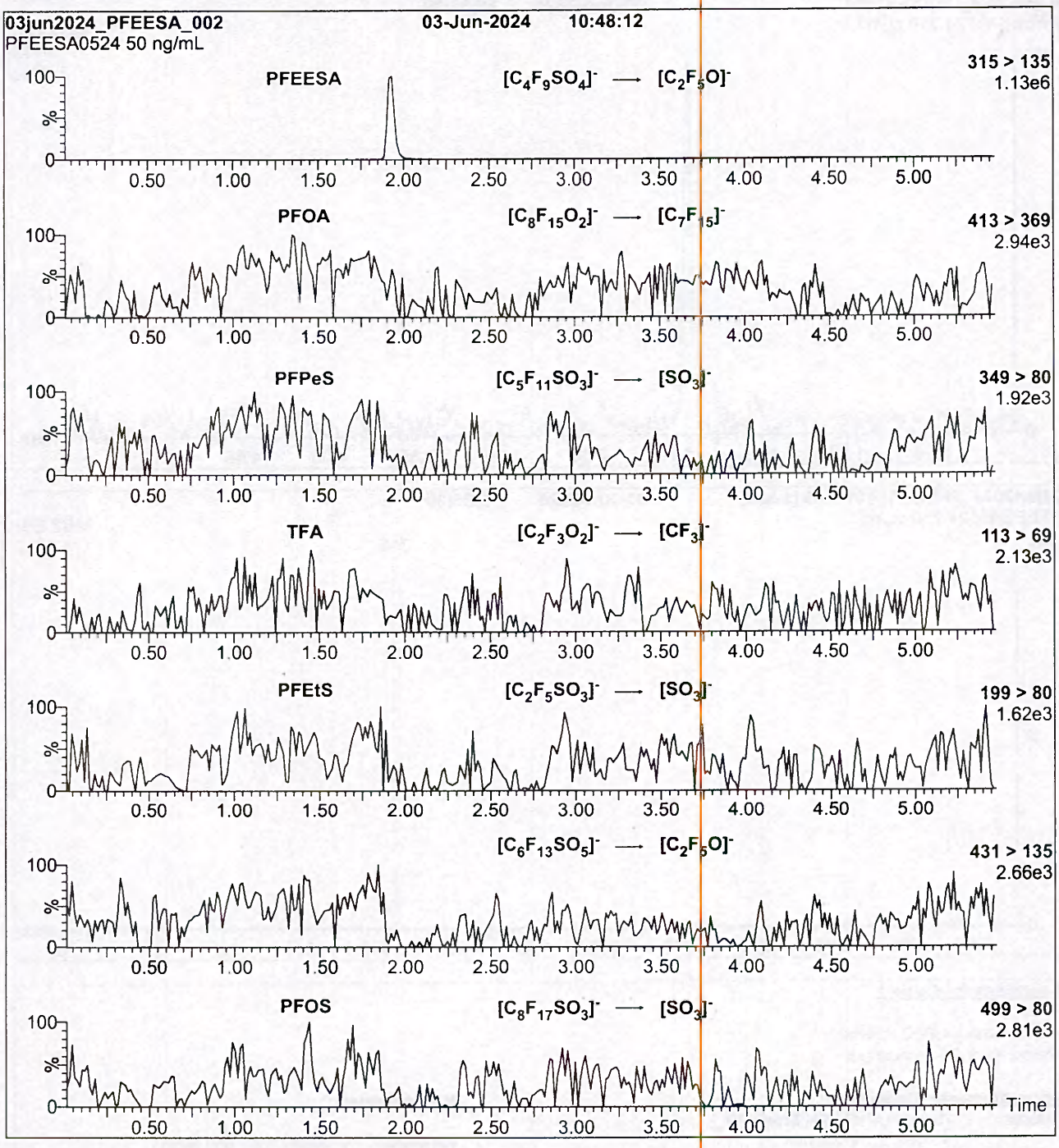
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (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

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) = 4.36e-3
Collision Energy (eV) = 22

Reagent

PFC_ST_03447

125 Market Street
New Haven CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

PFC_ST_03447

Catalog No PFOS-030S
Description Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
Lot: 224061564
Solvent: Methanol
Hazards *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified Jun 27 2024
Expiration Jul 27 2026
Sample Size 1 mL
Components 1
Storage Condition Freeze (< -10 °C)

410-7082864

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Bis(trifluoromethane)sulfonimide lithium salt	90076-65-6	97 0	104 6*	101 5

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT 1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity

A product with a suffix (1A, -2B, etc. or -01 -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4% and was determined in accordance with ISO 17034. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater A period (.) is used as a decimal place marker

The information on this certificate may not be reproduced without the express permission of the manufacturer See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001.2015

QR-ORG/INO-001
Rev. 7/20

1. **Quality Standards:**

   ISO 17034.2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025 2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001 2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side This product can be used for quantification and/or identification This product can also be used as a reference material to validate analytical procedures subject to the conditions under Section 7

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory Please refer to the NIST test number listed on the front of this certificate Class A glassware is used in the manufacture and quality control of all standards Good Laboratory Practices have been used throughout the preparation of this Standard

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability**· The manufacturer guarantees the stability of this solution through the expiration date stated on the label when handled and stored according to the conditions stated on the label

6. **Uncertainty**· The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula. $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass volume short-term stability long-term stability and homogeneity factors associated with the production of this product The expanded uncertainty assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only The company's liability will be limited to replacement of product or refund of purchase price Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

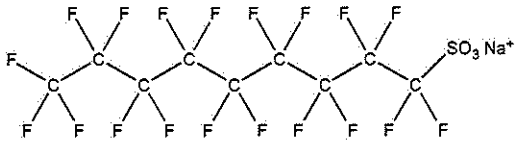
PFC_ST_03527

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC JT_ 03527

PRODUCT CODE.	L-PFNS	**LOT NUMBER.**	LPFNS0724
COMPOUND.	Sodium perfluoro-1-nonanesulfonate		
STRUCTURE.		**CAS #.**	98789-57 2



410-7222604

MOLECULAR FORMULA.	$C_9F_{19}SO_3Na$	**MOLECULAR WEIGHT:**	572.12
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt) 48 1 ± 2.4 µg/mL (PFNS acid) 48 0 ± 2.4 µg/mL (PFNS anion)	**SOLVENT(S).**	Methanol
CHEMICAL PURITY.	>98%		
LAST TESTED. (mm/dd/yyyy)	07/17/2024		
EXPIRY DATE. (mm/dd/yyyy)	07/17/2029		
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** 07/24/2024 (mm/dd/yyyy)
B.G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Gueiph ON N1G 3M5 CANADA
519-822-2436 • Fax 519-822-2849 • info@weil-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 SFC/UV/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, and/or SFC/UV/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 x_2, $.x_n$ on which it depends is

$$u_c(y(x_1\ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

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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:

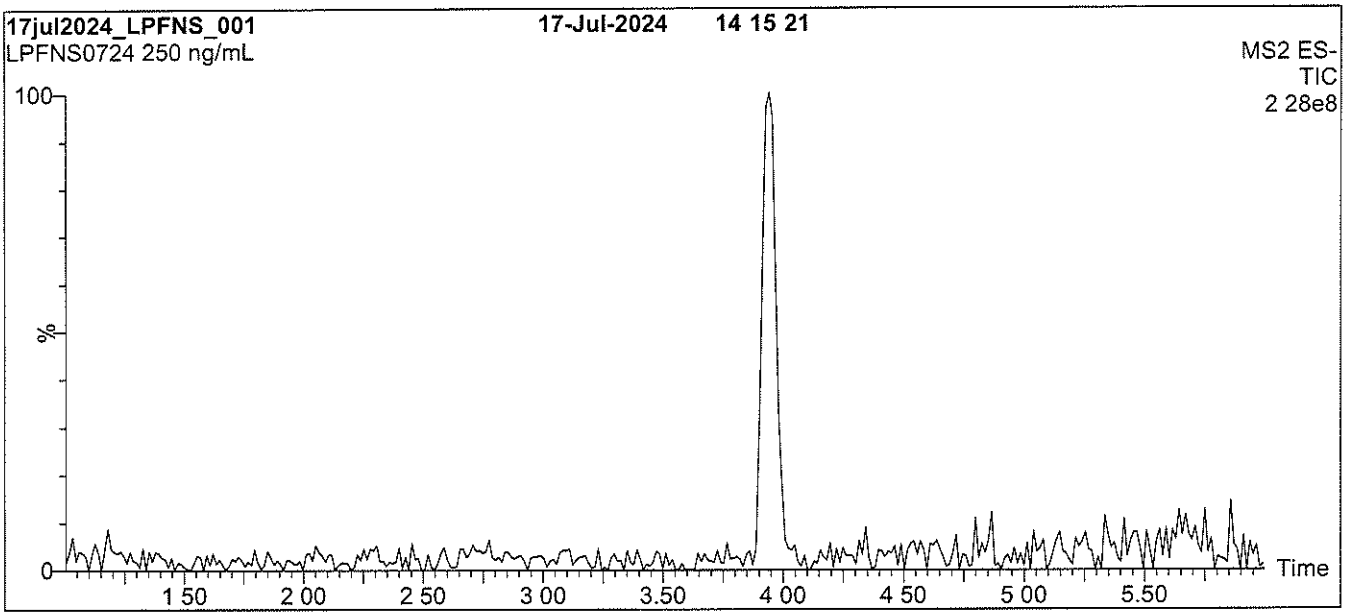
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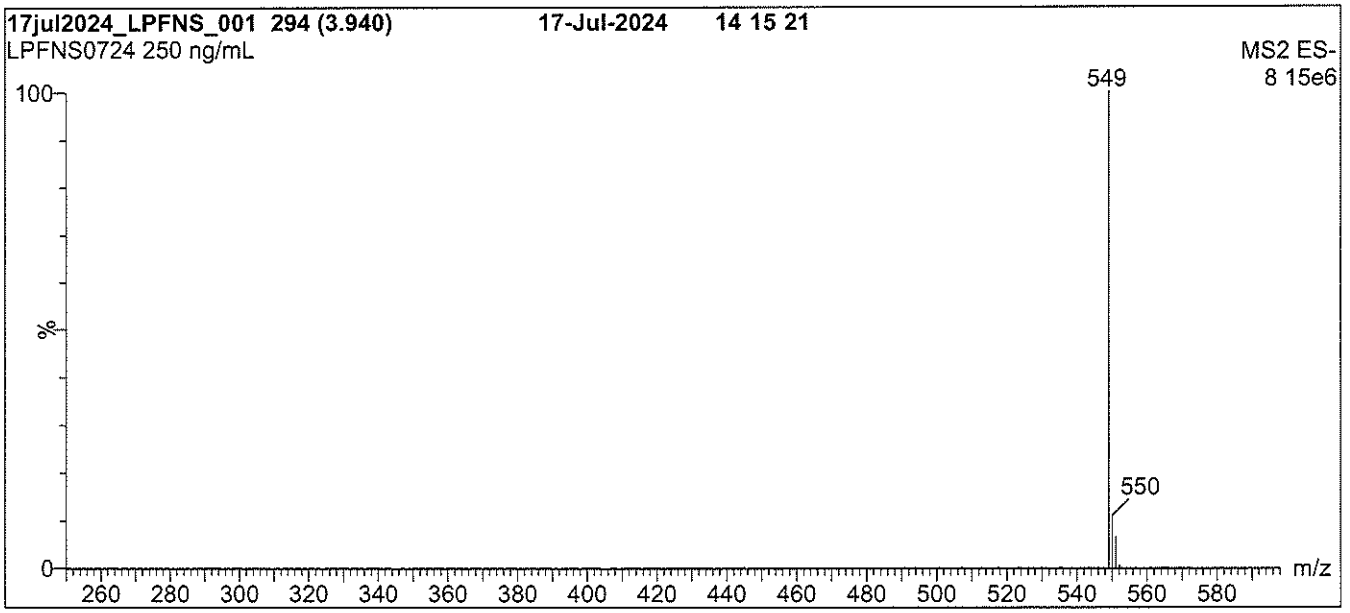
CALA Testing Accreditation No. A1226

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. **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: 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

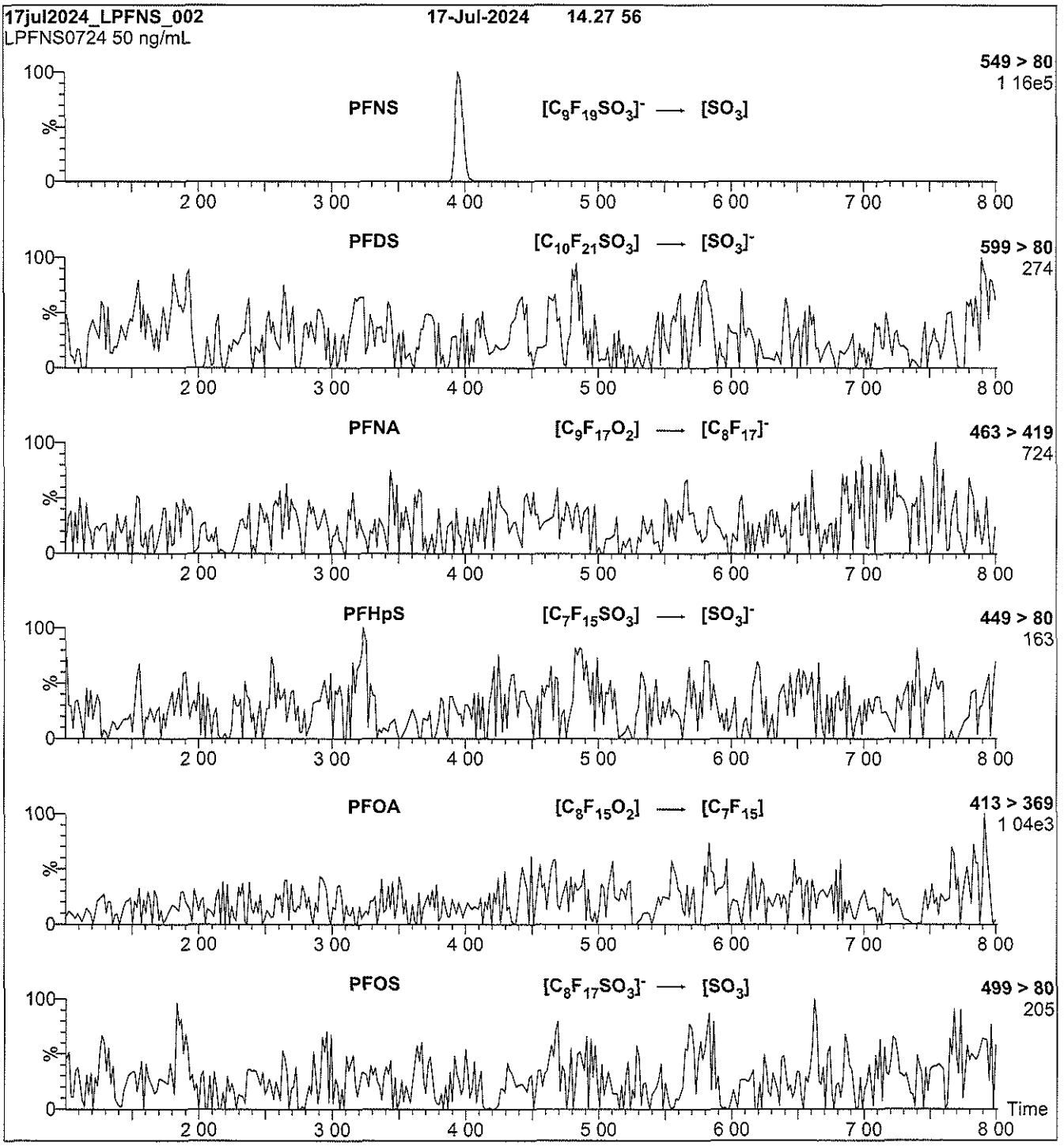
Flow: 300 µL/min

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-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) = 5.94e-3
Collision Energy (eV) = 64

Reagent

PFC_ST_03637

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-03636, 03637
03638, 03639

br-PFOA

Perfluorooctanoic Acid
Solution/Mixture of Linear and Branched Isomers

410-7412397

PRODUCT CODE.	br-PFOA
LOT NUMBER.	brPFOA0524
CONCENTRATION.	50 0 ± 2 5 µg/mL
SOLVENT(S).	Methanol/Water (<1%)
DATE PREPARED. (mm/dd/yyyy)	05/31/2024
LAST TESTED. (mm/dd/yyyy)	06/04/2024
EXPIRY DATE. (mm/dd/yyyy)	06/04/2029
RECOMMENDED STORAGE.	Store ampoule in a cool dark place

DESCRIPTION.

The chemical purity has been determined to be ≥98% perfluorooctanoic acid 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 ^{9}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
- It is recommended to integrate and quantify the linear and branched isomers seperately as their response factors can vary depending on optimization acquisitions parameters
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters
- Contains ~0 6% of perfluoro-n-heptanoic acid (PFHpA)
- CAS#: 335-67 1 (for linear isomer)

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

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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 x_2, $.x_n$ on which it depends is

$$u_c(y(x \quad x \quad .x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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

The individual uncertainties taken nto 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%) has been assigned to this product.

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:

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

CALA Testing Ac reditation No. A1226

ANAB ANSI National Accreditation Board ACCRED TED 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

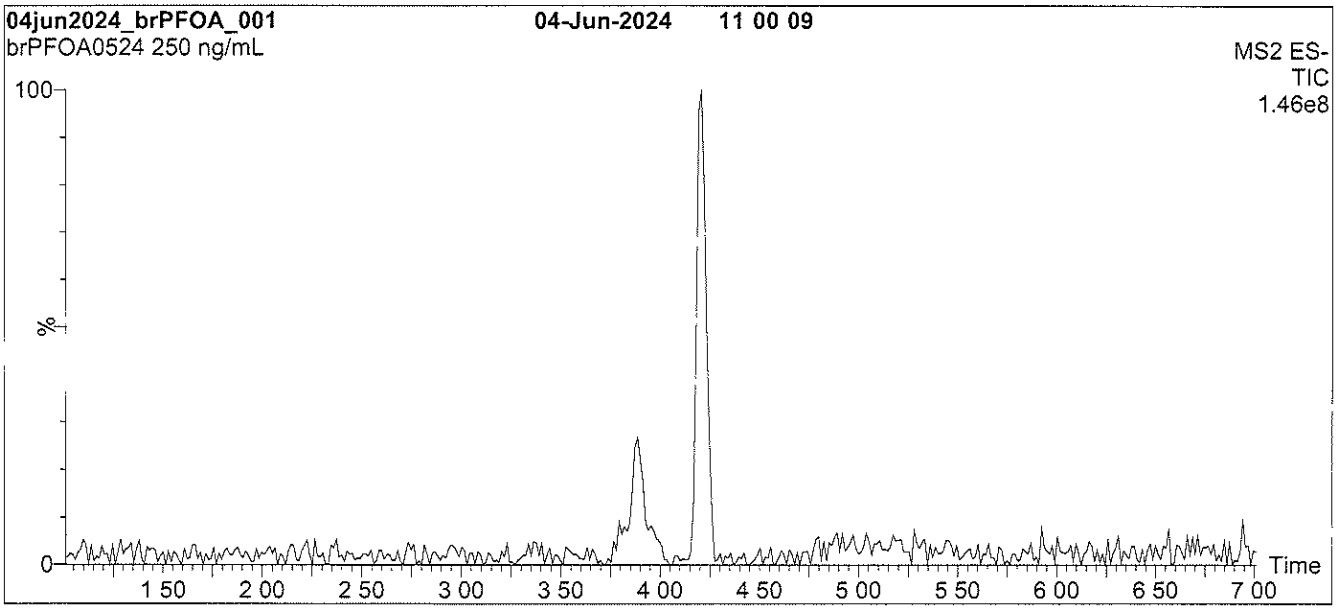
Table A. **br-PFOA, Isomeric Components and Percent Composition (by ^{9}F-NMR)***

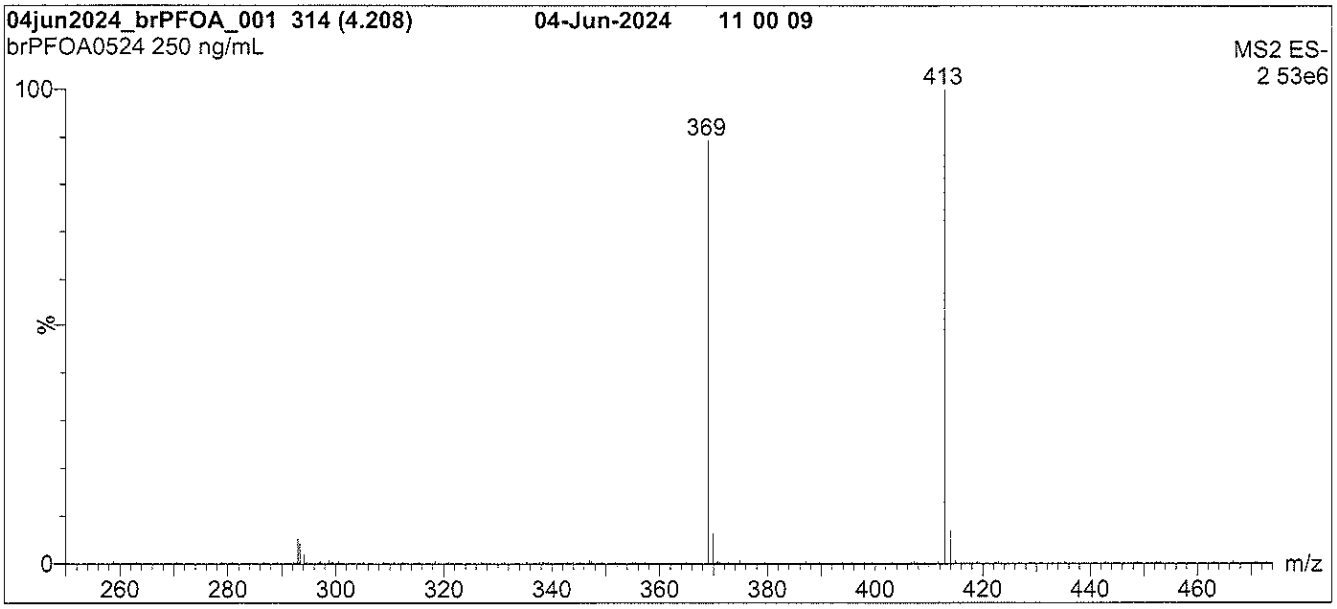
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Perfluoro-n-octanoic acid	$CF_3(CF_2)_6CO_2H$	66 3
2	Perfluoro-3-methylheptanoic acid	$CF_3(CF_2)_3CFCF_2CO_2H$ CF_3	5 0
3	Perfluoro-4-methylheptanoic acid	$CF_3(CF_2)_2CF(CF_2)_2CO_2H$ CF_3	6 9
4	Perfluoro-5-methylheptanoic acid	$CF_3CF_2CF(CF_2)_3CO_2H$ CF_3	7 2
5	Perfluoro-6-methylheptanoic acid	$CF_3CF(CF_2)_4CO_2H$ CF_3	13 3
6	Perfluoro-5 5-dimethylhexanoic acid	CF_3 $CF_3C(CF_2)_3CO_2H$ CF_3	0 4
7	Perfluoro-4 5-dimethylhexanoic acid	CF_3 $CF_3CFCF(CF_2)_2CO_2H$ CF_3	0 5
8	Perfluoro-3 5-dimethylhexanoic acid	CF_3 $CF_3CFCF_2CFCF_2CO_2H$ CF_3	0 2
9	Perfluoro-4 4-dimethylhexanoic acid	CF_3 $CF_3CF_2C(CF_2)_2CO_2H$ CF_3	0.2
10	Perfluoro-3 3-dimethylhexanoic acid	CF_3 $CF_3(CF_2)_2CCF_2CO_2H$ CF_3	

* Percent of total perfluorooctanoic acid isomers only

Certified By _____ **Date** 08/15/2024
(mm/dd/yyyy)
B G. Chittim General Manager

Figure 1. **br-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 12 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time 15 min

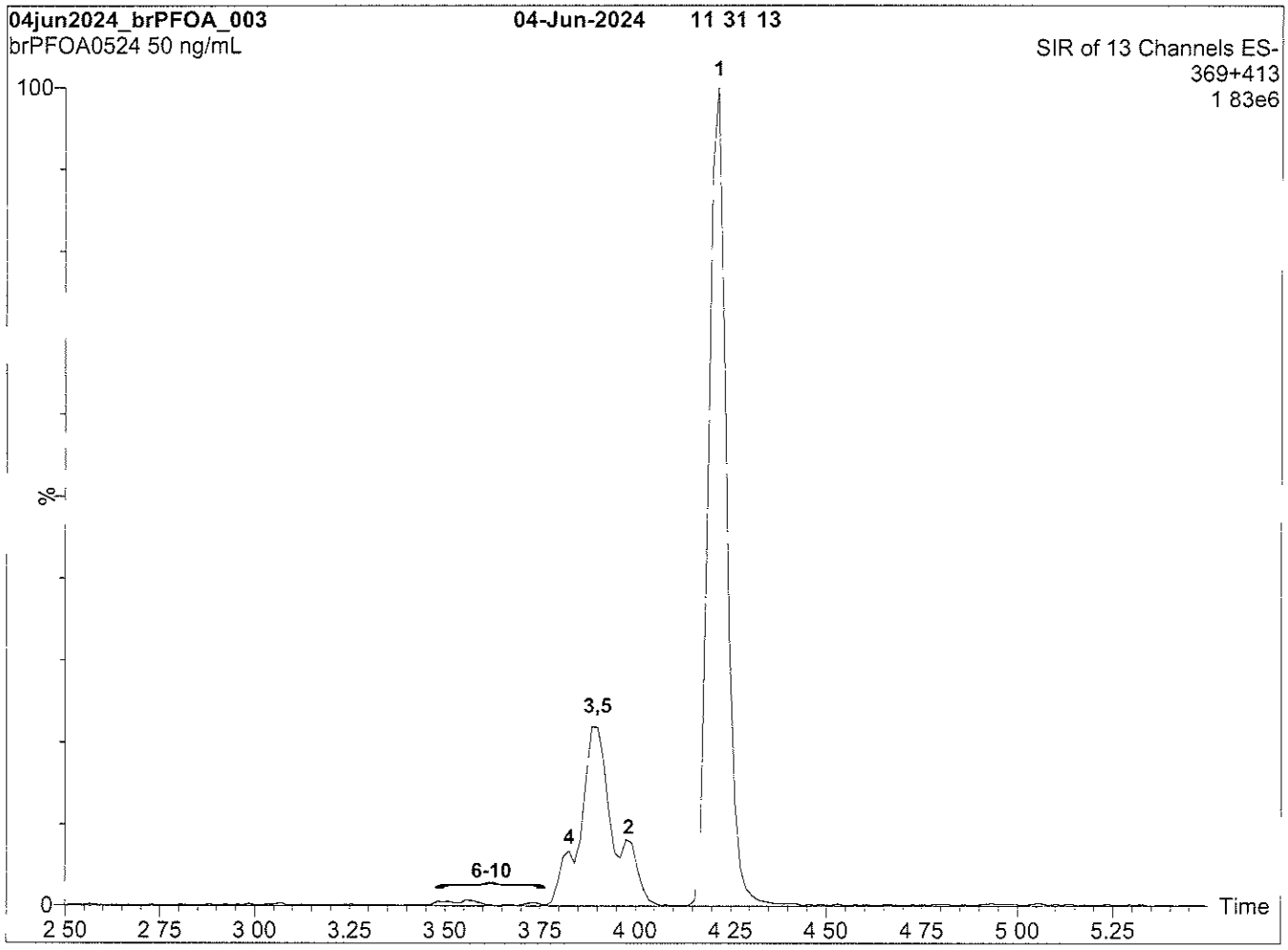
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2. **br-PFOA, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

Column: Acquity UPLC BEH Shield RP$_8$
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 OAc buffer)
Ramp to 90% organic over 12 min and hold for 1 min
before returning to initial conditions in 0 5 min
Time 15 min

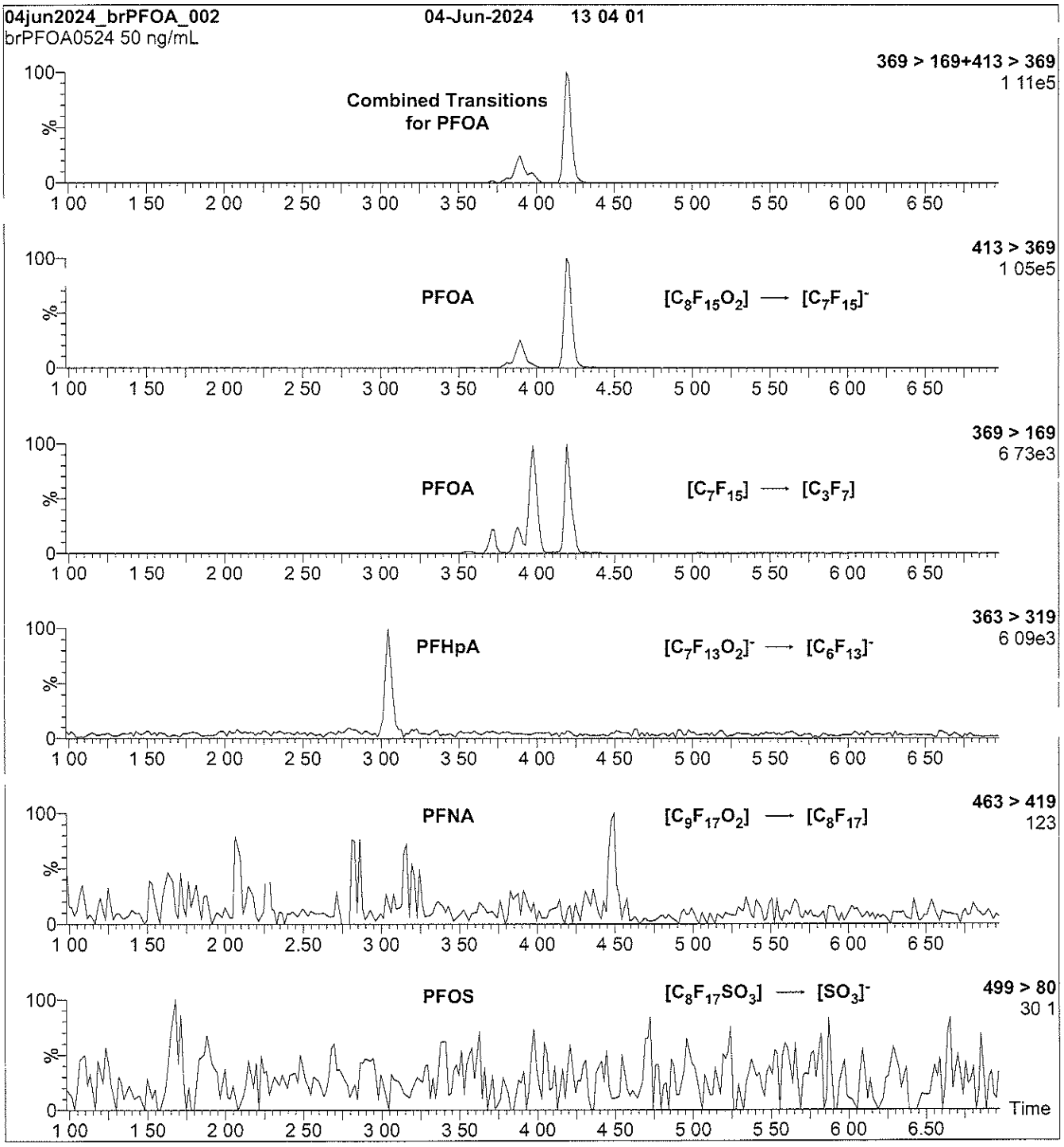
Flow: 300 µL/min

MS Parameters.

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-PFOA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3.

Injection	On-column (br-PFOA)
Mobile phase	Same as Figures 1 & 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.31e-3
Collision Energy (eV) = 15

Reagent

PFC_ST_03642

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

DEC_ST_03640 03641
03642

br-FOSA

Perfluorooctanesulfonamide Solution/Mixture of Linear and Branched Isomers

410-7412475

PRODUCT CODE.	br-FOSA
LOT NUMBER.	brFOSA0225
CONCENTRATION.	50 0 ± 2 5 µg/mL
SOLVENT(S).	Isopropanol
DATE PREPARED. (mm/dd/yyyy)	02/04/2025
LAST TESTED. (mm/dd/yyyy)	02/06/2025
EXPIRY DATE. (mm/dd/yyyy)	02/06/2030
RECOMMENDED STORAGE.	Refrigerate ampoule

DESCRIPTION.

The chemical purity has been determined to be ≥98% perfluorooctanesulfonamide (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
- CAS #: 754-91-6 (for linear isomer)
- It is recommended to integrate and quantify the linear and branched isomers serperately as their response factors can vary depending on optimized acquisition parameters

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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 compound(s) 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-function ng 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 SFC/UV/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 d luent 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 and/or SFC/UV/MS The relative response factors of the analyte of nterest 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 or equivalent products 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 equ pment.

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 x_2, $.x_n$ on which it depends is

$$u_c(y(x \quad x_2 \quad .x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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%) has been assigned to this product.

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.

Ongo ng stability studies of this product have demonstrated stab lity n 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 Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

CALA
esting
Accreditation No. A 226

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

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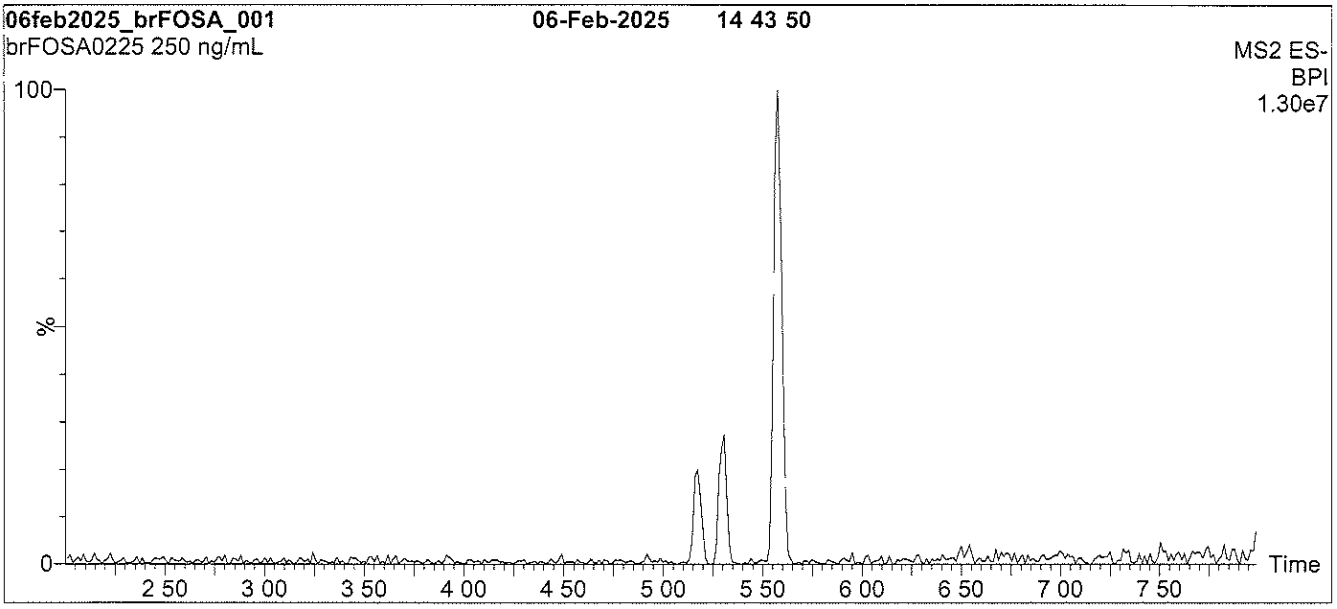
Table A. **br-FOSA Isomeric Components and Percent Composition (by ^{9}F-NMR)***

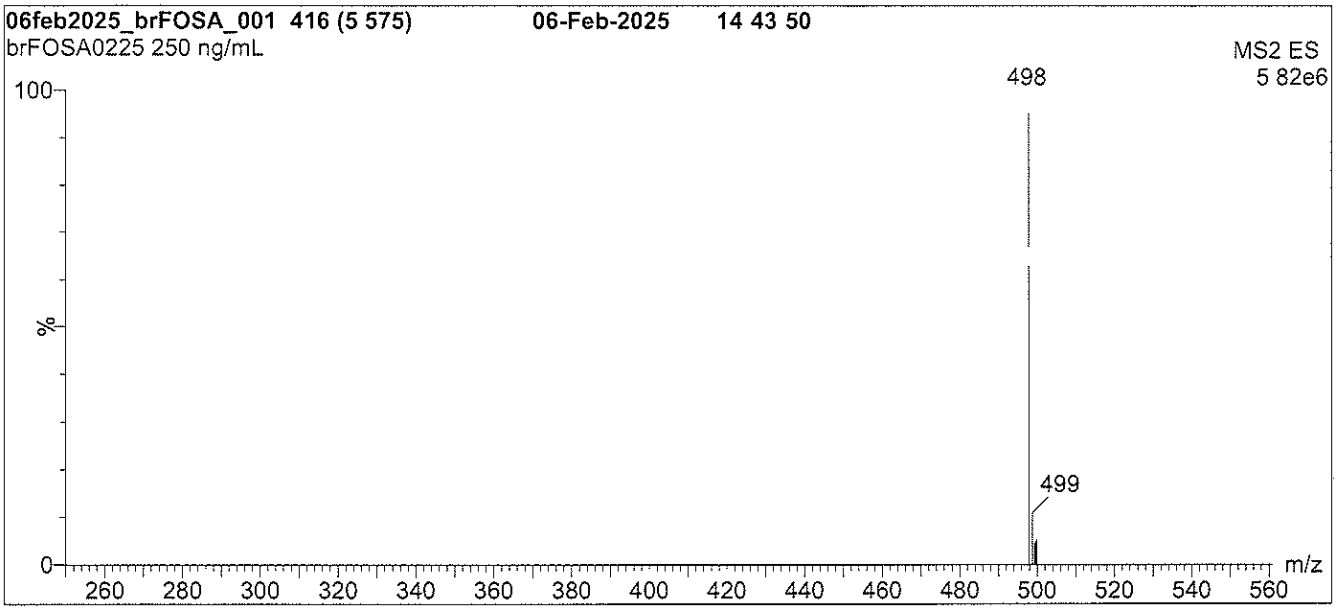
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Perfluoro-1-octanesulfonamide	$CF_3(CF_2)_7SO_2NH_2$	66 6
2	Perfluoro-1-methyl-1 heptanesulfonamide**	$CF_3(CF_2)_5CFSO_2NH_2$ CF_3	0 8
3	Perfluoro-2-methyl-1-heptanesulfonamide	$CF_3(CF_2)_4CFCF_2SO_2NH_2$ CF_3	0 3
4	Perfluoro-3-methyl 1-heptanesulfonamide	$CF_3(CF_2)_3CF(CF_2)_2SO_2NH_2$ CF_3	4 2
5	Perfluoro-4-methyl-1-heptanesulfonamide	$CF_3(CF_2)_2CF(CF_2)_3SO_2NH_2$ CF_3	3 5
6	Perfluoro-5-methyl-1-heptanesulfonamide	$CF_3CF_2CF(CF_2)_4SO_2NH_2$ CF_3	7 8
7	Perfluoro-6-methyl 1-heptanesulfonamide	$CF_3CF(CF_2)_5SO_2NH_2$ CF_3	16 8
8	Perfluoro-5 5-dimethyl 1-hexanesulfonamide	CF_3 $CF_3C(CF_2)_4SO_2NH_2$ CF_3	0.2

* Percent of total perfluorooctanesulfonamide isomers only
** Systematic Name Perfluoro-2-octanesulfonamide

Certified By _____ **Date** 02/10/2025
(mm/dd/yyyy)
B G. Chittim General Manager

Figure 1. **br-FOSA, 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.

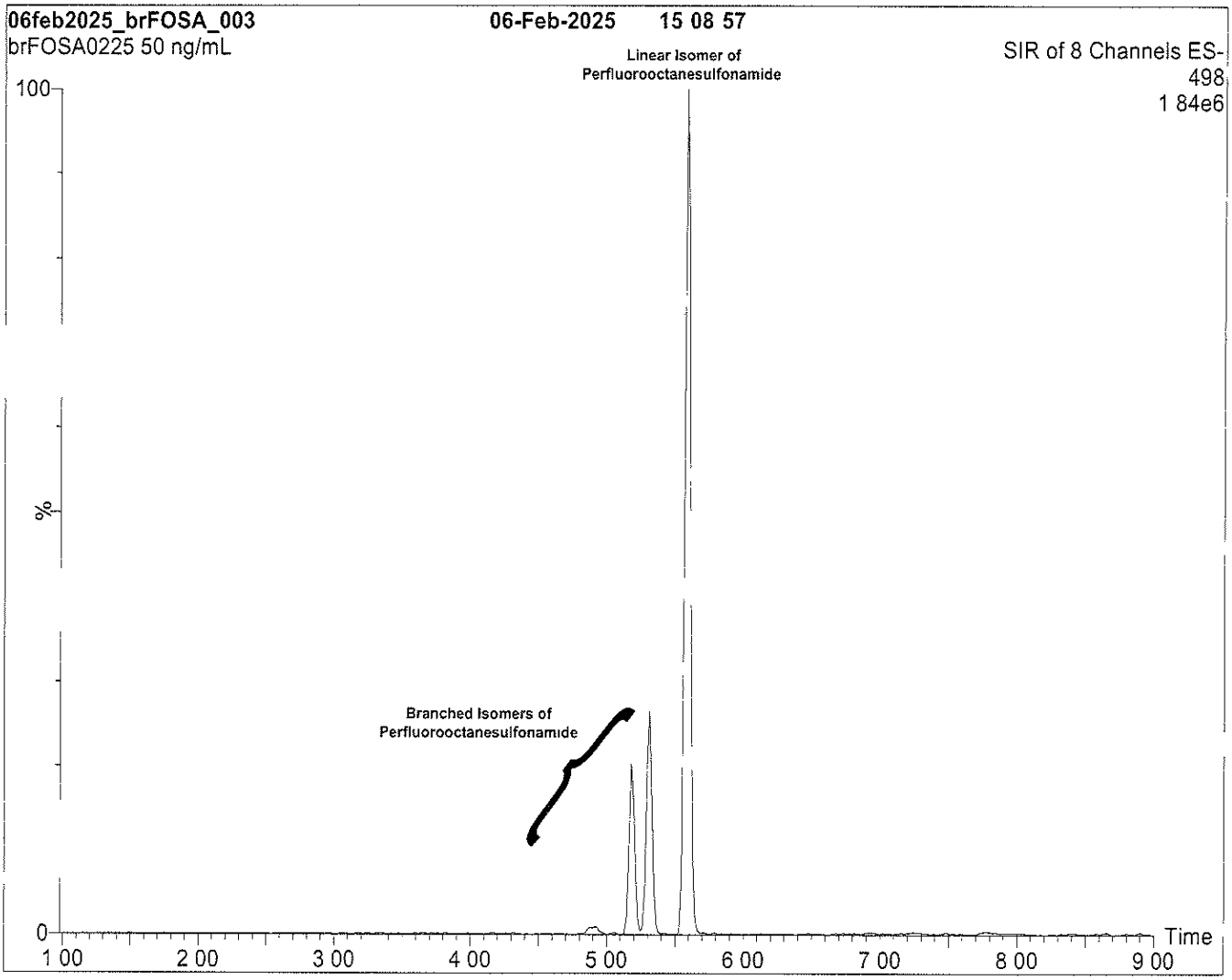
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions over 0.5 min Time 12 min
Flow	300 µL/min

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

Figure 2. **br-FOSA, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

Column: Acquity UPLC BEH Shield RP$_8$ 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 OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions over 0 5 min
Time 12 min

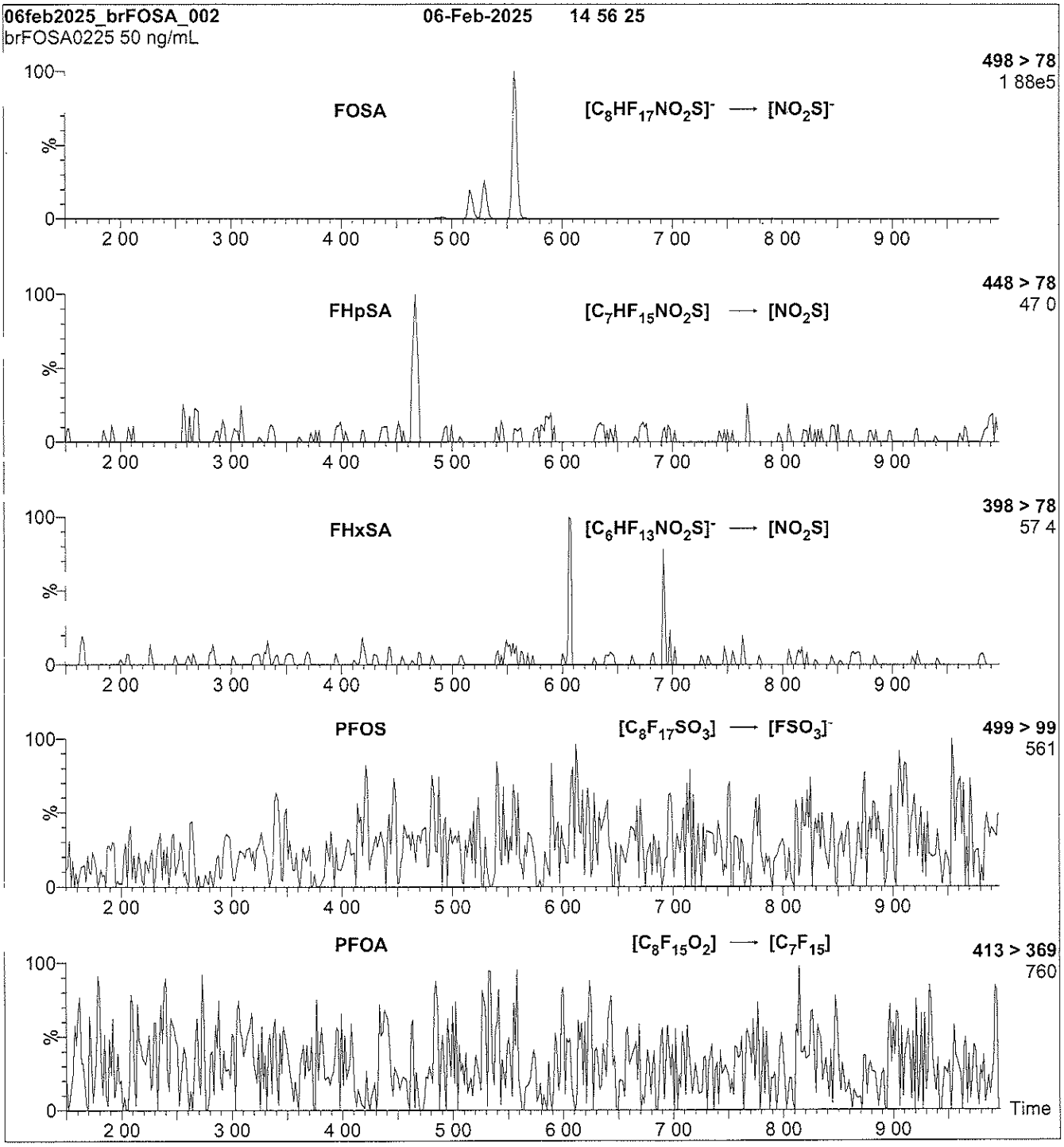
Flow: 300 µL/min

MS Parameters.

Experiment: SIR

Source Electrospray (negative)
Capillary Voltage (kV) = 1 50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-FOSA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3.

Injection	On-column (br-FOSA)
Mobile phase	Same as Figures 1 & 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4 14e-3
Collision Energy (eV) = 30

Reagent

PFC_ST_03656

7447598
ID: PFC_ST_03656
Exp:09/24/29 Prpd:R7RE Opn:
Native NEtFOSAA Mixed Isomers

410-7447598

br-NEtFOSAA

N-Ethylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE.	br-NEtFOSAA
LOT NUMBER.	brNEtFOSAA0924
CONCENTRATION.	50 0 ± 2 5 µg/mL
SOLVENT(S).	Methanol/Water (<1%)
DATE PREPARED. (mm/dd/yyyy)	09/20/2024
LAST TESTED. (mm/dd/yyyy)	09/24/2024
EXPIRY DATE. (mm/dd/yyyy)	09/24/2029
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
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters
- 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

INTENDED USE.

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HANDLING.

This product should only be used by qualified personnel fam'liar 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-function ng 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 SFC/UV/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 and/or SFC/UV/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 or equivalent products 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 d'lution 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 x_2, x_n on which it depends is

$$u\ (y(x\ \ x_2\ \ x_n)) - \sqrt{\sum^{n} u(y\ x\ )}$$

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%) has been assigned to this product.

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

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CALA Testing Accreditation No. A 226

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-NEtFOSAA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

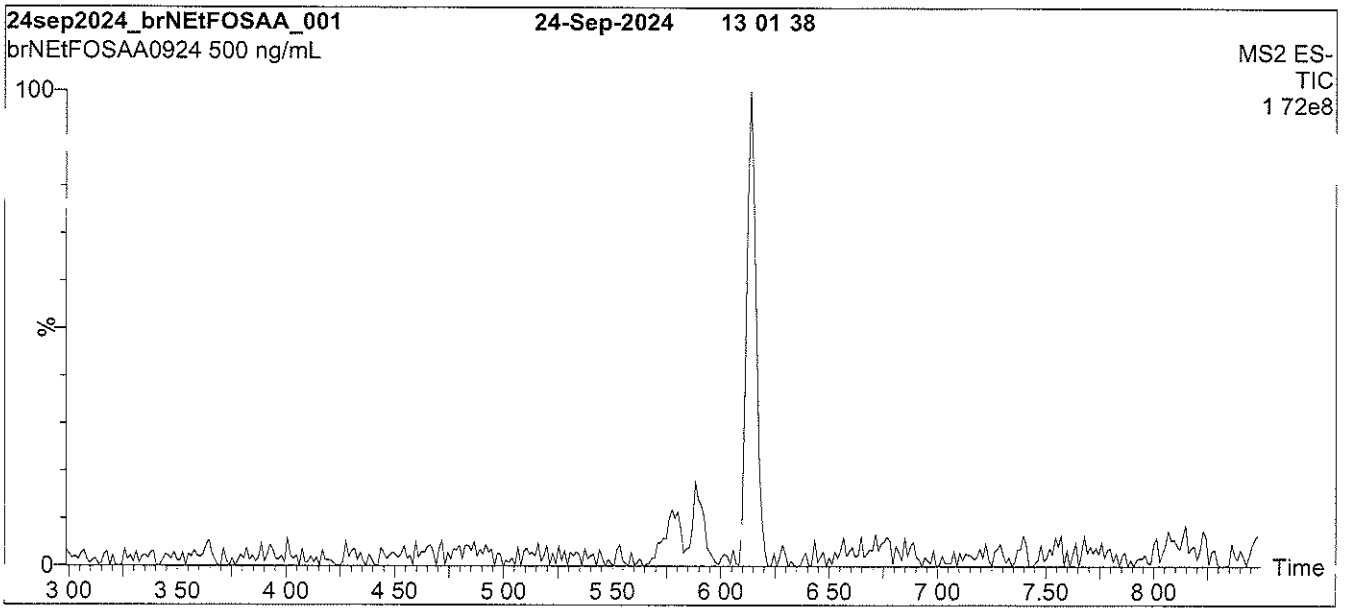
Isomer	Compound	Structure	Percent Composition by ^{9}F-NMR
1	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77 5
2	N-Ethylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2 3
3	N-Ethylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	2 2
4	N-Ethylperfluoro-5-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	5 4
5	N-Ethylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(C_2H_5)CH_2CO_2H$	10 4
6	N-Ethylperfluoro-5 5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	0 3
7	N-Ethylperfluoro-4 5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3CFCF(CF_3)(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	0 3
8	N-Ethylperfluoro-3 5-dimethyl-1-hexanesulfonamidoacetic acid	$CF_3CFCF_2CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	0 3
9	Other Unidentified Isomers		1 3

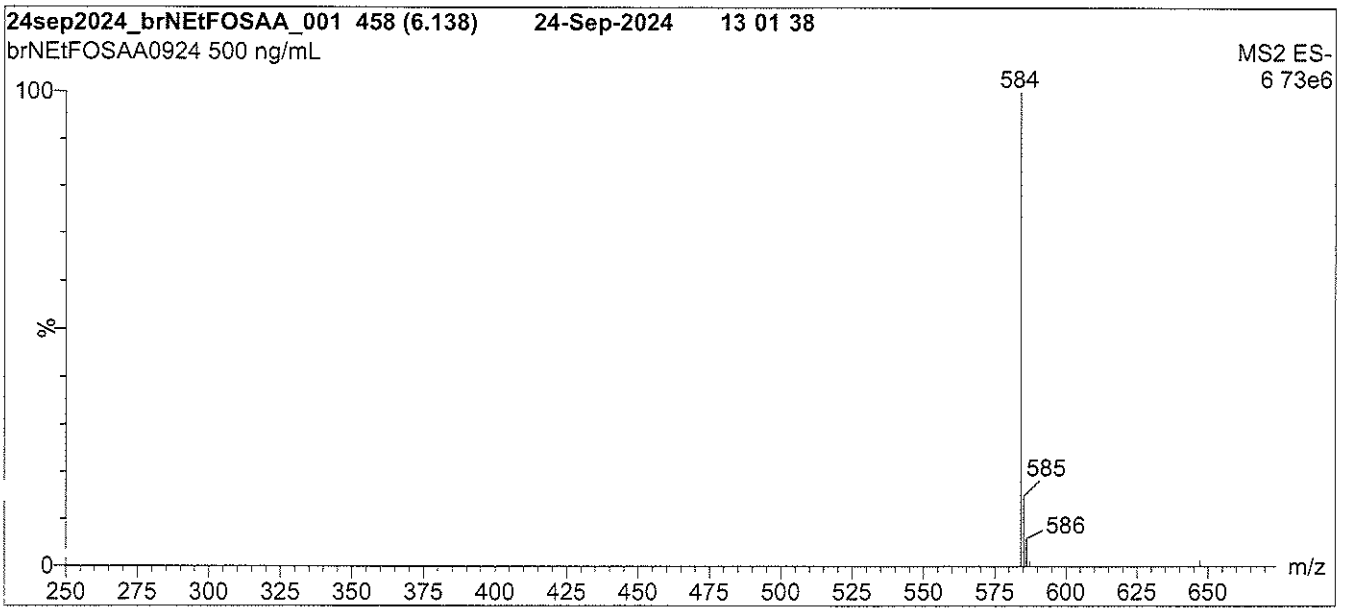
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only

Certified By _____ **Date** 10/09/2024 (mm/dd/yyyy)

B G. Chittim General Manager

Figure 1. **br-NEtFOSAA, 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.

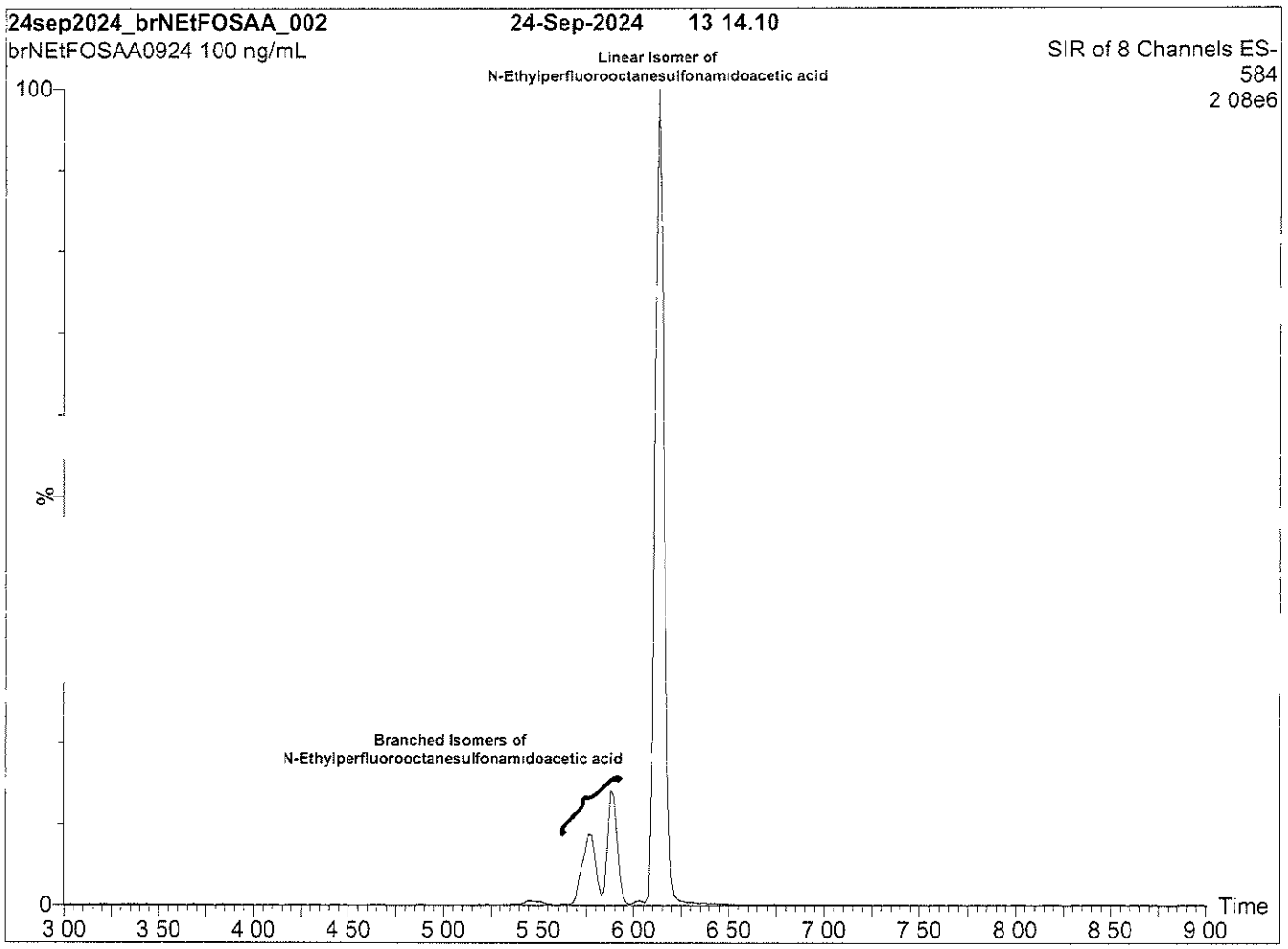
Column	Acquity UPLC BEH Shield RP$_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2. **br-NEtFOSAA, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

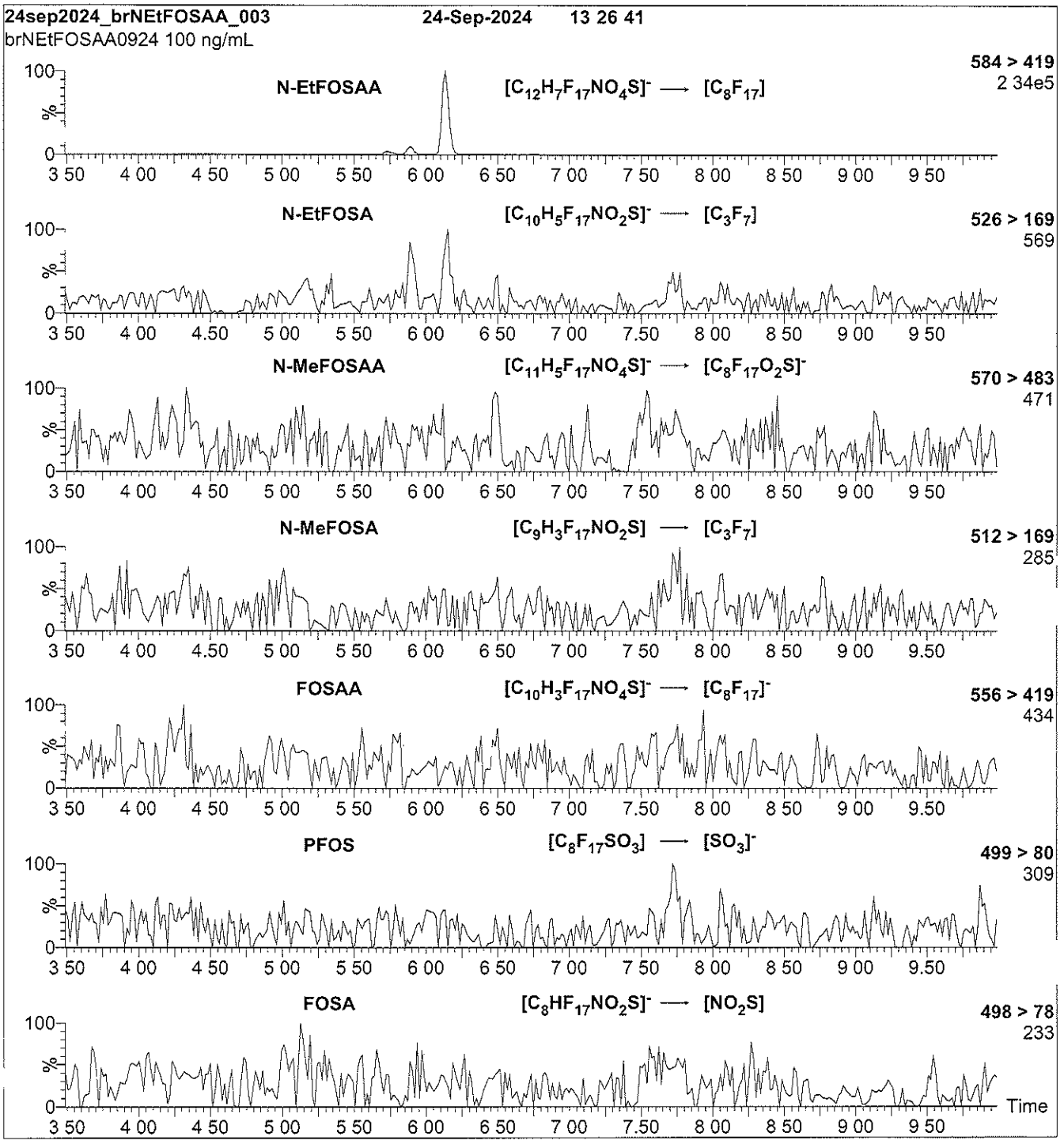
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: SIR

Source. Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = Variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-NEtFOSAA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3.

Injection	On-column (br-NEtFOSAA)
Mobile phase	Same as Figures 1 & 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.31e-3
Collision Energy (eV) = 18

Reagent

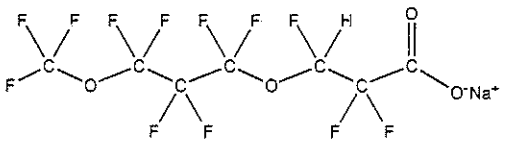
PFC_ST_03665

7447684
ID: PFC_ST_03665
Exp:12/03/29 Prpd:R7RE Opn:
Native NaDONA Stock
410-7447684

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	NaDONA	**LOT NUMBER.**	NaDONA1124
COMPOUND.	Sodium *rac*-dodecafluoro-3H-4 8-dioxanonanoate		
STRUCTURE.		**CAS #:**	2250081-67-3



MOLECULAR FORMULA.	$C_7HF_{12}O_4Na$	**MOLECULAR WEIGHT:**	400 05
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47 3 ± 2 4 µg/mL (NaDONA acid)		Water (<1%)
	47 1 ± 2 4 µg/mL (NaDONA anion)		
CHEMICAL PURITY.	>98%		
LAST TESTED. (mm/dd/yyyy)	12/03/2024		
EXPIRY DATE. (mm/dd/yyyy)	12/03/2029		
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 commercially known as ADONA
- NaDONA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester

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Certified By _____ **Date** 01/20/2025 (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 SFC/UV/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 and/or SFC/UV/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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

where x is expressed as a relative standard uncertainty of the ndividual 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%) has been assigned to this product.

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 cal'brated 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 nterlaboratory stud'es has also been established

EXPIRY DATE / PERIOD OF VALIDITY.

Ongoing stability studies of this product have demonstrated stab lity 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:

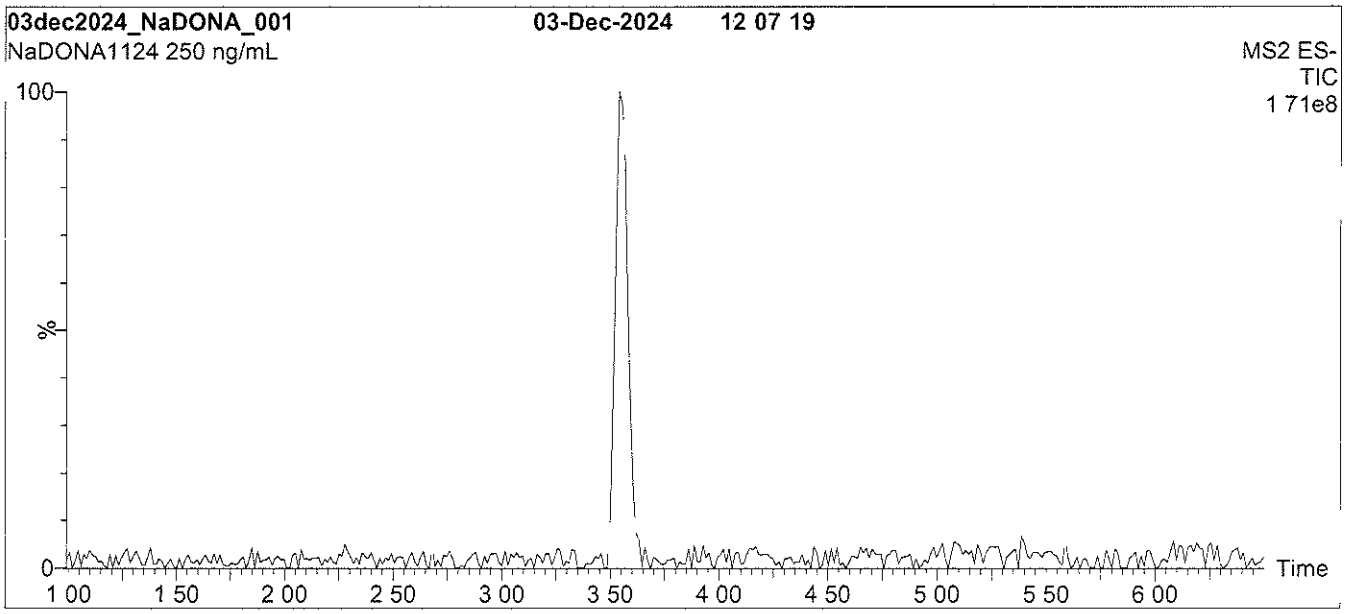
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR 1523)

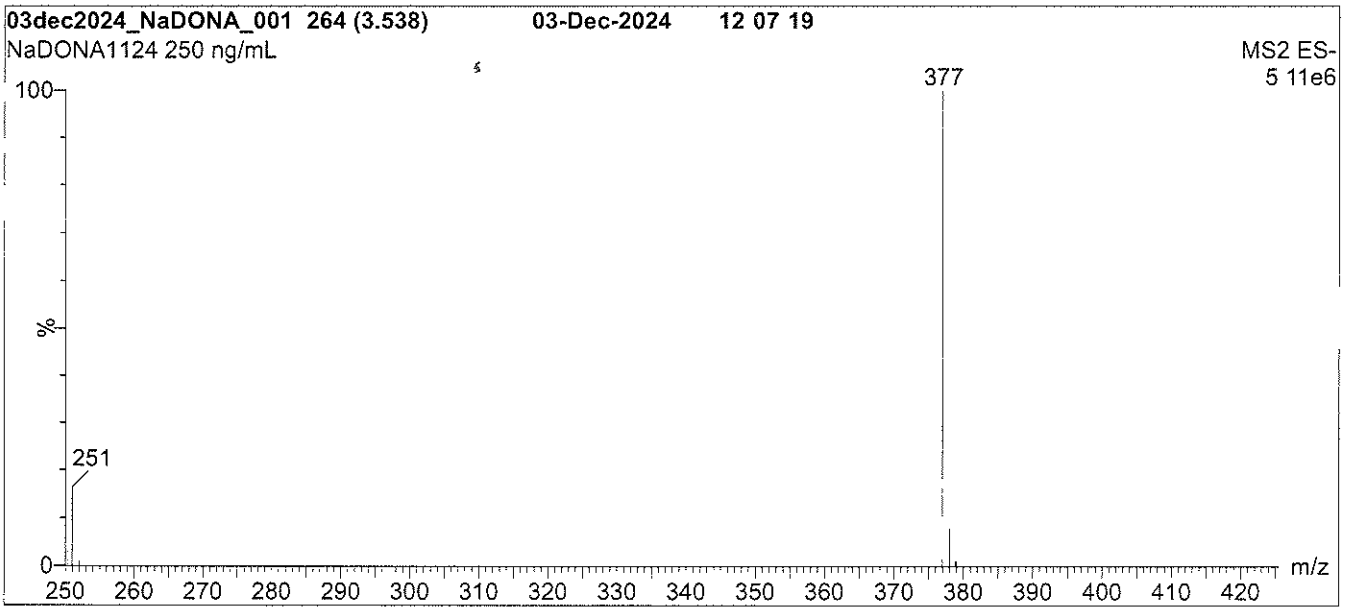
CALA Testing Accreditation No. A1226

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. **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.

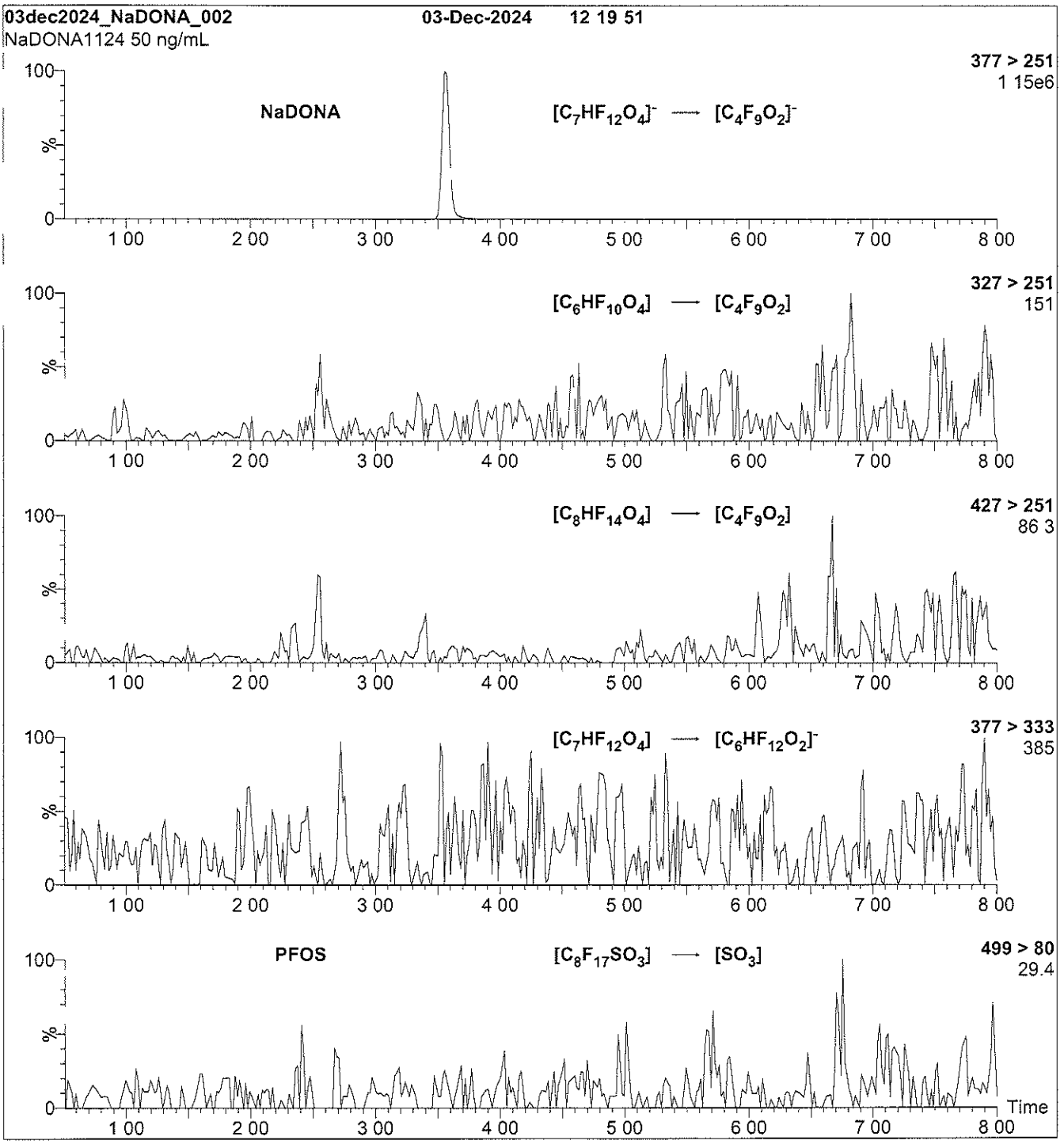
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 m n before returning to initial conditions in 0 5 min Time 12 min
Flow·	300 µL/min

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. **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) = 4.34e-3
Collision Energy (eV) = 10

Reagent

PFC_ST_03678

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFOSK

7447746

ID: PFC_ST_03678

Exp:09/09/29 Prpd:R7RE Opn:

Native PFOS Mixed Isomers Stock

410-7447746

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE.	br-PFOSK
LOT NUMBER.	brPFOSK0924
CONCENTRATION.	50 0 ± 2 5 µg/mL (total K 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)	09/04/2024
LAST TESTED. (mm/dd/yyyy)	09/09/2024
EXPIRY DATE. (mm/dd/yyyy)	09/09/2029
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 ^{9}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
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters
- CAS#: 2795-39-3 (for linear isomer: potassium salt)

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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 SFC/UV/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 and/or SFC/UV/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 or equivalent products 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x_1\ x_2\ \ .x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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%) has been assigned to this product.

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 n material and workmanship and to conform to the stated technical and purity specifications

QUALITY MANAGEMENT:

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CALA esting Accreditation No. A 226

ANAB ANSI ..tional Accreditation Board ACCRED TED ISO 17034 REFERENCE MATERIAL PRODUCER

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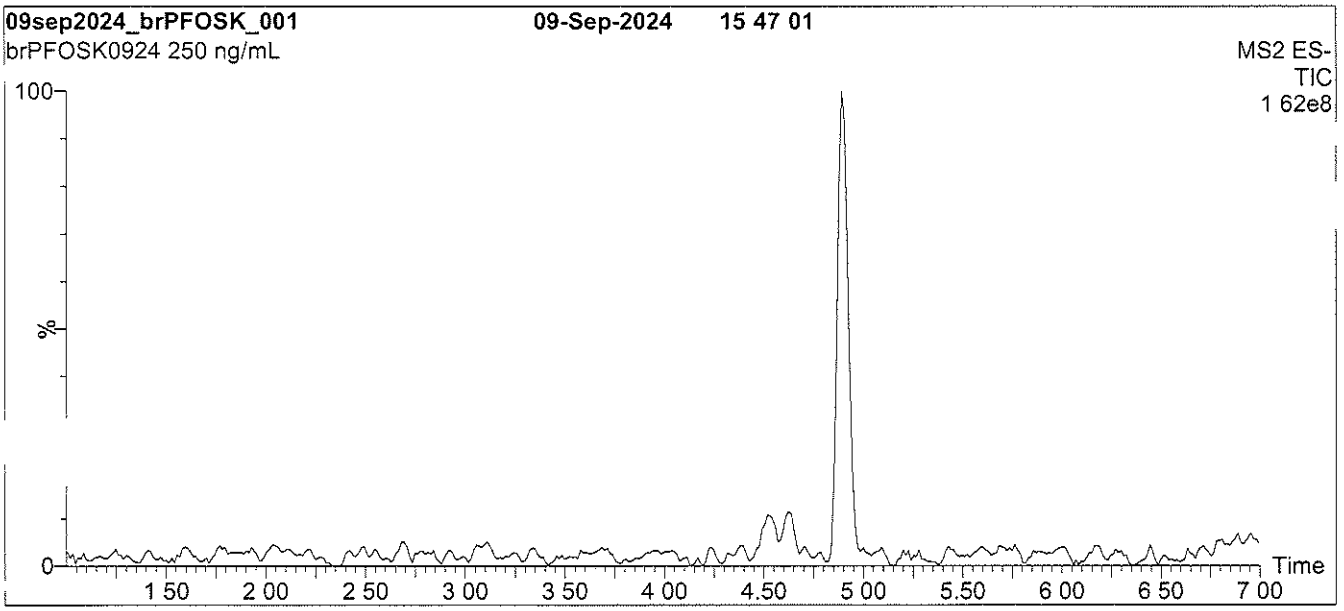
Table A. **br-PFOSK, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

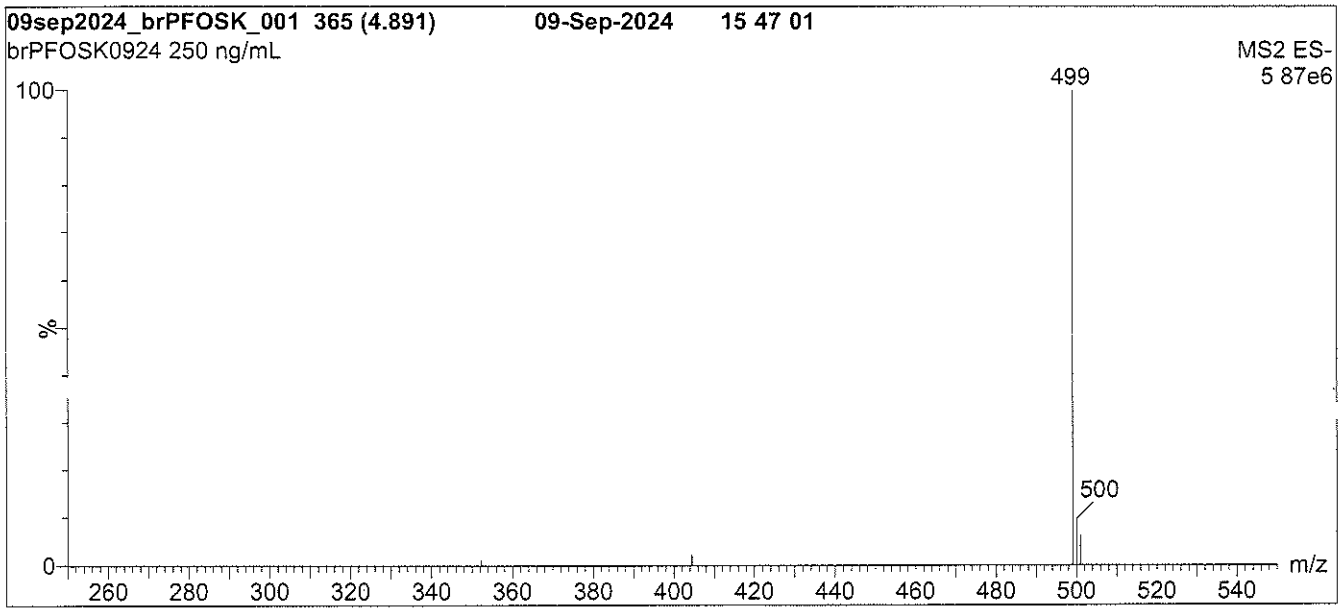
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3(CF_2)_7SO_3^-K^+$	78 8
2	Potassium perfluoro-1-methyl-1-heptanesulfonate**	$CF_3(CF_2)_5CF(CF_3)SO_3^-K^+$	1 2
3	Potassium perfluoro-2-methyl-1-heptanesulfonate	$CF_3(CF_2)_4CF(CF_3)CF_2SO_3^-K^+$	0 6
4	Potassium perfluoro-3-methyl-1-heptanesulfonate	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_3^-K^+$	1 9
5	Potassium perfluoro-4-methyl-1-heptanesulfonate	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_3^-K^+$	2.2
6	Potassium perfluoro-5-methyl-1-heptanesulfonate	$CF_3CF_2CF(CF_3)(CF_2)_4SO_3^-K^+$	4 5
7	Potassium perfluoro-6-methyl-1-heptanesulfonate	$CF_3CF(CF_3)(CF_2)_5SO_3^-K^+$	10 0
8	Potassium perfluoro-5 5-dimethyl-1-hexanesulfonate	$CF_3C(CF_3)_2(CF_2)_4SO_3^-K^+$	0 2
9	Potassium perfluoro-4,4-dimethyl-1-hexanesulfonate	$CF_3CF_2C(CF_3)_2(CF_2)_3SO_3^-K^+$	0 03
10	Potassium perfluoro-4 5-dimethyl-1-hexanesulfonate	$CF_3CF(CF_3)CF(CF_2)_3SO_3^-K^+$	0 4
11	Potassium perfluoro-3 5-dimethyl-1-hexanesulfonate	$CF_3CF(CF_3)CF_2CF(CF_3)(CF_2)_2SO_3^-K^+$	0 07

* Percent of total perfluorooctanesulfonate isomers only
** Systematic Name Potassium perfluoro-2-octanesulfonate

Certified By _____ **Date** 10/08/2024 (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 UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions.

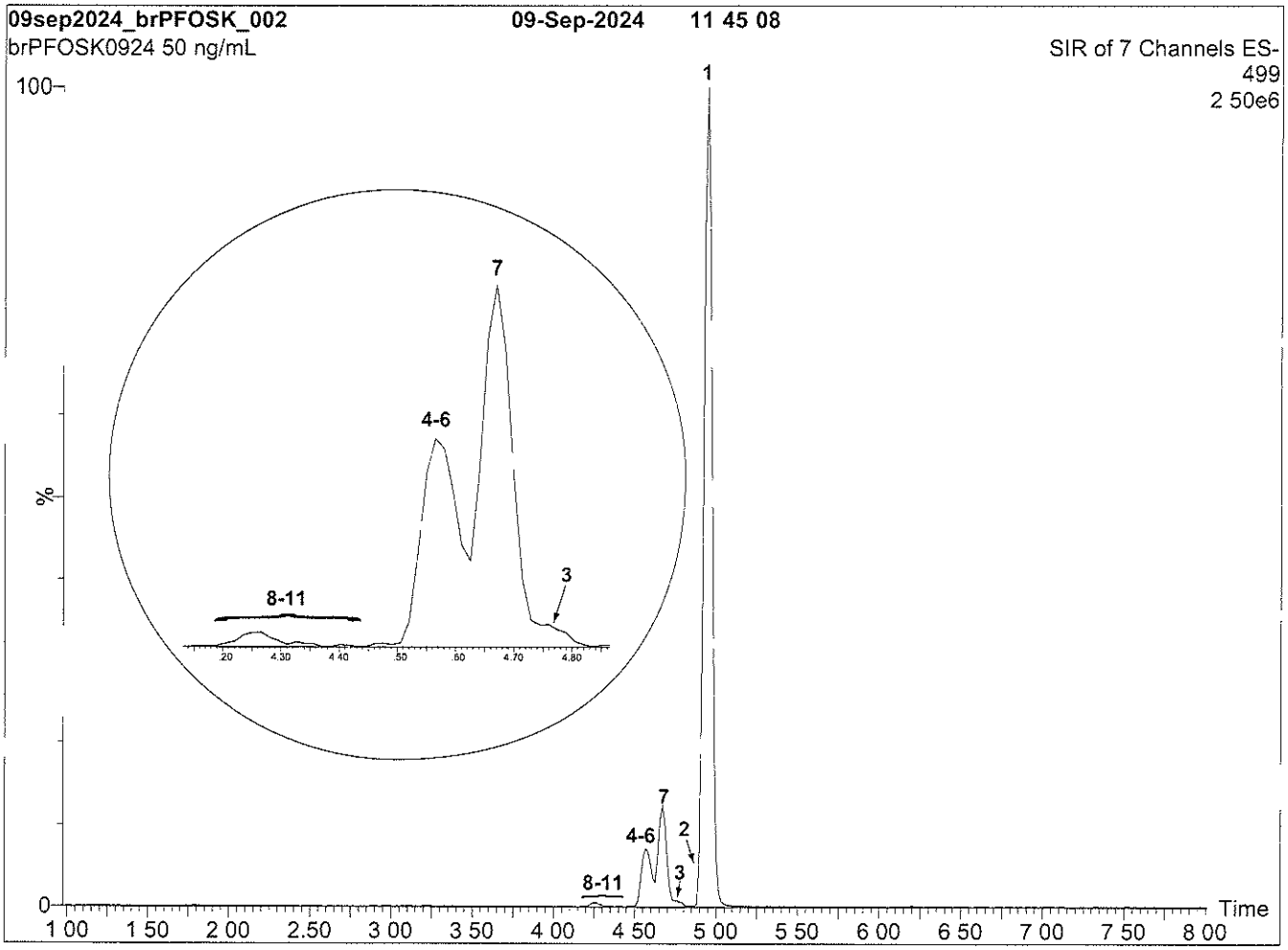
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow	300 µL/min

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. **br-PFOSK, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

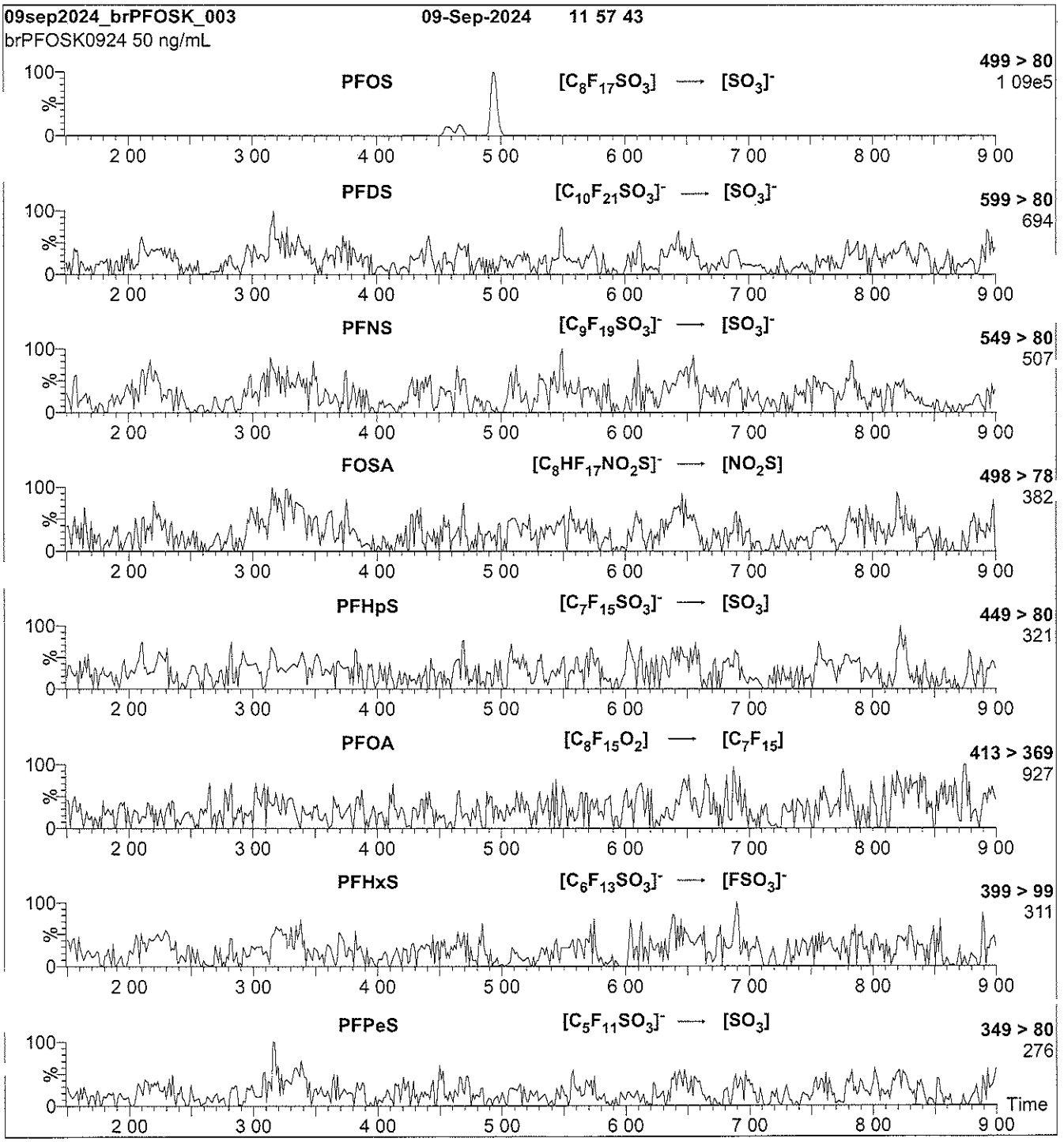
Column	Acquity UPLC BEH Shield RP 8 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 m n and hold for 1 min before returning to initial conditions in 0.5 m n Time 12 min
Flow	300 µL/min

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 Figures 1 & 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.29e-3
Collision Energy (eV) = 64

Reagent

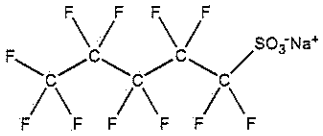
PFC_ST_03698

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_03409

PRODUCT CODE.	L PFPeS	**LOT NUMBER.**	LPFPeS1223
COMPOUND.	Sodium perfluoro-1 pentanesulfonate		
STRUCTURE.		**CAS #.**	630402-22-1



410-6842835

MOLECULAR FORMULA.	$C_5F\ SO_3Na$	**MOLECULAR WEIGHT:**	372 09
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt) 47 0 ± 2.4 µg/mL (PFPeS acid) 46 9 ± 2 3 µg/mL (PFPeS anion)	**SOLVENT(S).**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	12/18/2023		
EXPIRY DATE. (mm/dd/yyyy)	12/18/2028		
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

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Certified By _____ **Date** 01/31/2024 (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 x_2, $.x_n$ on wh ch it depends is

$$u\ (y(x\ \ x\ \ \ .x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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

The individual uncertainties taken into account nclude 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 stud es 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 techn cal and purity specifications

QUALITY MANAGEMENT:

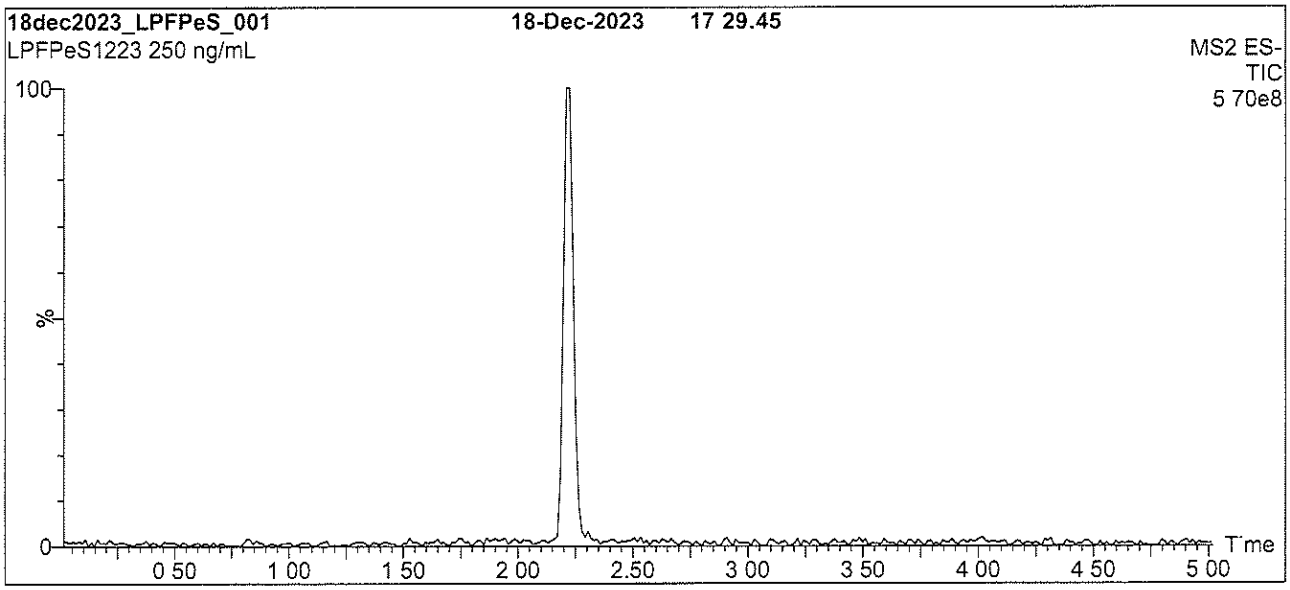
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by ANSI National Accreditation Board (ANAB AR-1523)

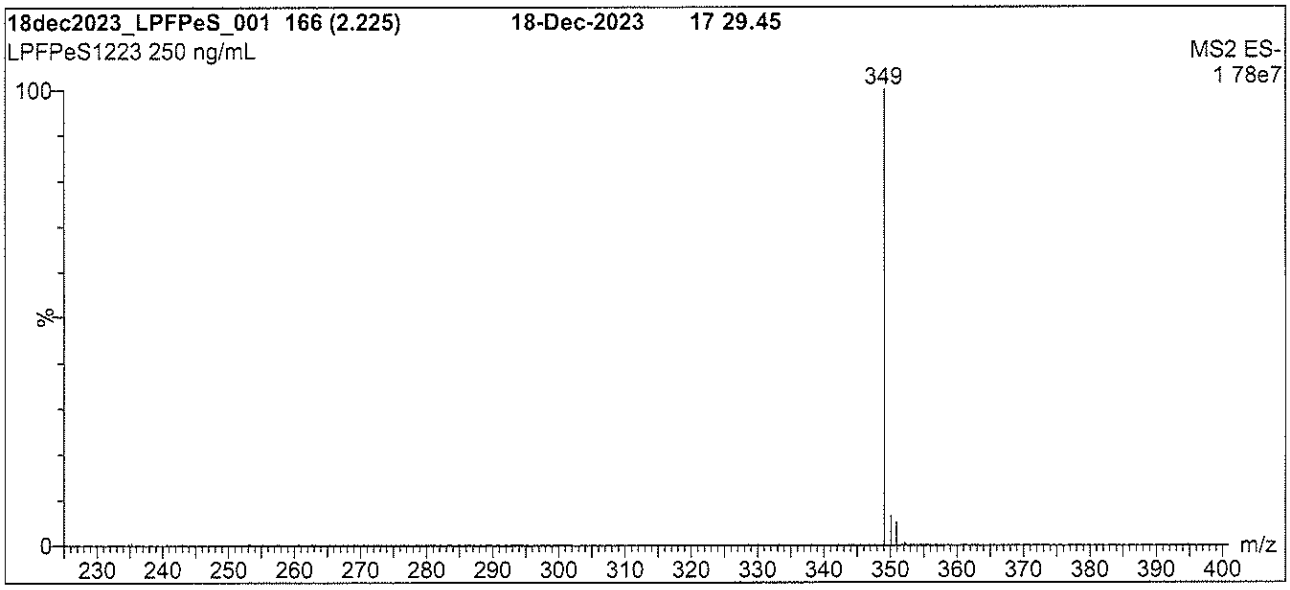
CALA Testing Accreditation No A1226

ANAB 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-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.

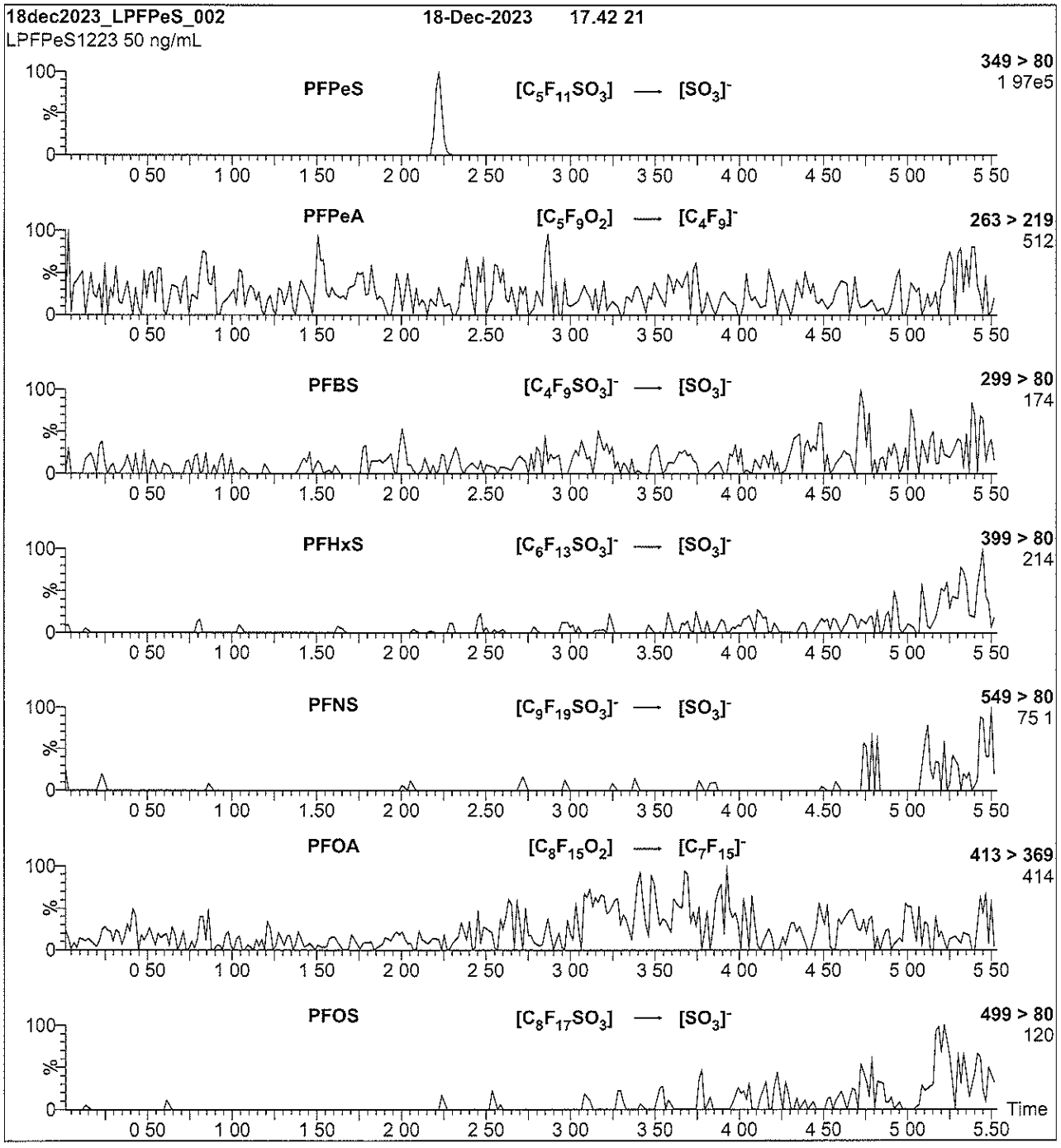
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions over 0 5 min Time 12 m n
Flow	300 µL/min

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. **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) = 4.41e-3
Collision Energy (eV) = 32

Reagent

PFC_ST_03719

7448425
ID: PFC_ST 03717
Exp:09/24/29 Prpd:R7RE Opn:
Native NMePFOSA Mixed Isomers

410-7448425

br-NMeFOSA

N-Methylperfluorooctanesulfonamide Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE.	br-NMeFOSA
LOT NUMBER.	brNMeFOSA0924
CONCENTRATION.	50 0 ± 2 5 µg/mL
SOLVENT(S).	Methanol
DATE PREPARED. (mm/dd/yyyy)	09/23/2024
LAST TESTED. (mm/dd/yyyy)	09/24/2024
EXPIRY DATE. (mm/dd/yyyy)	09/24/2029
RECOMMENDED STORAGE.	Store ampoule in a cool dark place

DESCRIPTION.

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamide (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 ^{9}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
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters
- CAS # 31506-32-8 (for linear isomer)

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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 SFC/UV/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 and/or SFC/UV/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 or equivalent products 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 s 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x_2\ \ .x_n)) - \sqrt{\sum^{n} u(y\ x\ )}$$

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%) has been assigned to this product.

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 Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 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

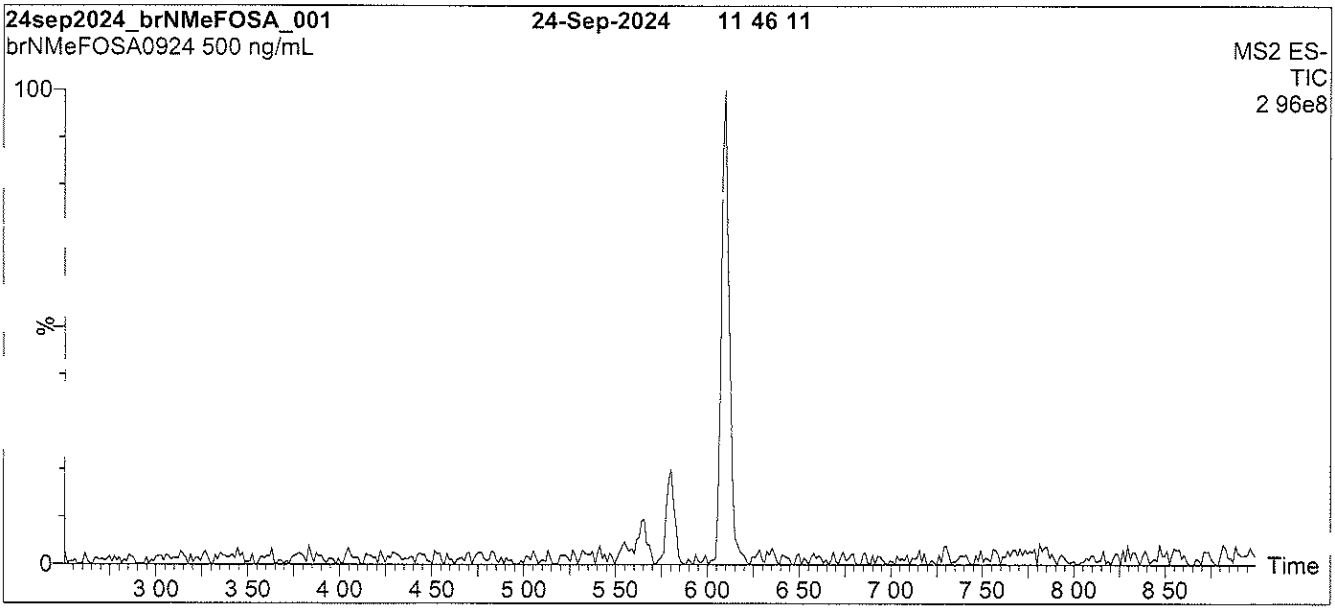
Table A. **br-NMeFOSA, Isomeric Components and Percent Composition (by ^{9}F-NMR)***

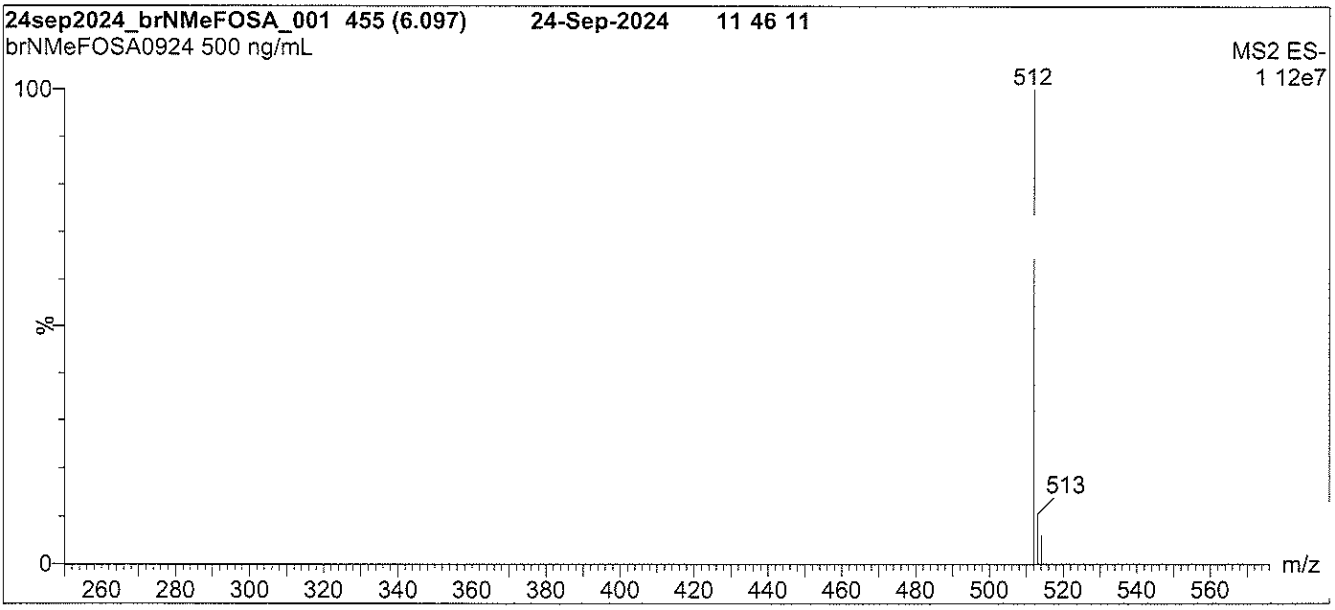
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	N-Methylperfluoro-1-octanesulfonamide	$CF_3(CF_2)_7SO_2NH$ $\vert$ CH_3	72 3
2	N-Methylperfluoro-3-methyl-1-heptanesulfonamide	$CF_3(CF_2)_3CF(CF_2)_2SO_2NH$ $\vert$ $\vert$ CF_3 CH_3	2 1
3	N-Methylperfluoro-4-methyl-1-heptanesulfonamide	$CF_3(CF_2)_2CF(CF_2)_3SO_2NH$ $\vert$ $\vert$ CF_3 CH_3	2 6
4	N Methylperfluoro-5-methyl-1-heptanesulfonamide	$CF_3CF_2CF(CF_2)_4SO_2NH$ $\vert$ $\vert$ CF_3 CH_3	6 7
5	N-Methylperfluoro-6-methyl-1-heptanesulfonamide	$CF_3CF(CF_2)_5SO_2NH$ $\vert$ $\vert$ CF_3 CH_3	16 2
6	N-Methylperfluoro-5 5-dimethyl-1-hexanesulfonamide	CF_3 $CF_3C(CF_2)_4SO_2NH$ $\vert$ $\vert$ CF_3 CH_3	0 04

* Percent of total N-methylperfluorooctanesulfonamide isomers only

Certified By _____ **Date** 09/30/2024
(mm/dd/yyyy)
B G. Chittim General Manager

Figure 1. **br-NMeFOSA, 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.

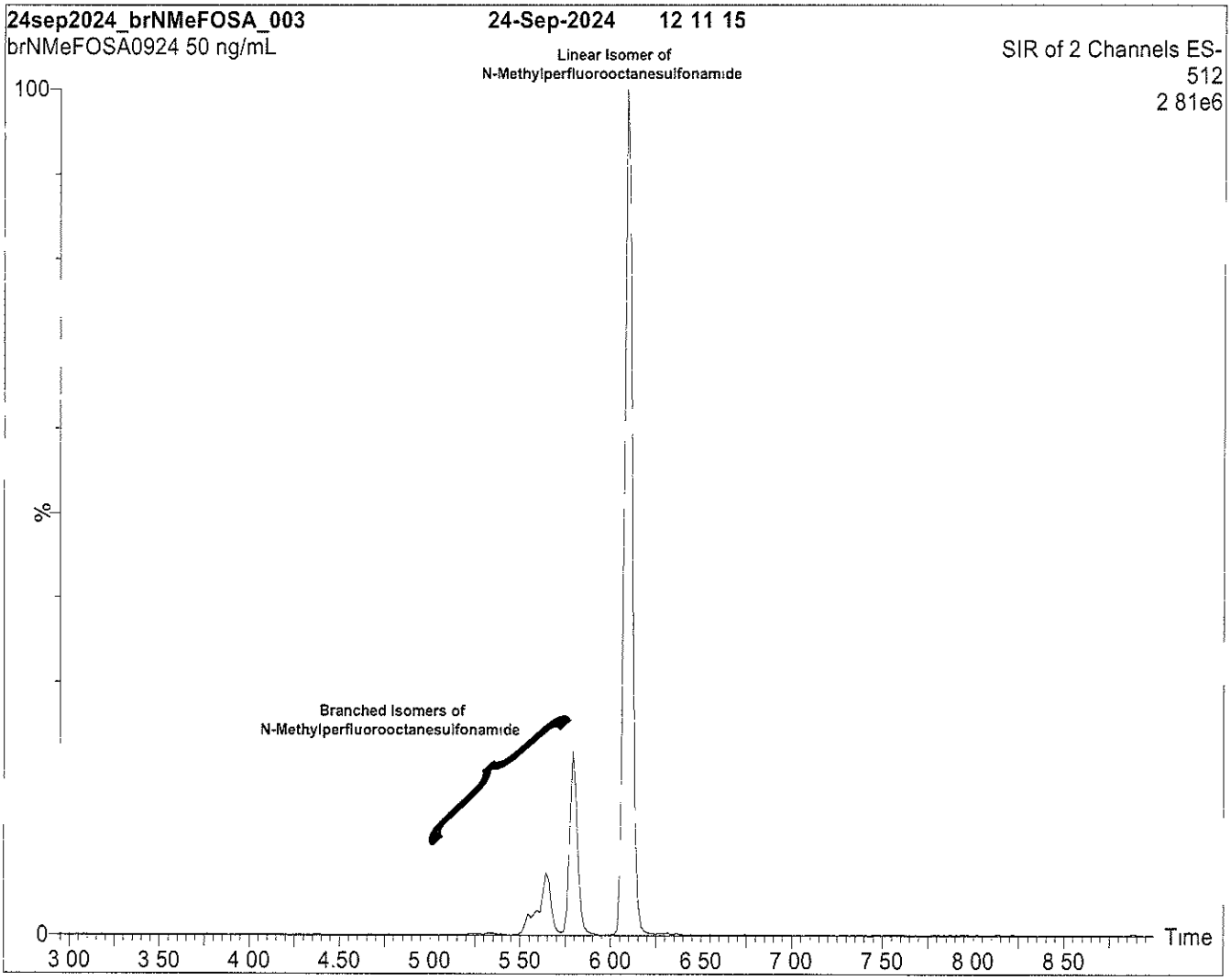
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80 20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions over 0.5 m n Time 12 min
Flow·	300 µL/min

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

Figure 2. **br-NMeFOSA, LC/MS Data (SIR)**



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: 40% H_2O / 60% (80.20 MeOH.ACN)
(both with 10 mM NH OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions over 0.5 min
Time: 12 min

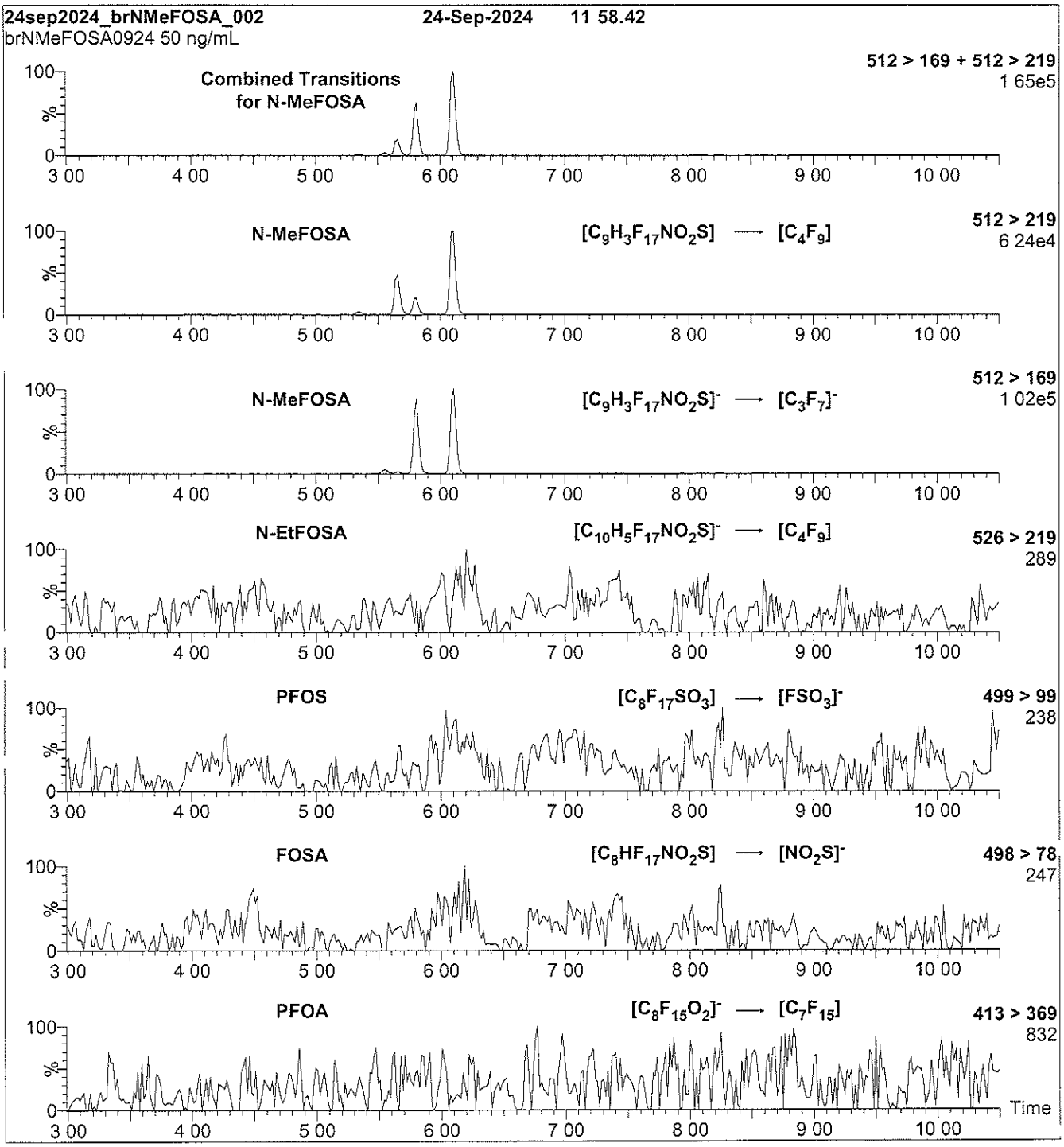
Flow: 300 µL/min

MS Parameters.

Experiment: SIR

Source Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = variable (2-74)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-NMeFOSA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3.

Injection	On-column (br-NMeFOSA)
Mobile phase	Same as Figure 1
Flow	300 µL/m n

MS Parameters.

Collision Gas (mbar) = 4.34e-3
Collision Energy (eV) = 24

Reagent

PFC_ST_03720

br-NEtFOSA

N-Ethylperfluorooctanesulfonamide Solution/Mixture of Linear and Branched Isomers

7448430
ID: PFC_ST_03722
Exp:09/24/29 Prpd:R7RE Opn:
Native NEtPFOSA Mixed Isomers

410-7448430

PRODUCT CODE.	br-NEtFOSA
LOT NUMBER.	brNEtFOSA1024
CONCENTRATION.	50 0 ± 2.5 µg/mL
SOLVENT(S).	Methanol
DATE PREPARED. (mm/dd/yyyy)	09/23/2024
LAST TESTED. (mm/dd/yyyy)	09/24/2024
EXPIRY DATE. (mm/dd/yyyy)	09/24/2029
RECOMMENDED STORAGE.	Store ampoule in a cool dark place

DESCRIPTION.

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamide (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
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters
- CAS #: 4151-50-2 (for linear isomer)

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INTENDED USE.

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HANDLING.

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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 x_2, $.x_n$ on which it depends is.

$$u_c(y(x \quad x_2 \quad .x_n)) - \sqrt{\sum^{n} u(y\ x)}$$

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%) has been assigned to this product.

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 nternational 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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CALA Testing Accreditation No. A 226

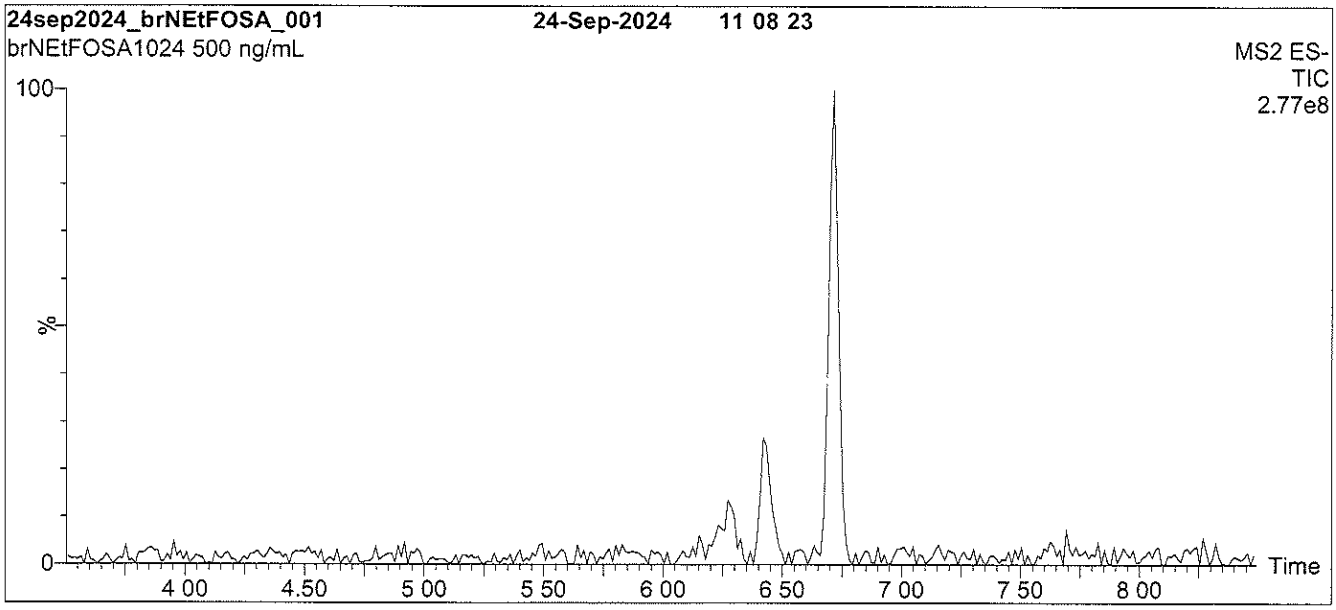
ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

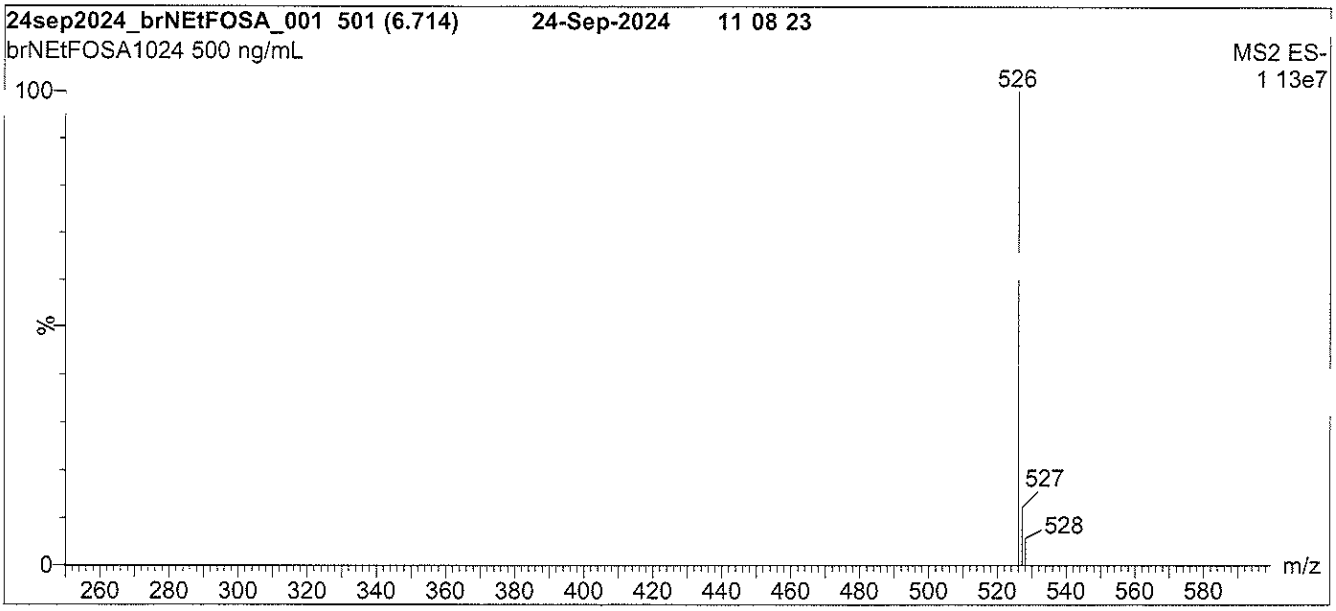
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Table A. **br-NEtFOSA, Isomeric Components and Percent Composition (by ^{9}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	N-Ethylperfluoro-1-octanesulfonamide	$CF_3(CF_2)_7SO_2NH$ $\quad\quad\quad

Figure 1. **br-NEtFOSA, 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.

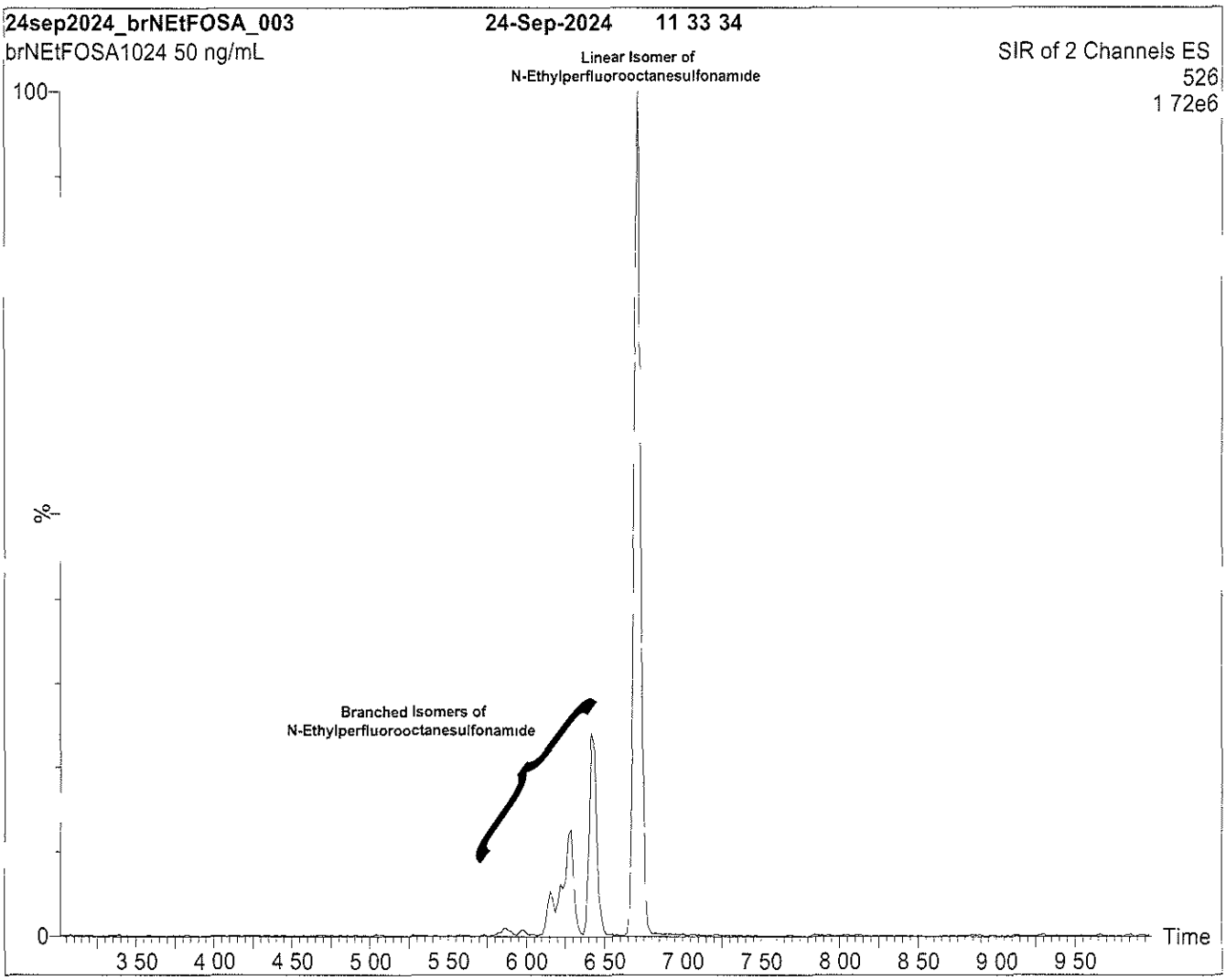
Column	Acquity UPLC BEH Shield RP$_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions over 0 5 min Time 12 min
Flow	300 µL/m n

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

Figure 2. **br-NEtFOSA, LC/MS Data (SIR)**



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. 40% H_2O / 60% (80 20 MeOH.ACN)
(both with 10 mM NH OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions over 0 5 min
Time 12 min

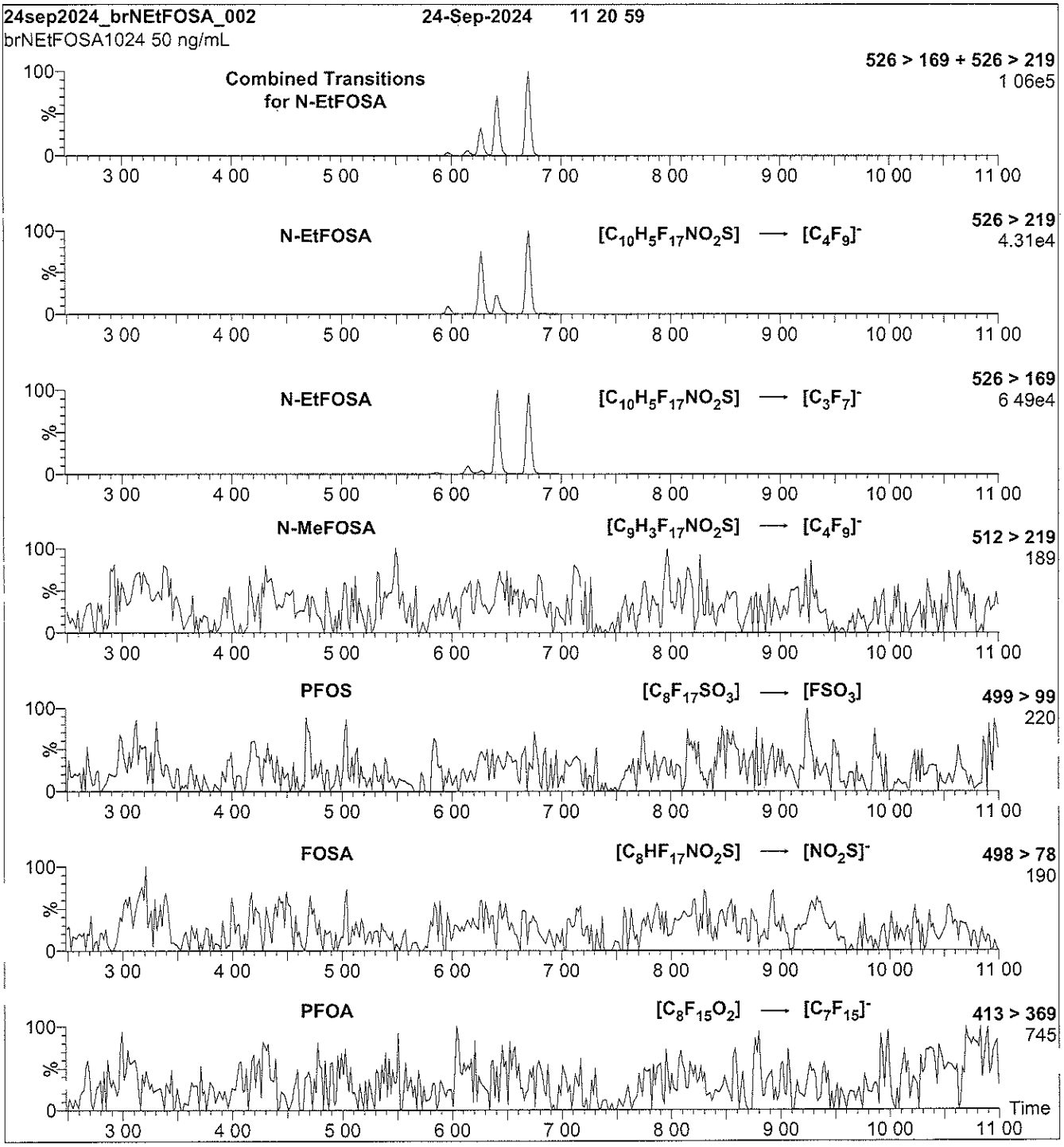
Flow: 300 µL/min

MS Parameters.

Experiment. SIR

Source Electrospray (negative)
Capillary Voltage (kV) = 1 50
Cone Voltage (V) = variable (2 74)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-NEtFOSA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3.

Injection	On-column (br-NEtFOSA)
Mobile phase	Same as Figures 1 and 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.34e-3
Collision Energy (eV) = 24

Reagent

PFC_ST_03735

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

**N-Methylperfluorooctanesulfonamidoacetic Acid
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE.	br NMeFOSAA
LOT NUMBER.	brNMeFOSAA0824
CONCENTRATION.	50 0 ± 2 5 µg/mL
SOLVENT(S).	Methanol/Water (<1%)
DATE PREPARED. (mm/dd/yyyy)	08/22/2024
LAST TESTED. (mm/dd/yyyy)	08/30/2024
EXPIRY DATE. (mm/dd/yyyy)	08/30/2029
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 ^{9}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
- It is recommended to integrate and quantify the linear and branched isomers separately as their resonse factors can vary depending on optimized acquisition parameters
- Contains 4 mole eq of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester
- CAS #: 2355-31-9 (for linear isomer)

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The combined relative standard uncertainty $u_c(y)$ of a value y and the uncertainty of the ndependent parameters x x_2, $.x_n$ on which it depends is

$$u_c(y(x \quad x_2 \quad .x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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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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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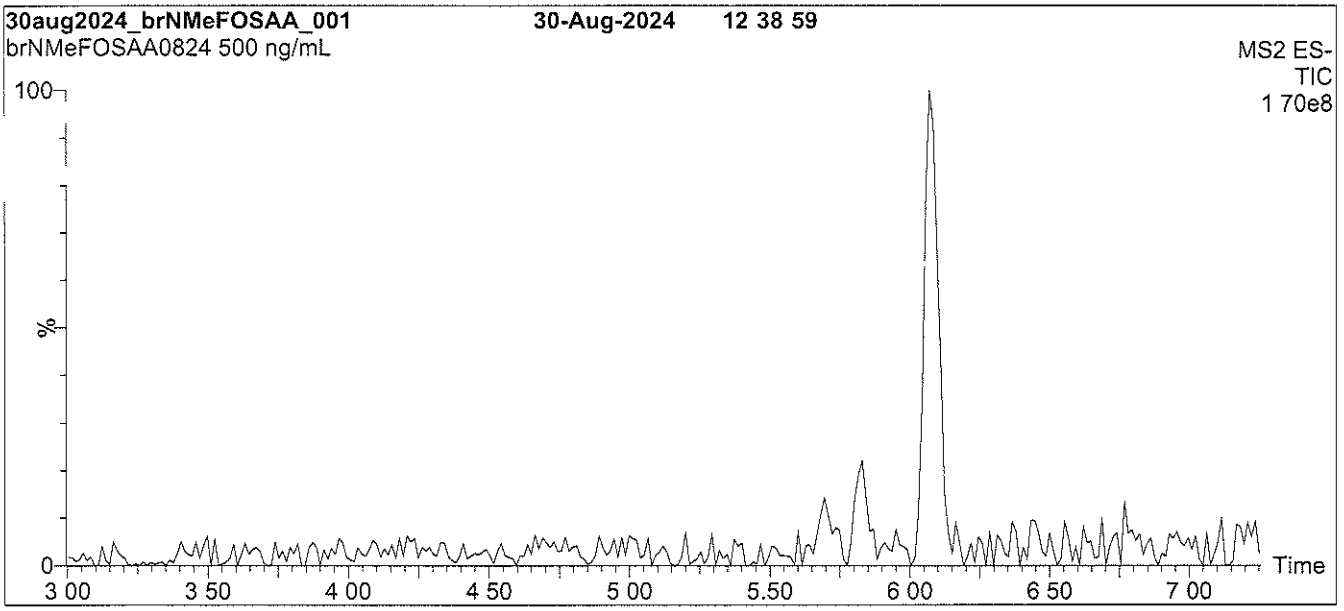
Table A. **br-NMeFOSAA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

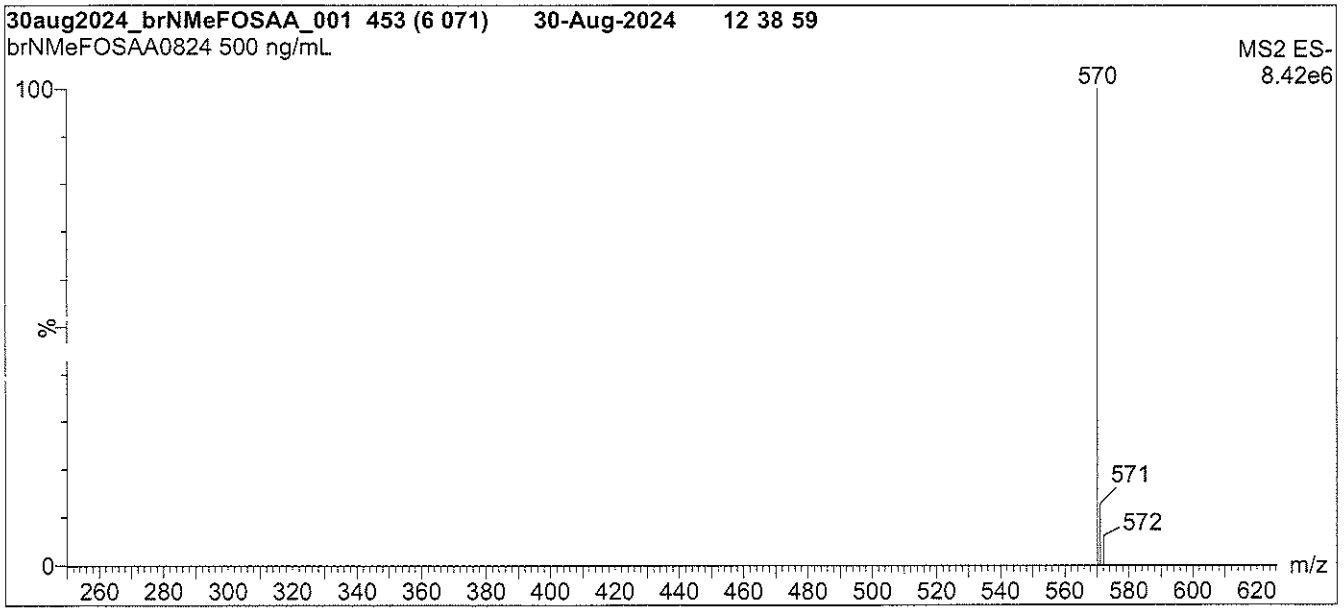
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	N-Methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2NCH_2CO_2H$ CH_3	76 0	76 0
2	N-Methylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_2)_2SO_2NCH_2CO_2H$ CF_3 CH_3	0 7	24 0
3	N-Methylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_2)_3SO_2NCH_2CO_2H$ CF_3 CH_3	2 0	
4	N Methylperfluoro-5-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_2)_4SO_2NCH_2CO_2H$ CF_3 CH_3	6 0	
5	N-Methylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	$CF_3CF(CF_2)_5SO_2NCH_2CO_2H$ CF_3 CH_3	14 0	
6	N-Methylperfluoro-5 5-dimethyl-1-hexanesulfonamidoacetic acid	CF_3 $CF_3C(CF_2)_4SO_2NCH_2CO_2H$ CF_3 CH_3	0 2	
7	Other Unidentified Isomers		1 1	

* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only

Certified By _____ **Date** 09/09/2024
(mm/dd/yyyy)
B G. Chittim General Manager

Figure 1. **br-NMeFOSAA, 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 9 min and hold for 1 min
before returning to initial conditions over 0.5 min
Time 12 min

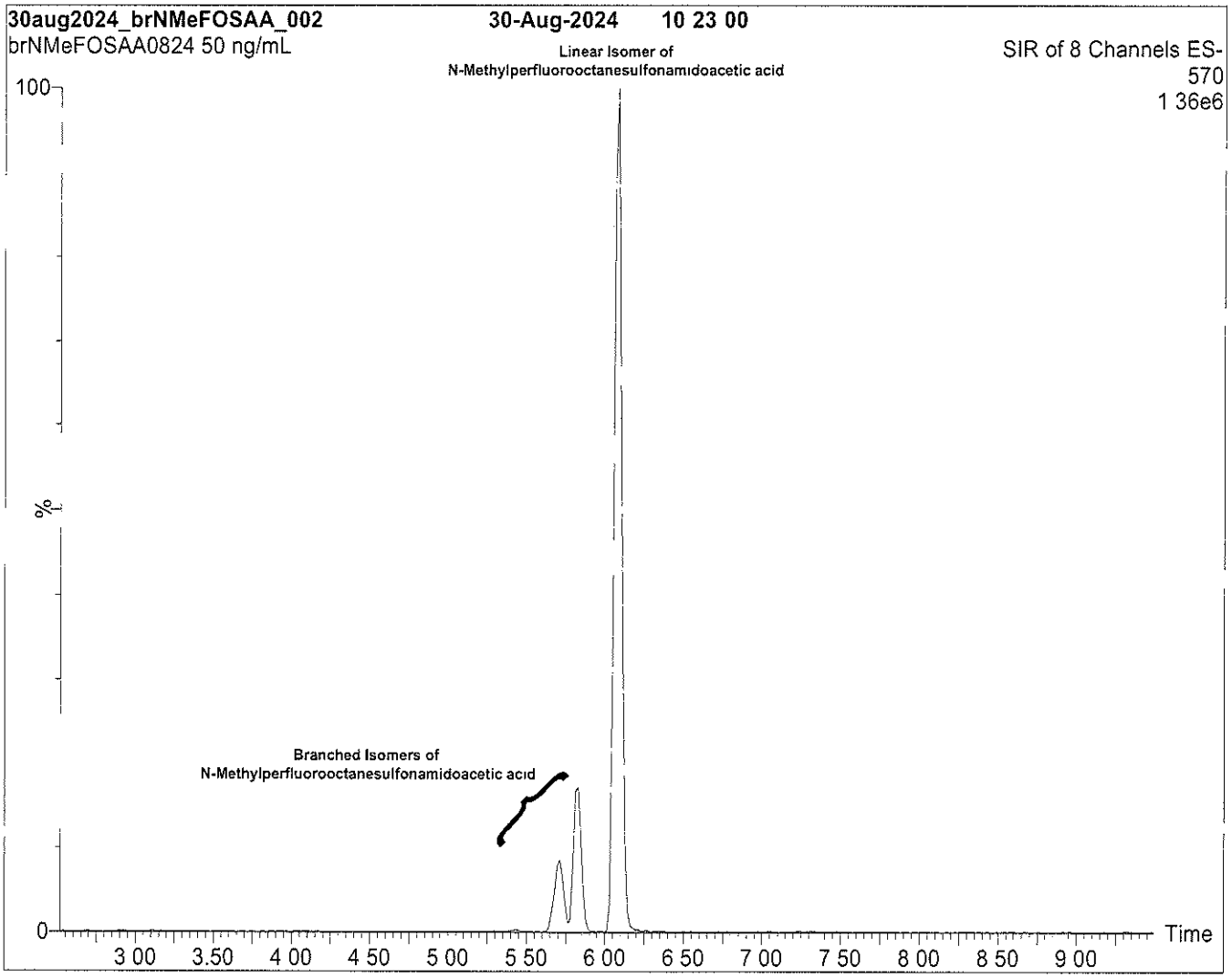
Flow: 300 µL/min

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

Figure 2. **br-NMeFOSAA, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

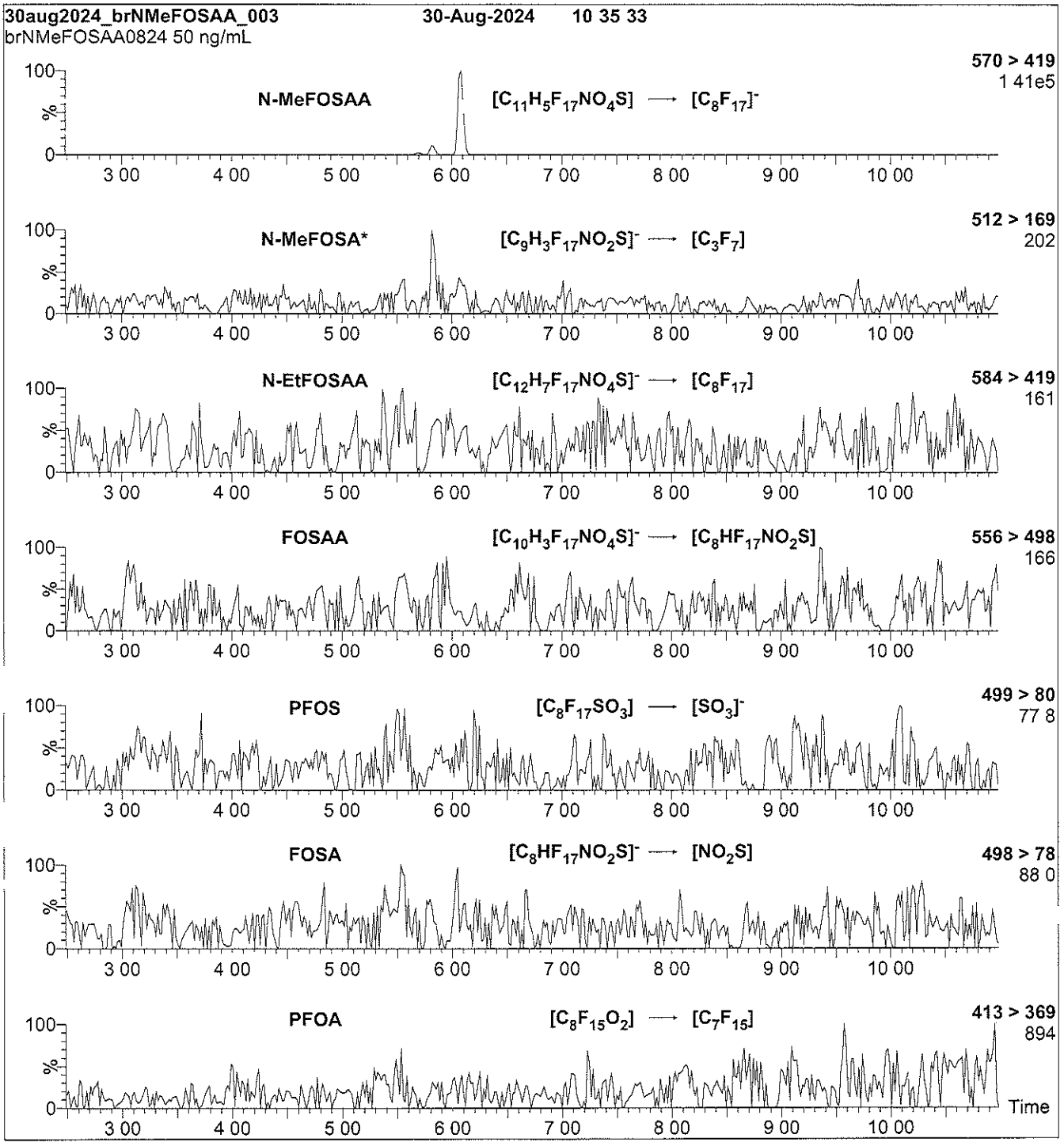
Column	Acquity UPLC BEH Shield RP $_{s}$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions over 0.5 min Time 12 min
Flow·	300 µL/min

MS Parameters.

Experiment: SIR

Source Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3. **br-NMeFOSAA, LC/MS/MS Data (Selected MRM Transitions)**



*__Note__. N-MeFOSA is formed by in-source fragmentation

Conditions for Figure 3.

Injection	On-column (br-NMeFOSAA)
Mobile phase	Same as F'gures 1 & 2
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.59e-3
Collision Energy (eV) = 18

Reagent

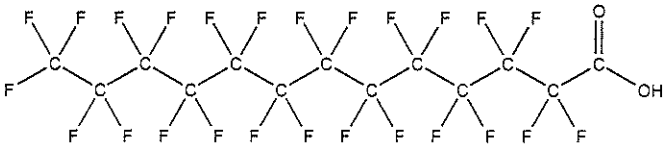
PFC_ST_03739

7448478
ID: PFC_ST_03739
Exp:07/17/29 Prpd:R7RE Opn.
Native PFTrDA Stock
= 410-7448478

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	PFTrDA	**LOT NUMBER.**	PFTrDA0724
COMPOUND.	Perfluoro-n-tridecanoic acid		
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)	07/17/2024		
EXPIRY DATE. (mm/dd/yyyy)	07/17/2029		
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** 09/19/2024 (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.

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 SFC/UV/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 and/or SFC/UV/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 x_2, $.x_n$ on which it depends is.

$$u_c(y(x \quad x, \quad x_n)) = \sqrt{\sum^{n} u(y \; x)^2}$$

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%) has been assigned to this product.

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:

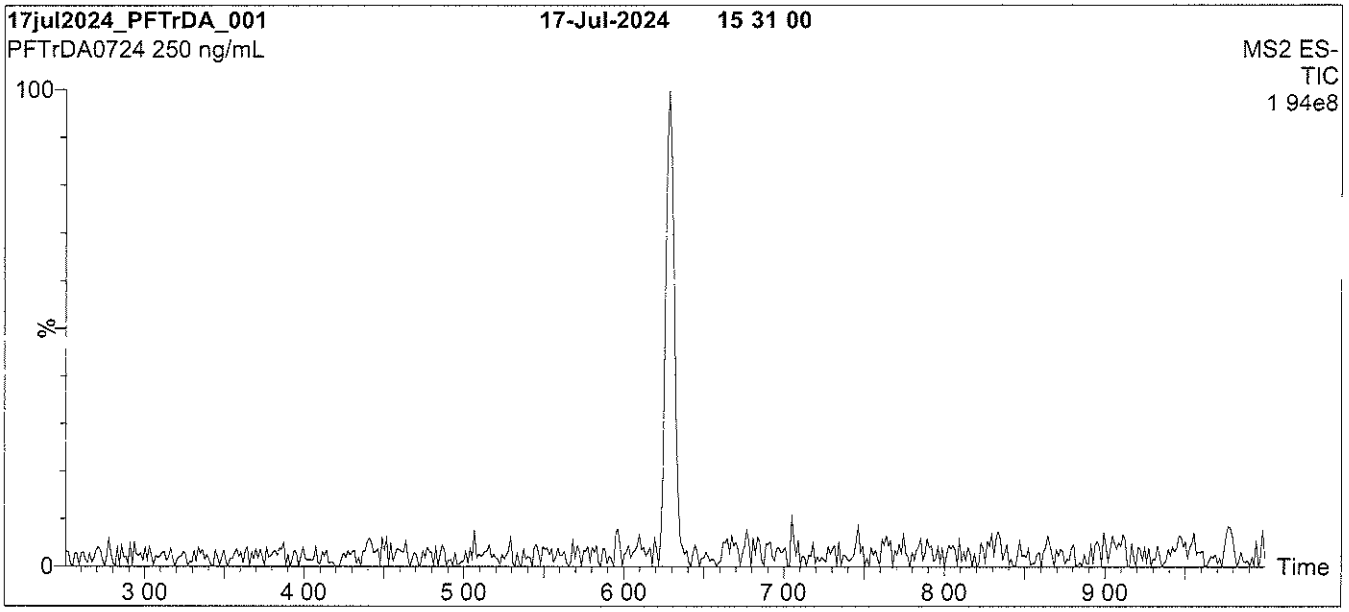
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR 1523)

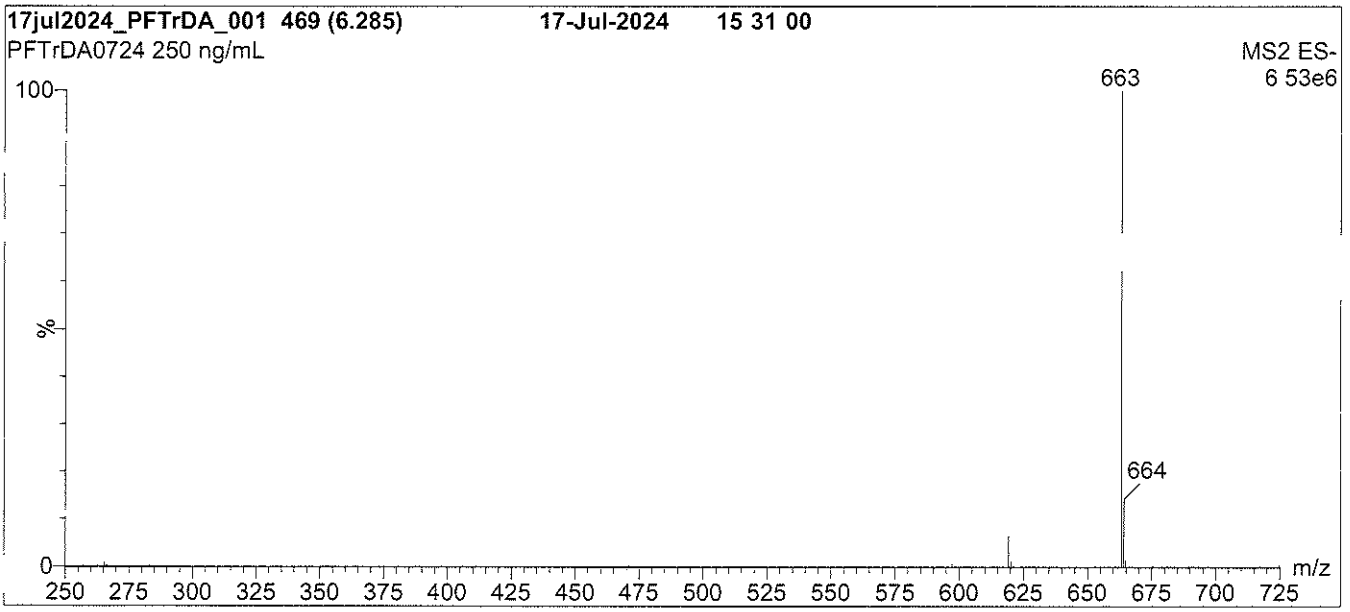
CALA Testing Accreditation No. A1226

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. **PFTrDA, 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.

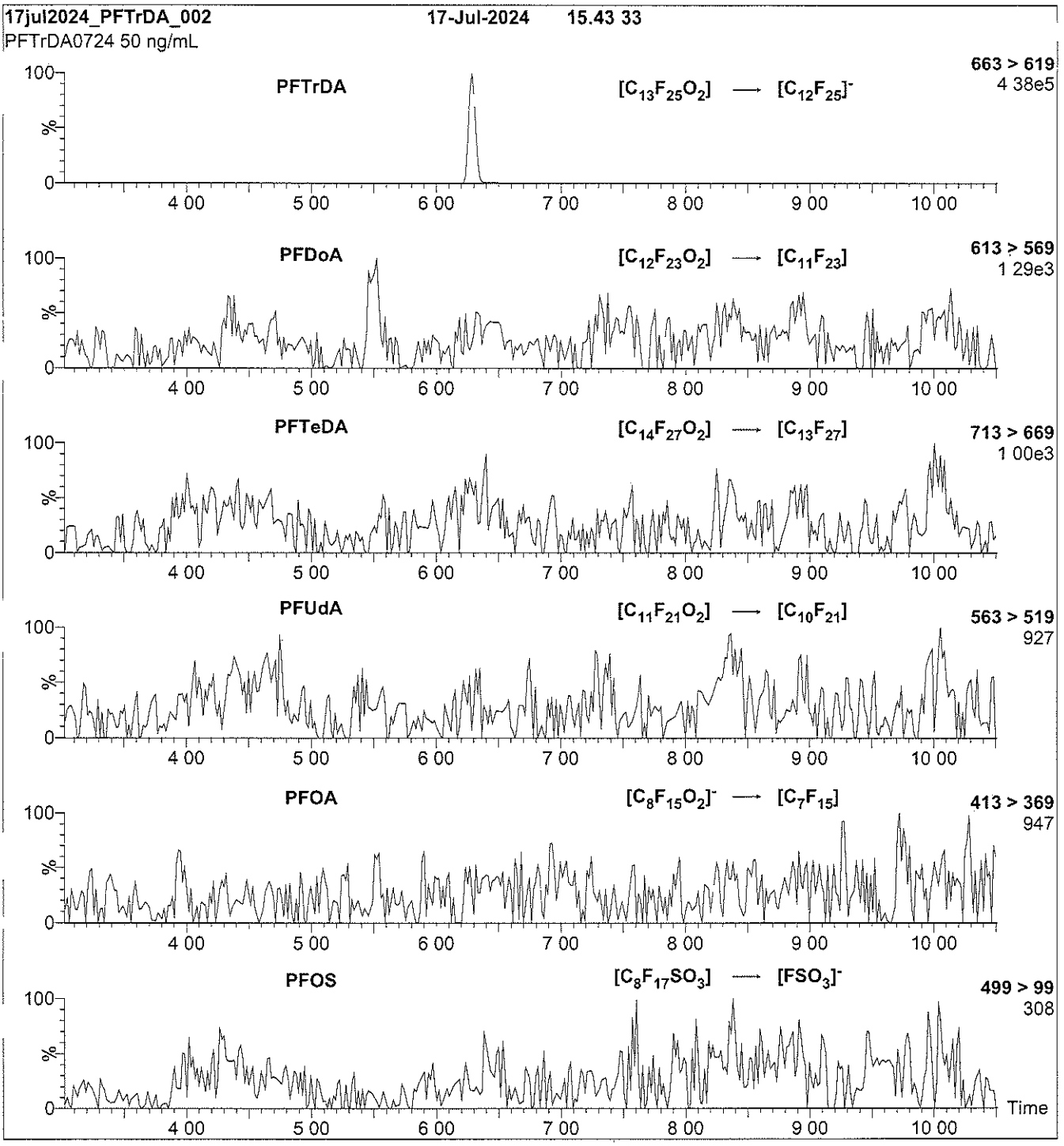
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80.20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time· 12 min
Flow·	300 µL/min

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. **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) = 5 94e-3
Collision Energy (eV) = 12

Reagent

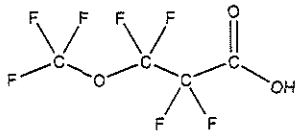
PFC_ST_03768

7448634
ID: PFC_ST_03768
Exp:06/21/29 Prpd:R7RE Opn:
Native PFMPA (PF4OPeA) Stock
410-7448634

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	PF4OPeA	**LOT NUMBER.**	PF4OPeA1024
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)	10/18/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/18/2029		
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** 12/10/2024 (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.

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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 SFC/UV/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, and/or SFC/UV/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 x_2, x_n on which it depends is

$$u(y(x \quad x_2 \quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

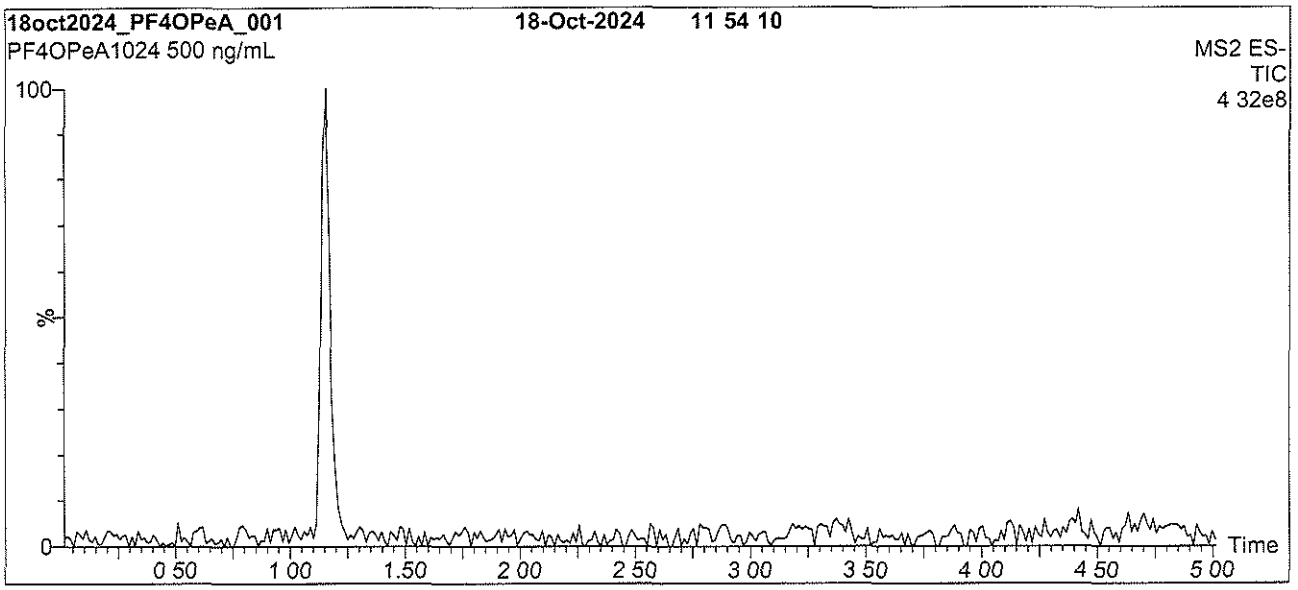
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB, AR-1523)

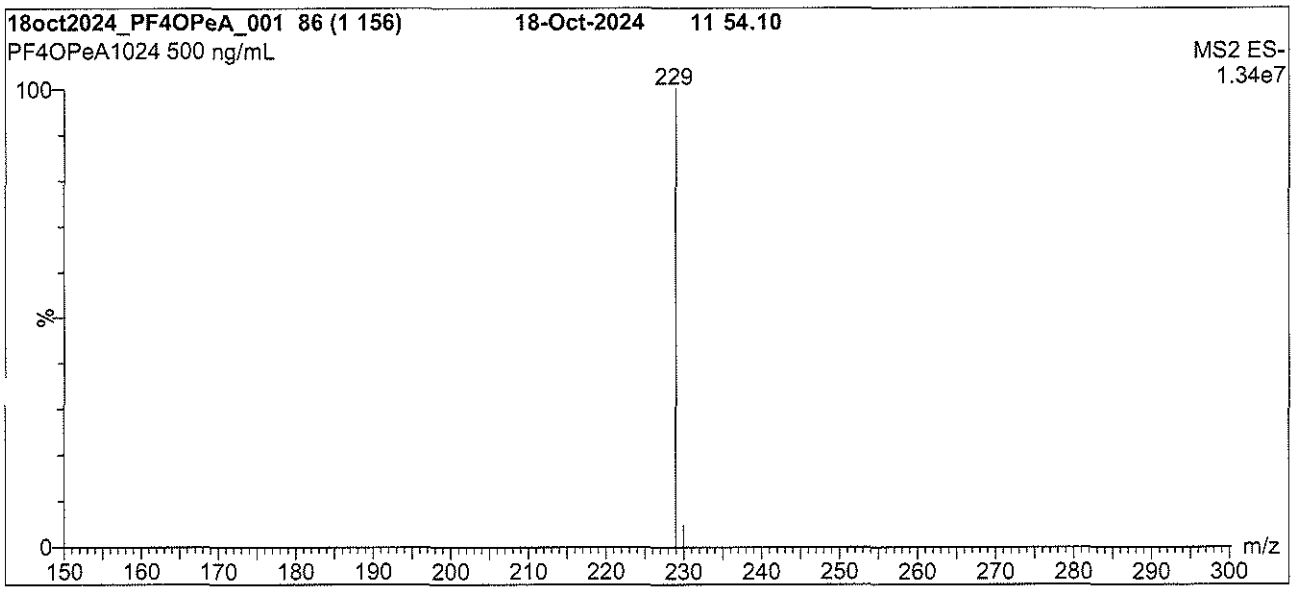
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **PF4OPeA, 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 9 min and hold for 1 min
before returning to initial conditions in 0 5 min
Time 12 min

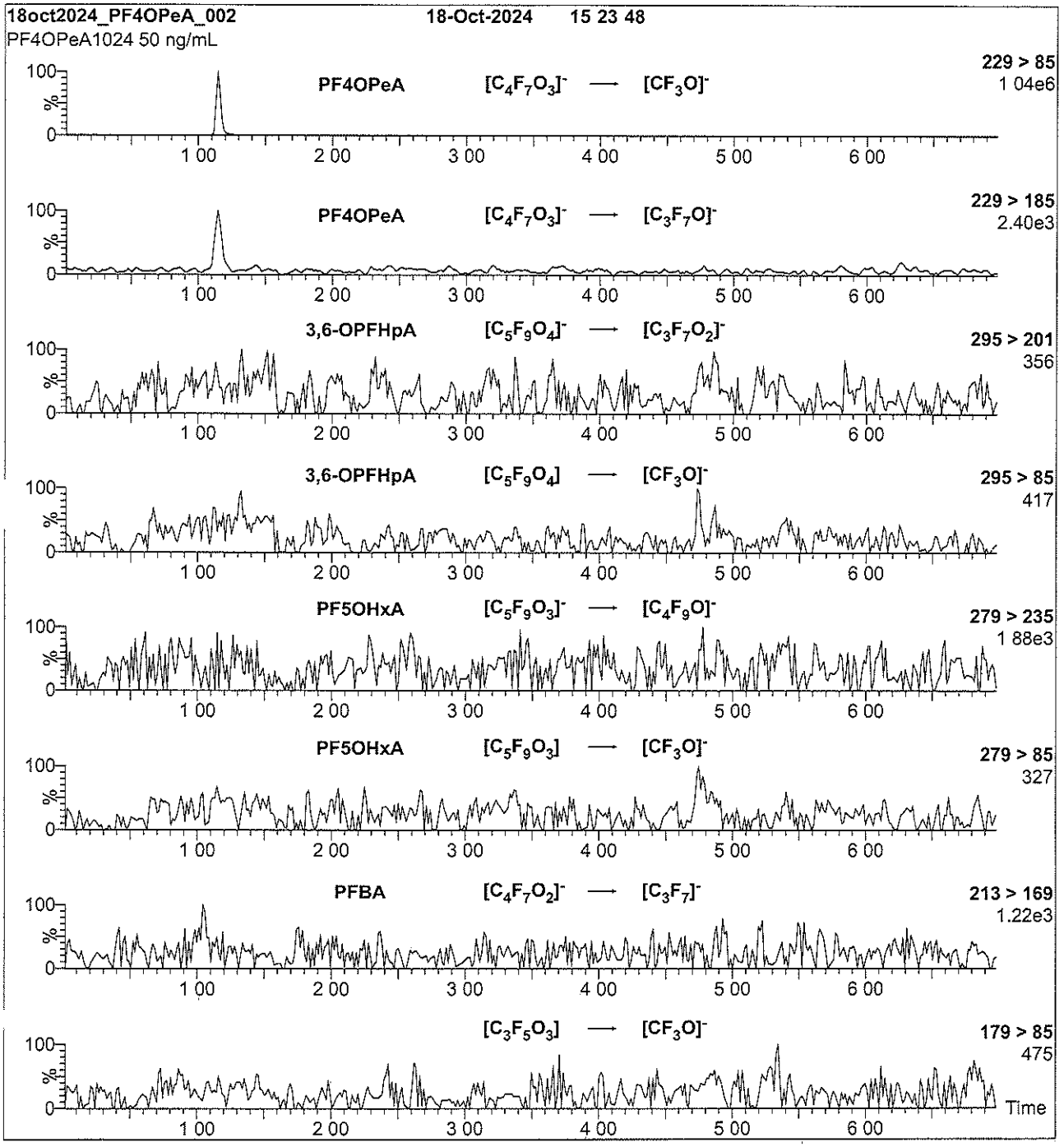
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source. Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 9.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.54e-3
Collision Energy (eV) = 10

Reagent

PFC_ST_03776

7448644
ID: PFC_ST 03774
Exp:04/17/23 Prpd:R7RE Opn:
Native 3,6-OPFHpA Stock (PFECA
410-7448644

WELLINGTON LABORATORIES

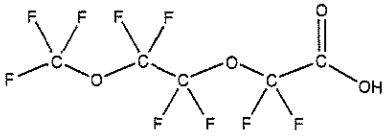
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. 3 6-OPFHpA
COMPOUND. Perfluoro-3 6-dioxaheptanoic acid

LOT NUMBER. 36OPFHpA0424

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) 04/17/2024
EXPIRY DATE. (mm/dd/yyyy) 04/17/2029
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** 04/23/2024 (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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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.

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:

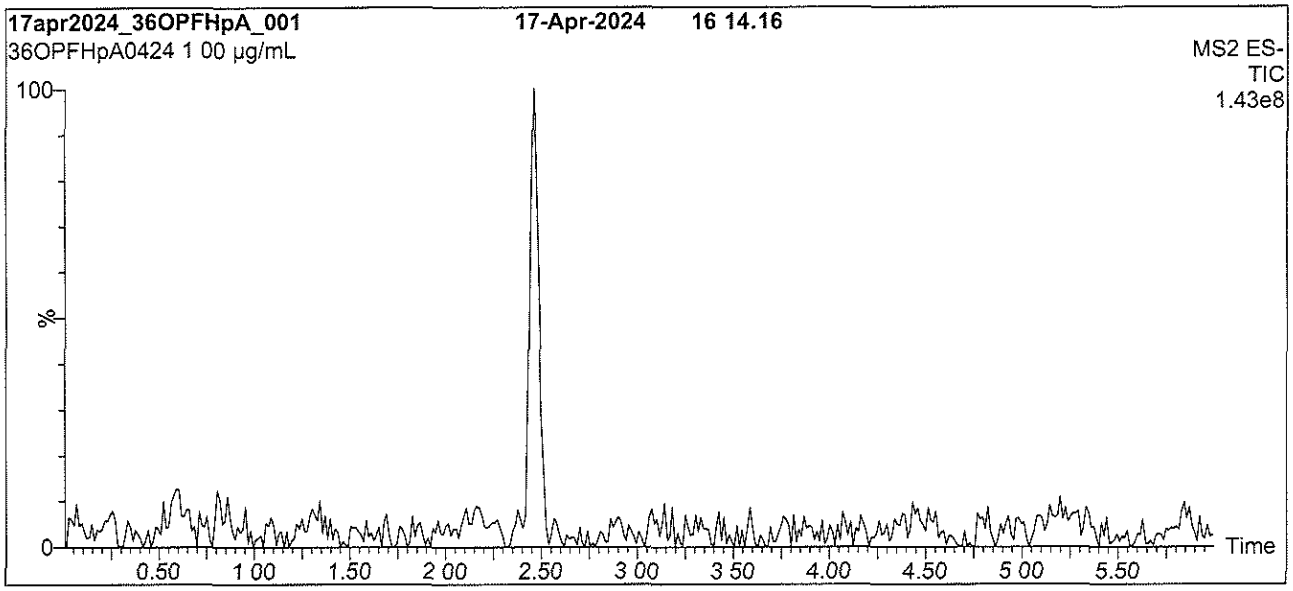
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB AR-1523).

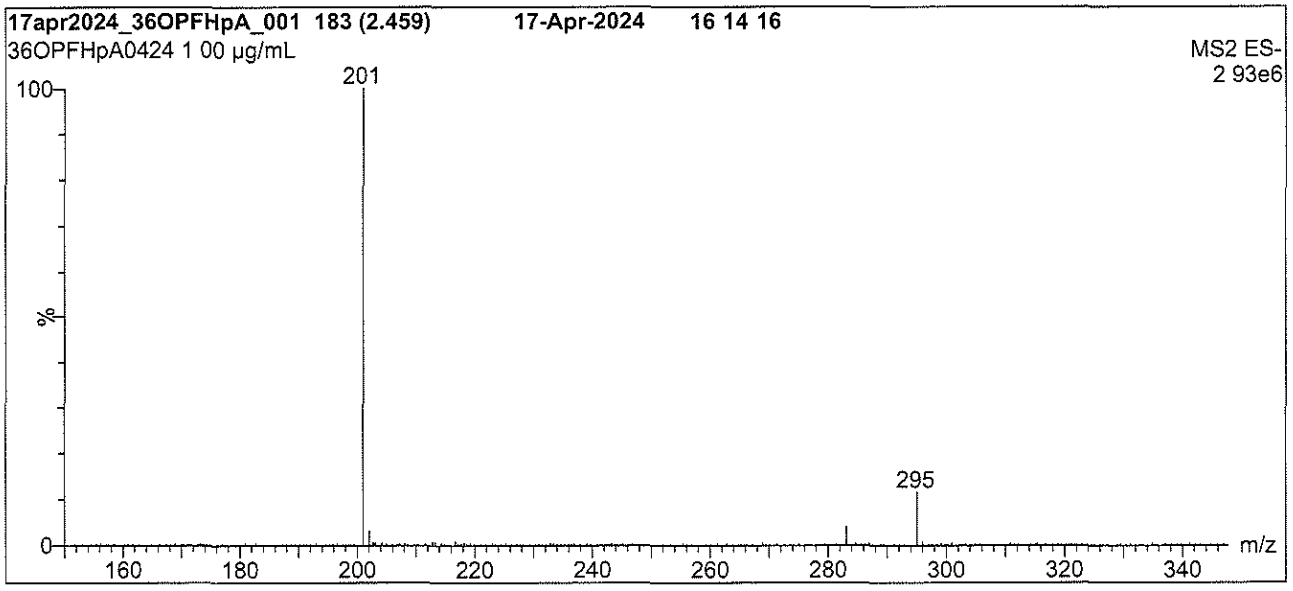
CALA testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **3,6-OPFHpA, 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.

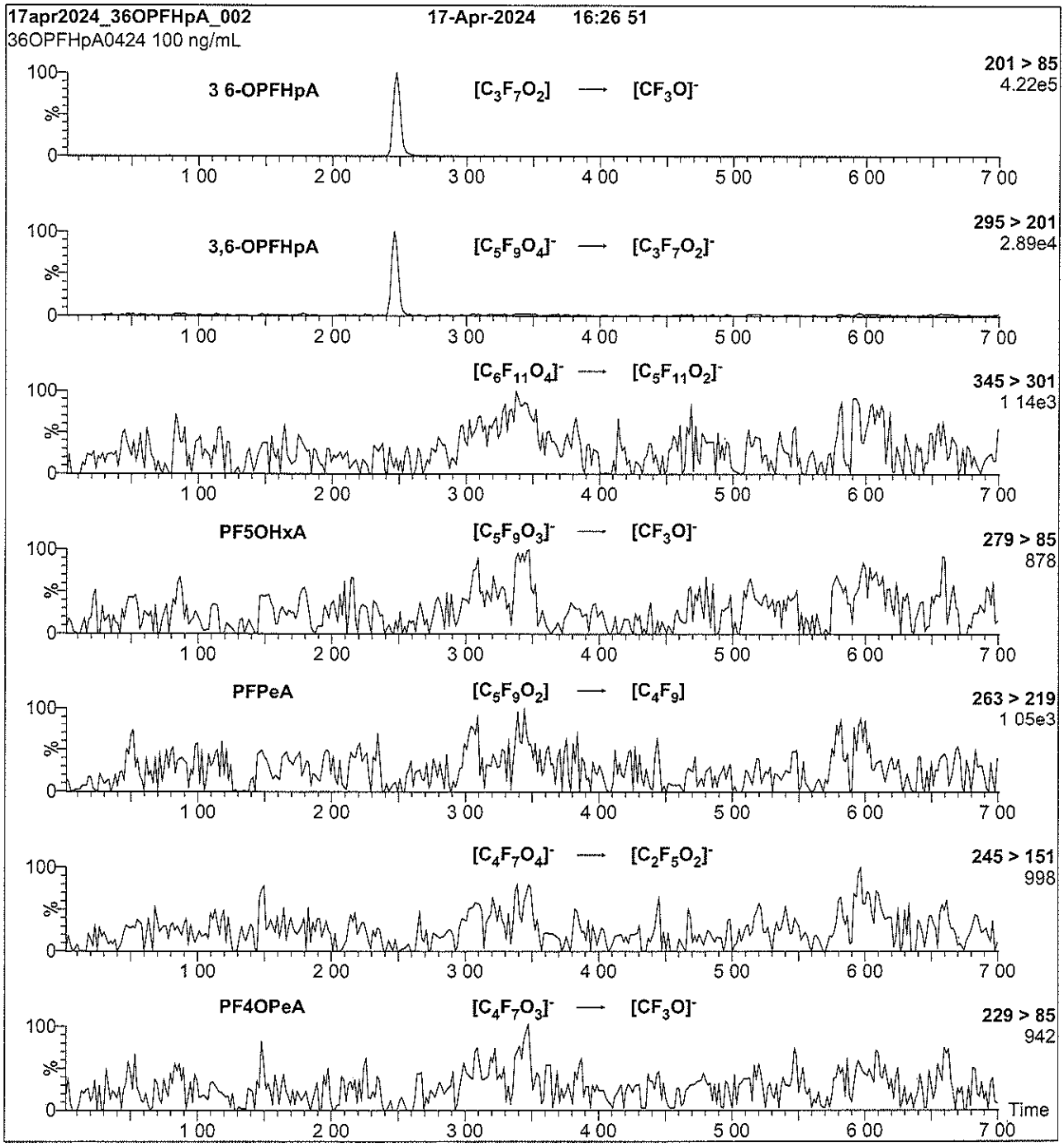
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2 75
Cone Voltage (V) = 40 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2. **3,6-OPFHpA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.			
Injection	On-column (3 6-OPFHpA)	**MS Parameters.**	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 4.36e-3 Collision Energy (eV) = 10	
Flow	300 µL/min		

Reagent

PFC_ST_03780

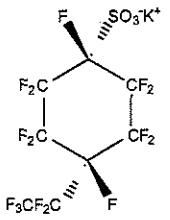
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

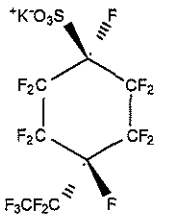
PRODUCT CODE. PFECHS **LOT NUMBER.** PFECHS0225

COMPOUND. *Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)*

STRUCTURE.



cis-isomer



trans-isomer

CAS #: 335-24-0

MOLECULAR FORMULA.	$C_8F_5SO_3K$	**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)	02/03/2025		
EXPIRY DATE. (mm/dd/yyyy)	02/03/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

DOCUMENTATION/ DATA ATTACHED.

Figure 1 LC/MS Data (Full Scan Extracted Chromatogram 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 85 (*cis·trans* by ^{19}F NMR)
- Contains ~0 7% total of two unknown impurities

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Certified By _____ **Date** 02/06/2025 (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, SFC/UV/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 and/or SFC/UV/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 ndependent parameters x x_2, x_n on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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%) has been assigned to this product.

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:

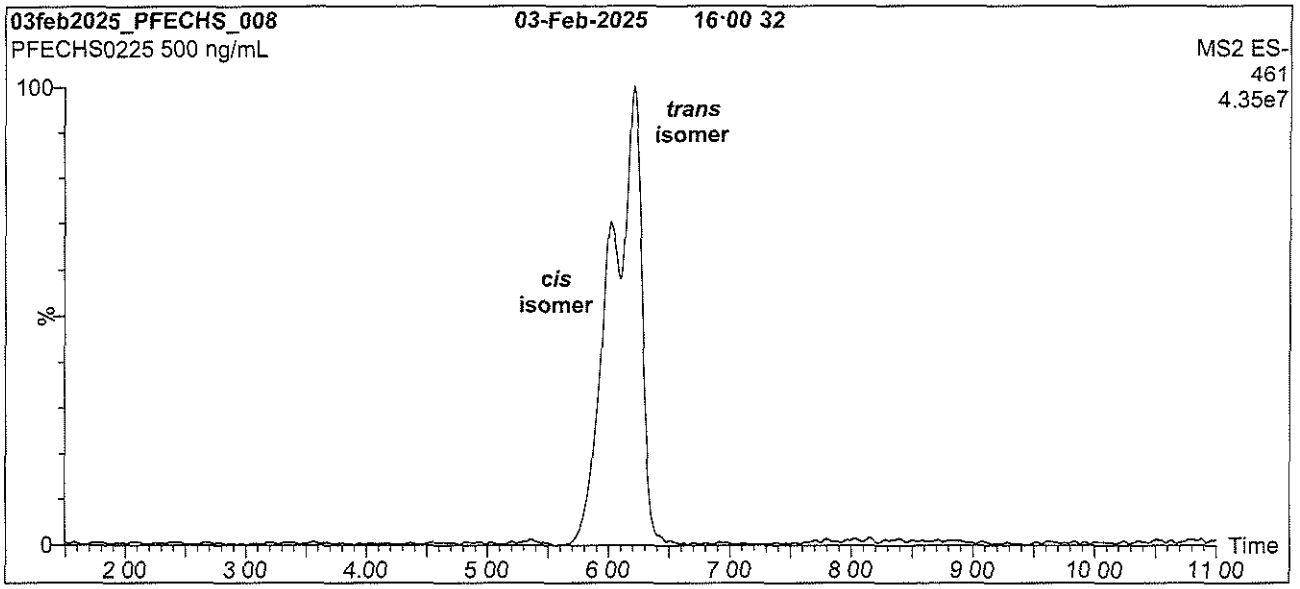
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

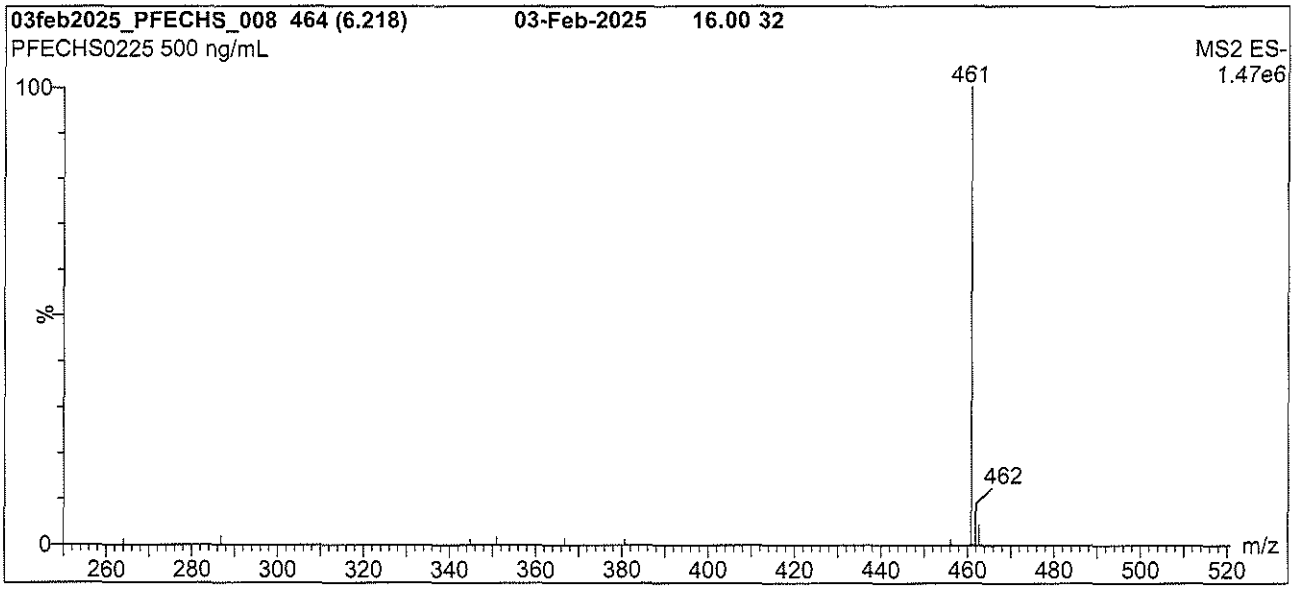
CALA esting Accreditation No. A1226

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. **PFECHS, LC/MS Data (Full Scan Extracted Chromatogram 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: 65% H_2O / 35% (80:20 MeOH.ACN)
(both with 10 mM NH_4OAc buffer)
Hold for 6 minutes then ramp to 90% organic over 4 min and hold for 2 min before returning to initial conditions in 1 min
Time 15 min

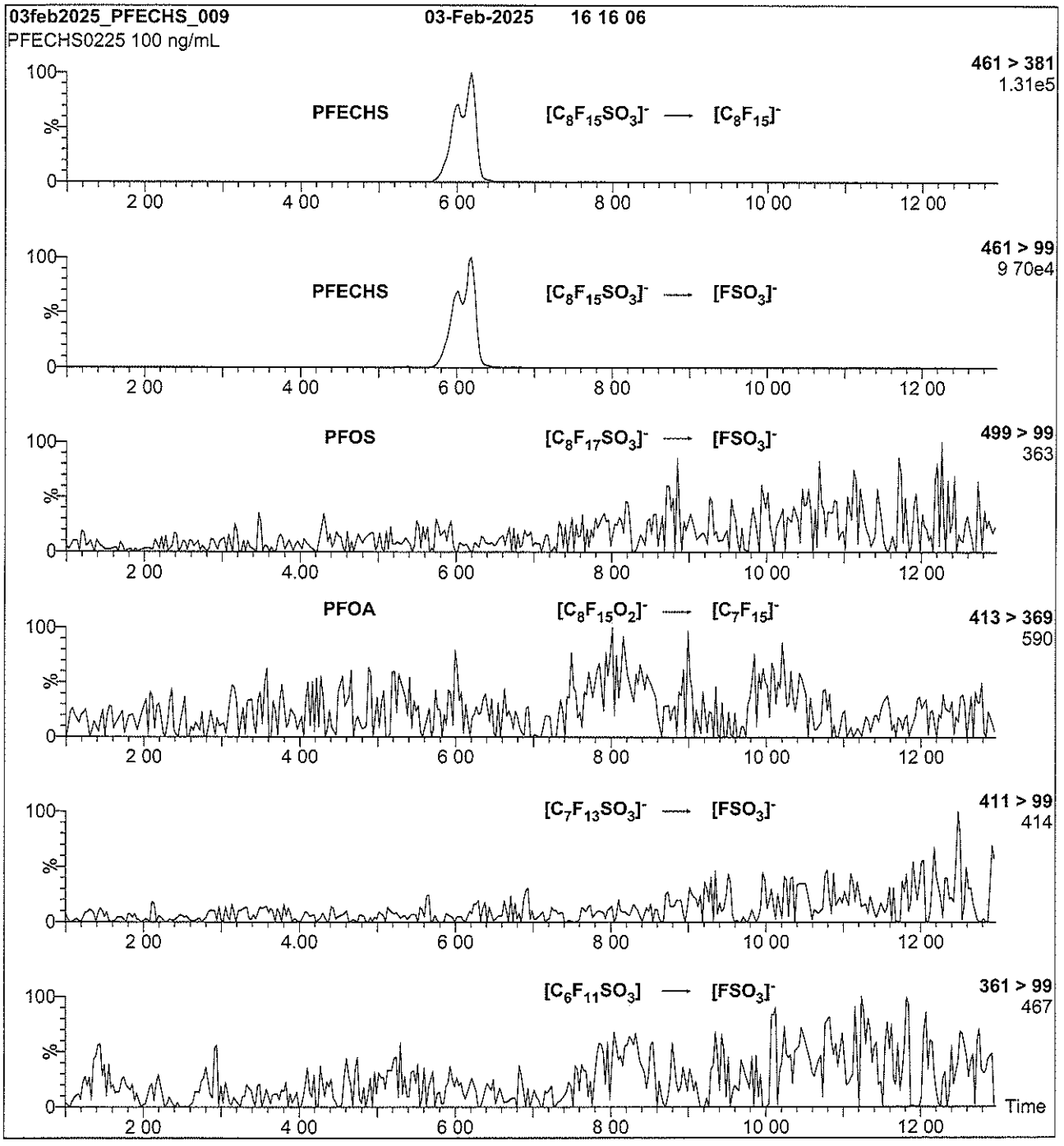
Flow: 300 µL/min

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) = 1000

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) = 4.36e-3
Collision Energy (eV) = 24

Reagent

PFC_ST_03790

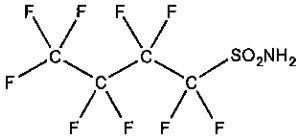
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_04010
PFC_ST_04011

PRODUCT CODE. FBSA-I
COMPOUND. Perfluoro-1-butanesulfonamide
LOT NUMBER. FBSA0225I

STRUCTURE.




7626876
ID: PFC_ST_04010
Exp:02/10/30 Prpd:JVK6 Opn:
Native FBSA Stock


7626877
ID: PFC_ST_04011
Exp:02/10/30 Prpd:JVK6 Opn:
Native FBSA Stock

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)	02/10/2025		
EXPIRY DATE. (mm/dd/yyyy)	02/10/2030		
RECOMMENDED STORAGE.	Refrigerate ampoule		


410-7626876

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

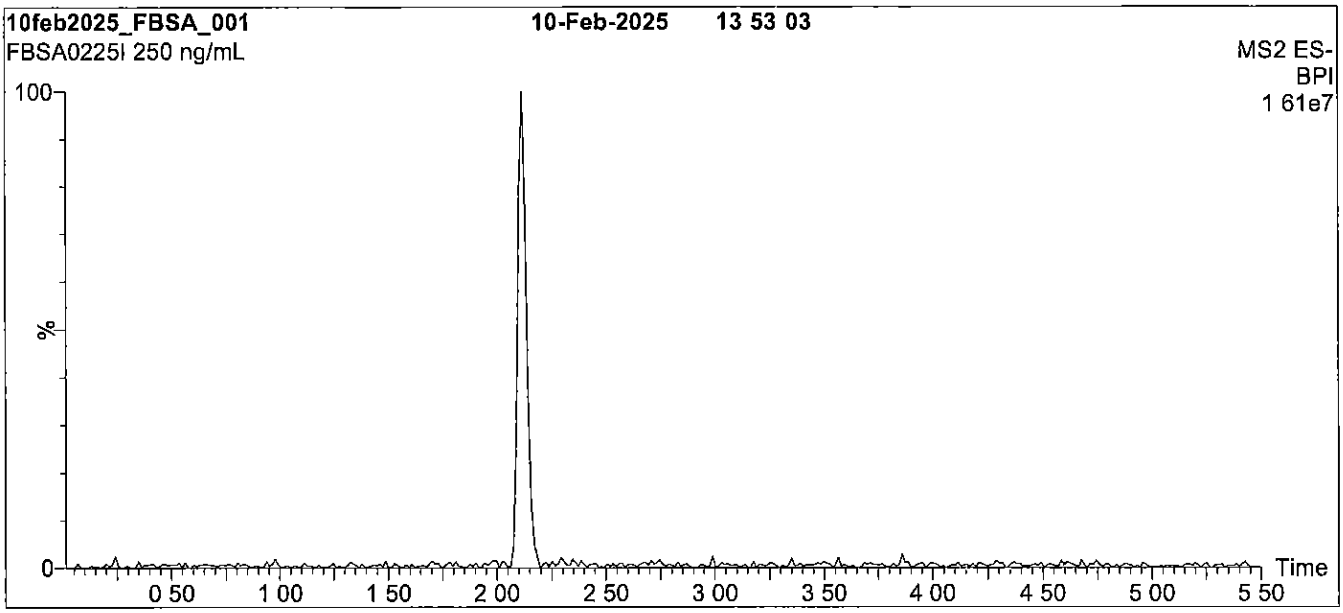
- See page 2 for further details

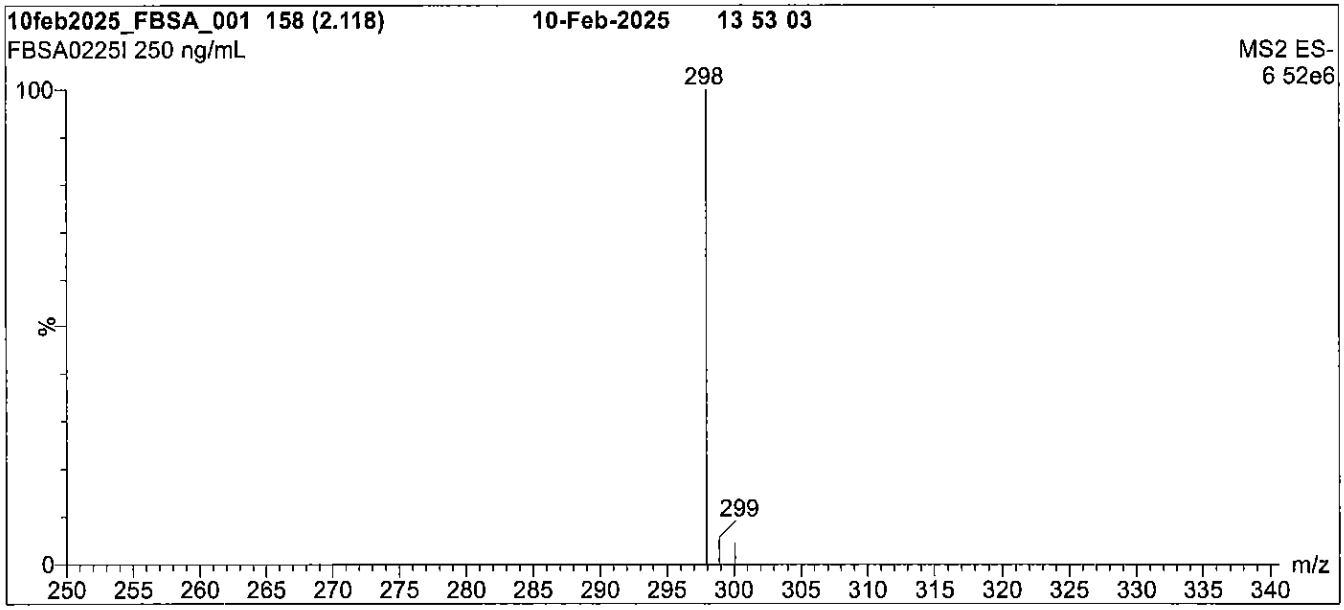
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Certified By· _____ **Date·** 02/21/2025 (mm/dd/yyyy)
B.G. Chittim General Manager

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

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 9 mln 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) = 1 50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

PFC_ST_03923

WELLINGTON LABORATORIES

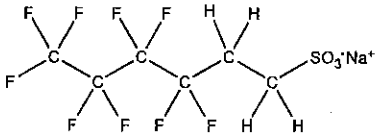
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_03919, 03920, 03921, 03922, 03923, 03924

PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS0924

COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexanesulfonate

STRUCTURE: **CAS #:** 27619-93-8



410-Z605013

MOLECULAR FORMULA:	$C_6H_4F_9SO_3Na$	**MOLECULAR WEIGHT:**	350.13
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S):**	Methanol
	46.9 ± 2.3 µg/mL (4:2FTS acid)		
	46.7 ± 2.3 µg/mL (4:2FTS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	10/02/2024		
EXPIRY DATE: (mm/dd/yyyy)	10/02/2029		
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.

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Certified By: _____ **Date:** 10/03/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

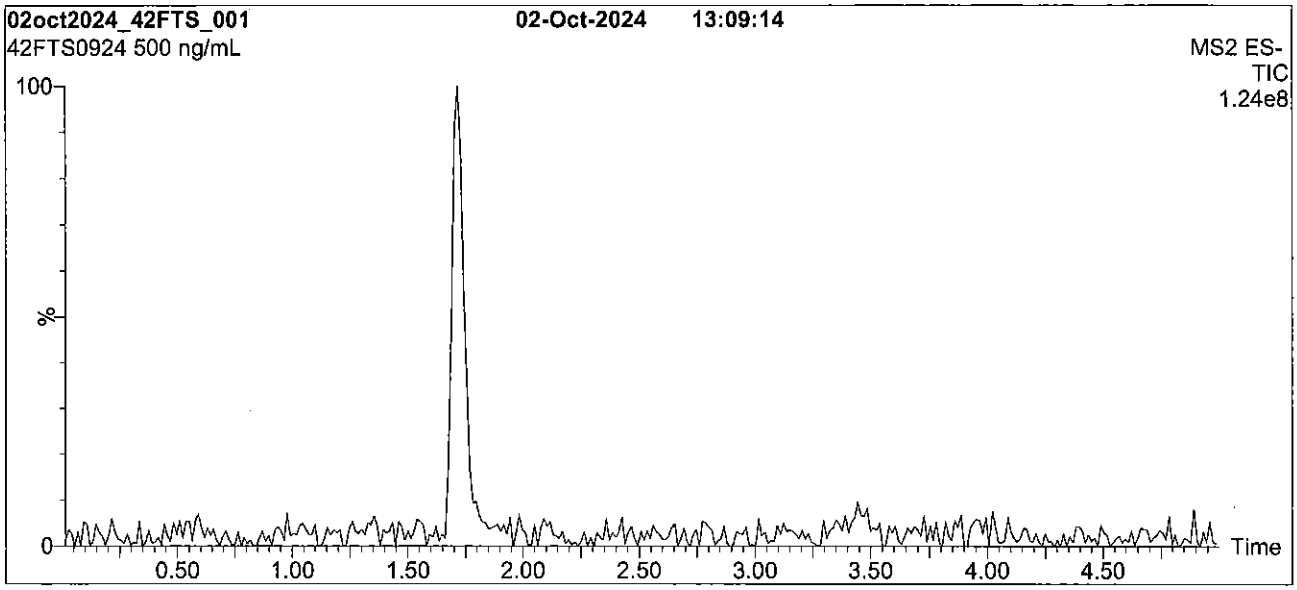
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

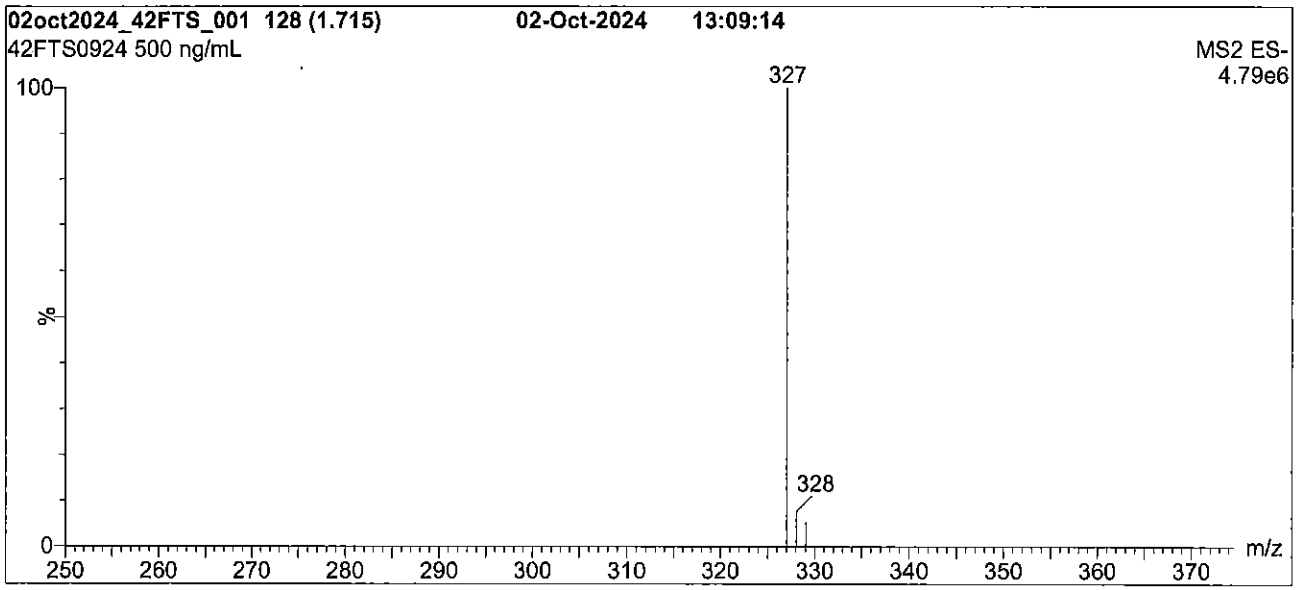
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

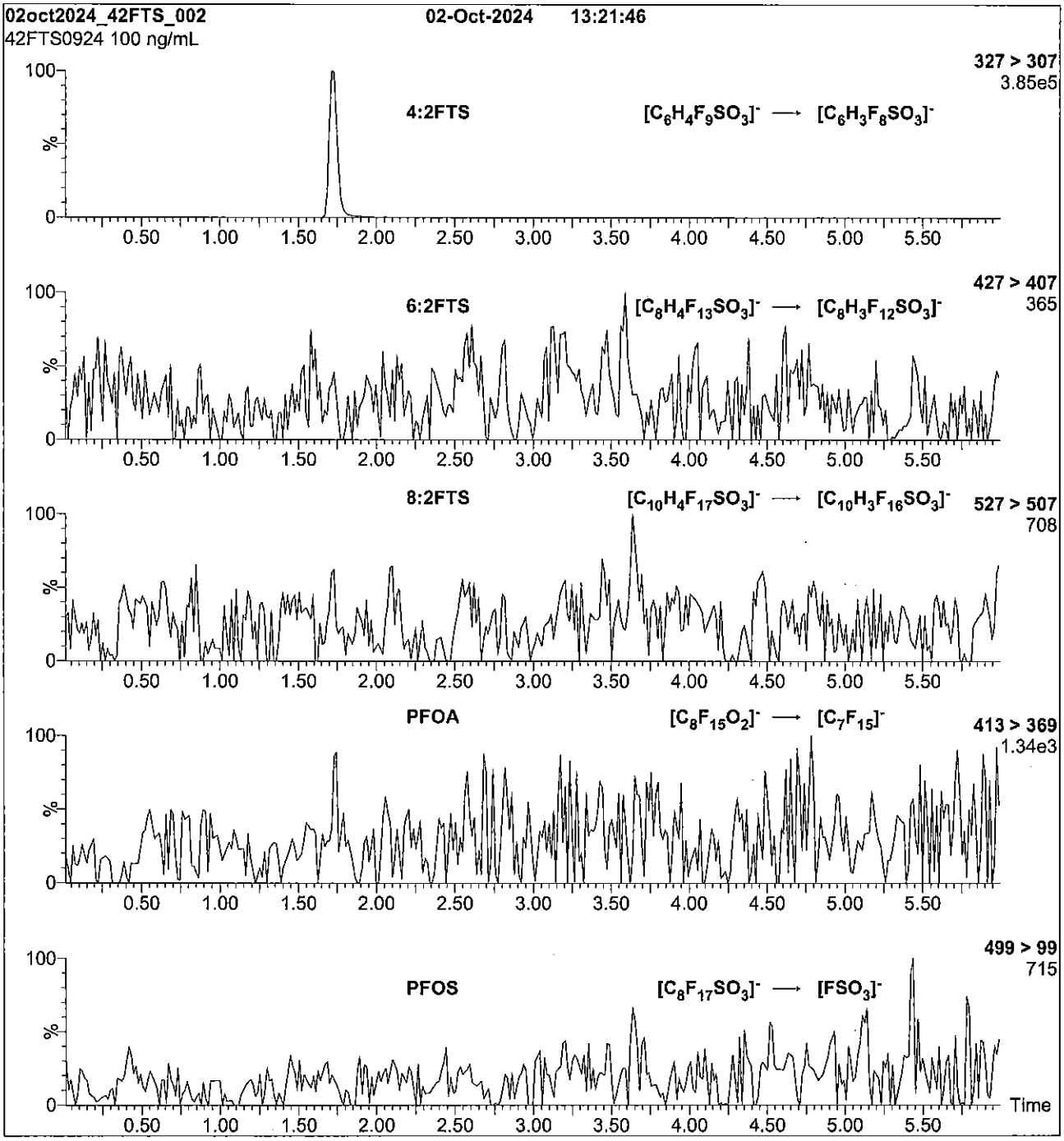
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 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) = 4.56e-3
Collision Energy (eV) = 18

Reagent

PFC_ST_03928

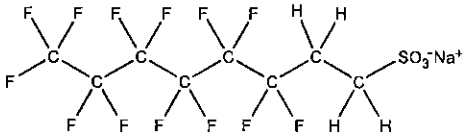
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-03925, 03926, 03927, 03928, 03929, 03930

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0225
COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctanesulfonate

STRUCTURE: **CAS #:** 27619-94-9



410-7605227

MOLECULAR FORMULA:	$C_8H_4F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	450.15
CONCENTRATION:	50.0 ± 2.5 µg/mL (Na salt) 47.6 ± 2.4 µg/mL (6:2FTS acid) 47.4 ± 2.4 µg/mL (6:2FTS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	03/04/2025		
EXPIRY DATE: (mm/dd/yyyy)	03/04/2030		
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:** 03/06/2025 (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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QUALITY MANAGEMENT:

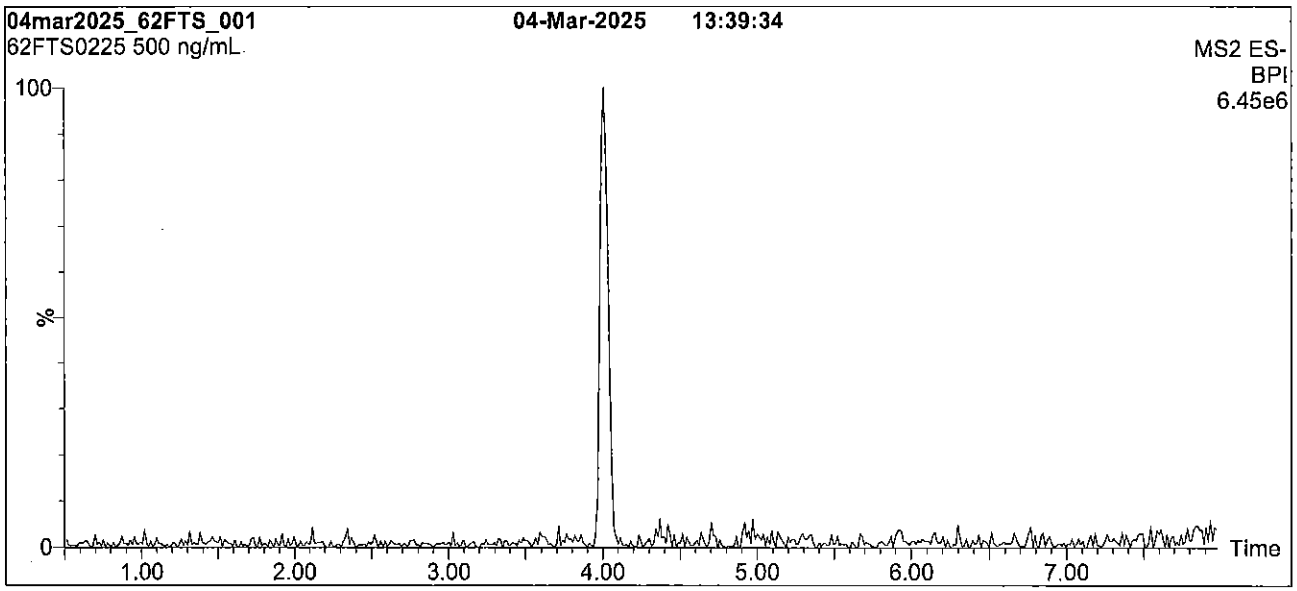
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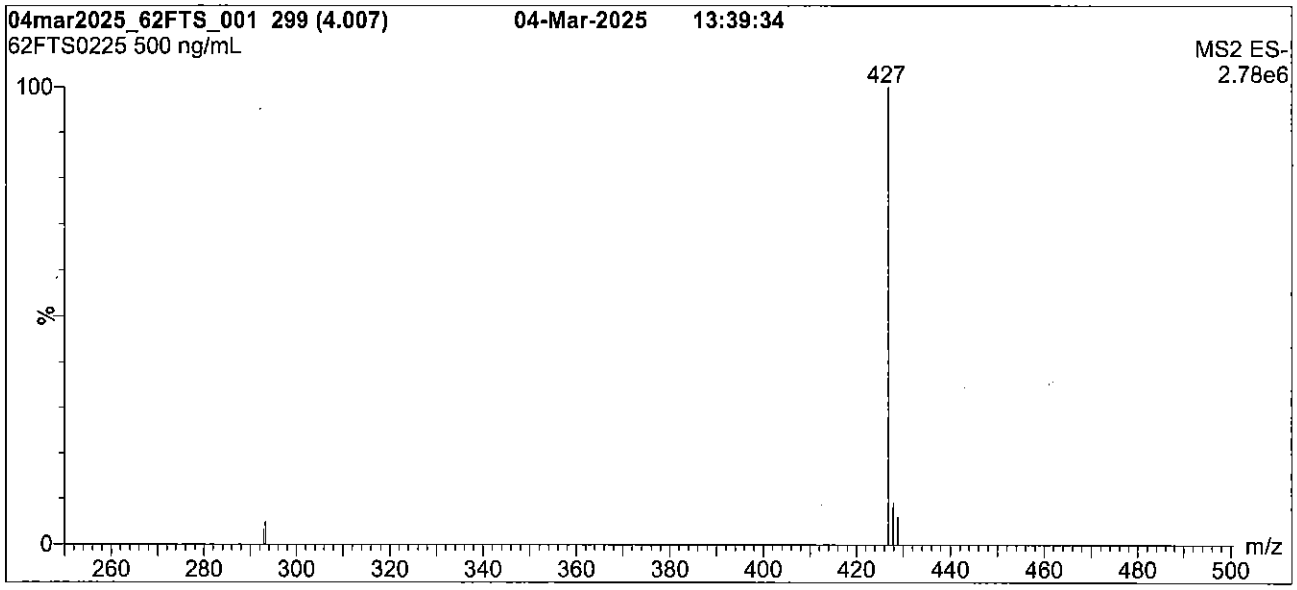
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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: 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

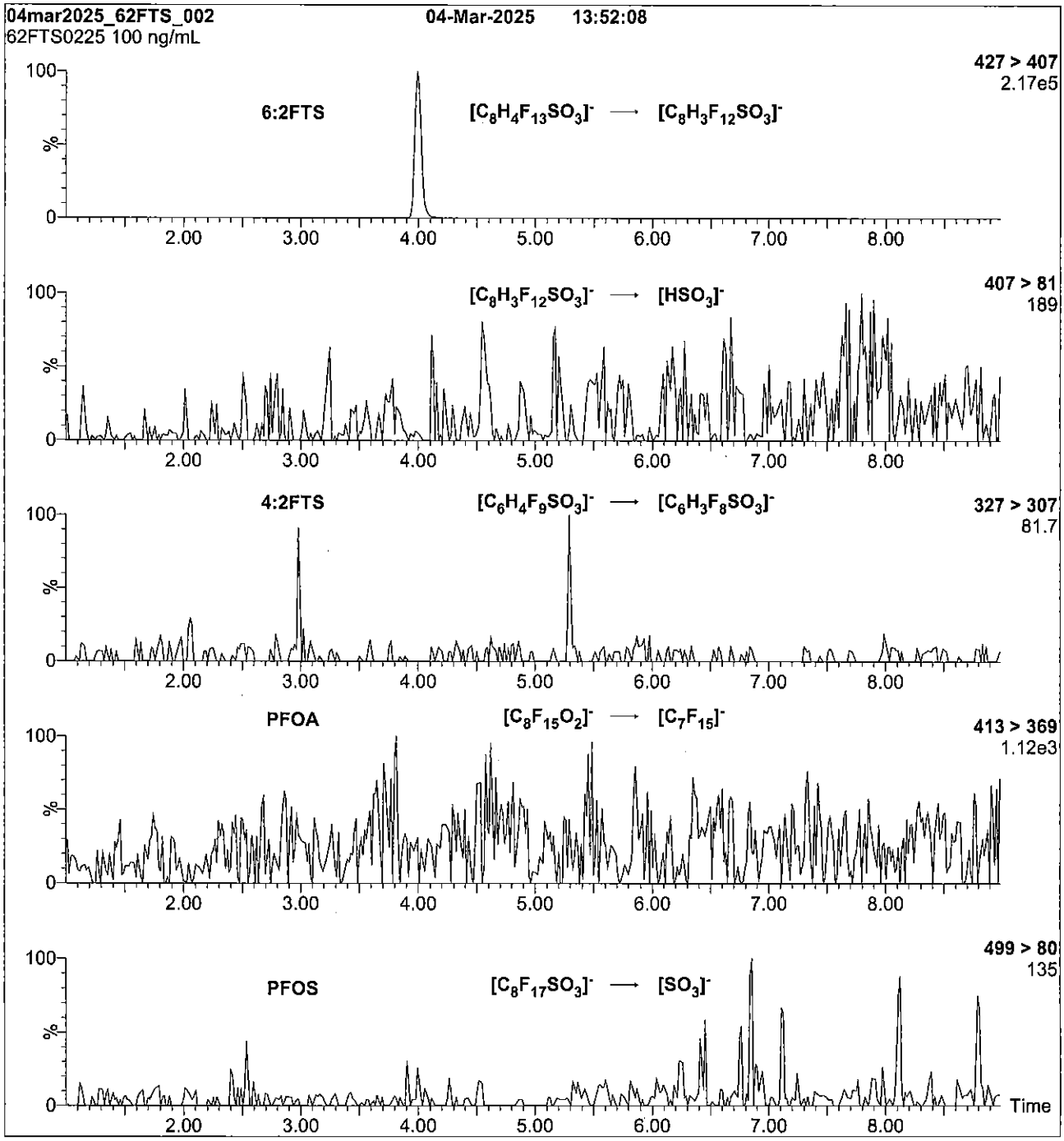
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 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) = 5.64e-3
Collision Energy (eV) = 20

Reagent

PFC_ST_03936

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC-ST-03935, 03936, 03937, 03938, 03939

br-NMeFOSE

2-(N-Methylperfluorooctanesulfonamido)ethanol Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NMeFOSE
LOT NUMBER:	brNMeFOSE0225
CONCENTRATION:	50.0 ± 2.5 µg/mL
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	02/20/2025
LAST TESTED: (mm/dd/yyyy)	03/13/2025 (HRGC/LRMS)
	02/21/2025 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy)	03/13/2030
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

410-7605308

DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-methylperfluorooctanesulfonamido)ethanol 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: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 24448-09-7 (for linear isomer).
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters.

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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 compound(s) 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, SFC/UV/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, and/or SFC/UV/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 or equivalent products 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,...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%) has been assigned to this product.

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 Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the 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-NMeFOSE; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

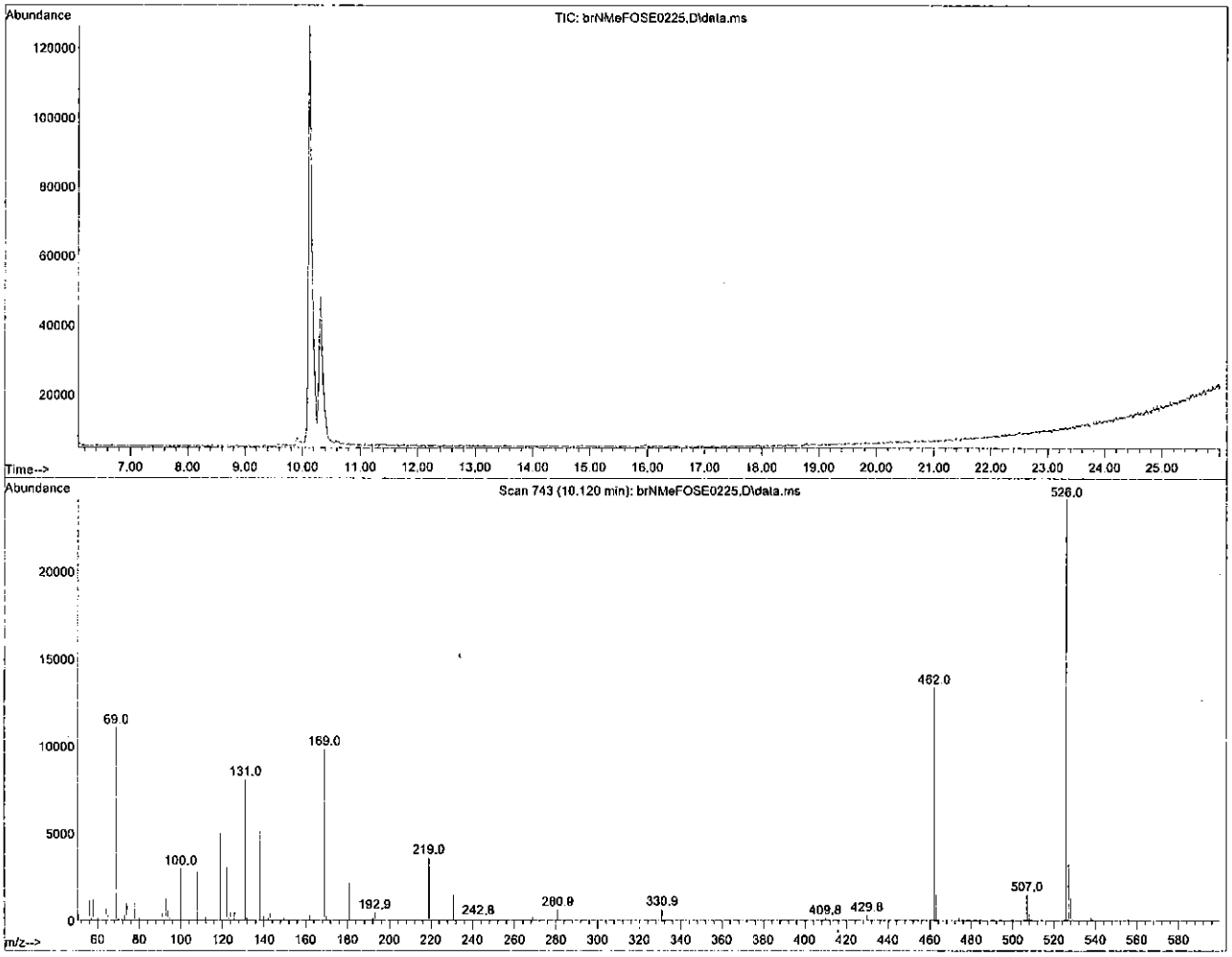
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	2-(N-Methylperfluoro-1-octanesulfonamido)ethanol	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CH_2OH$	67.6
2	2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CH_2OH$	3.9
3	2-(N-Methylperfluoro-4-methyl-1-heptanesulfonamido)ethanol	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CH_2OH$	3.2
4	2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$	7.7
5	2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CH_2OH$	17.5
6	2-(N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CH_2OH$	0.2

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only. Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

Certified By: _____ **Date:** 04/04/2025
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **br-NMeFOSE; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



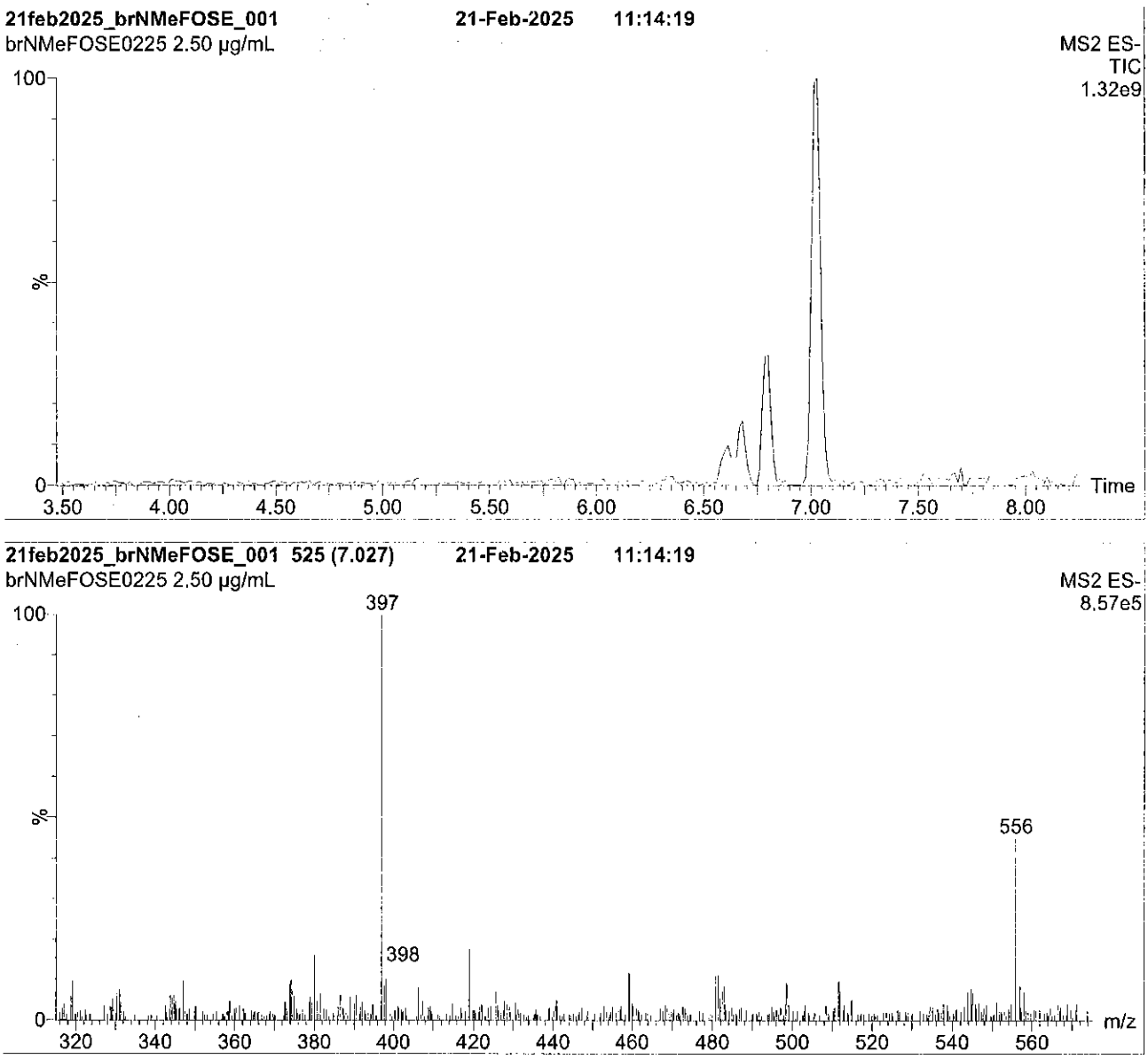
Conditions for Figure 1:

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 310°C 310°C (10 min)
Ionization:	EI+
Detector:	230°C Full Scan (50-1000 amu)

Figure 2: **br-NMeFOSE; 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: 40% H_2O / 60% MeOH
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

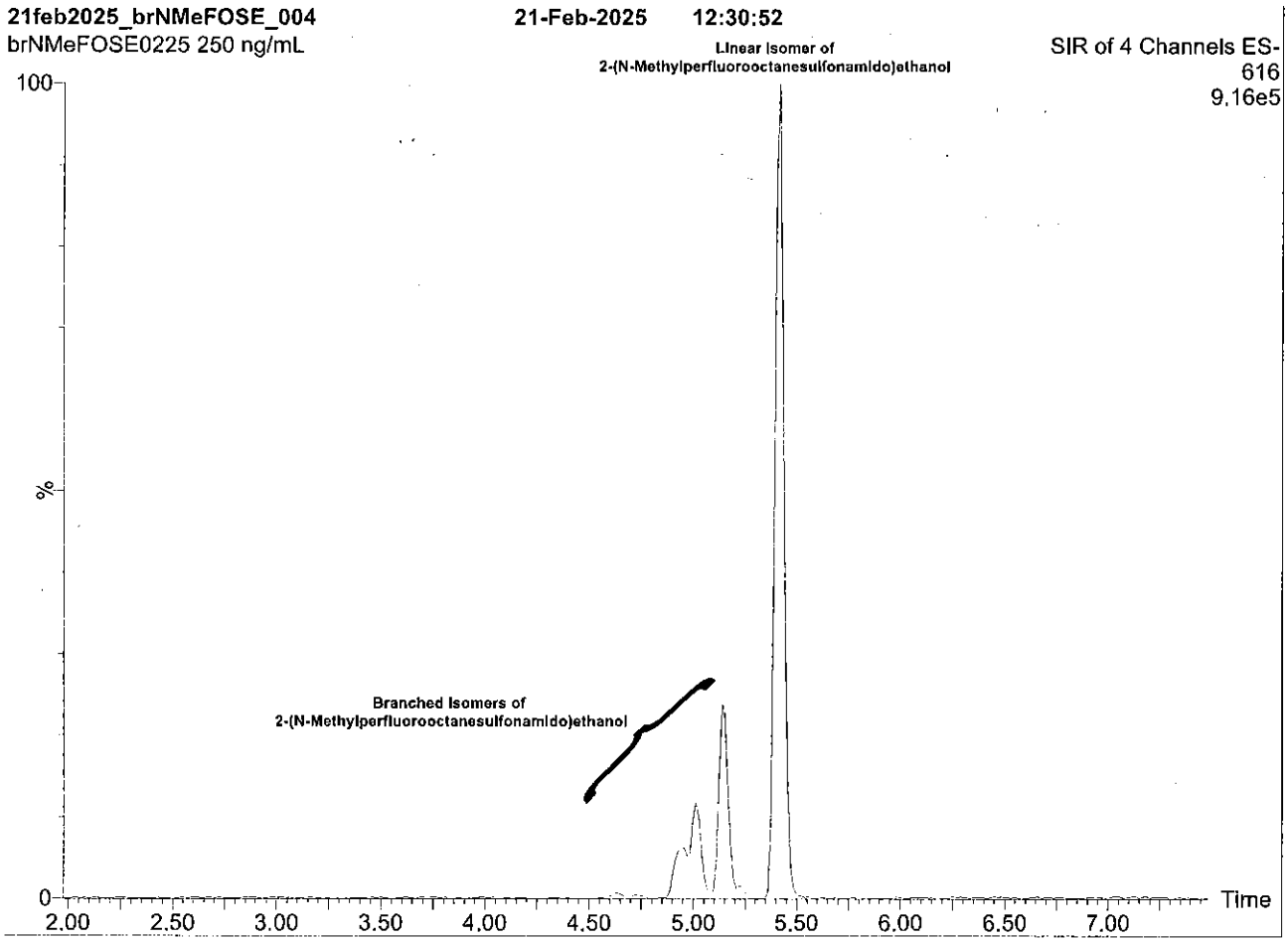
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **br-NMeFOSE; LC/MS Data (SIR)**



Conditions for Figure 3:

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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

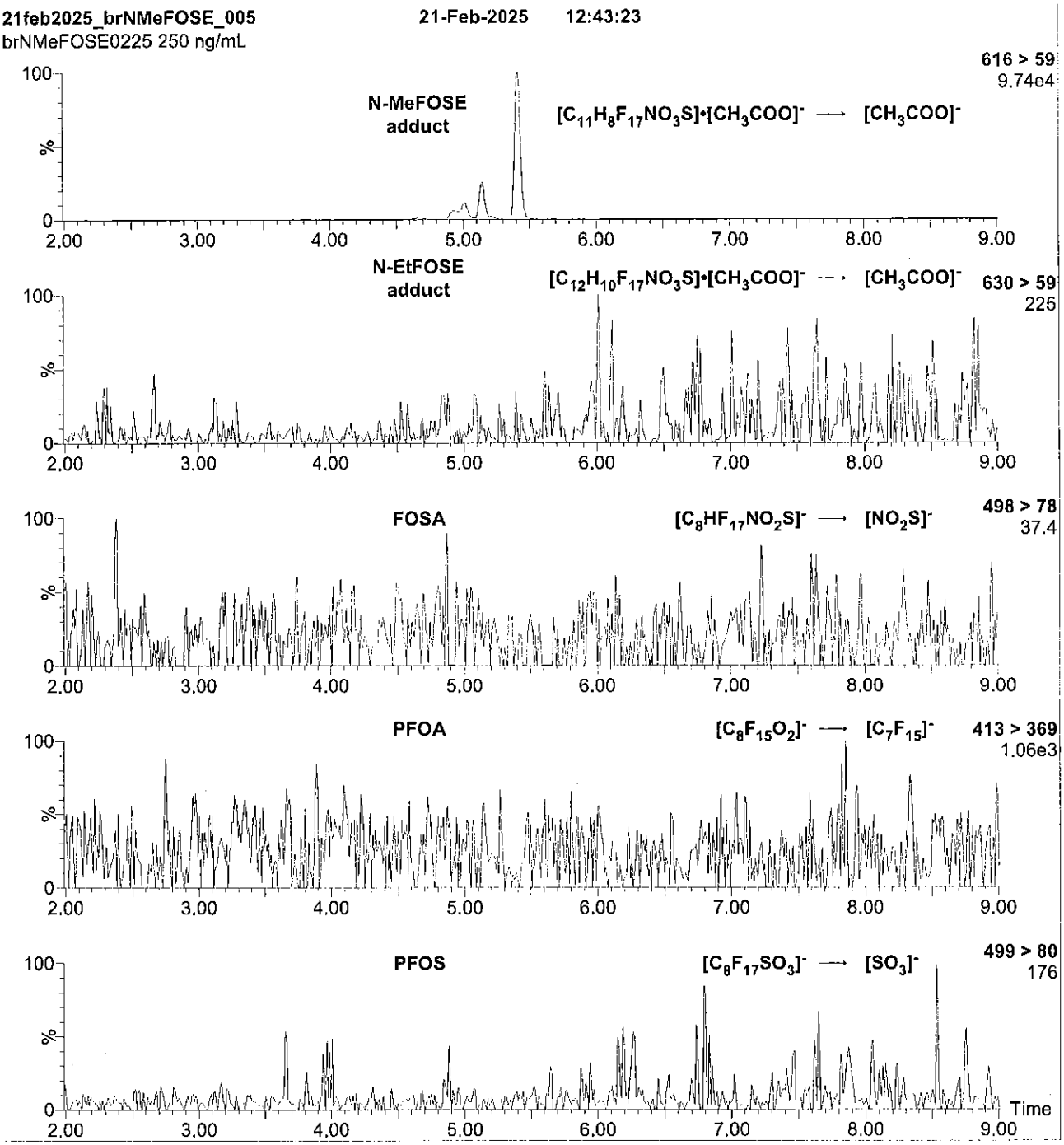
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (15-20)
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (L/hr) = 1000

Figure 4: **br-NMeFOSE; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 4:

Injection: On-column (br-NMeFOSE)

Mobile phase: Same as Figure 3

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.34e-3
Collision Energy (eV) = 12

Reagent

PFC_ST_03946

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-03514

br-PFHxSK

410-7205079

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE.	br-PFHxSK
LOT NUMBER.	brPFHxSK0724
CONCENTRATION.	50 0 ± 2 5 µg/mL (total K 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)	07/29/2024
LAST TESTED. (mm/dd/yyyy)	07/31/2024
EXPIRY DATE. (mm/dd/yyyy)	07/31/2029
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
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters
- 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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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, SFC/UV/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, and/or SFC/UV/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 or equivalent products 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, x_n on which it depends is:

$$u_c(y(x_1\ x_2\ \ x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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%) has been assigned to this product.

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 Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the 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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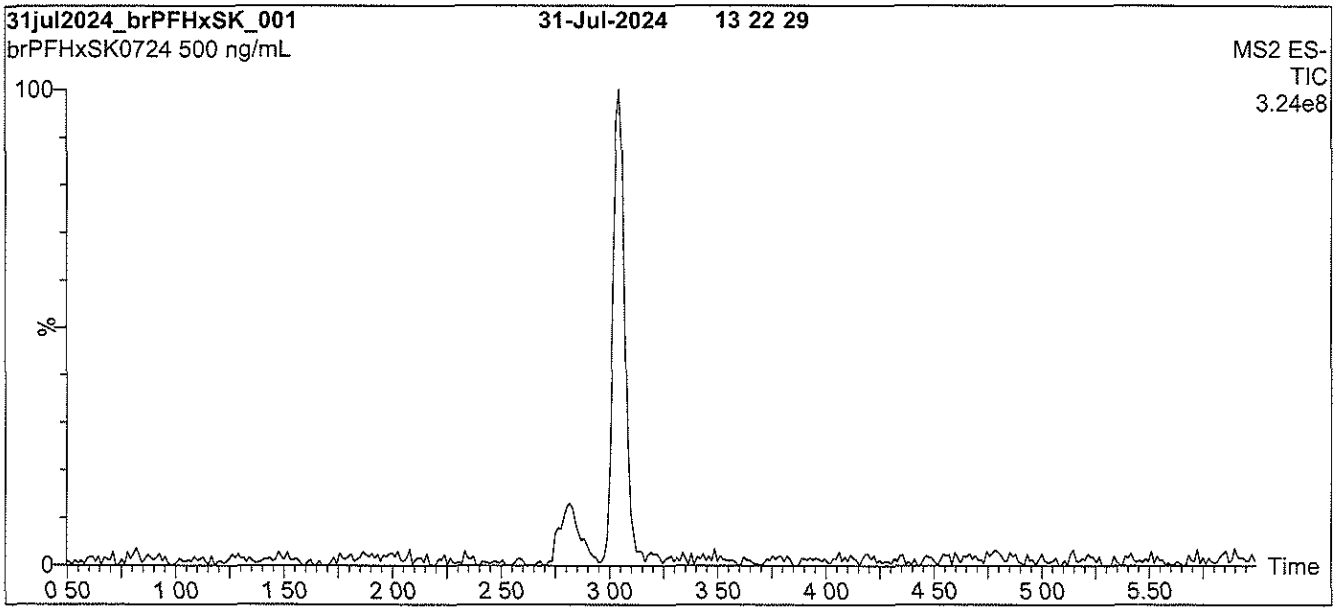
Table A. **br-PFHxSK, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

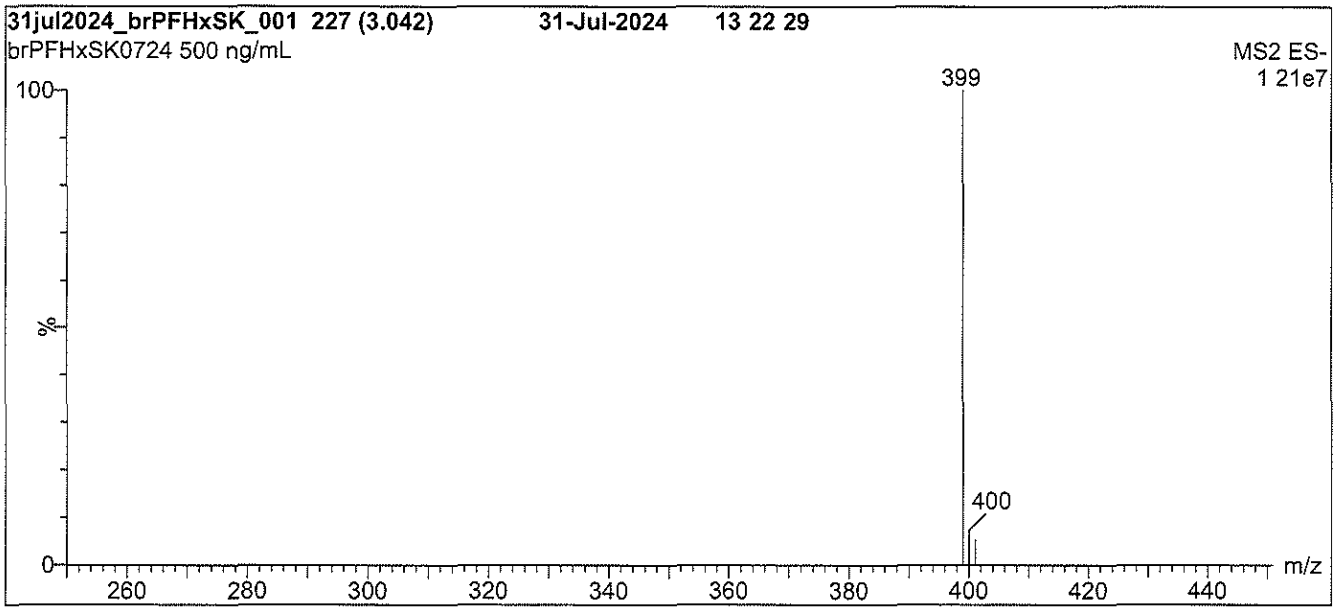
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3(CF_2)_5SO_3^-K^+$	81 1
2	Potassium perfluoro-1-methyl-1-pentanesulfonate**	$CF_3(CF_2)_3CF(CF_3)SO_3^-K^+$	2 9
3	Potassium perfluoro-2-methyl-1-pentanesulfonate	$CF_3(CF_2)_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium perfluoro-3-methyl-1-pentanesulfonate	$CF_3CF_2CF(CF_3)(CF_2)_2SO_3^-K^+$	5 0
5	Potassium perfluoro-4-methyl-1-pentanesulfonate	$CF_3CF(CF_3)(CF_2)_3SO_3^-K^+$	8 9
6	Potassium perfluoro-3 3-dimethyl-1-butanesulfonate	$CF_3C(CF_3)(CF_2)_2SO_3^-K^+$	0 2
7	Other Unidentified Isomers		0 5

* Percent of total perfluorohexanesulfonate isomers only
** Systematic Name Potassium perfluoro-2-hexanesulfonate

Certified By _____ **Date** 09/25/2024
(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 UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions.

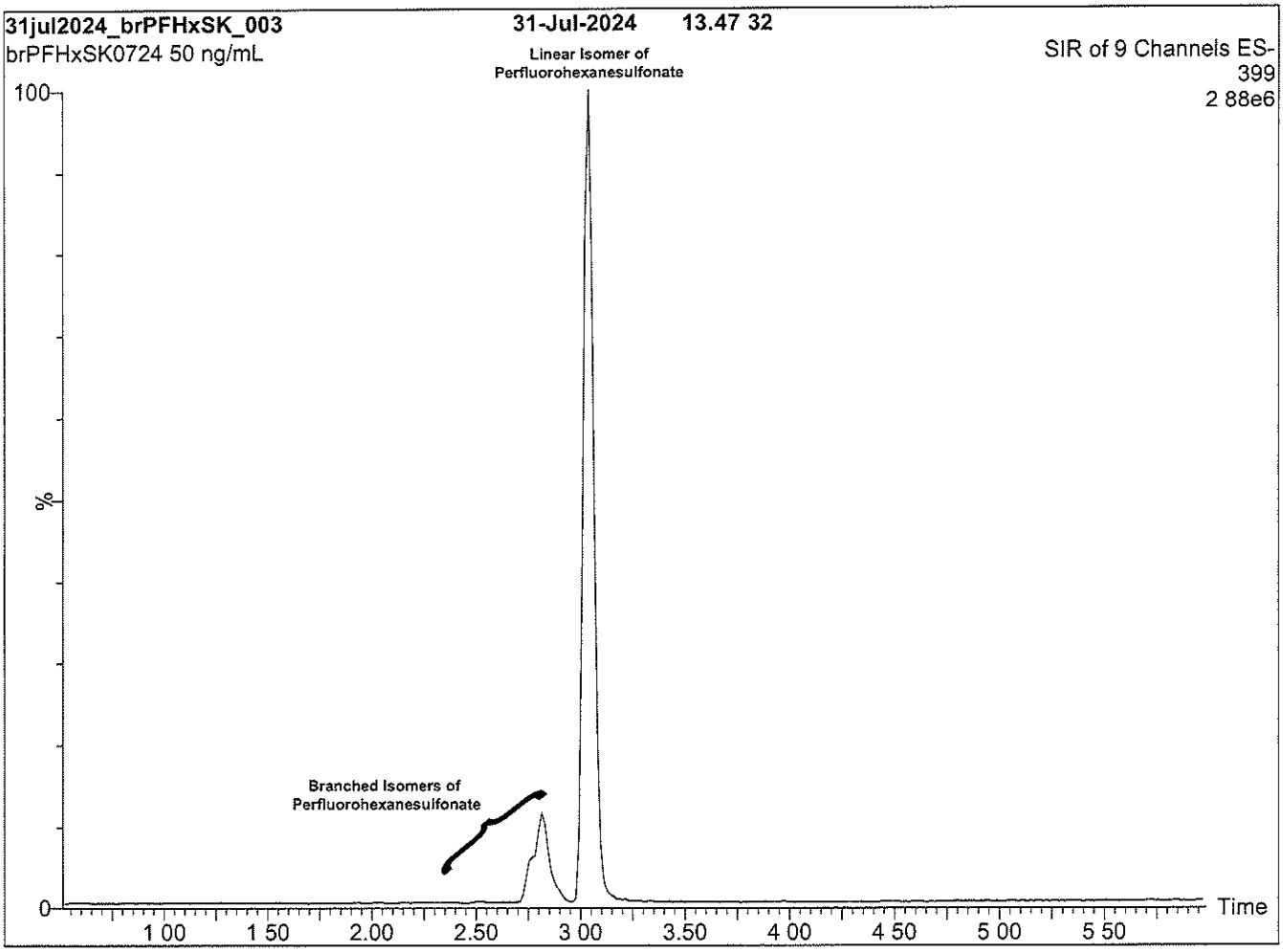
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80·20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time: 12 min
Flow·	300 µL/min

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. **br-PFHxSK, LC/MS Data (SIR)**



Conditions for Figure 2.

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

Chromatographic Conditions.

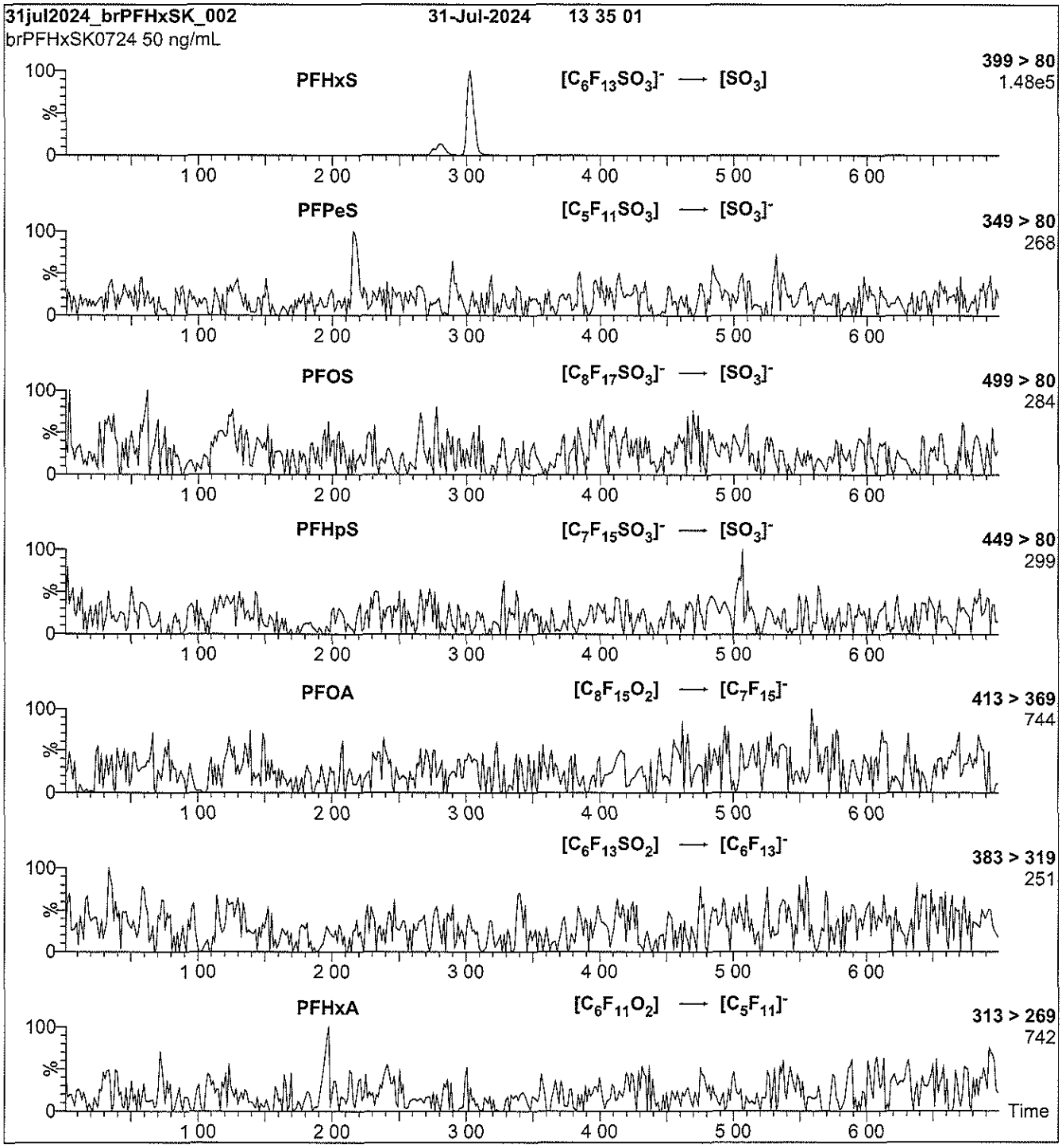
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow·	300 µL/min

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) = 4.31e-3
Collision Energy (eV) = 42

Reagent

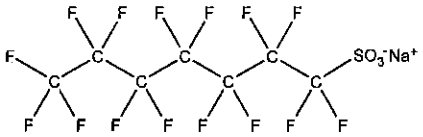
PFC_ST_03948

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC-ST-03947, 03948, 03949

PRODUCT CODE:	L-PFHpS	**LOT NUMBER:**	LPFHpS1024
COMPOUND:	Sodium perfluoro-1-heptanesulfonate		
STRUCTURE:		**CAS #:**	21934-50-9



410-7605610

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)	10/09/2024		
EXPIRY DATE: (mm/dd/yyyy)	10/09/2029		
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:** 10/17/2024 (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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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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

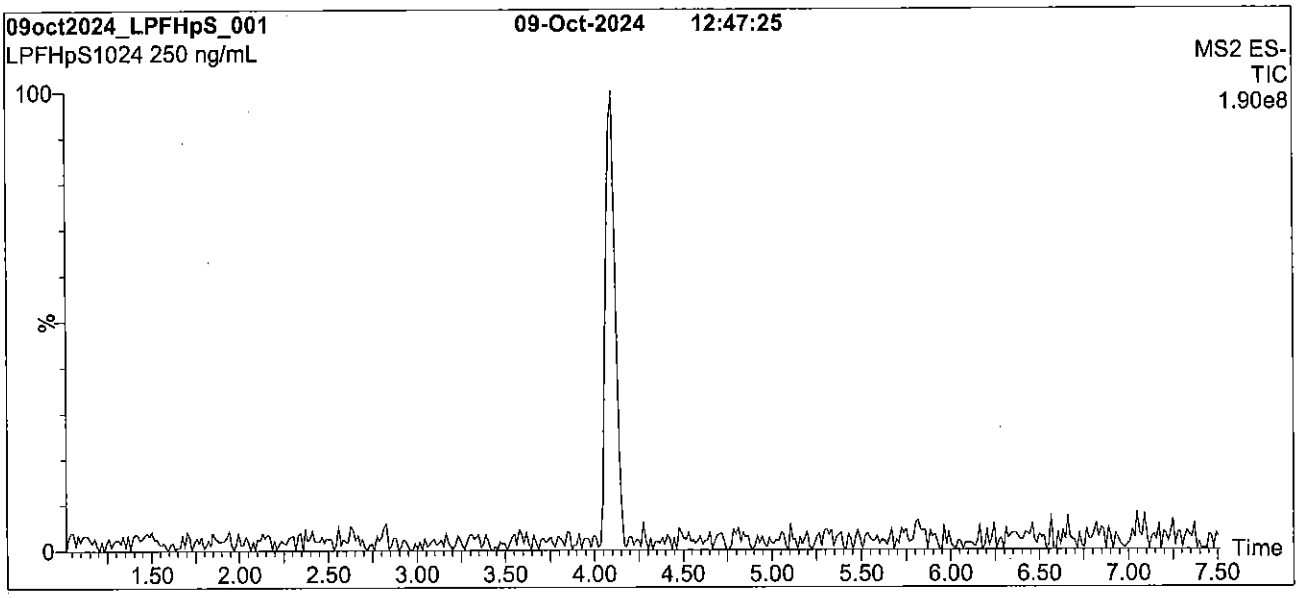
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

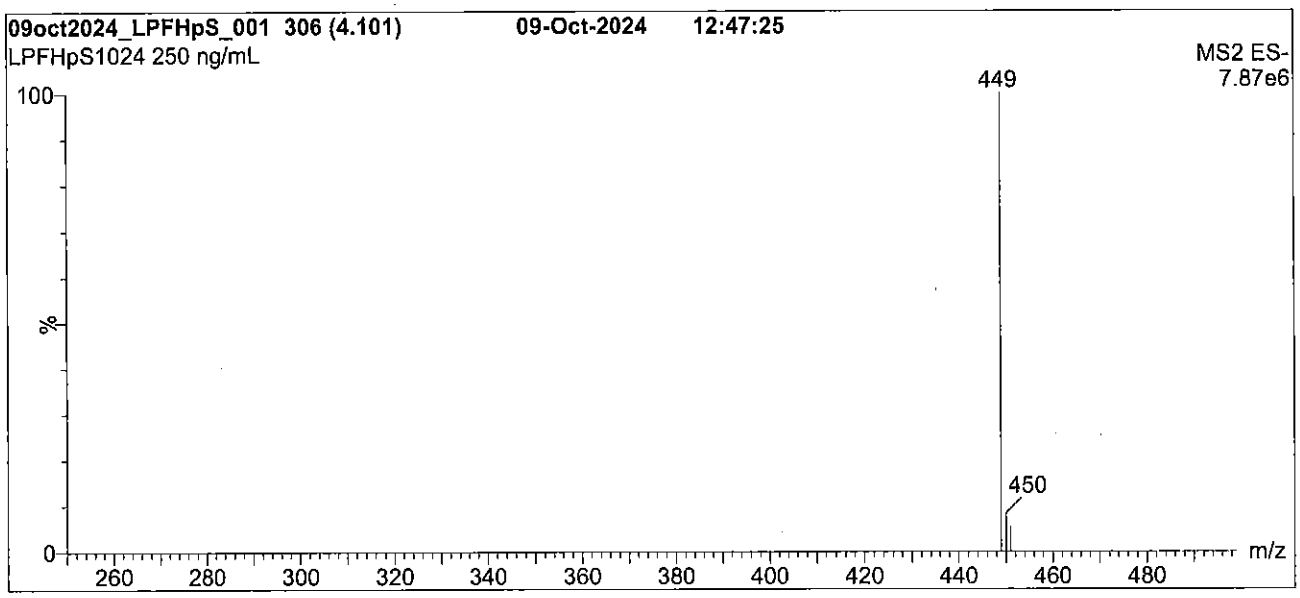
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **L-PFHpS; 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 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

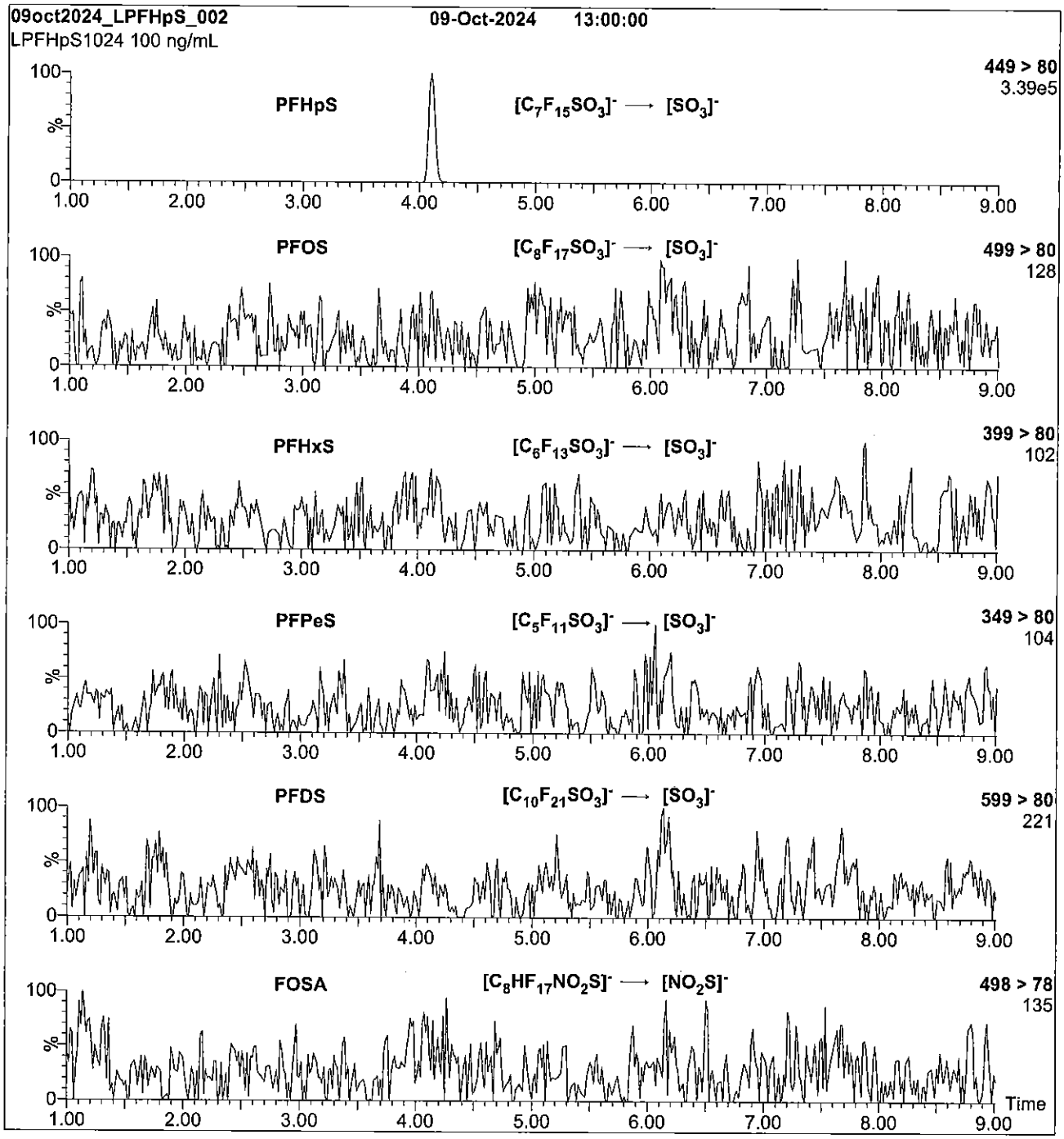
Flow: 300 µL/min

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)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.31e-3
Collision Energy (eV) = 42

Reagent

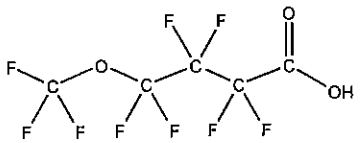
PFC_ST_03982

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_003982
PFC_ST_003983

PRODUCT CODE.	PF5OHxA	**LOT NUMBER.**	PF5OHxA0724
COMPOUND.	Perfluoro-5-oxahexanoic acid		
SYNONYM.	Perfluoro-4-methoxybutanoic acid (PFMBA)		
STRUCTURE.		**CAS #.**	863090-89-5



7626650
ID: PFC_ST_03982
Exp:07/11/29 Prpd:JVK6 Opn:
Native PF5OHxA Stock (PFECA A

7626651
ID: PFC_ST_03983
Exp:07/11/29 Prpd:JVK6 Opn:
Native PF5OHxA Stock (PFECA A

MOLECULAR FORMULA.	$C_5HF_8O_3$	**MOLECULAR WEIGHT:**	280 05
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	07/11/2024		
EXPIRY DATE. (mm/dd/yyyy)	07/11/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7626650

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

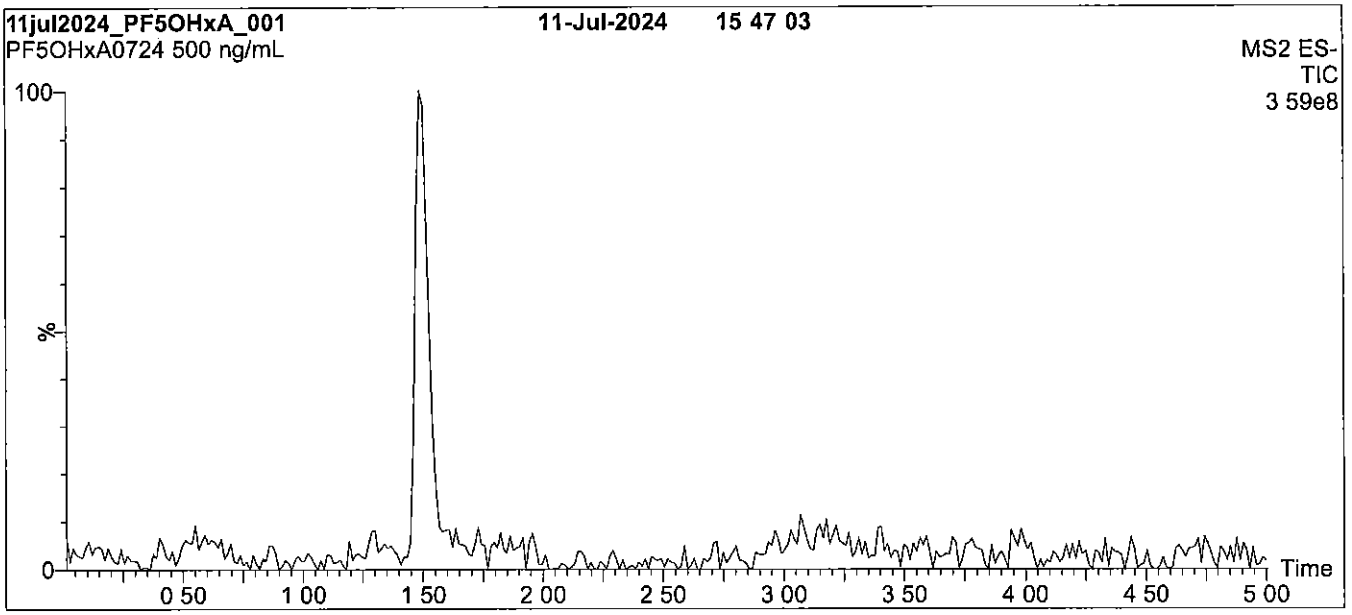
- See page 2 for further details
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester

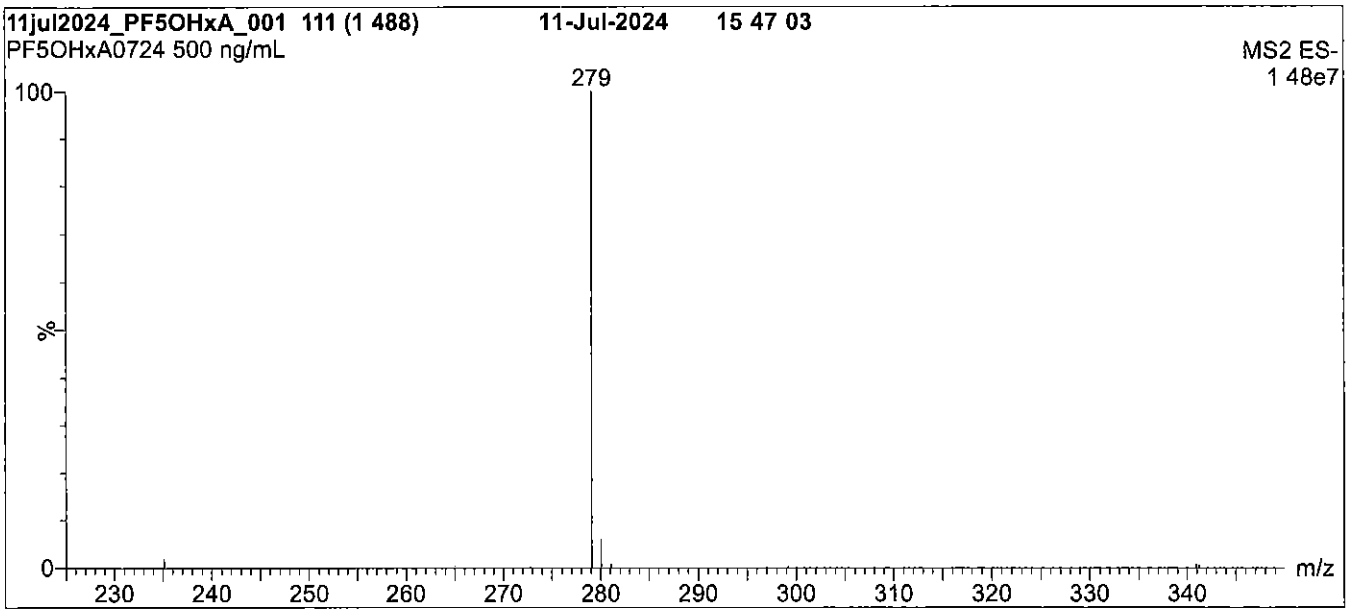
FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 07/12/2024 (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

Figure 1. **PF5OHxA, 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) = 0.50
Cone Voltage (V) = 14.50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

PFC_ST_03987

WELLINGTON LABORATORIES

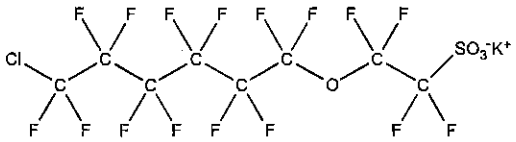
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-03986
PFC_ST_03987

PRODUCT CODE: 9Cl-PF3ONS **LOT NUMBER:** 9ClPF3ONS0125

COMPOUND: Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate

STRUCTURE: **CAS #:** 73606-19-6



410-7626657

MOLECULAR FORMULA:	$C_8F_{16}ClO_4SK$	**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)	01/21/2025		
EXPIRY DATE: (mm/dd/yyyy)	01/21/2030		
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:** 02/12/2025 (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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

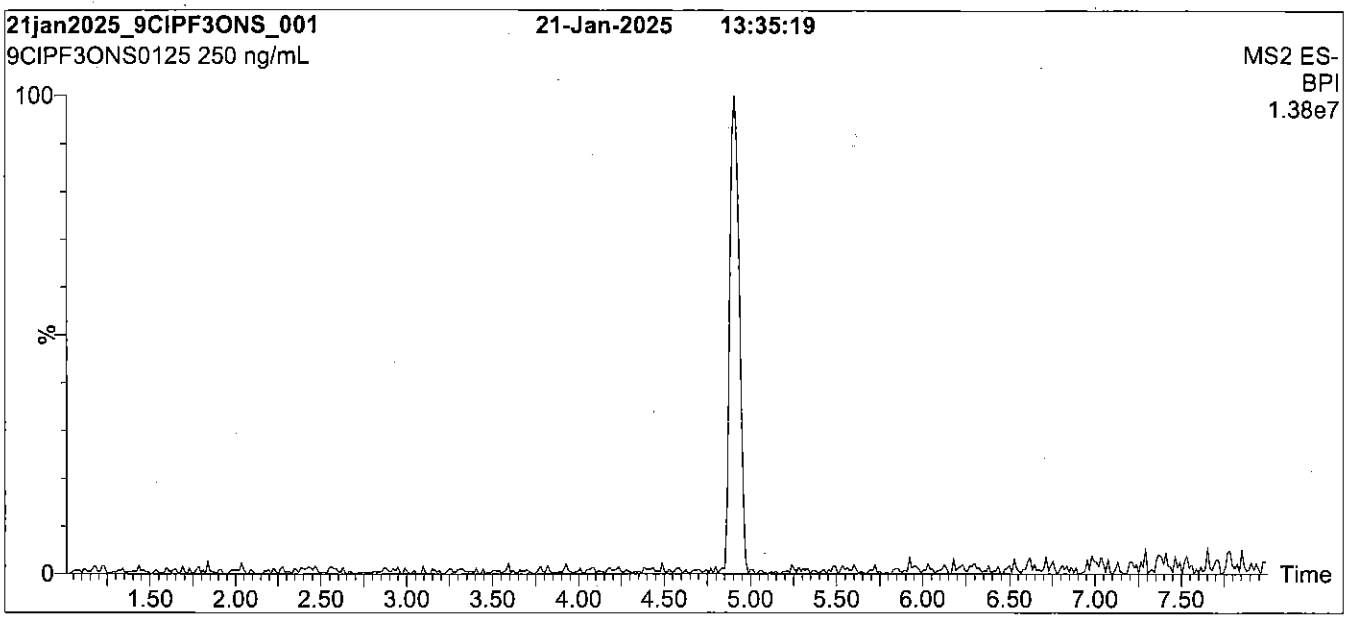
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

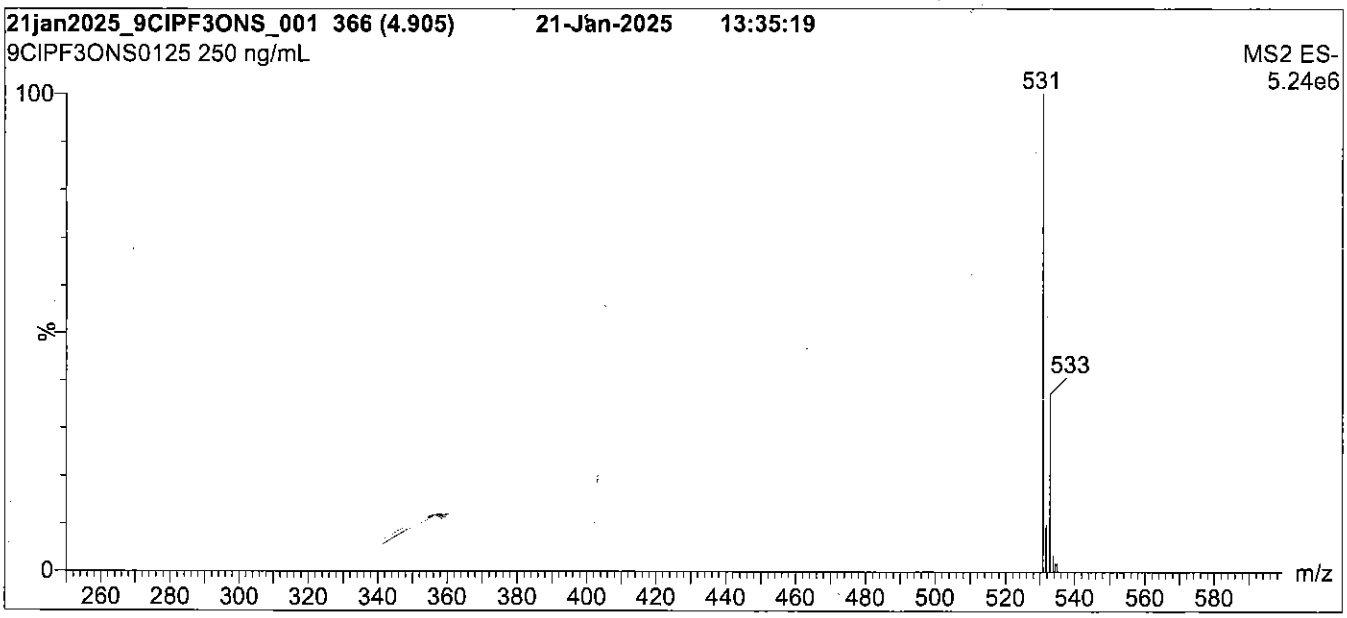
CALA Testing Accreditation No. A1226

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: **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: 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

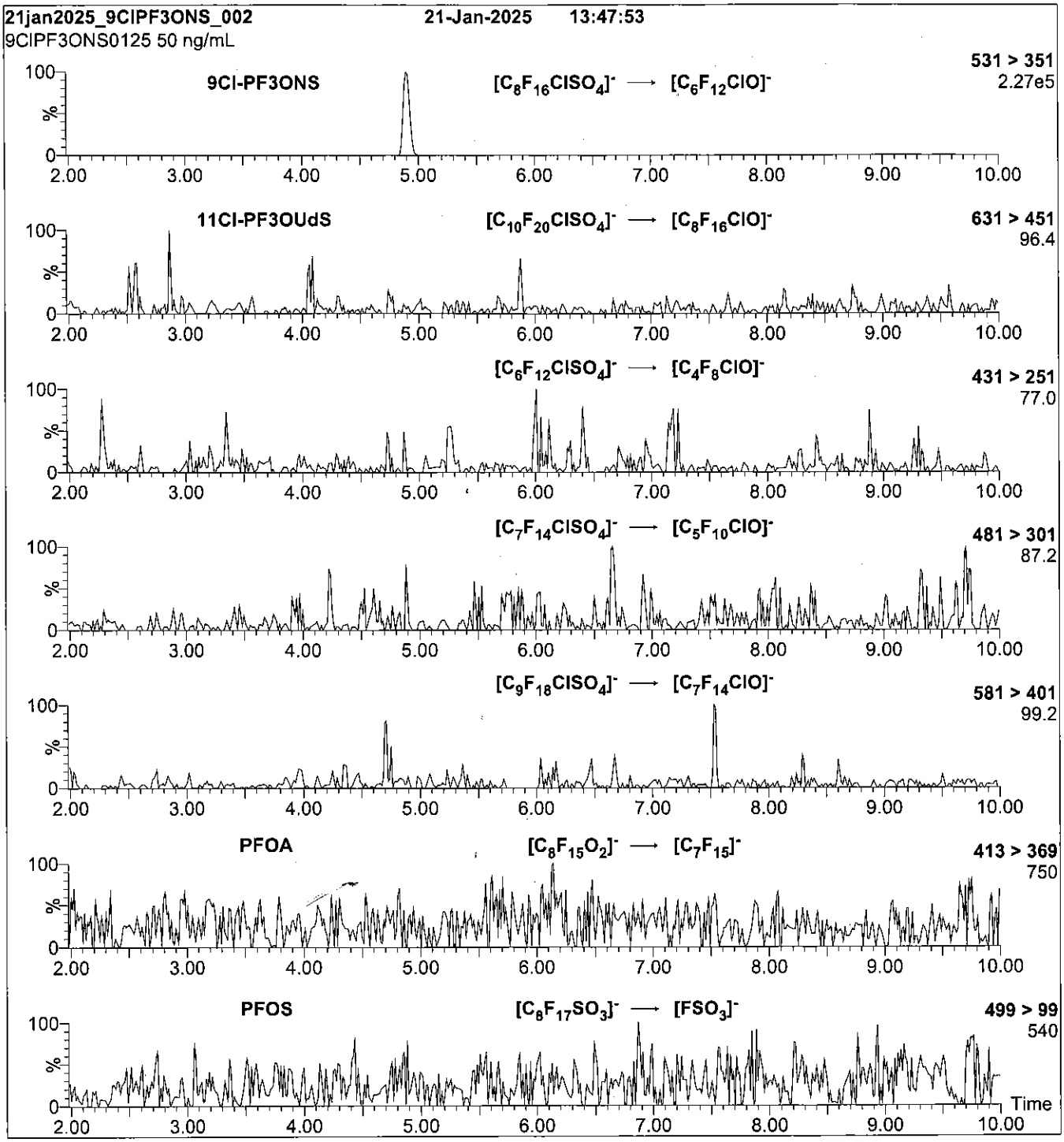
Flow: 300 µL/min

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: **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) = 5.87e-3
Collision Energy (eV) = 20

Reagent

PFC_ST_03988

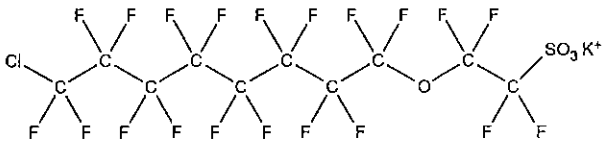
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_03988
PFC_ST_03989

PRODUCT CODE. 11Cl-PF3OUdS **LOT NUMBER.** 11ClPF3OUdS0125
COMPOUND. Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

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



7626672
ID: PFC_ST_03988
Exp:02/10/30 Prpd:JVK6 Opn:
Native 11Cl-PF3OUdS Stock

7626673
ID: PFC_ST_03989
Exp:02/10/30 Prpd:JVK6 Opn:
Native 11Cl-PF3OUdS Stock

MOLECULAR FORMULA.	$C_{10}F_{20}ClO_4SK$	**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)	02/10/2025		
EXPIRY DATE. (mm/dd/yyyy)	02/10/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7626672

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

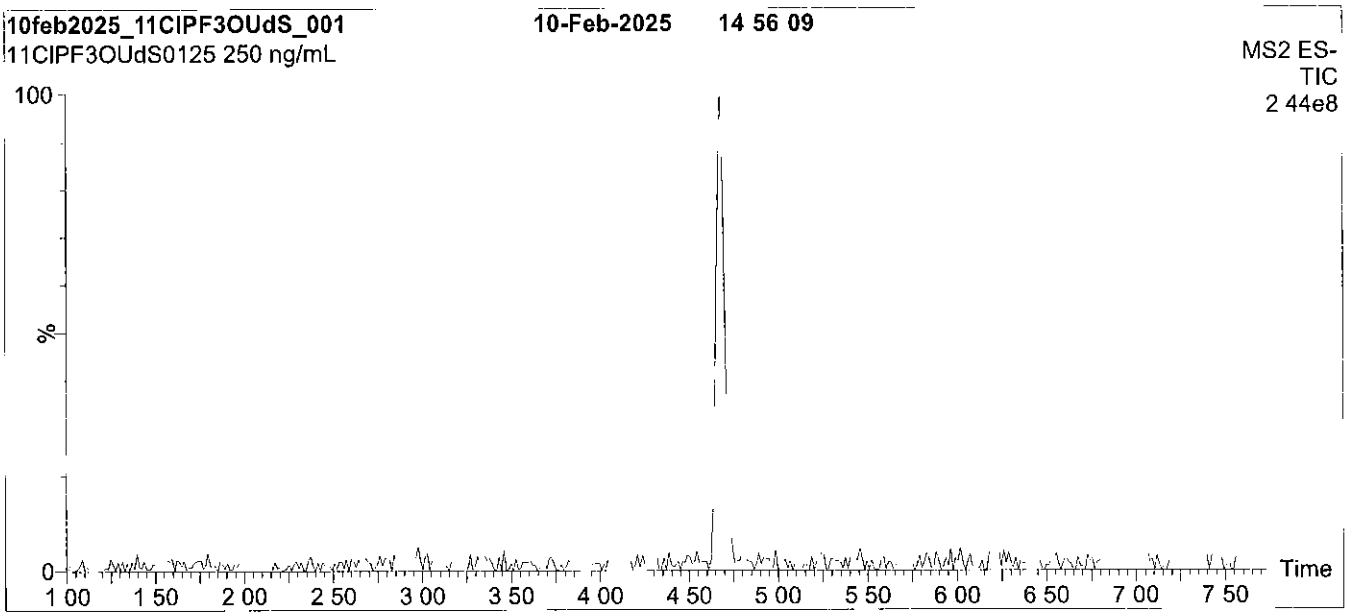
- See page 2 for further details
- This compound is a minor component of the commercial formulation known as F-53B
- Contains ~0 2% of potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF3ONS)

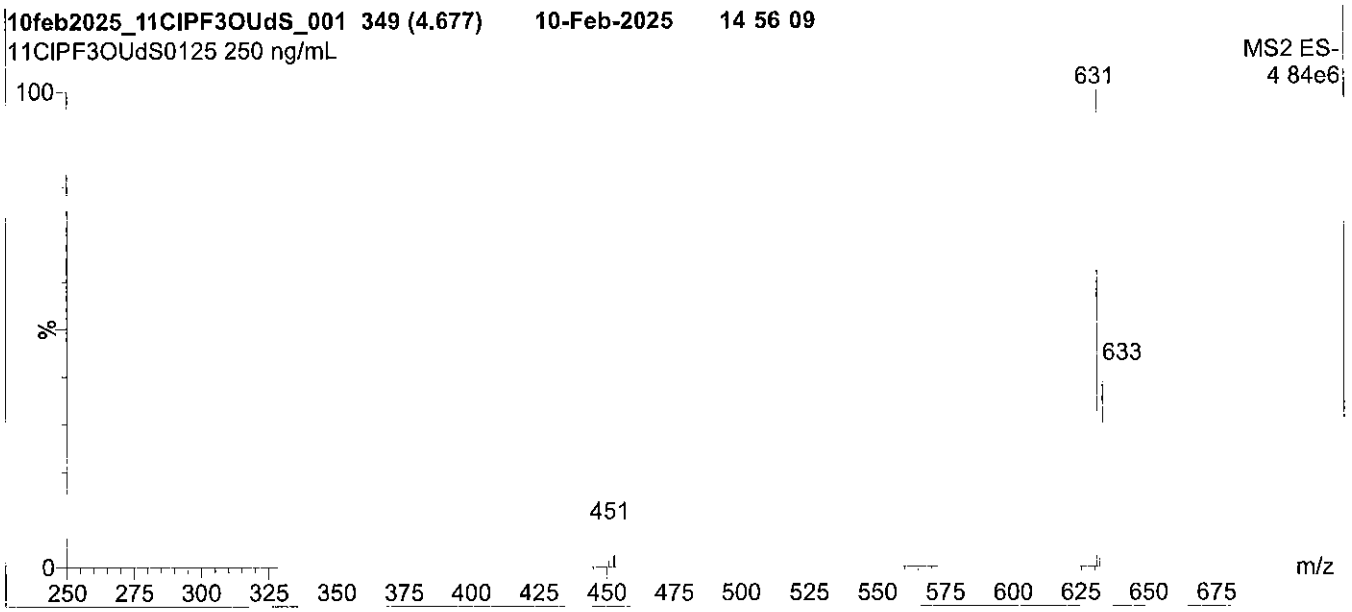
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Certified By _____ **Date·** 02/19/2025
(mm/dd/yyyy)
B G. Chittim General Manager

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

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 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) = 70 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 750

Reagent

PFC_ST_03990

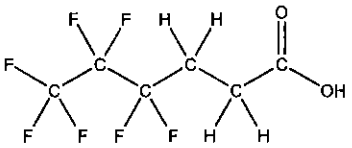
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_03990
PFC_ST_03991

PRODUCT CODE. FPrPA
COMPOUND. 3-Perfluoropropyl propanoic acid
LOT NUMBER. FPrPA1024

STRUCTURE.



7626674
ID: PFC_ST_03990
Exp:10/18/29 Prpd:JVK6 Opn:
Native FPrPA Stock (3:3 FTCA)

7626696
ID: PFC_ST_03991
Exp:10/18/29 Prpd:JVK6 Opn:
Native FPrPA Stock (3:3 FTCA)

CAS #. 356-02 5

MOLECULAR FORMULA.	$C_6H_5F_7O_2$
CONCENTRATION.	50 0 ± 2 5 µg/mL
CHEMICAL PURITY:	>98%
LAST TESTED. (mm/dd/yyyy)	10/18/2024
EXPIRY DATE. (mm/dd/yyyy)	10/18/2029
RECOMMENDED STORAGE.	Refrigerate ampoule

MOLECULAR WEIGHT: 242 09
SOLVENT(S). Methanol

410-7626674

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

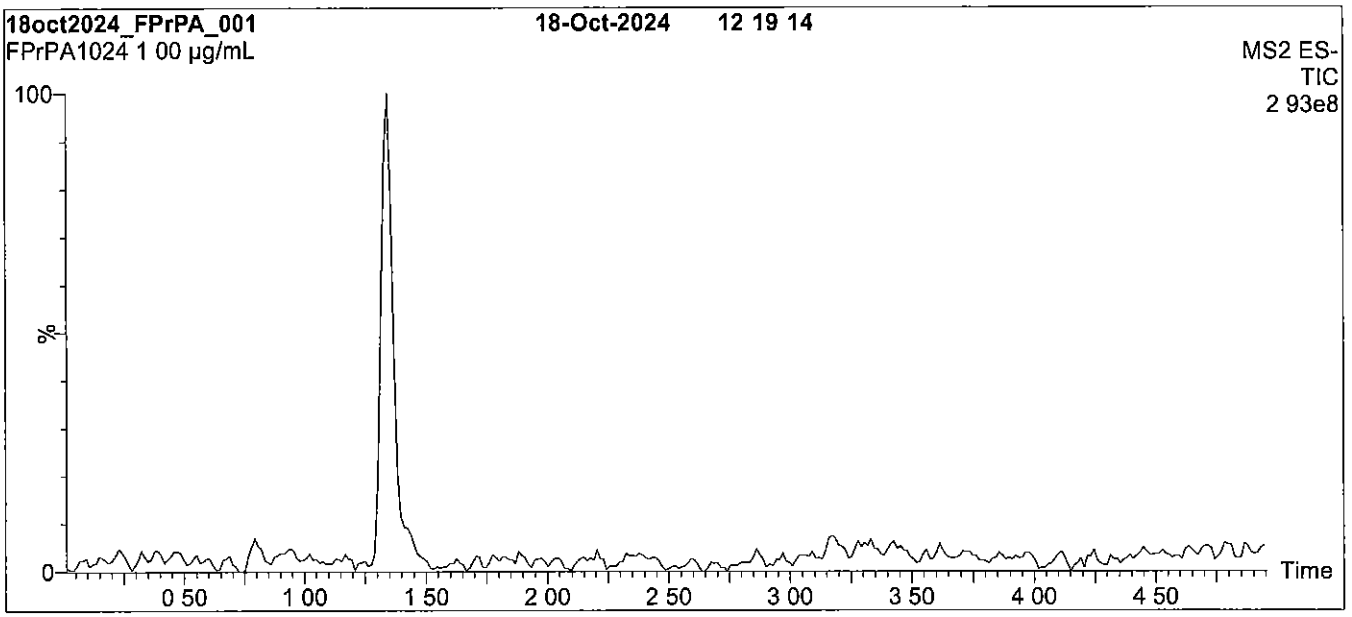
- See page 2 for further details
- Contains <1% of the unsaturated 3 3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by ^{19}F NMR

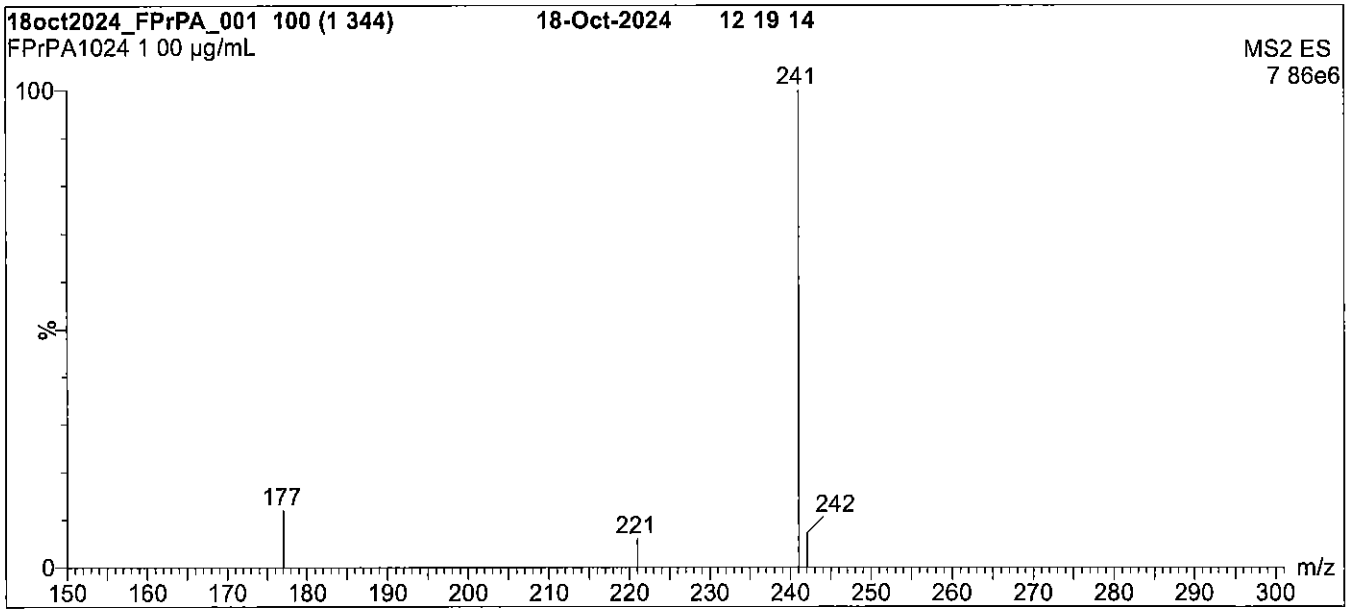
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Certified By _____ **Date** 10/31/2024
(mm/dd/yyyy)
B G. Chiltim General Manager

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

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 8
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 mln

Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 18 50
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Reagent

PFC_ST_04012

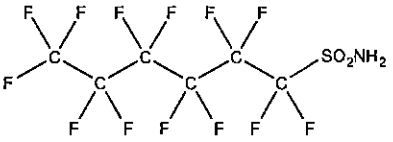
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04012
PFC-ST-04013

PRODUCT CODE. FHxSA-I
COMPOUND. Perfluoro-1-hexanesulfonamide
LOT NUMBER. FHxSA0424I

STRUCTURE.



CAS #. 41997-13-1

7626878
ID: PFC_ST_04012
Exp:04/ 7/29 Prpd:JVK6 Opn:
Native FHxSA Stock

7626881
ID: PFC_ST_04013
Exp:04/17/29 Prpd:JVK6 Opn:
Native FHxSA Stock

MOLECULAR FORMULA.	$C_6H_2F_{13}NO_2S$	**MOLECULAR WEIGHT:**	399 13
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	04/17/2024		
EXPIRY DATE. (mm/dd/yyyy)	04/17/2029		
RECOMMENDED STORAGE.	Refrigerate ampoule		

410-7626878

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

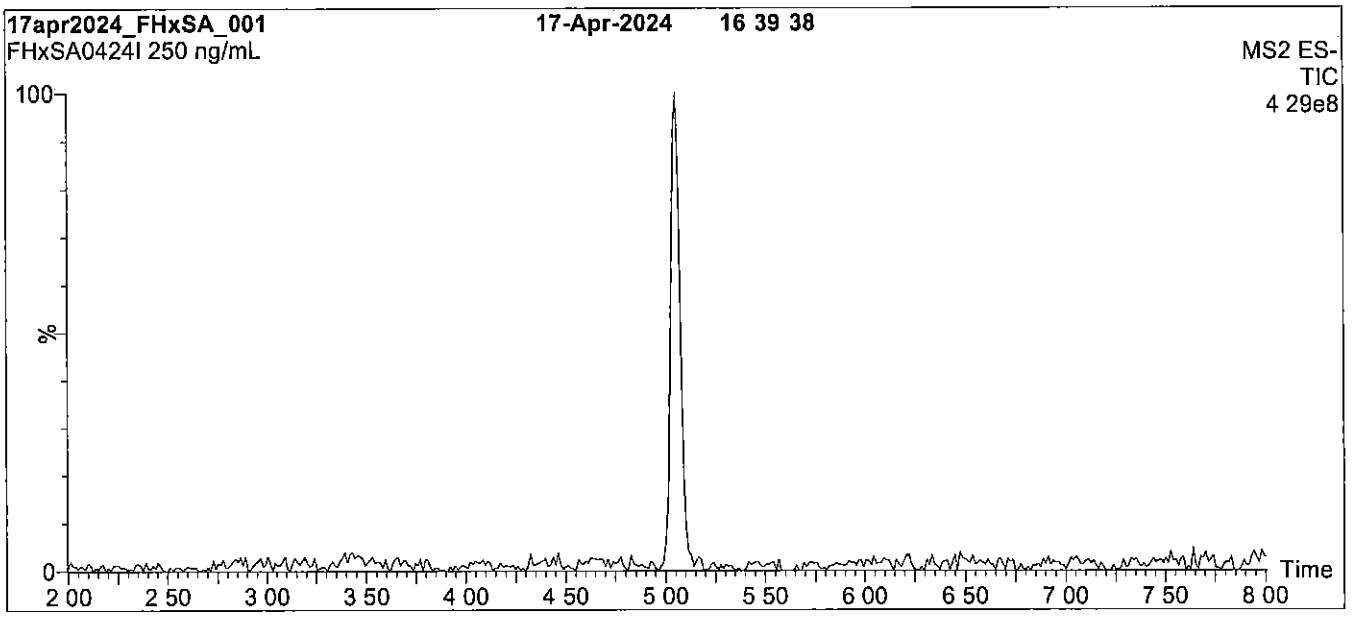
- See page 2 for further details

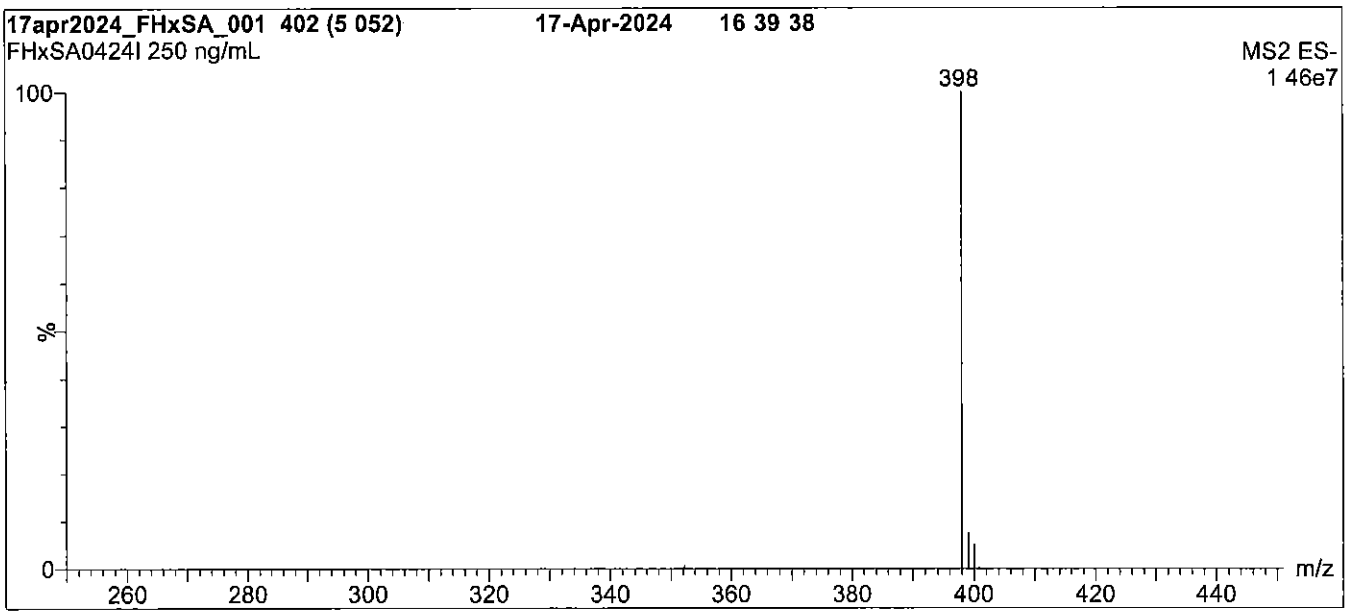
FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By B G. Chittim General Manager **Date** 04/22/2024 (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

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 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 8 mln 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

PFC_ST_04048

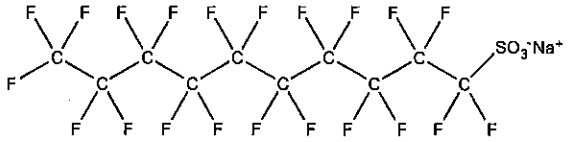
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04044
PFC-ST-04048

PRODUCT CODE: L-PFDS
LOT NUMBER: LPFDS0624
COMPOUND: Sodium perfluoro-1-decanesulfonate

STRUCTURE:



CAS #: 2806-15-7

410-7626953

410-7626956

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)	06/21/2024		
EXPIRY DATE: (mm/dd/yyyy)	06/21/2029		
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:** 06/25/2024 (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:

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:

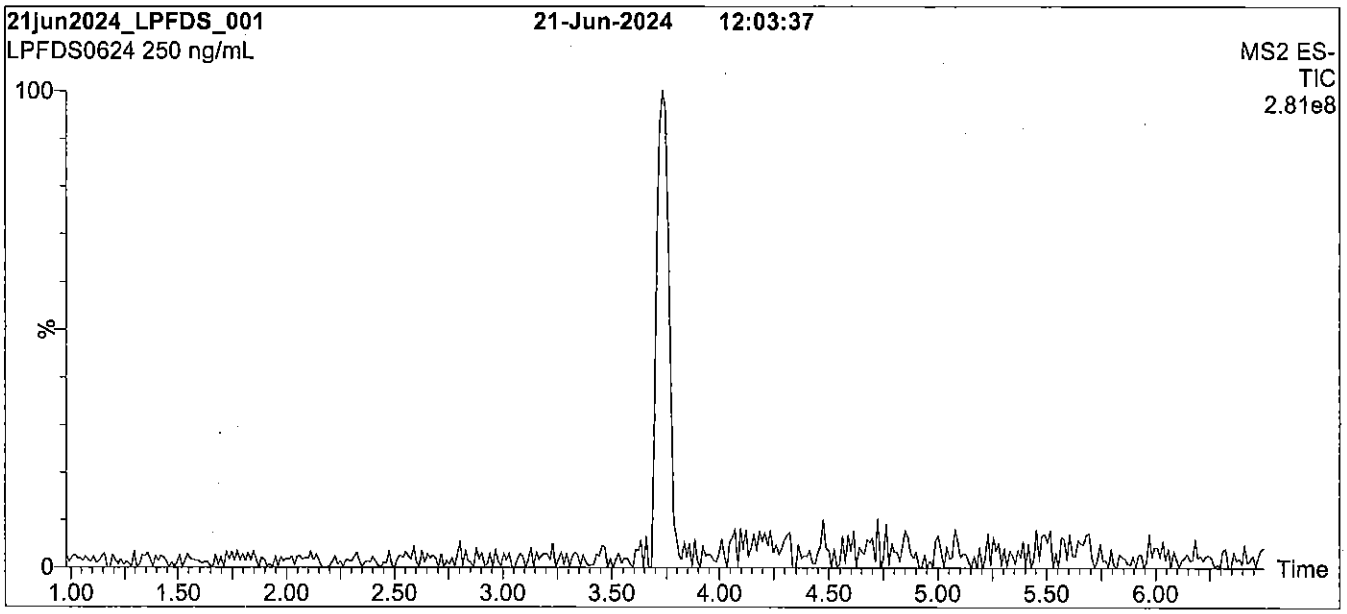
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

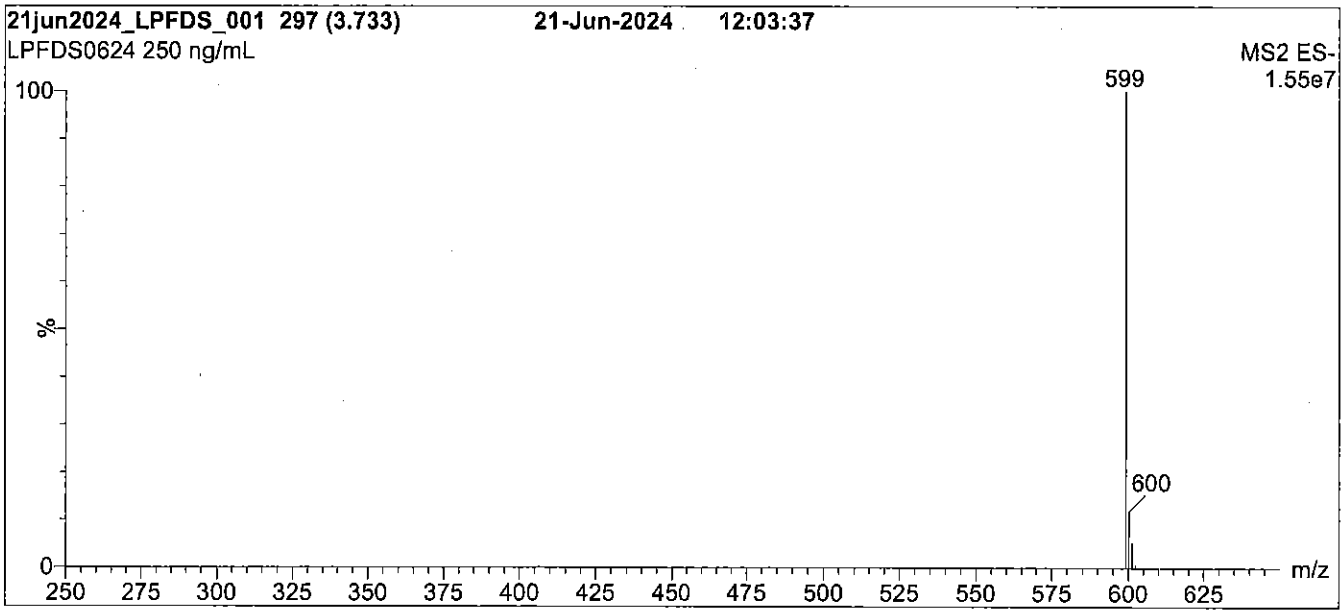
CALA Testing Accreditation No. A1226

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

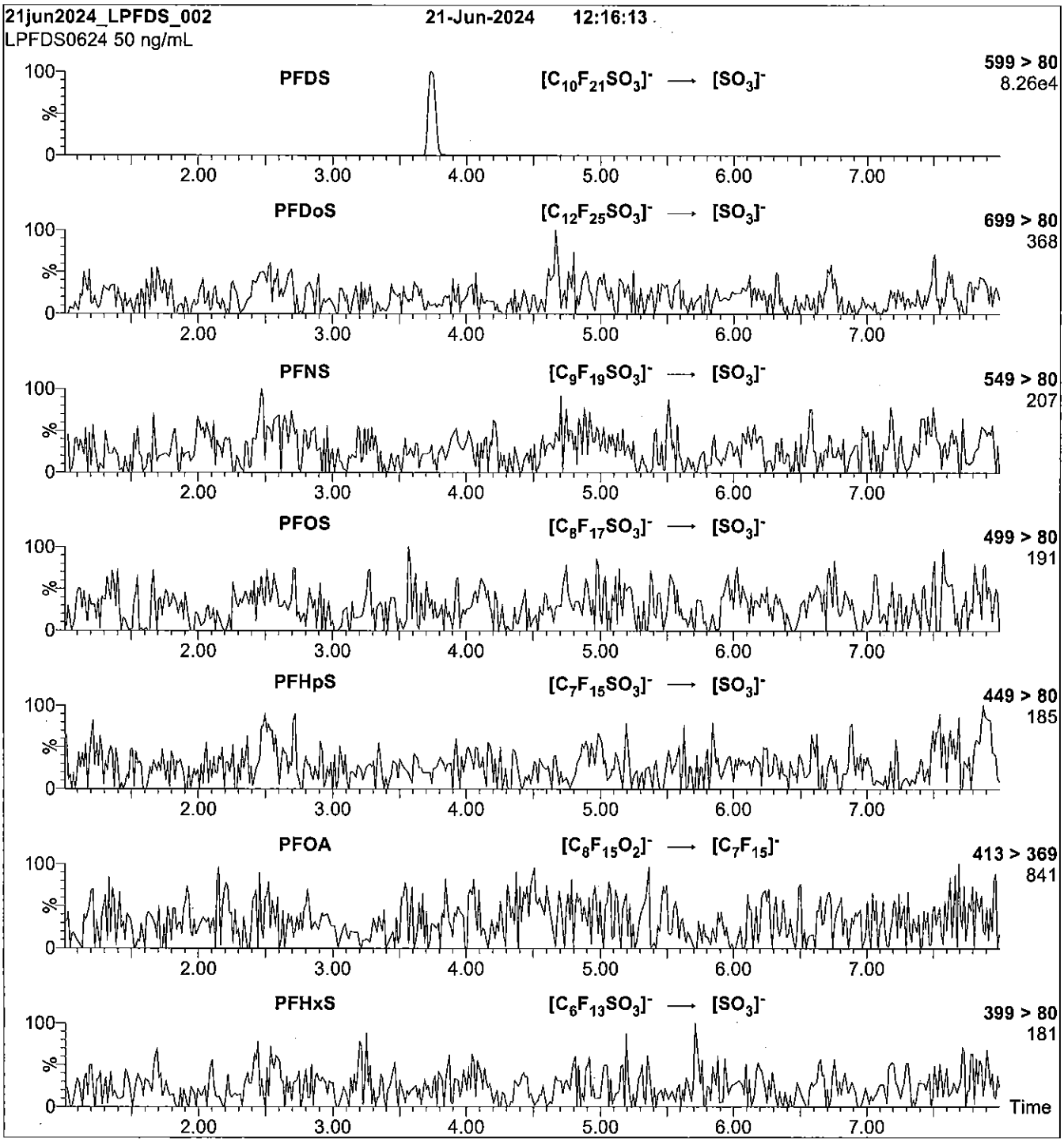
Flow: 300 µL/min

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) = 4.83-3
Collision Energy (eV) = 56

Reagent

PFC_ST_04051

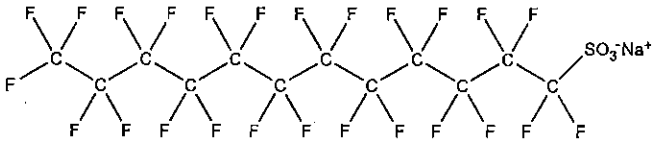
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST_040S1
PFC-ST_040S3

PRODUCT CODE: L-PFDoS
LOT NUMBER: LPFDoS1124
COMPOUND: Sodium perfluoro-1-dodecanesulfonate

STRUCTURE:



CAS #: 1260224-54-1

410-7626982

410-7626984

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)	11/11/2024		
EXPIRY DATE: (mm/dd/yyyy)	11/11/2029		
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 ~0.6% perfluoro-n-dodecanoic acid (PFDoA) and ~0.6% sodium perfluoro-1-undecanesulfonate (L-PFUdS)

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/28/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

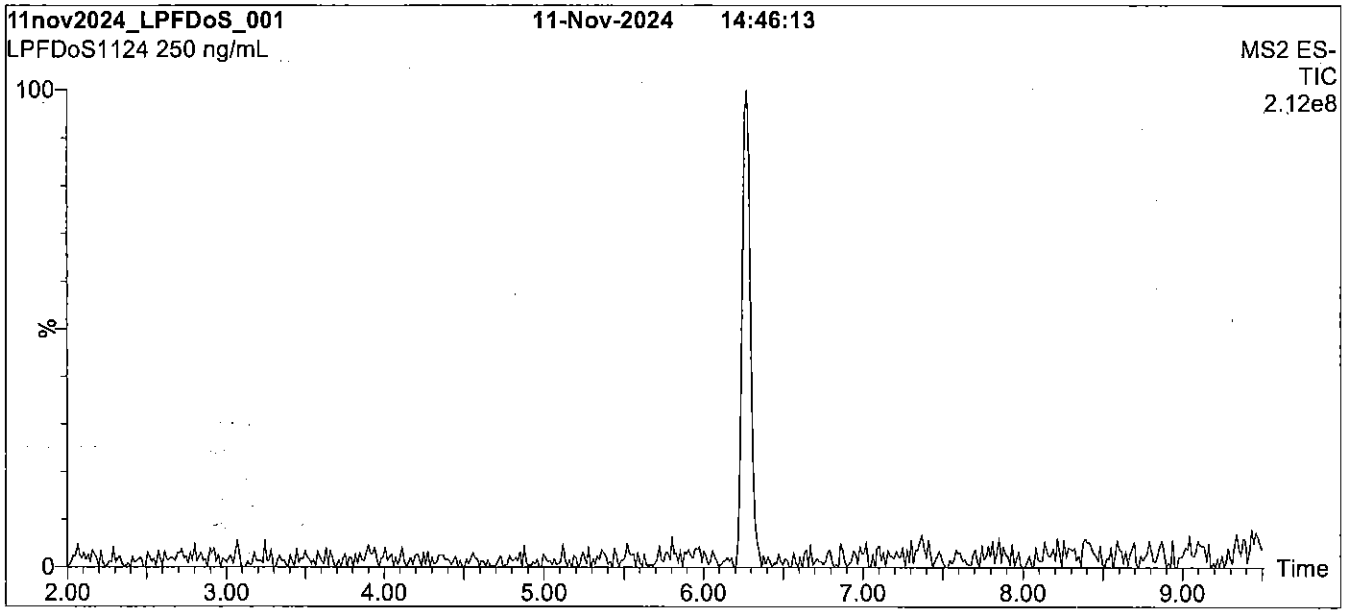
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

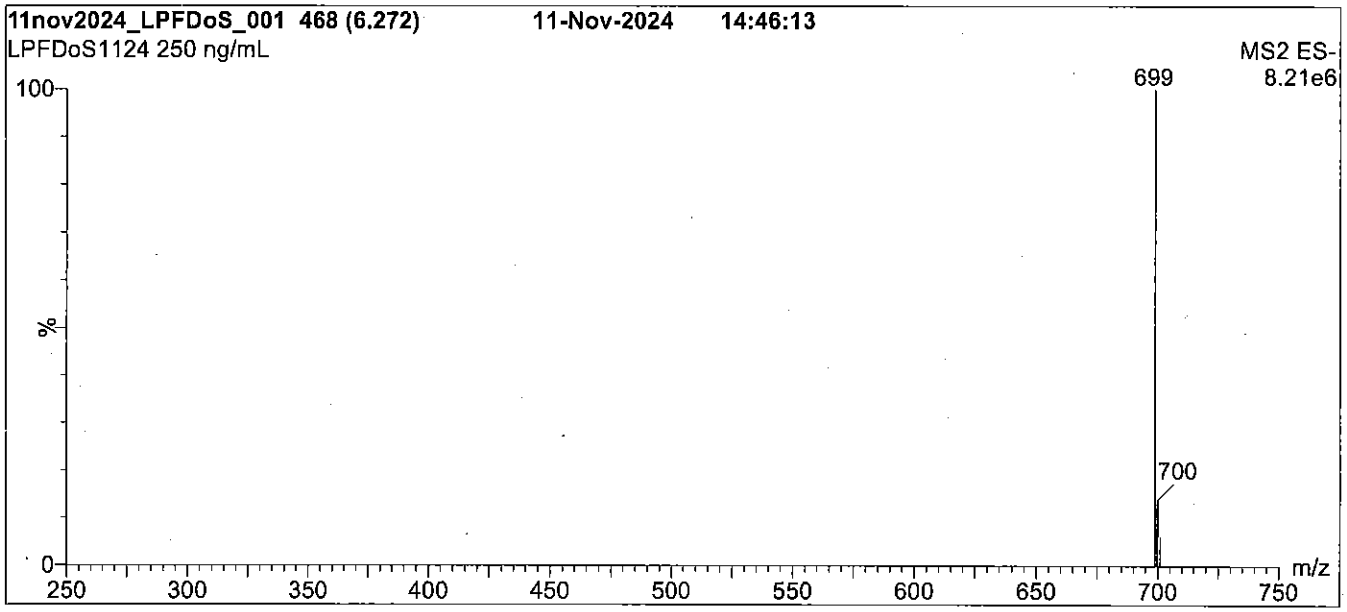
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

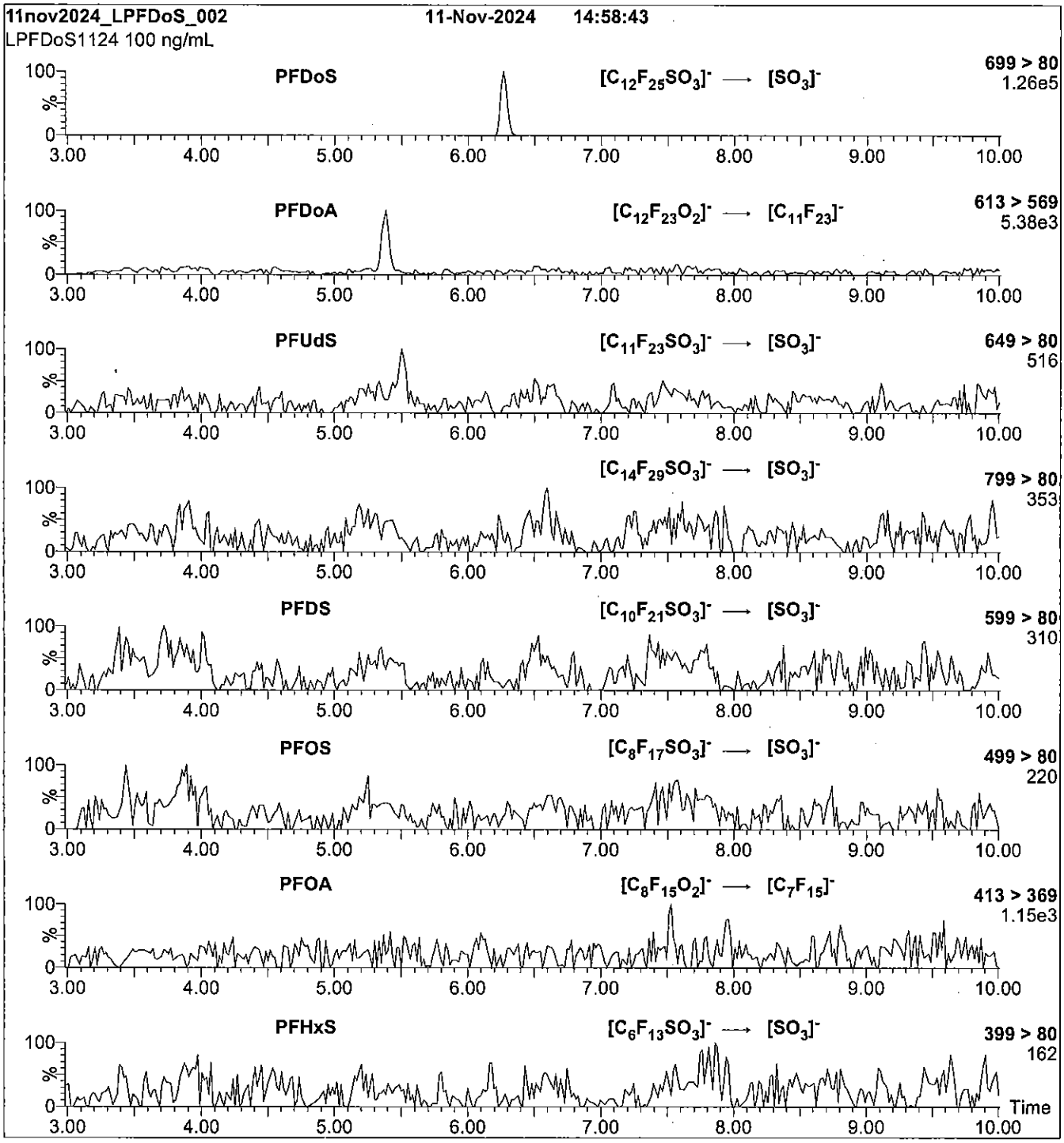
Flow: 300 µL/min

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-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) = 6.40e-3
Collision Energy (eV) = 60

Reagent

PFC_ST_04080

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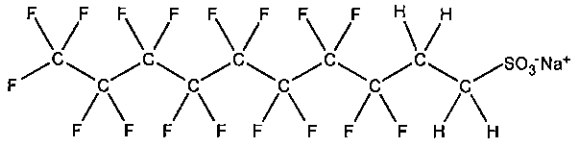
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04080
PFC-ST-04083

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0624

COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecanesulfonate

STRUCTURE: **CAS #:** 27619-96-1



410-7627089

410-7627091

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)	06/13/2024		
EXPIRY DATE: (mm/dd/yyyy)	06/13/2029		
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:** 06/13/2024 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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.

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:

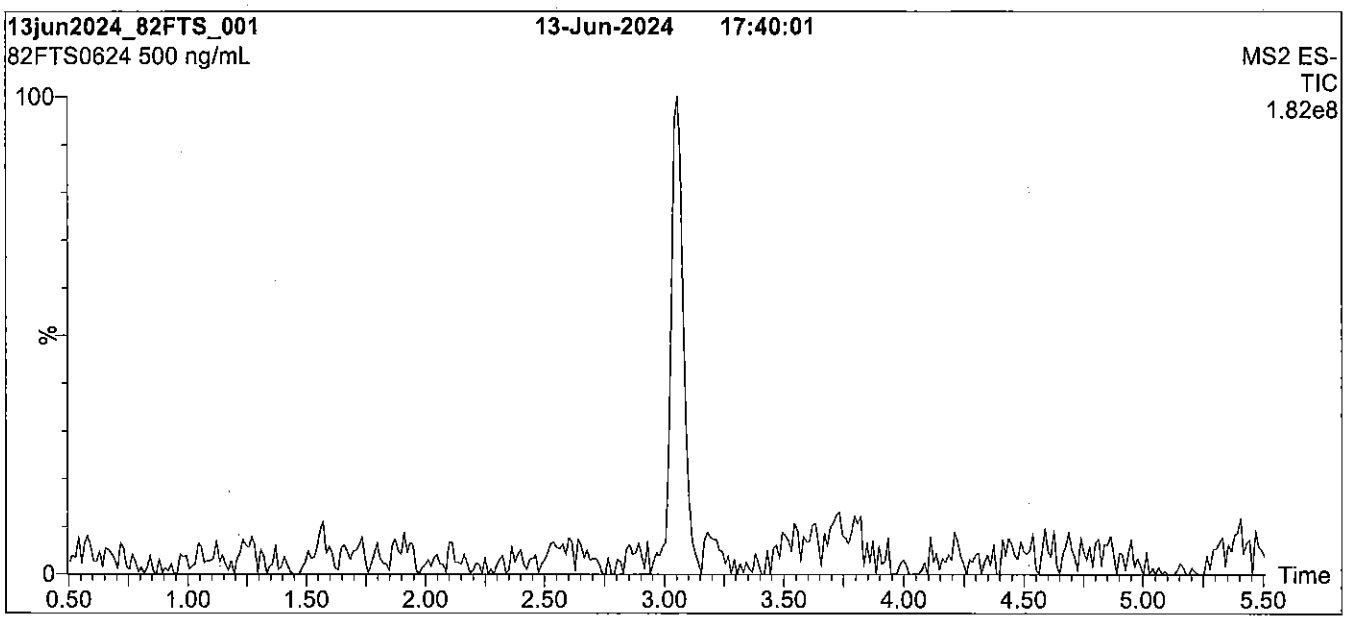
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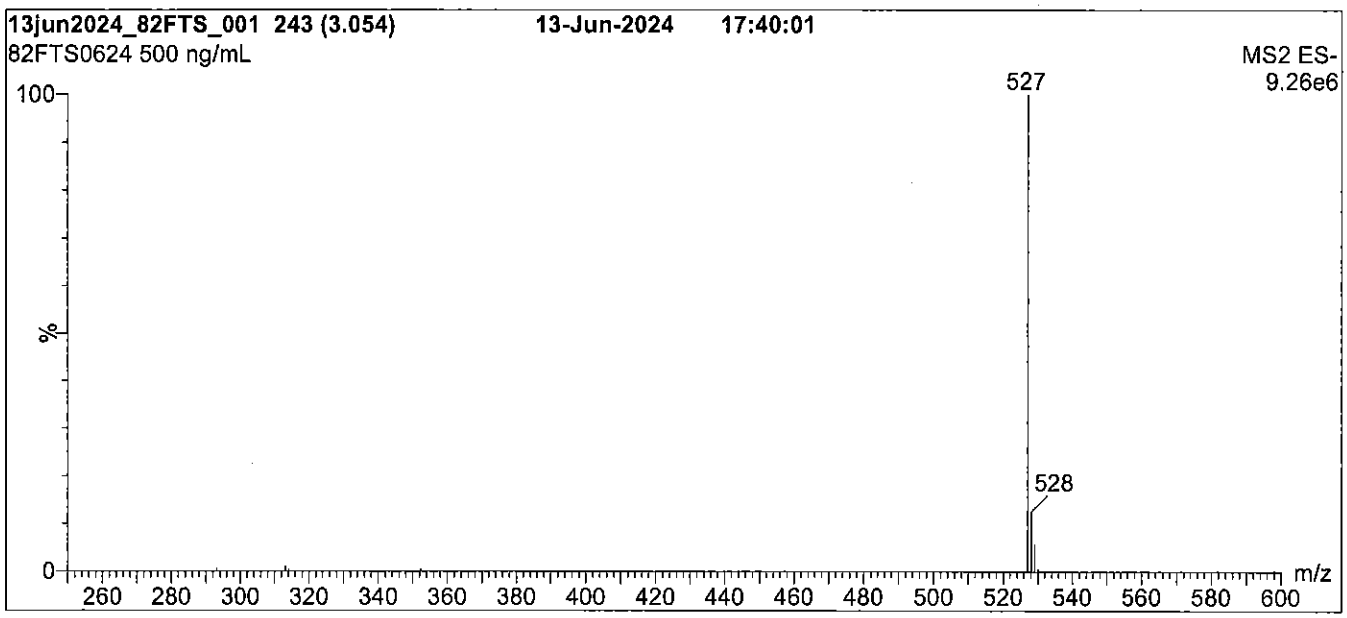
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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

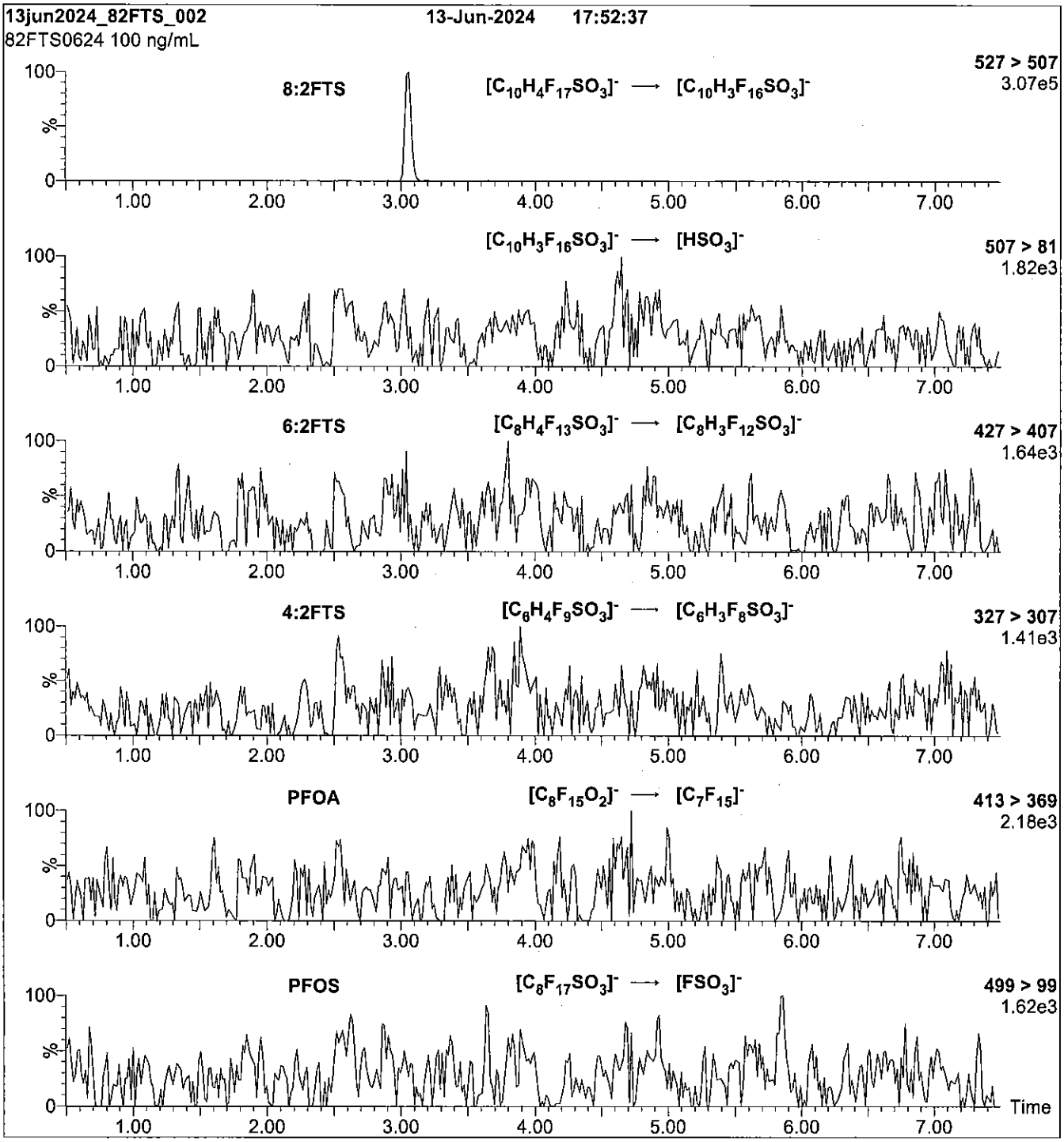
Flow: 300 µL/min

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

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) = 5.30e-3
Collision Energy (eV) = 26

Reagent

PFC_ST_04130

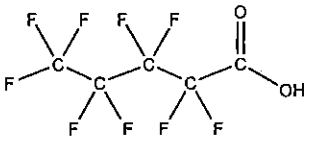
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST_04130
PFC_ST_04131

PRODUCT CODE. PFPeA
COMPOUND. Perfluoro-n-pentanoic acid
LOT NUMBER. PFPeA0924

STRUCTURE.
CAS #. 2706-90-3



7627517
ID: PFC_ST_04130
Exp:09/20/29 Prpd:JVK6 Opn:
Native PFPeA Stock

7627521
ID: PFC_ST_04131
Exp:09/20/29 Prpd:JVK6 Opn:
Native PFPeA Stock

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)	09/20/2024		
EXPIRY DATE. (mm/dd/yyyy)	09/20/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool, dark place		

410-7627517

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

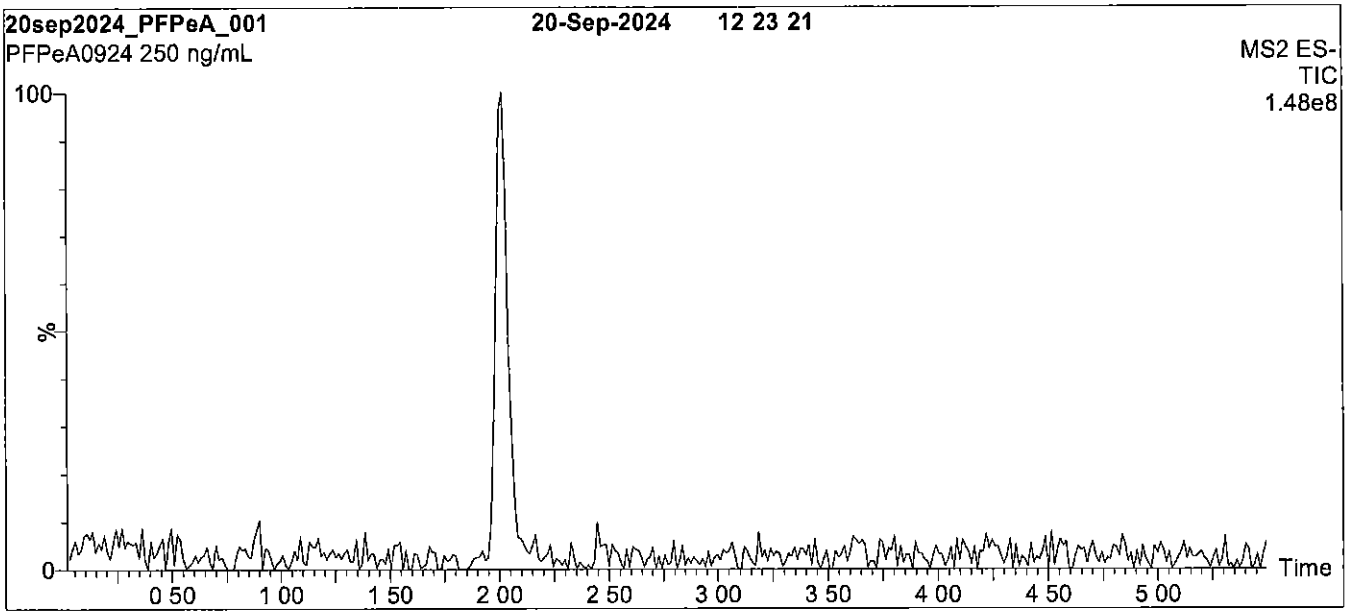
- See page 2 for further details
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester

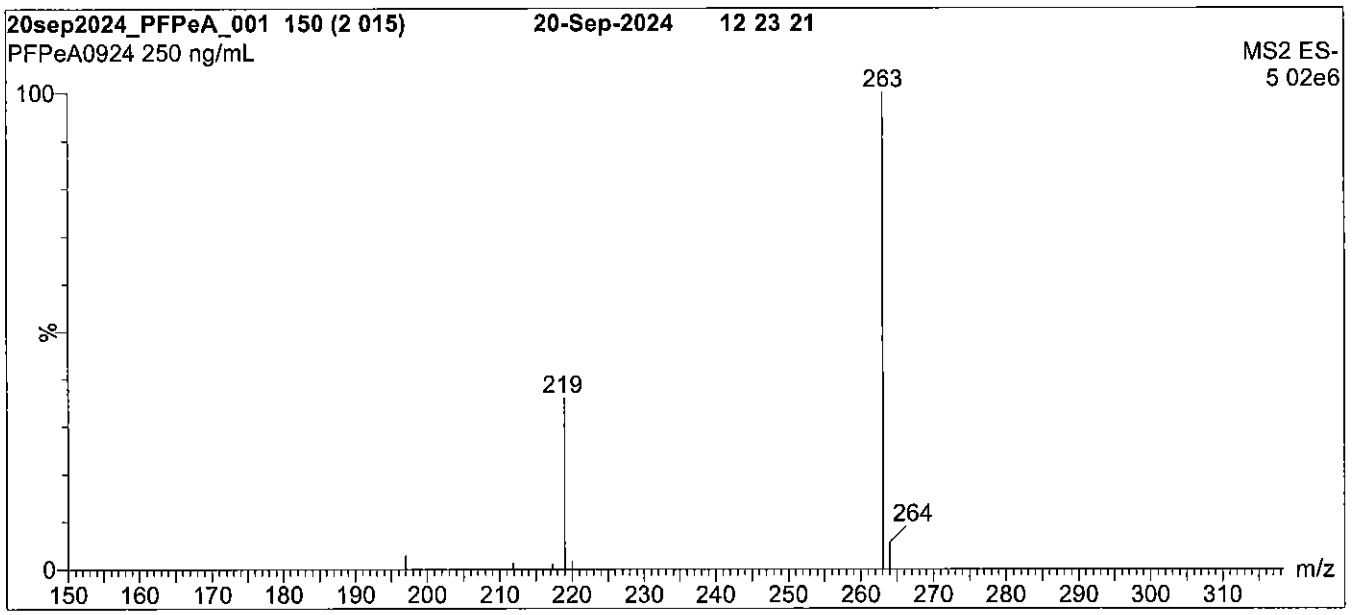
FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date** 09/25/2024 (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

Figure 1. **PFPeA, 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 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

PFC_ST_04132

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

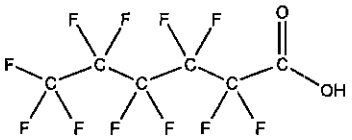
PFC_ST_04132
PFC_ST_04133

PRODUCT CODE. PFHxA
COMPOUND. Perfluoro-n-hexanoic acid

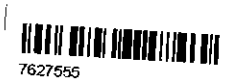
LOT NUMBER. PFHxA0325

STRUCTURE.

CAS #: 307-24-4




7627554
ID: PFC_ST_04132
Exp:03/31/30 Prpd:JVK6 Opn:
Native PFHxA Stock


7627555
ID: PFC_ST_04133
Exp:03/31/30 Prpd:JVK6 Opn:
Native PFHxA Stock

MOLECULAR FORMULA.	$C_6HF_{11}O_2$	**MOLECULAR WEIGHT:**	314 05
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	03/31/2025		
EXPIRY DATE: (mm/dd/yyyy)	03/31/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		


410-7627554

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

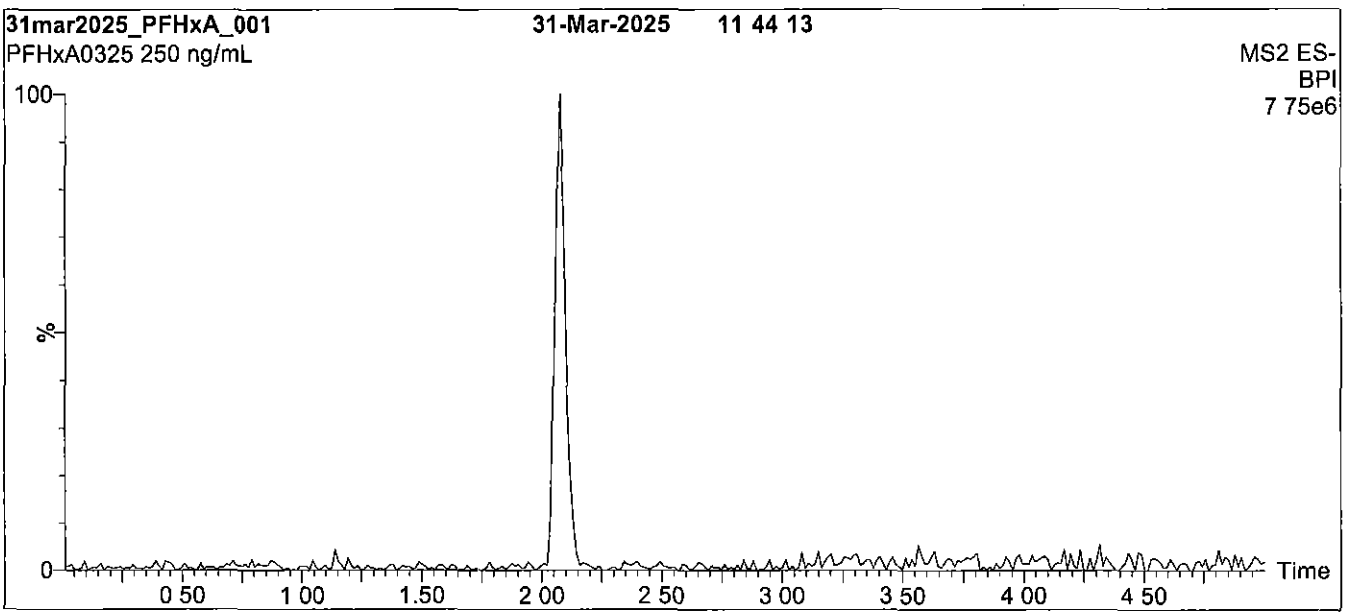
- See page 2 for further details
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester

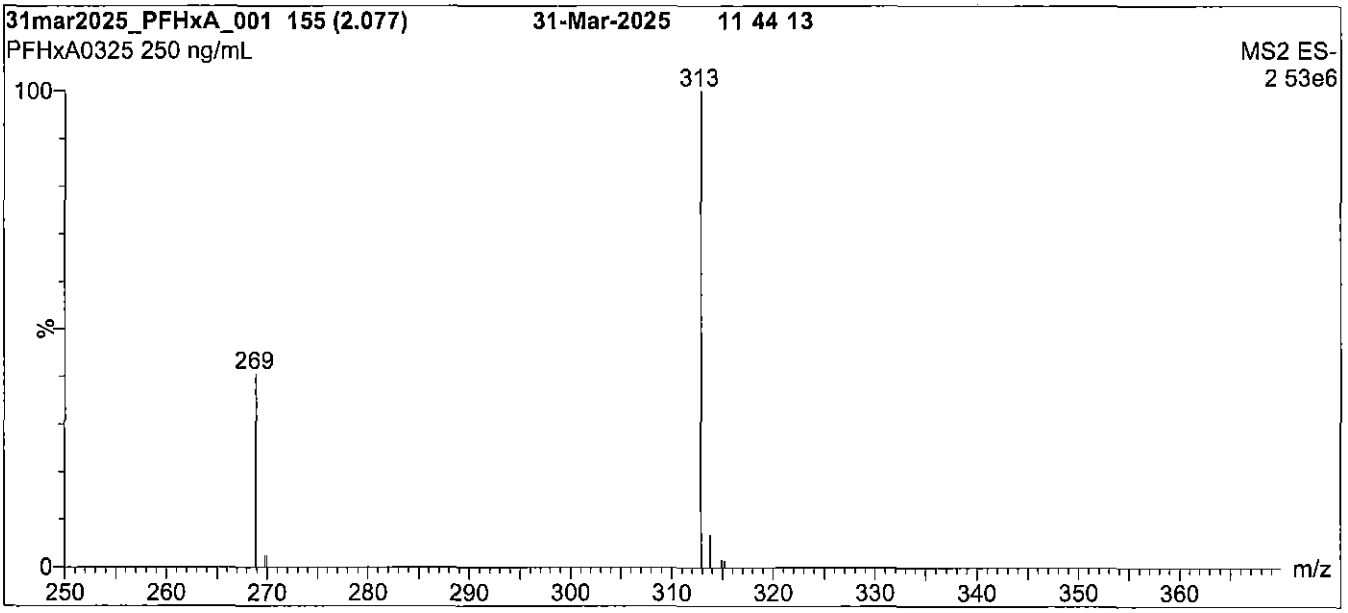
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By. _____ **Date** 04/04/2025 (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

Figure 1. **PFHxA; 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 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

Reagent

PFC_ST_04167

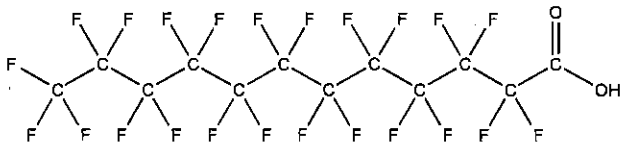
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_041666
PFC_ST_041667

PRODUCT CODE: PFDoA
LOT NUMBER: PFDoA1124
COMPOUND: Perfluoro-n-dodecanoic acid

STRUCTURE:



CAS #: 307-55-1

7628568
ID: PFC_ST_04166
Exp:11/11/29 Prpd:RPU6 Opn:
Native PFDoA Stock

7628569
ID: PFC_ST_04167
Exp:11/11/29 Prpd:RPU6 Opn:
Native PFDoA Stock

MOLECULAR FORMULA: $C_{12}HF_{23}O_2$
MOLECULAR WEIGHT: 614.10
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/11/2024
EXPIRY DATE: (mm/dd/yyyy) 11/11/2029
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

410-7628568

410-7628569

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:** 11/27/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

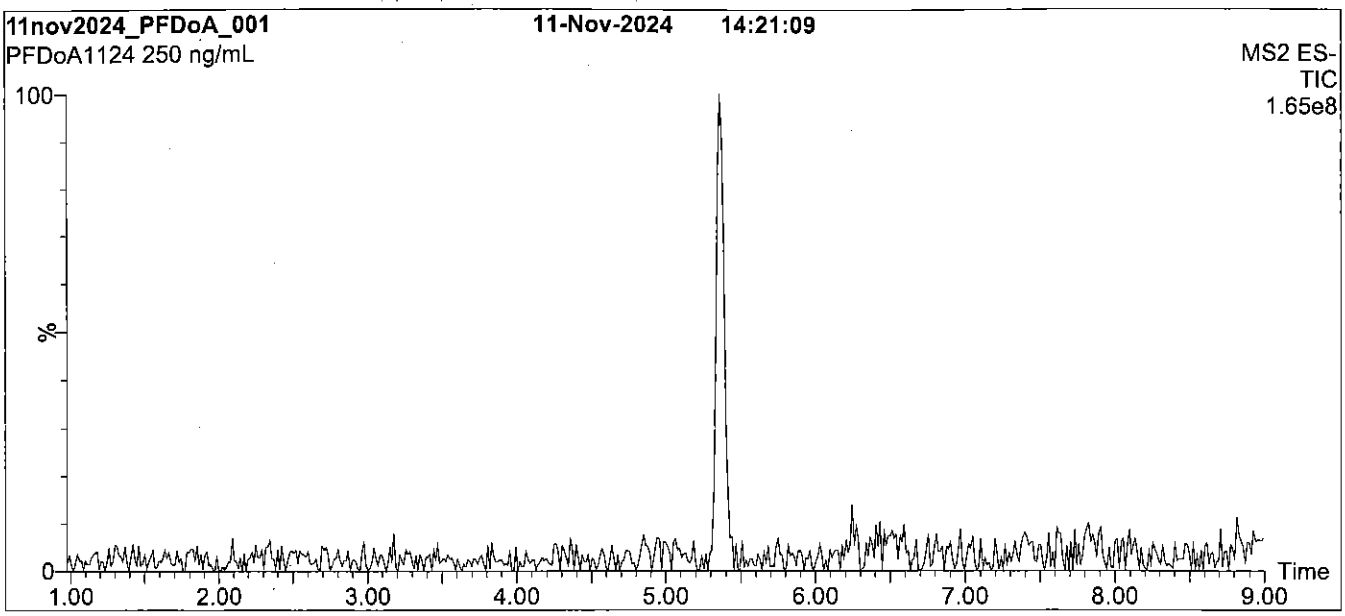
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

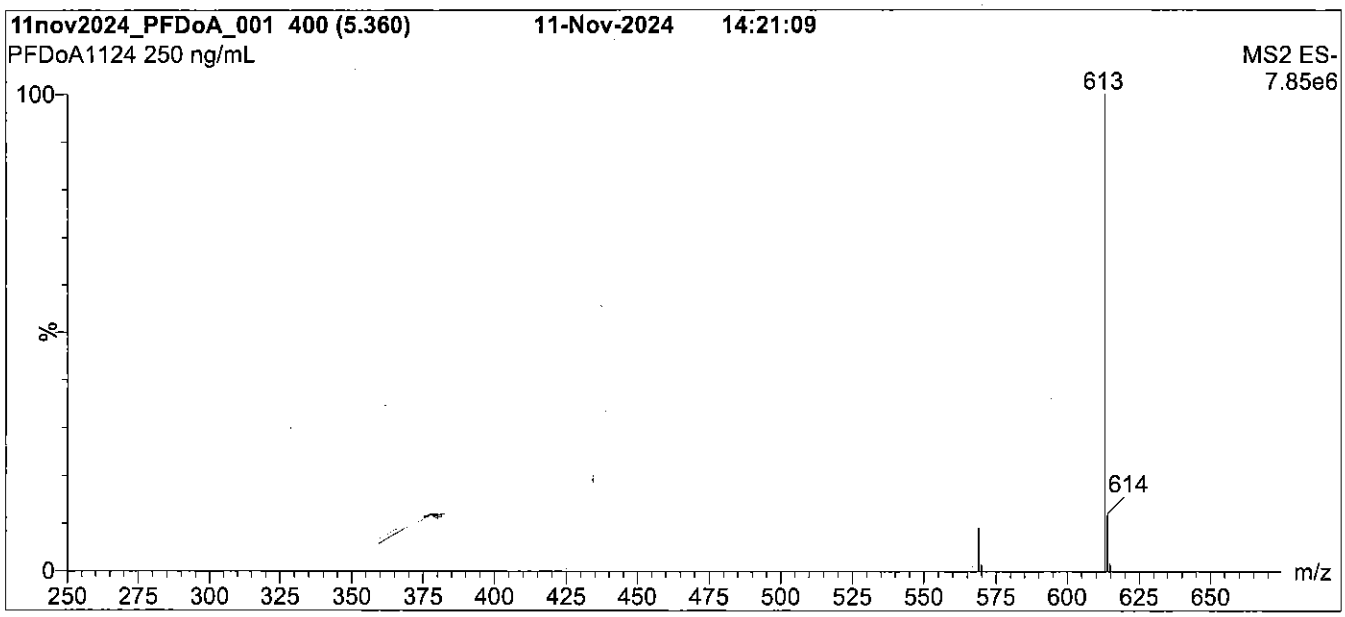
CALA Testing Accreditation No. A1226

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: **PFDoA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

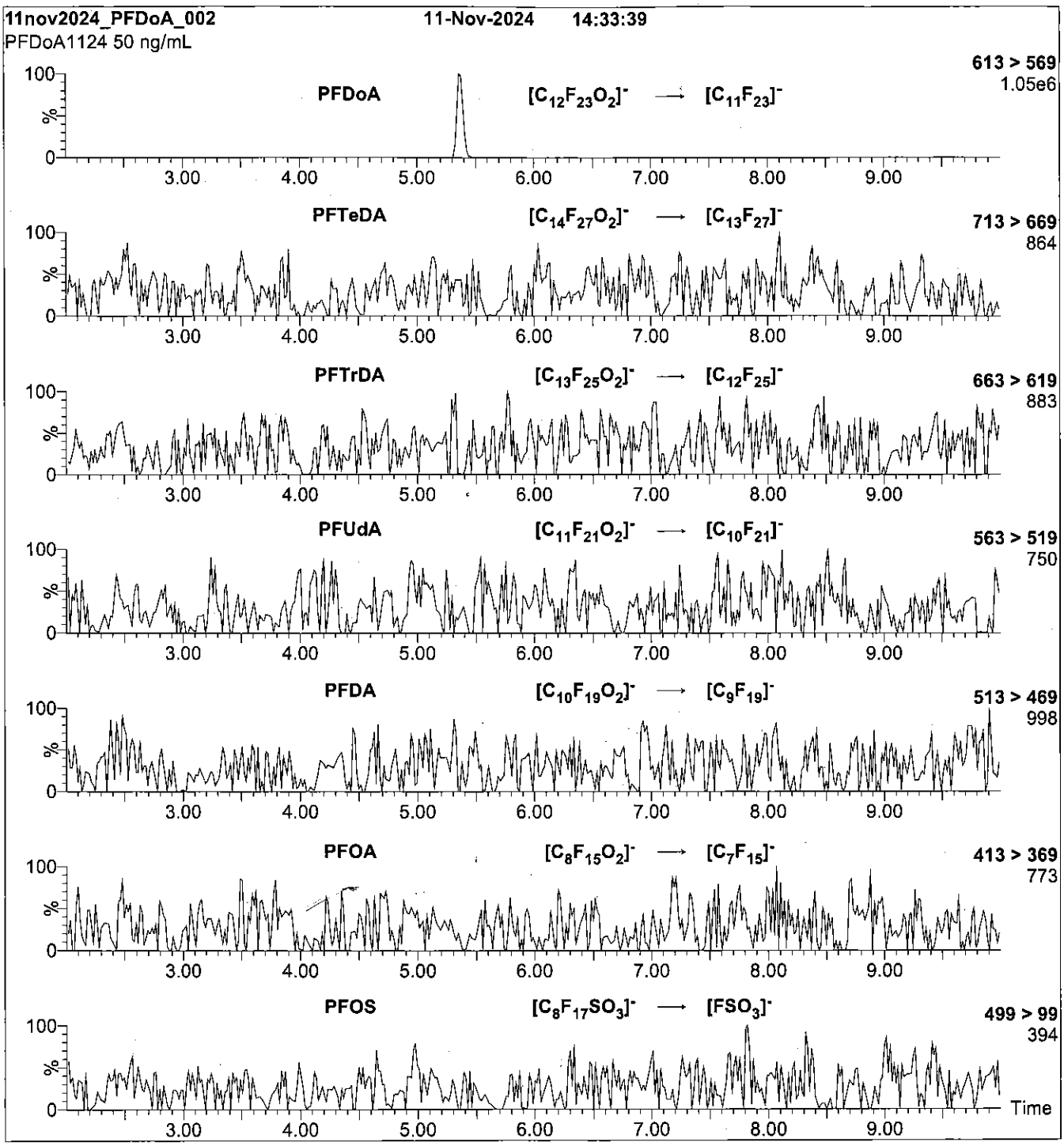
Flow: 300 µL/min

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: **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) = 6.40e-3
Collision Energy (eV) = 12

Reagent

PFC_ST_04183

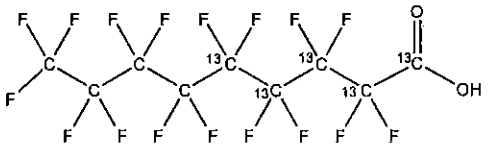
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

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

LOT NUMBER. MPFNA1024

STRUCTURE.



CAS #: 960315-49-5

7639443
ID: PFC_ST_04182
Exp:10/07/29 Prpd:P7EB Opn:
Labeled 13C5 PFNA Stock

7639444
ID: PFC_ST_04183
Exp:10/07/29 Prpd:P7EB Opn:
Labeled 13C5 PFNA Stock

MOLECULAR FORMULA.	$^{13}C_5{}^{12}C_4HF_{17}O_2$	**MOLECULAR WEIGHT:**	469 04
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY.**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	10/07/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/07/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7639444

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** 10/17/2024 (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.

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 SFC/UV/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, and/or SFC/UV/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, .x_n on which it depends is

$$u_c(y(x_1, x_2 \quad x)) = \sqrt{\sum_{=1} u(y, x)^2}$$

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%) has been assigned to this product.

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:

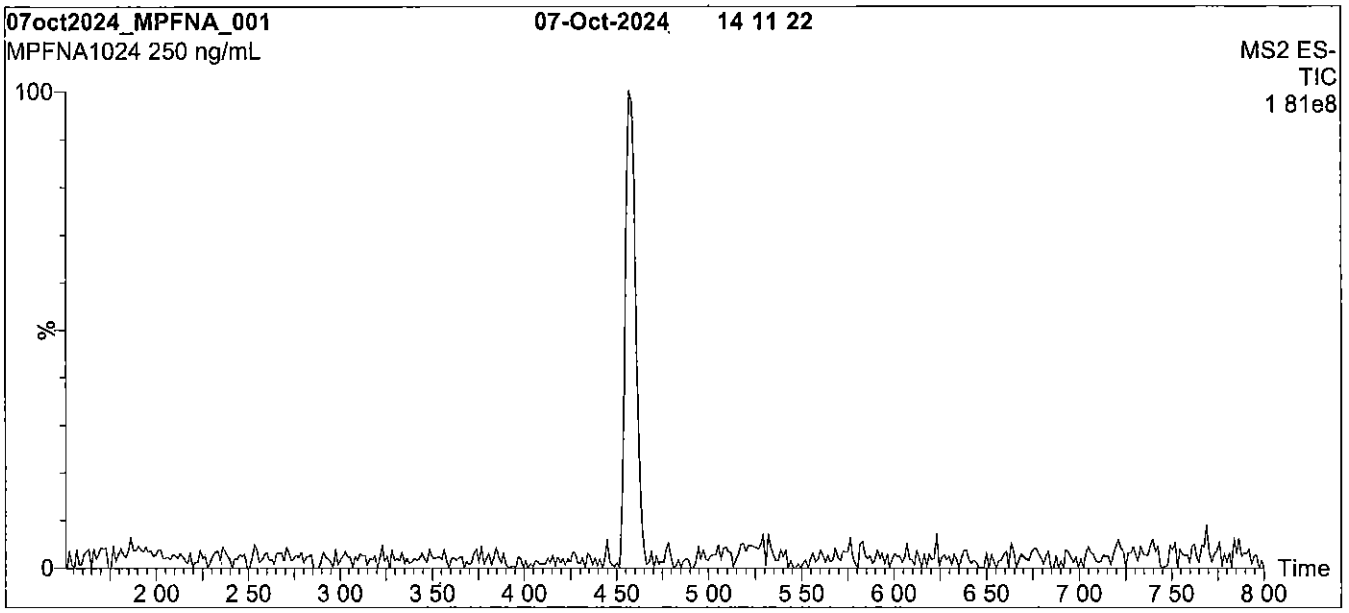
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

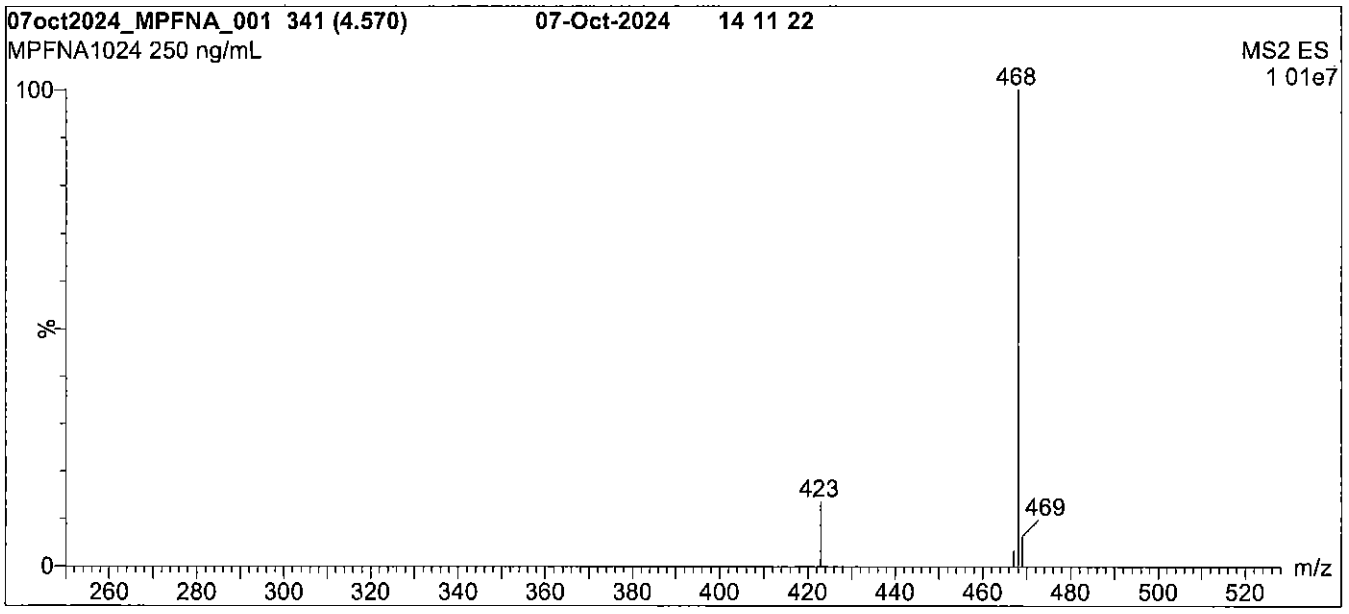
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 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. **MPFNA, 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.

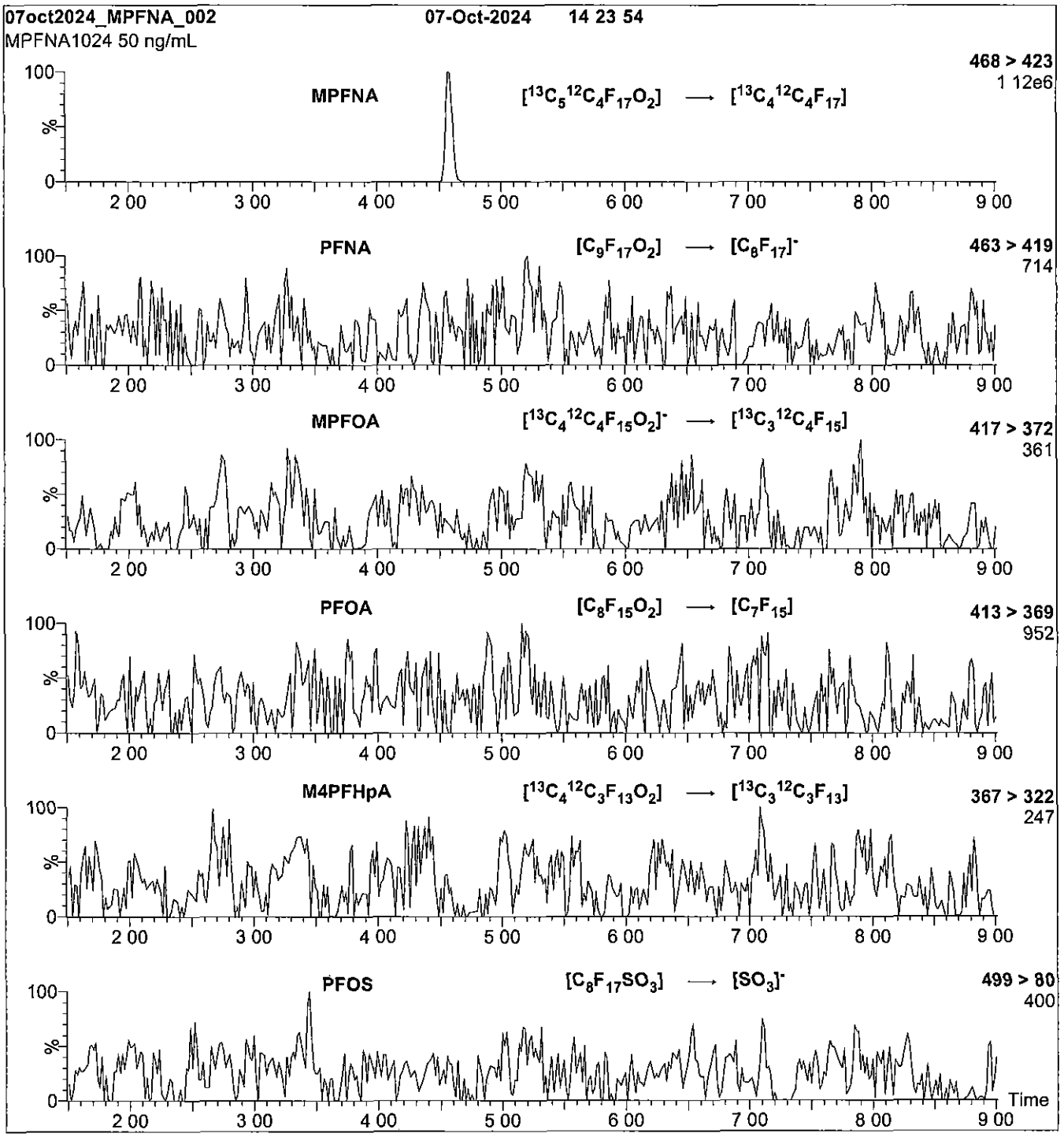
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm, 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow·	300 µL/min

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. **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) = 4.26e-3
Collision Energy (eV) = 10

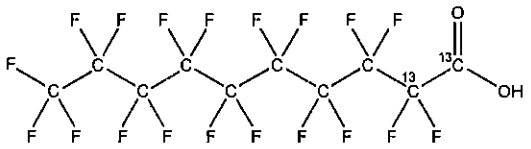
Reagent

PFC_ST_04184

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	MPFDA	**LOT NUMBER.**	MPFDA1024
COMPOUND.	Perfluoro-n-(1 2-$^{13}C_2$)decanoic acid		
STRUCTURE.		**CAS #.**	960315-50-8



7639446
ID: PFC_ST_04184
Exp:10/07/29 Prpd:P7EB Opn:
Labeled 13C2 PFDA Stock

7639447
ID: PFC_ST_04185
Exp:10/07/29 Prpd:P7EB Opn:
Labeled 13C2 PFDA Stock

MOLECULAR FORMULA.	$^{13}C_2{}^{12}C_8HF_{19}O_2$	**MOLECULAR WEIGHT:**	516 07
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	10/07/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/07/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7639446

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** 10/17/2024 (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.

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 and/or SFC/UV/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, x_n on which it depends is

$$u_c(y(x_1, x_2 \quad x)) = \sqrt{\sum_{=1}^{n} u(y, x_1)^2}$$

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%) has been assigned to this product

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:

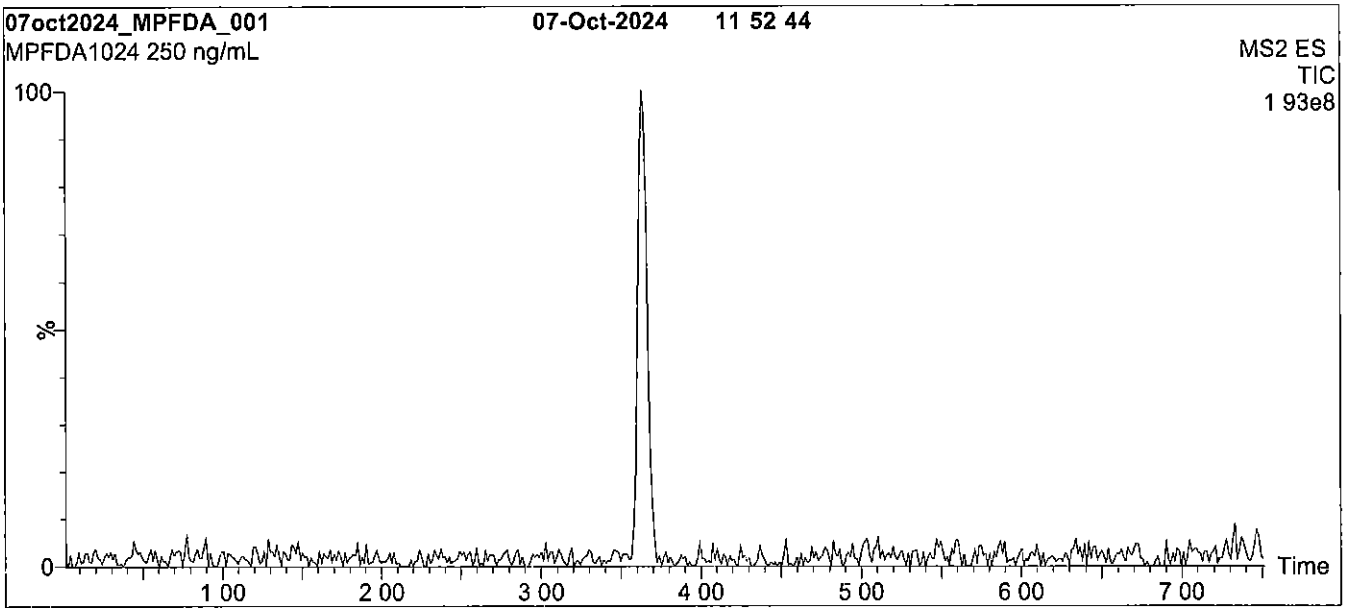
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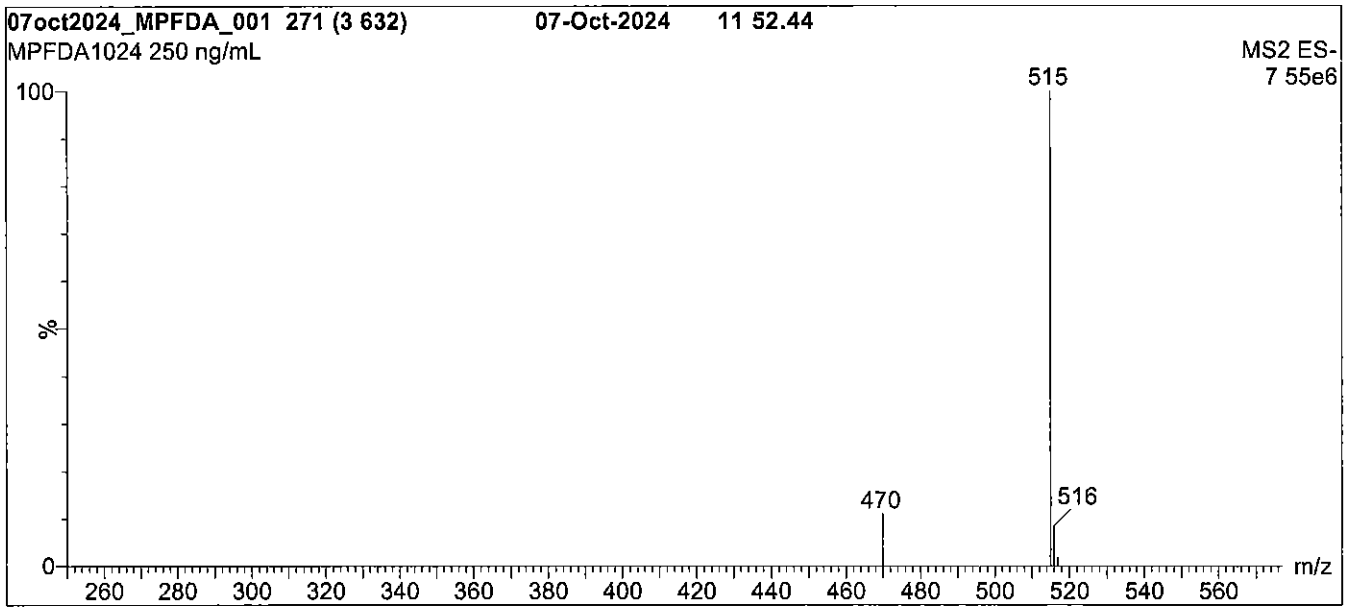
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **MPFDA, 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.

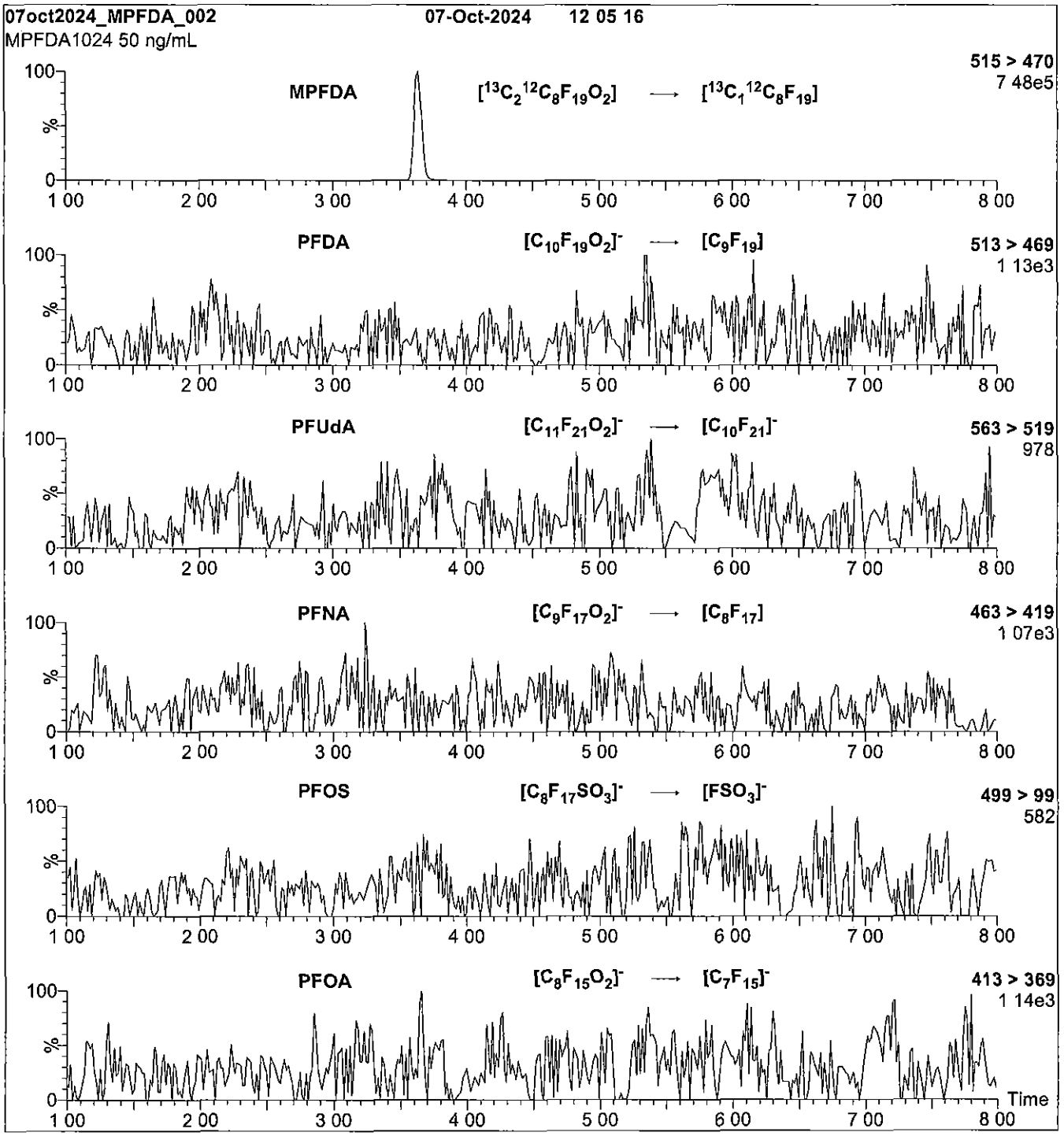
Column	Acquity UPLC BEH Shield RP $_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start. 40% H_2O / 60% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow·	300 µL/min

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. **MPFDA, LC/MS/MS Data (Selected MRM Transitions)**



Condltions for Figure 2.

Injection	On-column (MPFDA)
Mobile phase	Same as Figure 1
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.26e-3
Collision Energy (eV) = 10

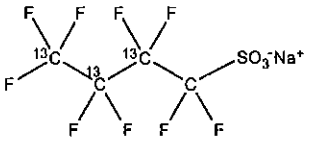
Reagent

PFC_ST_04192

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M3PFBS	**LOT NUMBER.**	M3PFBS0225
COMPOUND.	Sodium perfluoro-1-(2,3 4-$^{13}C_3$)butanesulfonate		
STRUCTURE.		**CAS #.**	2708218-84-0



7639568
ID: PFC_ST_04192
Exp:03/04/30 Prpd:P7EB Opn:
M3PFBS Stock

7639569
ID: PFC_ST_04193
Exp:03/04/30 Prpd:P7EB Opn:
M3PFBS Stock

MOLECULAR FORMULA.	$^{13}C_3{}^{12}CF_9SO_3Na$	**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
LAST TESTED. (mm/dd/yyyy)	03/04/2025		
EXPIRY DATE. (mm/dd/yyyy)	03/04/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7639568

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.** 03/14/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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

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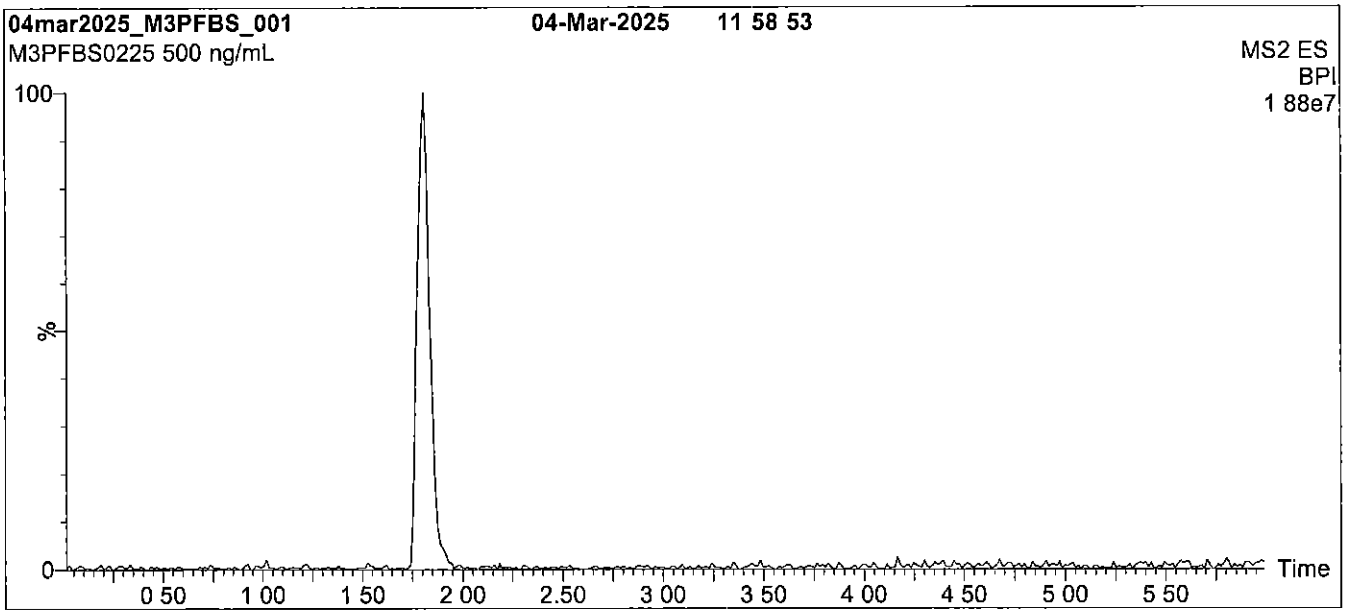
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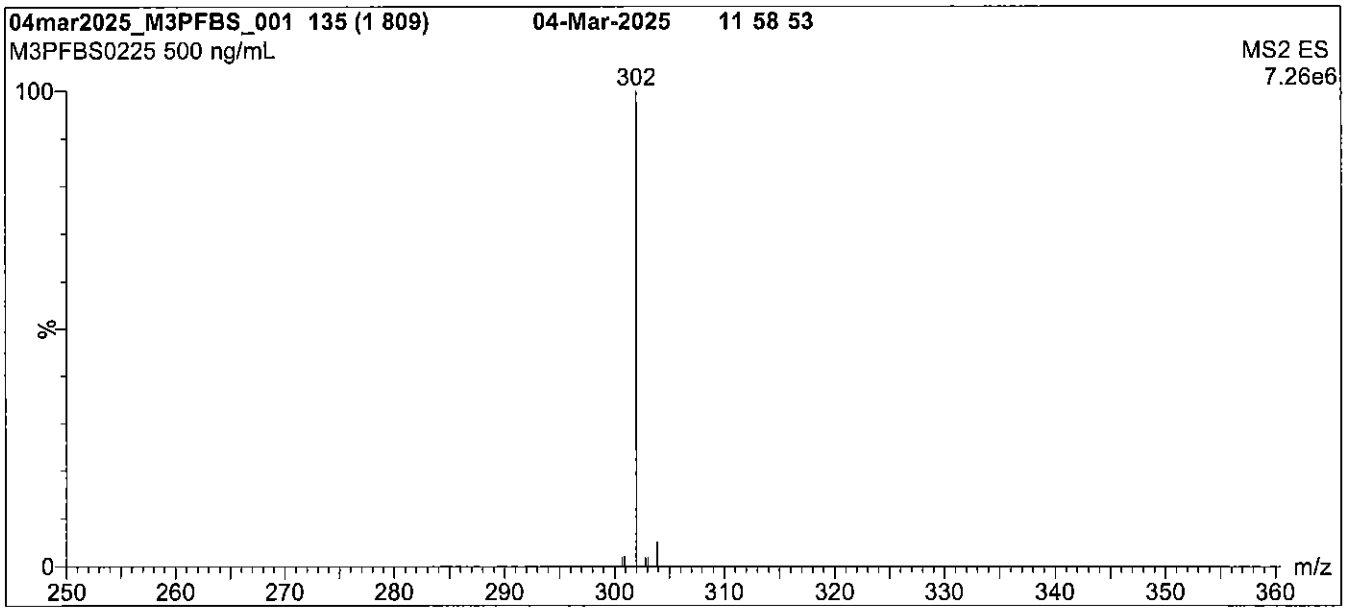
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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.

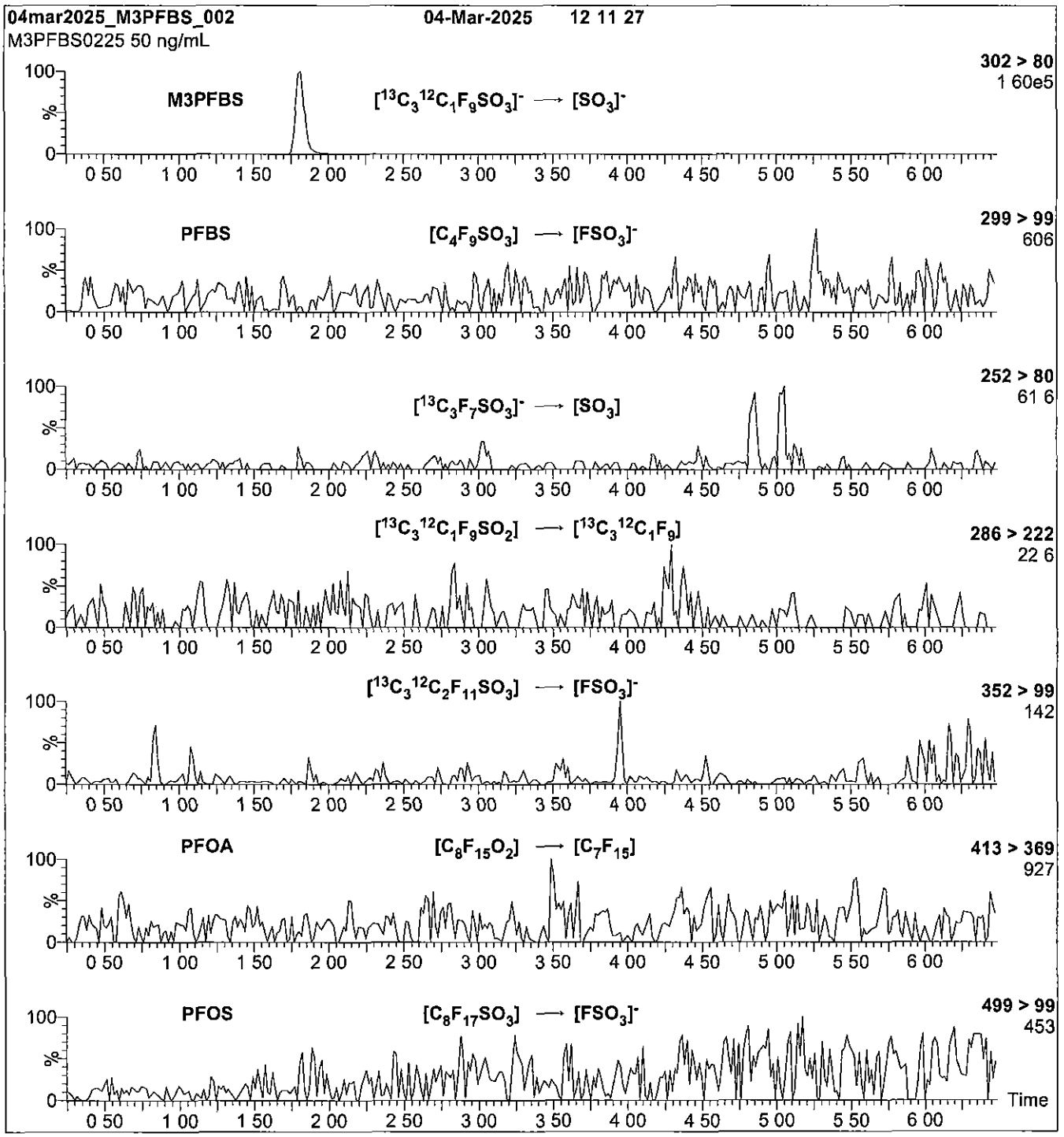
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80·20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow·	300 µL/min

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. **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) = 5 68e-3
Collision Energy (eV) = 30

Reagent

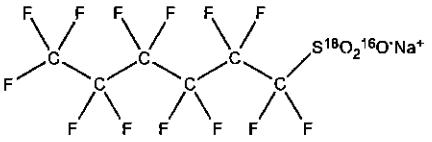
PFC_ST_04195

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. MPFHxS
LOT NUMBER. MPFHxS0924
COMPOUND. Sodium perfluoro-1 hexane($^{18}O_2$)sulfonate

STRUCTURE.



CAS #. 1585941-14-5

7639630
ID: PFC_ST_04194
Exp:09/11/29 Prpd:P7EB Opn:
Labeled 18O2 PFHxS Stock

7639631
ID: PFC_ST_04195
Exp:09/11/29 Prpd:P7EB Opn:
Labeled 18O2 PFHxS Stock

MOLECULAR FORMULA.	$C_6F_{13}S^{18}O_2{}^{16}ONa$	**MOLECULAR WEIGHT:**	426 10
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47.4 ± 2 4 µg/mL (MPFHxS acid)		
	47 3 ± 2 4 µg/mL (MPFHxS anion)		
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	>94% ^{18}O
LAST TESTED. (mm/dd/yyyy)	09/11/2024		
EXPIRY DATE. (mm/dd/yyyy)	09/11/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool, dark place		

410-7639631

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 ($C_6F_{13}S^{18}O_2{}^6O^-$) 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 >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

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Certified By _____ **Date** 09/12/2024 (mm/dd/yyyy)
B.G. Chittim General Manager

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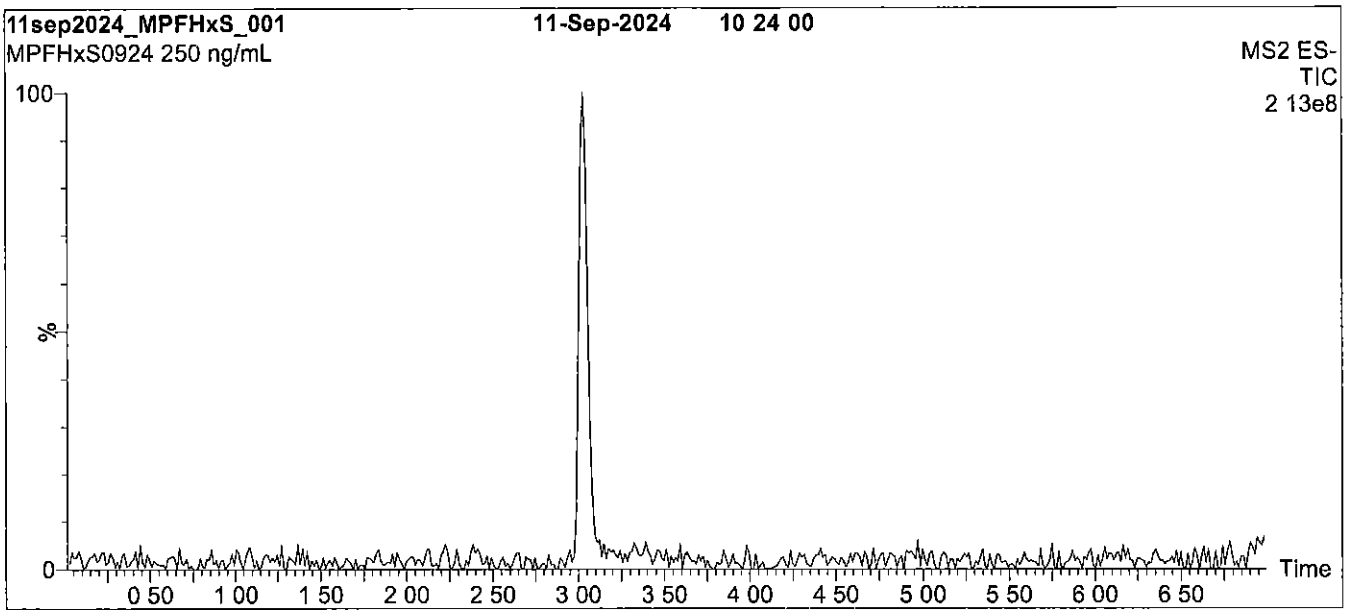
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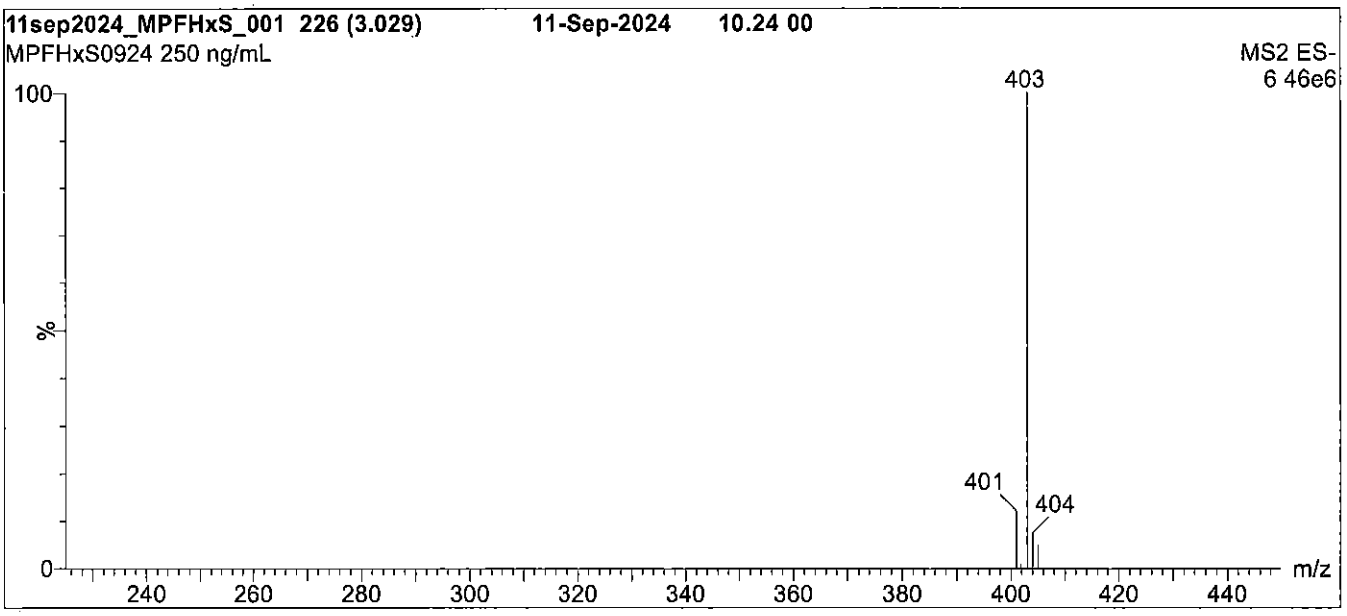
CALA Testing Accreditation No. A1226

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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.

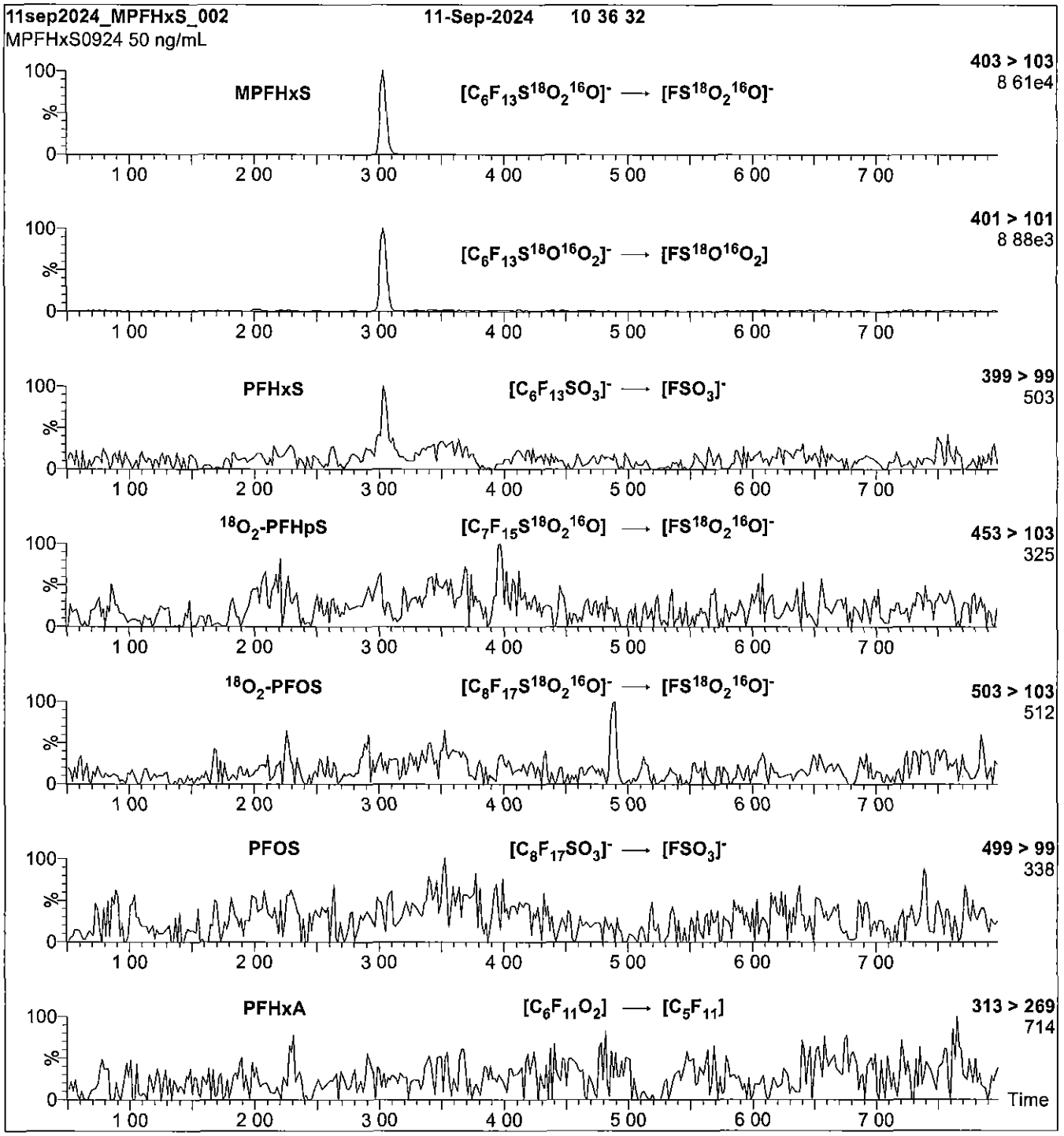
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80·20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow·	300 µL/min

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. **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) = 4.29e-3
Collision Energy (eV) = 32

Reagent

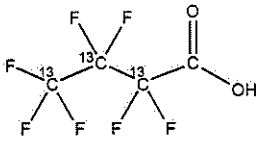
PFC_ST_04248

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04248

PRODUCT CODE.	M3PFBA	**LOT NUMBER.**	M3PFBA0125
COMPOUND.	Perfluoro-n-(2 3,4- $^{3}C_{3}$)butanoic acid		
STRUCTURE.		**CAS #.**	2483735-33-5



410-7664778

MOLECULAR FORMULA.	$^{13}C_{3}{}^{12}CHF_{7}O_{2}$	**MOLECULAR WEIGHT:**	217 02
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	01/10/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/10/2030		
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-($^{13}C_{3}$)propanoic acid and also contains ~1 1% of perfluoro-n-($^{13}C_{4}$)butanoic acid (MPFBA) due to the naturally occurring isotopic abundance of ^{13}C in the unlabelled carbon atom

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Certified By _____ **Date** 01/16/2025 (mm/dd/yyyy)
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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, x_n on which it depends is

$$u_c(y(x \quad x \quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

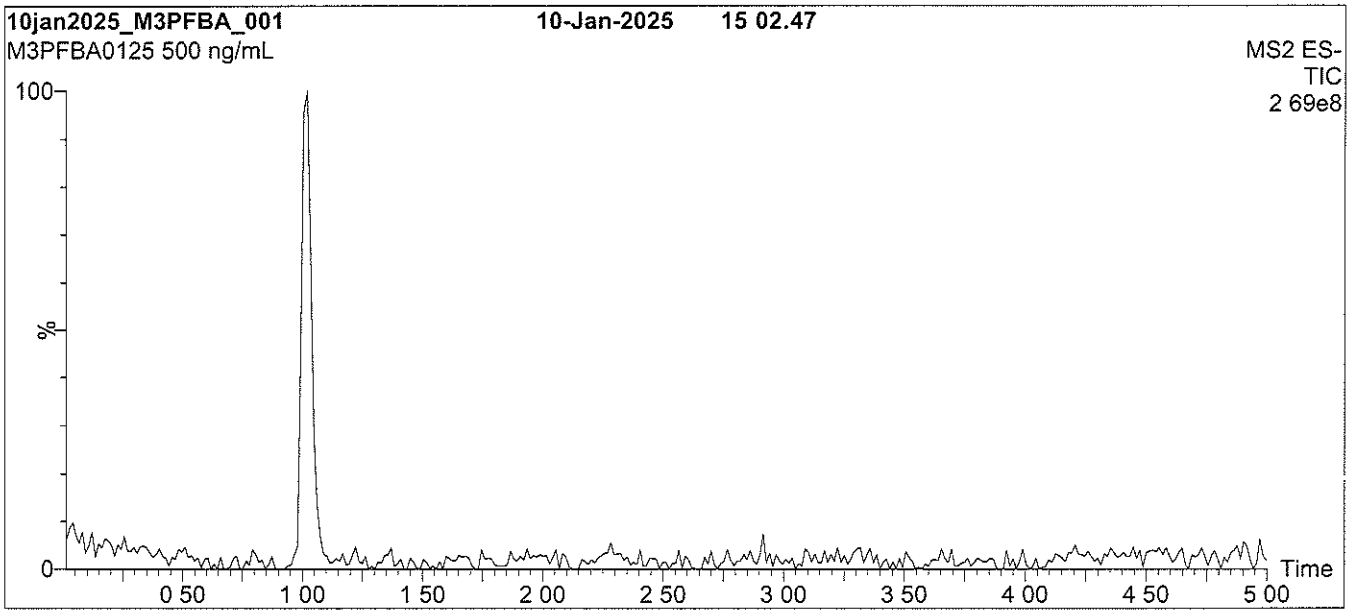
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

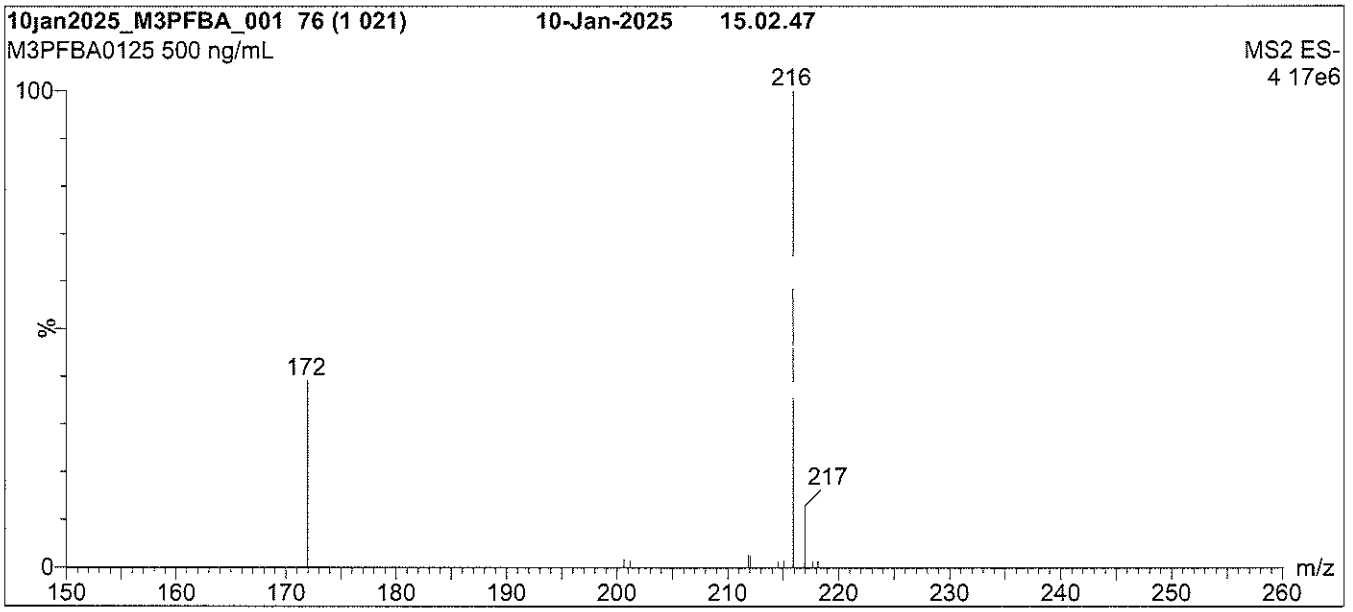
CALA Testing Accreditation No. A1226

ANAB Accredited ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M3PFBA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time 12 min

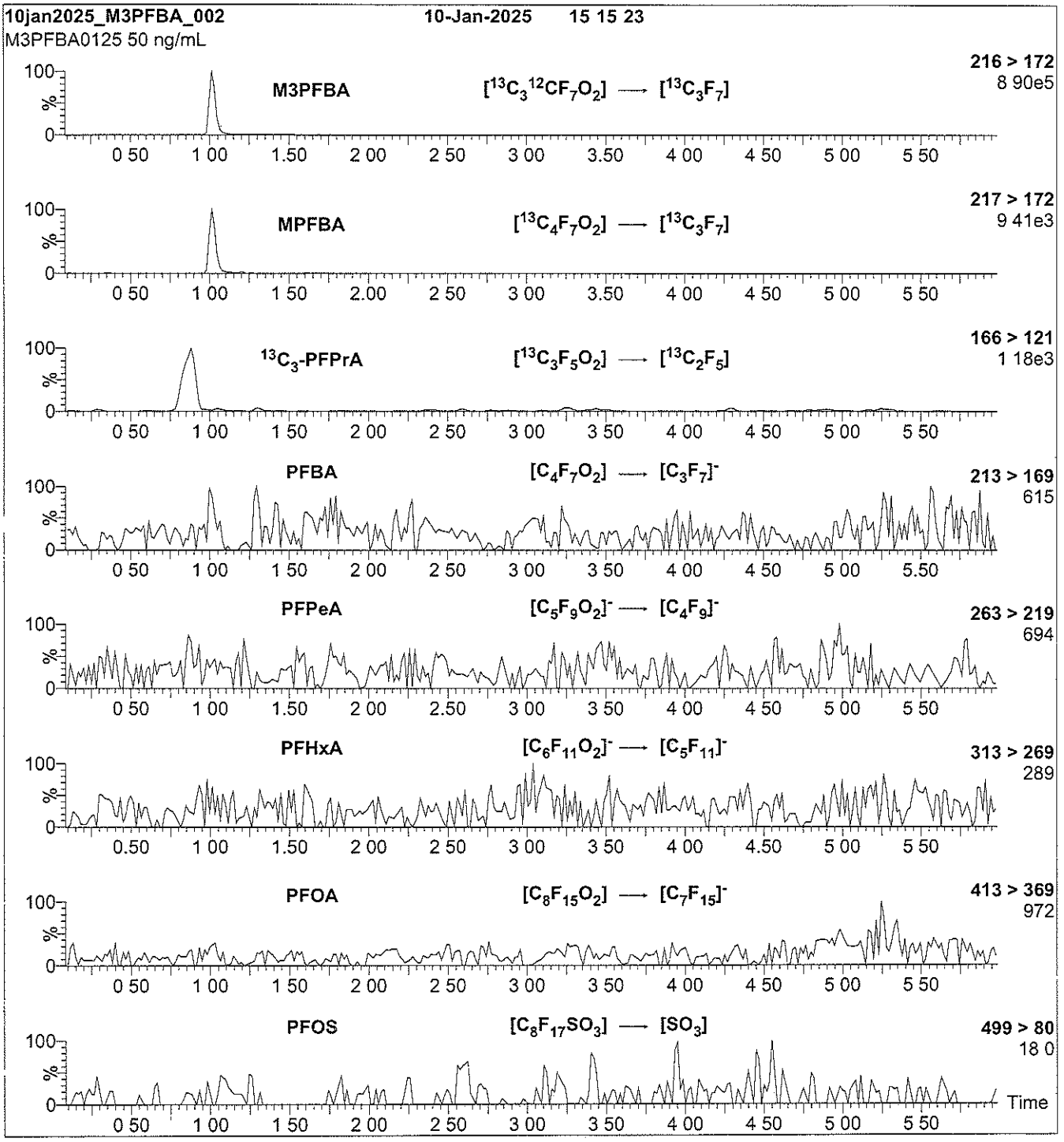
Flow: 300 µL/min

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

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) = 6.29e-3
Collision Energy (eV) = 8

Reagent

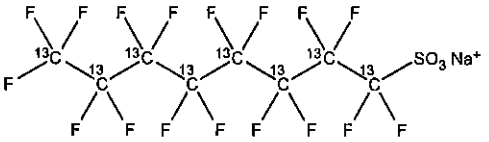
PFC_ST_04250

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04249, 04250

PRODUCT CODE.	M8PFOS	**LOT NUMBER.**	M8PFOS1224
COMPOUND.	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		
STRUCTURE.		**CAS #.**	2522762 16-7



410-7668573

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
LAST TESTED. (mm/dd/yyyy)	01/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/02/2030		
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 ~1 1% of sodium perfluoro-1-(1 2 3,4 $^{13}C_4$)octanesulfonate (MPFOS) and <0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA)

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date.** 01/06/2025 (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 SFC/UV/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 and/or SFC/UV/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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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

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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:

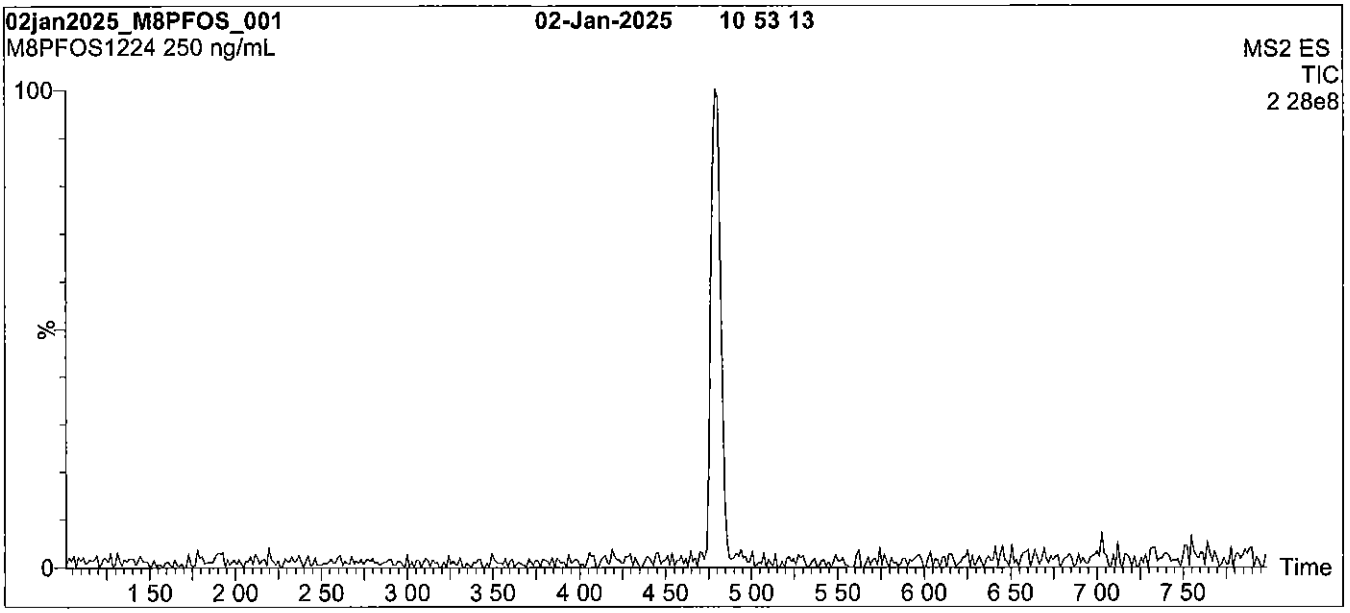
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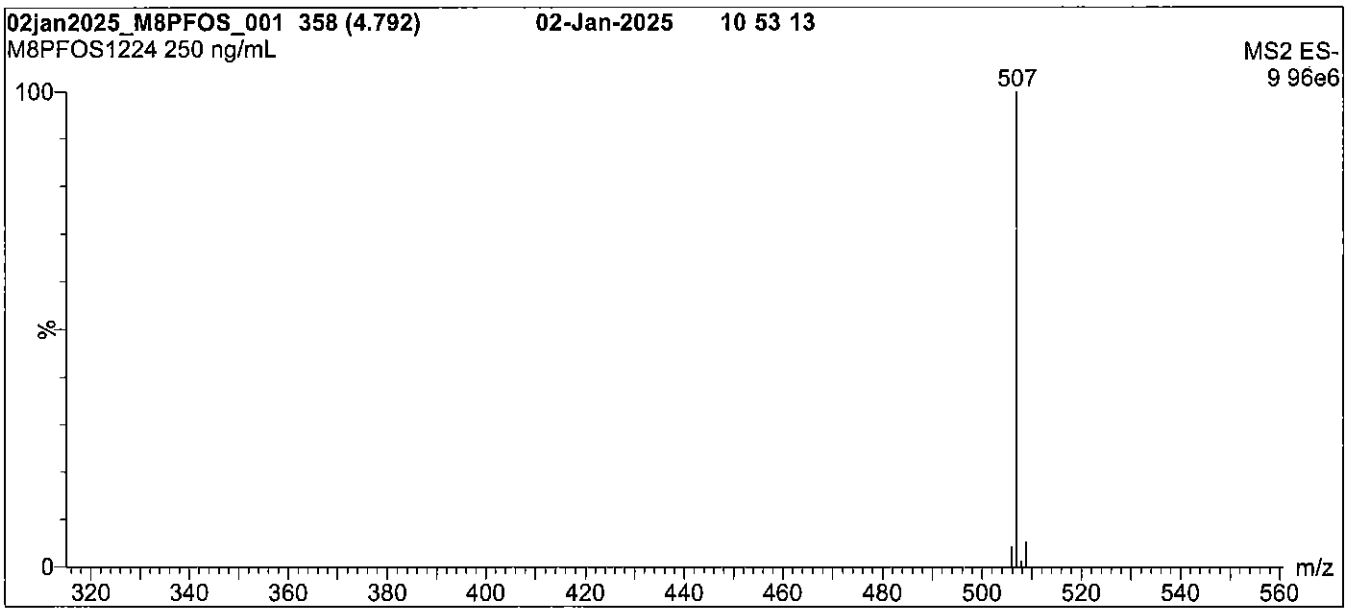
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M8PFOS, 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 8
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

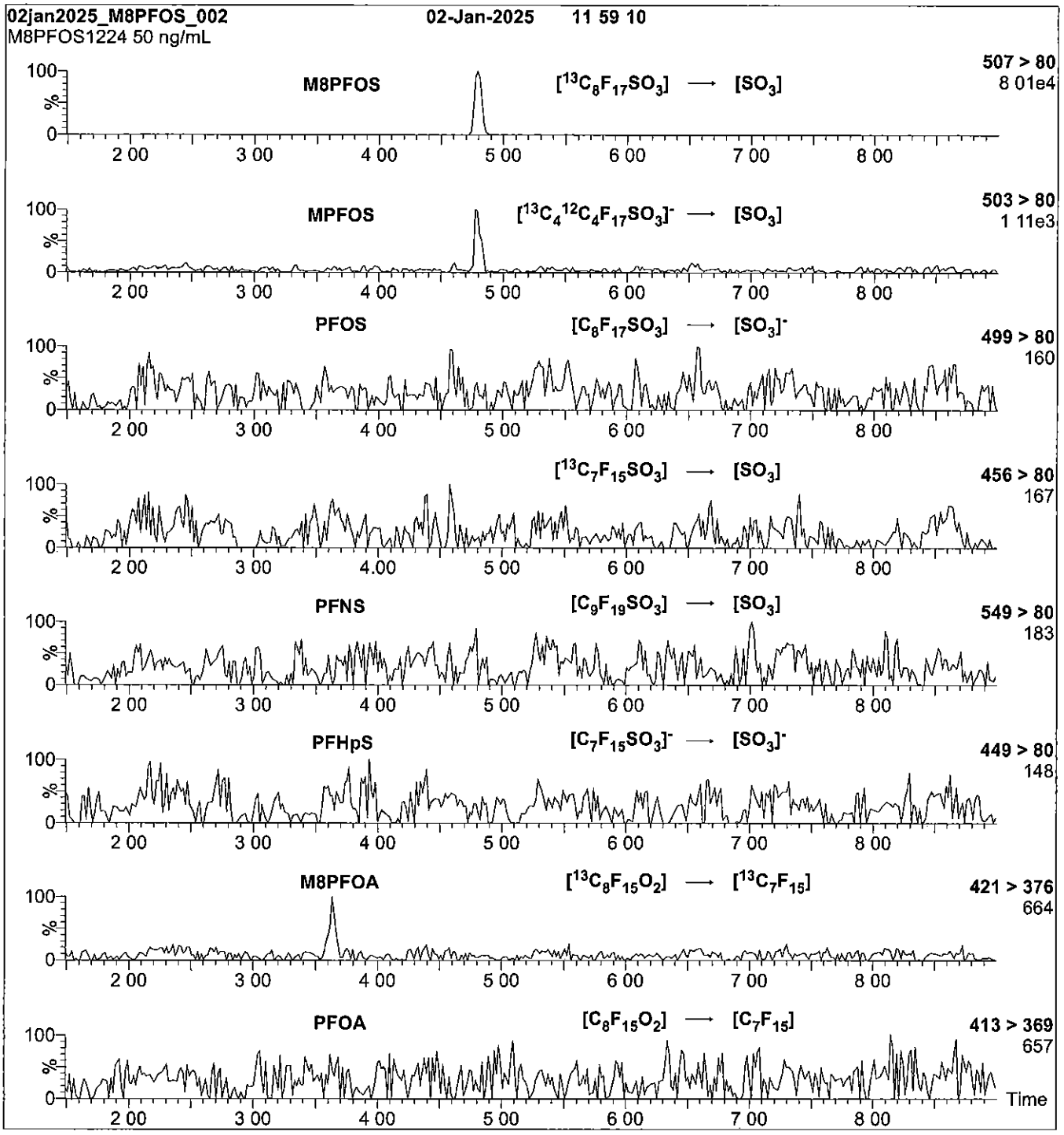
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 5 87e-3
Collision Energy (eV) = 64

Reagent

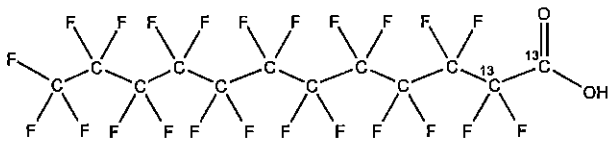
PFC_ST_04255

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04255 , 04256

PRODUCT CODE.	MPFDoA	**LOT NUMBER.**	MPFDoA1124
COMPOUND.	Perfluoro-n-(1 2-$^{13}C_2$)dodecanoic acid		
STRUCTURE.		**CAS #.**	960315-52-0



410-7668677

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
LAST TESTED. (mm/dd/yyyy)	11/21/2024		
EXPIRY DATE. (mm/dd/yyyy)	11/21/2029		
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** 11/26/2024 (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.

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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 SFC/UV/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 and/or SFC/UV/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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$$u\ (y(x_1\ x_2\quad x\ )) = \sqrt{\sum_{=1}^{i} u(y,x\ )^2}$$

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%) has been assigned to this product.

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:

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QUALITY MANAGEMENT:

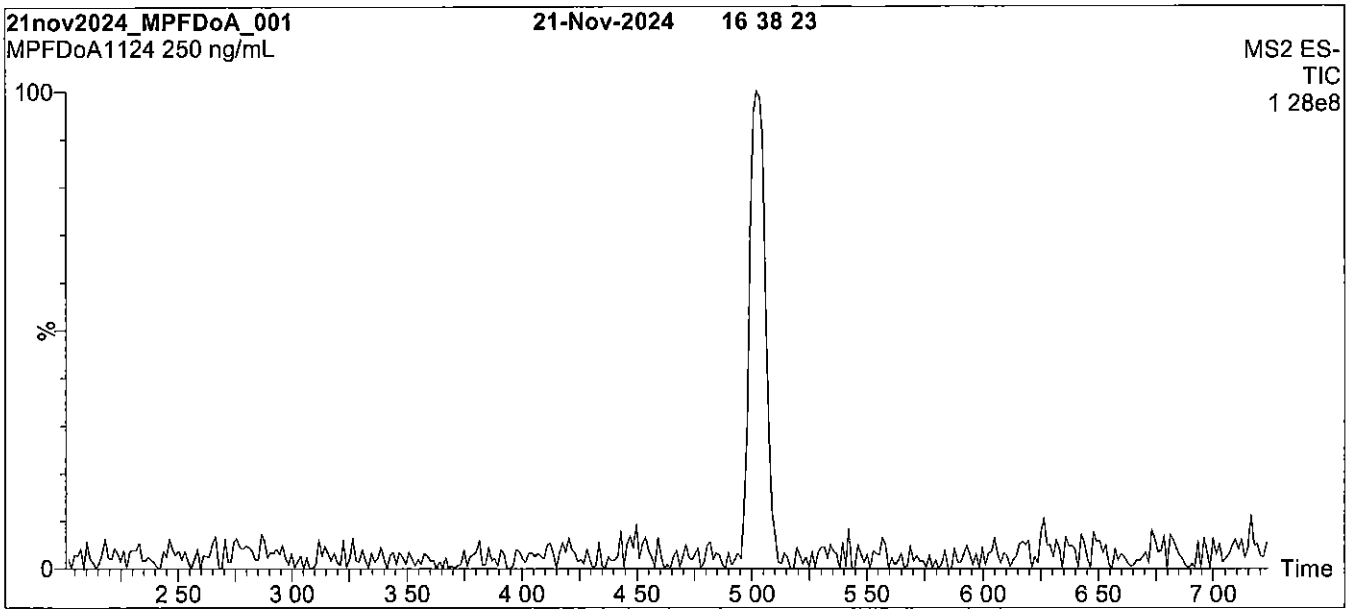
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

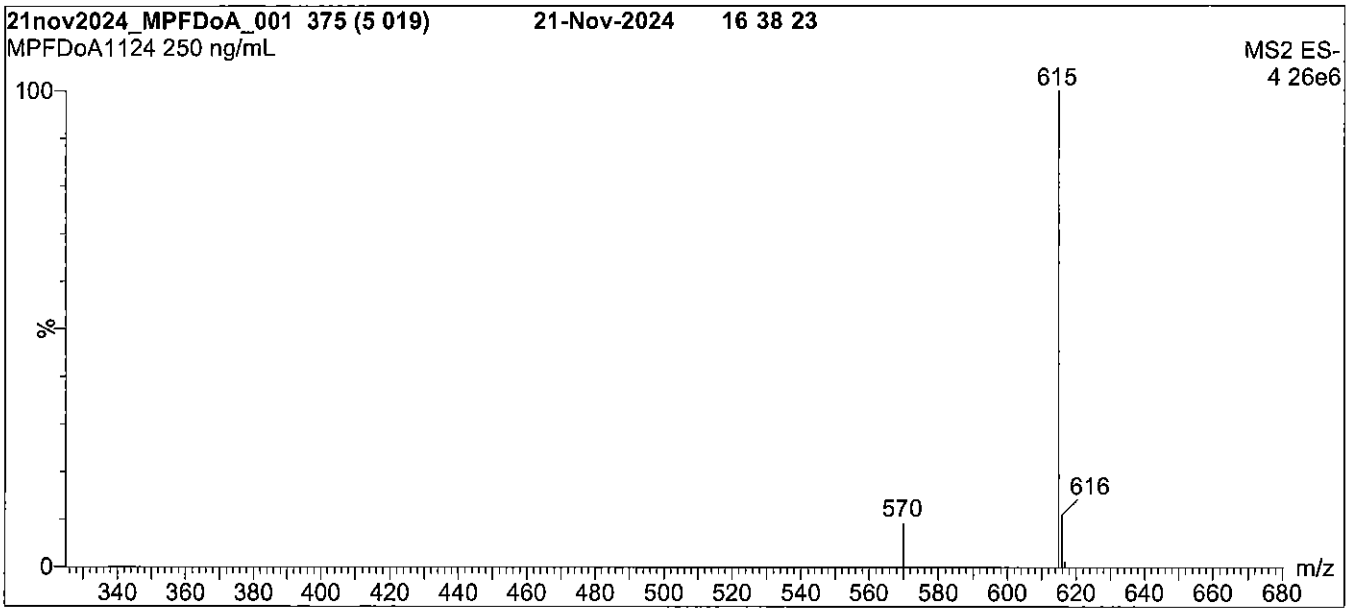
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

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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.

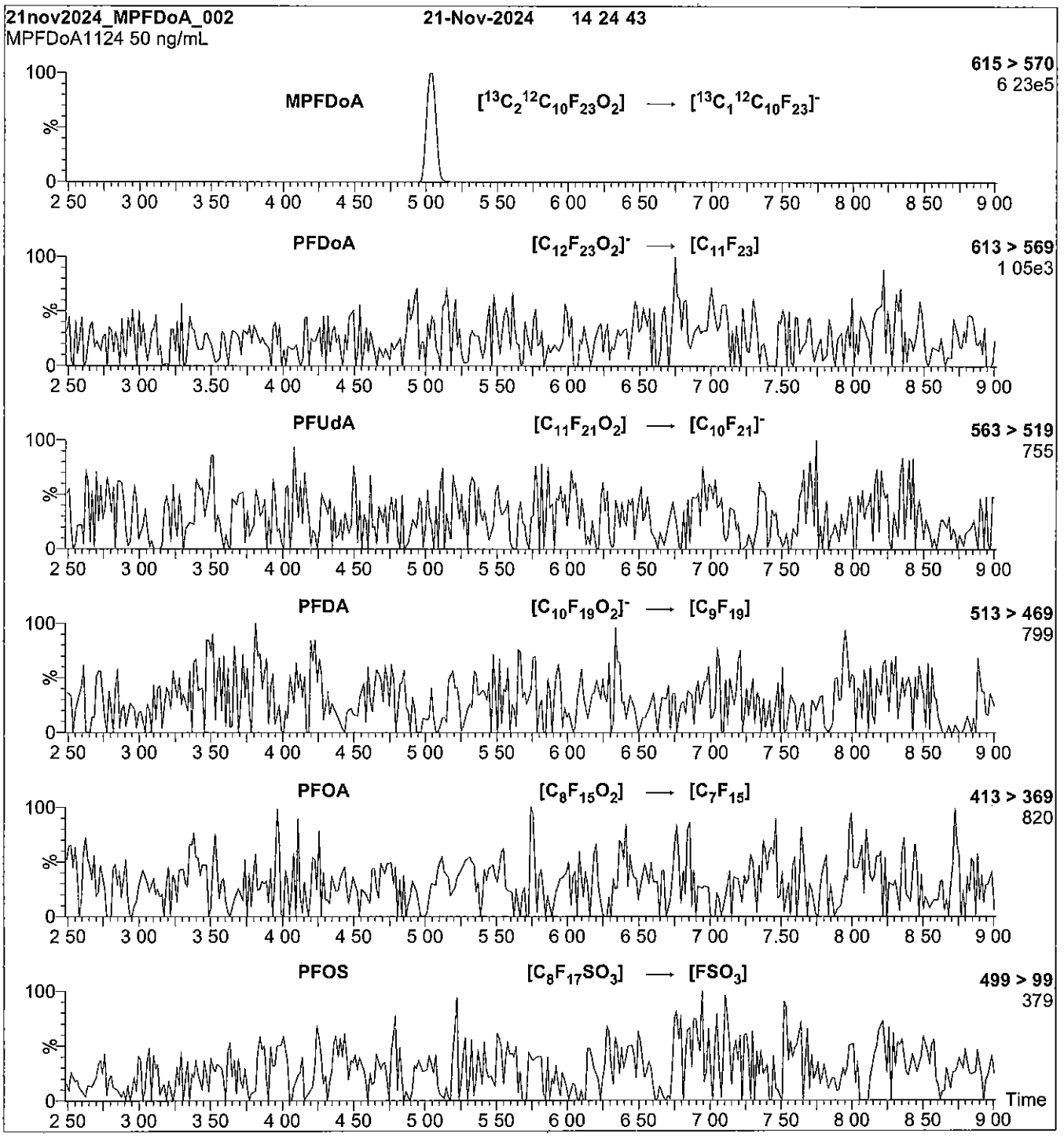
Column	Acquity UPLC BEH Shield RP$_{18}$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (325 - 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. **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) = 6.40e-3
Collision Energy (eV) = 12

Reagent

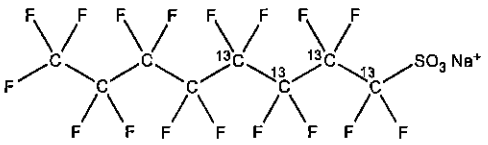
PFC_ST_04261

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-042601, 042602

PRODUCT CODE.	MPFOS	**LOT NUMBER.**	MPFOS0325
COMPOUND.	Sodium perfluoro-1-(1 2,3 4-$^{13}C_4$)octanesulfonate		
STRUCTURE.		**CAS #.**	960315-53-1





410-7668941

MOLECULAR FORMULA.	$^{13}C_4{}^{12}C_4F_7SO_3Na$	**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
LAST TESTED. (mm/dd/yyyy)	03/04/2025		
EXPIRY DATE. (mm/dd/yyyy)	03/04/2030		
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-($^{13}C_3$)heptanesulfonate and ~0 2% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA)

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Certified By _____ **Date** 04/02/2025 (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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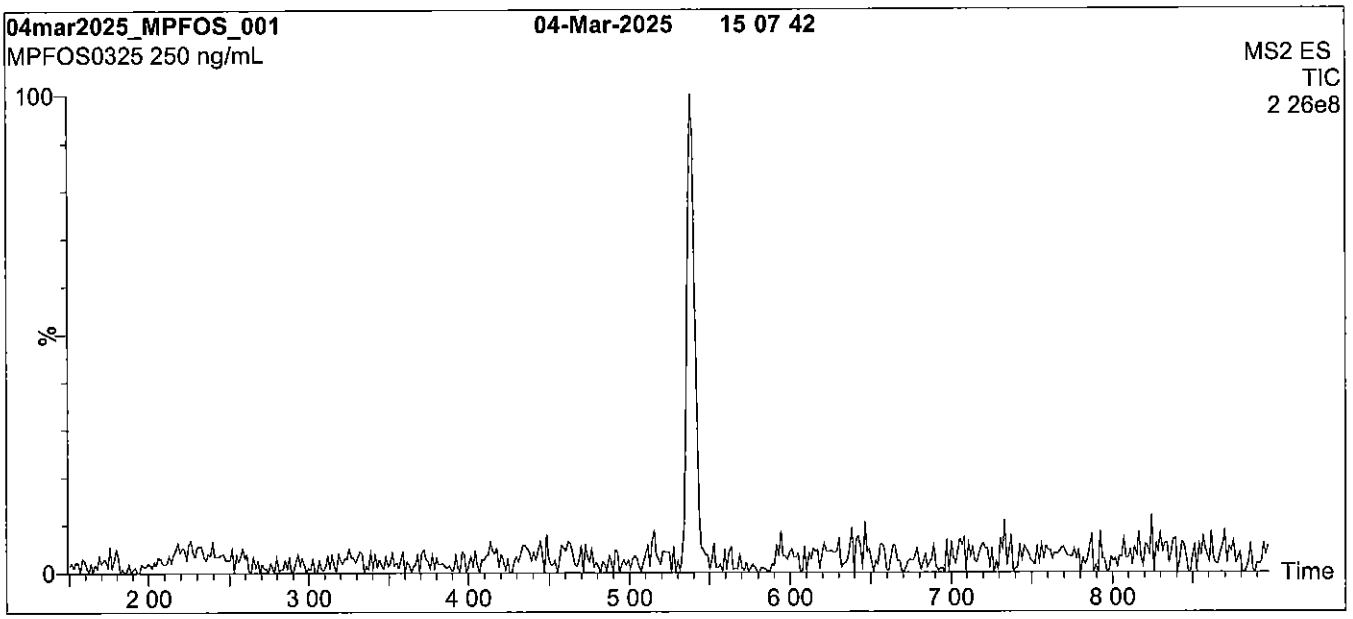
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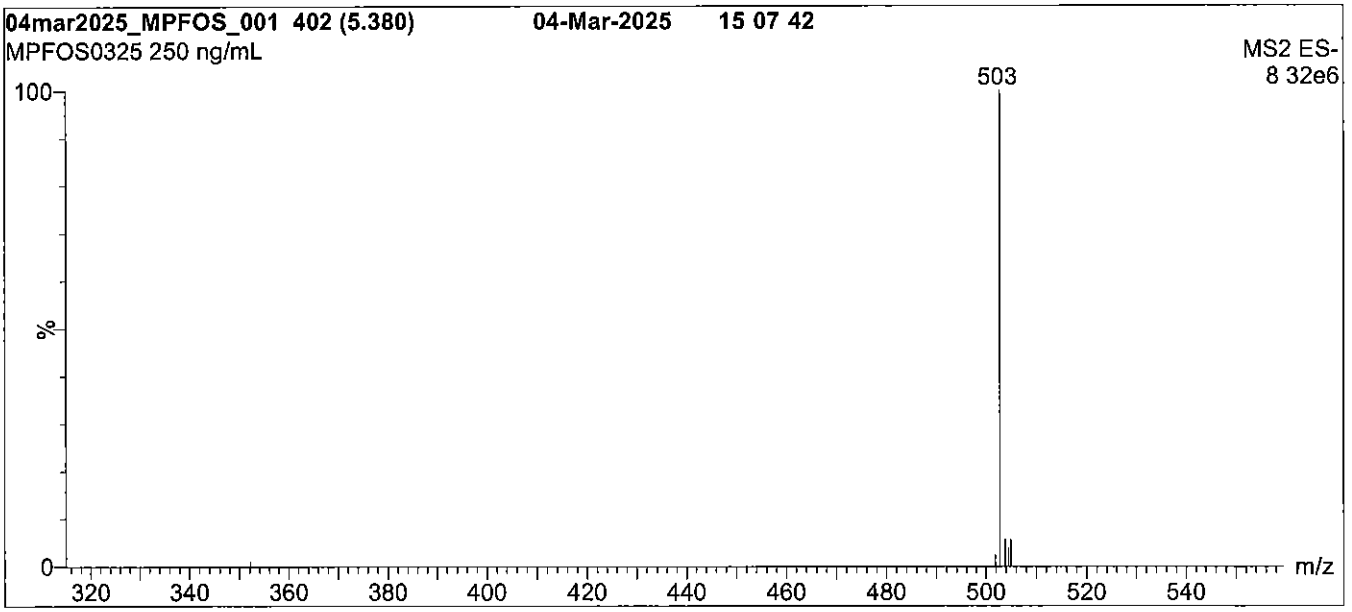
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17011 REFERENCE MATERIAL PRODUCER

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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. 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

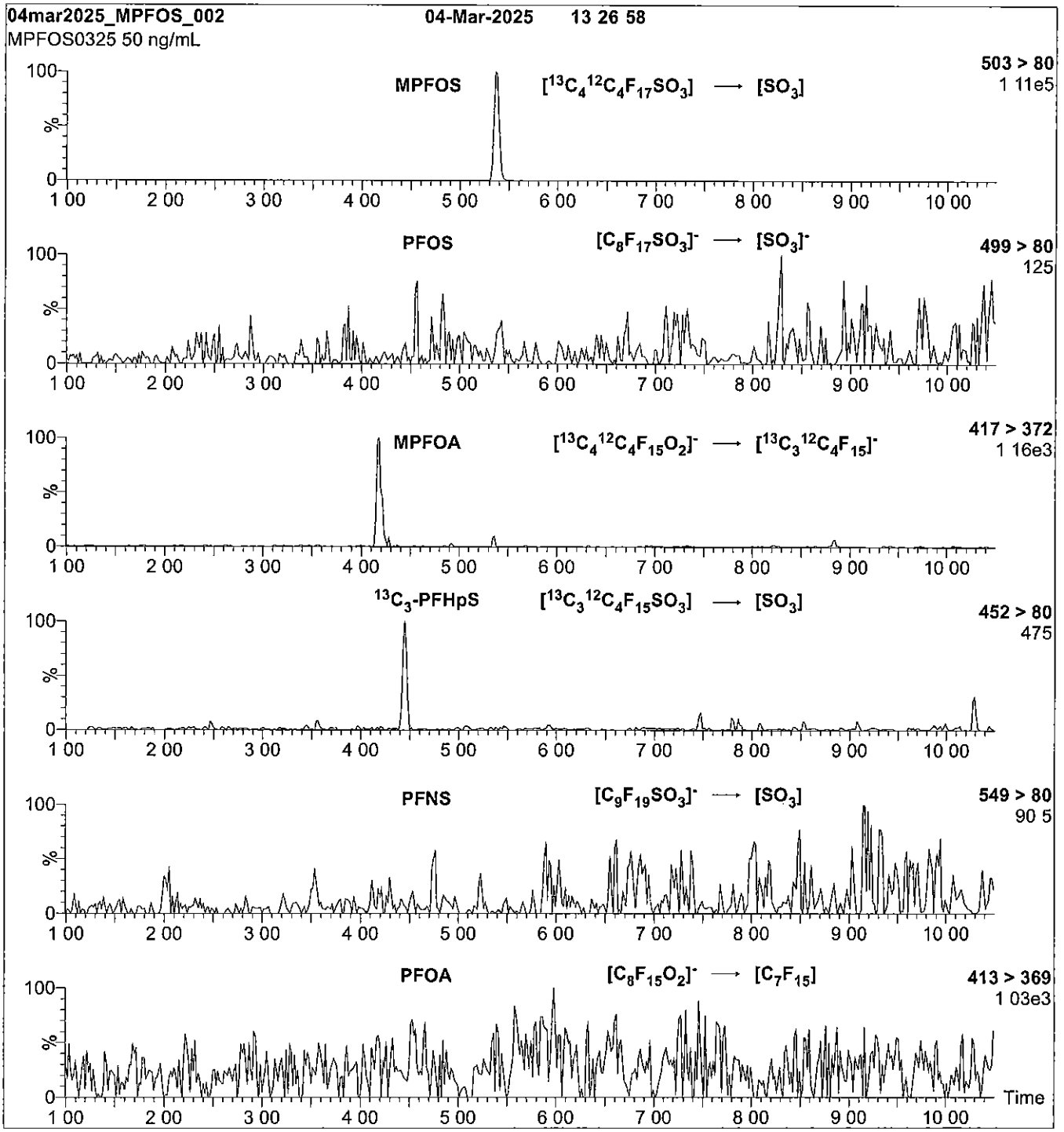
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 - 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. **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) = 5.68e-3
Collision Energy (eV) = 42

Reagent

PFC_ST_04283

Reagent

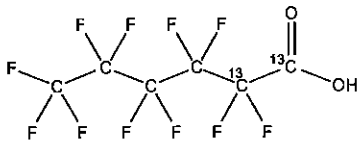
PFC_ST_04290

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04290, 04291

PRODUCT CODE:	MPFHxA	**LOT NUMBER:**	MPFHxA1124
COMPOUND:	Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		
STRUCTURE:		**CAS #:**	960315-47-3



410-7684672

410-7684673

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
LAST TESTED: (mm/dd/yyyy)	11/27/2024		
EXPIRY DATE: (mm/dd/yyyy)	11/27/2029		
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:** 11/28/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

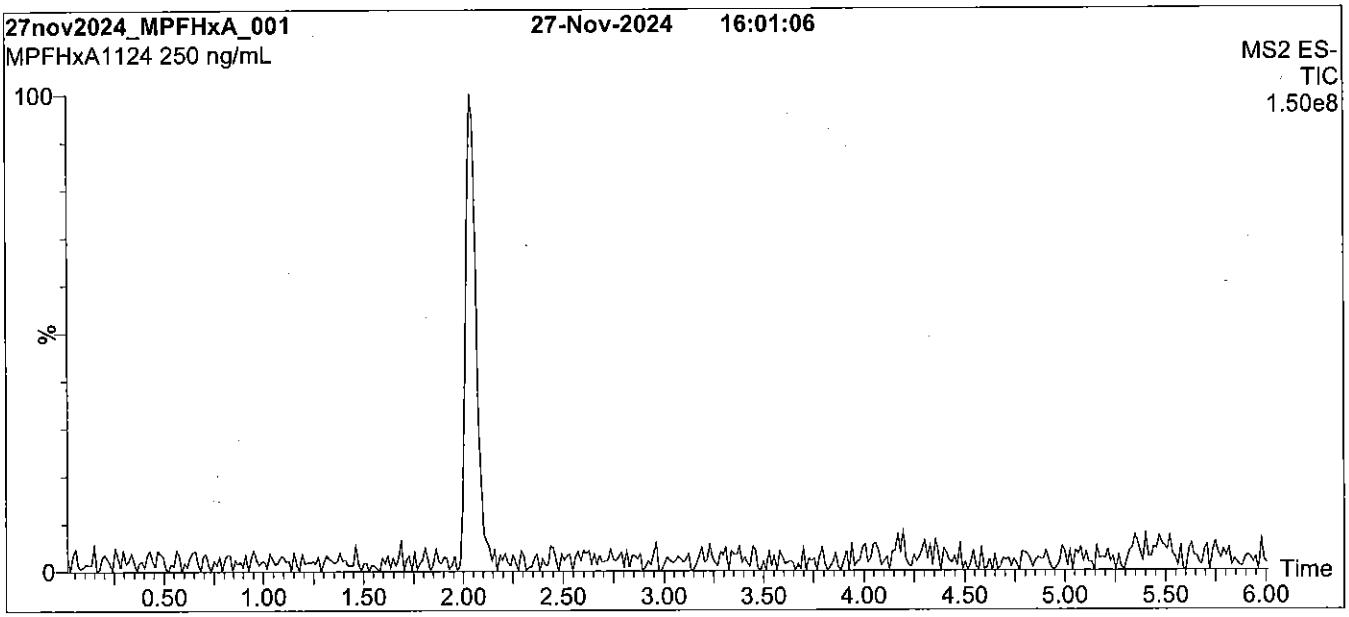
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

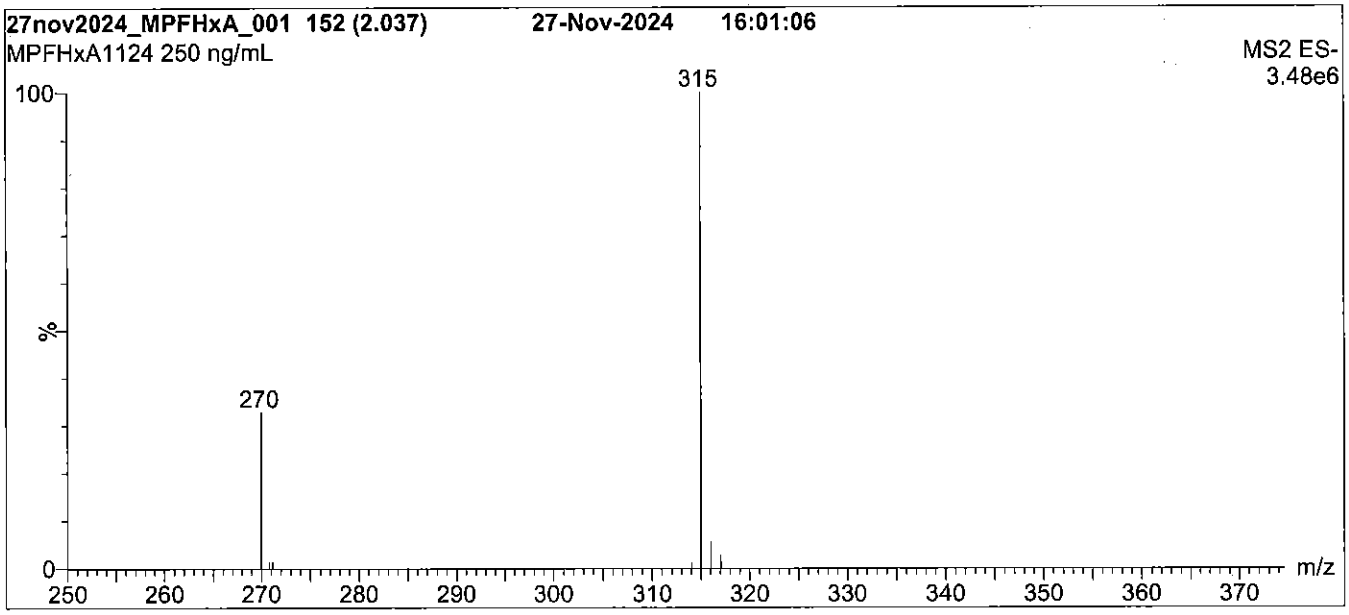
CALA Testing Accreditation No. A1226

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: **MPFHxA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

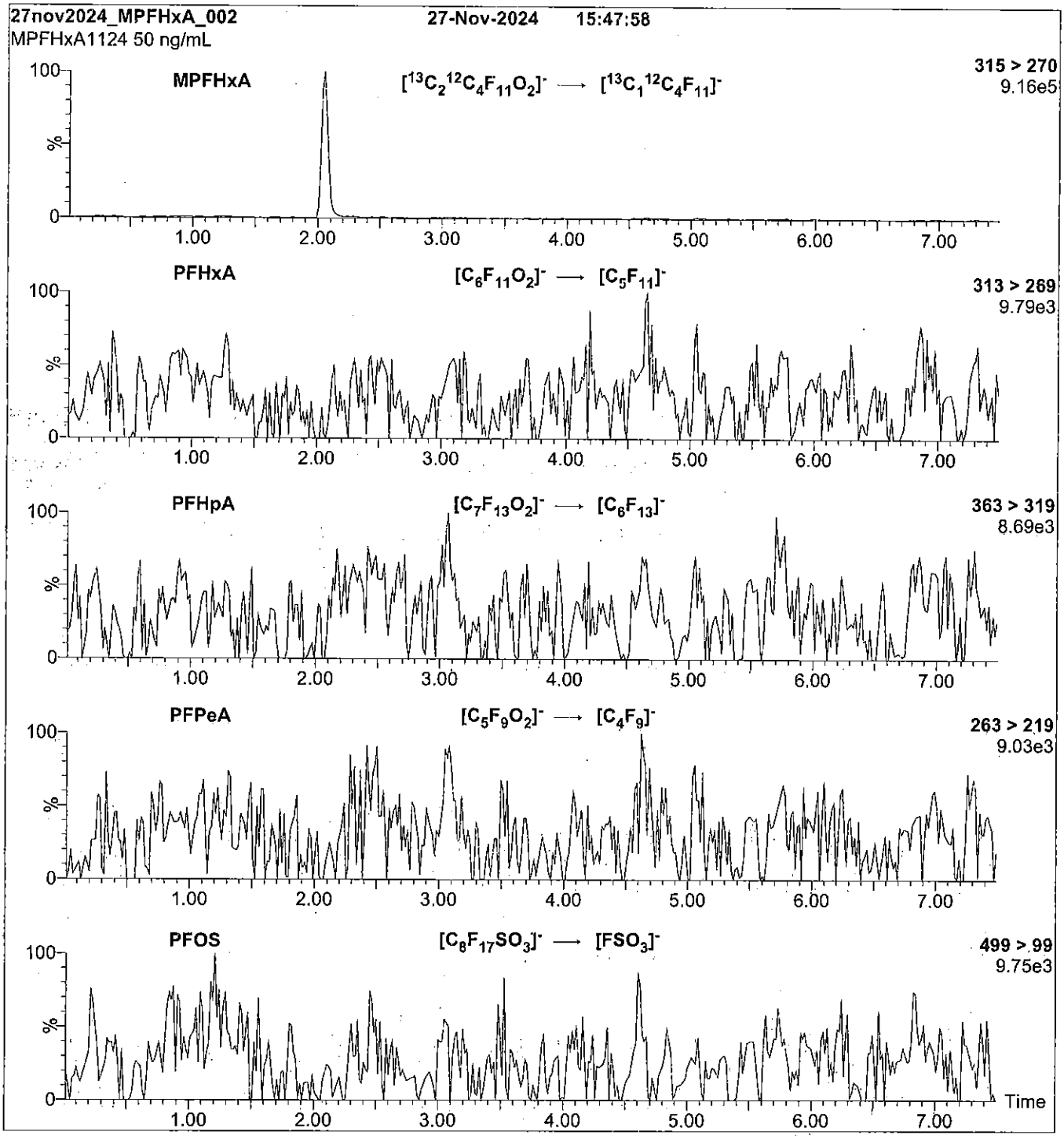
Flow: 300 µL/min

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: **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) = 4.24e-3
Collision Energy (eV) = 8

Reagent

PFC_ST_04296

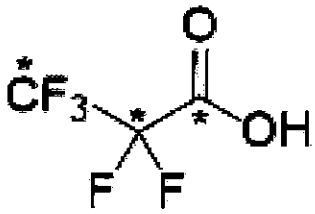
Cambridge Isotope Laboratories, Inc.

50 Frontage Road
Andover, MA 01810 USA

PFC-ST-04294, 04295, 04296, 04297, 04298

Certificate of Analysis

Perfluoropropanoic acid (PFPrA) ($^{13}C_3$,99%) 50 µg/mL in MeOH w/4 molar equivalents NaOH



Catalog #:	CLM-11324-A-S
Batch #:	**B003784**
Chemical Formula:	*C3HF5O2
Molecular Weight:	167.01
Labeled CAS #:	NA
Unlabeled CAS #:	422-64-0
Manufacture Date:	4/9/2025
Retest Date:	4/8/2030

Storage: Store at room temperature away from light and moisture.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

Quality Control Tests and Results

Test	Specification	Result
Concentration Based on Gravimetry	50 ± 5 µg/mL	50.0 ± 0.4 µg/mL, (k=2)

Certification

- Cambridge Isotope Laboratories, Inc. certifies that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1. The expiration date is valid only for unopened vials or ampoules that have been stored as recommended. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.
- Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.
- For compounds that are enriched at 2 or more sites within the molecule, the value given for isotopic enrichment will be different from the percent species abundance of the fully enriched molecule. To learn more about isotopic enrichment and species abundance, please visit https://isotope.com/en-us/enrichment.
- Concentration is verified through multiple analysis and is calculated as the average of the multiple analysis compared to an independently prepared calibration solution. The calculation and reporting of uncertainty conforms to the practices outlined in the Eurachem/CITAC Guide. "Quantifying Uncertainty in Analytical Measurement", Second Edition.

Marina Klionsky
Quality Review

Date: 4/23/2025

410-7685052 410-7684956 410-7685101 410-7685102 410-7685104

1.800.322.1174 (North America) 1.978.749.8000 (International) isotope.com

Container pack list

Cambridge Isotope Laboratories Inc.
50 Frontage Road
Andover, MA 01810
USA

Order number: SO-00027318
Date shipped: 4/23/2025
Shipment ID: SHIP-00037571
Container ID: CTR-00040151
Customer #: C0176050

Ship to Lancaster Labs
2425 New Holland Pike
Lancaster, PA 17601
USA

Line number	Item number	Product name	Quantity	UOM
1.0000000000	CLM-11324-A-1.2	Perfluoropropanoic acid (PFPrA) ($^{13}C_3$,99%) 50 µg/mL in MeOH w/4 molar equivalents NaOH	5.000	1.2 mL

Reagent

PFC_ST_04334

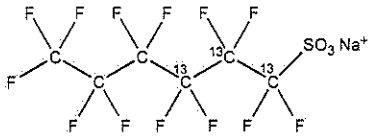
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M3PFHxS **LOT NUMBER.** M3PFHxS0425

COMPOUND. Sodium perfluoro-1-(1 2 3 $^{3}C_{3}$)hexanesulfonate

STRUCTURE. **CAS #.** 2708218-86-2



7759072
ID: PFC_ST 04334
Exp:04/23/30 Prpd:WTU3 Opn:
M3PFHxS Stock

7759090
ID: PFC_ST_04335
Exp:04/23/30 Prpd:WTU3 Opn:
M3PFHxS Stock

MOLECULAR FORMULA.	$^{13}C_{3}{}^{12}C_{3}F_{13}SO_{3}Na$	**MOLECULAR WEIGHT:**	425 07
CONCENTRATION.	50 0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47.4 ± 2.4 µg/mL (M3PFHxS acid)		
	47.3 ± 2.4 µg/mL (M3PFHxS anion)		
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy)	04/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/23/2030		
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)

410-7759072

410-7759072

ADDITIONAL INFORMATION.

- See page 2 for further details

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 04/30/2025 (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 'n a well-function ng 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 SFC/UV/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 'nternal standard they are compared by GC/MS LC/MS and/or SFC/UV/MS The relative response factors of the analyte of interest n each solution are required to be <5% RSD New solution lots of existing products are compared to older lots n the same manner wh ch further confirms the homogeneity of the crystall'ne 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 uncerta nty the dilution or njection of a subsample of this product should be performed using calibrated measuring equ'pment.

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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\ \ \ .x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

where x is expressed as a relative standard uncertainty of the ndividual 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%) has been assigned to this product.

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 unti the specified expiry date in the unopened ampoule Monitoring for any degradation or change n 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:

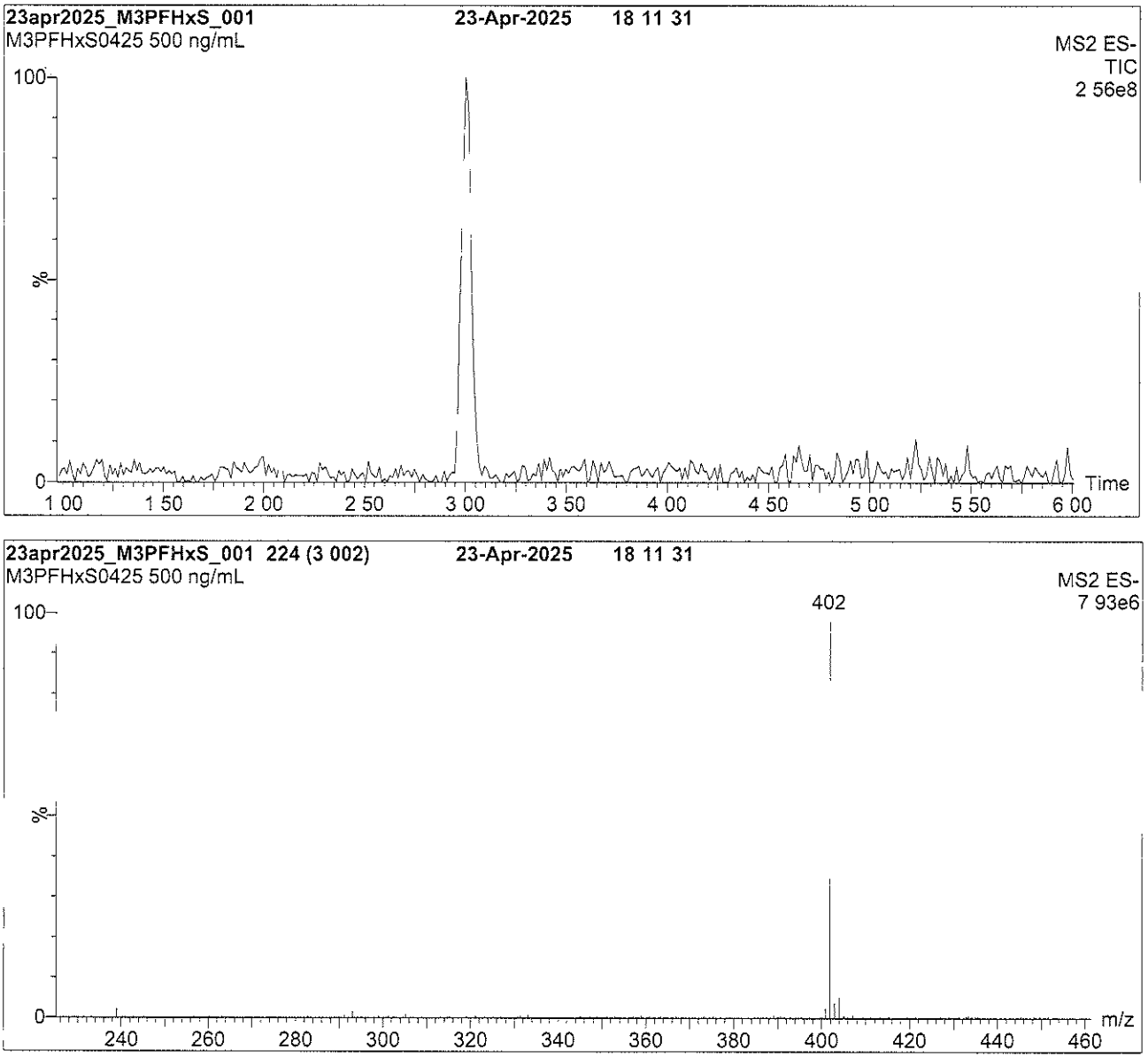
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

CALA Testing Accreditation No A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17034 REFERENCE MATERIAL PRODUCER

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

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 OAc buffer)
Ramp to 90% organic over 9 min and hold for 1 min
before return ng to nitial conditions in 0 5 min
Time 12 min

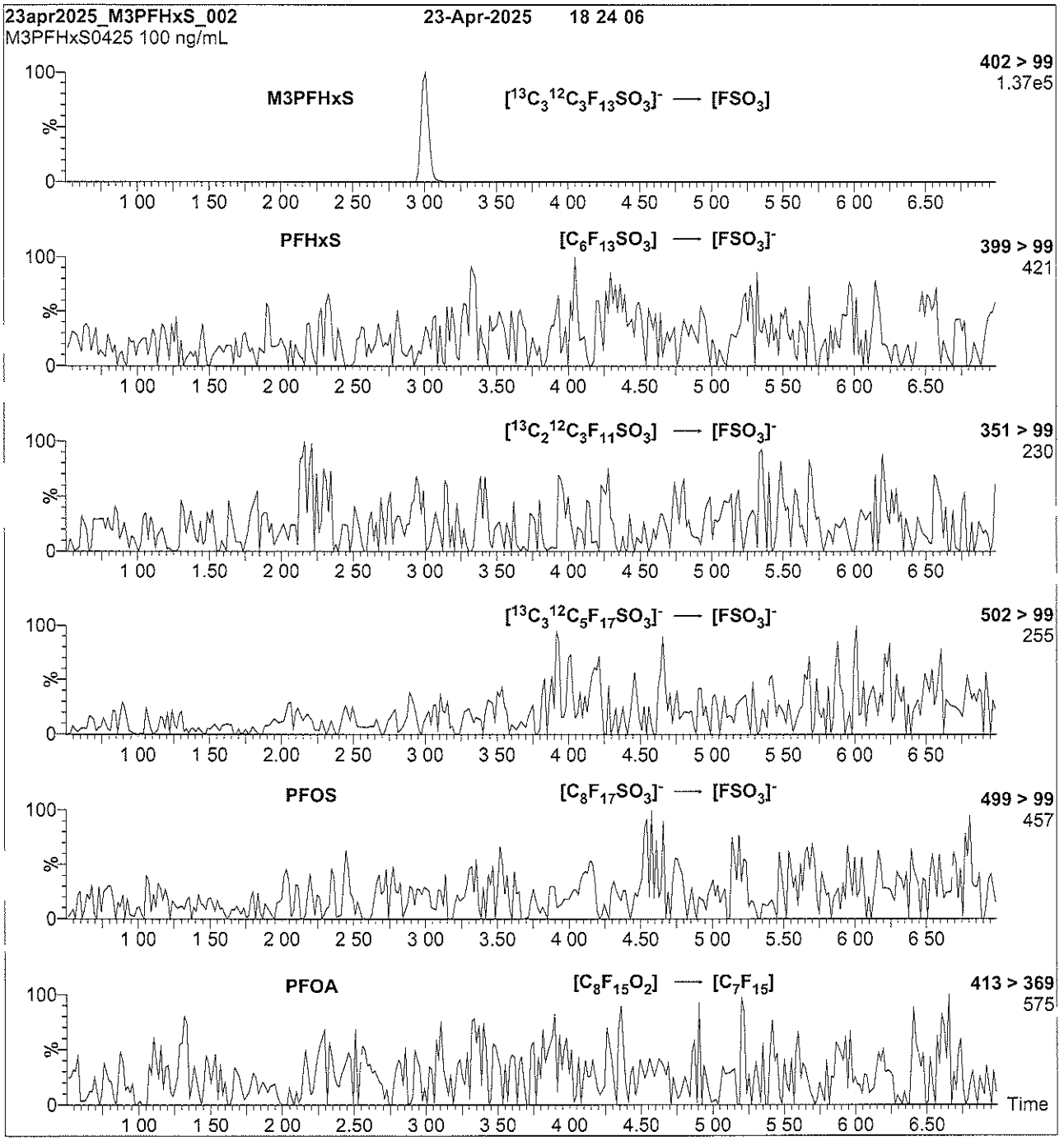
Flow: 300 µL/min

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. **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) = 4 31e-3
Collision Energy (eV) = 32

Reagent

PFC_ST_04358

WELLINGTON LABORATORIES

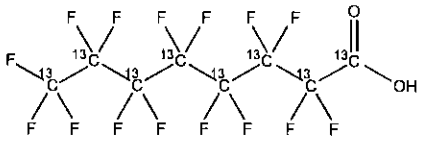
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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

LOT NUMBER: M8PFOA0724

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%
ISOTOPIC PURITY: ≥99% ^{13}C

LAST TESTED: (mm/dd/yyyy) 07/26/2024
EXPIRY DATE: (mm/dd/yyyy) 07/26/2029
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

7761029
ID: PFC_ST_04356
Exp:07/26/29 Prpd:WTU3 Opn:
M8PFOA Stock

7761055
ID: PFC_ST_04357
Exp:07/26/29 Prpd:WTU3 Opn:
M8PFOA Stock

7761057
ID: PFC_ST_04358
Exp:07/26/29 Prpd:WTU3 Opn:
M8PFOA Stock

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

410-7761029 410-7761055 410-7761057

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~1.1% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/01/2024 (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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HOMOGENEITY:

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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:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

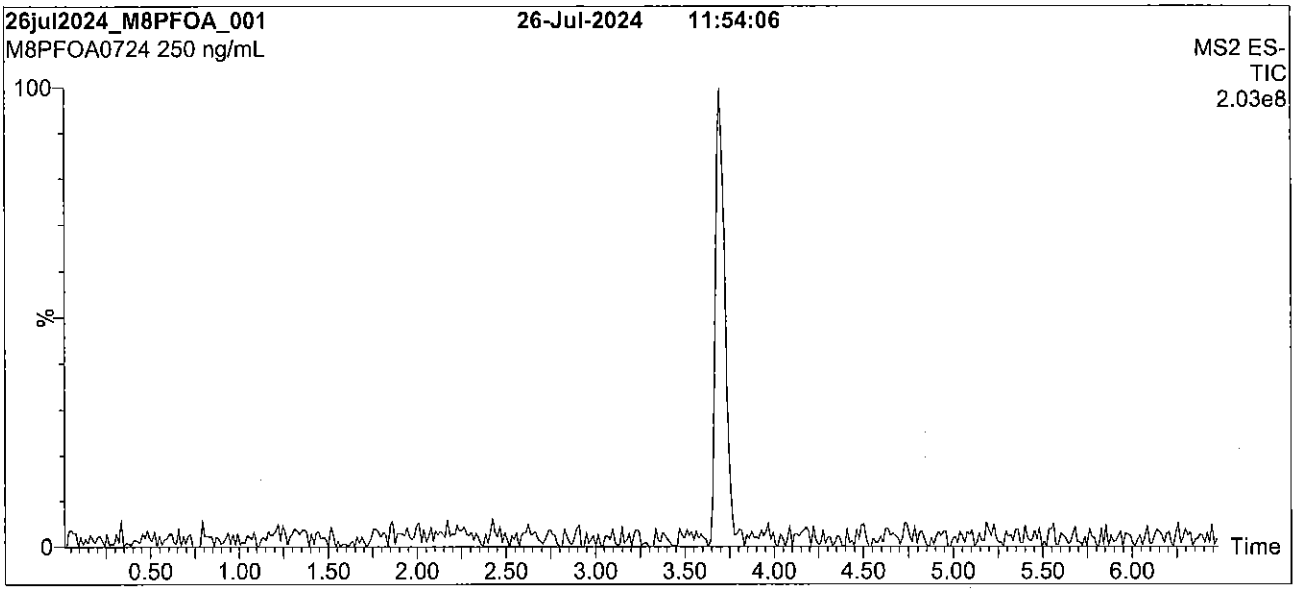
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

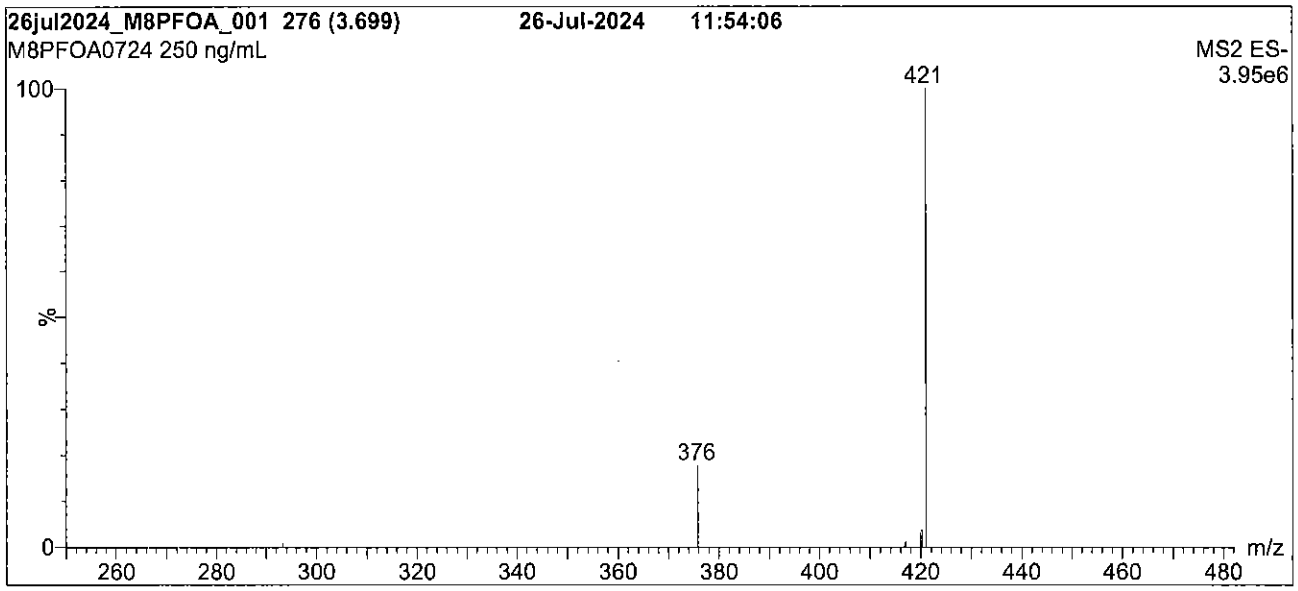
CALA Testing Accreditation No. A1226

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: **M8PFOA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

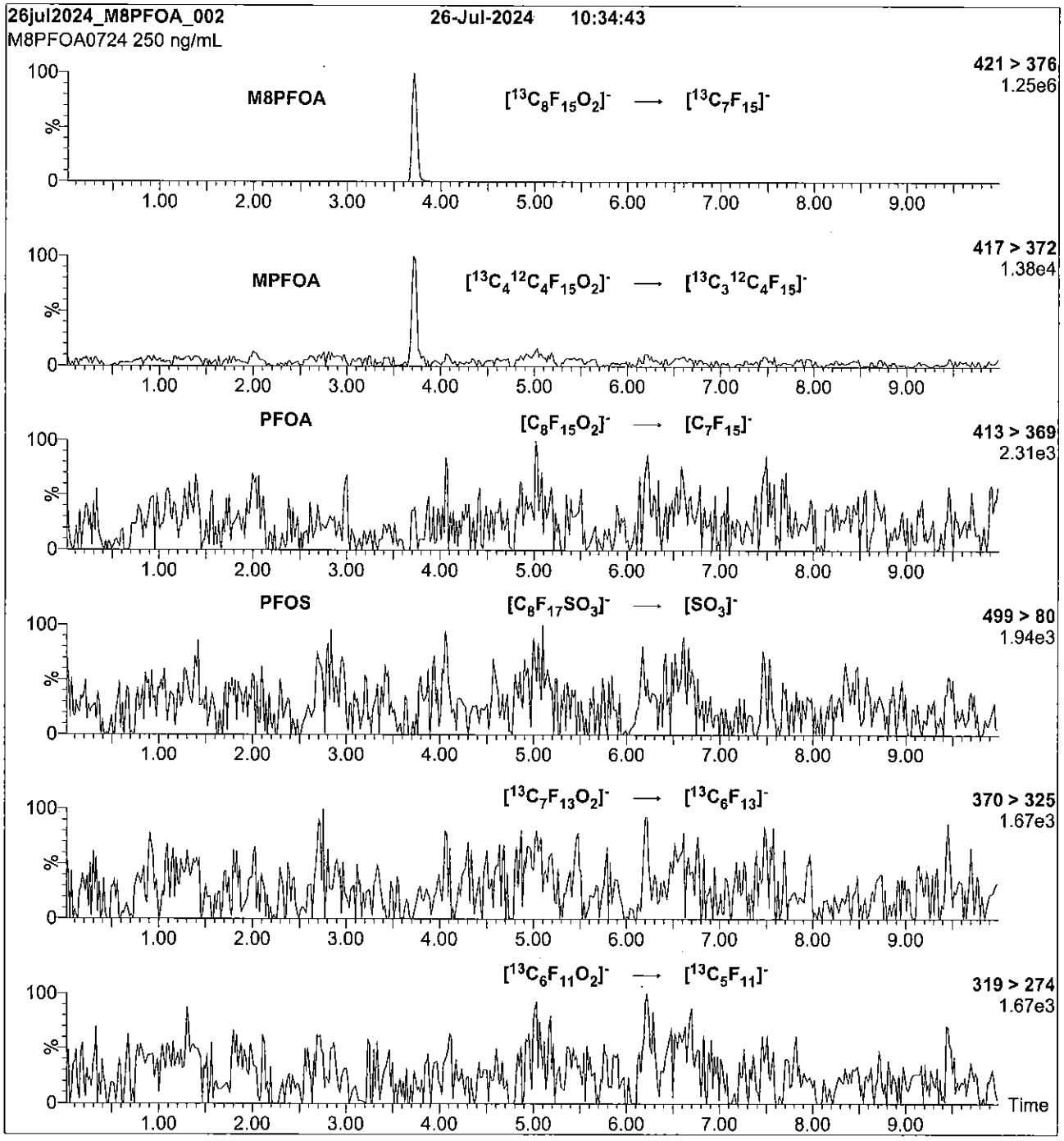
Flow: 300 µL/min

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: **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) = 4.39e-3
Collision Energy (eV) = 8

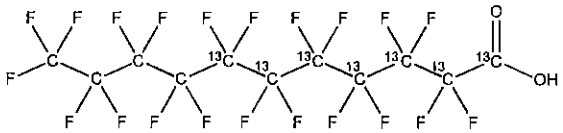
Reagent

PFC_ST_04366

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M7PFUdA	**LOT NUMBER:**	M7PFUdA1124
COMPOUND:	Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid		
STRUCTURE:		**CAS #:**	Not available



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
LAST TESTED: (mm/dd/yyyy)	12/03/2024		
EXPIRY DATE: (mm/dd/yyyy)	12/03/2029		
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)

7761470
ID: PFC_ST_04367
Exp:12/03/29 Prpd:WTU3 Opn:
M7PFUdA Stock
410-7761470

7761469
ID: PFC_ST_04366
Exp:12/03/29 Prpd:WTU3 Opn:
M7PFUdA Stock
410-7761469

7761467
ID: PFC_ST_04365
Exp:12/03/29 Prpd:WTU3 Opn:
M7PFUdA Stock
410-7761467

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:** 12/06/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

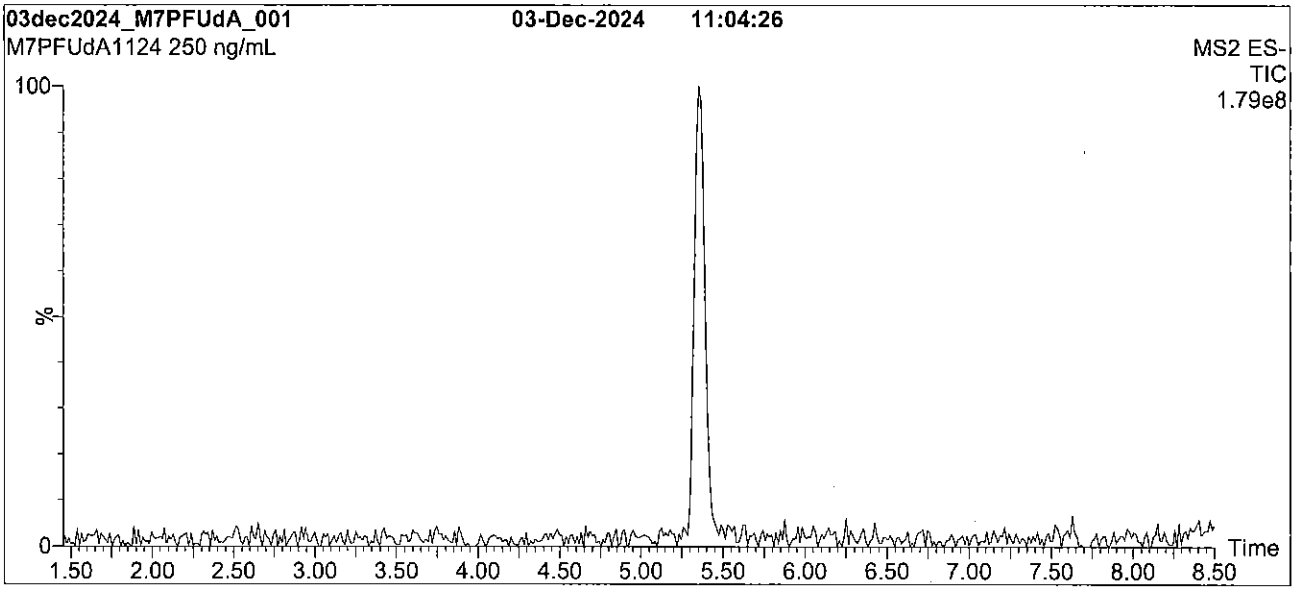
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

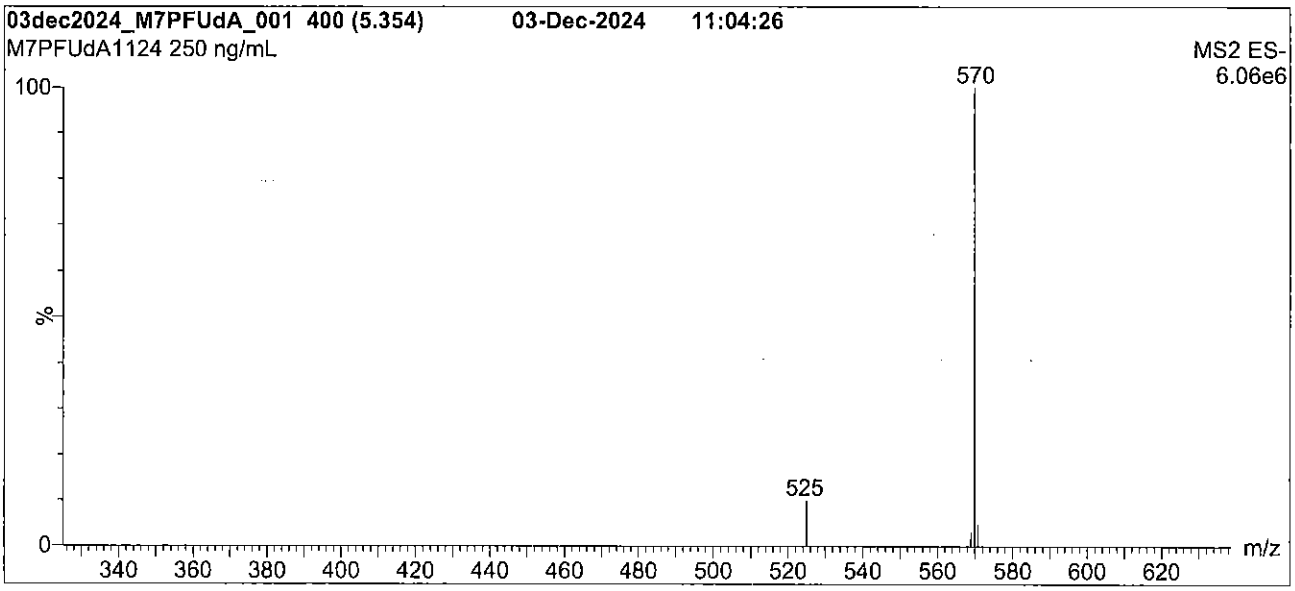
CALA Testing Accreditation No. A1226

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: **M7PFUdA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

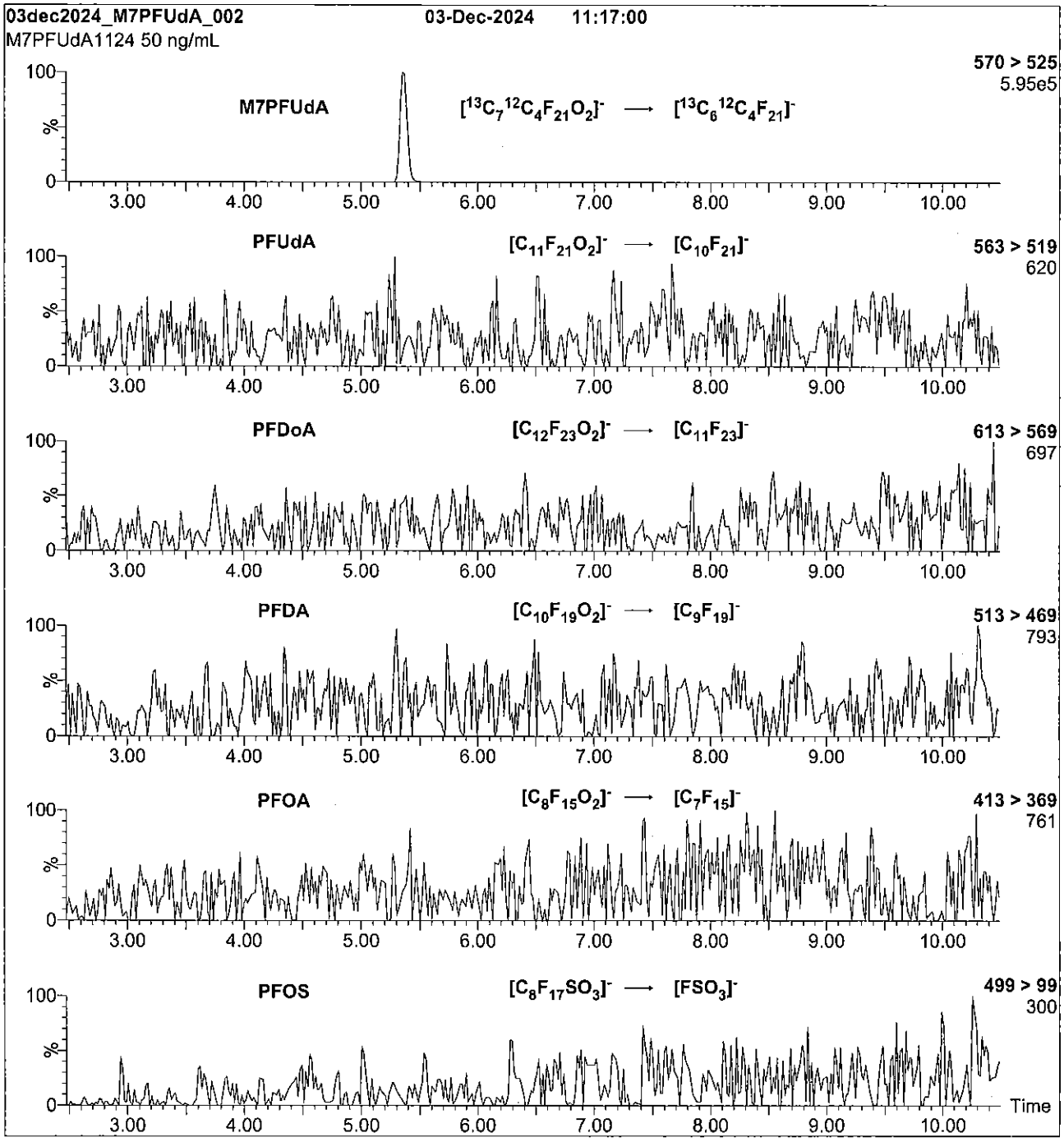
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (325 - 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: **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) = 4.34e-3
Collision Energy (eV) = 12

Reagent

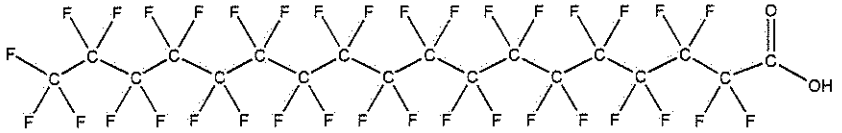
PFC_ST_04388

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST_03386

PRODUCT CODE.	PFODA	**LOT NUMBER.**	PFODA0224
COMPOUND.	Perfluoro-n-octadecanoic acid		
STRUCTURE.		**CAS #:**	16517 11-6



410-6842695

MOLECULAR FORMULA.	$C_8HF_{35}O_2$	**MOLECULAR WEIGHT:**	914 14
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	02/21/2024		
EXPIRY DATE. (mm/dd/yyyy)	02/21/2029		
RECOMMENDED STORAGE.	Store ampoule at ambient temperature in a 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
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition The stated validity period applies to the sealed ampoules stored at ambient temperature

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 02/21/2024 (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

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 s taken nto 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 nterest 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 n 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 x_2, x_n on which it depends is.

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

The ndividual uncertainties taken into account include those associated with weights (cal'bration 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 us ng 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 n its composition and concentration until the specified expiry date n the unopened ampoule Monitoring for any degradation or change n 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:

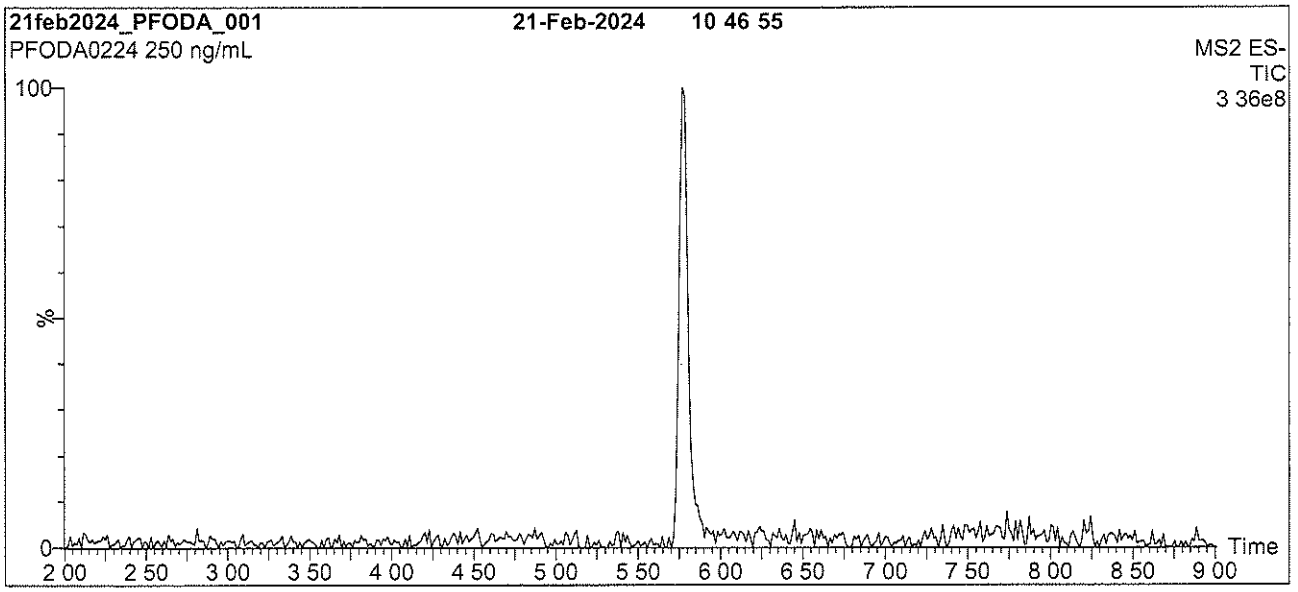
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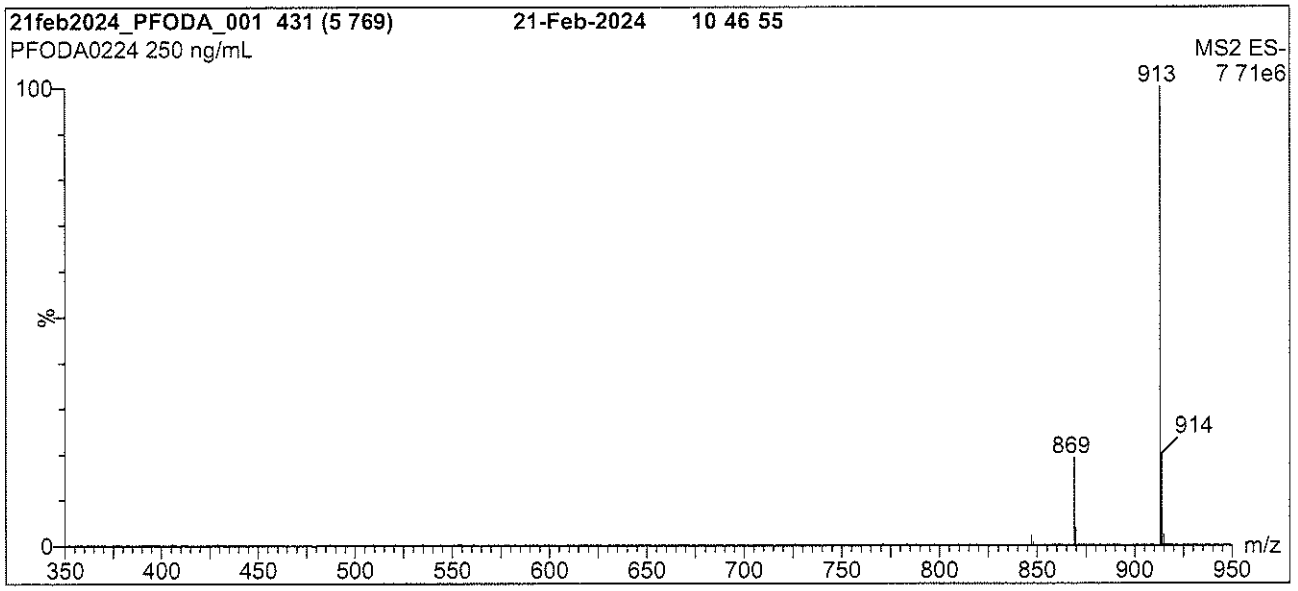
CALA sting Accreditation No A1226

ANAB ANSI Na onal Ac reditat Bo rd ACCRED TED 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. **PFODA, LC/MS Data (Full Scan and Mass Spectrum)**





Conditions for Figure 1.

Waters Acquity UPLC -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 m`n and hold for
2 min before returning to initial conditions n 0 5 min
Time 12 m n

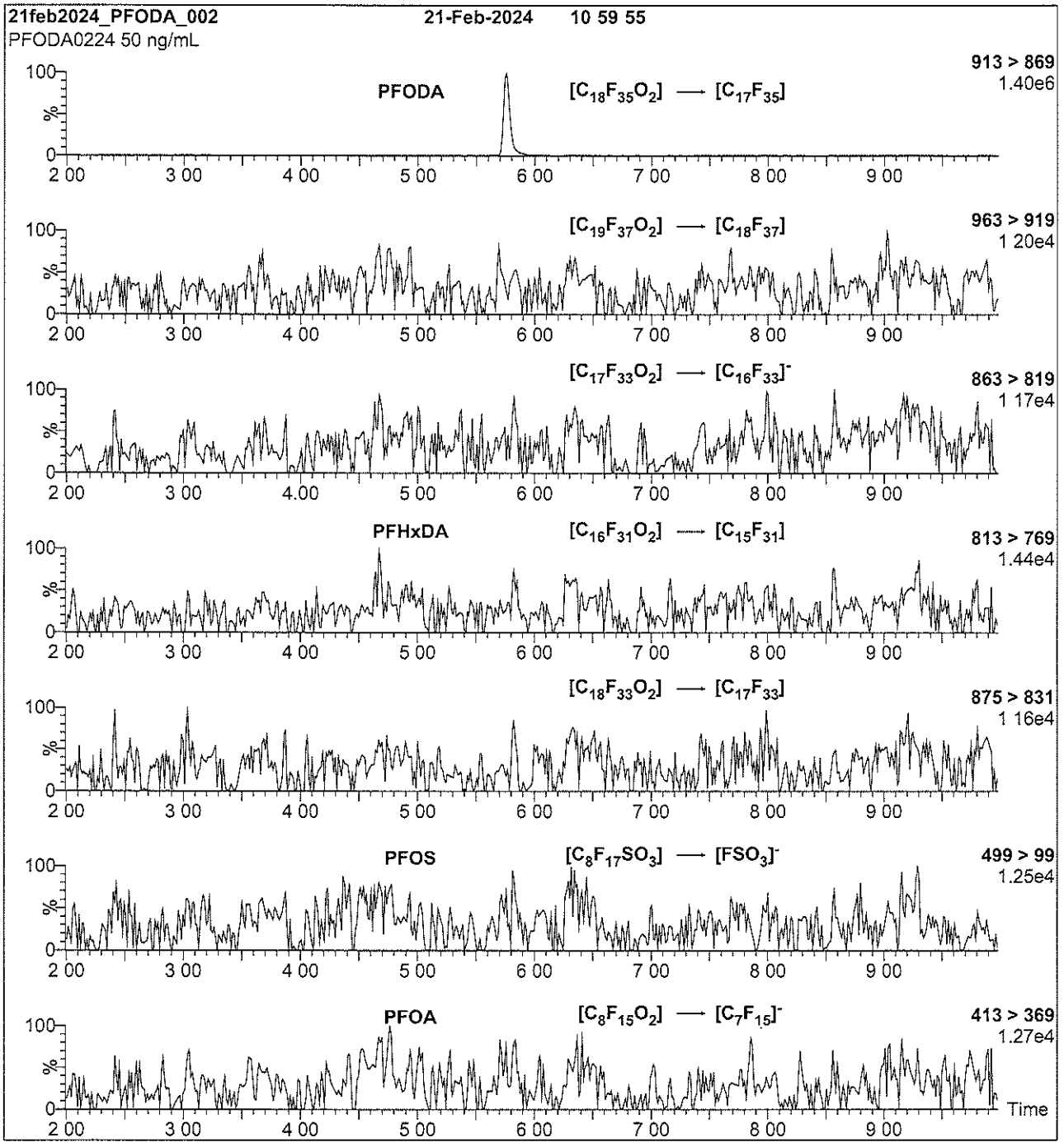
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (350 950 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. **PFODA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (PFODA)
Mobile phase	Same as Figure 1
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.44e-3
Collision Energy (eV) = 15

Reagent

PFC_ST_04434

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No PFOS-030S
Description Bis(trifluoromethane)sulfonimide lithium salt (HQ-115)
Lot: 225031579
Solvent: Methanol
Hazards *Refer to SDS for complete safety information*



Signal Word Danger

Date Certified Apr 4 2025
Expiration May 4 2027
Sample Size 1 mL
Components 1
Storage Condition Freeze (< 10 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Bis(trifluoromethane)sulfonimide lithium salt	90076-65-6	97 0	103.2*	100 1

7897366
ID: PFC_ST_04433
Exp:05/04/27 Prpd:WTU3 Opn:
Native TFSI Lithium Salt

7897392
ID: PFC_ST_04434
Exp:05/04/27 Prpd:WTU3 Opn:
Native TFSI Lithium Salt

7897393
ID: PFC_ST_04435
Exp:05/04/27 Prpd:WTU3 Opn:
Native TFSI Lithium Salt

410-7897392

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT 1339) and ISO 17034 (AR-1463)

* Weight compensated to 100% purity

A product with a suffix (1A, -2B, etc. or -01 -02 etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

Certified Analyte Concentration Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4% and was determined in accordance with ISO 17034. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST Test No. 684/291344-18 & 684/292805-19

[3] Purity/Identity determined by one or more of the following methods: GC/MS LC/MS NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values. A comma (,) is used to separate units of one-thousand or greater A period (.) is used as a decimal place marker

The information on this certificate may not be reproduced without the express permission of the manufacturer See reverse side for additional information

Hazard Information Please refer to the SDS for information regarding the hazards associated with using this material

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

1 **Quality Standards**

ISO 17034 2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025.2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001 2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side This product can be used for quantification and/or identification This product can also be used as a reference material to validate analytical procedures subject to the conditions under Section 7

3. **Manufacturing·** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory Please refer to the NIST test number listed on the front of this certificate Class A glassware is used in the manufacture and quality control of all standards Good Laboratory Practices have been used throughout the preparation of this Standard

4. **Homogeneity·** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability·** The manufacturer guarantees the stability of this solution through the expiration date stated on the label when handled and stored according to the conditions stated on the label

6. **Uncertainty·** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass volume short-term stability long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level

7 **Legal Notice and Limit of Liability.** This product is for routine laboratory analysis and research purposes only The company's liability will be limited to replacement of product or refund of purchase price Notice of claims must be made within thirty (30) days from date of delivery

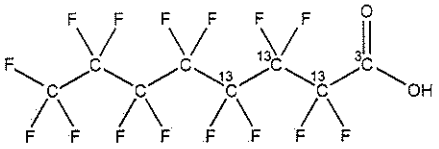
Reagent

PFC_ST_04469

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE.	MPFOA	**LOT NUMBER.**	MPFOA1124
COMPOUND.	Perfluoro-n (1 2 3 4- $^{3}C_{4}$)octanoic acid		
STRUCTURE.		**CAS #.**	960315-48-4



7930738
ID: PFC_ST_04468
Exp:11/27/29 Prpd:WTU3 Opn:
Labeled MPFOA Stock

7930740
ID: PFC_ST_04469
Exp:11/27/29 Prpd:WTU3 Opn:
Labeled MPFOA Stock

MOLECULAR FORMULA.	$^{3}C_{4}{}^{12}C_{4}HF_{5}O_{2}$	**MOLECULAR WEIGHT:**	418 04
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	11/27/2024		
EXPIRY DATE. (mm/dd/yyyy)	11/27/2029		
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)

410-7930740

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** 12/04/2024 (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.

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 ngestion 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 SFC/UV/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 n a given d'luent is taken into consideration Duplicate solutions of a new product are prepared from the same crystalline lot and after the addition of an appropriate nternal standard they are compared by GC/MS LC/MS and/or SFC/UV/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 n the storage containers In order to maintain the ntegrity 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 comb ned relative standard uncertainty $u_c(y)$, of a value y and the uncerta nty of the independent parameters x x_2, x_n on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

The individual uncertainties taken into account nclude 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%) has been assigned to this product.

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 nternational 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:

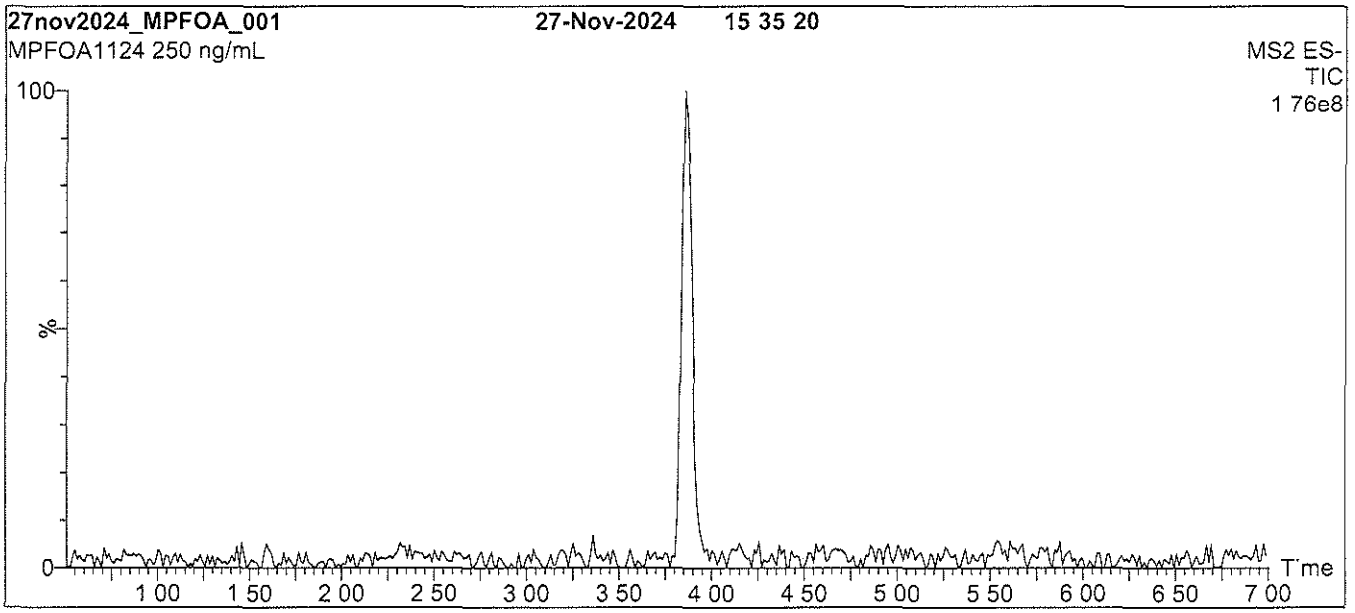
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

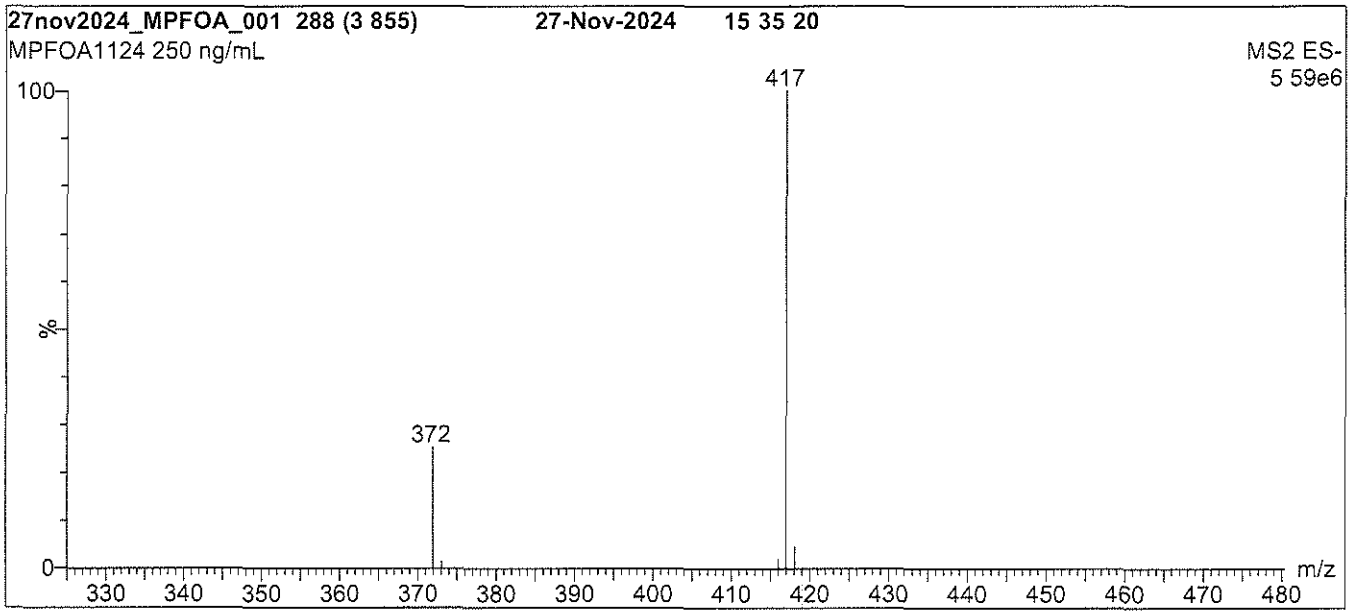
CALA Accreditation No. A 226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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 OAc 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

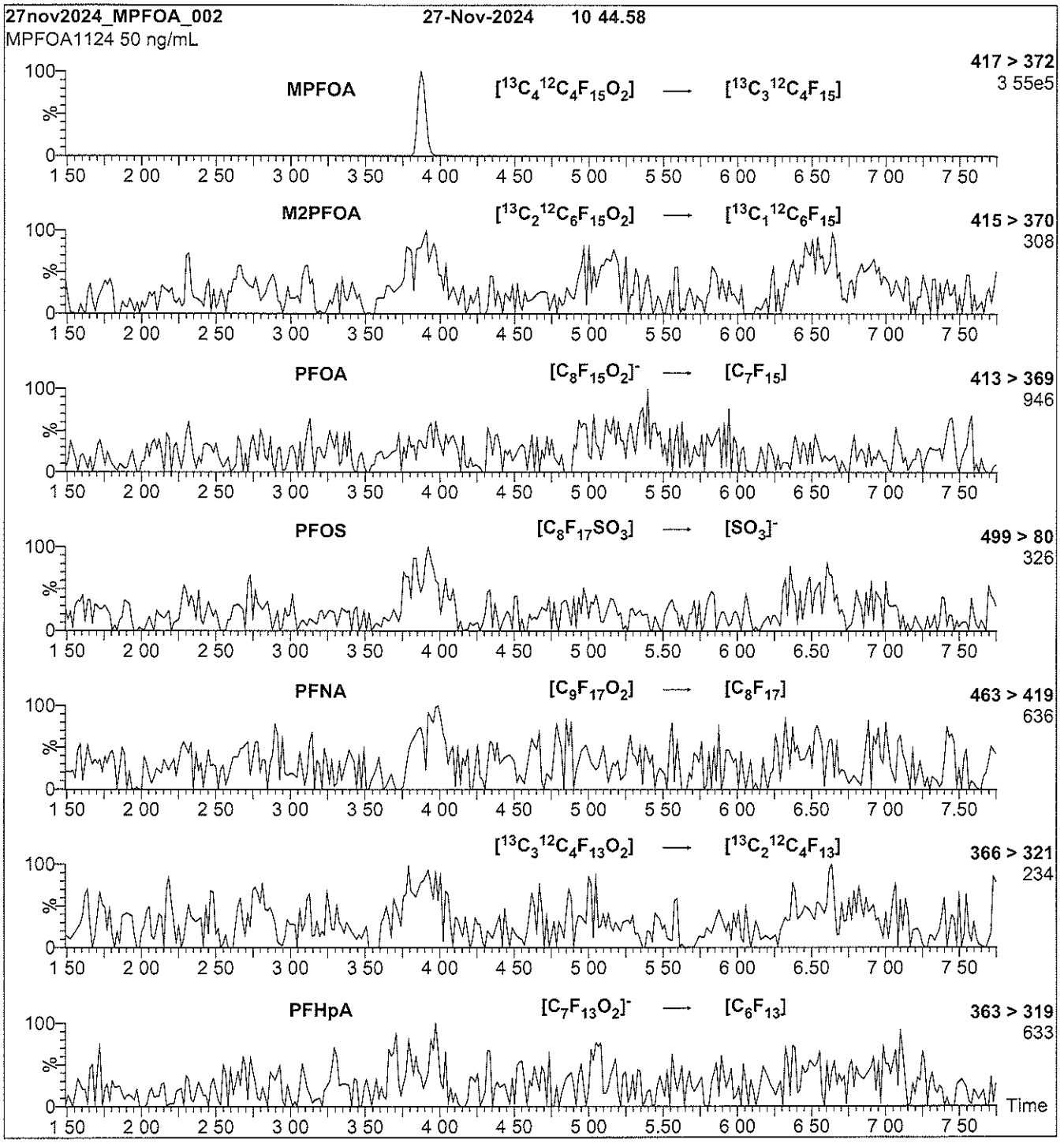
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (325 850 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. **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) = 4.24e-3
Collision Energy (eV) = 8

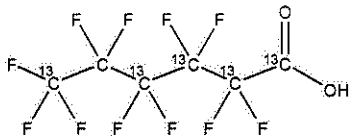
Reagent

PFC_ST_04485

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M5PFHxA	**LOT NUMBER.**	M5PFHxA1224
COMPOUND.	Perfluoro-n-(1 2 3,4 6- $^{3}C_{5}$)hexanoic acid		
STRUCTURE.		**CAS #.**	2328024-54-8



410-7931216

MOLECULAR FORMULA.	$^{13}C_{5}{}^{12}C_{1}HF_{11}O_{2}$	**MOLECULAR WEIGHT:**	319 02
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	01/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/02/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

7931214
ID: PFC_ST_04483
Exp:01/02/30 Prpd:WTU3 Opn:
M5PFHxA Stock

7931215
ID: PFC_ST_04484
Exp:01/02/30 Prpd:WTU3 Opn:
M5PFHxA Stock

DOCUMENTATION/ DATA ATTACHED.

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

7931216
ID: PFC_ST_04485
Exp:01/02/30 Prpd:WTU3 Opn:
M5PFHxA Stock

7931217
ID: PFC_ST 04486
Exp:01/02/30 Prpd:WTU3 Opn:
M5PFHxA Stock

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** 01/06/2025 (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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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 ndependent parameters x x_2, x_n on which it depends is

$$u\ (y(x_1\ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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

The individual uncertainties taken nto account include those associated with weights (calibration of the balance) and volumes (cal'bration 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%) has been assigned to this product.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly cal'brated by an external ISO/IEC 17025 accredited laboratory In addition their cal'bration 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 n 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:

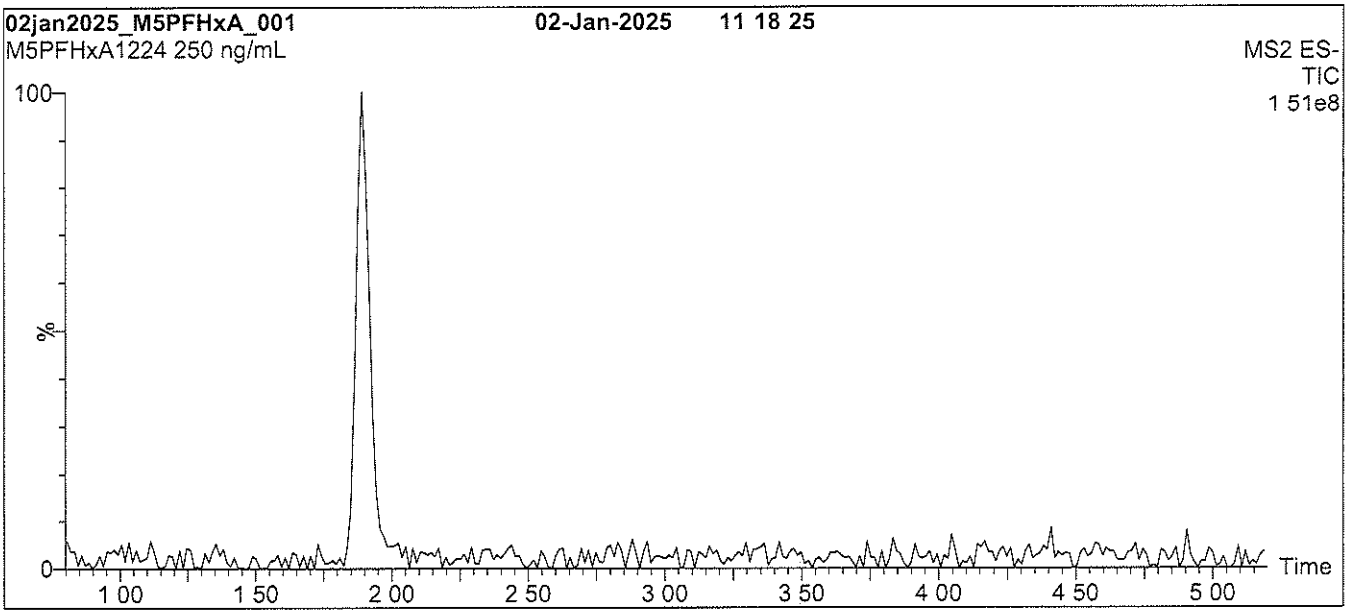
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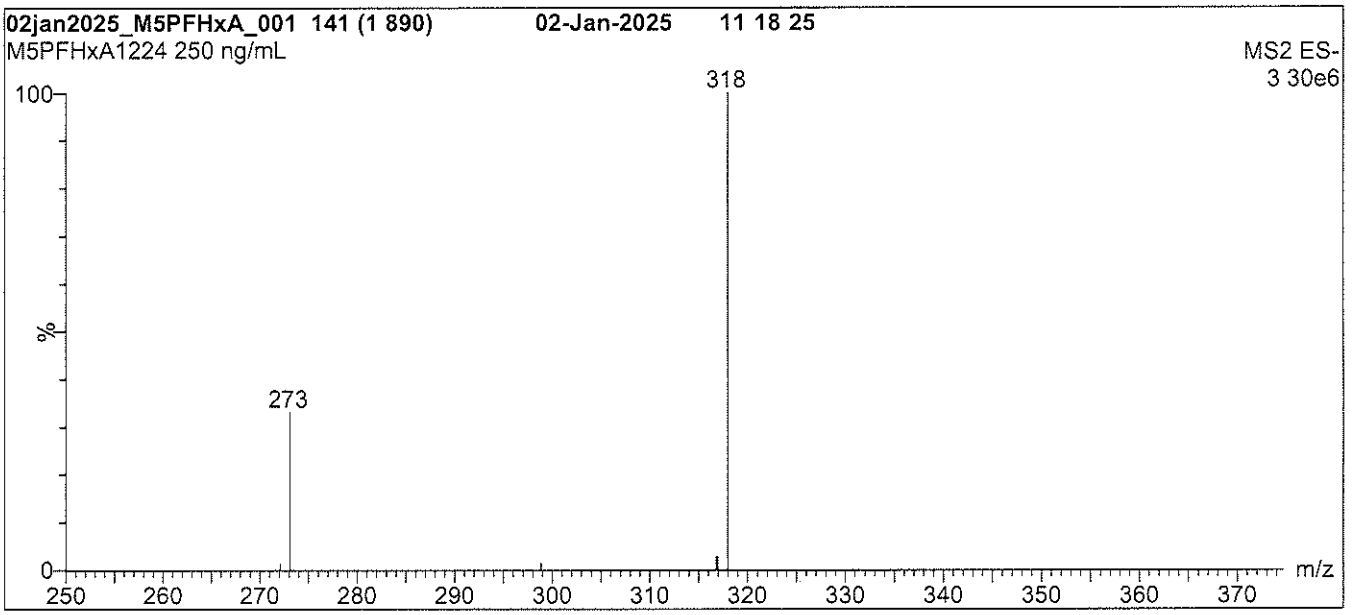
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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.

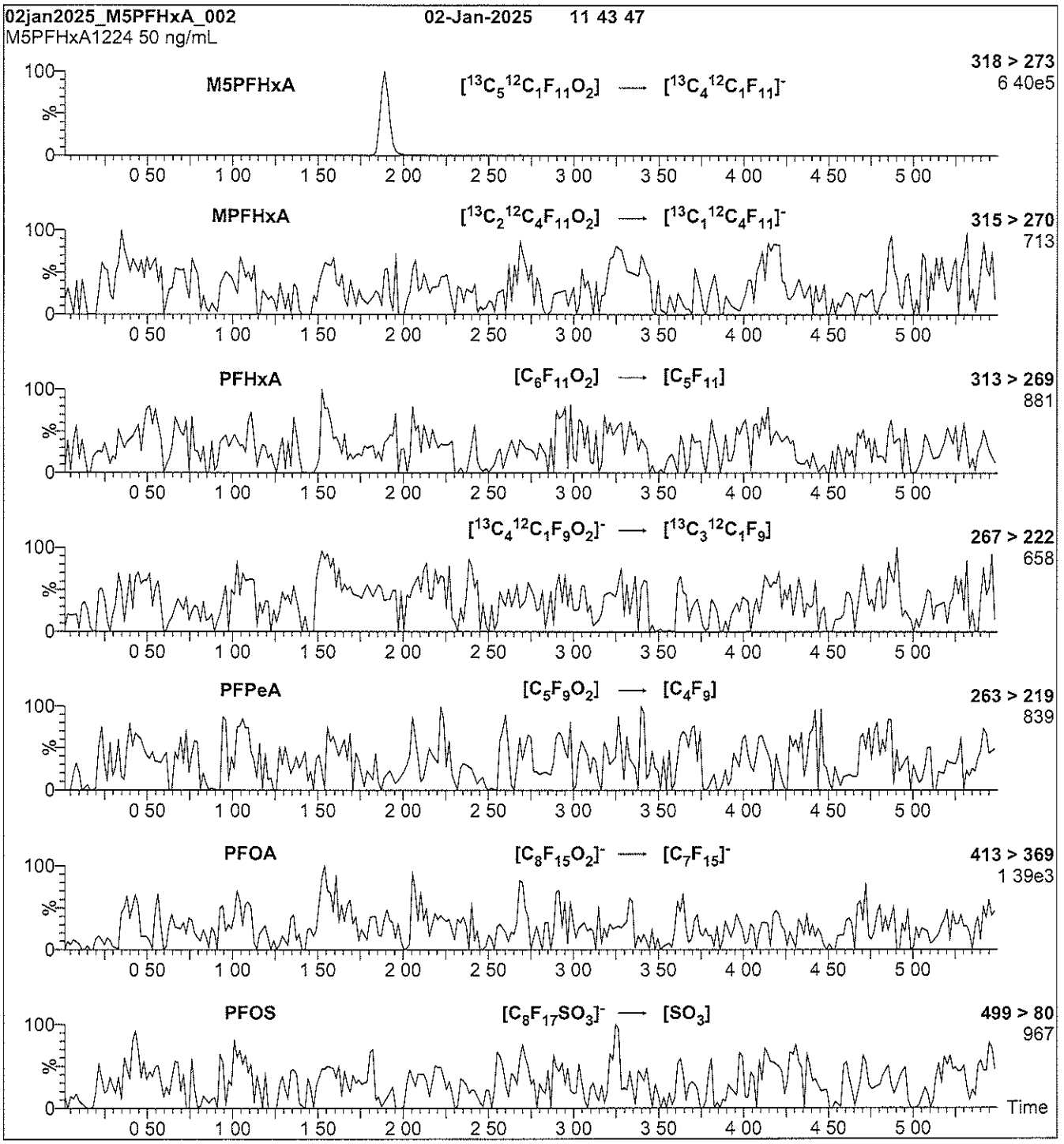
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time: 12 min
Flow	300 µL/m n

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. **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) = 5 87e-3
Collision Energy (eV) = 8

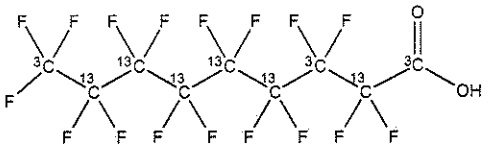
Reagent

PFC_ST_04487

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M9PFNA	**LOT NUMBER.**	M9PFNA0325
COMPOUND.	Perfluoro-n ($^{13}C_9$)nonanoic acid		
STRUCTURE.		**CAS #.**	2283397-80-6



410-7931392

MOLECULAR FORMULA.	$^{13}C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	473 01
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY.**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	04/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/02/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

7931392
ID: PFC_ST_04487
Exp:04/02/30 Prpd:WTU3 Opn:
M9PFNA Stock

7931393
ID: PFC_ST_04488
Exp:04/02/30 Prpd:WTU3 Opn:
M9PFNA Stock

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) and ~0 2% of an unknown impurity

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 04/24/2025 (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:

Prior to solution preparation crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility n a given d luent is taken nto 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 and/or SFC/UV/MS The relative response factors of the analyte of interest in each solution are requ red to be <5% RSD New solution lots of existing products are compared to older lots n the same manner which further confirms the homogeneity of the crystalline material as well as the stab lity and homogeneity of the solutions n 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 cal'brated measuring equipment.

UNCERTAINTY:

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

The comb ned relative standard uncertainty $u_c(y)$ of a value y and the uncertainty of the ndependent parameters x x_2, x_n on which it depends is

$$u\ (y(x_1\ x\quad x_n)) - \sqrt{\sum^{n} u(y\ x\ )}$$

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

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EXPIRY DATE / PERIOD OF VALIDITY.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

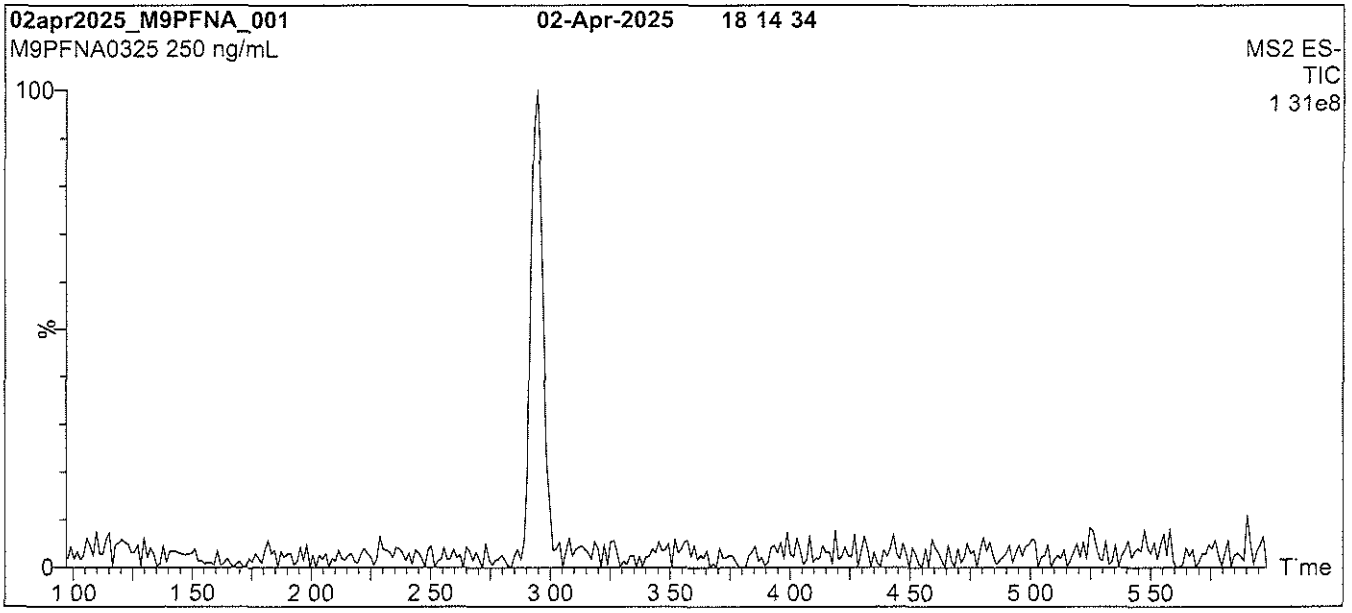
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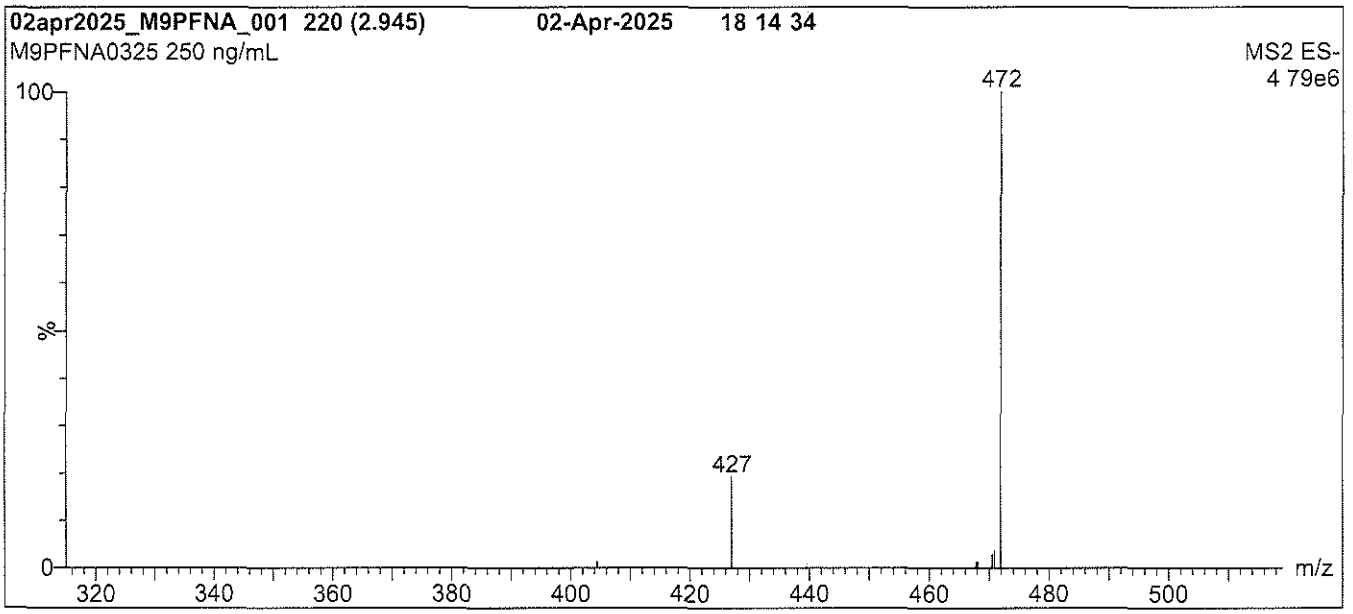
CALA Testing Accreditation No A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 m n
before returning to initial conditions in 0.5 min
Time 12 min

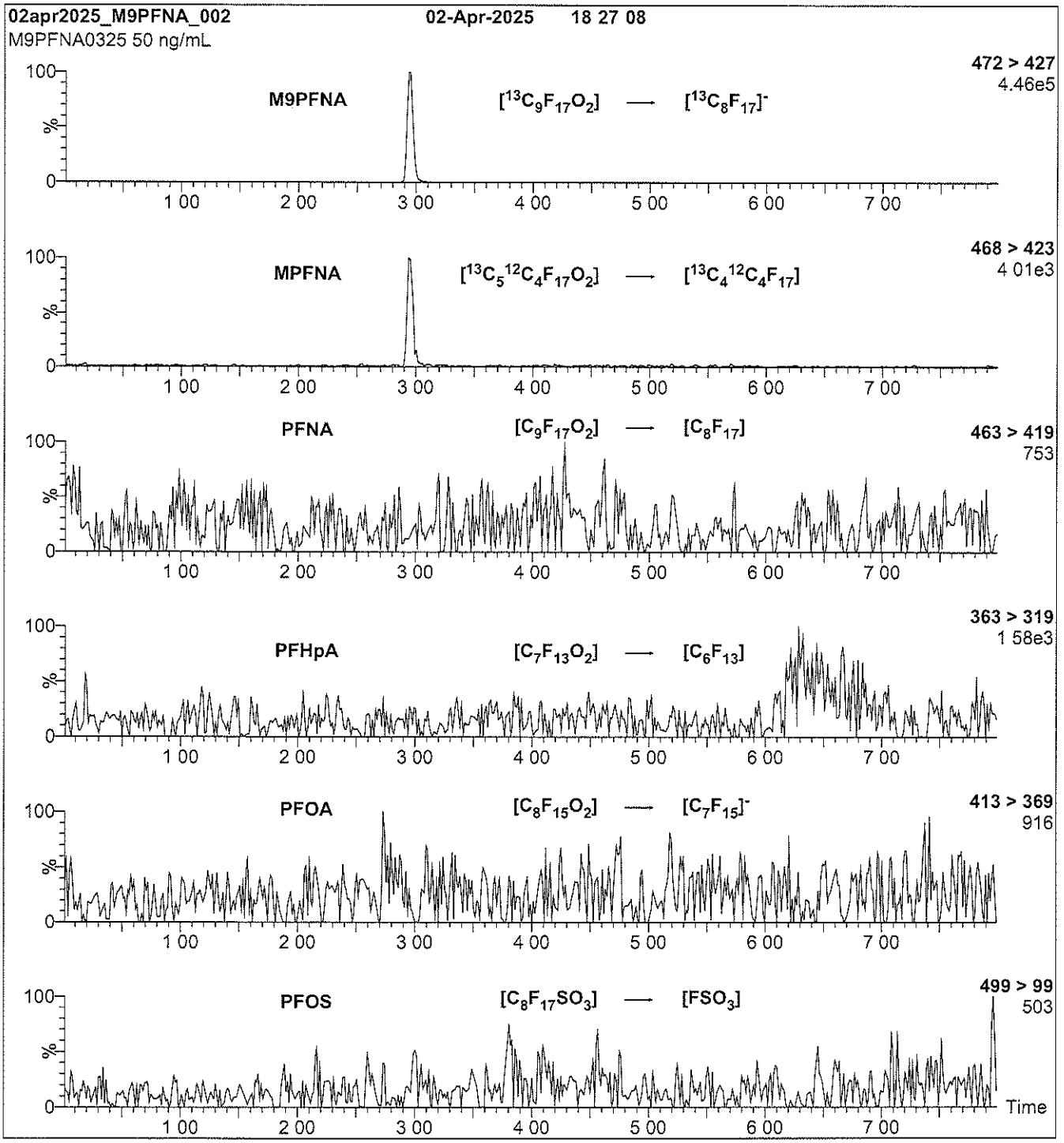
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 4 16e-3
Collision Energy (eV) = 10

Reagent

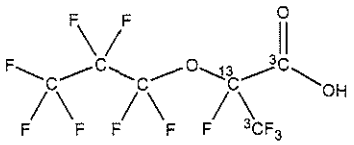
PFC_ST_04489

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE.	M3HFPO-DA	**LOT NUMBER.**	M3HFPODA0125
COMPOUND.	$^{3}C_{3}$-Hexafluoropropylene oxide dimer acid ($^{13}C_{3}$-GenX)		
IUPAC NAME.	*rac*-2 3 3 3 Tetrafluoro-2 (1 1 2 2 3 3 3-heptafluoropropoxy)($^{13}C_{3}$)propanoic acid		

STRUCTURE.



CAS #. 3030247-97-0

MOLECULAR FORMULA.	$^{13}C_{3}\ ^{2}C_{3}HF_{11}O_{3}$	**MOLECULAR WEIGHT:**	333 03
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy)	01/30/2025		
EXPIRY DATE. (mm/dd/yyyy)	*01/30/2029*		
RECOMMENDED STORAGE.	Refrigerate ampoule		

410-7931526

7931526
ID: PFC_ST_04489
Exp: 01/30/29 Prpd: WTU3
Labeled M3HFPO-DA Stock

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 $^{13}C_{3}$-labelled analogue of the major component of the commercial formulation* known as GenX.
- M3HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions

FOR LABORATORY USE ONLY NOT FOR HUMAN OR DRUG USE

Certified By B G. Chittim General Manager **Date** 01/30/2025 (mm/dd/yyyy)

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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:

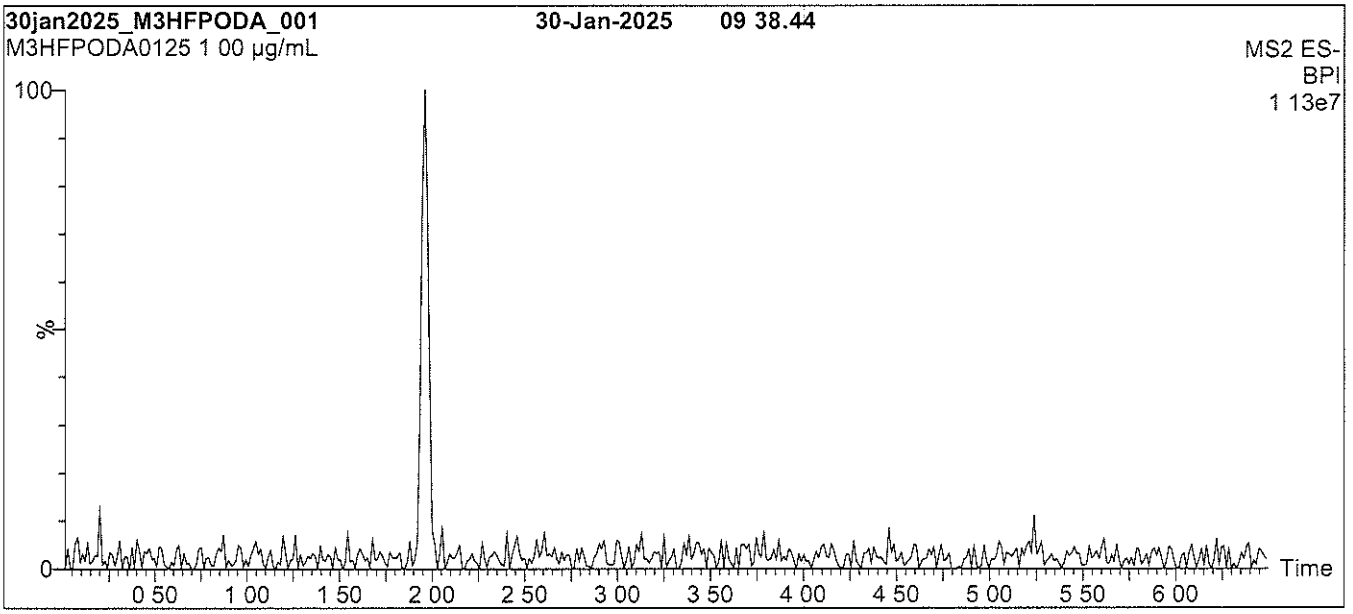
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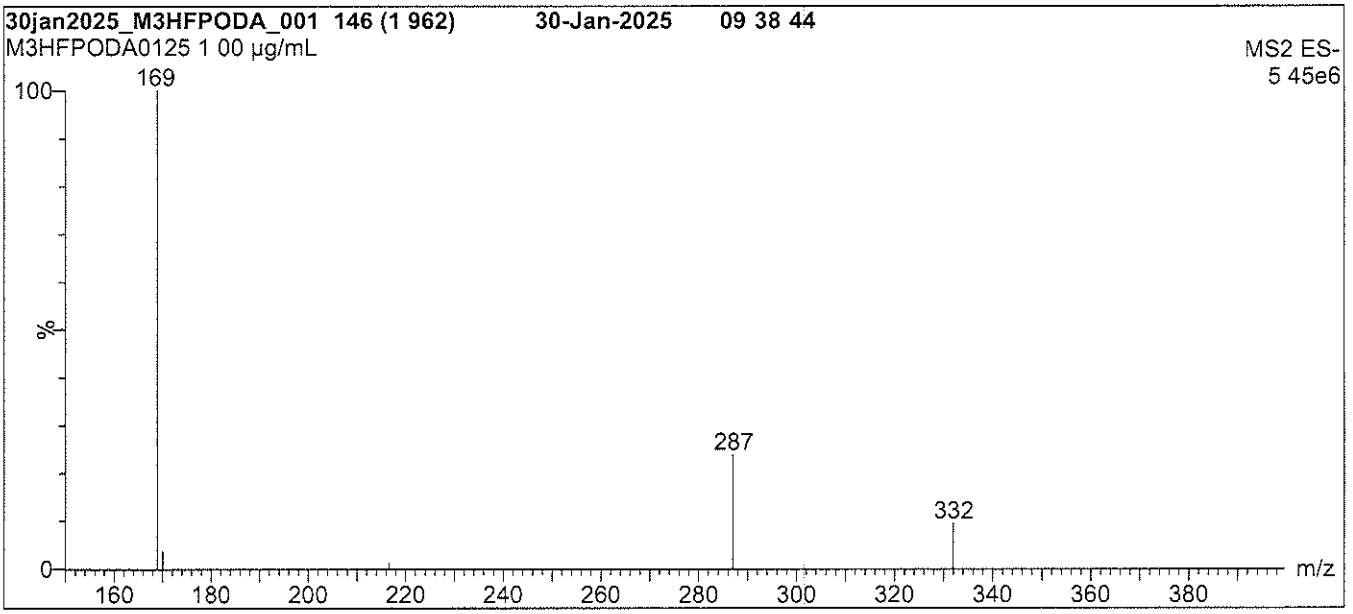
CALA
esting
Accreditation No. A 226

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0 5 min
Time 12 min

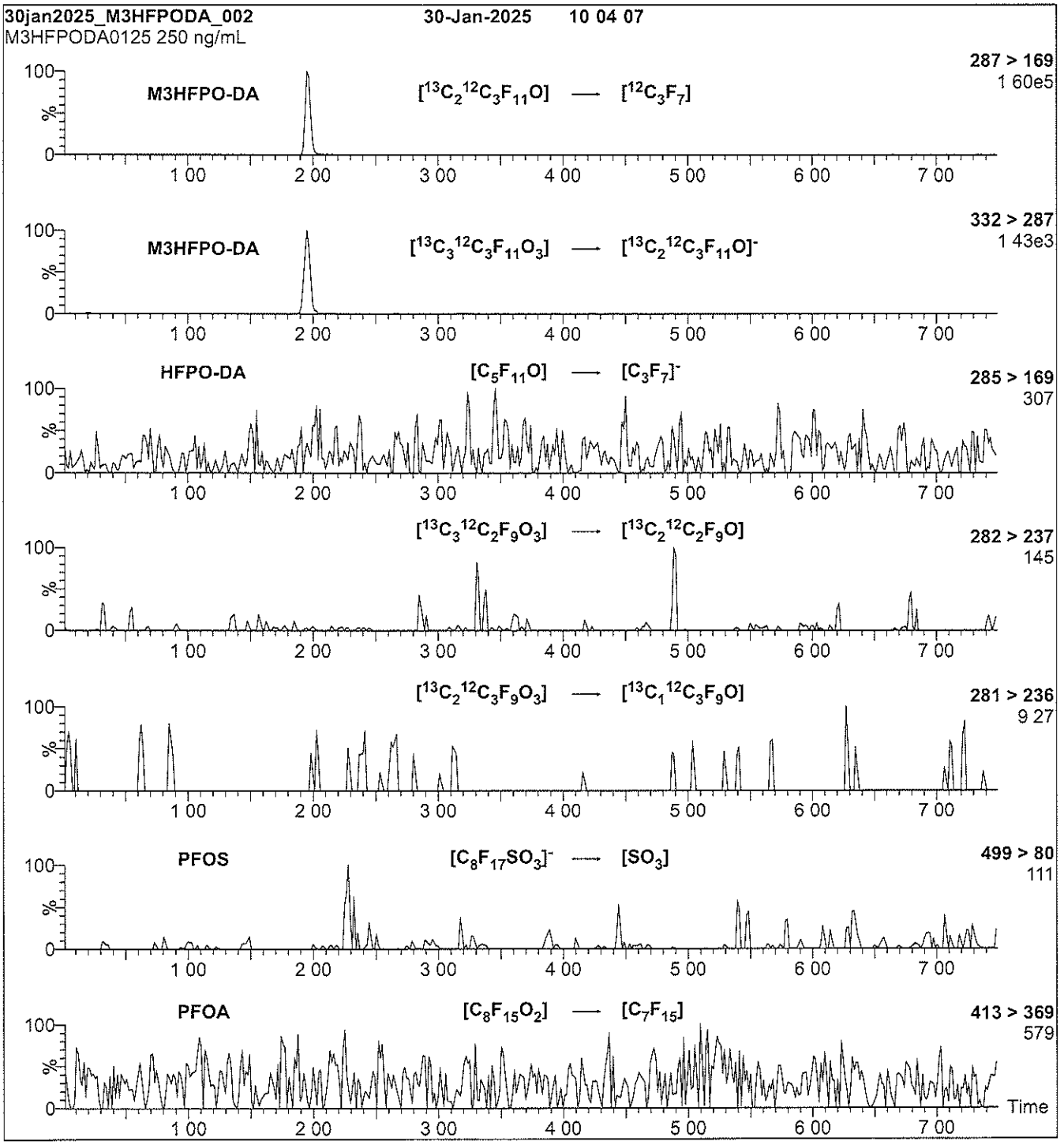
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2 75
Cone Voltage (V) = 15 00
Desolvation Temperature (°C) = 350
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/m n

MS Parameters.

Collision Gas (mbar) = 4.36e-3
Collision Energy (eV) = 8

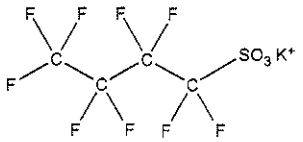
Reagent

PFC_ST_04490

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	L-PFBS	**LOT NUMBER.**	LPFBS0125
COMPOUND.	Potassium perfluoro-1-butanesulfonate		
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)	01/22/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/22/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-7931549

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

7931549
ID: PFC_ST_04490
Exp:01/22/30 Prpd:WTU3 Opn:
Native PFBS Stock

7931550
ID: PFC_ST_04491
Exp:01/22/30 Prpd:WTU3 Opn:
Native PFBS Stock

7931551
ID: PFC_ST_04492
Exp:01/22/30 Prpd:WTU3 Opn:
Native PFBS Stock

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Certified By _____ **Date** 02/04/2025 (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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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions s 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 x_2, $.x_n$ on which it depends is.

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

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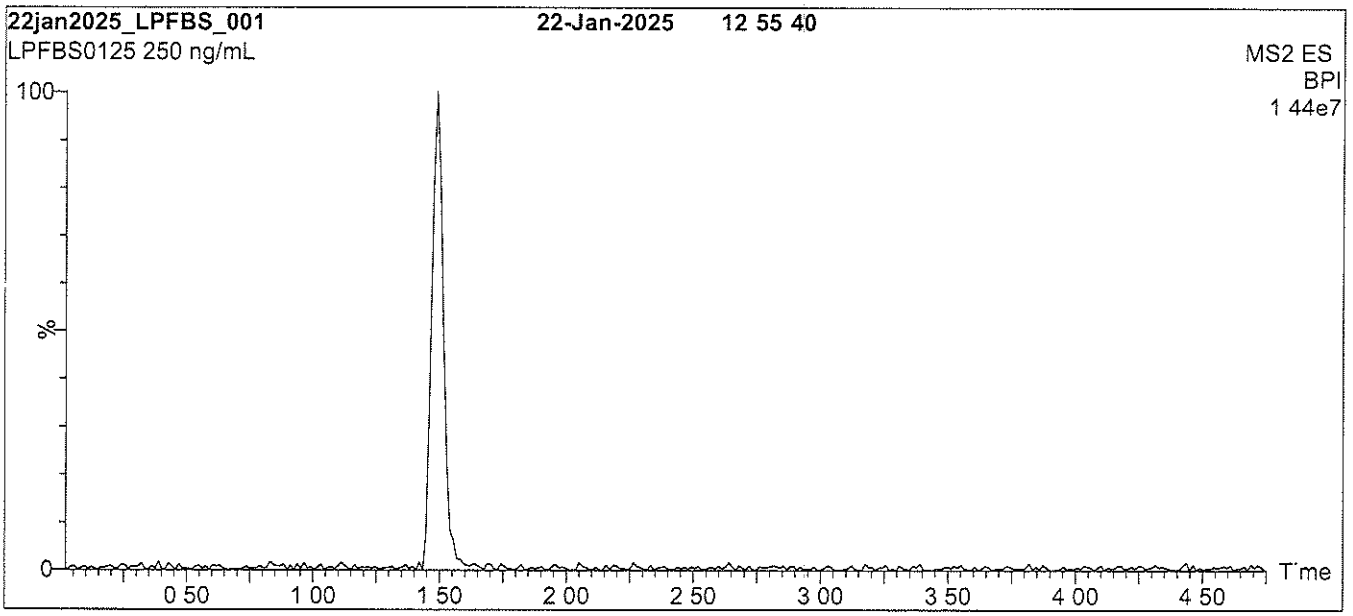
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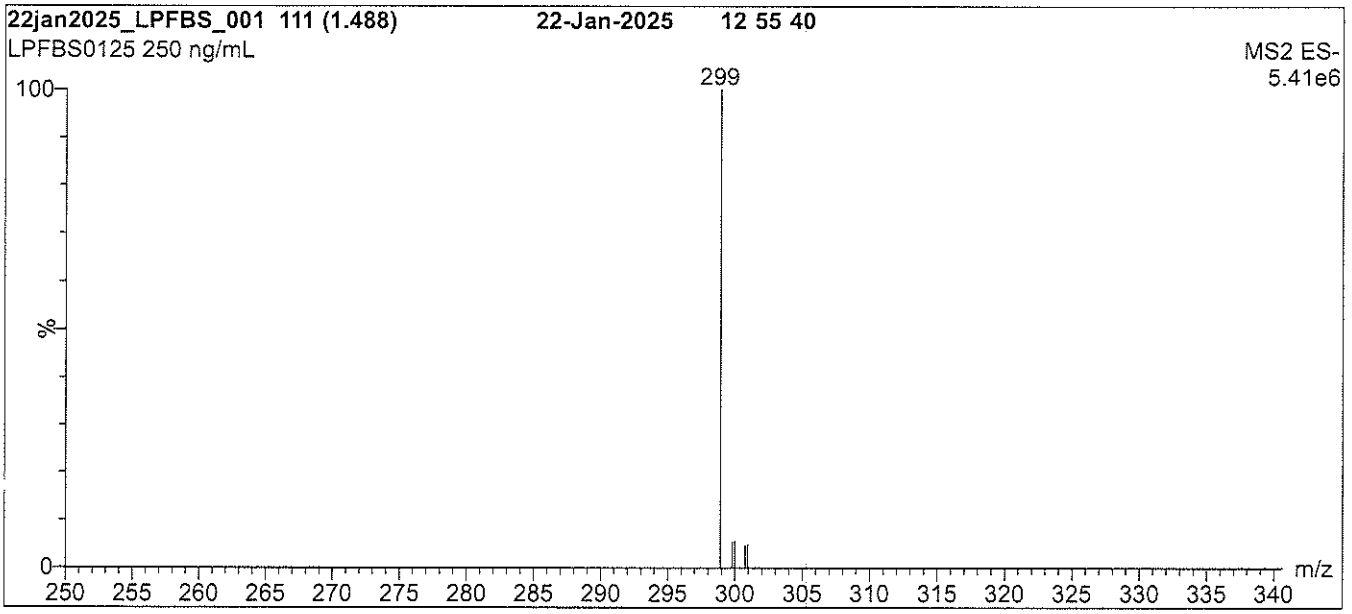
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **L-PFBS, 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 Sh eld 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 return ng to nitial conditions over 0 5 min
Time 12 min

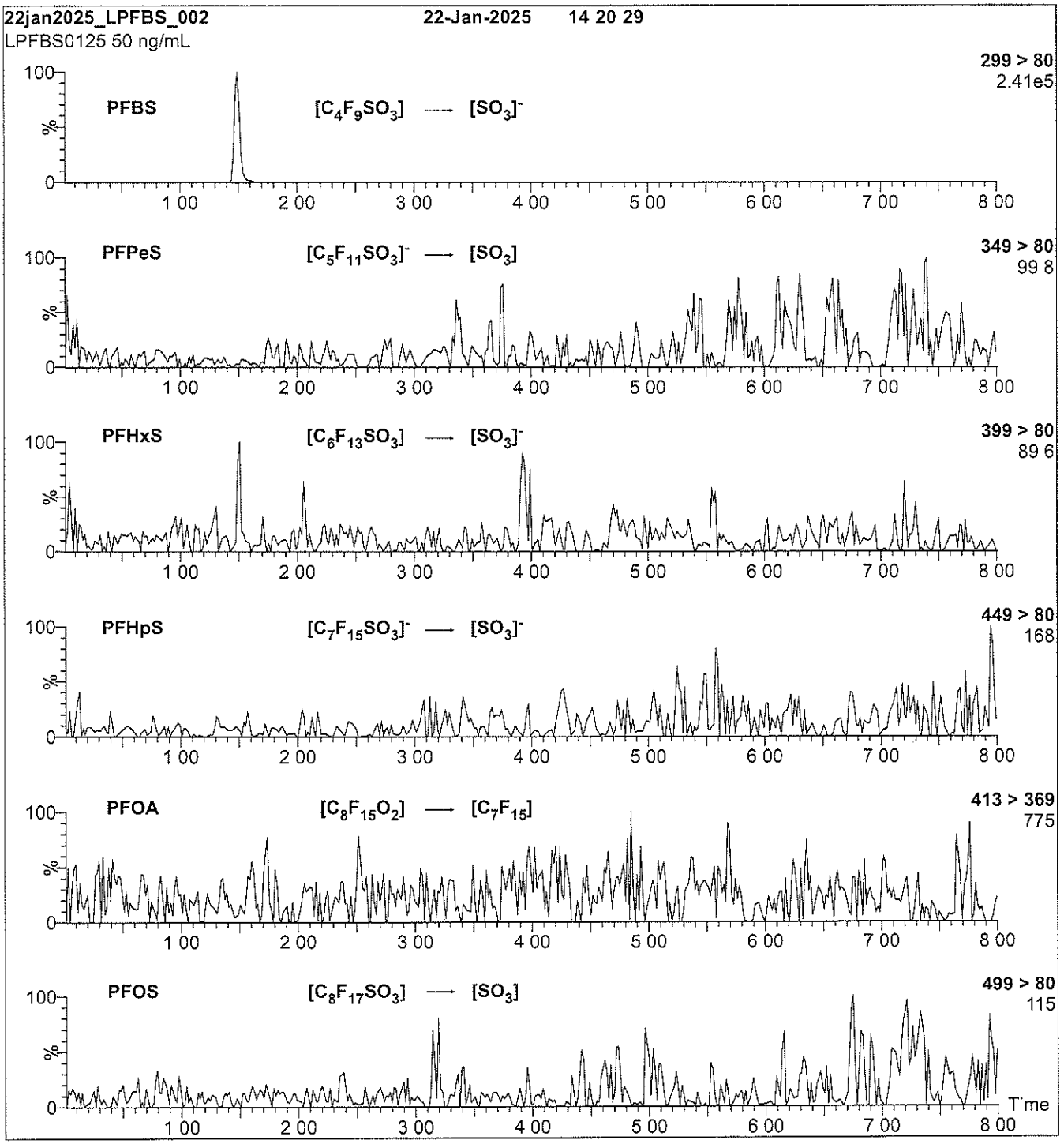
Flow: 300 µL/min

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-PFBS, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (L-PFBS)
Mobile phase	Same as F`gure 1
Flow·	300 µL/mın

MS Parameters.

Collision Gas (mbar) = 5.87e-3
Collision Energy (eV) = 30

Reagent

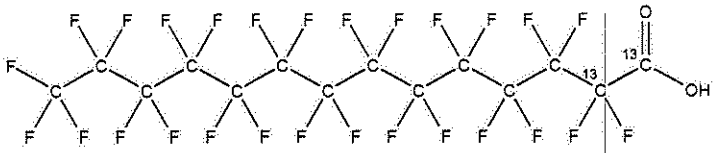
PFC_ST_04512

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M2PFTeDA
LOT NUMBER. M2PFTeDA0525
COMPOUND. Perfluoro-n-(1 2- $^{3}C_{2}$)tetradecanoic acid

STRUCTURE.
CAS #. 2708218-82-8



410-7932826

MOLECULAR FORMULA. $^{3}C_{2}{}^{12}C_{12}HF_{27}O_{2}$
MOLECULAR WEIGHT: 716 10
CONCENTRATION. 50 0 ± 2 5 µg/mL
SOLVENT(S). Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY. ≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy) 06/05/2025
EXPIRY DATE. (mm/dd/yyyy) 06/05/2030
RECOMMENDED STORAGE. Store ampoule in a cool dark place

7932816
ID: PFC_ST_04510
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932817
ID: PFC_ST_04511
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932826
ID: PFC_ST_04512
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932827
ID: PFC_ST_04513
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932828
ID: PFC_ST_04514
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932829
ID: PFC_ST_04515
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

7932830
ID: PFC_ST_04516
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled 13C2 PFTeDA Stock

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 est

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Certified By _____ **Date** 06/06/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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where x is expressed as a relative standard uncerta nty of the individual parameter

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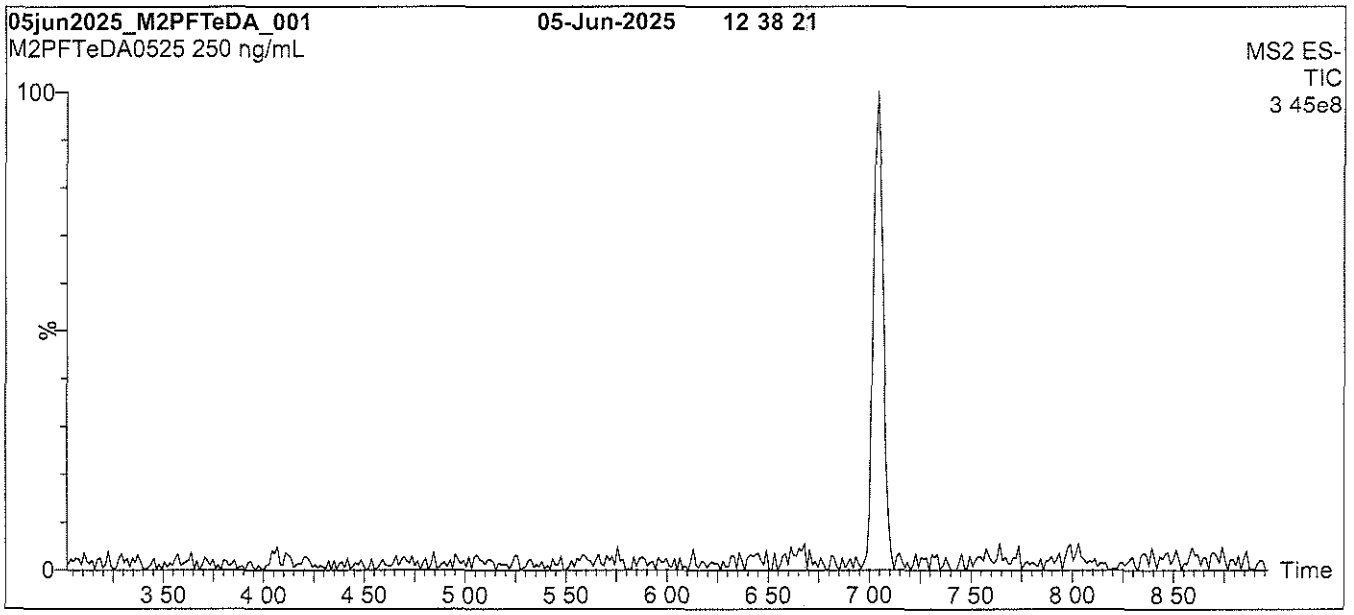
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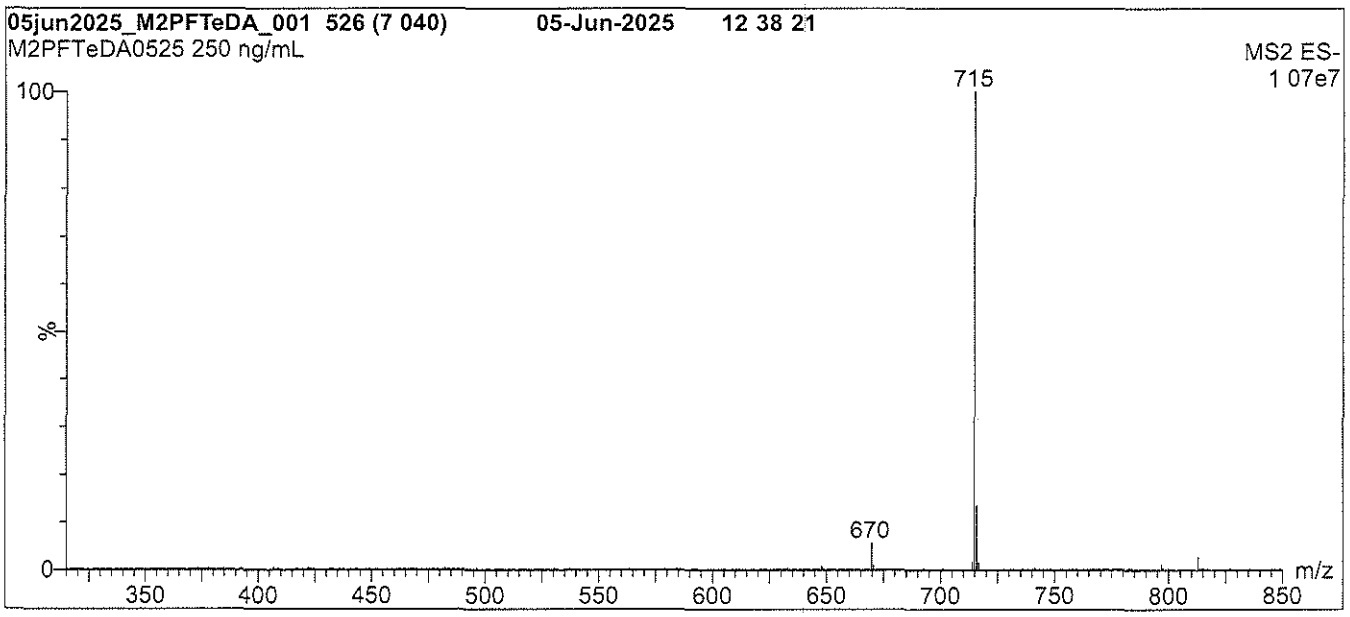
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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: 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 m n
before returning to initial conditions in 0.5 min
Time 12 min

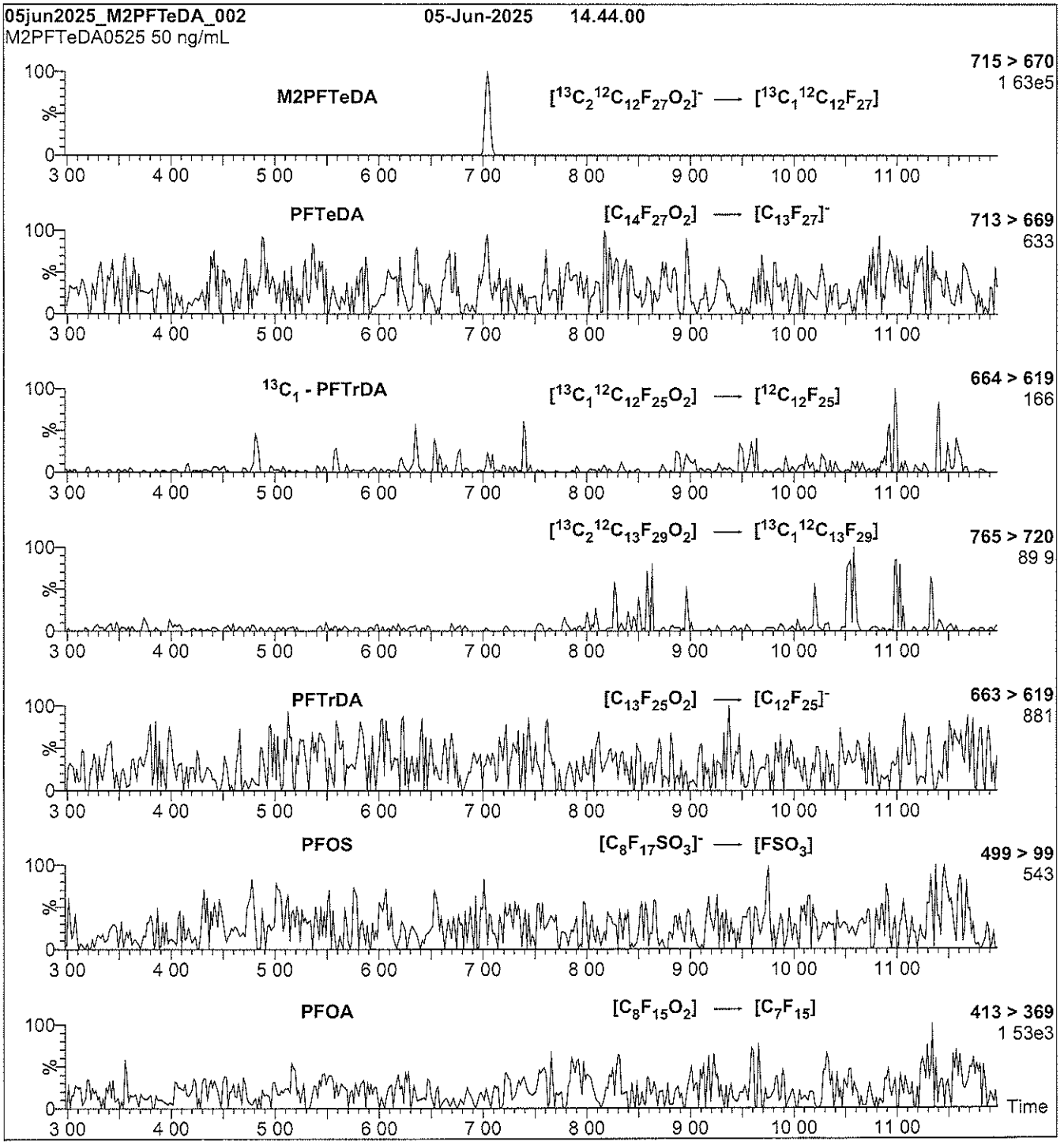
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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

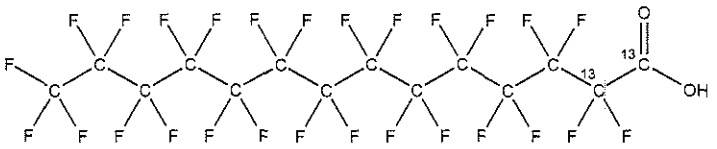
MS Parameters.

Collision Gas (mbar) = 3 76e-3
Collision Energy (eV) = 14

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M2PFTeDA	**LOT NUMBER.**	M2PFTeDA0525
COMPOUND.	Perfluoro-n (1 2 $^{13}C_2$)tetradecanoic acid		
STRUCTURE.		**CAS #.**	2708218-82-8



MOLECULAR FORMULA.	$^{13}C_2{}^{12}C_2HF_{27}O_2$	**MOLECULAR WEIGHT:**	716 10
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY.**	≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
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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B G. Chittim General Manager

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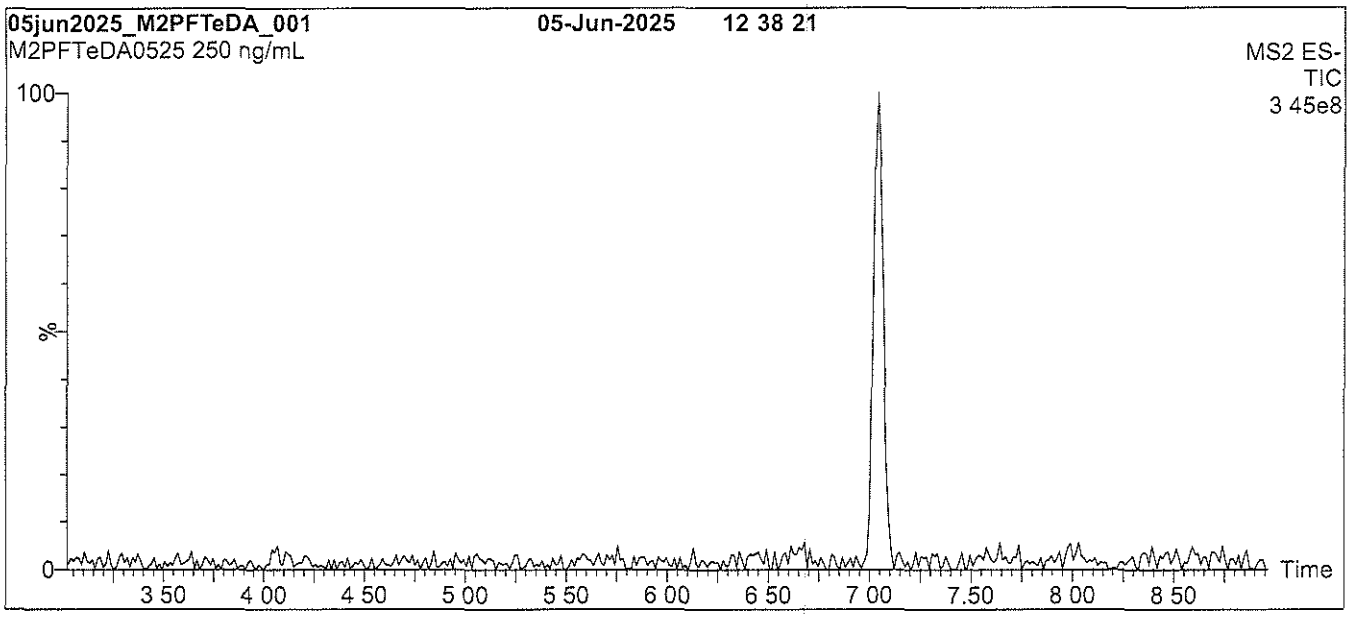
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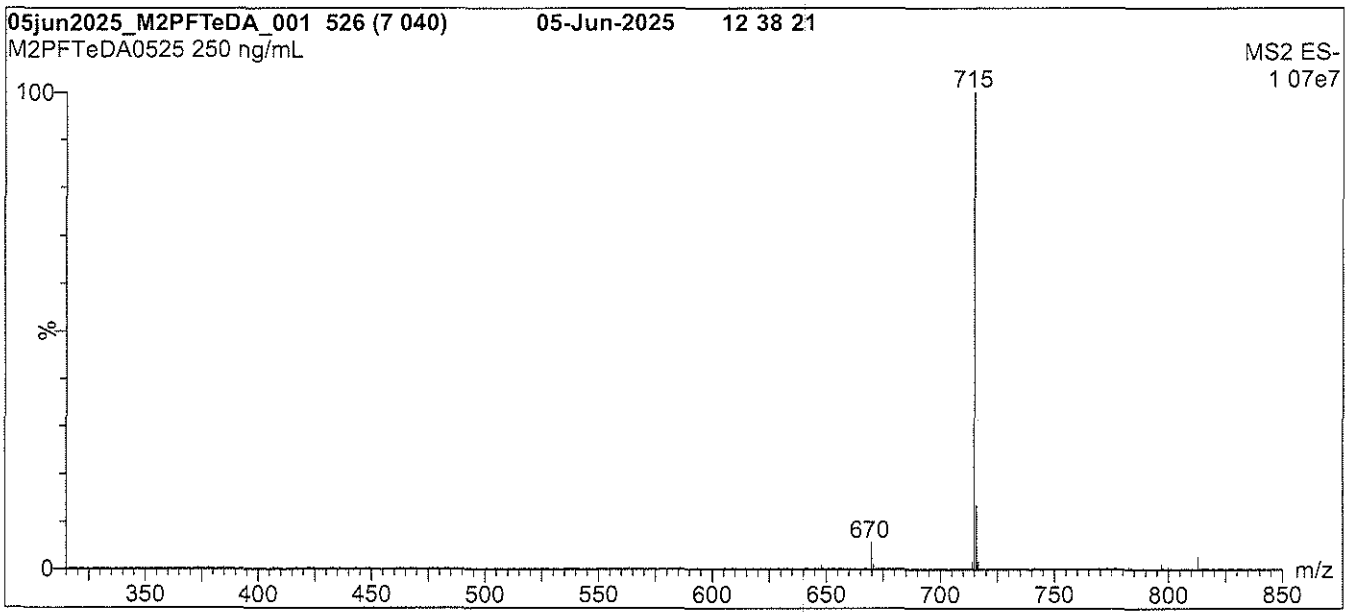
CALA Testing Accreditation No. A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional nformation 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. **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: 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 nitial conditions in 0.5 min
Time 12 min

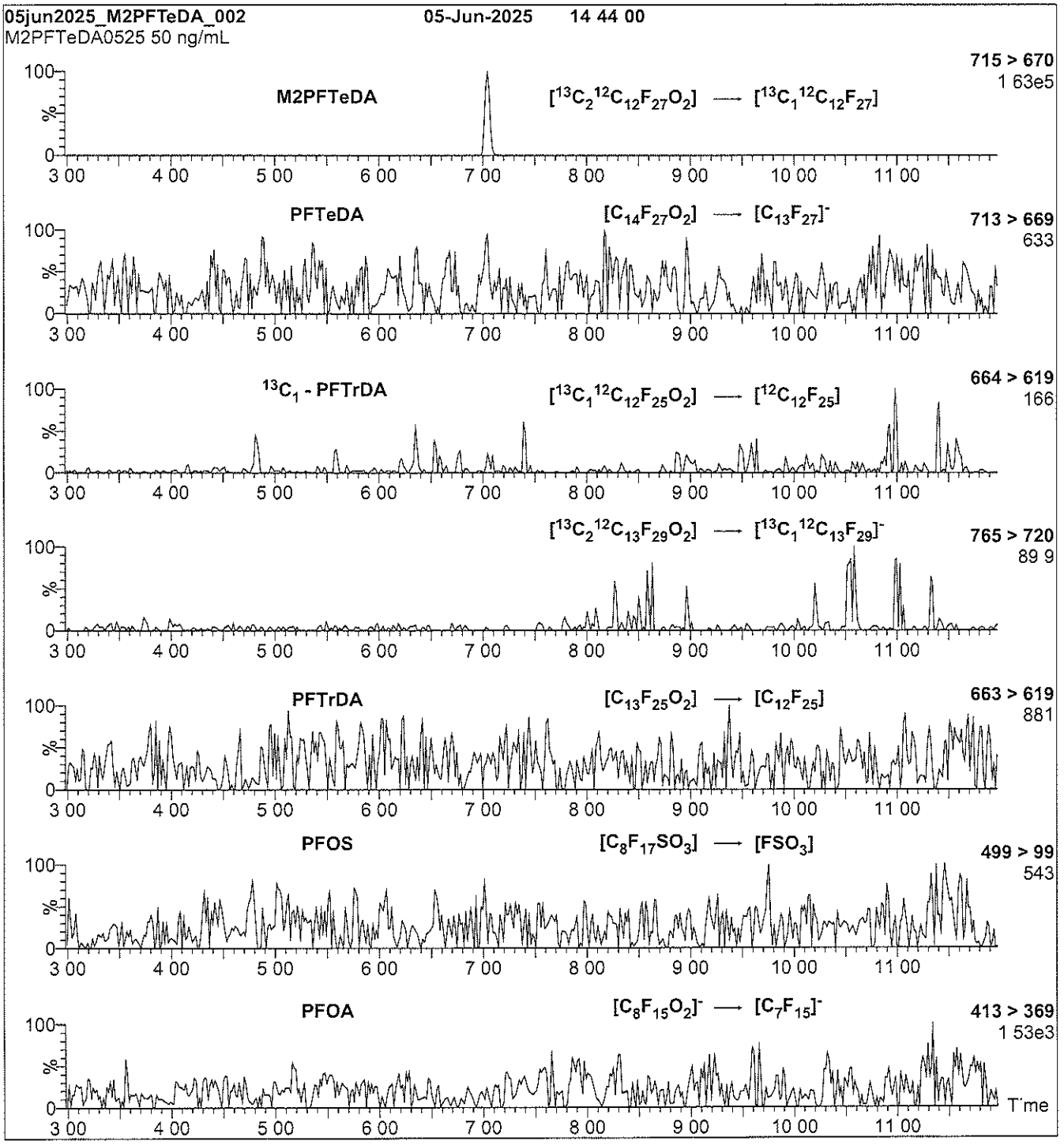
Flow: 300 µL/m n

MS Parameters.

Experiment: Full Scan (315 850 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. **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/m n

MS Parameters.

Collision Gas (mbar) = 3 76e-3
Collision Energy (eV) = 14

Reagent

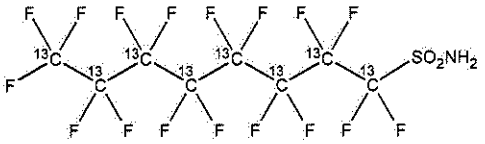
PFC_ST_04530

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M8FOSA-I
COMPOUND. Perfluoro-1-($^{13}C_8$)octanesulfonamide
LOT NUMBER. M8FOSA0525I

STRUCTURE.

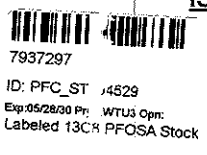


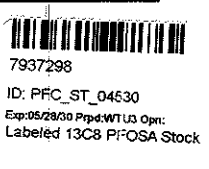
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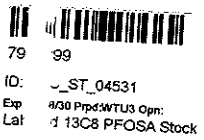


410-7937298

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
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
RECOMMENDED STORAGE.	Refrigerate ampoule		

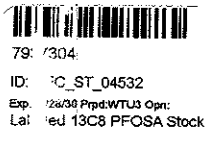


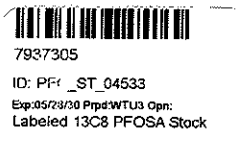


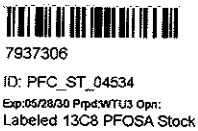


DOCUMENTATION/ DATA ATTACHED.

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 0% of perfluoro-1-($^{13}C_4$)octanesulfonamide ~0 1% of perfluoro-1-($^{13}C_7$)heptanesulfonamide and ~0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA)

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 06/04/2025 (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(s) it contains

HANDLING.

This product should only be used by qualified personnel fam liar 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 SFC/UV/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 solub lity 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, and/or SFC/UV/MS The relative response factors of the analyte of nterest 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 cal'brated 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

The individual uncertainties taken into account include those associated with weights (cal'bration 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%) has been assigned to this product.

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 n its composition and concentration until the specified expiry date n 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:

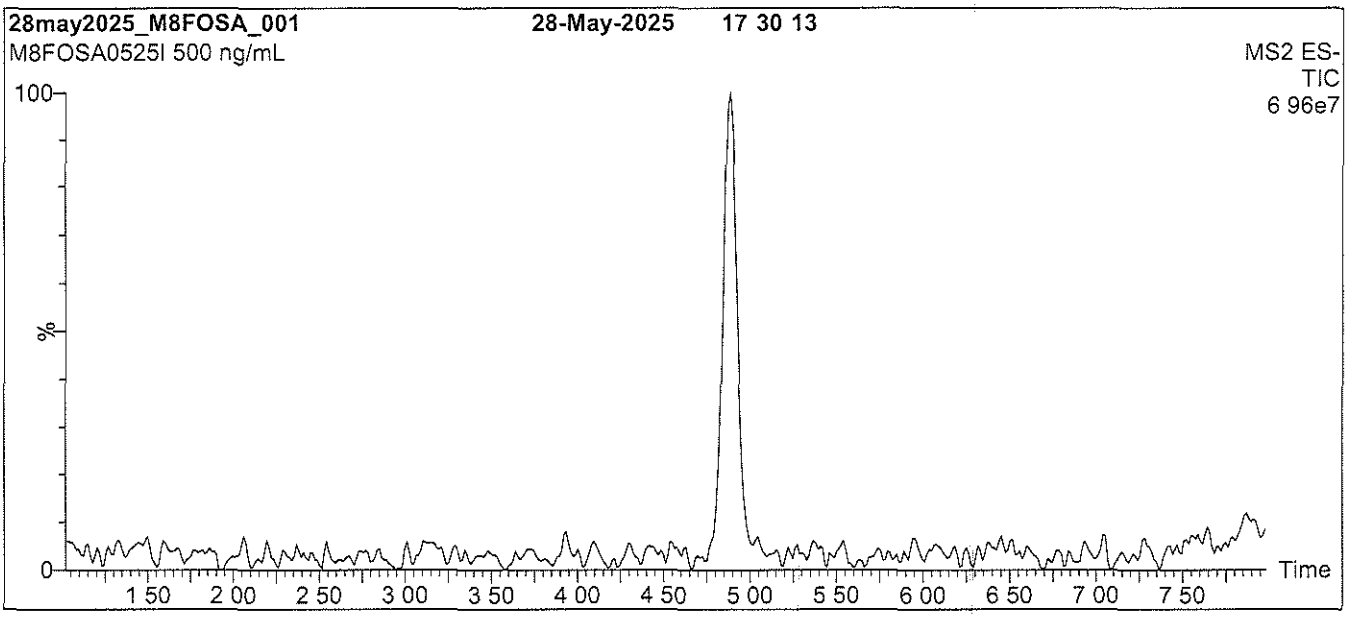
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

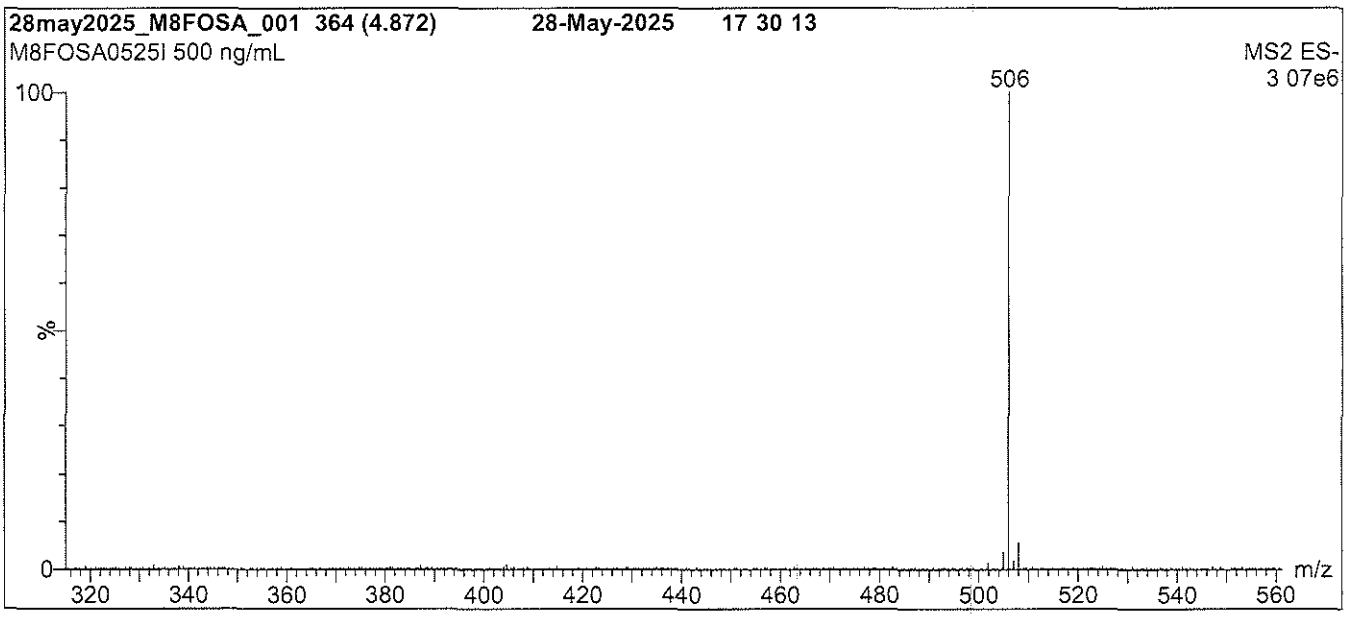
CALA
Accreditation No. A 226

ANAB
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

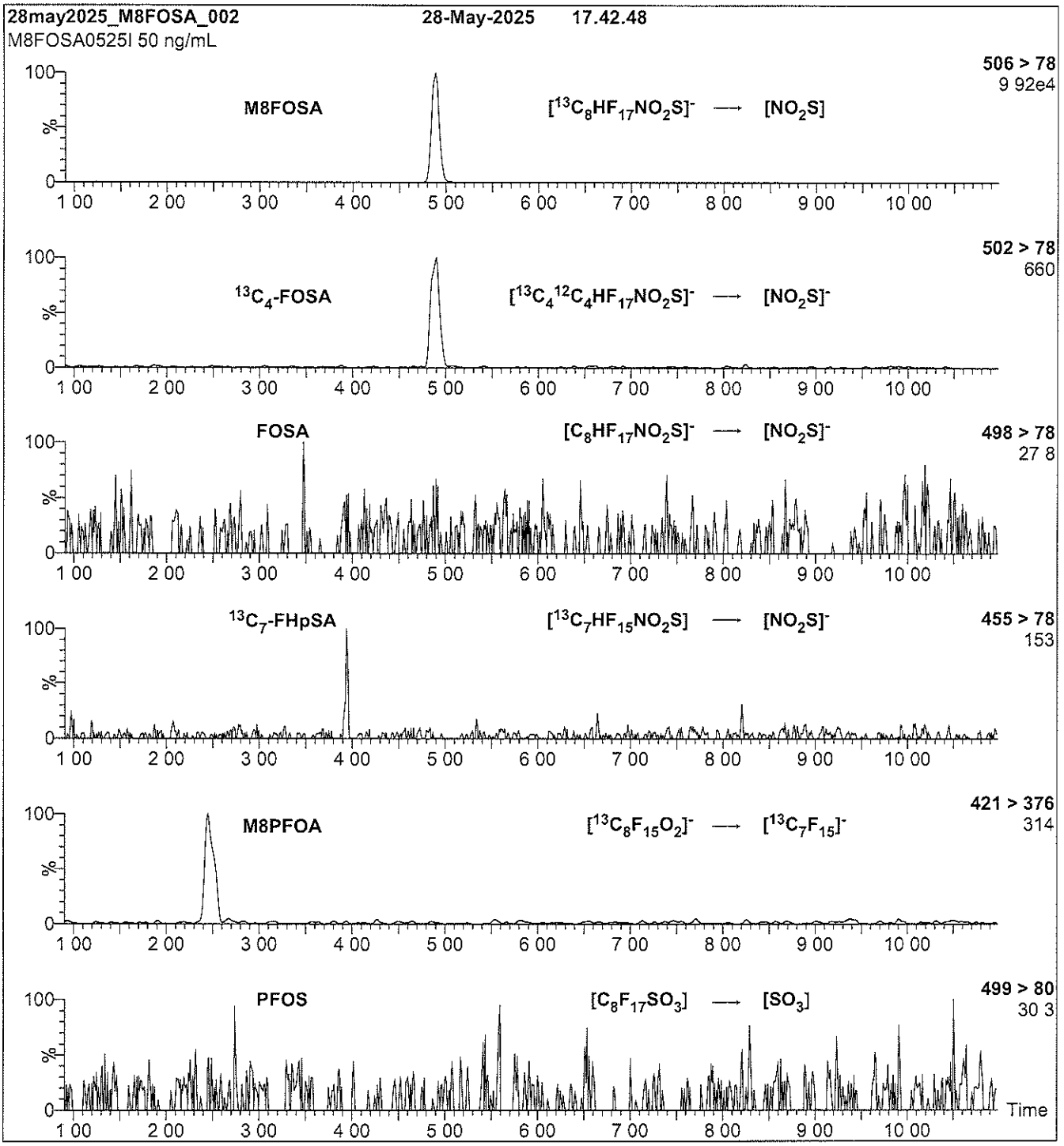
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 1 50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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

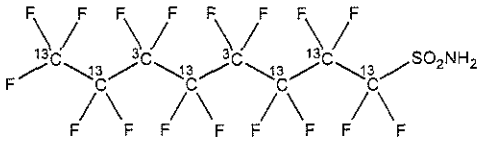
MS Parameters.

Collision Gas (mbar) = 4.43e-3
Collision Energy (eV) = 30

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M8FOSA I	**LOT NUMBER.**	M8FOSA0525I
COMPOUND.	Perfluoro-1 ($^{3}C_{8}$)octanesulfonamide		
STRUCTURE.		**CAS #.**	1365803-60-6



MOLECULAR FORMULA.	$^{3}C_{8}H_{2}F_{7}NO_{2}S$	**MOLECULAR WEIGHT:**	507 09
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Isopropanol
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY.**	≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
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 0% of perfluoro-1 ($^{13}C_{4}$)octanesulfonamide ~0 1% of perfluoro-1 ($^{3}C_{7}$)heptanesulfonamide and ~0 1% of perfluoro-n ($^{3}C_{8}$)octanoic acid (M8PFOA)

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Certified By _____ **Date** 06/04/2025 (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.

This product should only be used by qualified personnel familiar with its potential hazards and trained n the handling of hazardous chemicals Due care should be exercised to prevent unnecessary human contact or ingestion All procedures should be carried out n a well-function ng 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 SFC/UV/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 nternal standard they are compared by GC/MS LC/MS and/or SFC/UV/MS The relative response factors of the analyte of interest n each solution are required to be <5% RSD New solution lots of existing products are compared to older lots n 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 s 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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

The ndividual uncertainties taken into account nclude 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%) has been assigned to this product.

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 stud es of this product have demonstrated stability in its composition and concentration until the specified exp ry date n 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:

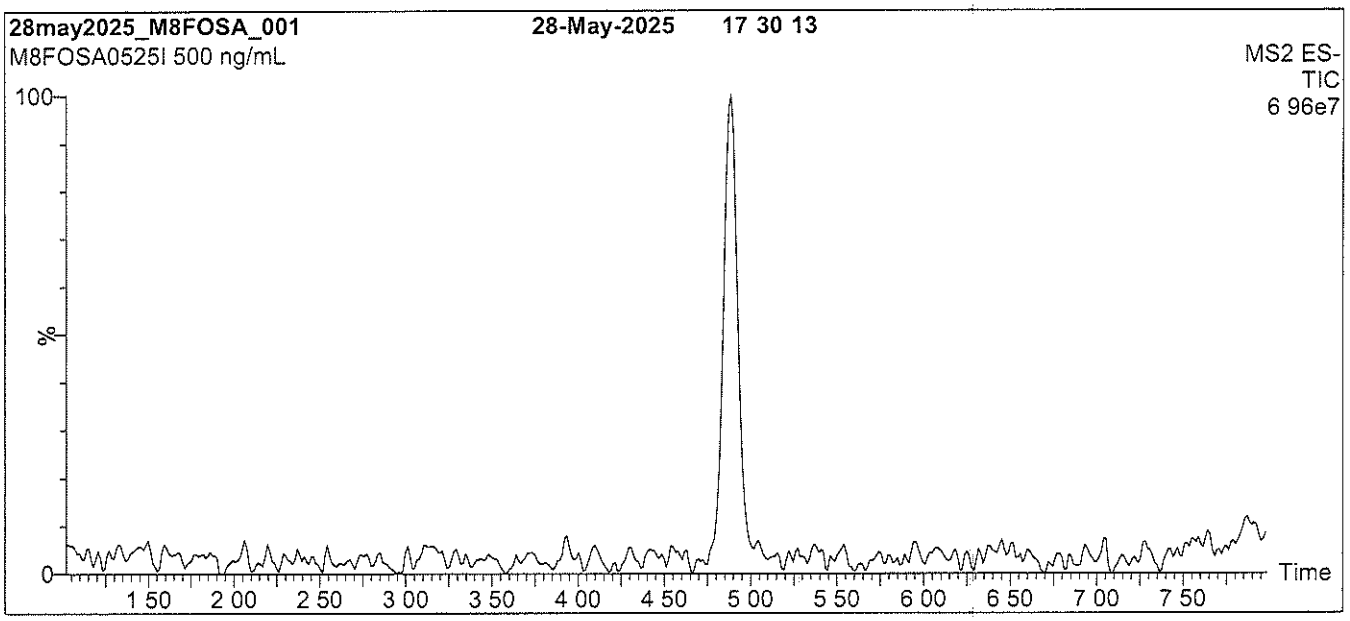
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canad an Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

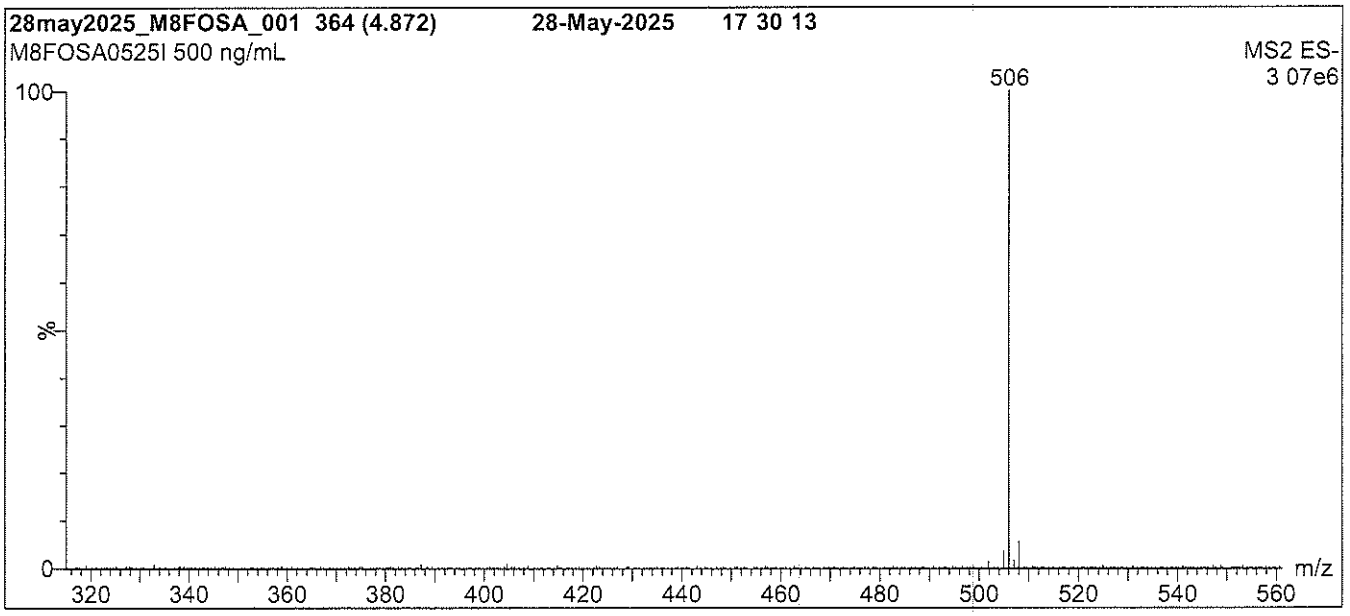
CALA Testing Accreditation No A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional nformation 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. **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.

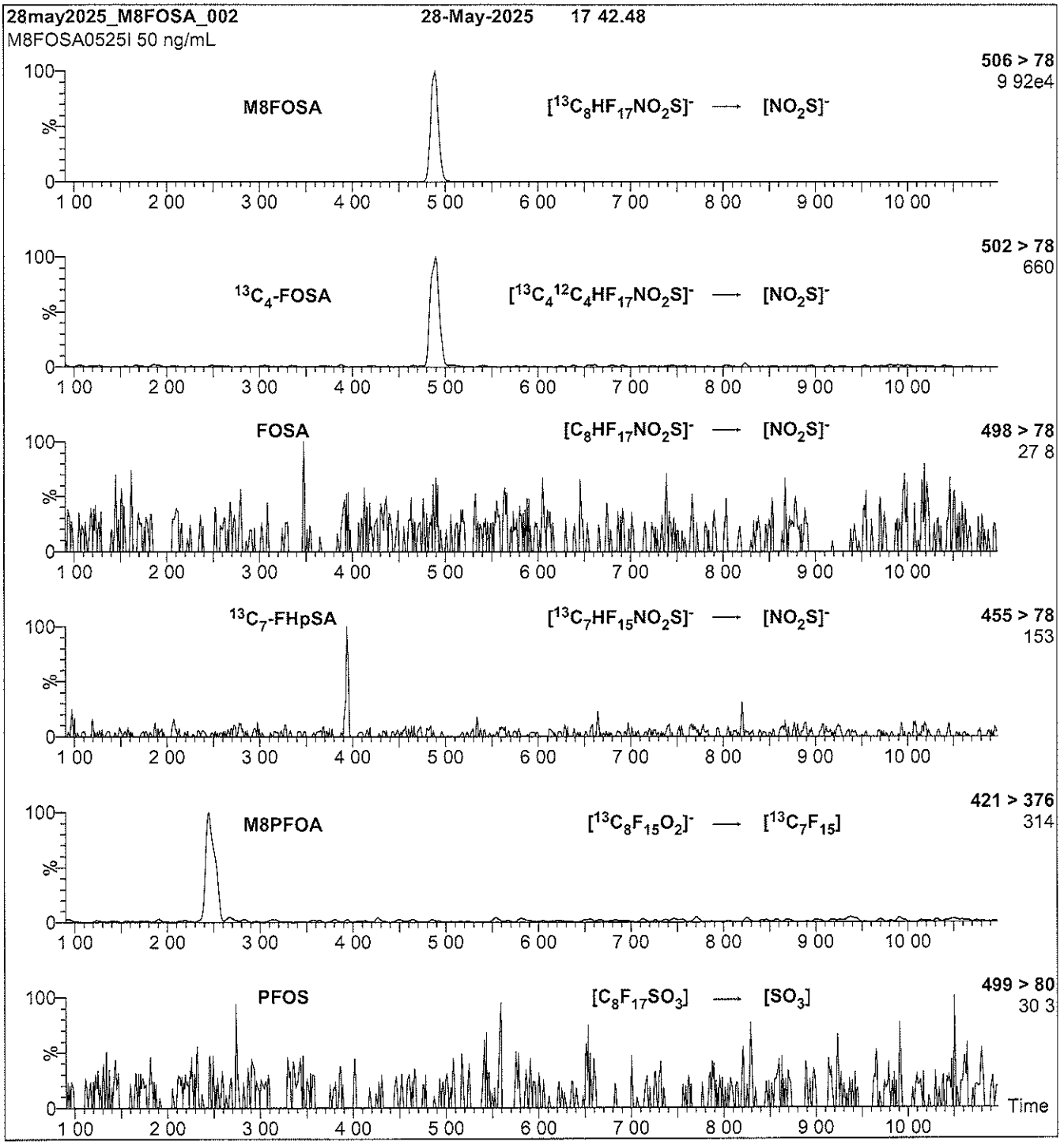
Column	Acquity UPLC BEH Shield RP$_e$ 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start 40% H_2O / 60% (80 20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment. Full Scan (315 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 1 50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.43e-3
Collision Energy (eV) = 30

Reagent

PFC_ST_04536

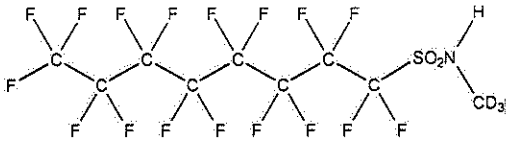
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d-N-MeFOSA-M
COMPOUND. N Methyl-d_3-perfluoro-1-octanesulfonamide

LOT NUMBER. dNMeFOSA1024M

STRUCTURE.



CAS #. 936109-37-4

410-7937495

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 (D)
LAST TESTED. (mm/dd/yyyy)	10/15/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/15/2029		
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)

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ID: PFC_ST_04535
Exp:10/15/29 Prpd:WTU3 Op
Labeled d3-NMePFO Stock

7937495
ID: PFC_ST_04536
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d3-NMePFOSA Stock

7937497
ID: PFC_ST_04
Exp:10/15/29 Prpd:W Opn:
Labeled d3-NM FOSA Stock

7937498
ID: PFC_ST_04538
Exp:10/15/29 Prpd: TU: Opn:
Labeled d3-NM PFOSA Stock

7937499
ID: PFC_ST_04539
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d3-NMePFOSA Stock

ADDITIONAL INFORMATION.

- See page 2 for further details

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Certified By _____ **Date** 10/18/2024 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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:

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QUALITY MANAGEMENT:

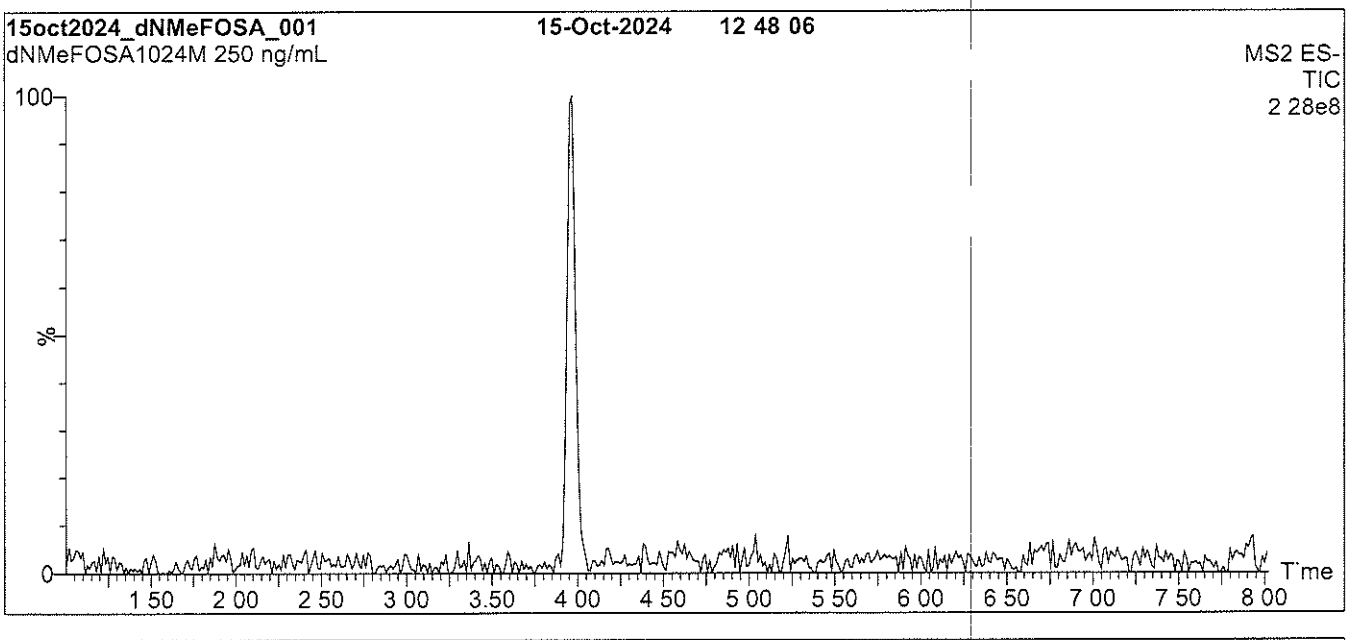
Th s product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

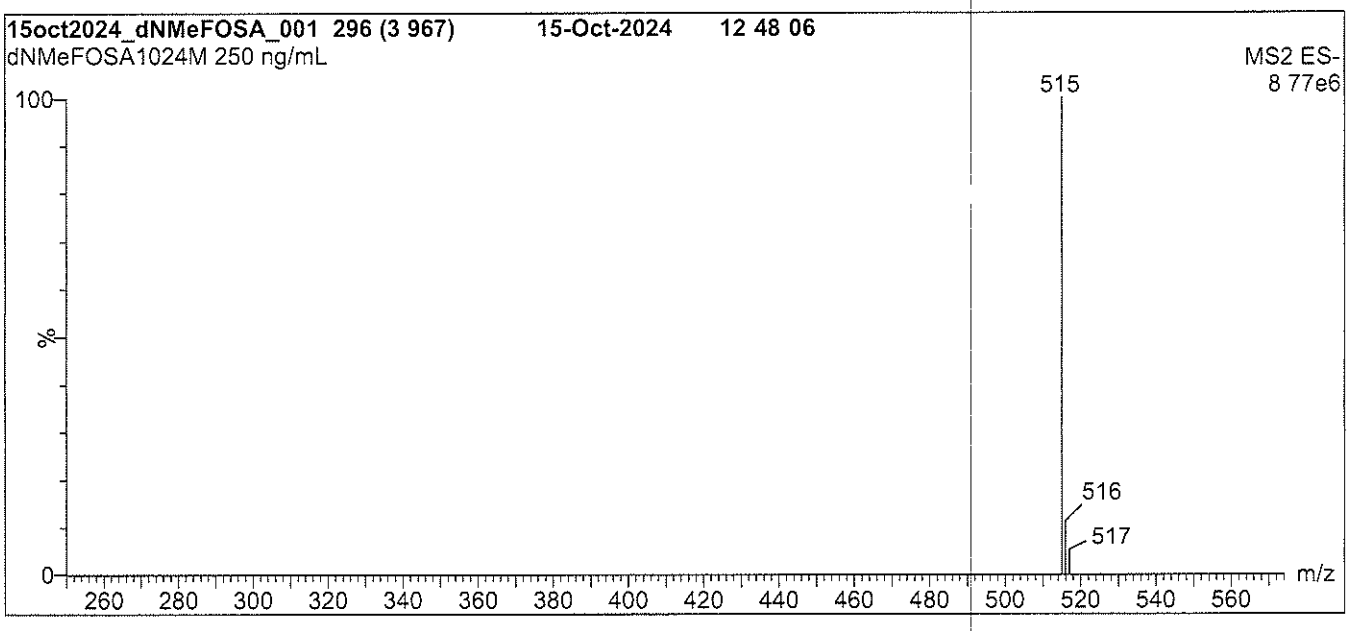
CALA Testing Accreditati No. A 226

ANAB ANSI National Ac reditation Board ACCRED TED 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. **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 9 m n and hold for 1 min
before return ng to nitial conditions in 0 5 min
Time. 12 min

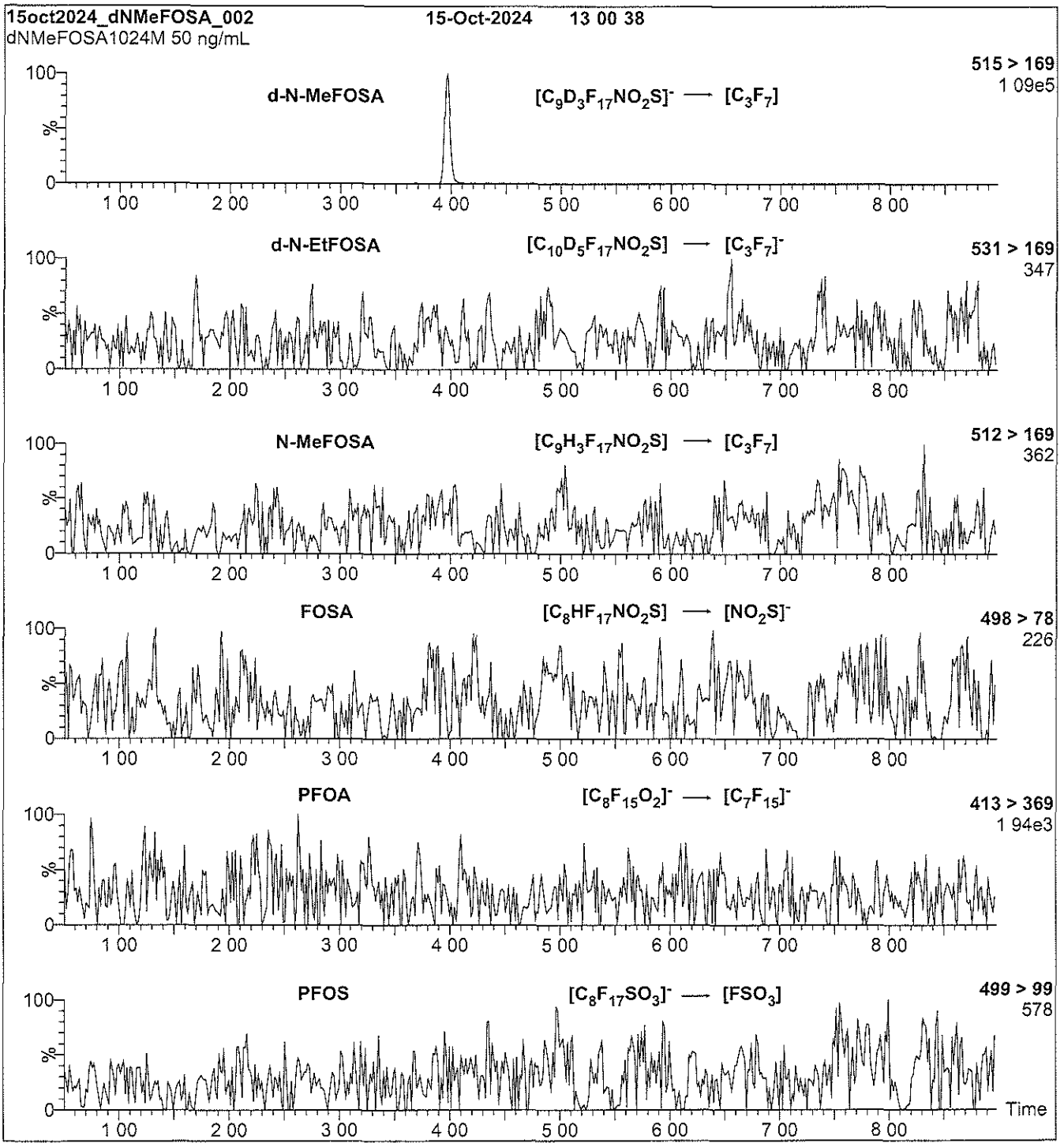
Flow· 300 µL/min

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

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) = 4.24e-3
Collision Energy (eV) = 24

Reagent

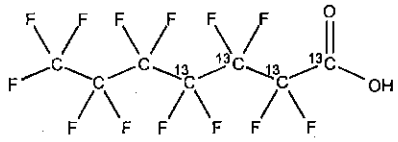
PFC_ST_04563

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M4PFHpA
LOT NUMBER: M4PFHpA1024
COMPOUND: Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid

STRUCTURE:



CAS #: 2328024-55-9

410-7938123

MOLECULAR FORMULA: $^{13}C_4{}^{12}C_3HF_{13}O_2$
MOLECULAR WEIGHT: 368.03
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy) 10/07/2024
EXPIRY DATE: (mm/dd/yyyy) 10/07/2029
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

7938105
ID: PFC_ST_04561
Exp:10/07/29 Prpd:WTU3 Opn:
M4PFHpA Stock

7938106
ID: PFC_ST_04562
Exp:10/07/29 Prpd:WTU3 Opn:
M4PFHpA Stock

7938122
ID: PFC_ST_04563
Exp:10/07/29 Prpd:WTU3 Opn:
M4PFHpA Stock

7938123
ID: PFC_ST_04564
Exp:10/07/29 Prpd:WTU3 Opn:
M4PFHpA Stock

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:** 10/17/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

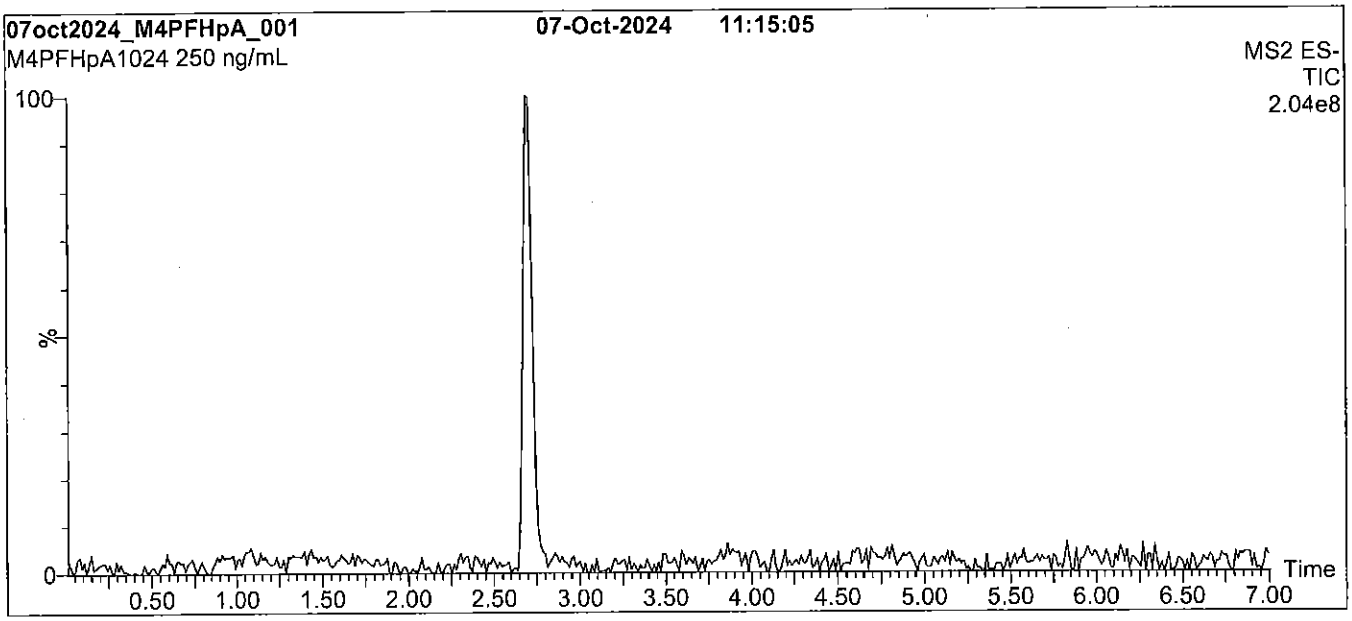
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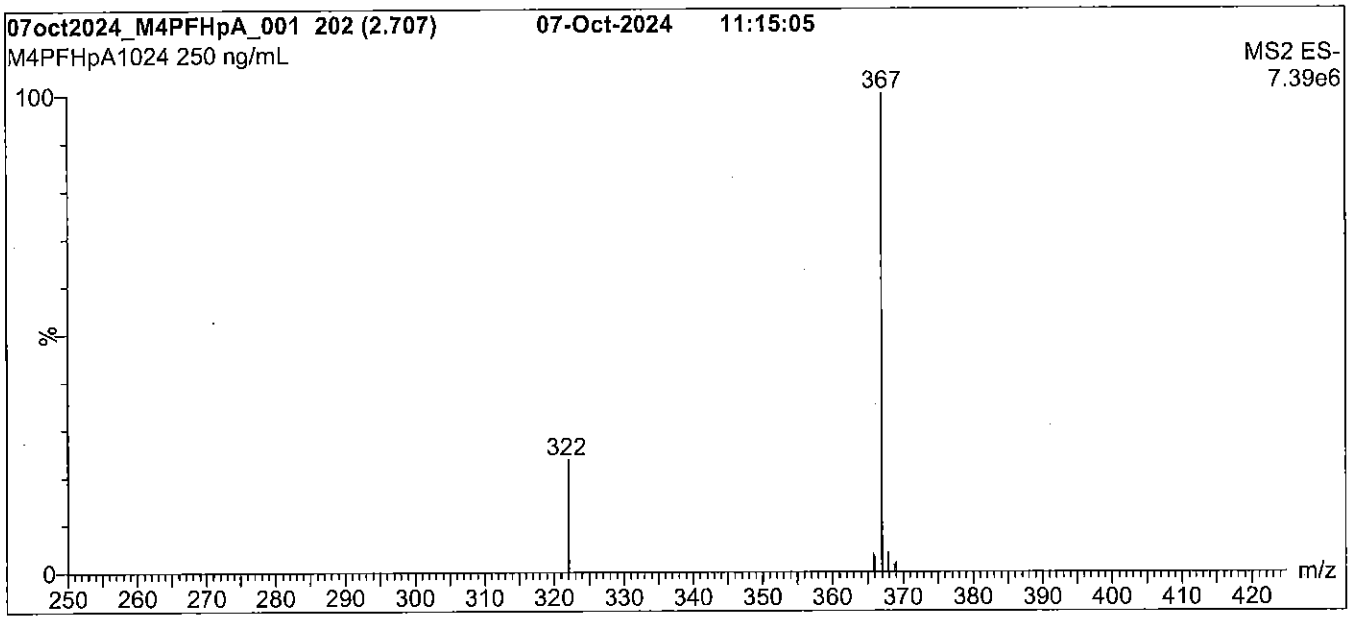
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

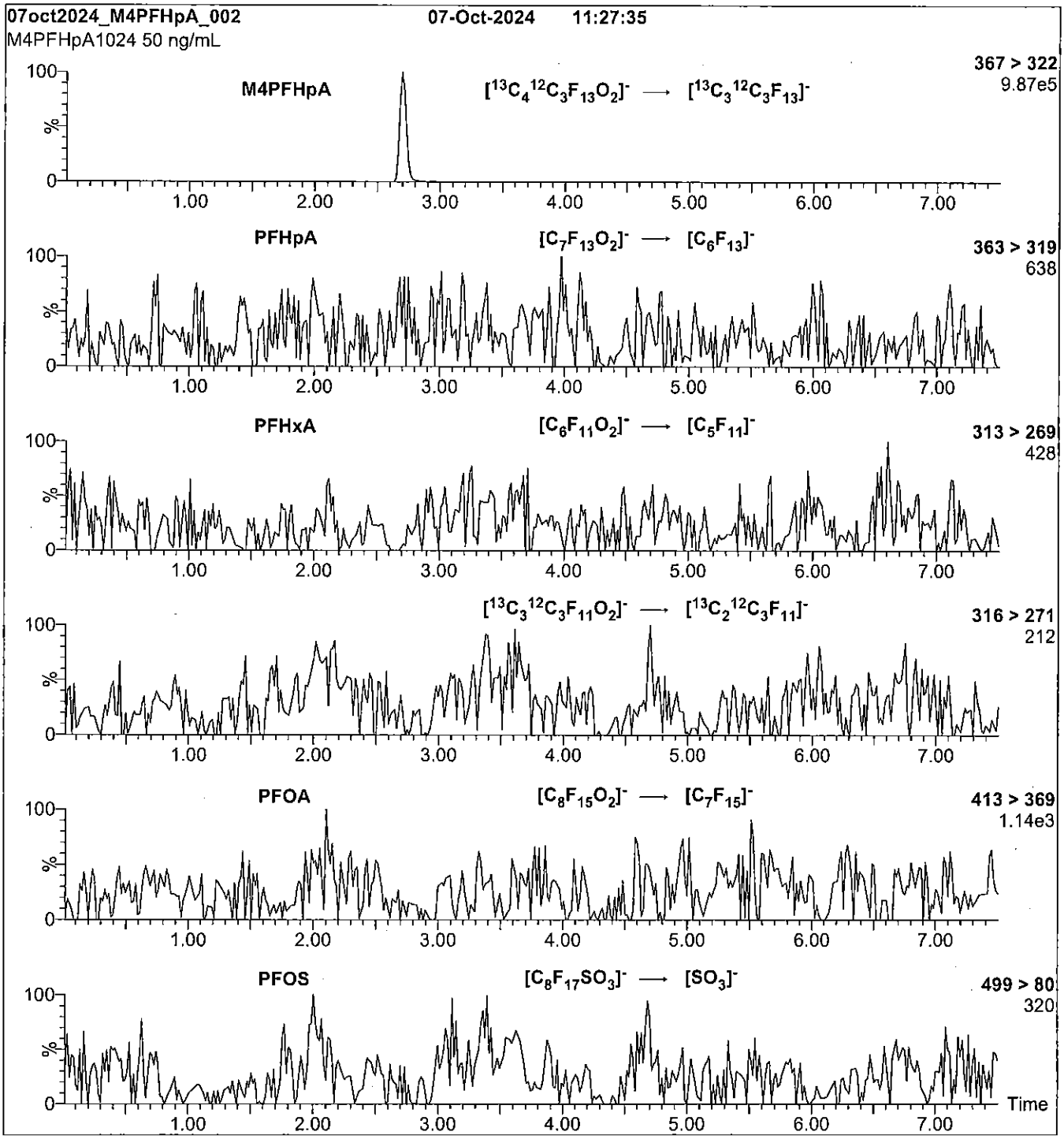
Flow: 300 µL/min

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: **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) = 4.26e-3
Collision Energy (eV) = 8

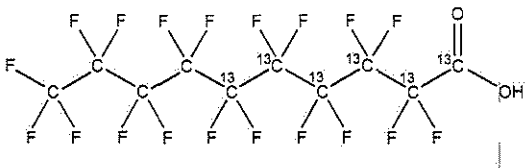
Reagent

PFC_ST_04568

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	M6PFDA	**LOT NUMBER.**	M6PFDA0525
COMPOUND.	Perfluoro-n-(1 2 3 4 5 6-$^{13}C_6$)decanoic acid		
STRUCTURE.		**CAS #.**	2328024-56-0



410-7938307

MOLECULAR FORMULA.	$^{13}C_6\ ^{2}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520 04
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

7938307
ID: PFC_ST_04568
Exp:05/28/30 Prpd:WTU3 Opn:
M6PFDA Stock

7938308
ID: PFC_ST_04569
Exp:05/28/30 Prpd:WTU3 Opn:
M6PFDA Stock

7938309
ID: PFC_ST_04570
Exp:05/28/30 Prpd:WTU3 Opn:
M6PFDA Stock

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-(1,2 3,4 5- $^{3}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 05/30/2025 (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.

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HOMOGENEITY:

Prior to solution preparation crystalline material is tested for homogeneity us ng a variety of techniques (as stated above) and its solub lity 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 and/or SFC/UV/MS The relative response factors of the analyte of nterest 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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The combined relative standard uncertainty $u_c(y)$ of a value y and the uncertainty of the independent parameters x x_2, x_n on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

The individual uncertainties taken into account nclude 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%) has been assigned to this product.

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 stud es 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:

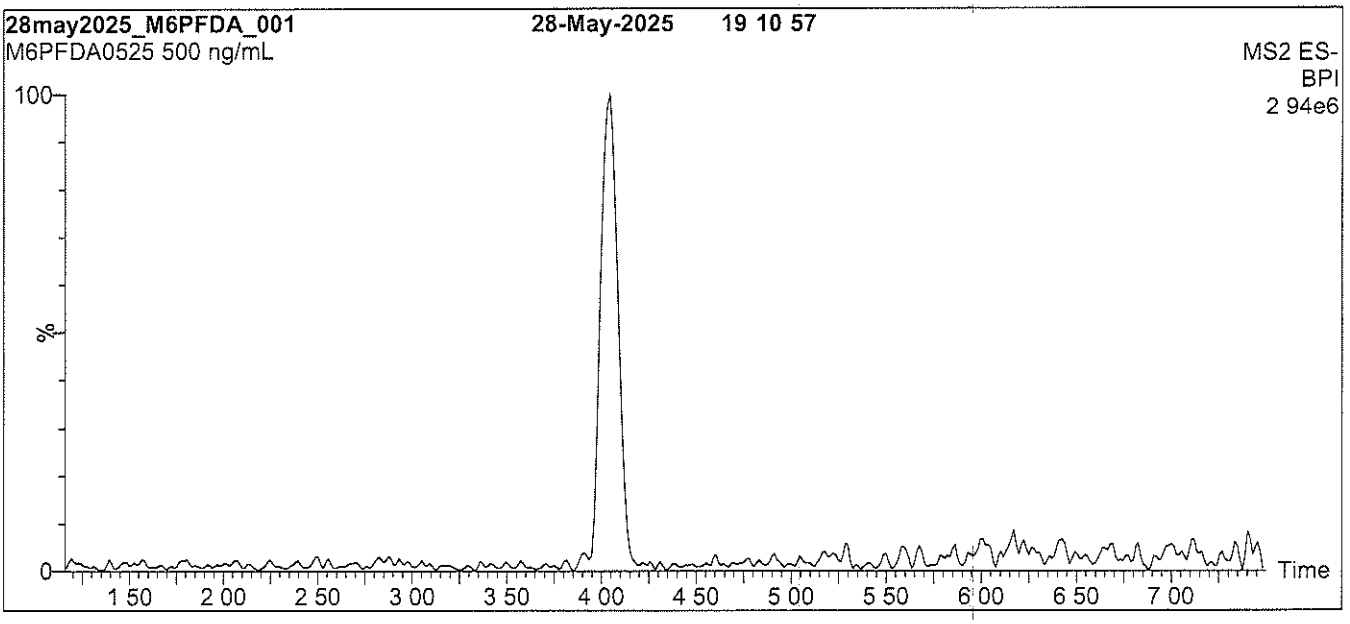
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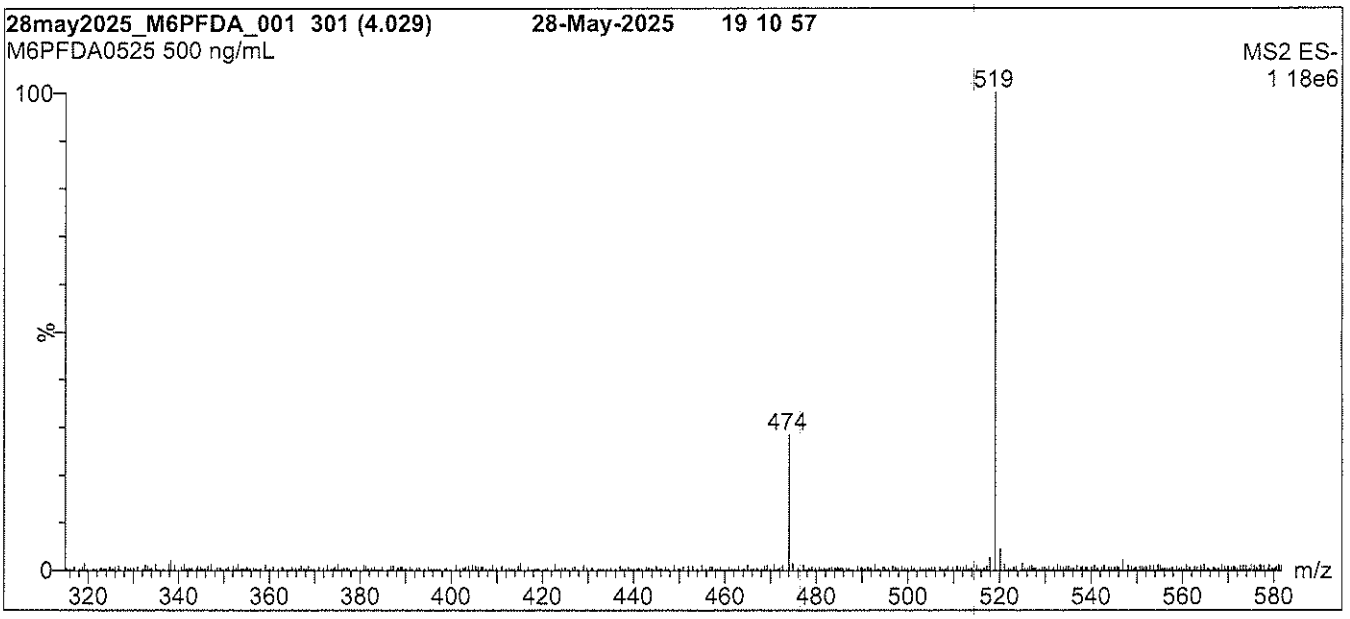
CALA Te ing Accreditat on No. A1226

ANAB ANSI Nat cnal Accreditation Board ACCRED TED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M6PFDA, 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$_8$
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 0.5 min
Time 12 min

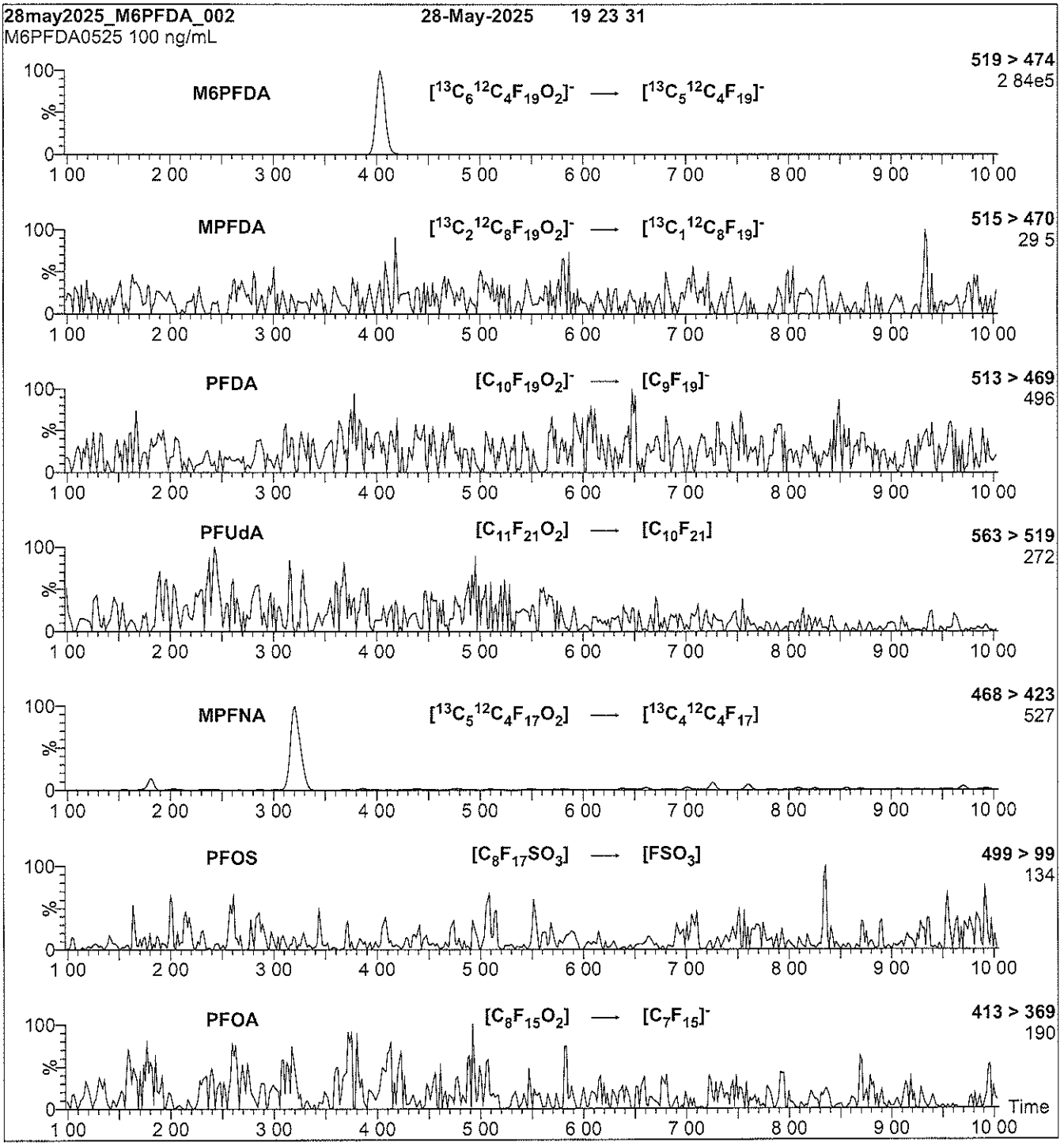
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 4.46e-3
Collision Energy (eV) = 10

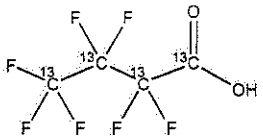
Reagent

PFC_ST_04605

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	MPFBA	**LOT NUMBER.**	MPFBA0924
COMPOUND.	Perfluoro-n-($^{13}C_4$)butanoic acid		
STRUCTURE.		**CAS #.**	1017281 29-6



410-8073376

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
LAST TESTED. (mm/dd/yyyy)	09/09/2024		
EXPIRY DATE. (mm/dd/yyyy)	09/09/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

8073374
ID: PFC_ST_04604
Exp:09/09/29 Prpd:WTU3 Opn:
Labeled 13C4 PFBA Stock

8073376
ID: PFC_ST_04605
Exp:09/09/29 Prpd:WTU3 Opn:
Labeled 13C4 PFBA Stock

8073377
ID: PFC_ST_04606
Exp:09/09/29 Prpd:WTU3 Opn:
Labeled 13C4 PFBA Stock

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** 09/10/2024 (mm/dd/yyyy)
B G. Chittim General Manager

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

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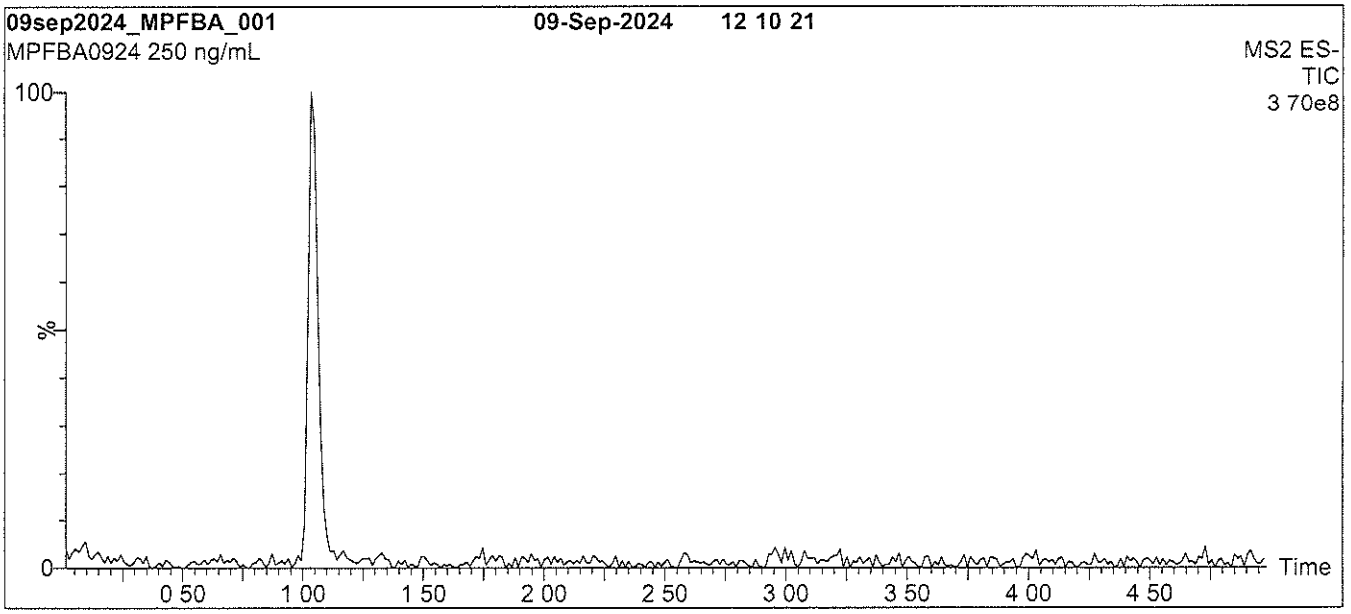
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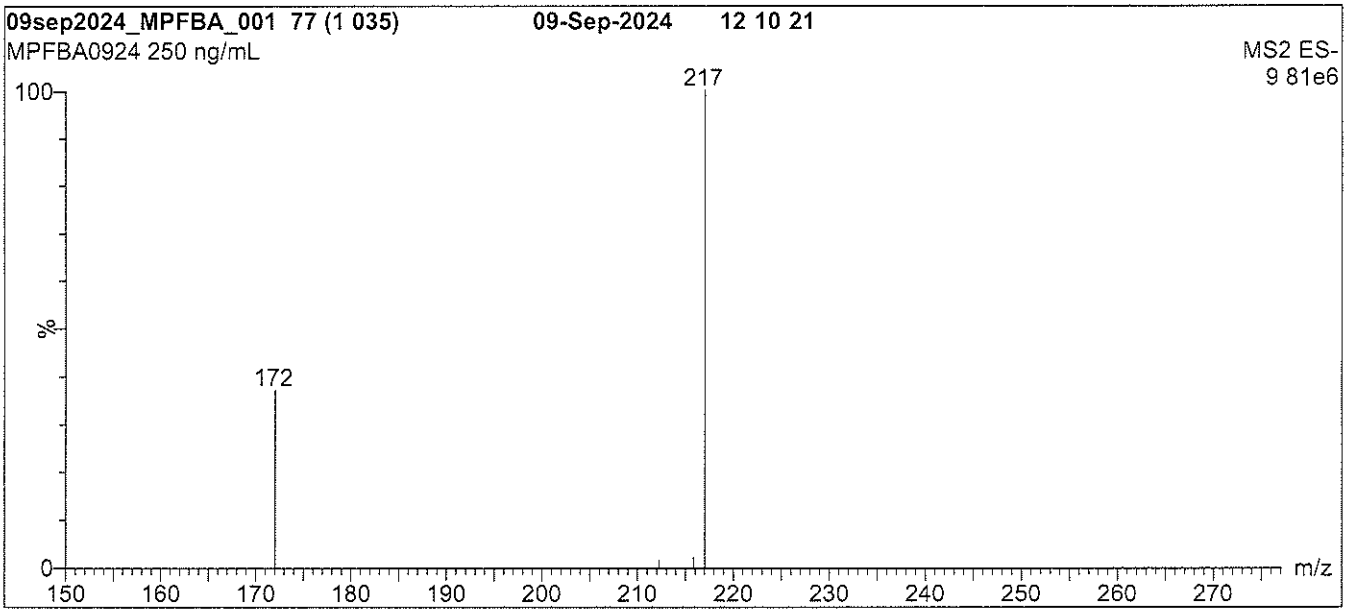
CALA Test ng Accreditation No. A 226

ANAB ANSI Nat onal Accreditation Board ACCRED TED ISO 17034 REFERENCE MATERIAL PRODUCER

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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$_8$ 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

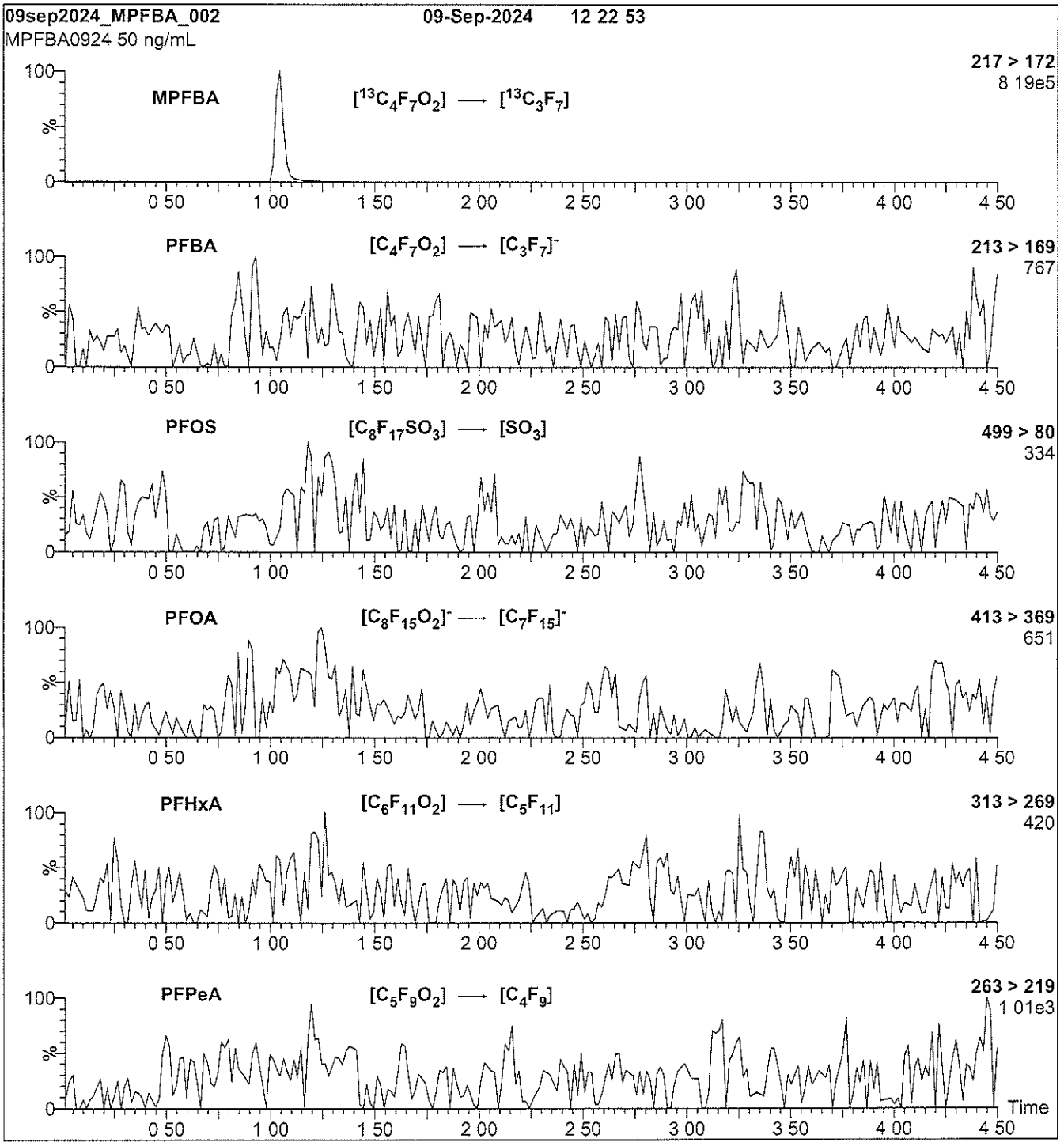
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (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 29e-3
Collision Energy (eV) = 8

Reagent

PFC_ST_04617

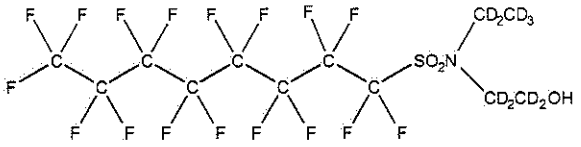
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d9-N EtFOSE M **LOT NUMBER.** d9NEtFOSE0425M

COMPOUND. 2-(N-Ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE. **CAS #.** 1265205-96-6



410-8074138

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)	04/17/2025 (HRGC/LRMS) 04/09/2025 (LC/MS)		
EXPIRY DATE. (mm/dd/yyyy)	04/17/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

8074138
ID: PFC_ST_04617
Exp:04/17/30 Prpd:WTU3 Opn:
Labeled d9-NEtPFOSAE Stock

8074139
ID: PFC_ST_04618
Exp:04/17/30 Prpd:WTU3 Opn:
Labeled d9-NEtPFOSAE Stock

8074140
ID: PFC_ST_04619
Exp:04/17/30 Prpd:WTU3 Opn:
Labeled d9-NEtPFOSAE Stock

8074141
ID: PFC_ST_04620
Exp:04/17/30 Prpd:WTU3 Opn:
Labeled d9-NEtPFOSAE Stock

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
- Contains ~0 7% of branched 2-(N-ethyl-d5-perfluorooctanesulfonamido)ethan-d4-ol by ^{19}F NMR.

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Certified By _____ **Date** 04/23/2025 (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 SFC/UV/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 and/or SFC/UV/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 x_2, x_n on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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%) has been assigned to this product.

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:

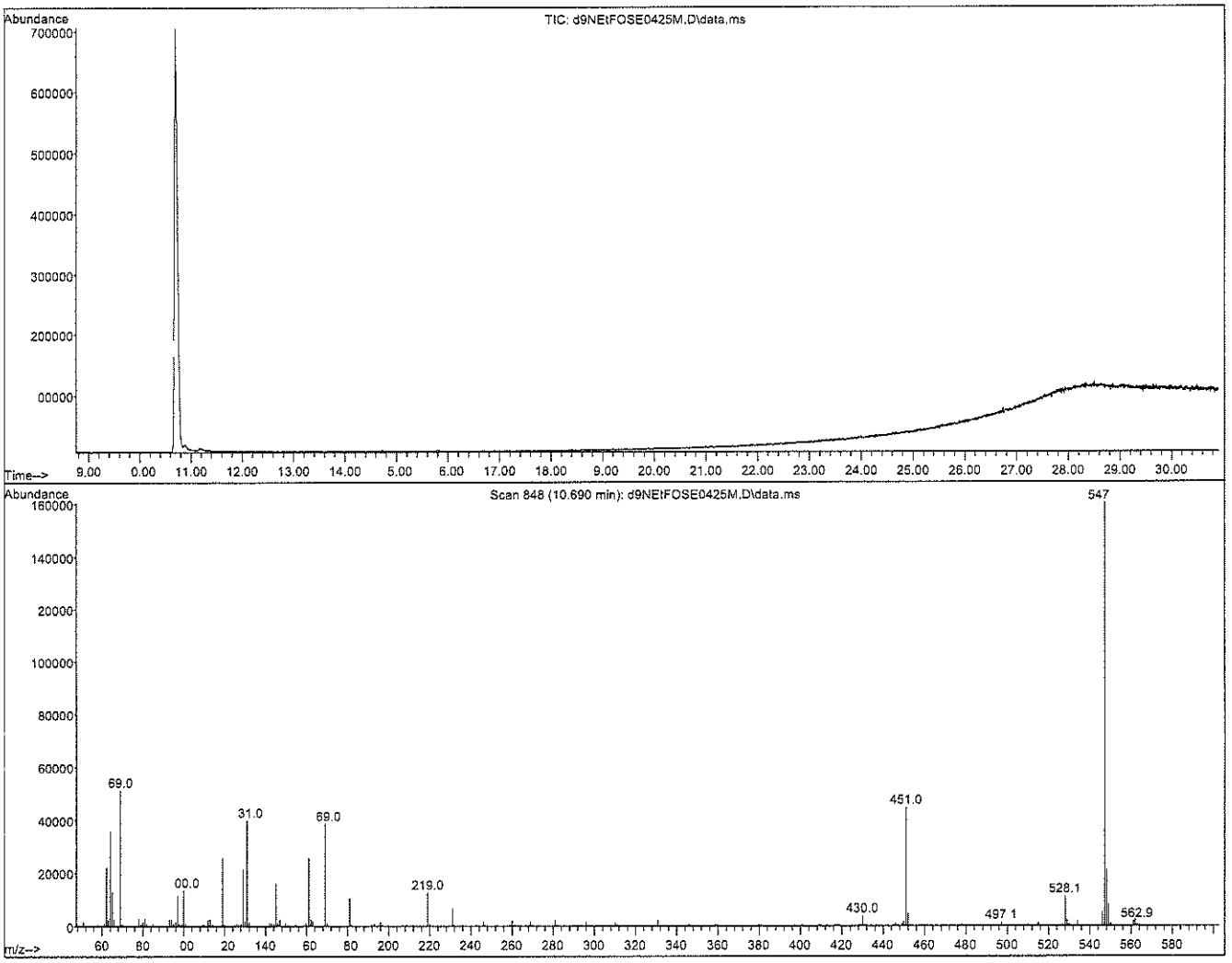
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

CALA Testing Accreditation No. A 226

ANAB 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)**



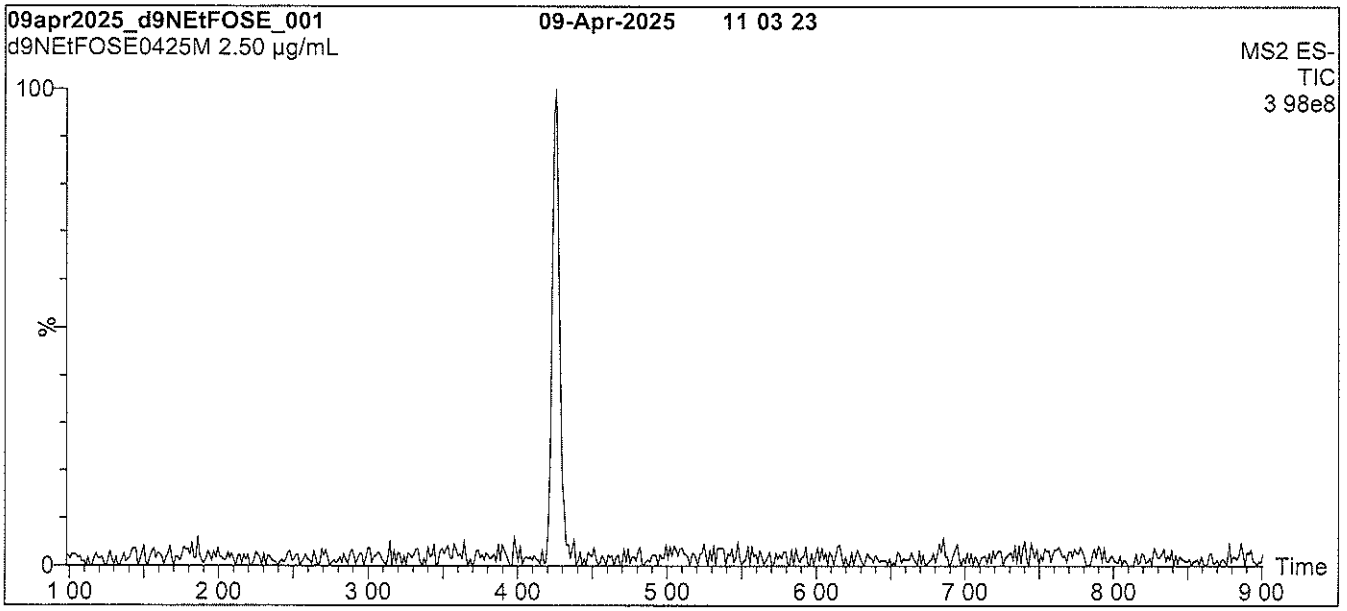
Conditions for Figure 1.

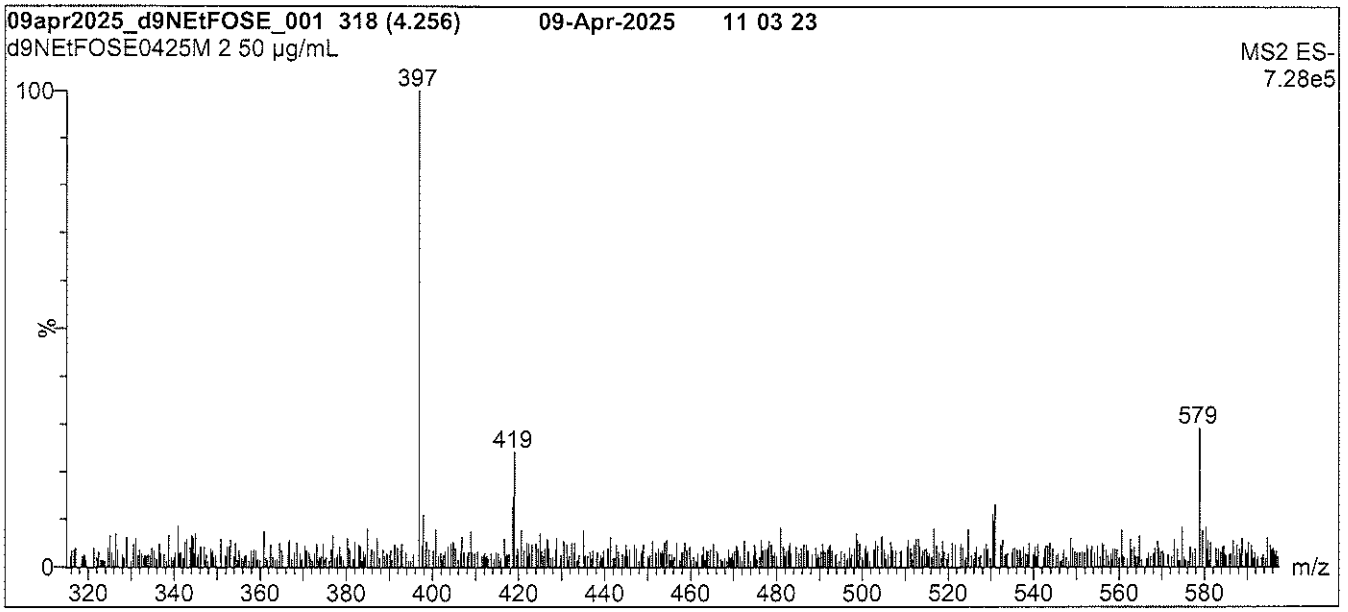
Agilent 7890A HRGC
Agilent 5975C MSD

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-S micro MS

Chromatographic Conditions.

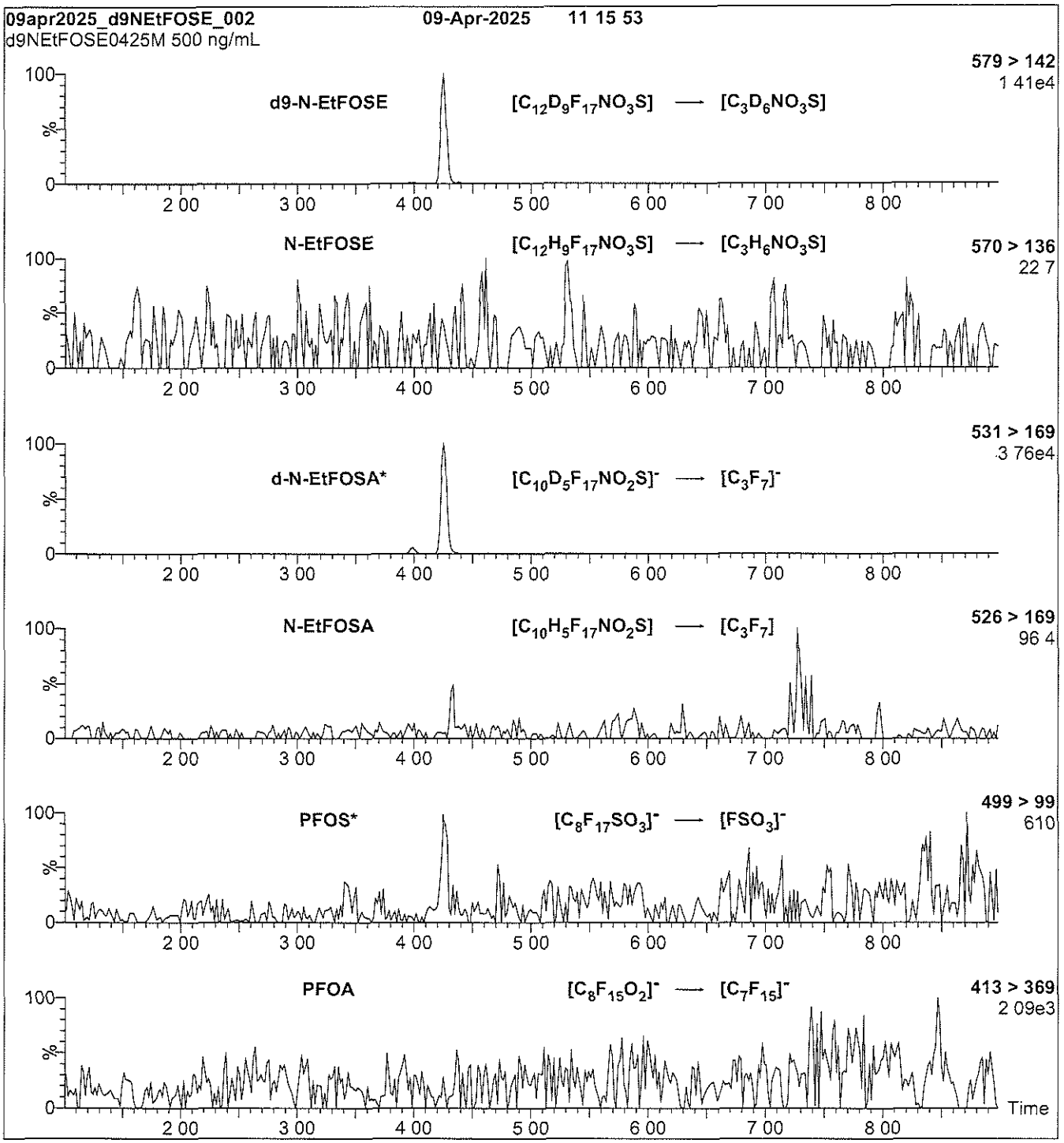
Column	Acquity UPLC BEH Shield RP$_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 30% H_2O / 70% MeOH Ramp to 90% organic over 9 m n and hold for 1 min before returning to nitial conditions in 0.5 m n Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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)**



*Note: Formed by in-source fragmentation

Conditions for Figure 3.

Injection	On-column (d9-N-EtFOSE-M)
Mobile phase	Same as Figure 2
Flow	300 µL/m n

MS Parameters.

Collision Gas (mbar) = 5.98e-3
Collision Energy (eV) = 32

Reagent

PFC_ST_04627

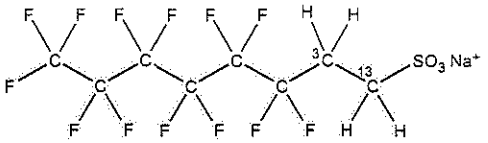
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. M2-6.2FTS **LOT NUMBER.** M262FTS1224

COMPOUND. Sodium 1H 1H 2H 2H-perfluoro(1 2- $^{3}C_{2}$)octanesulfonate

STRUCTURE. **CAS #.** 2708218-89-5



410-8074416

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
LAST TESTED. (mm/dd/yyyy)	12/19/2024		
EXPIRY DATE. (mm/dd/yyyy)	12/19/2029		
RECOMMENDED STORAGE.	Refrigerate ampoule		

8074414
ID: PFC ST 04625
Exp:12/19/29 Prpd:WTU3 Opn:
Labeled 13C2-6:2-FTS Stock

8074415
ID: PFC_ST_04626
Exp:12/19/29 Prpd:WTU3 Opn:
Labeled 13C2-6:2-FTS Stock

DOCUMENTATION/ DATA ATTACHED.

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

8074416
ID: PFC_ST_04627
Exp:12/19/29 Prpd:WTU3 Opn:
Labeled 13C2-6:2-FTS Stock

8074417
ID: PFC_ST_04628
Exp:12/19/29 Prpd:WTU3 Opn:
Labeled 13C2-6:2-FTS Stock

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)

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Certified By _____ **Date** 12/20/2024 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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 and/or SFC/UV/MS The relative response factors of the analyte of nterest 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 crystall ne 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 njection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

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The combined relative standard uncerta nty $u_c(y)$ of a value y and the uncertainty of the independent parameters x x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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

The ndividual uncertainties taken into account nclude 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%) has been assigned to this product.

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 stud es has also been established

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability n 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 sh pment, 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:

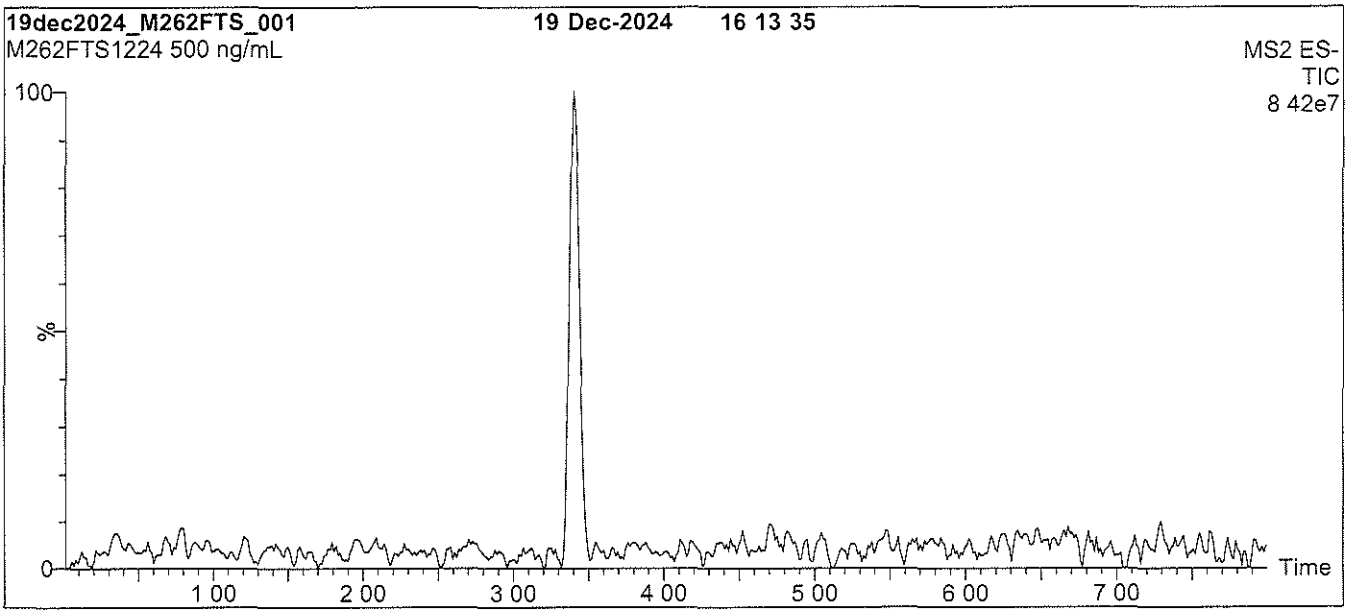
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canad an Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR 1523).

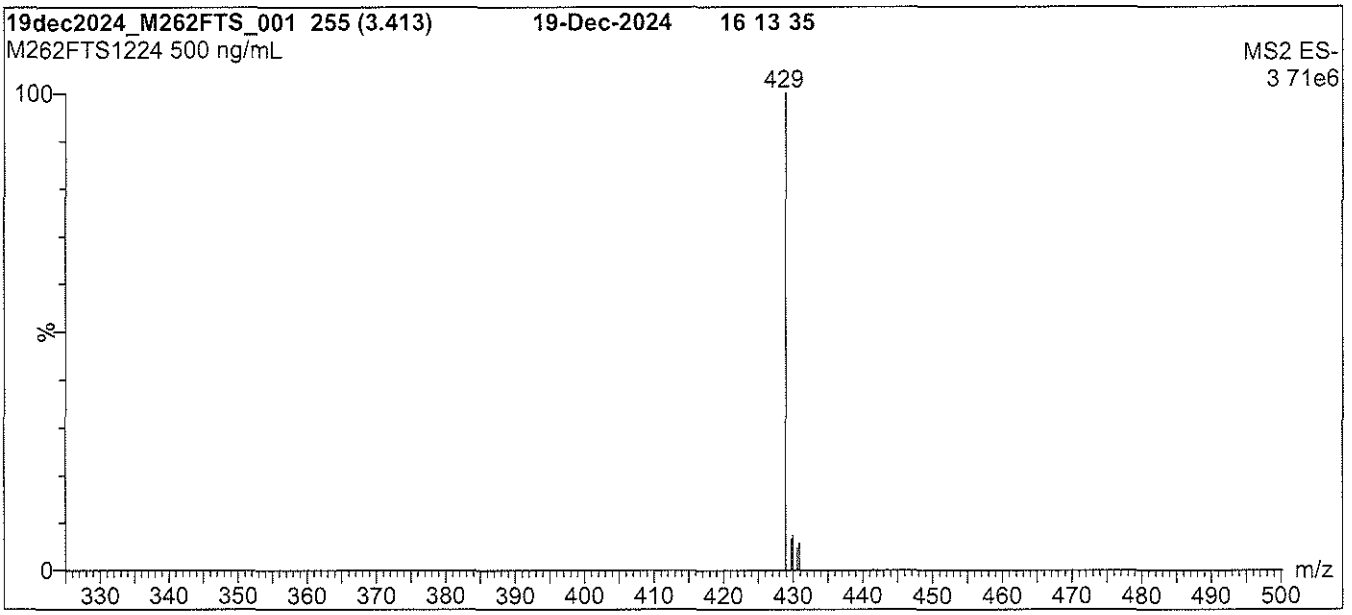
CALA Testing Accreditation No. A1226

ANAB ANSI Nat onal Accreditation Board ACCRED TED ISO 17034 REFERENCE MATERIAL PRODUCER

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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.

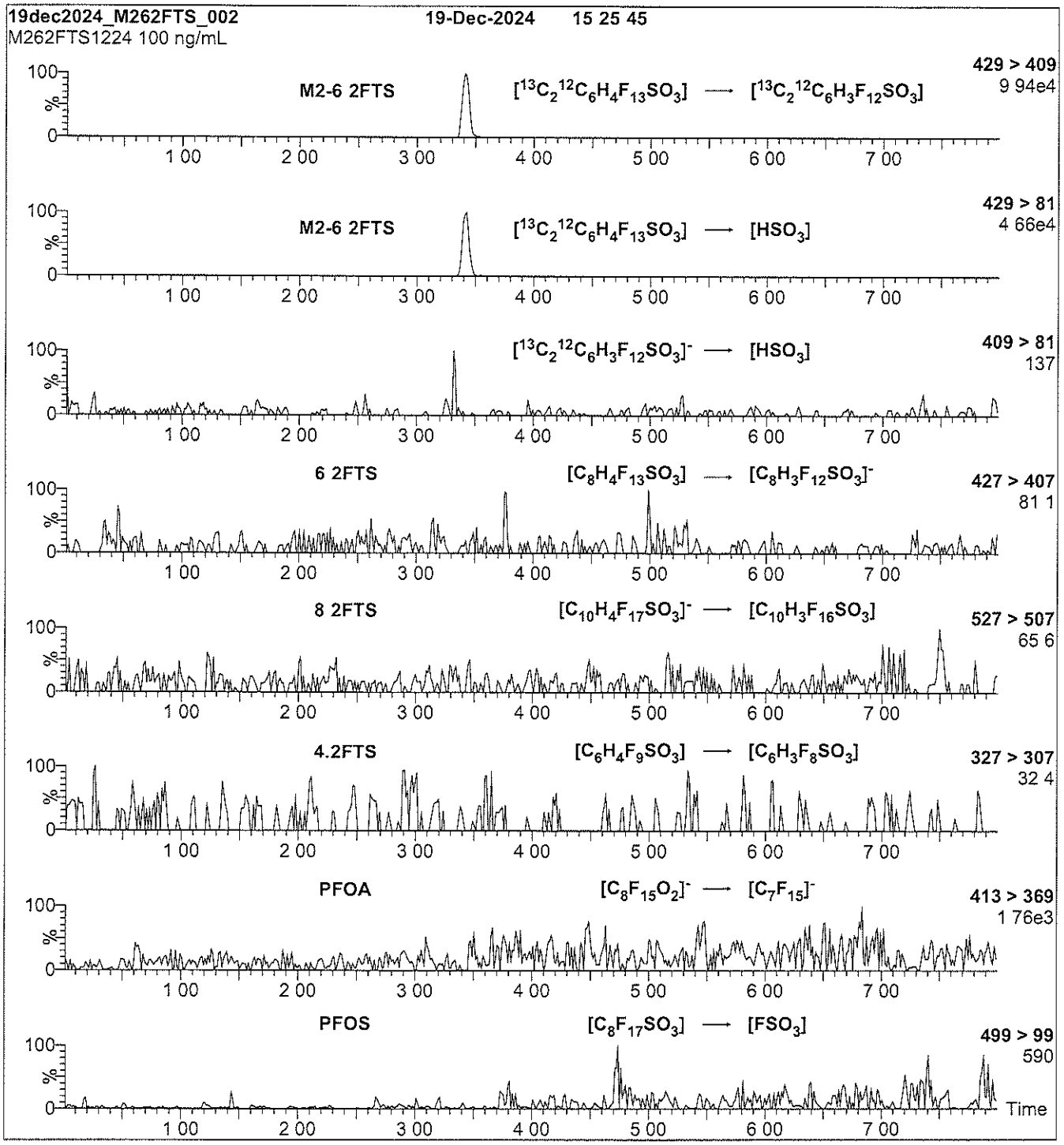
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80·20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time· 12 min
Flow·	300 µL/m·n

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 4.46e-3
Collision Energy (eV) = 20

Reagent

PFC_ST_04631

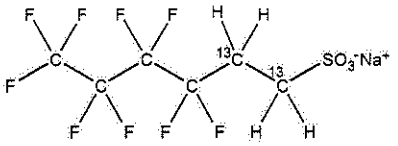
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M2-4 2FTS **LOT NUMBER.** M242FTS0125

COMPOUND. Sodium 1H 1H 2H 2H perfluoro(1 2 $^{3}C_{2}$)hexanesulfonate ($^{13}C_{2}$-4 2 FTS)

STRUCTURE.



CAS #. 2708218-88-4

410-8074462

MOLECULAR FORMULA.	$^{13}C_{2}{}^{12}C_{4}H_{4}F_{9}SO_{3}Na$	**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
LAST TESTED. (mm/dd/yyyy)	01/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/28/2030		
RECOMMENDED STORAGE.	Refrigerate ampoule		

8074459
ID: PFC_ST_04629
Exp:01/28/30 Prpd:WTU3 Opn:
Labeled 13C2-4:2-FTS Stock

8074461
ID: PFC_ST_04630
Exp:01/28/30 Prpd:WTU3 Opn:
Labeled 13C2-4:2-FTS Stock

DOCUMENTATION/ DATA ATTACHED.

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

8074462
ID: PFC_ST_04631
Exp:01/28/30 Prpd:WTU3 Opn:
Labeled 13C2-4:2-FTS Stock

8074463
ID: PFC_ST_04632
Exp:01/28/30 Prpd:WTU3 Opn:
Labeled 13C2-4:2-FTS Stock

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)
- Contains ≤0 5% of sodium 1H 2H-perfluoro-1-(1 2-$^{13}C_{2}$)hexenesulfonate by ^{9}F NMR

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Certified By _____ **Date** 01/28/2025 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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where x is expressed as a relative standard uncertainty of the individual parameter

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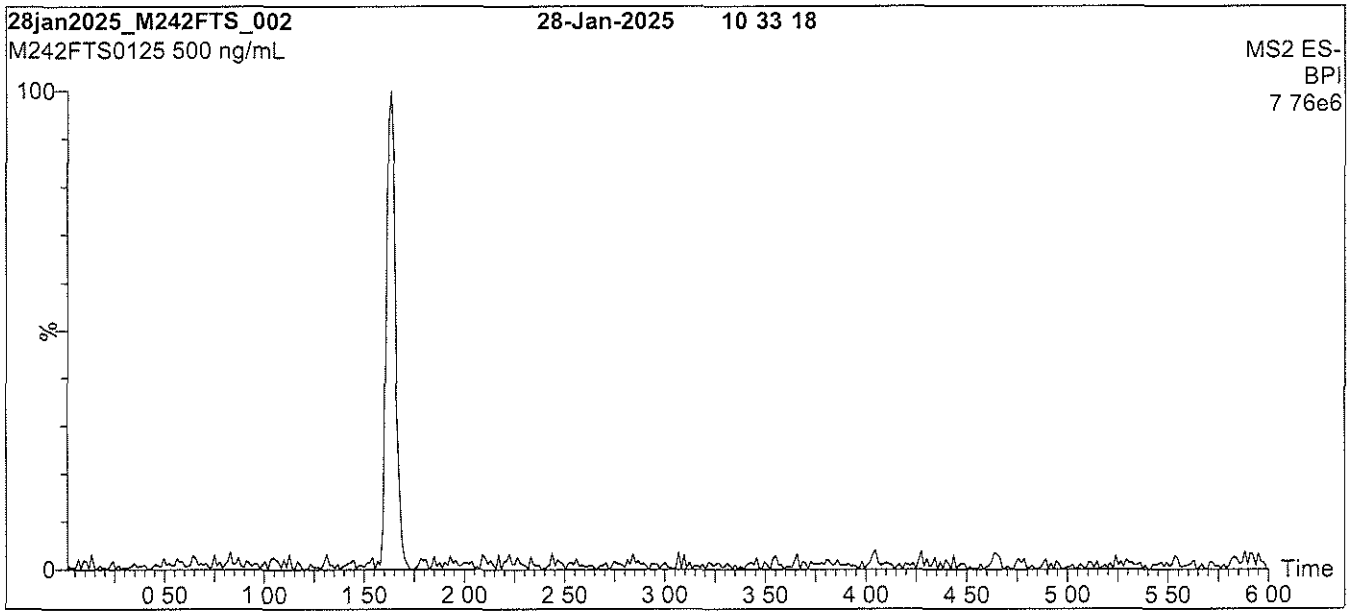
This product was produced us ng a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR 1523)

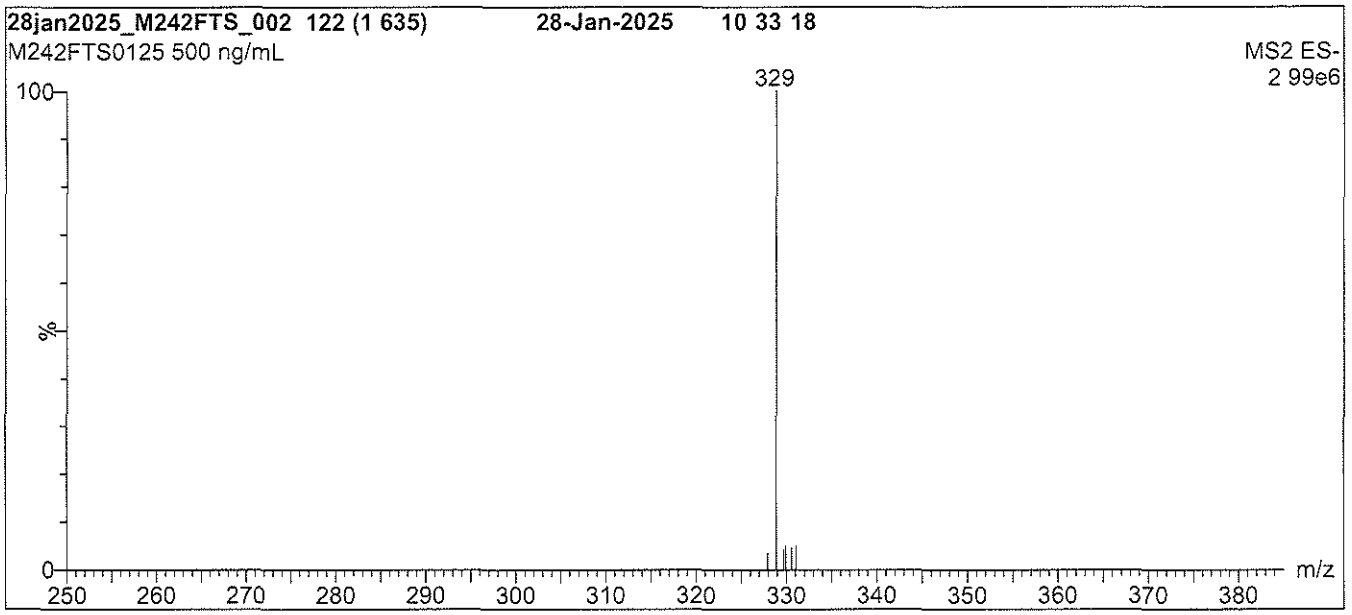
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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: 50% H_2O / 50% (80:20 MeOH.ACN)
(both with 10 mM NH OAc 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

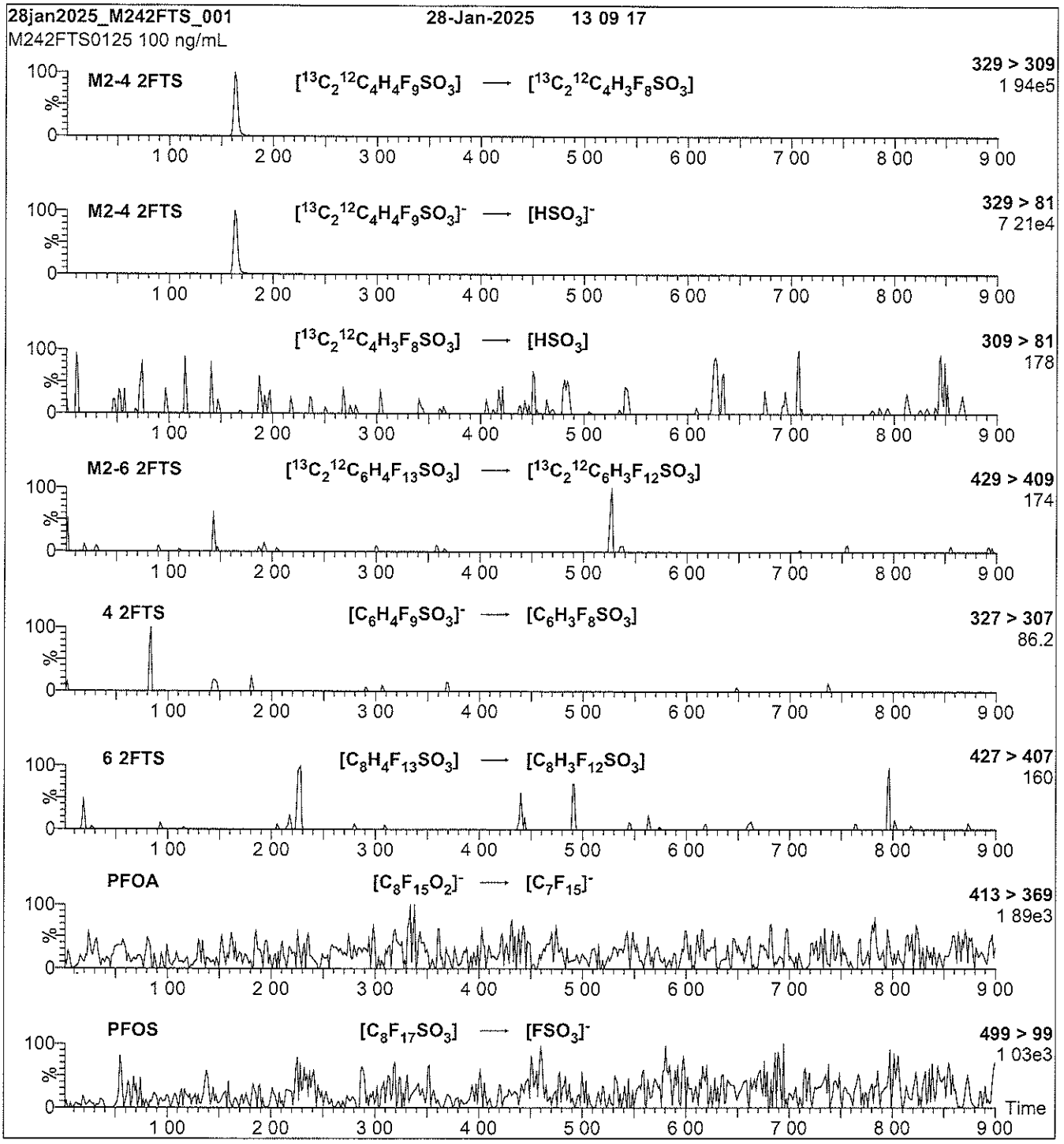
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = 25 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.24e-3
Collision Energy (eV) = 18

Reagent

PFC_ST_04652

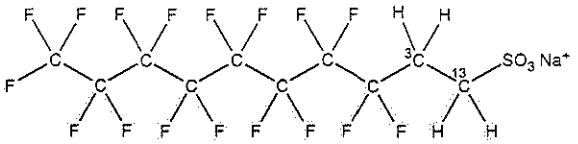
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M2-8 2FTS **LOT NUMBER.** M282FTS0425

COMPOUND. Sodium 1H 1H 2H,2H-perfluoro(1 2- $^{3}C_{2}$)decanesulfonate

STRUCTURE. **CAS #:** 2708218-90-8



410-8075183

MOLECULAR FORMULA. $^{13}C_{2}\ ^{2}C_{8}H_{4}F_{17}SO_{3}Na$ **MOLECULAR WEIGHT:** 552 15

CONCENTRATION. 50 0 ± 2 5 µg/mL (Na salt) **SOLVENT(S).** Methanol
48 0 ± 2.4 µg/mL (M2-8 2FTS acid)
47 9 ± 2.4 µg/mL (M2-8.2FTS anion)

CHEMICAL PURITY: >98% **ISOTOPIC PURITY.** ≥99% ^{3}C

LAST TESTED. (mm/dd/yyyy) 04/09/2025

EXPIRY DATE. (mm/dd/yyyy) 04/09/2030

RECOMMENDED STORAGE. Refrigerate ampoule

8075182
ID: PFC_ST_04651
Exp:04/09/30 Prpd:WTU3 Opn:
Labeled 13C2-8:2-FTS Stock

8075183
ID: PFC_ST_04652
Exp:04/09/30 Prpd:WTU3 Opn:
Labeled 13C2-8:2-FTS Stock

8075184
ID: PFC_ST_04653
Exp:04/09/30 Prpd:WTU3 Opn:
Labeled 13C2-8:2-FTS Stock

DOCUMENTATION/ DATA ATTACHED.

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

8075185
ID: PFC_ST_04654
Exp:04/09/30 Prpd:WTU3 Opn:
Labeled 13C2-8:2-FTS Stock

8075186
ID: PFC_ST_04655
Exp:04/09/30 Prpd:WTU3 Opn:
Labeled 13C2-8:2-FTS Stock

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)

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Certified By B.G. Chittim General Manager **Date** 04/23/2025 (mm/dd/yyyy)

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

HOMOGENEITY.

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UNCERTAINTY:

The maximum combined relative standard uncerta nty 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 x_2, $.x_n$ on which it depends is.

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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

The individual uncertainties taken into account include those associated with weights (cal'bration 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%) has been assigned to this product.

TRACEABILITY.

All reference standard solutions are traceable to specific crystalline lots The microbalances used for solution preparation are regularly cal'brated by an external ISO/IEC 17025 accredited laboratory In addition their cal'bration is verified prior to each weigh ng using calibrated external we ghts 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 n material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

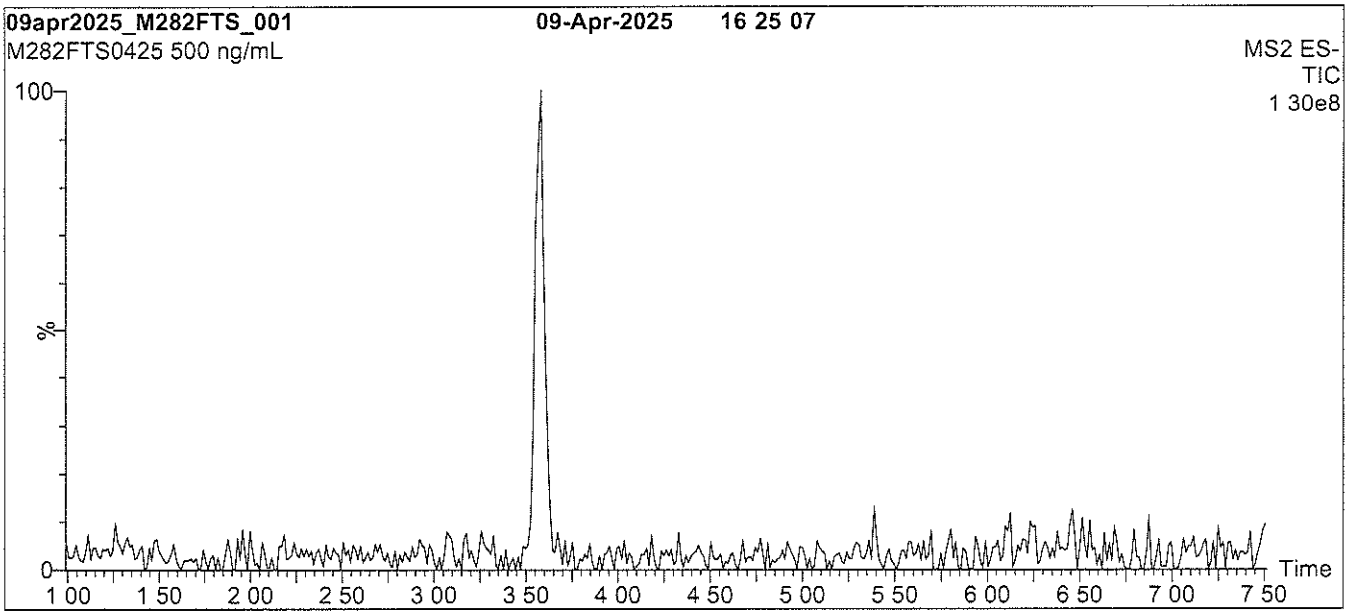
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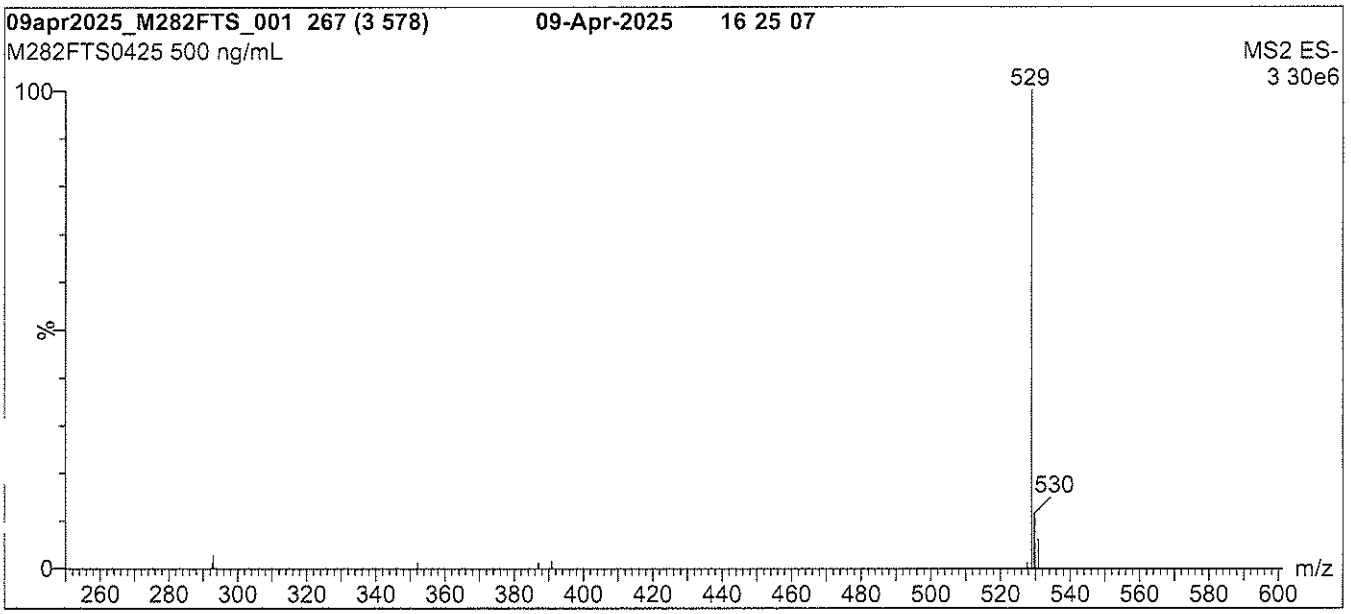
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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: Grad ent
Start: 40% H_2O / 60% (80.20 MeOH.ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 m n and hold for 1 min
before returning to initial conditions in 0.5 m n
Time 12 min

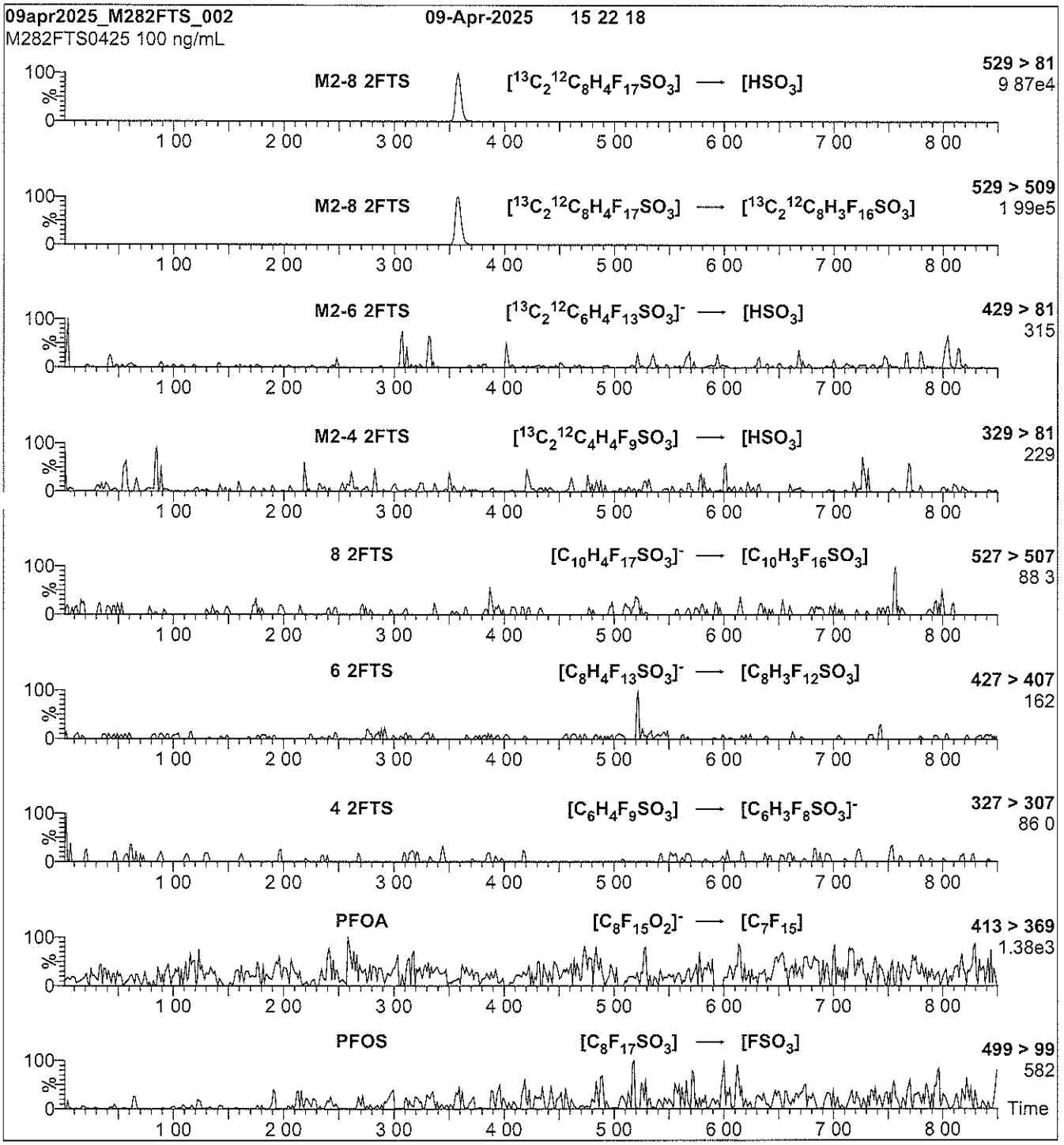
Flow: 300 µL/min

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. **M2-8 2FTS, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (M2-8 2FTS)
Mobile phase	Same as F'gure 1
Flow·	300 µL/m n

MS Parameters.

Collision Gas (mbar) = 5 91e-3
Collision Energy (eV) = 26

Reagent

PFC_ST_04680

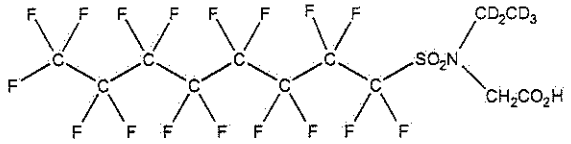
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d5-N EtFOSAA **LOT NUMBER.** d5NEtFOSAA0125

COMPOUND. N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE. **CAS #.** 1265205-97 7



410-8076014

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 (D)
LAST TESTED. (mm/dd/yyyy)	01/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/23/2030		
RECOMMENDED STORAGE.	Refrigerate ampoule		

8076014
ID: PFC_ST_04680
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

8076015
ID: PFC_ST_04681
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

8076016
ID: PFC_ST_04682
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

8076018
ID: PFC_ST_04683
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

8076019
ID: PFC_ST_04684
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

8076020
ID: PFC_ST_04685
Exp:01/23/30 Prpd:WTU3 Opn:
Labeled d5-N-EtFOSAA Stock

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

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Certified By· B G. Chittim General Manager **Date** 02/10/2025 (mm/dd/yyyy)

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HANDLING.

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

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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

The ind'vidual 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%) has been assigned to this product.

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 cal'bration is verified prior to each weighing using cal brated 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:

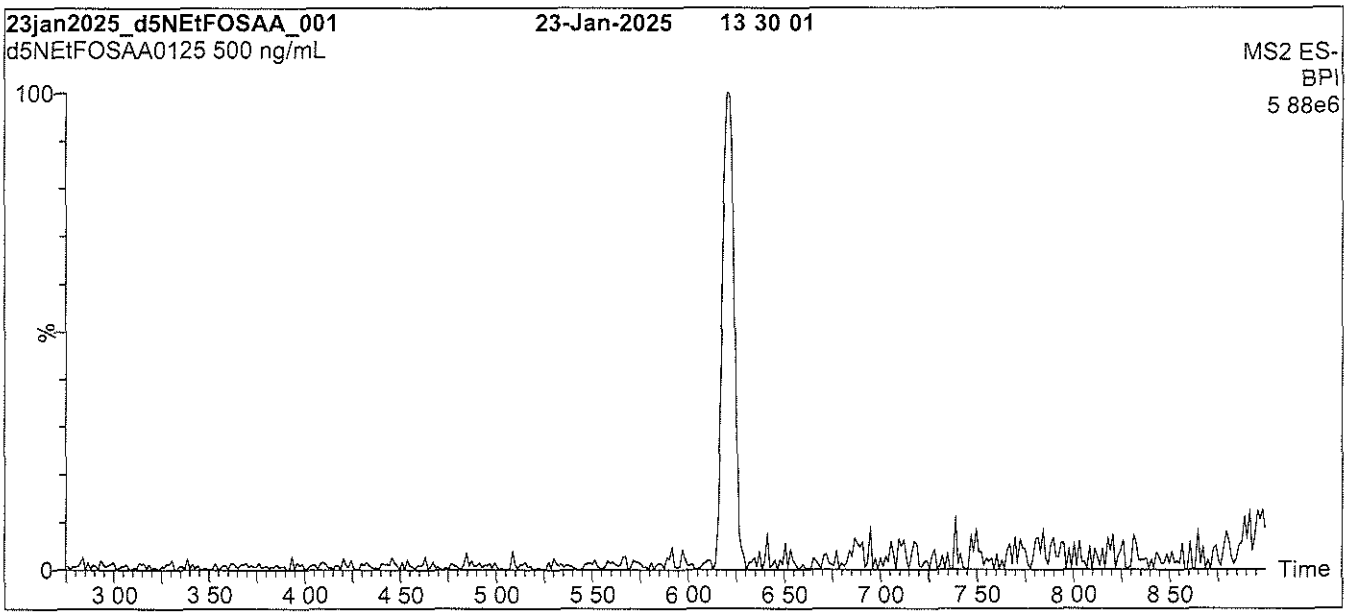
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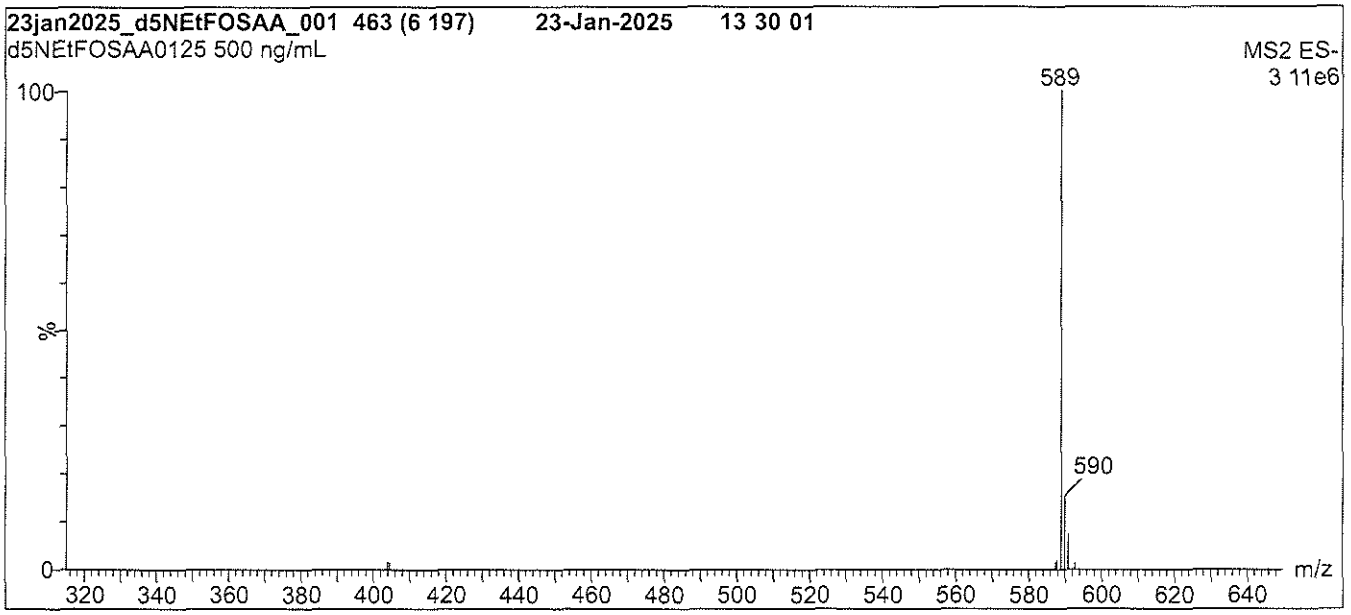
CALA Tes ing Accreditation No. A 226

ANAB ANSI Nat onal Accreditation Board ACCRED TED ISO 17034 REFERENCE MATERIAL PRODUCER

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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: Grad ent
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

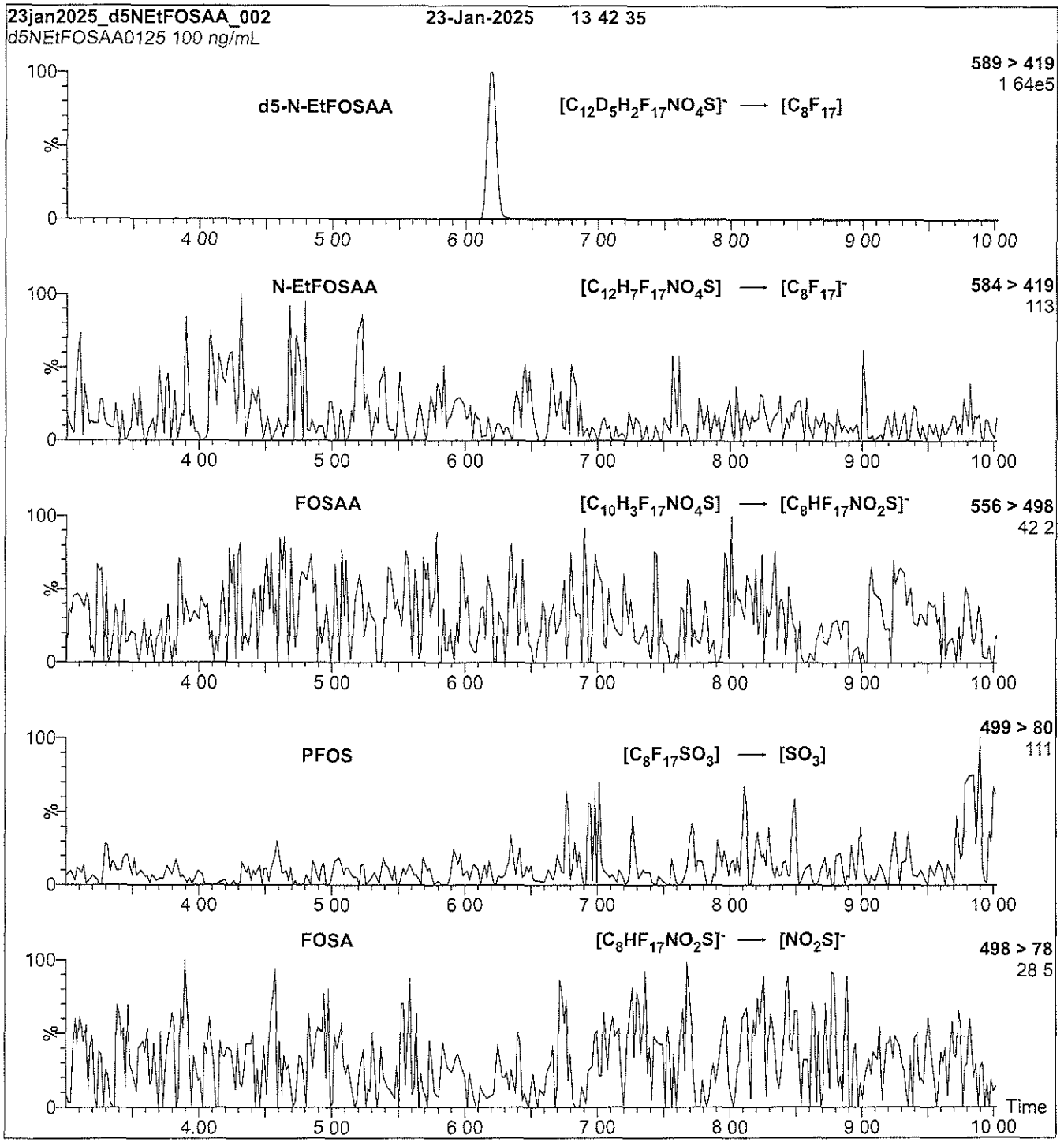
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 amu)

Source Electrospray (negative)
Cap llary Voltage (kV) = 2 00
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.21e-3
Collision Energy (eV) = 18

Reagent

PFC_ST_04687

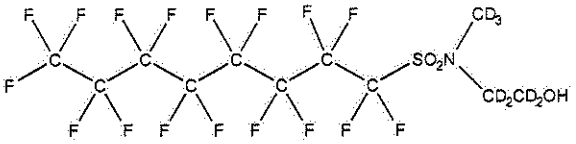
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d7-N-MeFOSE M **LOT NUMBER.** d7NMeFOSE0425M

COMPOUND. 2-(N-Methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE. **CAS #.** 1265205-95-5



410-8076094

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)	04/23/2025 (HRGC/LRMS) 04/28/2025 (LC/MS)		
EXPIRY DATE. (mm/dd/yyyy)	04/28/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

8076092
ID: PFC_ST_04686
Exp:04/28/30 Prpd:WTU3 Opn:
Labeled d7-NMePFOSAE Stock

8076094
ID: PFC_ST_04687
Exp:04/28/30 Prpd:WTU3 Opn:
Labeled d7-NMePFOSAE Stock

8076095
ID: PFC_ST_04688
Exp:04/28/30 Prpd:WTU3 Opn:
Labeled d7-NMePFOSAE Stock

8076096
ID: PFC_ST_04689
Exp:04/28/30 Prpd:WTU3 Opn:
Labeled d7-NMePFOSAE Stock

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
- Contains ~0 8% of a branched isomer of d7-N-MeFOSE by ^{19}F NMR

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Certified By _____ **Date** 04/30/2025 (mm/dd/yyyy)

B G. Chittim General Manager

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

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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:

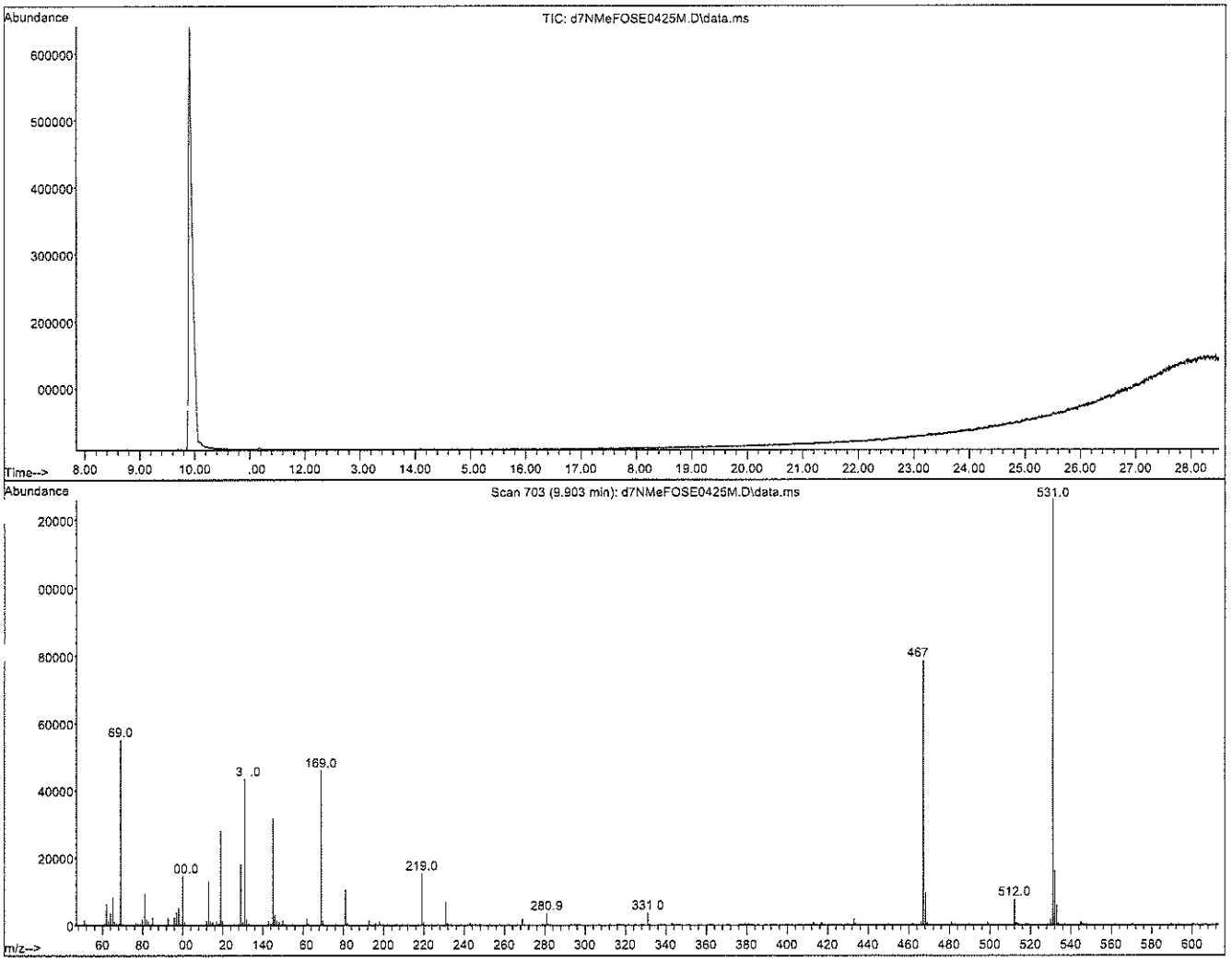
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

CALA Testing Accreditation No A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **d7-N-MeFOSE-M, HRGC/LRMS Data (Full Scan and Mass Spectrum)**



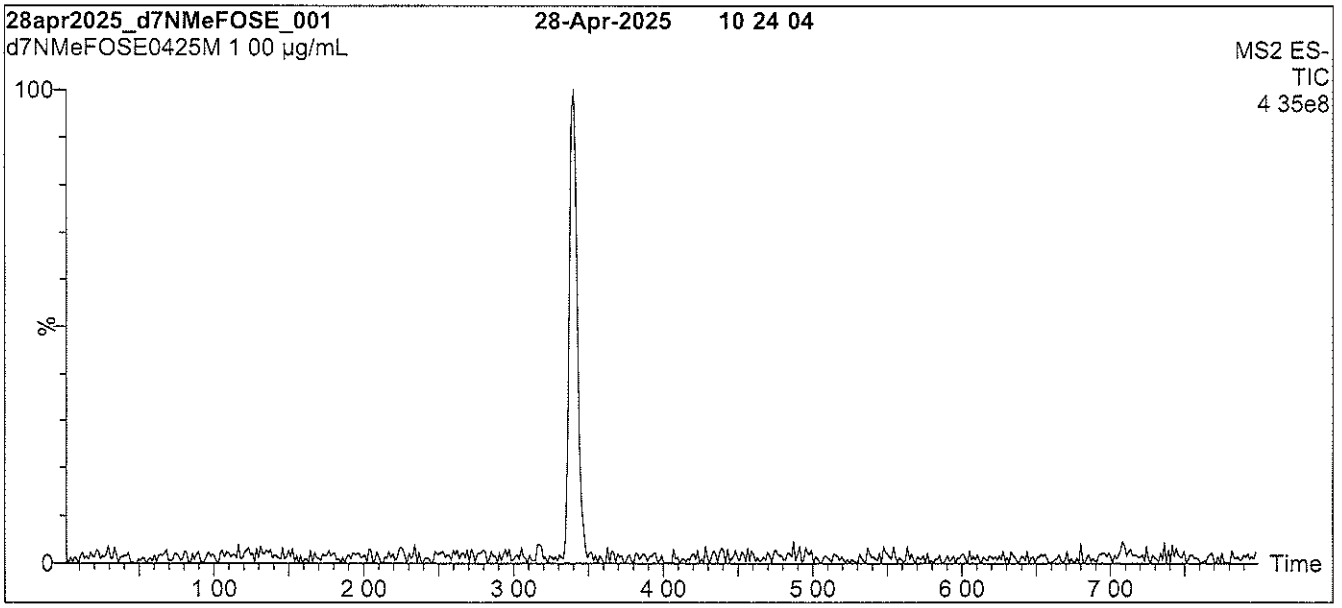
Conditions for Figure 1.

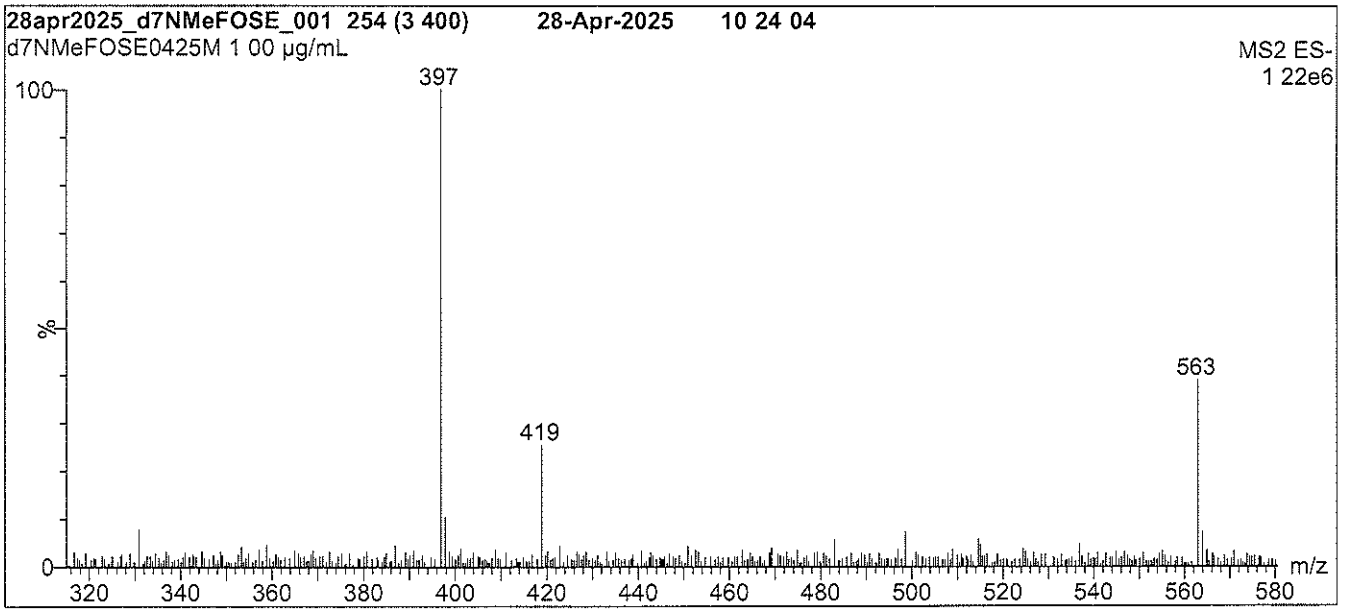
Agilent 7890A HRGC
Agilent 5975C MSD

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 9 min and hold for 1 min before returning to initial conditions in 0.5 m n
Time 12 min

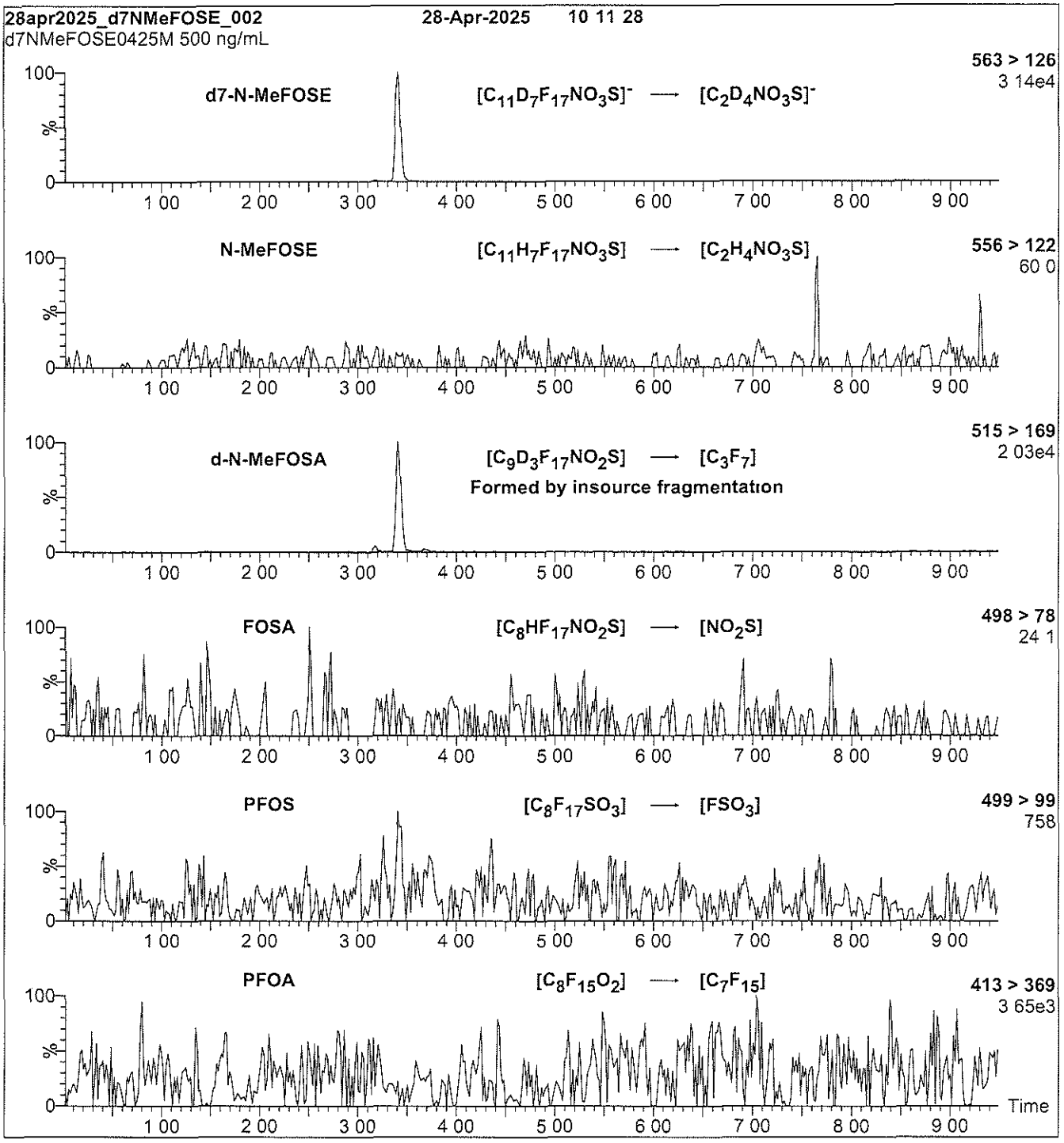
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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) = 5 87e-3
Collision Energy (eV) = 36

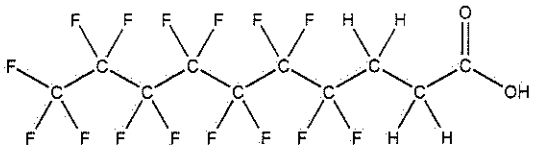
Reagent

PFC_ST_04690

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	FHpPA	**LOT NUMBER.**	FHpPA1224
COMPOUND.	3-Perfluoroheptyl propanoic acid (7 3 FTCA)		
STRUCTURE.		**CAS #.**	812 70-4



410-8076134

MOLECULAR FORMULA.	$C_9H_5F_{15}O_2$	**MOLECULAR WEIGHT:**	442 12
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED. (mm/dd/yyyy)	12/16/2024		
EXPIRY DATE. (mm/dd/yyyy)	12/16/2029		
RECOMMENDED STORAGE.	Refrigerate ampoule		

8076134
ID: PFC_ST_04690
Exp:12/16/29 Prpd:WTU3 Opn:
Native FHpPA Stock (7:3 FTCA)

8076135
ID: PFC_ST_04691
Exp:12/16/29 Prpd:WTU3 Opn:
Native FHpPA Stock (7:3 FTCA)

8076136
ID: PFC_ST_04692
Exp:12/16/29 Prpd:WTU3 Opn:
Native FHpPA Stock (7:3 FTCA)

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 3-perfluorohexyl propanoic acid (6 3 FTCA)

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Certified By _____ **Date** 02/18/2025 (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 techn ques such as NMR GC/MS LC/MS, SFC/UV/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 and/or SFC/UV/MS The relative response factors of the analyte of nterest 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 materia as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the ntegrity 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x_1\ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )}$$

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

The individual uncertainties taken nto 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%) has been assigned to this product.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots The microbalances used for solution preparation are regularly cal'brated 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 n the unopened ampoule Monitoring for any degradation or change n 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:

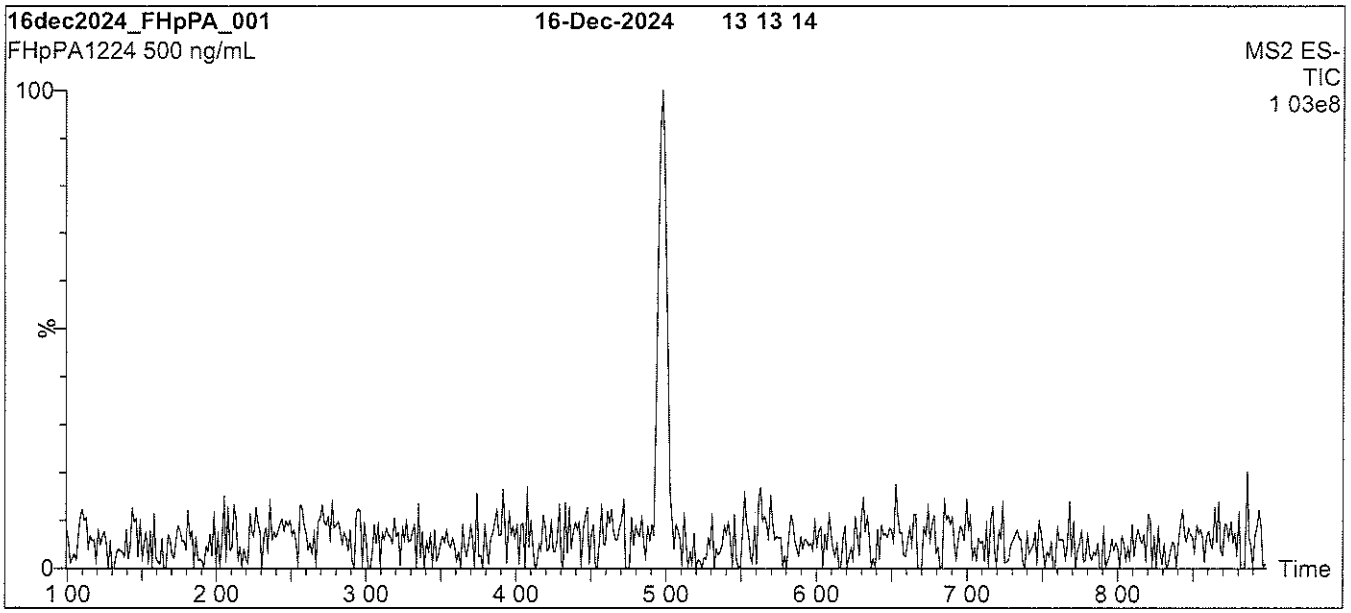
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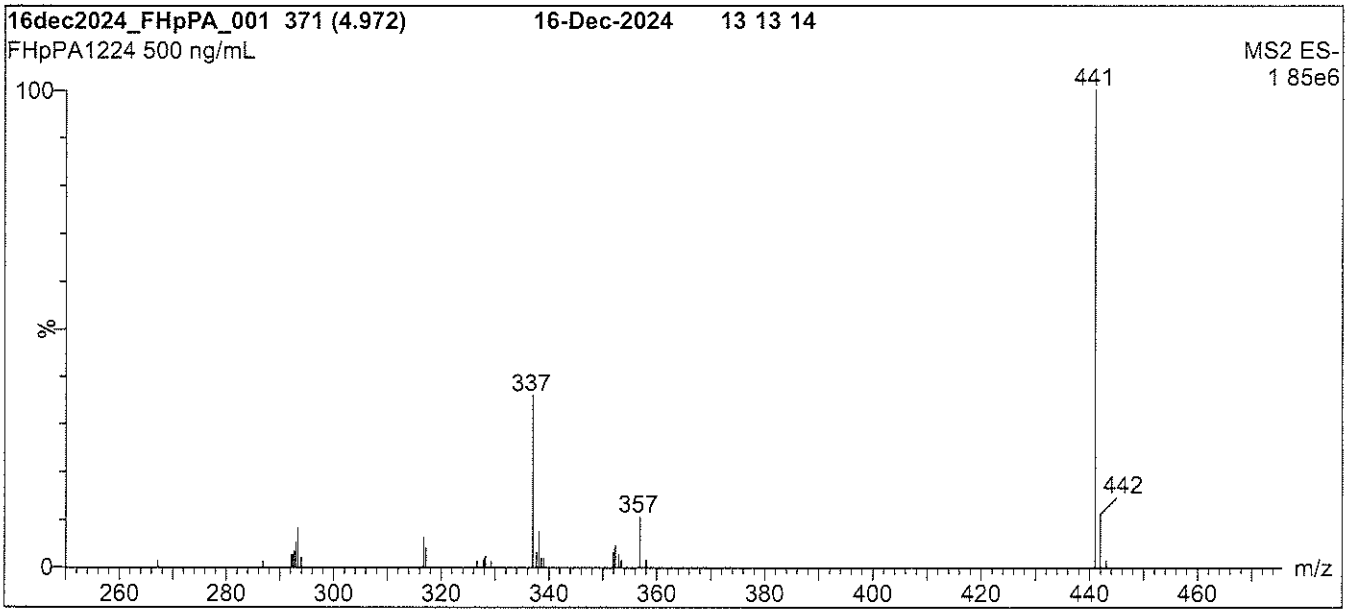
CALA Testing Accreditation No. A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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.

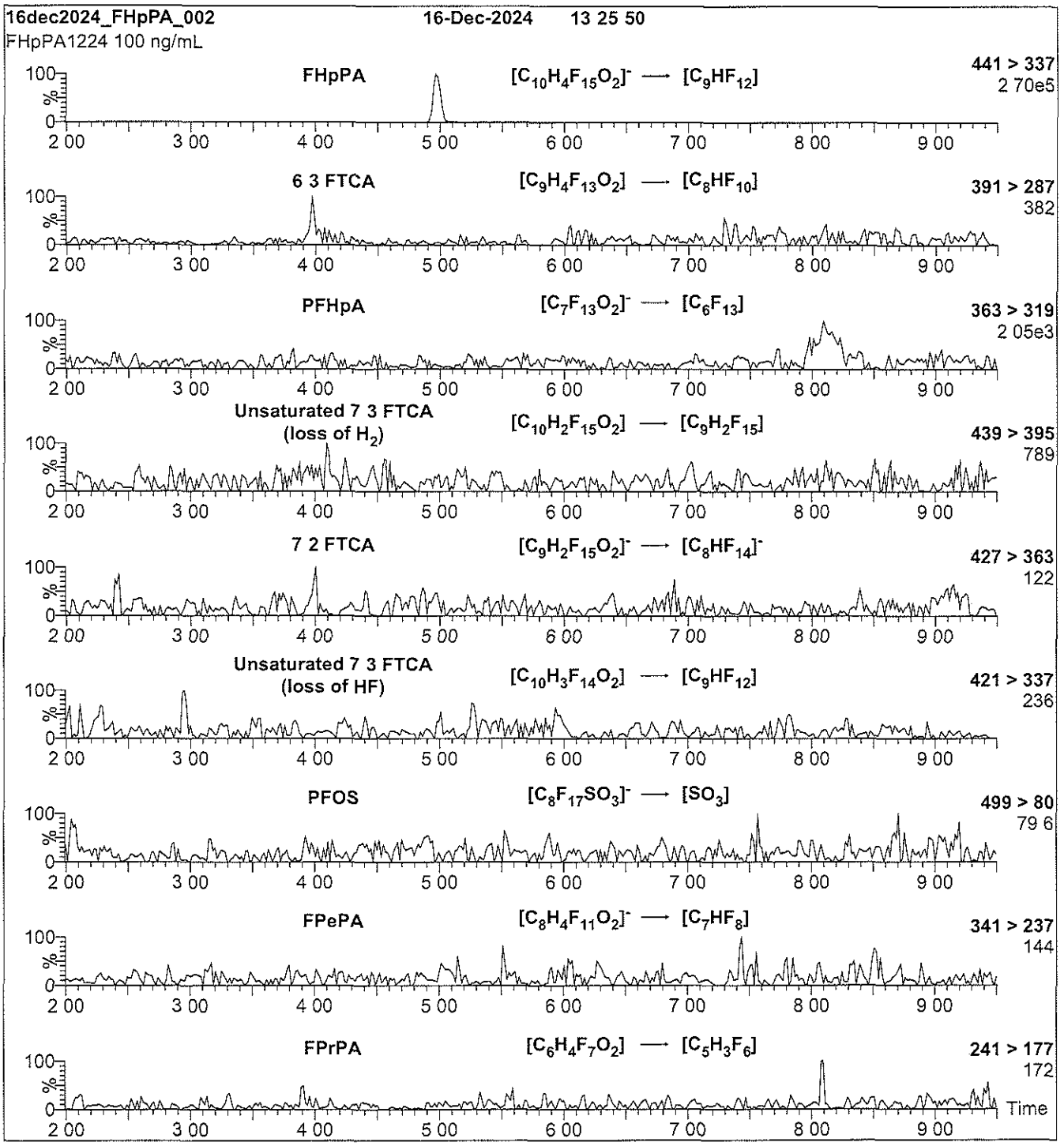
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 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) = 5.42e-3
Collision Energy (eV) = 8

Reagent

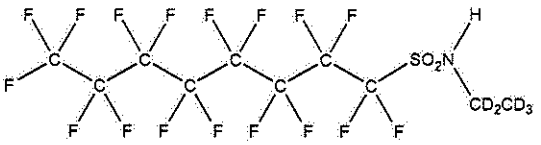
PFC_ST_04695

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	d-N-EtFOSA M	**LOT NUMBER.**	dNEtFOSA1124M
COMPOUND.	N-Ethyl-d_5-perfluoro-1-octanesulfonamide		

STRUCTURE.



CAS #. 936109-40-9

410-8087403

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 (D)
LAST TESTED. (mm/dd/yyyy)	10/15/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/15/2029		
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)

8087401
ID: PFC_ST_04693
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d5-NEtPFOSA Stock

8087402
ID: PFC_ST_04694
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d5-NEtPFOSA Stock

8087403
ID: PFC_ST_04695
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d5-NEtPFOSA Stock

8087404
ID: PFC_ST_04696
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d5-NEtPFOSA Stock

ADDITIONAL INFORMATION.

- See page 2 for further details

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Certified By _____ **Date** 10/18/2024 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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 and/or SFC/UV/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 crystall'ne 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 x_2, $.x_n$ on which it depends is

$$u\ (y(x\ \ x\ \ \ x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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 stud es of this product have demonstrated stability n 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:

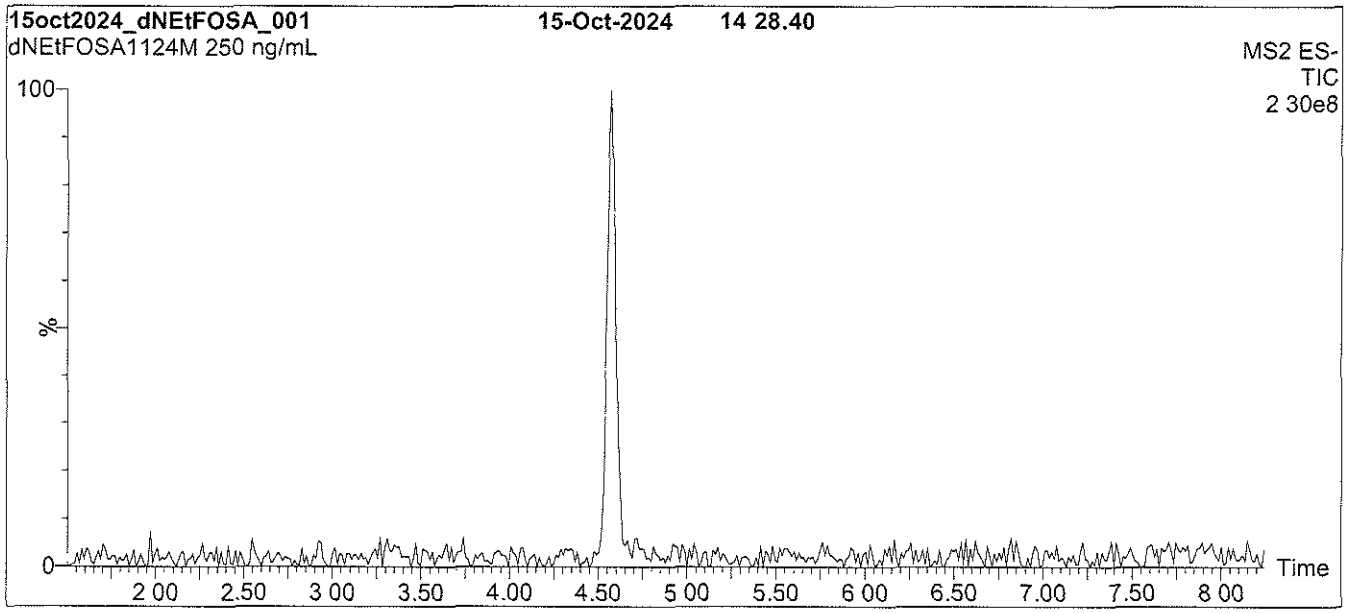
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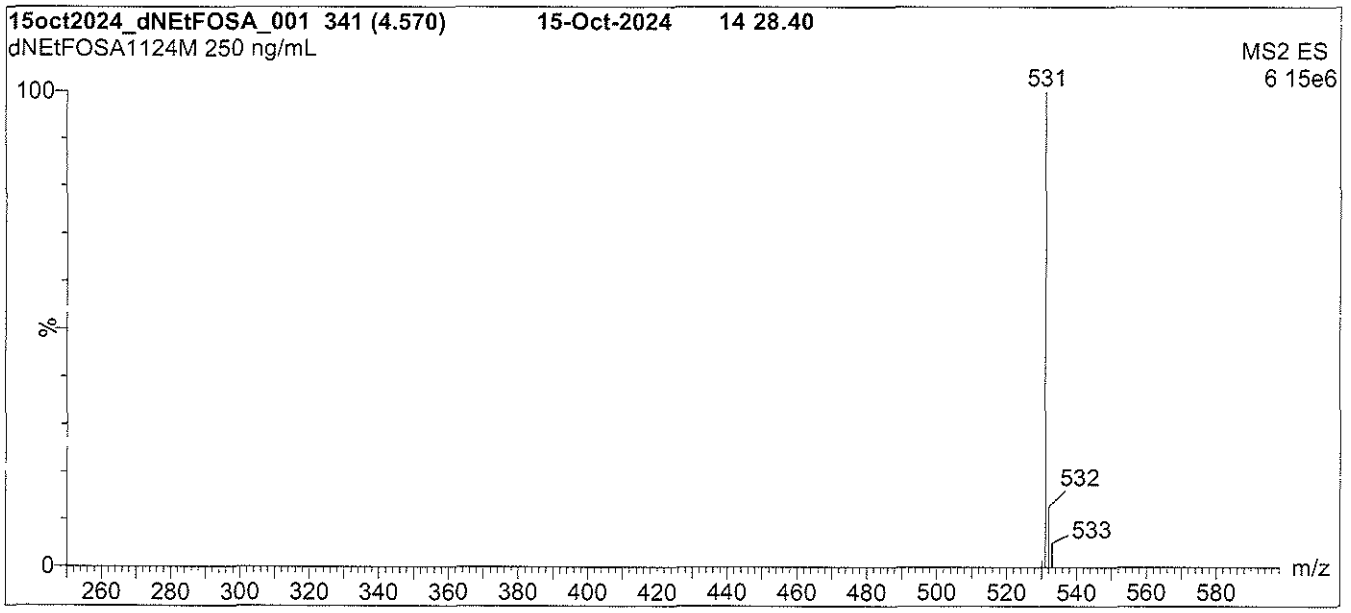
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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.

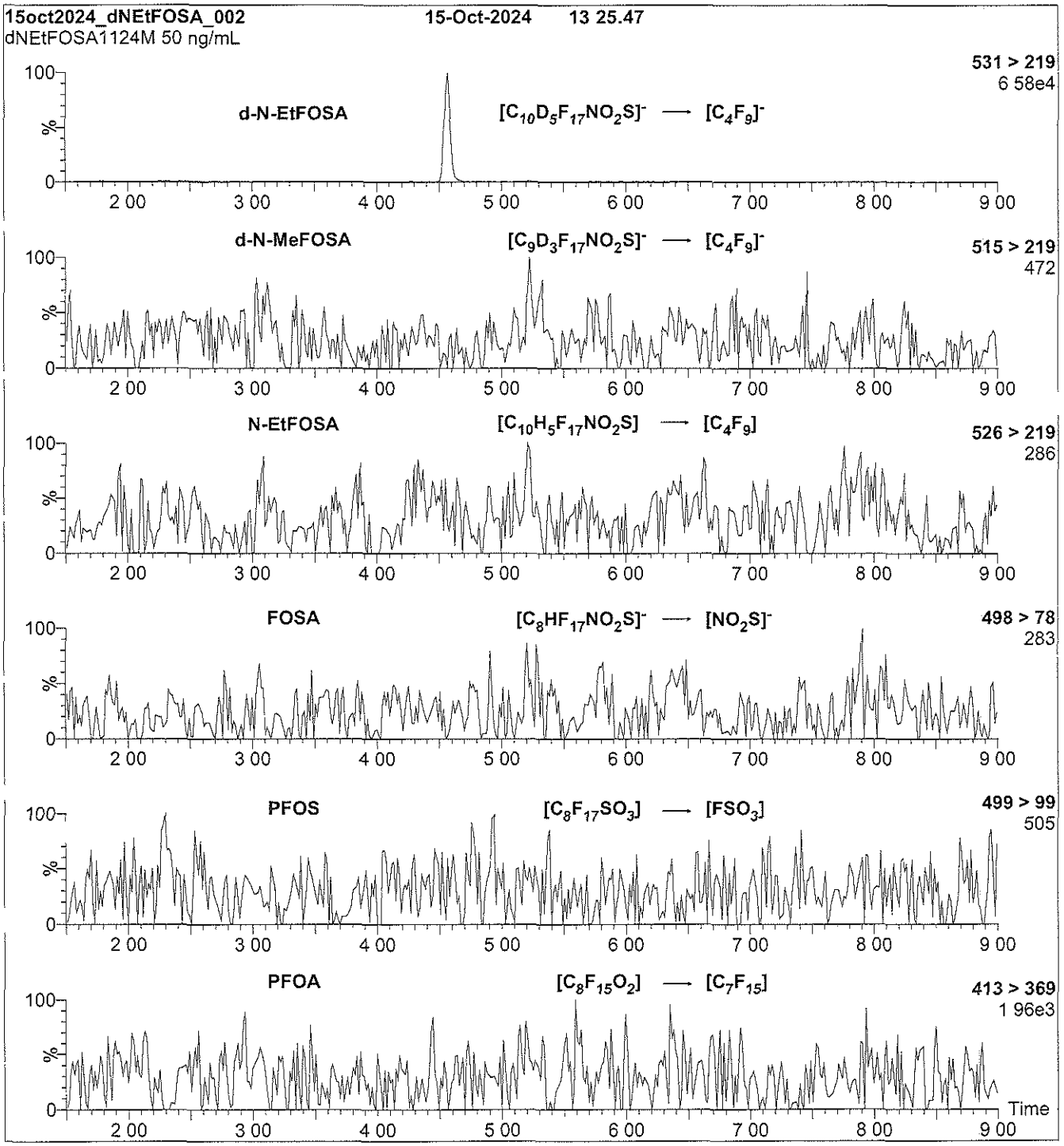
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 30% H_2O / 70% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 1 00
Cone Voltage (V) = 44 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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/m n

MS Parameters.

Collision Gas (mbar) = 4.24e-3
Collision Energy (eV) = 24

Reagent

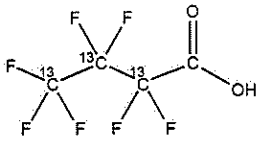
PFC_ST_04712

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04248

PRODUCT CODE.	M3PFBA	**LOT NUMBER.**	M3PFBA0125
COMPOUND.	Perfluoro-n-(2 3,4- $^{3}C_{3}$)butanoic acid		
STRUCTURE.		**CAS #.**	2483735-33-5



410-7664778

MOLECULAR FORMULA.	$^{13}C_{3}{}^{12}CHF_{7}O_{2}$	**MOLECULAR WEIGHT:**	217 02
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	01/10/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/10/2030		
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-($^{13}C_{3}$)propanoic acid and also contains ~1 1% of perfluoro-n-($^{13}C_{4}$)butanoic acid (MPFBA) due to the naturally occurring isotopic abundance of ^{13}C in the unlabelled carbon atom

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Certified By _____ **Date** 01/16/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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519-822-2436 • Fax 519-822-2849 • info@well-labs.com

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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:

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QUALITY MANAGEMENT:

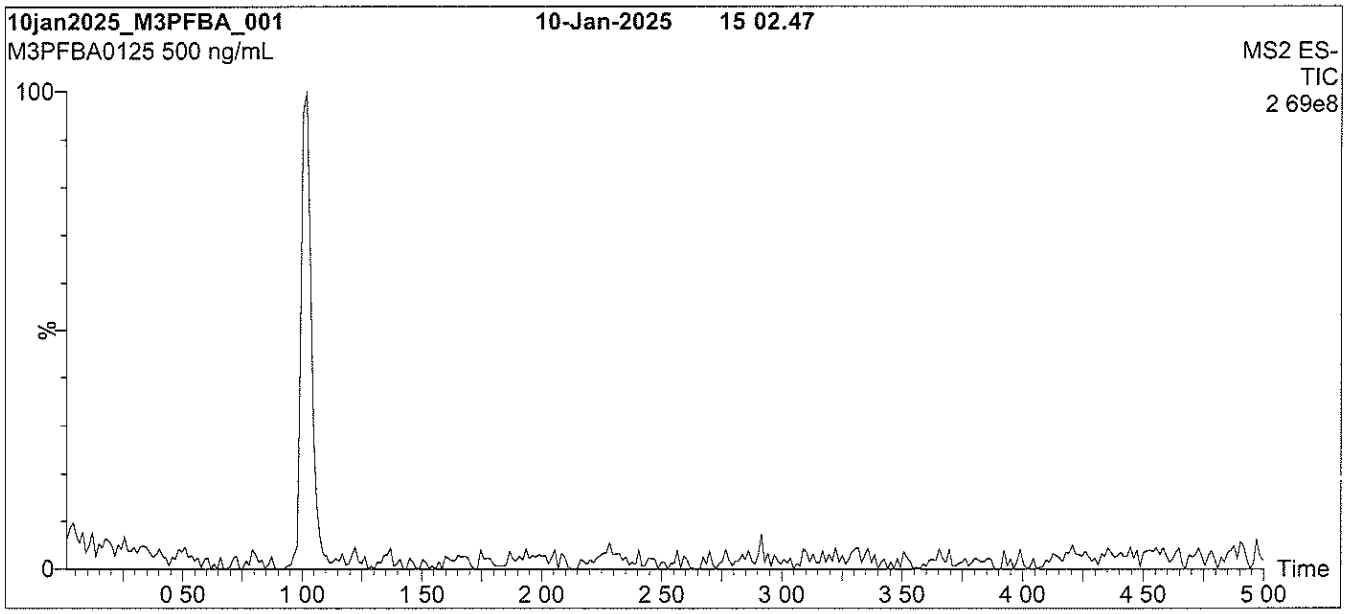
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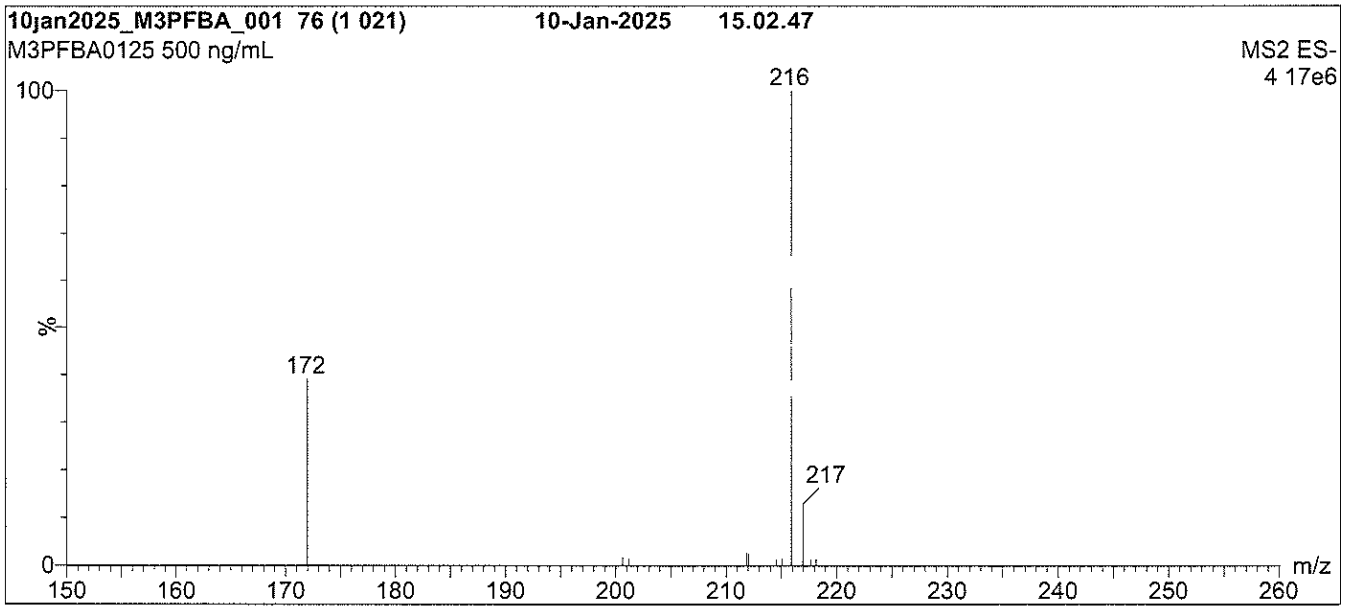
CALA Testing Accreditation No. A1226

ANAB At 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. **M3PFBA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time 12 min

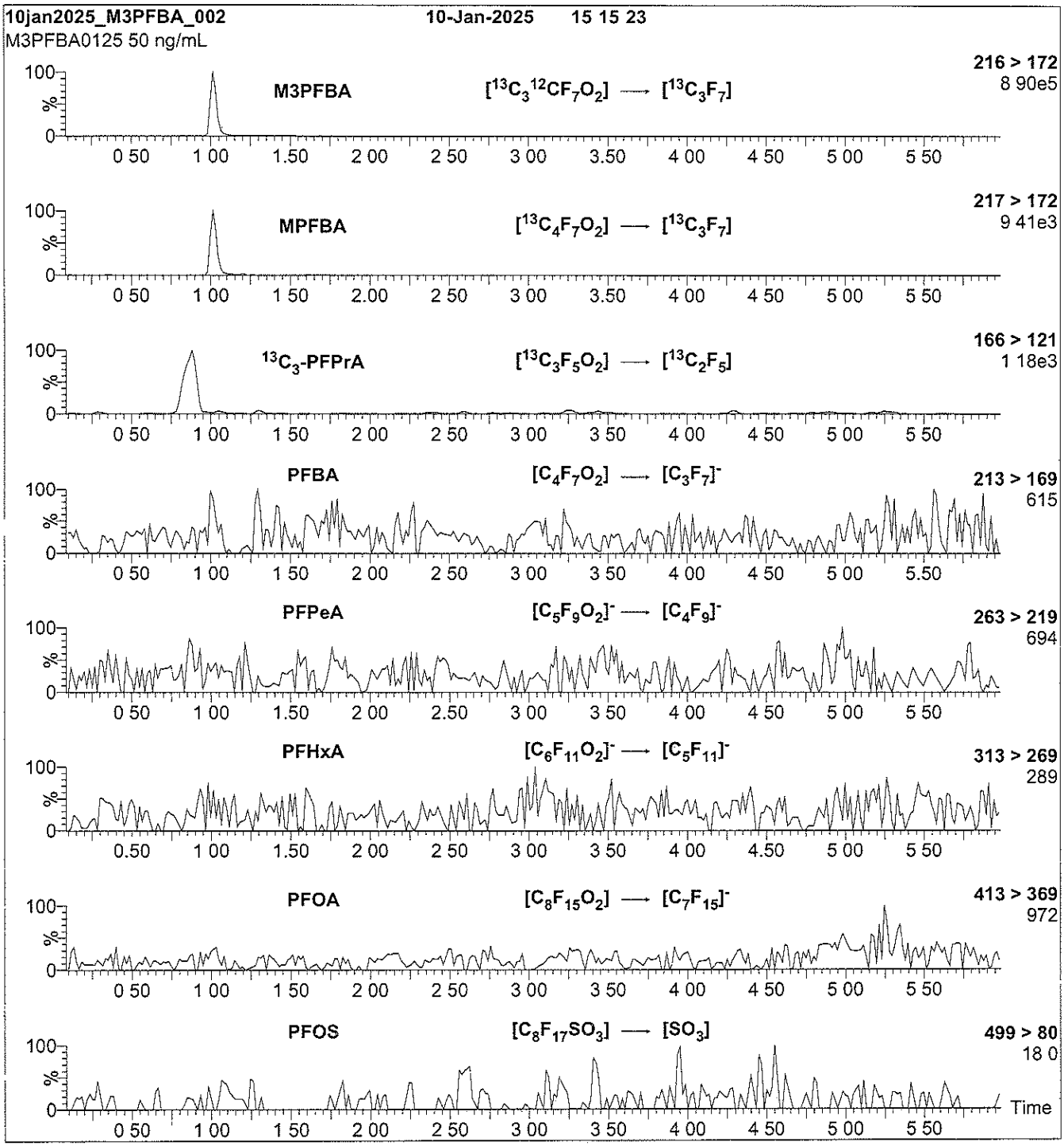
Flow: 300 µL/min

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

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) = 6.29e-3
Collision Energy (eV) = 8

Reagent

PFC_ST_04713

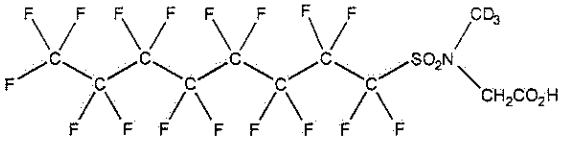
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. d3-N-MeFOSAA **LOT NUMBER.** d3NMeFOSAA0525

COMPOUND. N Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE. **CAS #.** 1400690 70-1



410-8075611

MOLECULAR FORMULA.	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574 23
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY.**	≥98% ^2H (D)
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
RECOMMENDED STORAGE.	Refrigerate ampoule		

8075611
ID: PFC_ST_04657
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled d3-N-MeFOSAA Stock

8075614
ID: PFC_ST_04658
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled d3-N-MeFOSAA Stock

8075615
ID: PFC_ST_04659
Exp:06/05/30 Prpd:WTU3 Opn:
Labeled d3-N-MeFOSAA Stock

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 _____ **Date** 06/09/2025 (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(s) 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 SFC/UV/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 s 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 nternal standard they are compared by GC/MS LC/MS and/or SFC/UV/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 njection of a subsample of this product should be performed using calibrated measuring equ pment.

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 x_2, $.x_n$ on which it depends s

$$u\ (y(x\ \ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x\ )^2}$$

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%) has been assigned to this product.

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:

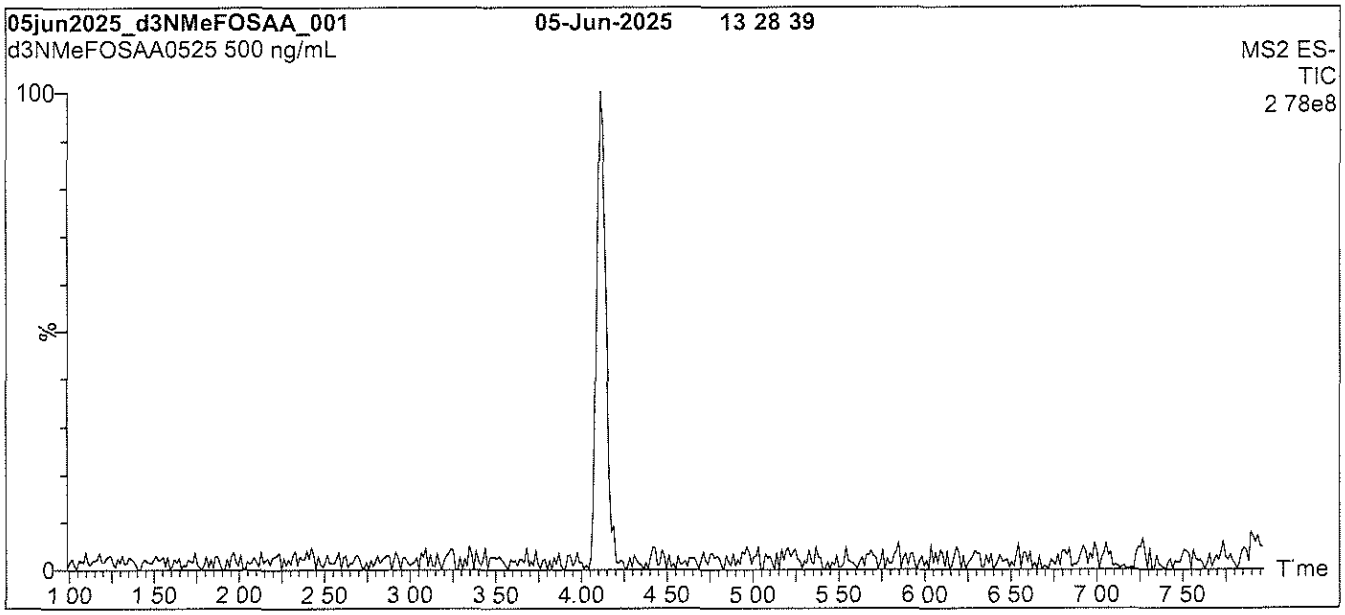
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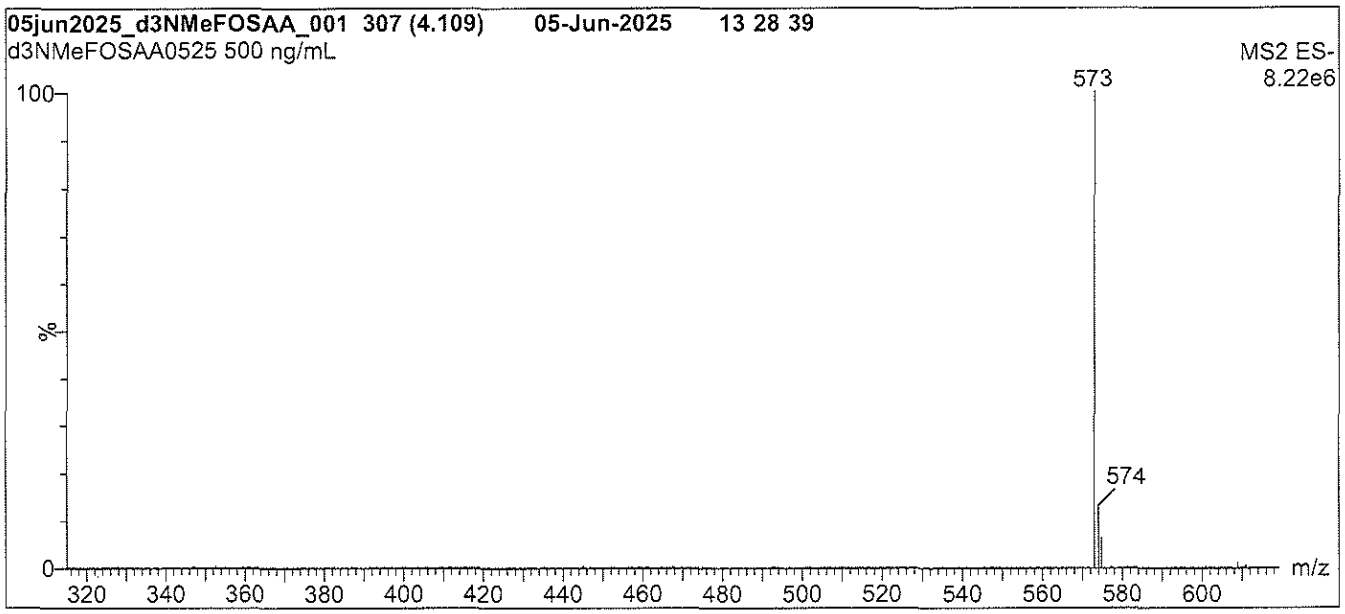
CALA
Ac reditation No. A 226

ANAB
ANSI Nat onal Accreditation Board
ACCRED TED
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. **d3-N-MeFOSAA, 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.

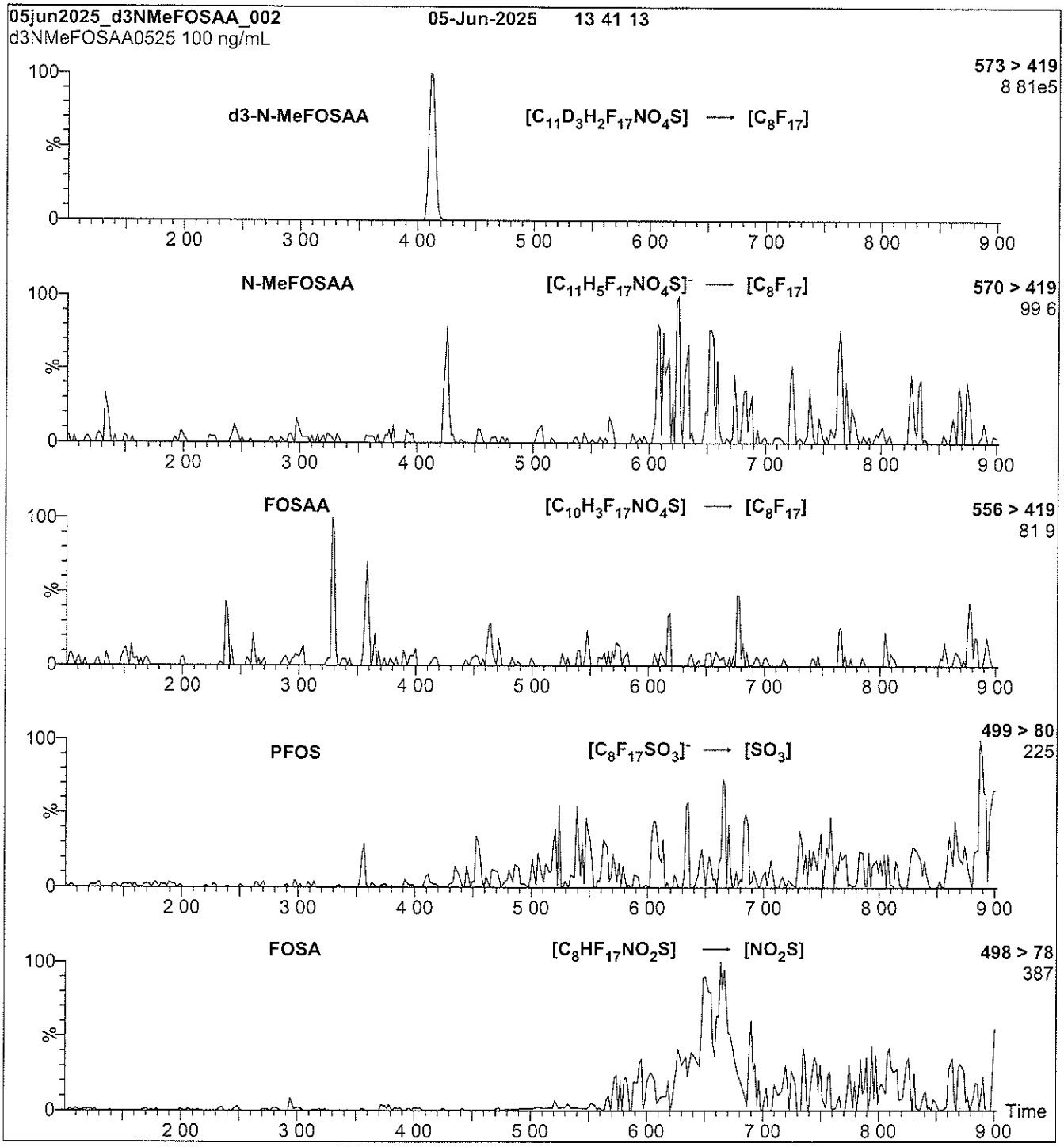
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start. 40% H_2O / 60% (80 20 MeOH.ACN) (both with 10 mM NH OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before return ng to nitial conditions in 0.5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 3.76e-3
Collision Energy (eV) = 18

Reagent

PFC_ST_04729

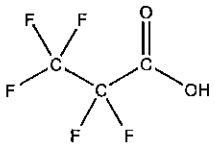
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-04728, 04729, 04730

PRODUCT CODE: PFPrA
COMPOUND: Perfluoropropanoic acid
LOT NUMBER: PFPrA0825

STRUCTURE:
CAS #: 422-64-0



MOLECULAR FORMULA: $C_3HF_5O_2$
MOLECULAR WEIGHT: 164.03
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/08/2025
EXPIRY DATE: (mm/dd/yyyy) 08/08/2030
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (Full Scan Extracted Chromatogram 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:** 08/08/2025 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

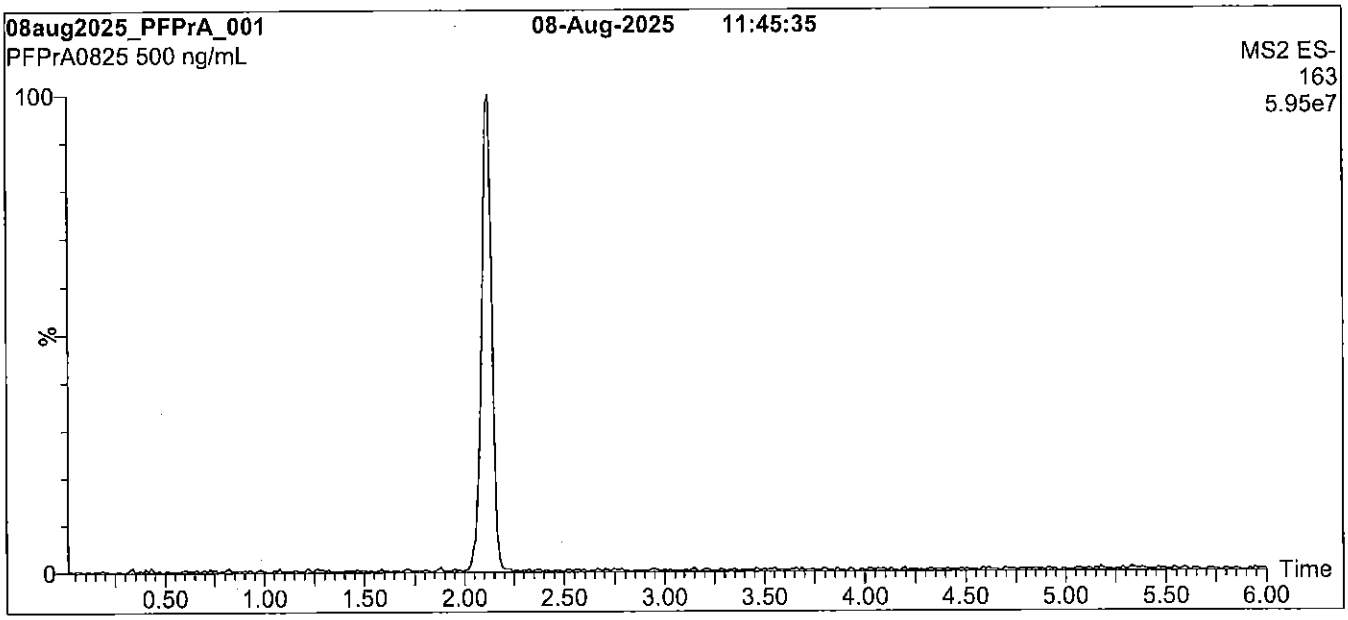
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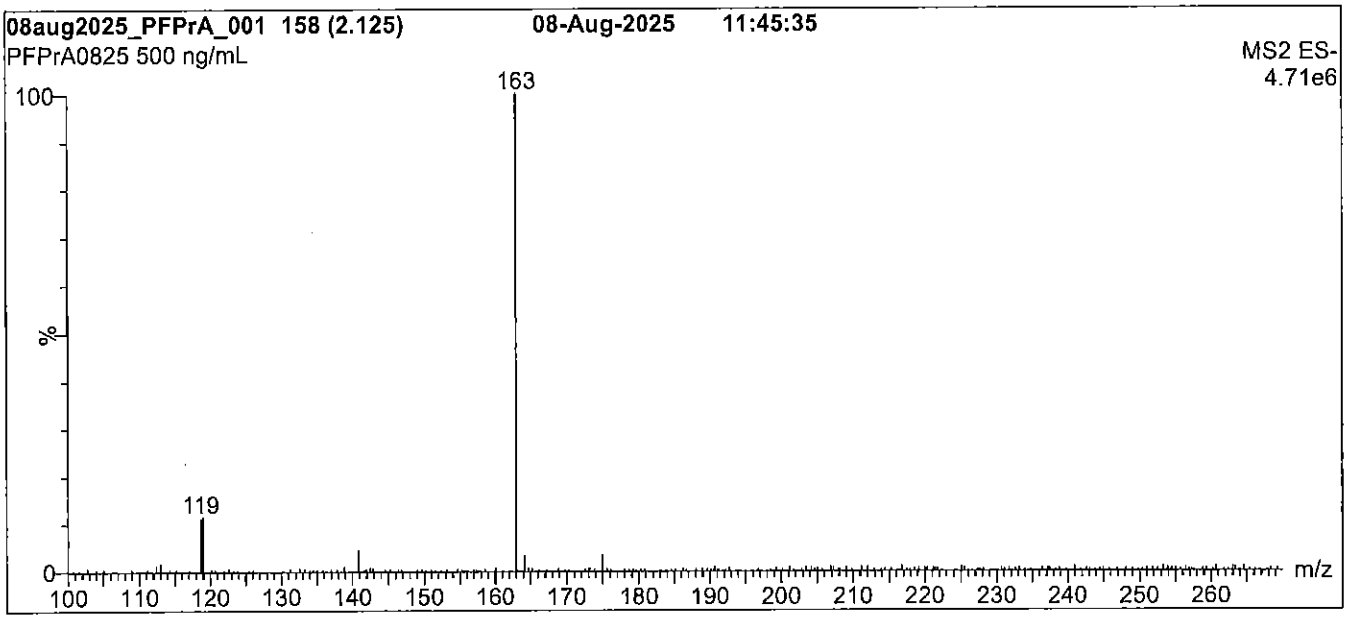
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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





Conditions for Figure 1:

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

Chromatographic Conditions:

Column: Restek Raptor Polar X
2.7 µm, 2.1 x 50 mm

Mobile phase: Gradient
Start: 50% H_2O (with 10 mM NH_4COOH buffer)
50% (60:40 ACN:MeOH)
(both with 0.05% formic acid)
Ramp to 90% organic over 7 min and hold for 1 min before returning to initial conditions in 0.5 min.
Time: 10 min

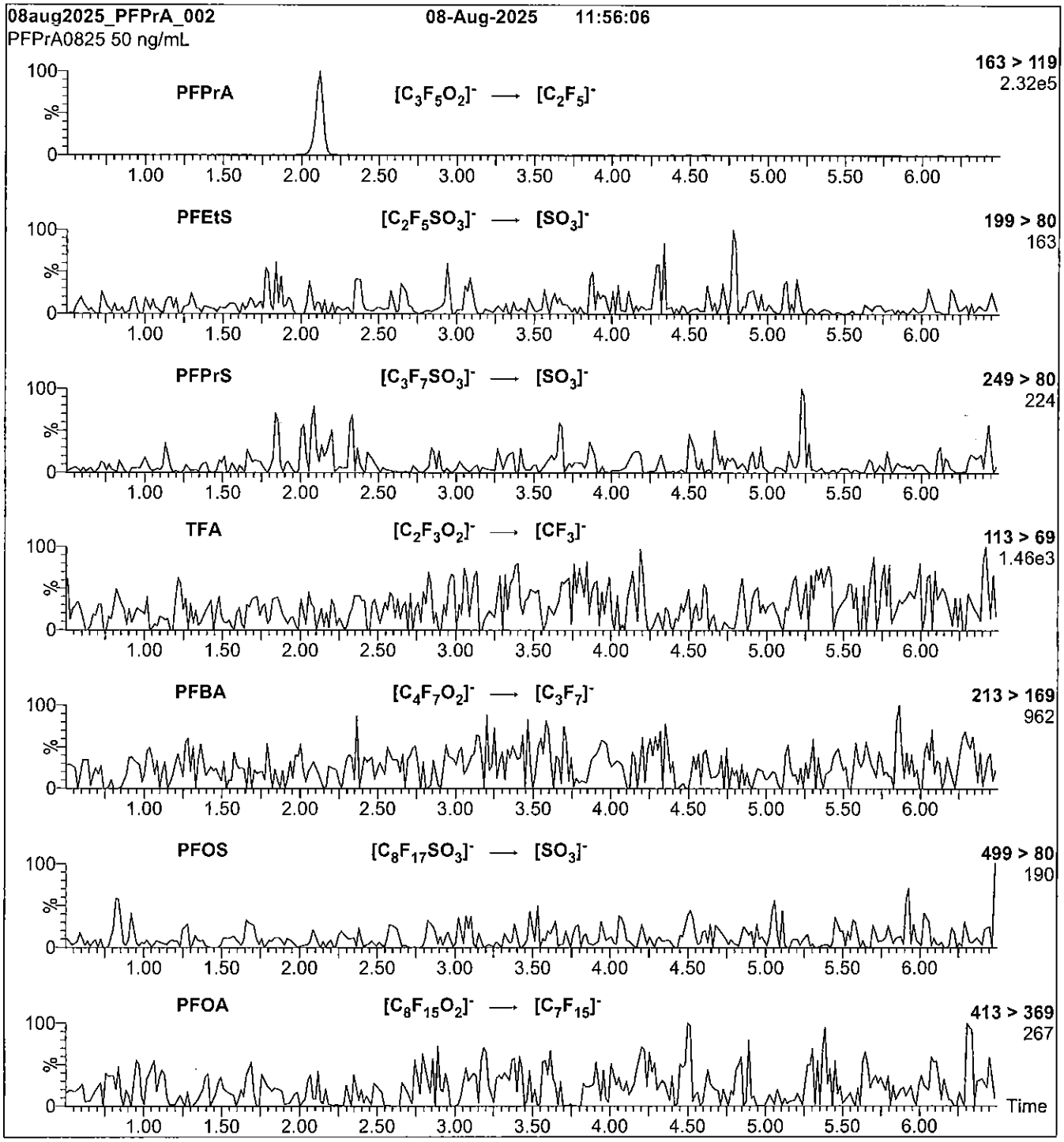
Flow: 400 µL/min

MS Parameters:

Experiment: Full Scan (100 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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



Conditions for Figure 2:

Injection: On-column (PFPrA)

Mobile phase: Same as Figure 1

Flow: 400 µL/min

MS Parameters:

Collision Gas (mbar) = 3.65e-3
Collision Energy (eV) = 8

Reagent

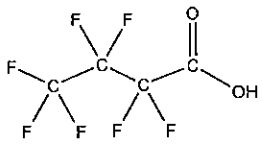
PFC_ST_04767

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-047164, 047166, 047167

PRODUCT CODE:	PFBA	**LOT NUMBER:**	PFBA0625
COMPOUND:	Perfluoro-n-butanoic acid		
STRUCTURE:		**CAS #:**	375-22-4



MOLECULAR FORMULA:	$C_4HF_7O_2$	**MOLECULAR WEIGHT:**	214.04
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	06/11/2025		
EXPIRY DATE: (mm/dd/yyyy)	06/11/2030		
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:** 08/01/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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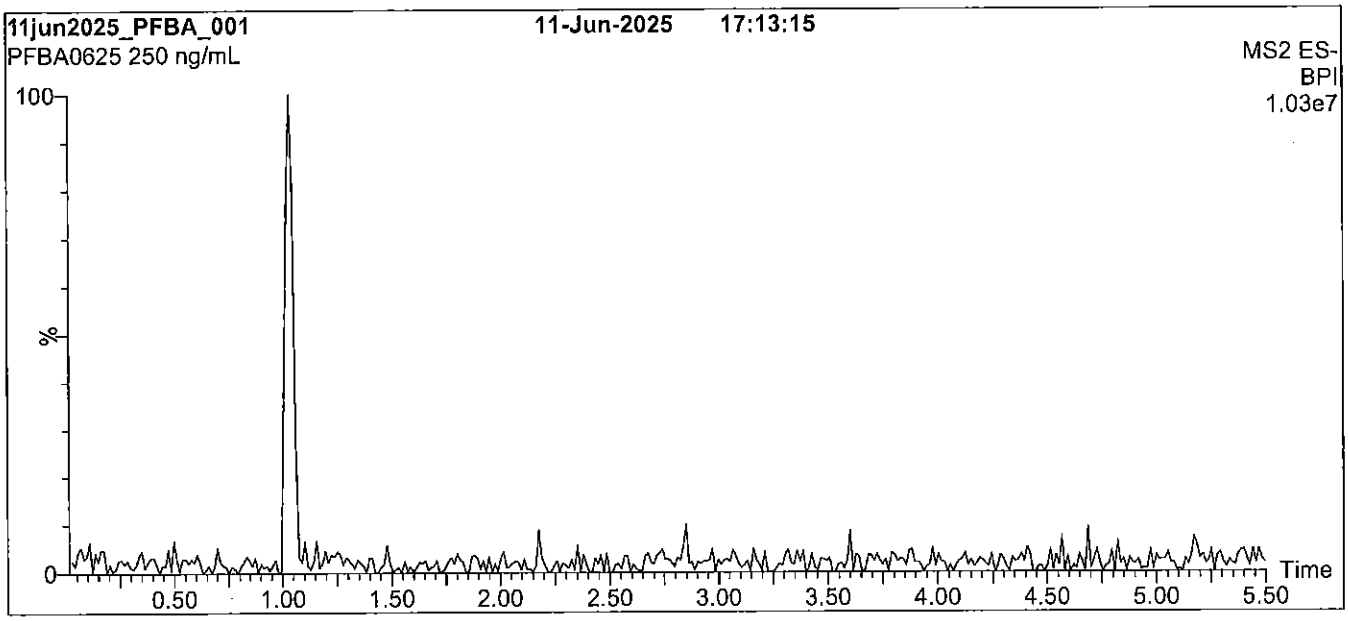
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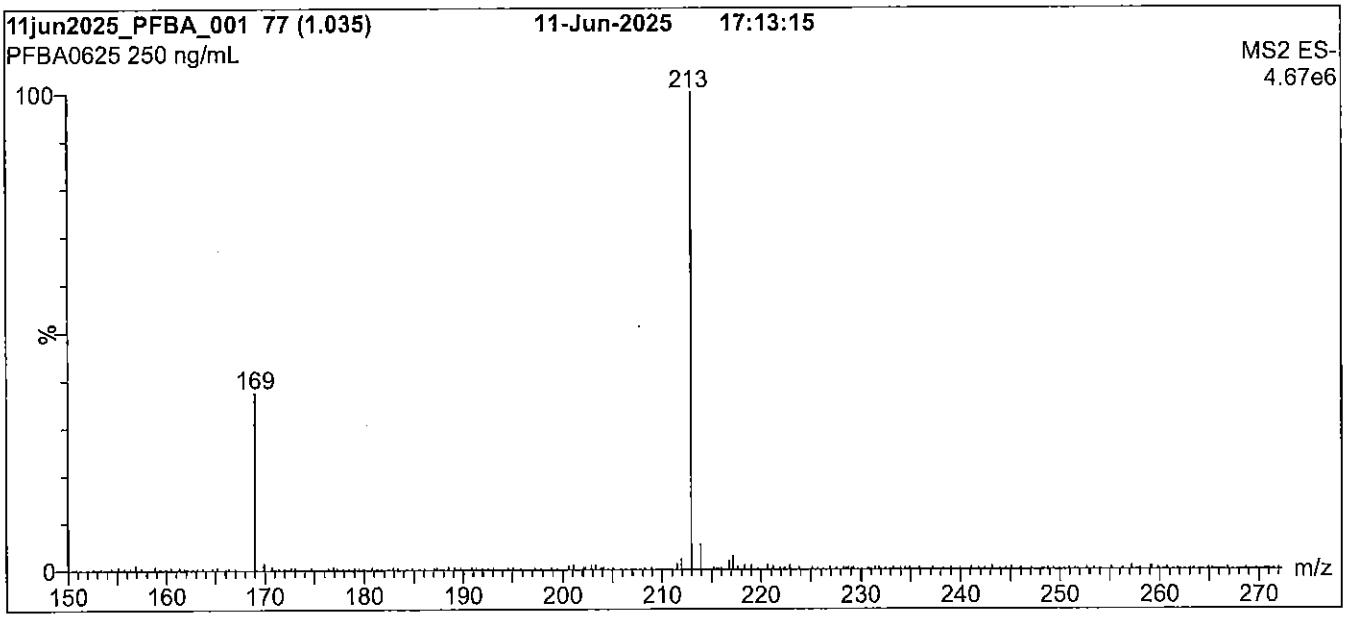
CALA Testing Accreditation No. A1226

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Figure 1: **PFBA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

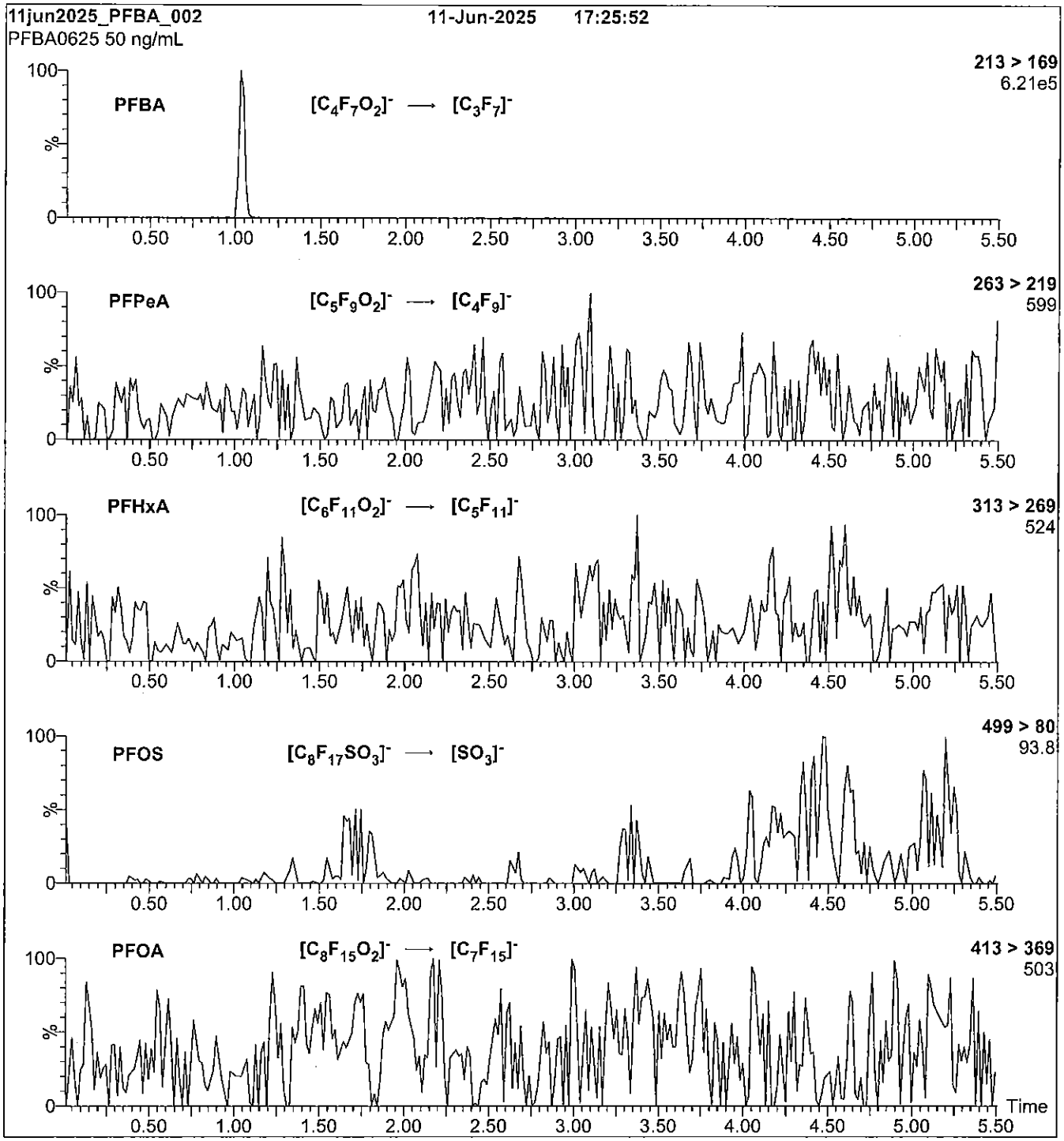
Flow: 300 µL/min

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

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) = 5.06e-3
Collision Energy (eV) = 8

Reagent

PFC_ST_04769

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

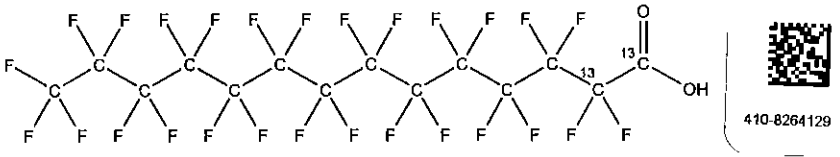
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Exp:06/05/30 Prpd:DSU6 Opn:
Labeled 13C2 PFTeDA Stock

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Labeled 13C2 PFTeDA Stock

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ID: PFC_ST_04772
Exp:06/05/30 Prpd:DSU6 Opn:
Labeled 13C2 PFTeDA Stock

8264139
ID: PFC_ST_04773
Exp:06/05/30 Prpd:DSU6 Opn:
Labeled 13C2 PFTeDA Stock

PRODUCT CODE.	M2PFTeDA	**LOT NUMBER.**	M2PFTeDA0525
COMPOUND.	Perfluoro-n-(1 2 $^{13}C_2$)tetradecanoic acid		
STRUCTURE.		**CAS #.**	2708218-82-8



410-8264129

MOLECULAR FORMULA.	$^{3}C_2{}^{12}C_{12}HF_{27}O_2$	**MOLECULAR WEIGHT:**	716 10
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
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.

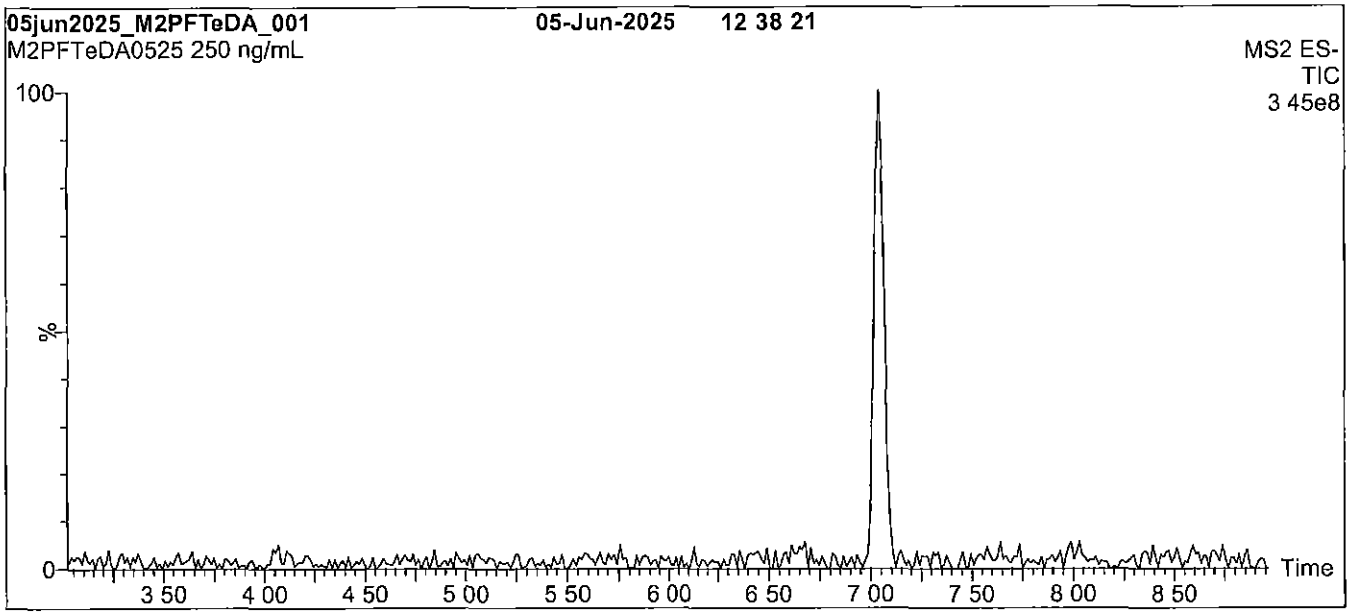
- See page 2 for further details
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester

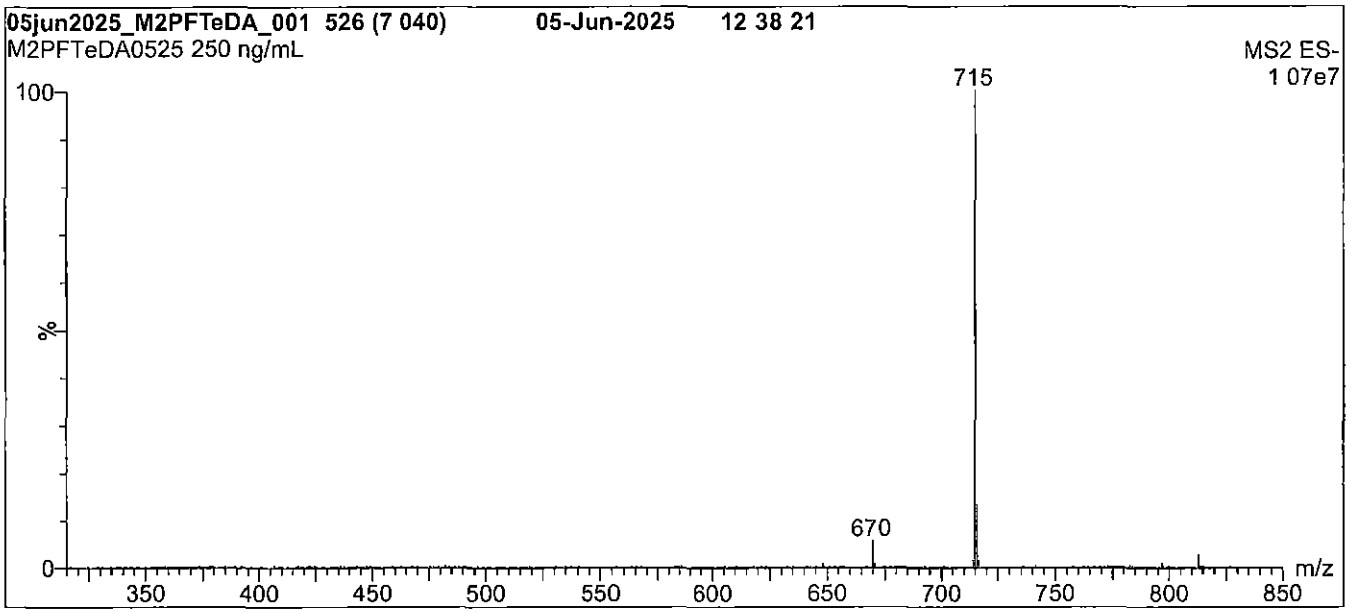
FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 06/06/2025 (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

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: 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 0.5 min
Time 12 min

Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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

PFC_ST_04774

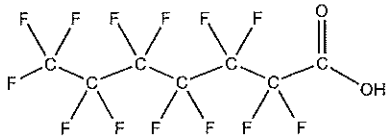
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-DH768, 4770, 4774

PRODUCT CODE: PFHpA
LOT NUMBER: PFHpA1124
COMPOUND: Perfluoro-n-heptanoic acid

STRUCTURE:
CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
MOLECULAR WEIGHT: 364.06
CONCENTRATION: 50.0 ± 2.5 µg/mL
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/21/2024
EXPIRY DATE: (mm/dd/yyyy) 11/21/2029
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:** 12/10/2024 (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:

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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

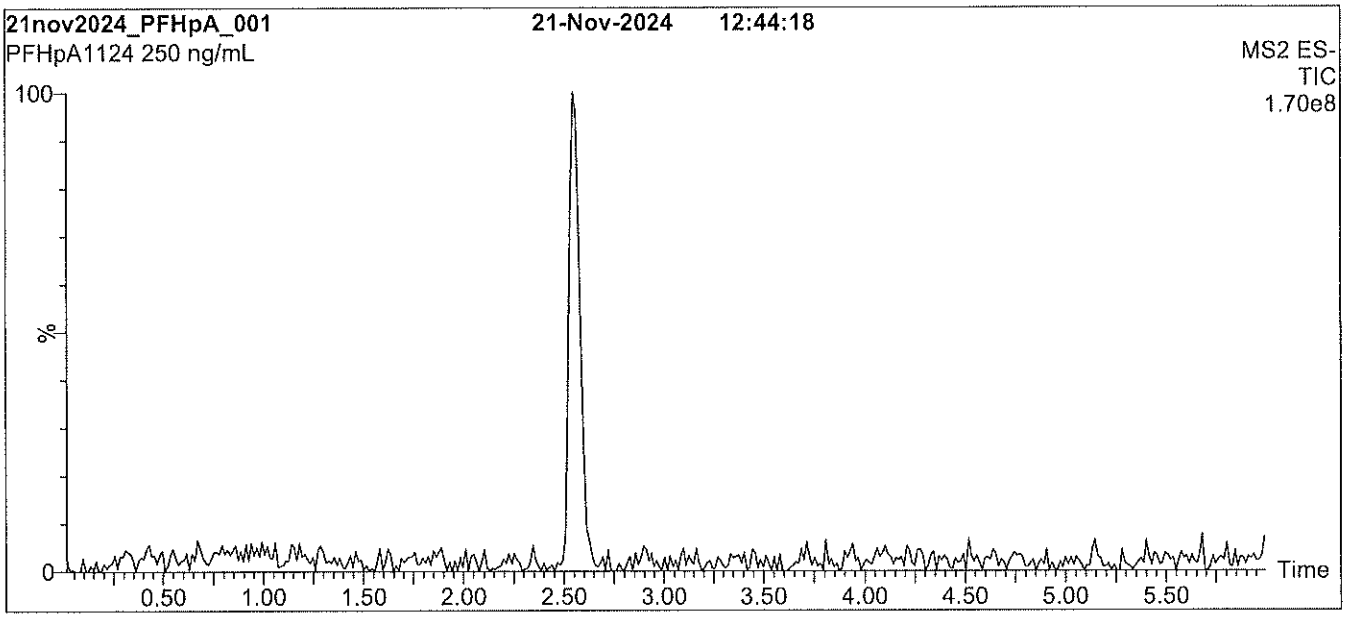
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

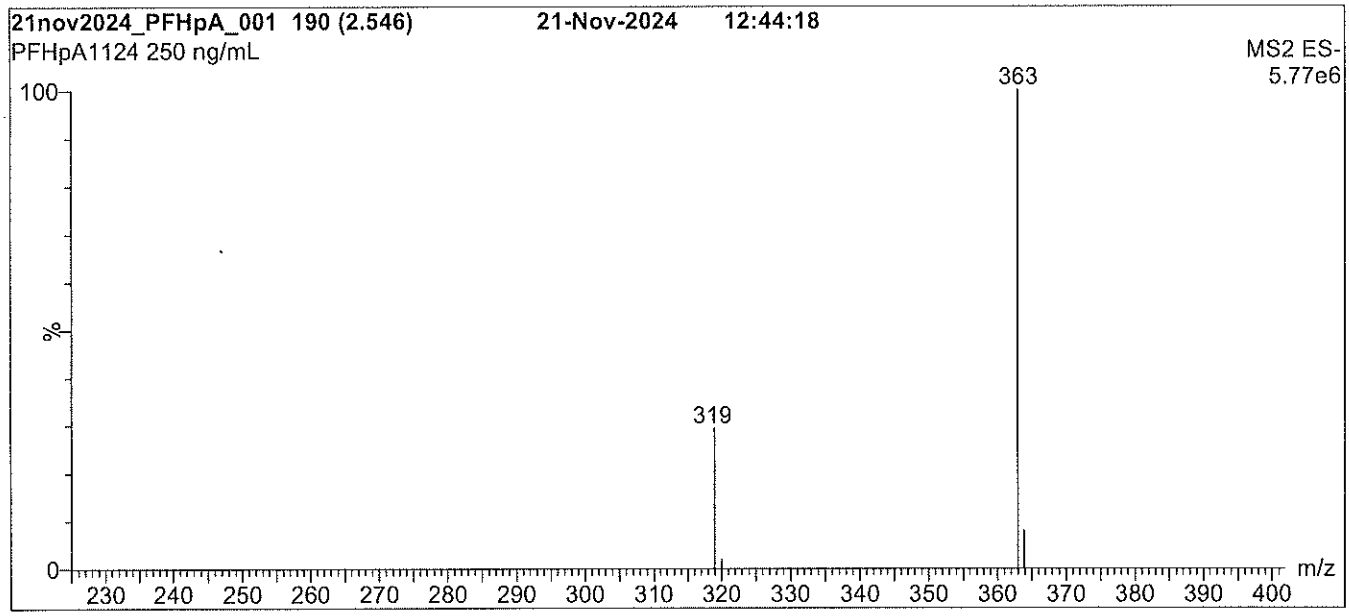
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

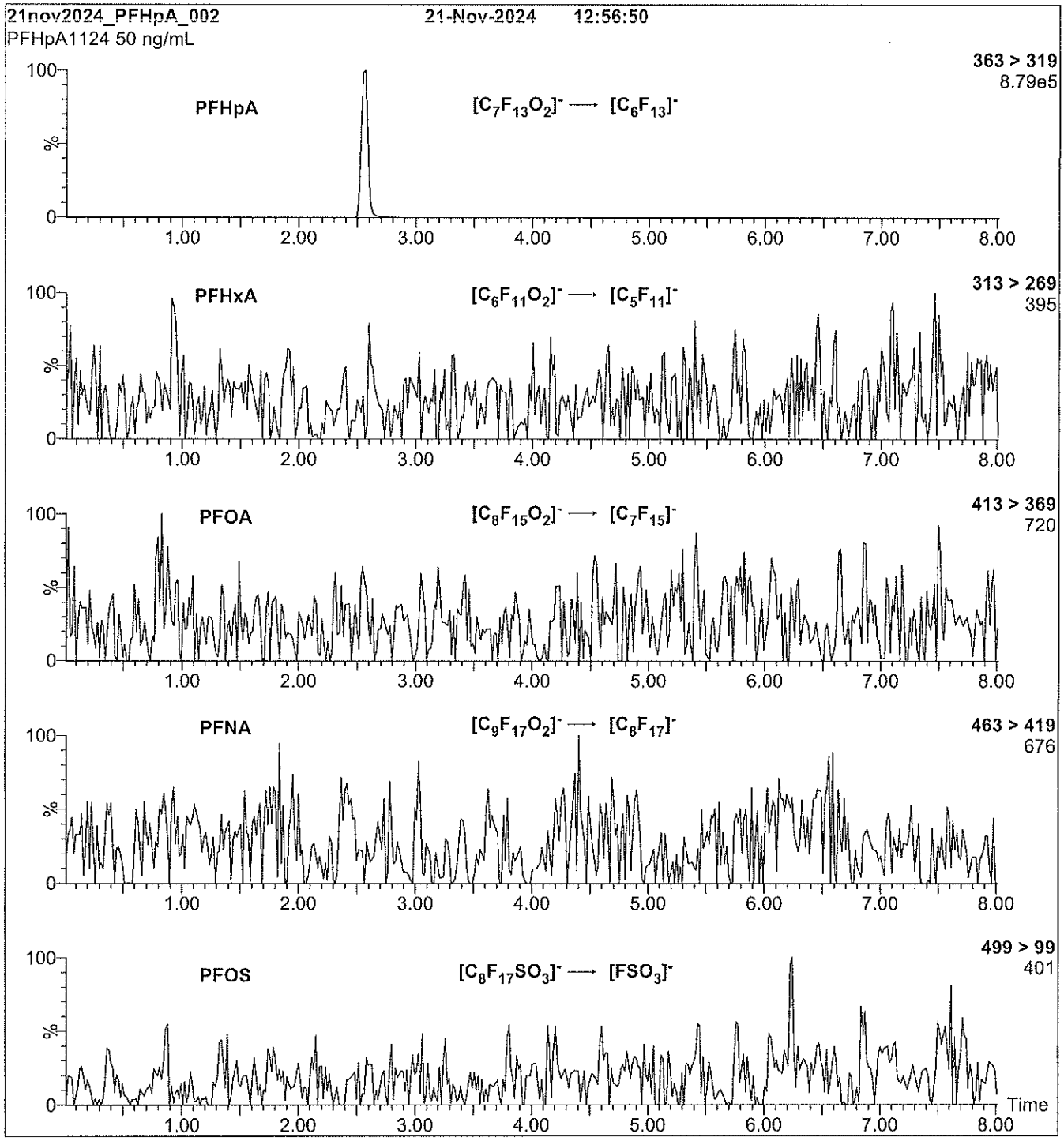
Flow: 300 µL/min

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: 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) = 6,40e-3
Collision Energy (eV) = 8

Reagent

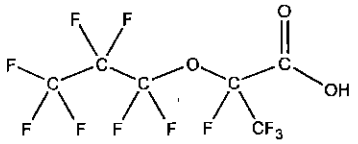
PFC_ST_04793

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST_04790, 4791, 4792, 4793

PRODUCT CODE:	HFPO-DA	**LOT NUMBER:**	HFPODA0425
COMPOUND:	Hexafluoropropylene oxide dimer acid		
IUPAC NAME:	*rac*-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)	04/25/2025		
EXPIRY DATE: (mm/dd/yyyy)	04/25/2029		
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 compound is commercially known as GenX.
- HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/29/2025 (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:

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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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

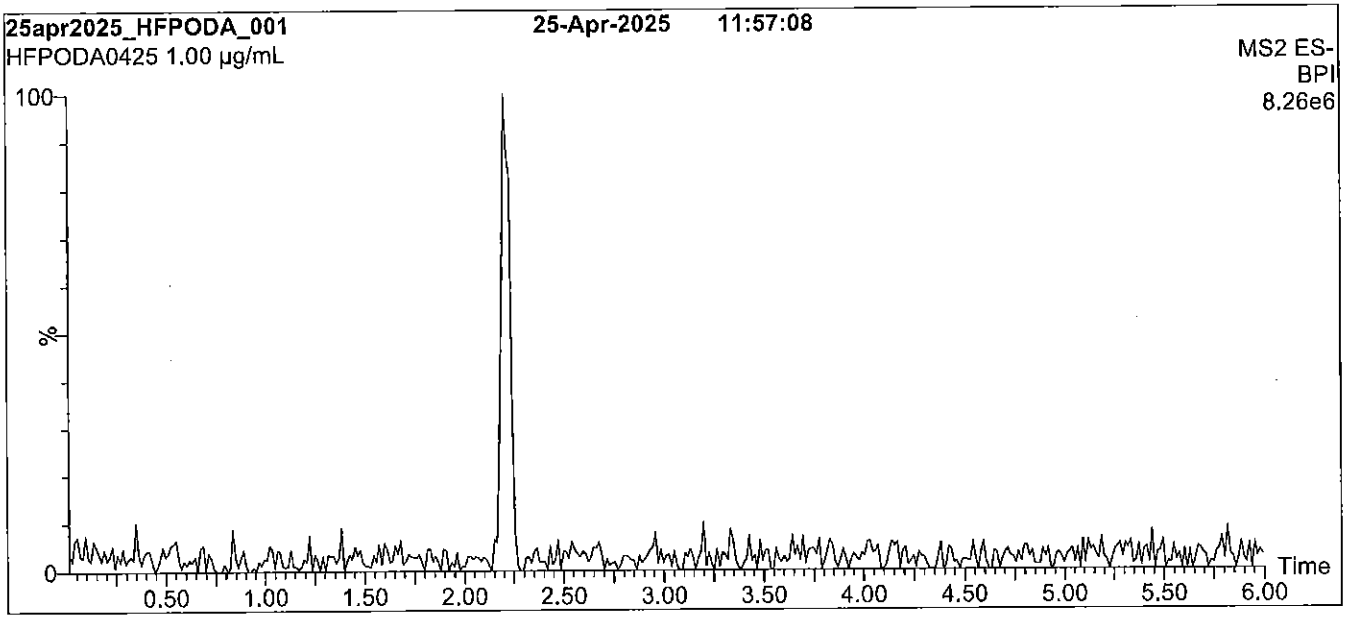
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

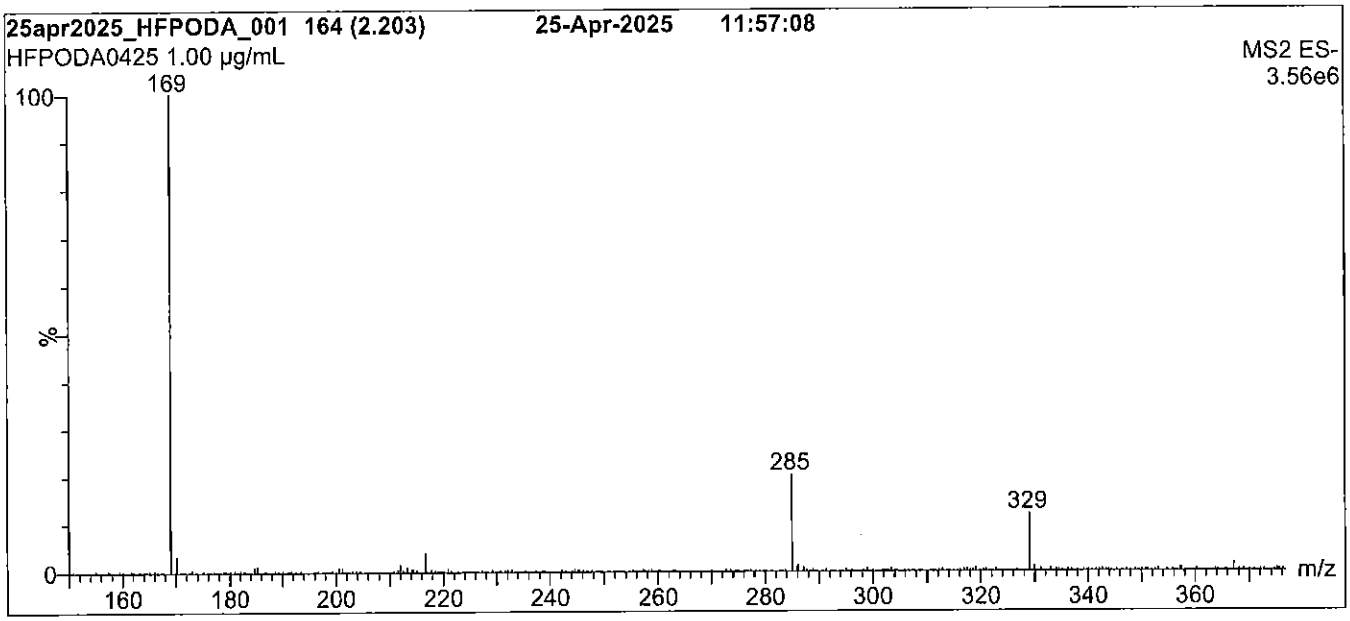
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **HFPO-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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

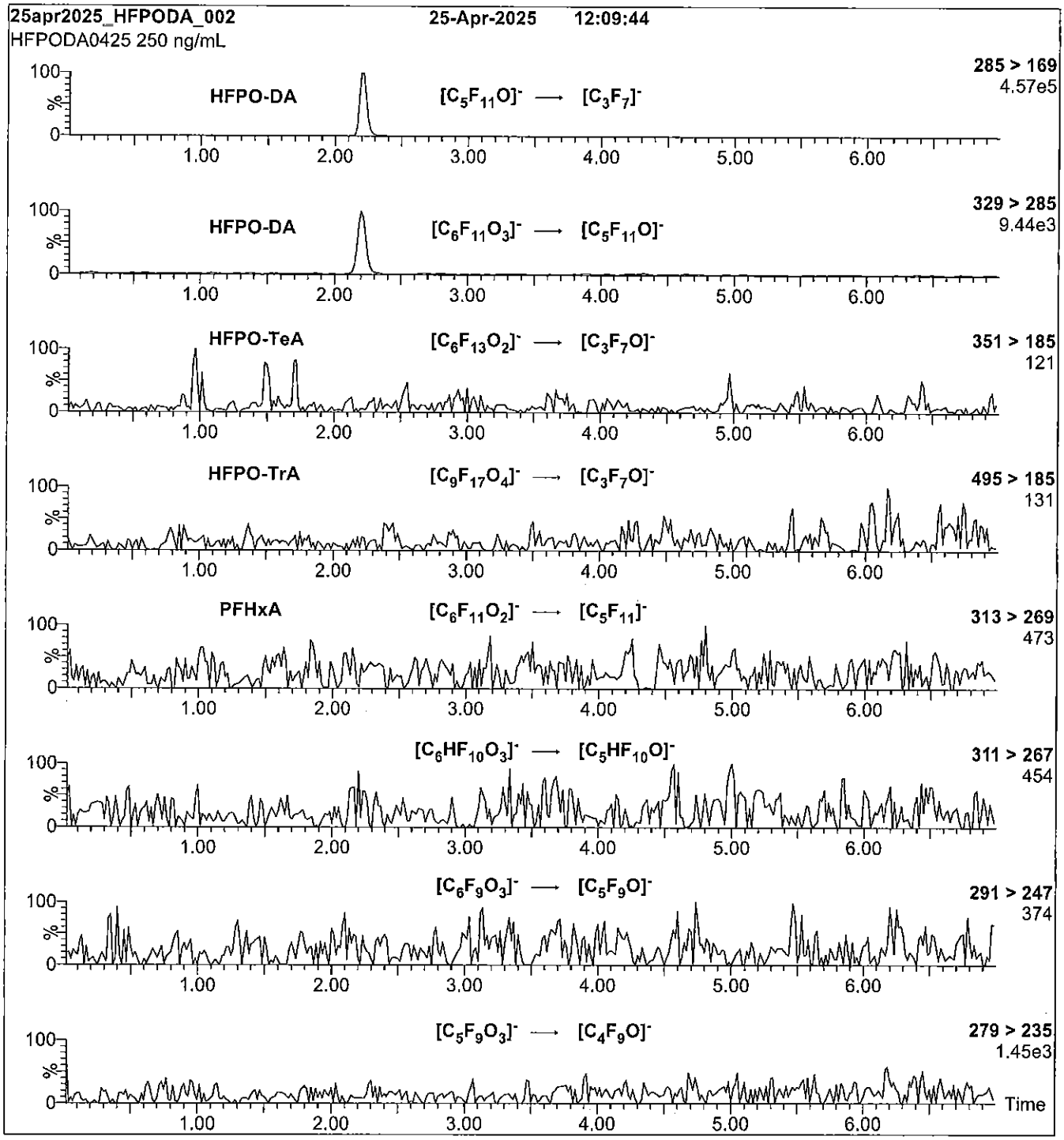
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

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) = 4.19e-3
Collision Energy (eV) = 8

Reagent

PFC_ST_04801

br-NEtFOSE

2-(N-Ethylperfluorooctanesulfonamido)ethanol
Solution/Mixture of Linear and
Branched Isomers

PRODUCT CODE:	br-NEtFOSE
LOT NUMBER:	brNEtFOSE0225
CONCENTRATION:	50.0 ± 2.5 µg/mL
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	02/20/2025
LAST TESTED: (mm/dd/yyyy)	03/13/2025 (HRGC/LRMS)
	02/21/2025 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy)	03/13/2030
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% 2-(N-ethylperfluorooctanesulfonamido)ethanol 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: HRGC/LRMS Data (Full Scan and Mass Spectrum)
Figure 2: LC/MS Data (Full Scan and Mass Spectrum)
Figure 3: LC/MS Data (SIR)
Figure 4: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- CAS #: 1691-99-2 (for linear isomer).
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

INTENDED USE:

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HANDLING:

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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, and/or SFC/UV/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 or equivalent products 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,...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%) has been assigned to this product.

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.

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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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Table A: **br-NEtFOSE; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

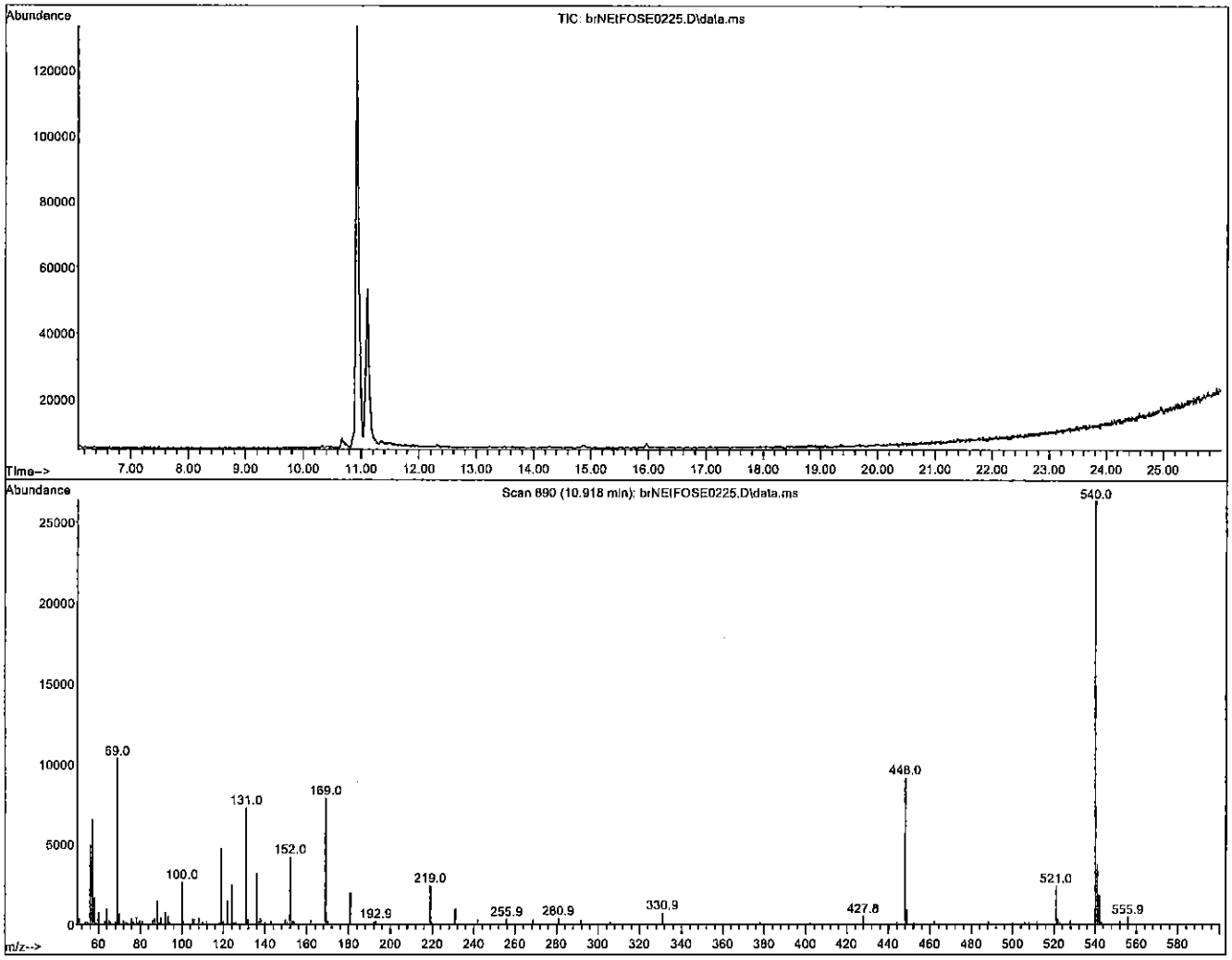
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol	$CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CH_2OH$	64.6
2	2-(N-Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol	$CF_3(CF_2)_4CF(CF_3)CF_2SO_2N(CH_2CH_3)CH_2CH_2OH$	0.2
3	2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_2CH_3)CH_2CH_2OH$	4.1
4	2-(N-Ethylperfluoro-4-methyl-1-heptanesulfonamido)ethanol	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_2CH_3)CH_2CH_2OH$	4.3
5	2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$	8.8
6	2-(N-Ethylperfluoro-6-methyl-1-heptanesulfonamido)ethanol	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_2CH_3)CH_2CH_2OH$	17.8
7	2-(N-Ethylperfluoro-5,5-dimethyl-1-hexanesulfonamido)ethanol	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_2CH_3)CH_2CH_2OH$	0.3

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only. Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

Certified By: _____ **Date:** 04/04/2025
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **br-NEtFOSE; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



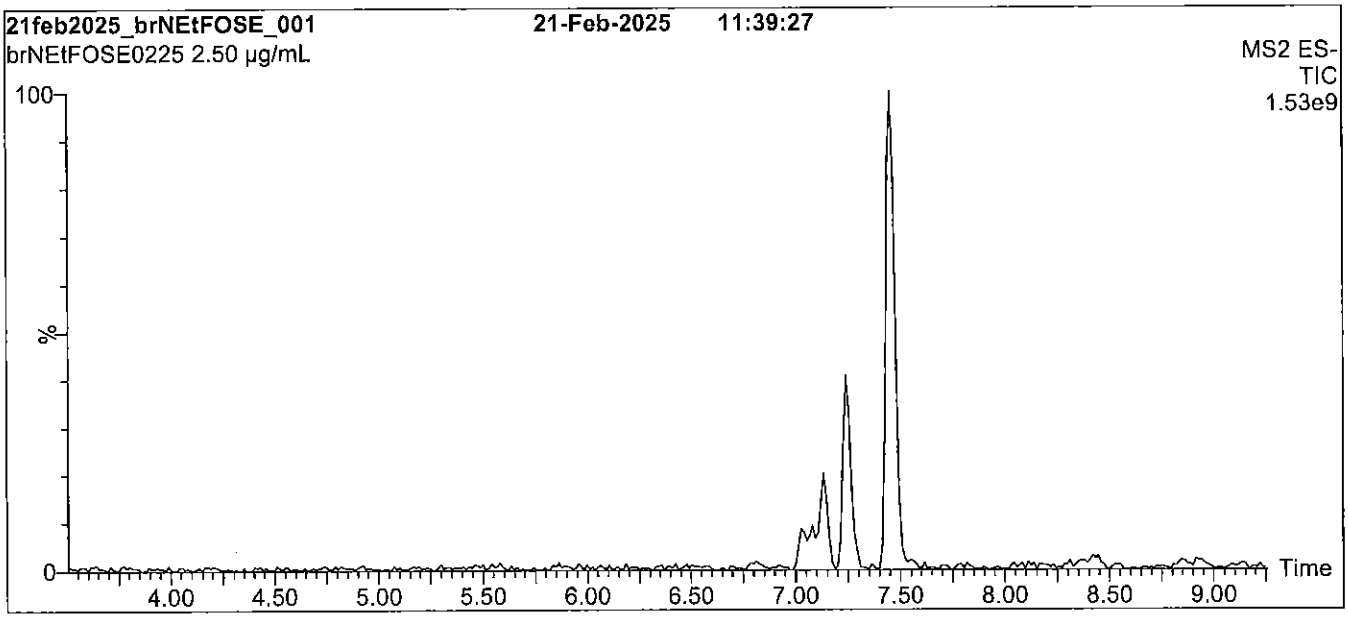
Conditions for Figure 1:

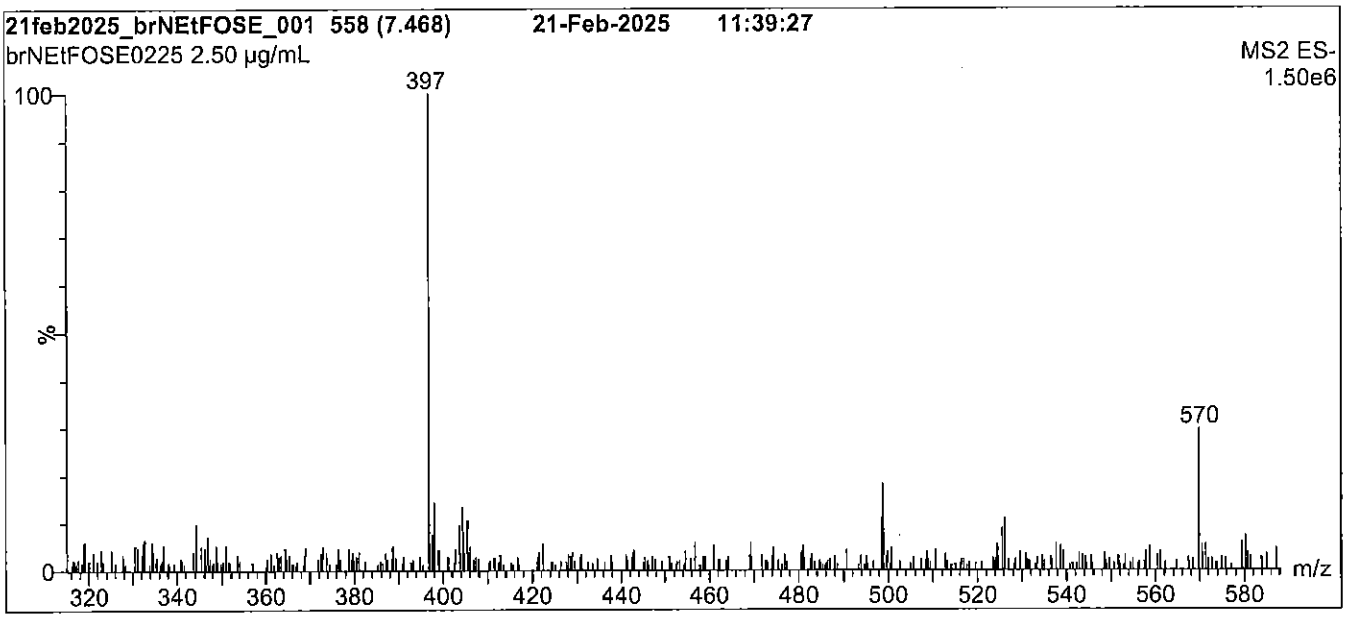
Agilent 7890A HRGC
Agilent 5975C MSD

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 310°C 310°C (10 min)
Ionization:	EI+
Detector:	230°C Full Scan (50-1000 amu)

Figure 2: **br-NEtFOSE; 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: 40% H_2O / 60% MeOH
Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min.
Time: 12 min

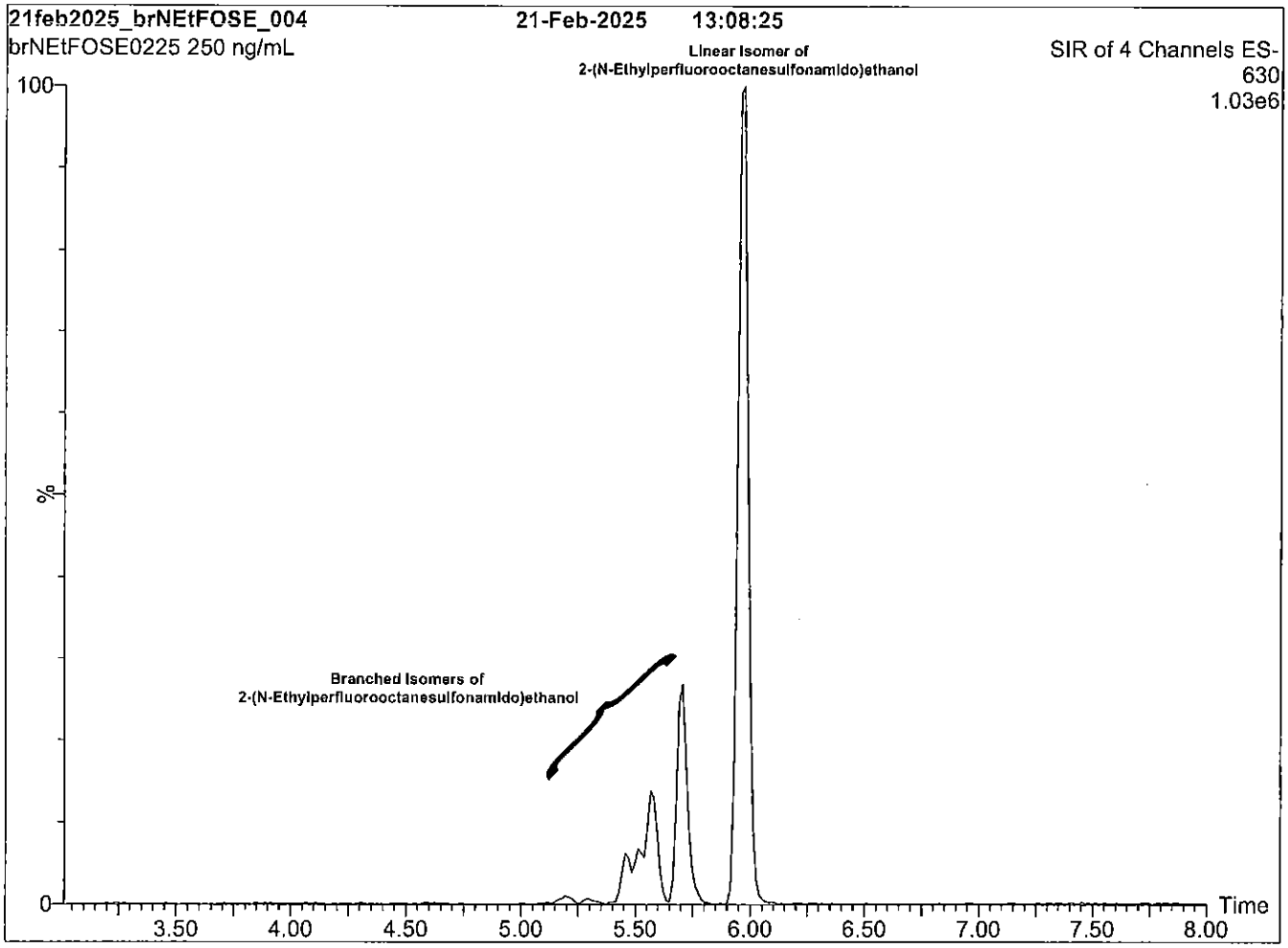
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **br-NEtFOSE; LC/MS Data (SIR)**



Conditions for Figure 3:

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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

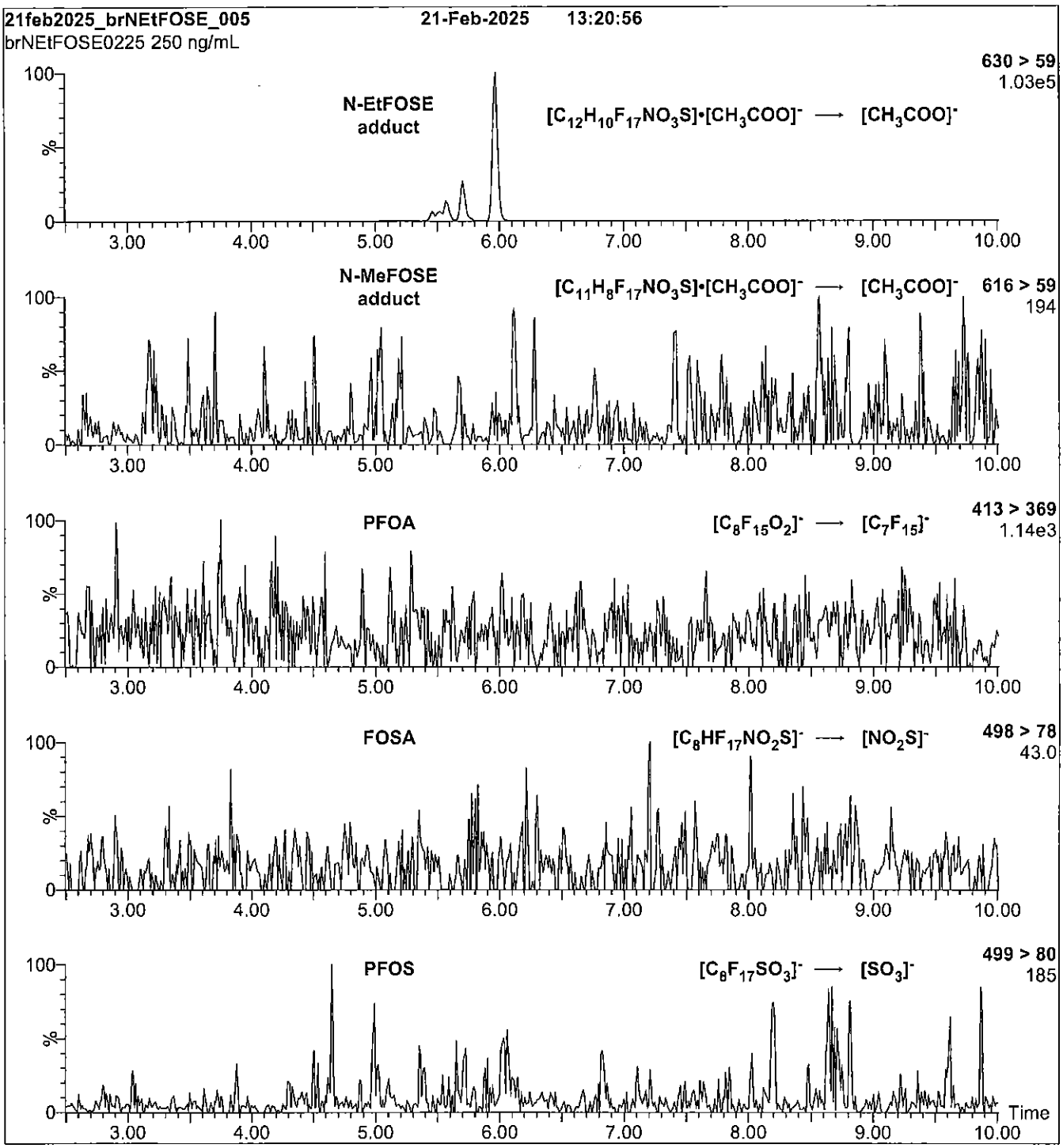
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (15-20)
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (L/hr) = 1000

Figure 4: br-NEtFOSE; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 4:

Injection: On-column (br-NEtFOSE)

Mobile phase: Same as Figure 3

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.34e-3
Collision Energy (eV) = 12

Reagent

PFC_ST_04804

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC-ST-04802, 4803, 4804

br-PFNA

Perfluorononanoic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFNA
LOT NUMBER:	brPFNA0724
CONCENTRATION:	50.0 ± 2.5 µg/mL
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	07/15/2024
LAST TESTED: (mm/dd/yyyy)	07/17/2024
EXPIRY DATE: (mm/dd/yyyy)	07/17/2029
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorononanoic acid 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.
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.
- Contains ~0.4% of perfluoro-n-octanoic acid (PFOA).
- CAS#: 375-95-1 (for linear isomer).

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 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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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 Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the 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-PFNA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

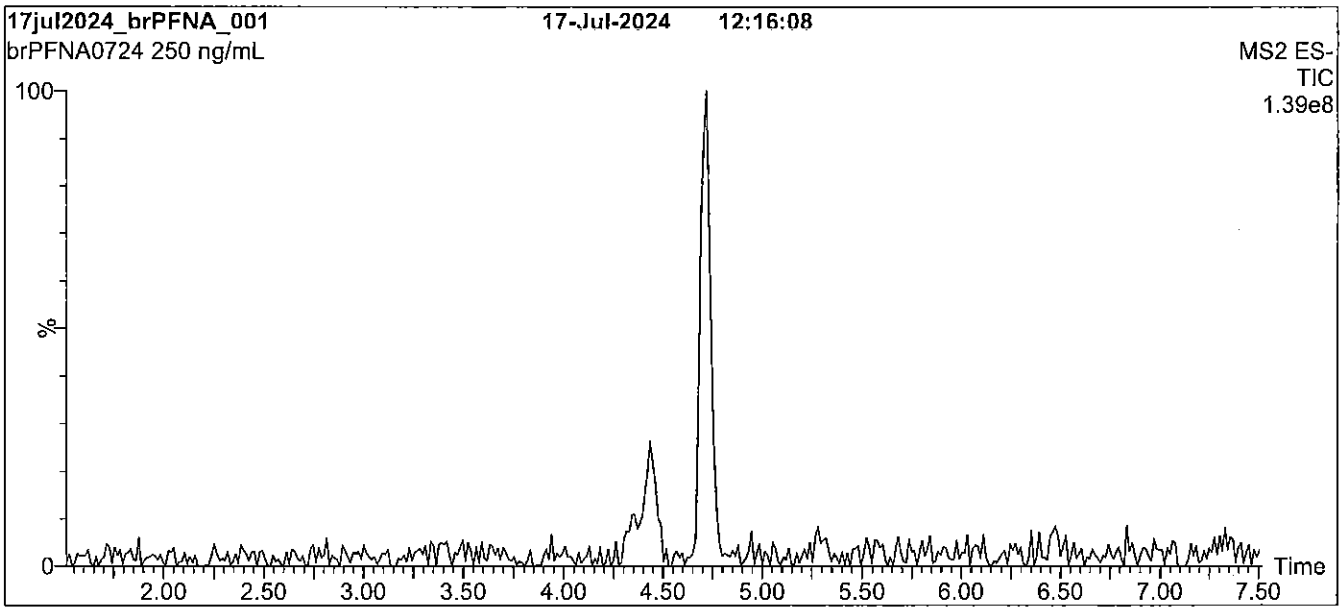
Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR
1	Perfluoro-n-nonanoic acid	$CF_3(CF_2)_7CO_2H$	65.2
2	Perfluoro-4-methyloctanoic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2CO_2H$	5.7
3	Perfluoro-5-methyloctanoic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3CO_2H$	4.9
4	Perfluoro-6-methyloctanoic acid	$CF_3CF_2CF(CF_3)(CF_2)_4CO_2H$	8.1
5	Perfluoro-7-methyloctanoic acid	$CF_3CF(CF_3)(CF_2)_5CO_2H$	14.6
6	Perfluoro-6,6-dimethylheptanoic acid	$CF_3C(CF_3)_2(CF_2)_4CO_2H$	0.4
7	Unknown Double Branched Isomers		1.0

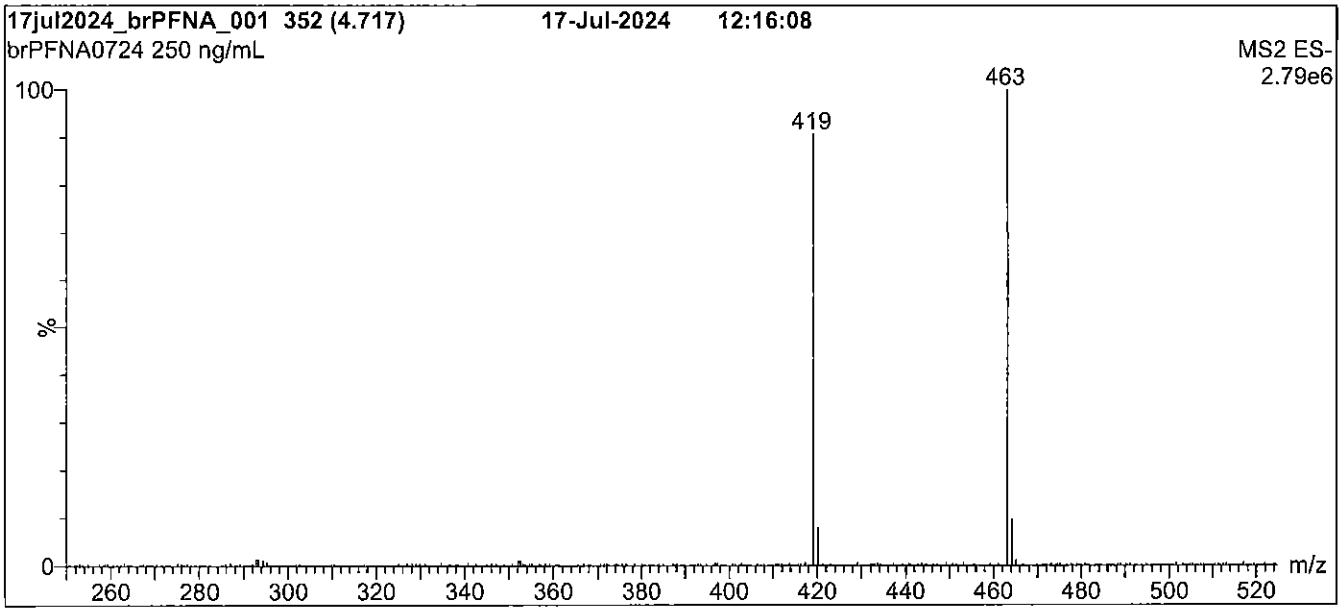
* Percent of total perfluorononanoic acid isomers only.

Certified By: _____ **Date:** 07/19/2024
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: br-PFNA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

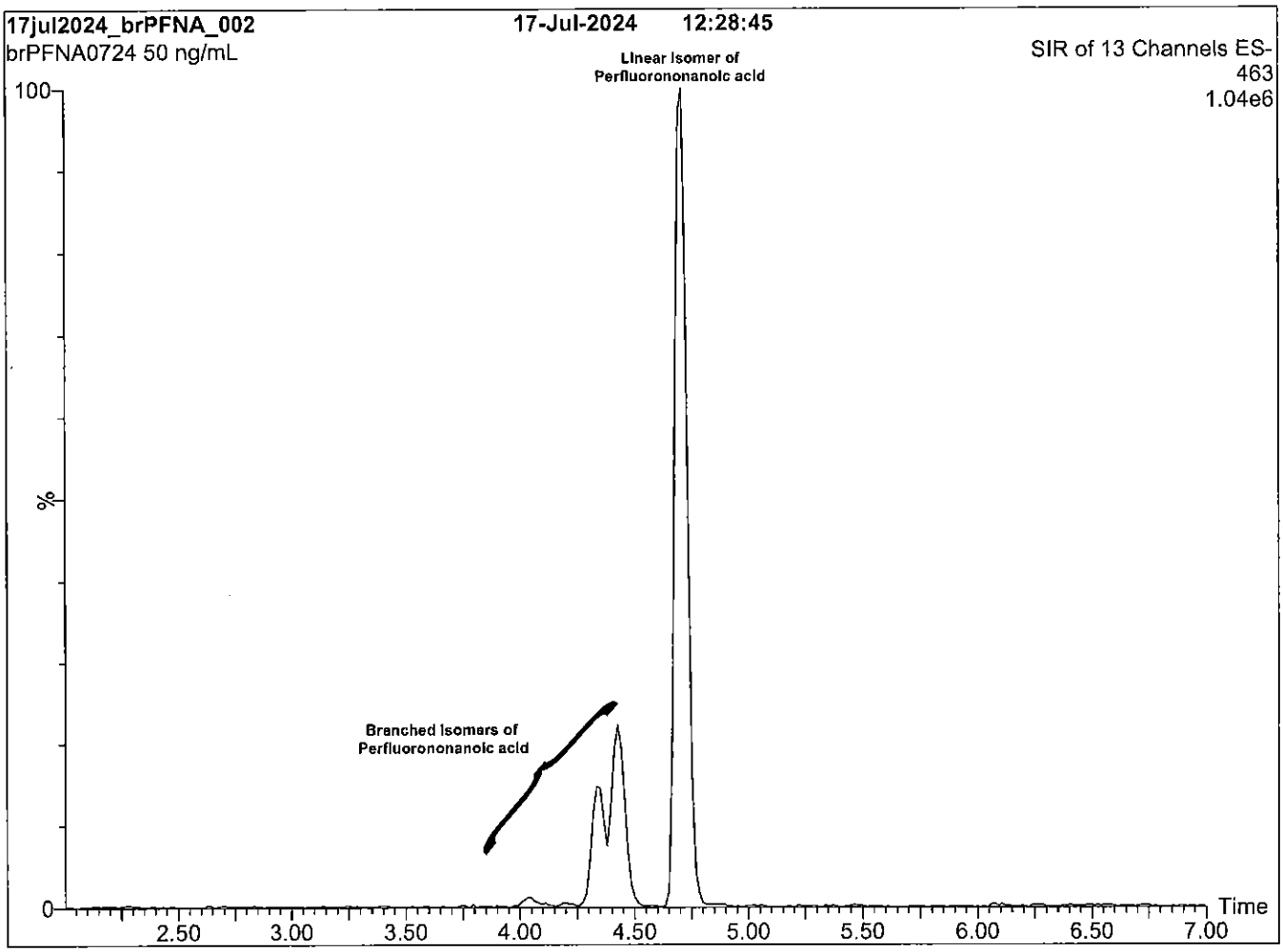
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2: br-PFNA; LC/MS Data (SIR)



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: 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

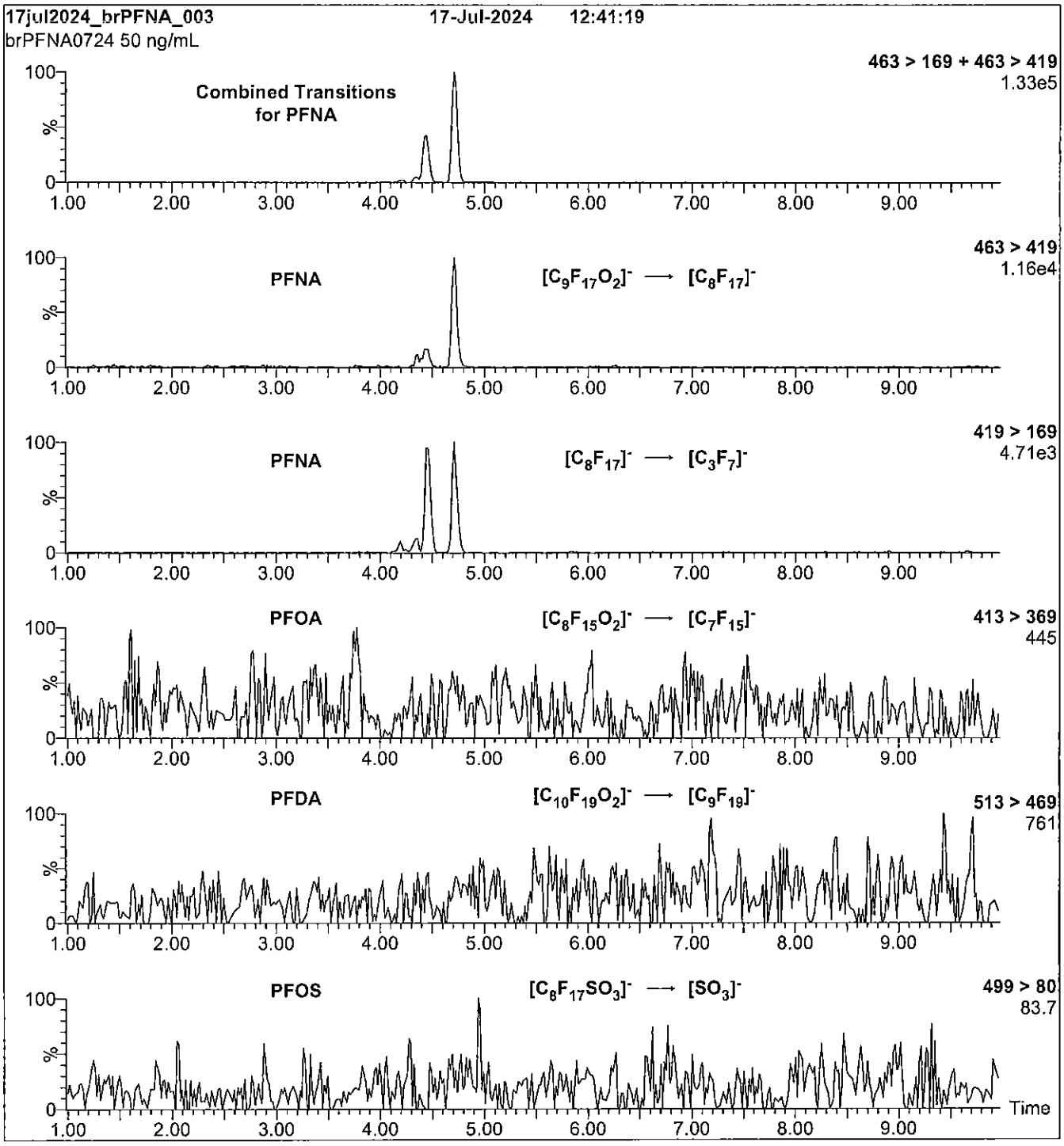
Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 3: **br-PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFNA)

Mobile phase: Same as Figures 1 & 2

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 5.94e-3
Collision Energy (eV) = 20

Reagent

PFC_ST_04807

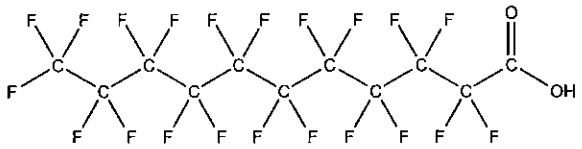
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

QFC-ST-04807, 4811

PRODUCT CODE: PFUdA
COMPOUND: Perfluoro-n-undecanoic acid
LOT NUMBER: PFUdA0425

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) 04/09/2025
EXPIRY DATE: (mm/dd/yyyy) 04/09/2030
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:** 04/11/2025 (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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

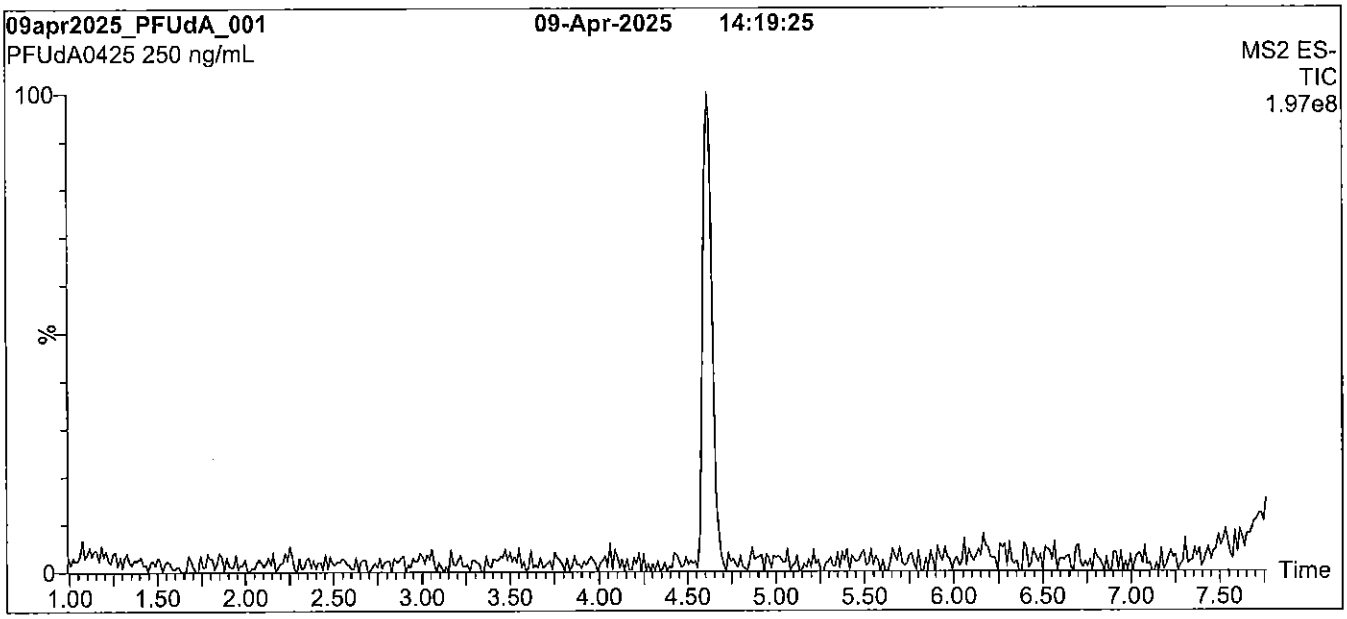
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

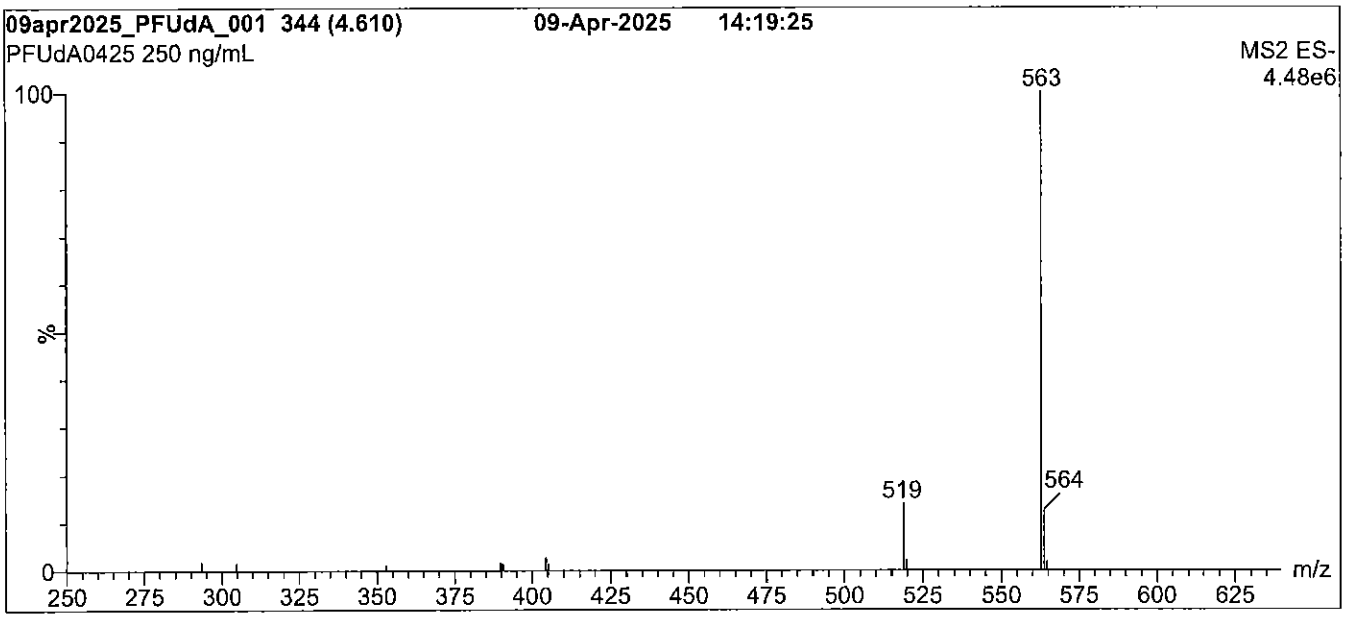
CALA Testing Accreditation No. A1226

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 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

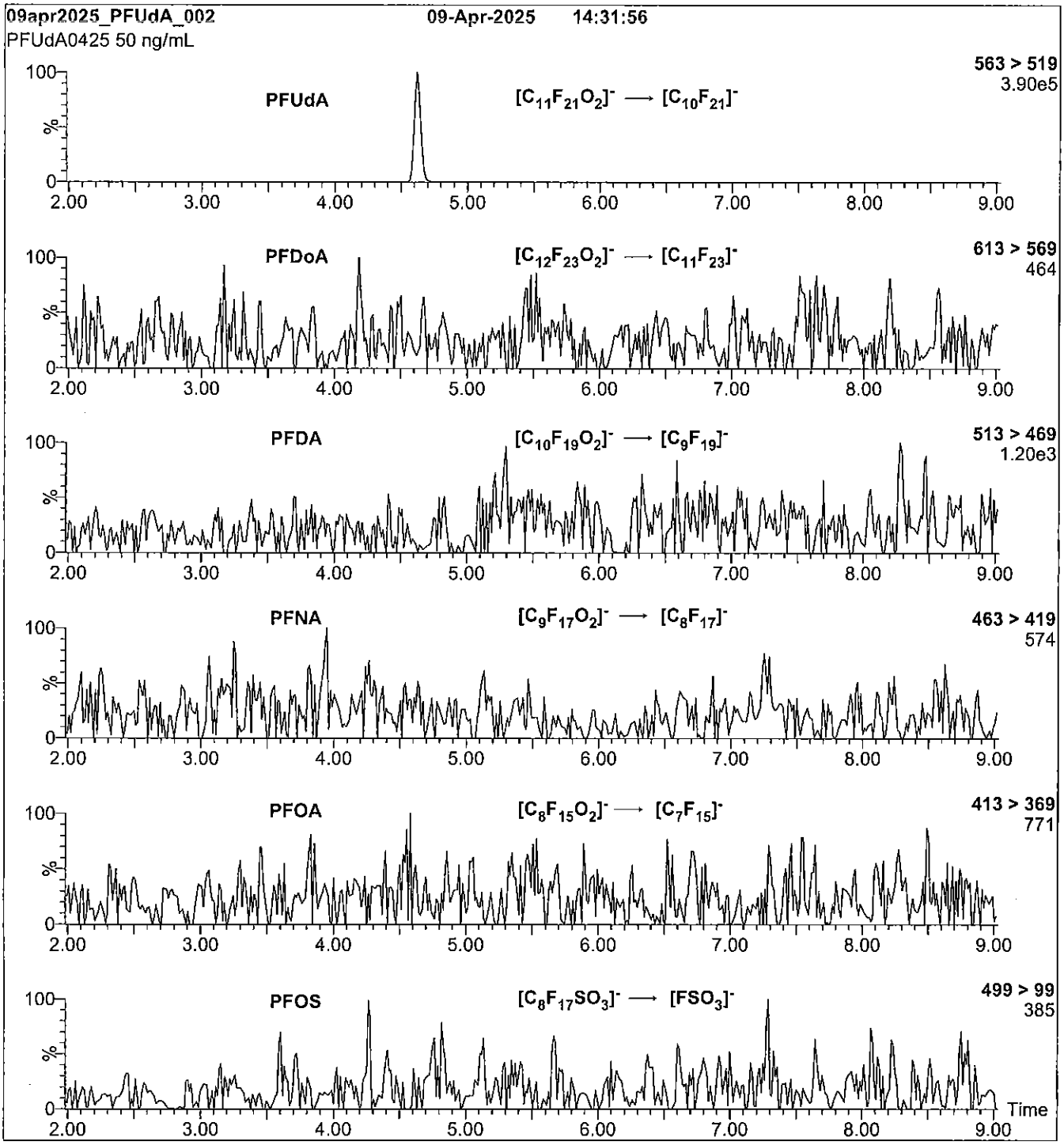
Flow: 300 µL/min

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: 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) = 5.91e-3
Collision Energy (eV) = 12

Reagent

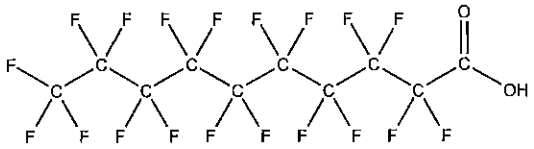
PFC_ST_04815

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_04815, 4816

PRODUCT CODE:	PFDA	**LOT NUMBER:**	PFDA0724
COMPOUND:	Perfluoro-n-decanoic acid		
STRUCTURE:		**CAS #:**	335-76-2



MOLECULAR FORMULA:	$C_{10}HF_{19}O_2$	**MOLECULAR WEIGHT:**	514.08
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/17/2024		
EXPIRY DATE: (mm/dd/yyyy)	07/17/2029		
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:** 02/10/2025 (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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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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

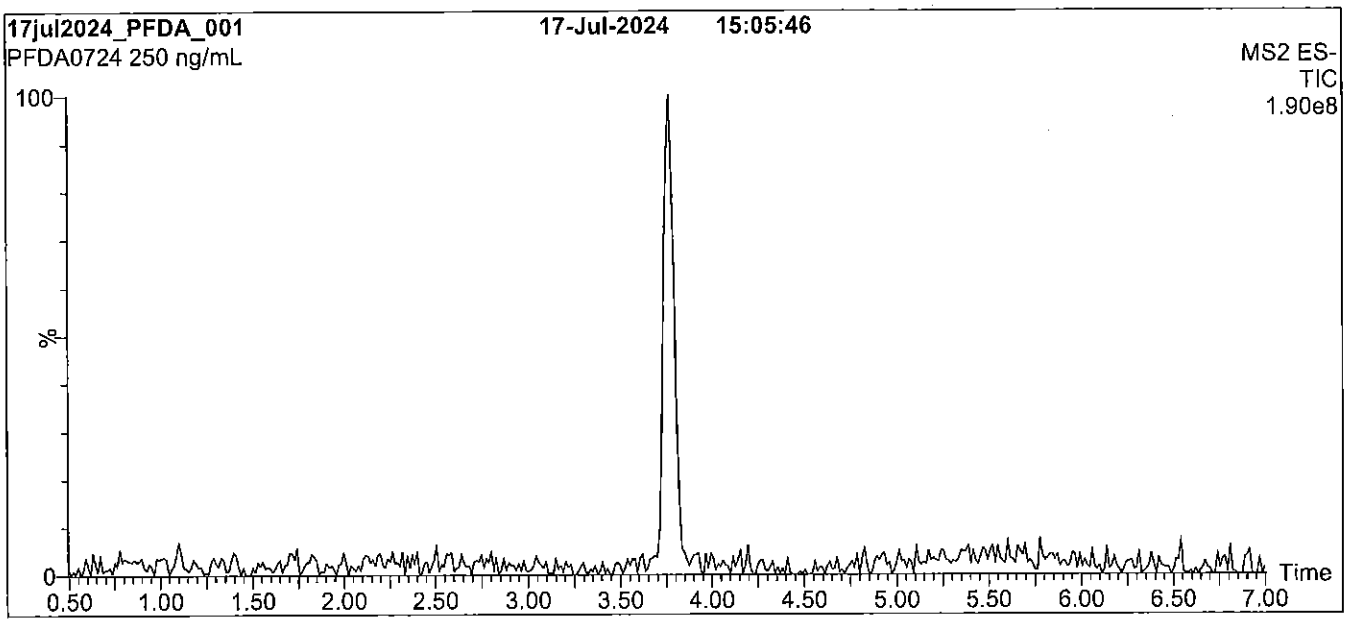
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

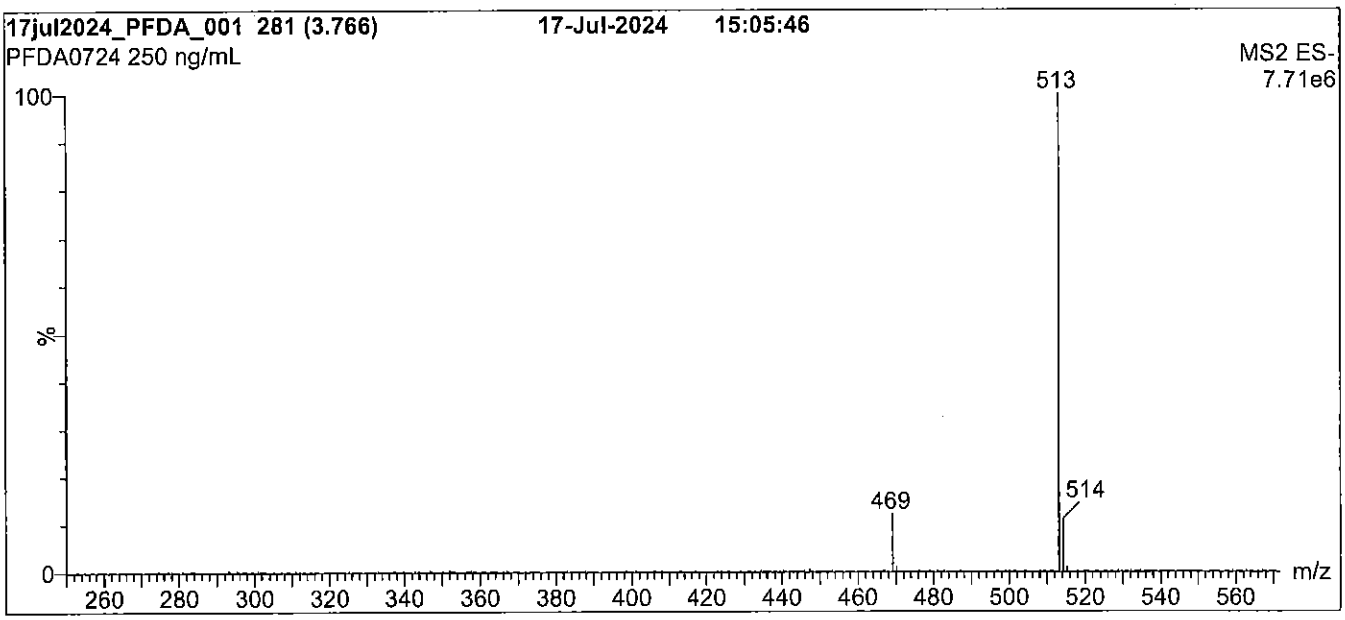
CALA Testing Accreditation No. A1226

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: **PFDA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

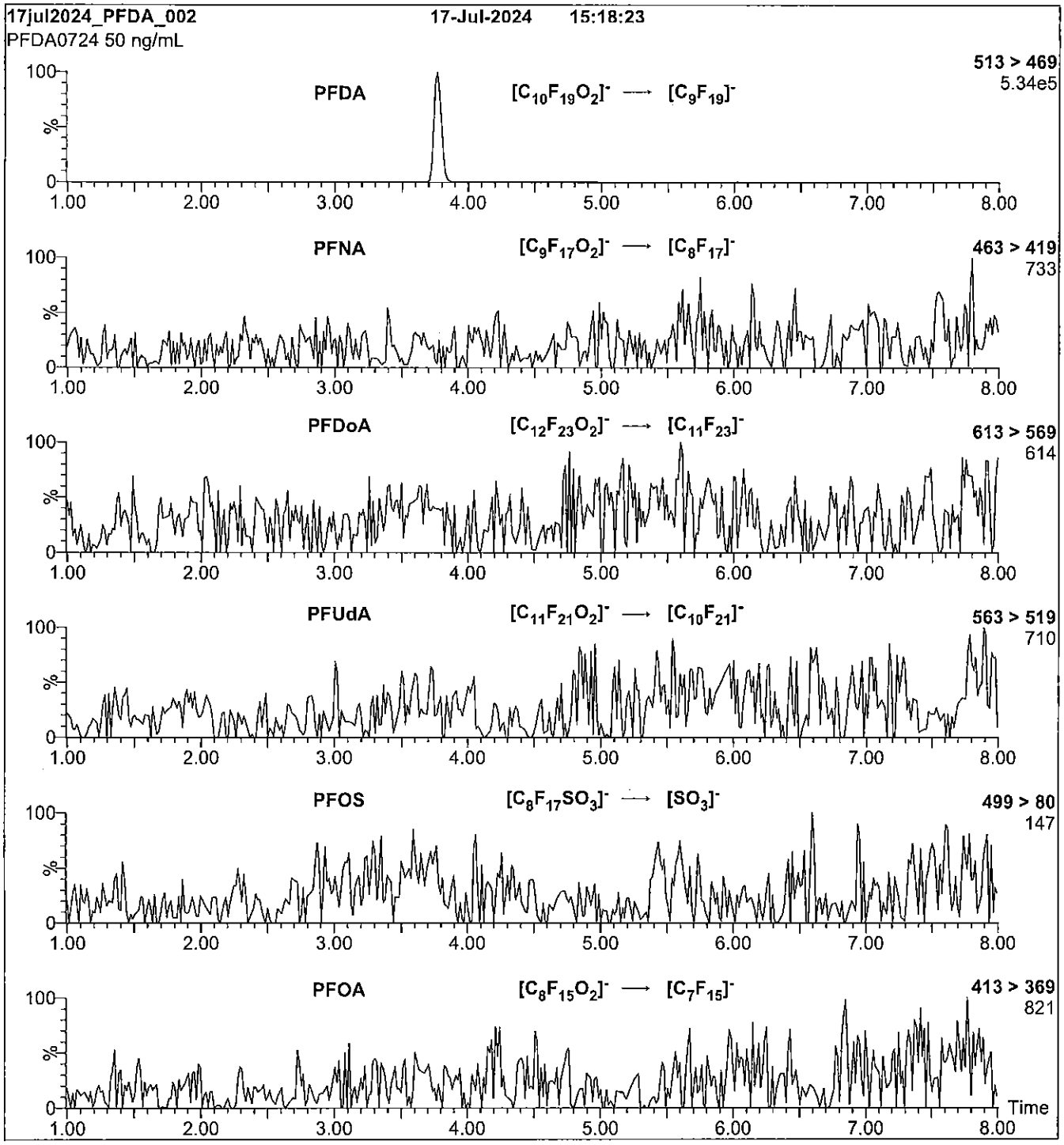
Flow: 300 µL/min

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: **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) = 5.94e-3
Collision Energy (eV) = 10

Reagent

PFC_ST_04858

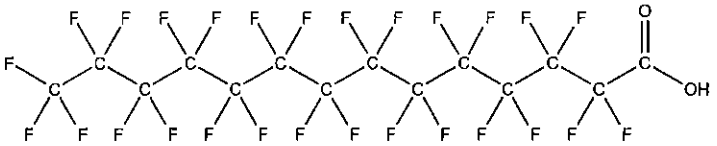
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

8264648
ID: PFC_ST_04857
Exp:04/09/30 Prpd:RPU6 Opn:
Native PFTeDA Stock

8264649
ID: PFC_ST_04858
Exp:04/09/30 Prpd:RPU6 Opn:
Native PFTeDA Stock

PRODUCT CODE.	PFTeDA	**LOT NUMBER.**	PFTeDA0425
COMPOUND.	Perfluoro-n-tetradecanoic acid		
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)	04/09/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/09/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-8264649

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

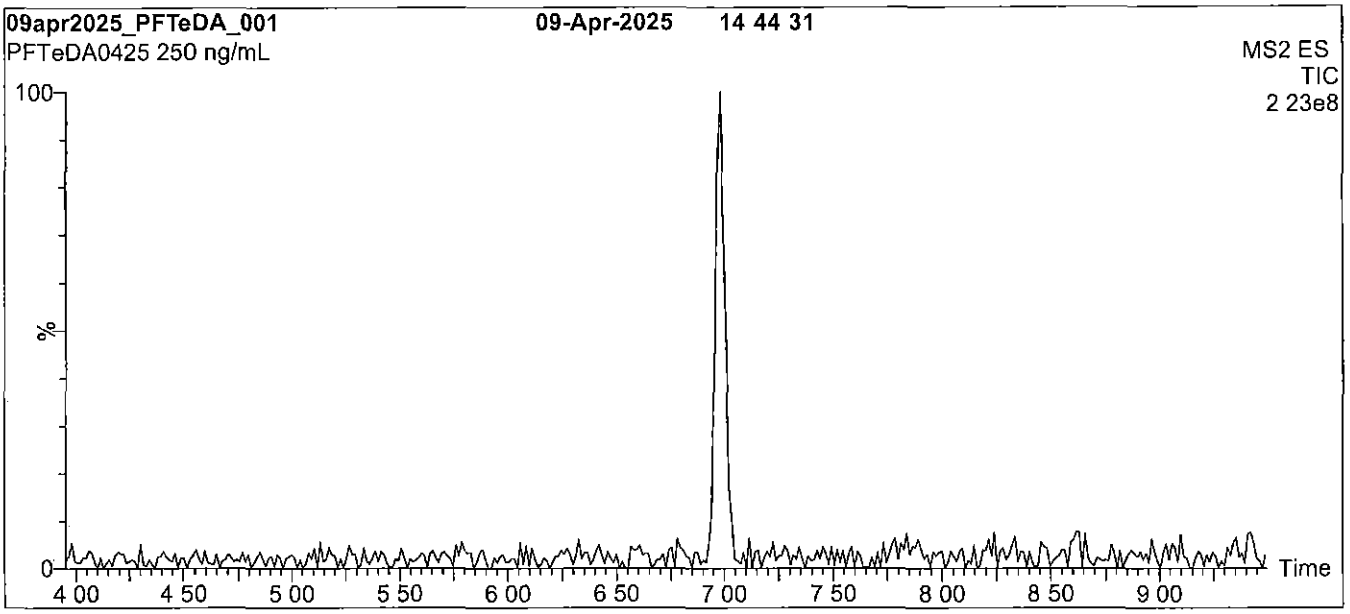
- See page 2 for further details
- Contains 4 mole eq of NaOH to prevent conversion of the carboxylic acid to the methyl ester
- Contains ~0 3% of perfluoro-n-dodecanoic acid (PFDoA)

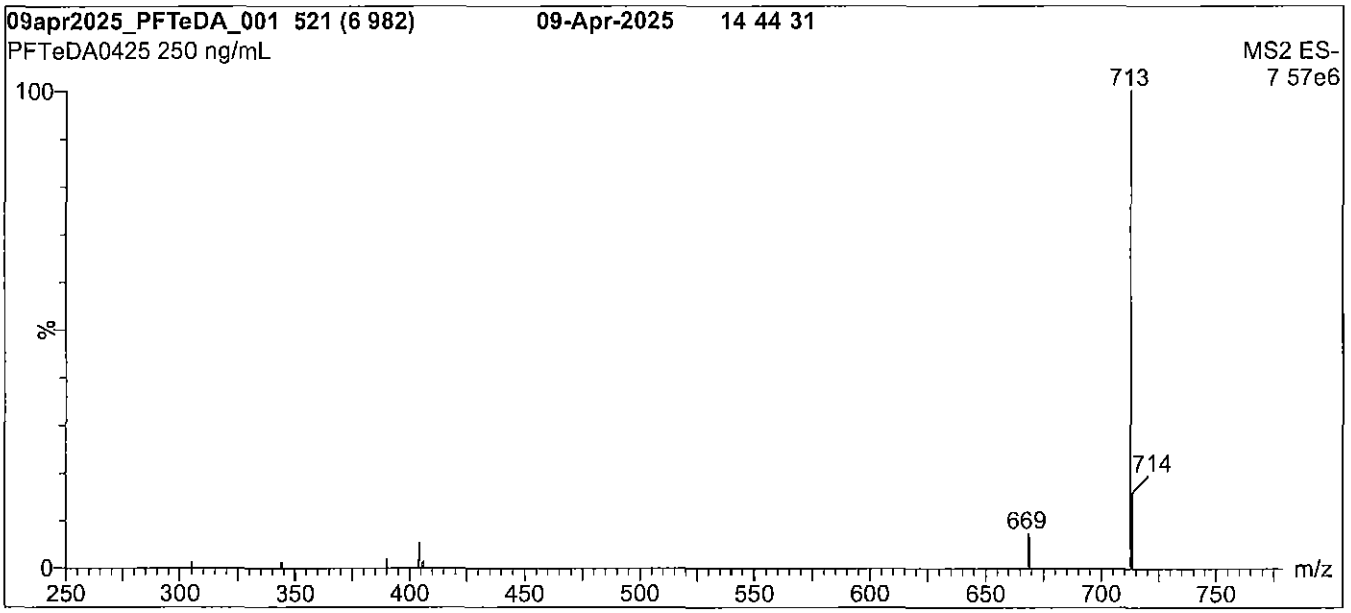
FOR LABORATORY USE ONLY NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 04/14/2025 (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

Figure 1. **PFTeDA, 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 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

Reagent

PFC_ST_04947

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

8439529
ID: PFC_ST_04946
Exp:04/23/30 Prpd:D4BO Opn:
Native FPePA Stock (5:3 FTCA)

8439530
ID: PFC_ST_04947
Exp:04/23/30 Prpd:D4BO Opn:
Native FPePA Stock (5:3 FTCA)

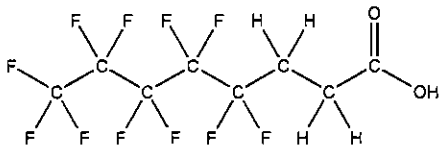
8439531
ID: PFC_ST_04948
Exp:04/23/30 Prpd:D4BO Opn:
Native FPePA Stock (5:3 FTCA)

8439532
ID: PFC_ST_04949
Exp:04/23/30 Prpd:D4BO Opn:
Native FPePA Stock (5:3 FTCA)

PRODUCT CODE. FPePA
COMPOUND. 3-Perfluoropentyl propanoic acid

LOT NUMBER: FPePA0425

STRUCTURE:



CAS #: 914637-49-3

410-8439530

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)	04/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/23/2030		
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 by H and ^{19}F NMR.

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By. _____ **Date** 05/05/2025 (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 SFC/UV/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 and/or SFC/UV/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, $.x_n$ on which it depends is

$$u_c(y(x_1\ x_2\ \ .x_n)) = \sqrt{\sum_{=1}^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

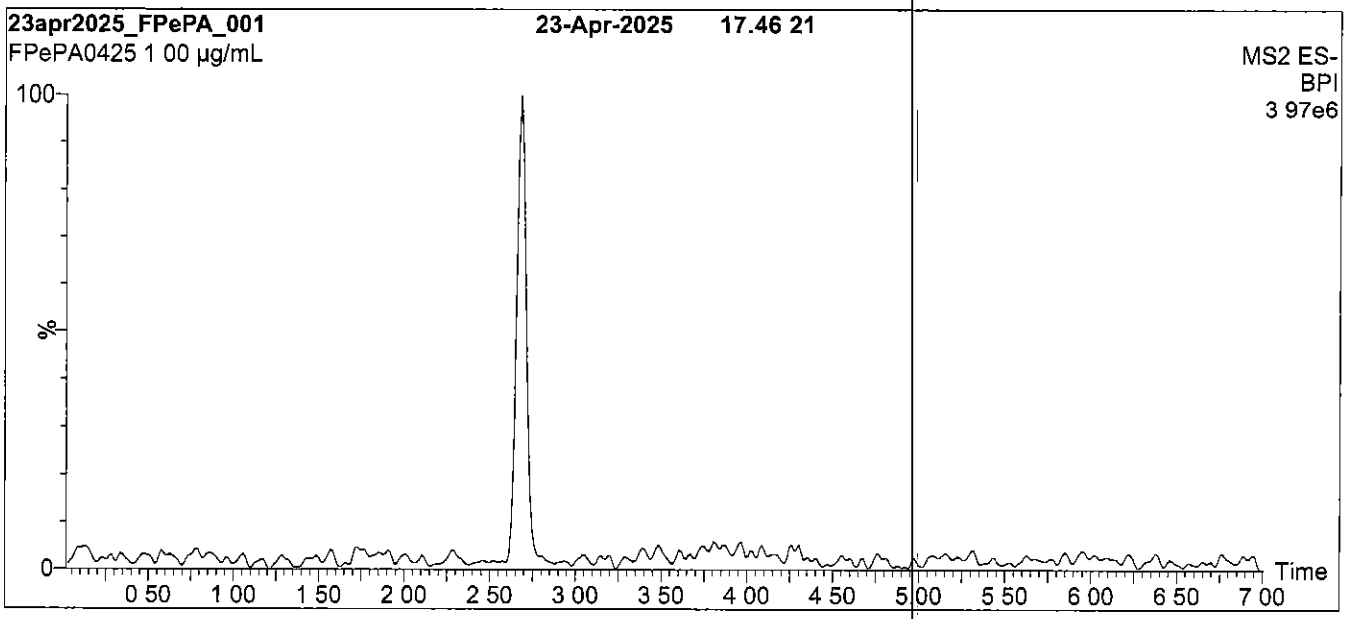
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

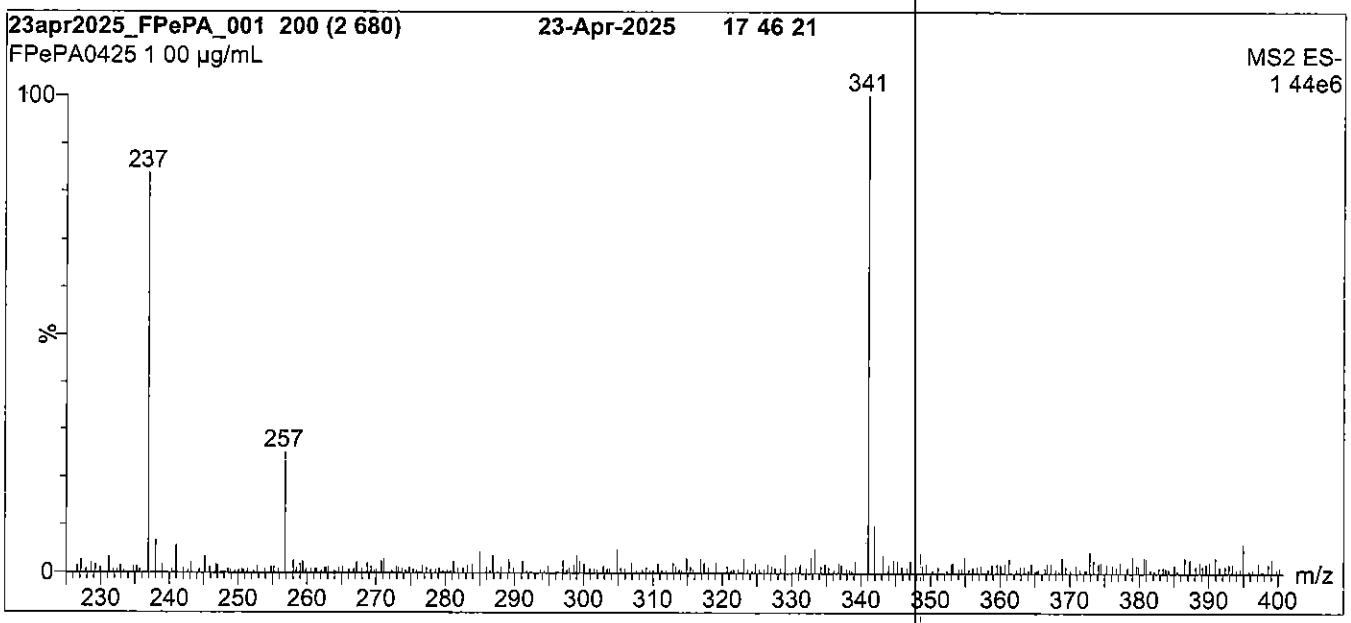
CALA Testing Accreditation No. A1226

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 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 9 min and hold for 1 min
before returning to initial conditions in 0 5 min.
Time 12 min

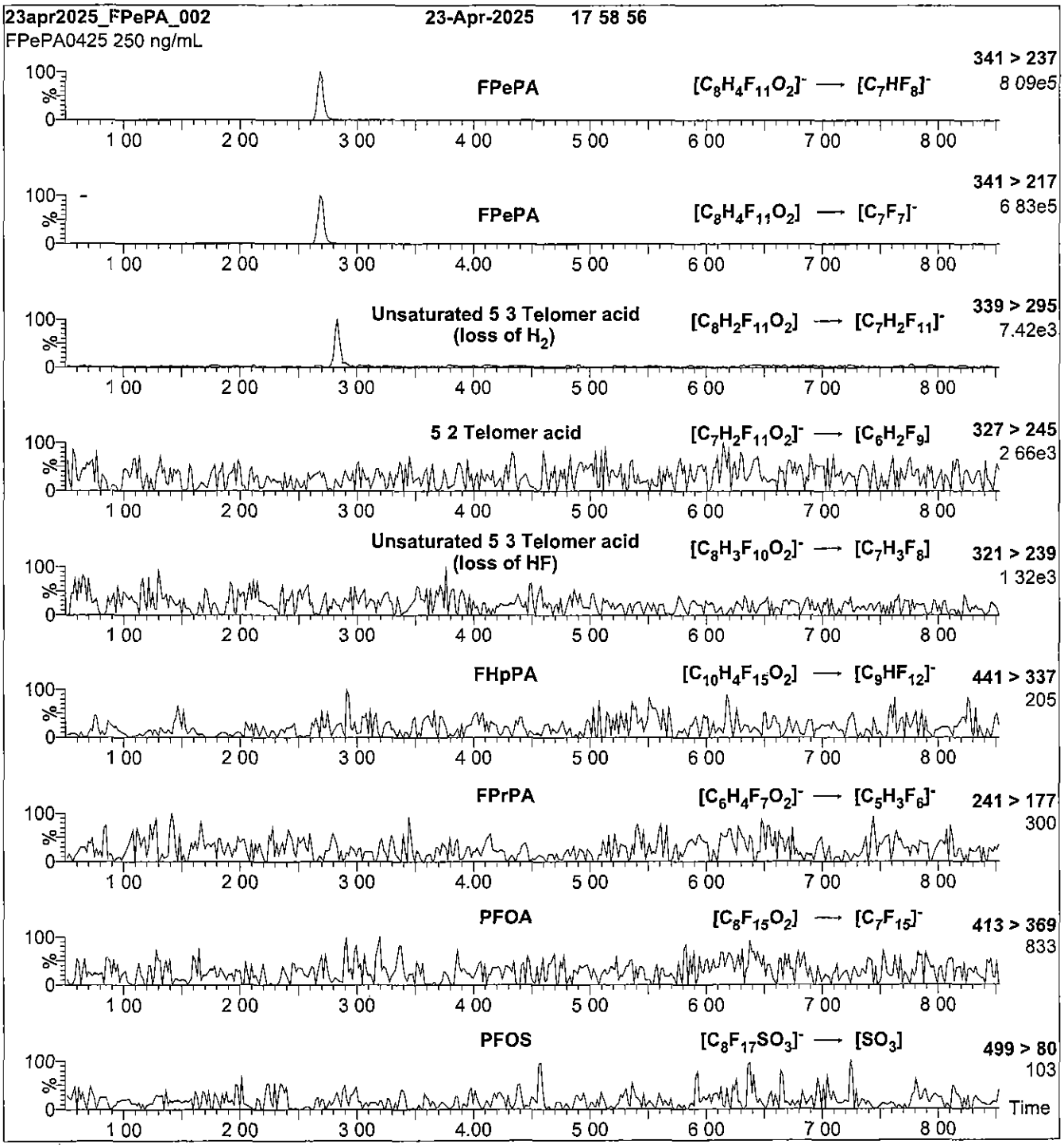
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0 50
Cone Voltage (V) = 28.50
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) = 4.34e-3
Collision Energy (eV) = 10

Reagent

PFC_ST_04949

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

8439529
ID: PFC_ST_04946
Exp:04/23/30 Prpd:D48Q Opn:
Native FPePA Stock (5:3 FTCA)

8439530
ID: PFC_ST_04947
Exp:04/23/30 Prpd:D48Q Opn:
Native FPePA Stock (5:3 FTCA)

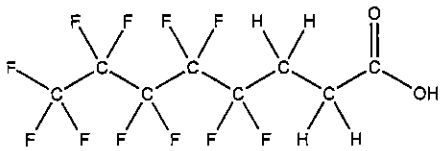
8439531
ID: PFC_ST_04948
Exp:04/23/30 Prpd:D48Q Opn:
Native FPePA Stock (5:3 FTCA)

8439532
ID: PFC_ST_04949
Exp:04/23/30 Prpd:D48Q Opn:
Native FPePA Stock (5:3 FTCA)

PRODUCT CODE. FPePA
COMPOUND. 3-Perfluoropentyl propanoic acid

LOT NUMBER. FPePA0425

STRUCTURE.



CAS #: 914637-49-3

410-8439532

MOLECULAR FORMULA. $C_8H_5F_{11}O_2$
CONCENTRATION. 50 0 ± 2 5 µg/mL
CHEMICAL PURITY: >98%
LAST TESTED. (mm/dd/yyyy) 04/23/2025
EXPIRY DATE. (mm/dd/yyyy) 04/23/2030
RECOMMENDED STORAGE. Refrigerate ampoule

MOLECULAR WEIGHT: 342 11
SOLVENT(S). Methanol

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 ($C_8H_3F\ O_2$) as an impurity by ^1H and ^{19}F NMR.

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By· _____ **Date** 05/05/2025 (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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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:

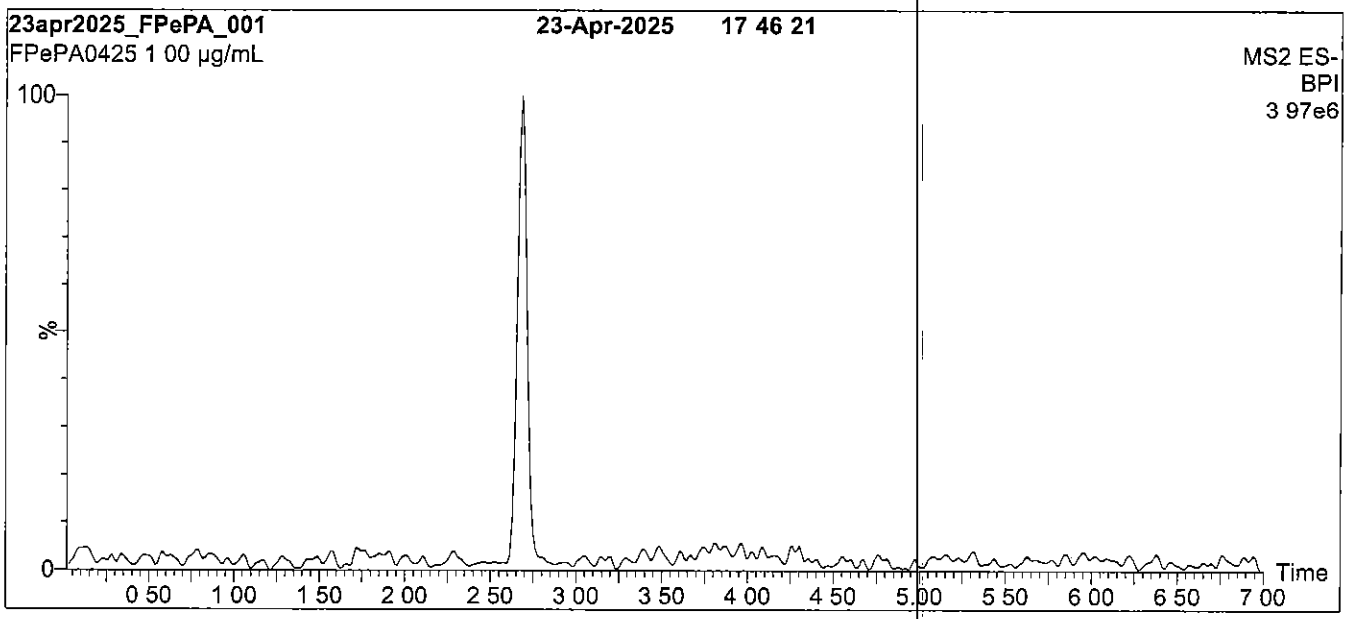
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

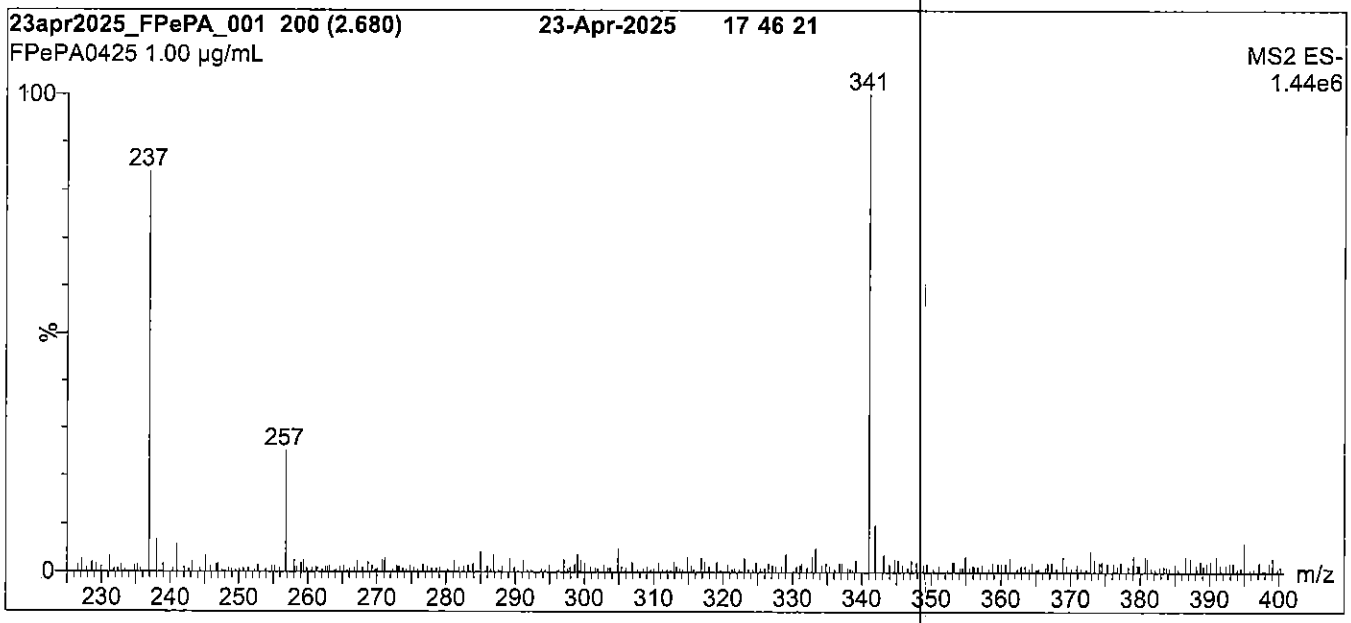
CALA Testing Accreditation No. A1226

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 UPLC I-Class
Waters Xevo TQ-S micro MS

Chromatographic Conditions.

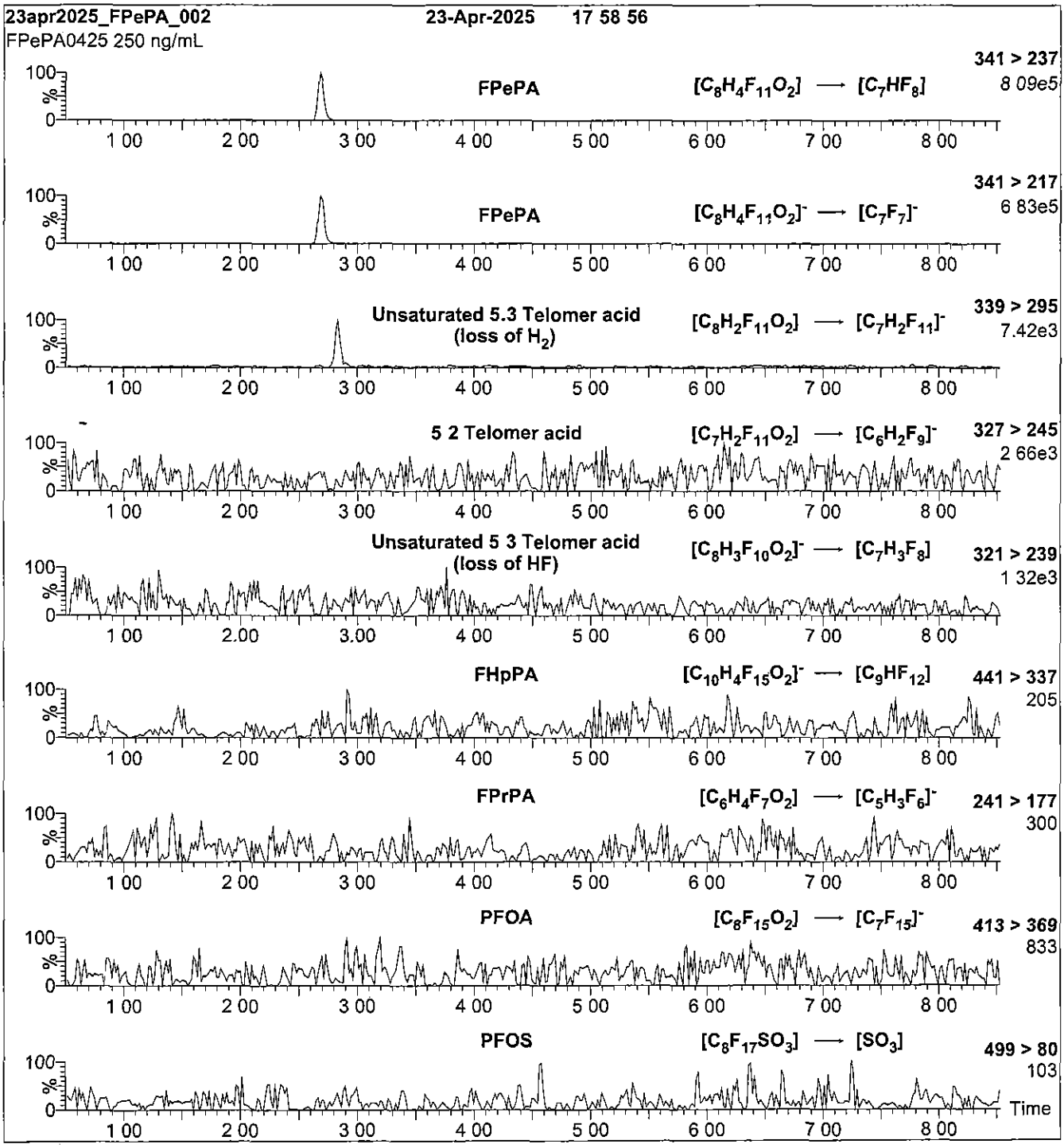
Column	Acquity UPLC BEH Shield RP $_{18}$ 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (225 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 28 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) = 4.34e-3
Collision Energy (eV) = 10

Reagent

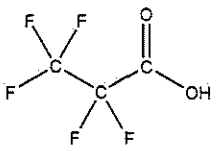
PFC_ST_04970

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC-ST-04970, 4971, 4972

PRODUCT CODE.	PFPrA	**LOT NUMBER.**	PFPrA0825
COMPOUND.	Perfluoropropanoic acid		
STRUCTURE.		**CAS #.**	422-64-0



410-8456672

MOLECULAR FORMULA.	$C_3HF_5O_2$	**MOLECULAR WEIGHT:**	164 03
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%		
LAST TESTED. (mm/dd/yyyy)	08/08/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/08/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

DOCUMENTATION/ DATA ATTACHED.

Figure 1 LC/MS Data (Full Scan Extracted Chromatogram 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** 08/08/2025
(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(s) 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 SFC/UV/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 and/or SFC/UV/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 x_2, x_n on which it depends is.

$$u_c(y(x_1\ x\quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

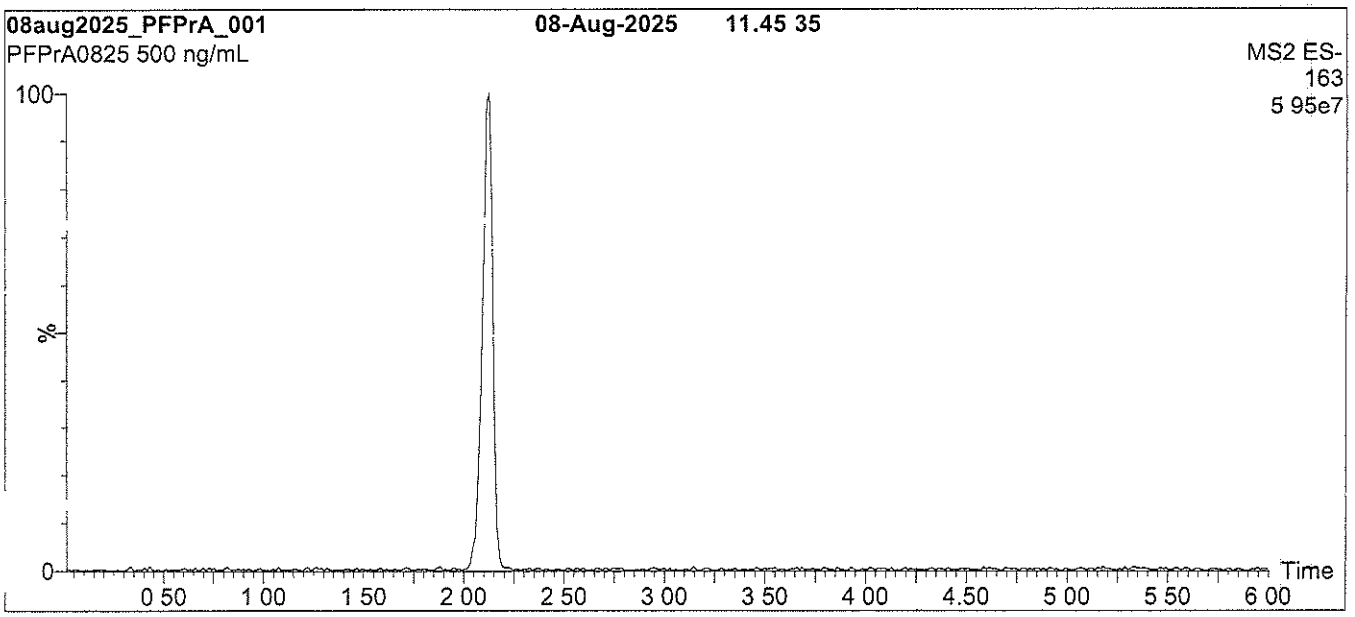
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

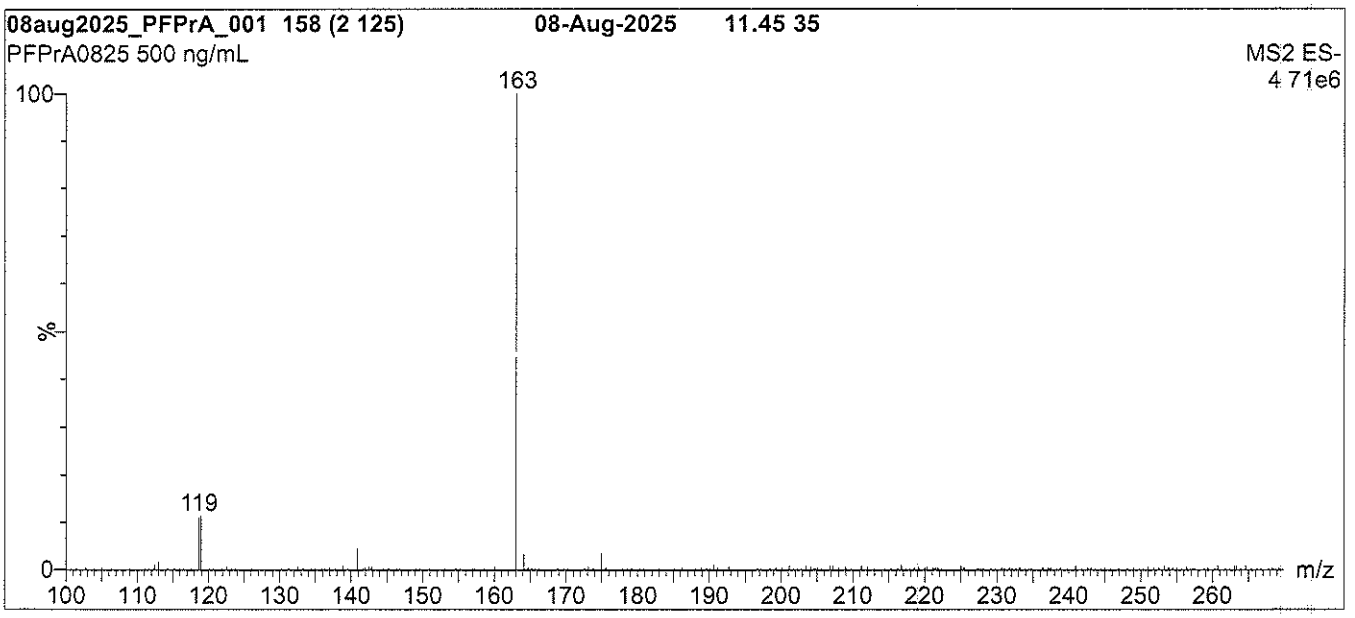
CALA Testing Accreditation No. A 226

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. **PFPrA, LC/MS Data (Full Scan Extracted Chromatogram and Mass Spectrum)**





Conditions for Figure 1.

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

Chromatographic Conditions.

Column: Restek Raptor Polar X
2.7 µm 2.1 x 50 mm

Mobile phase: Gradient
Start: 50% H_2O (with 10 mM NH_4COOH buffer)
50% (60:40 ACN MeOH)
(both with 0 05% formic acid)
Ramp to 90% organic over 7 min and hold for 1 min
before returning to initial conditions in 0 5 min
Time 10 min

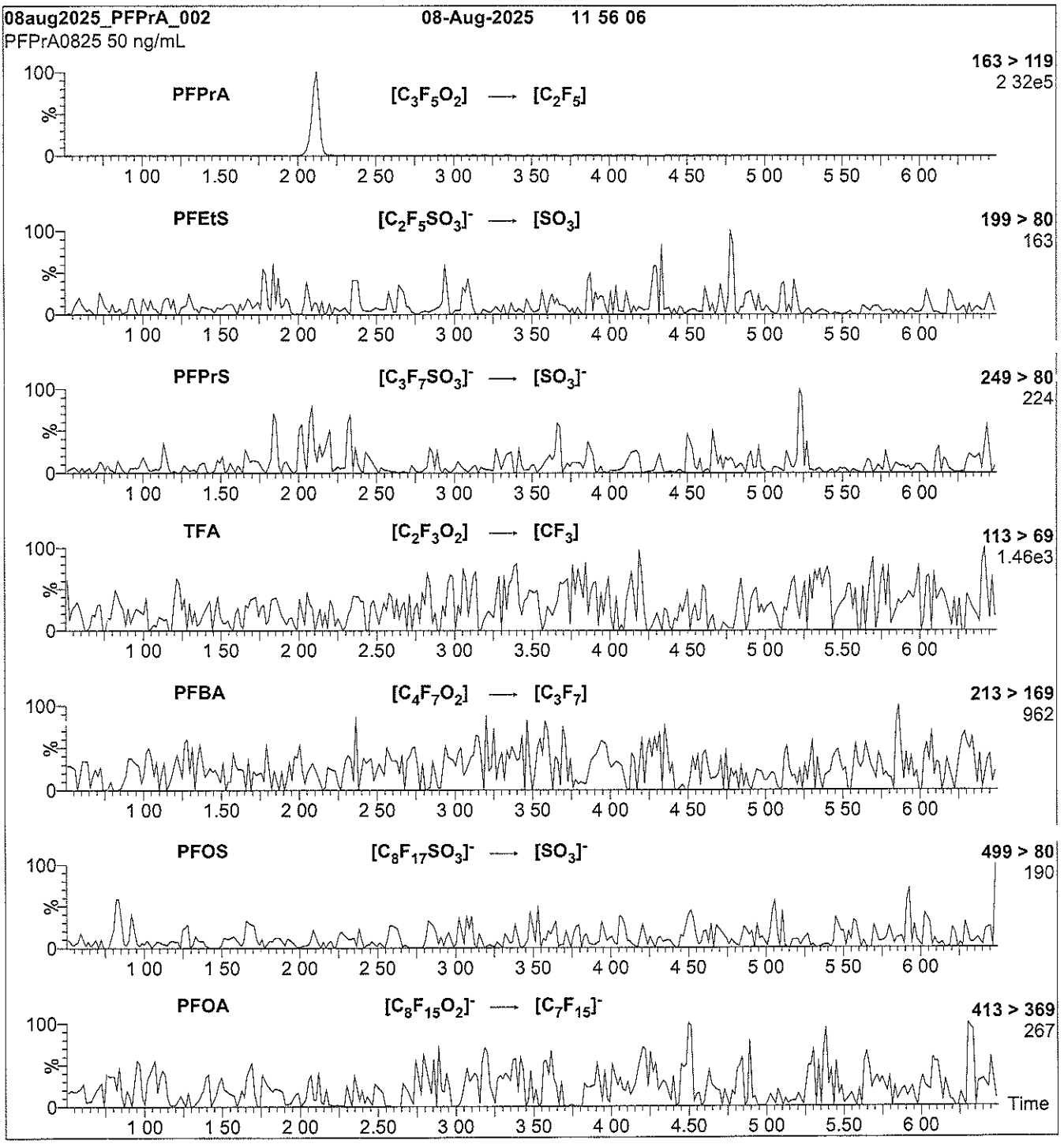
Flow: 400 µL/min

MS Parameters.

Experiment: Full Scan (100 850 amu)

Source. Electrospray (negative)
Capillary Voltage (kV) = 2 75
Cone Voltage (V) = 10 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

Figure 2. **PFPrA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (PFPrA)
Mobile phase	Same as Figure 1
Flow	400 µL/min

MS Parameters.

Collision Gas (mbar) = 3.65e-3
Collision Energy (eV) = 8

Reagent

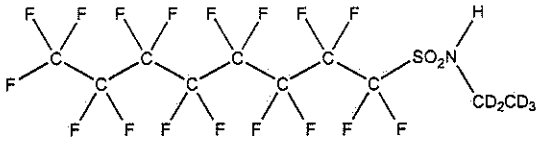
PFC_ST_05001

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_4998, 4999, 5000, 5001

PRODUCT CODE.	d-N-EtFOSA-M	**LOT NUMBER.**	dNEtFOSA1124M
COMPOUND.	N-Ethyl-d_5-perfluoro-1-octanesulfonamide		
STRUCTURE.		**CAS #.**	936109-40-9



410-8468571

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 (D)
LAST TESTED. (mm/dd/yyyy)	10/15/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/15/2029		
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** 10/18/2024 (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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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

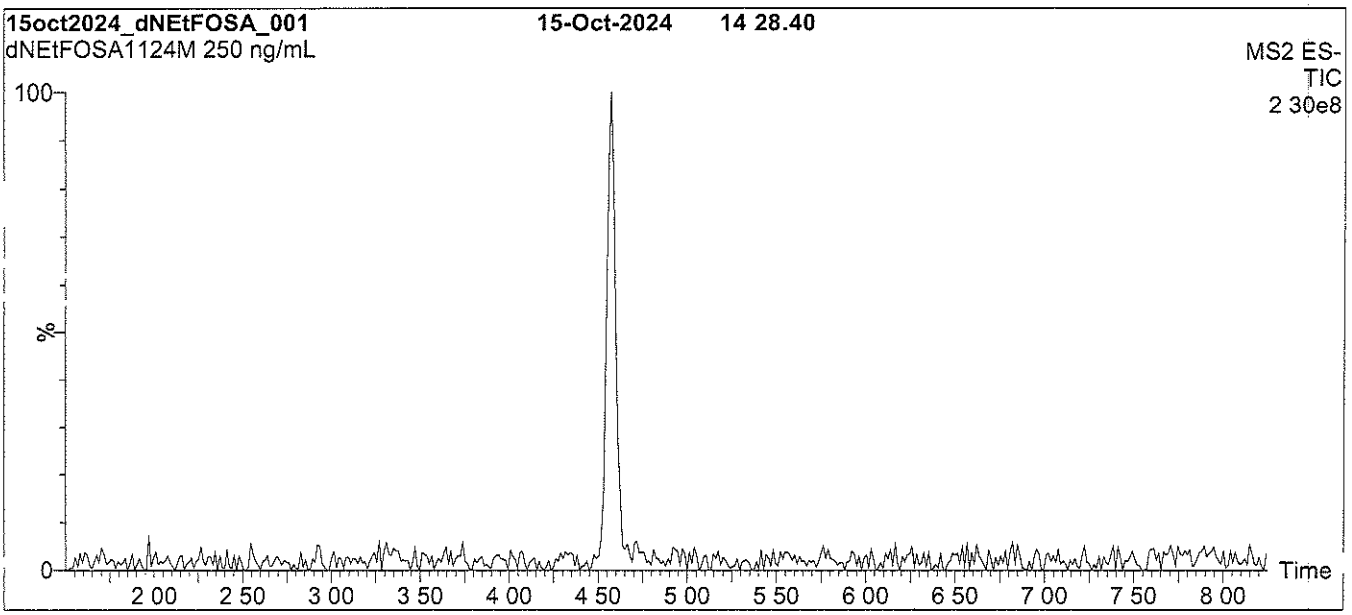
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

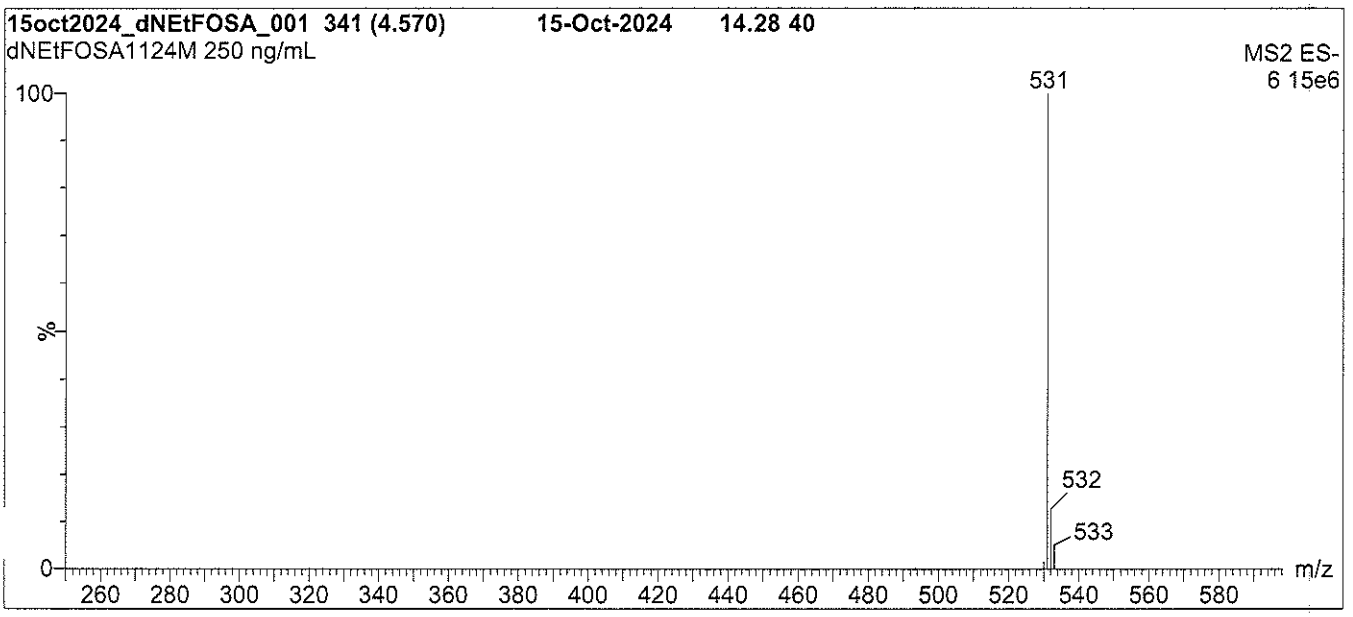
CALA Testing Accreditation No. A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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: 30% H_2O / 70% (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

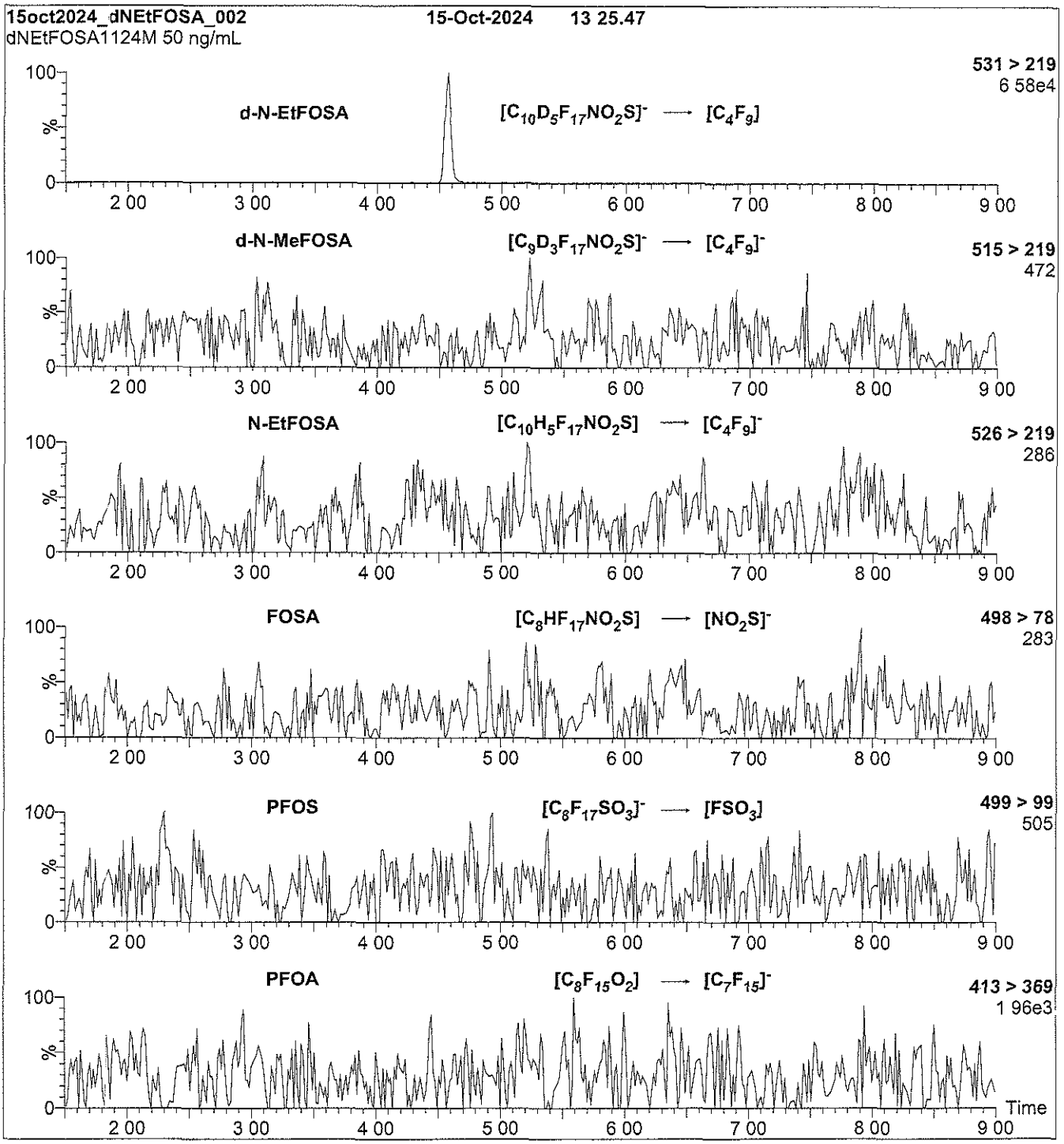
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 1 00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.24e-3
Collision Energy (eV) = 24

Reagent

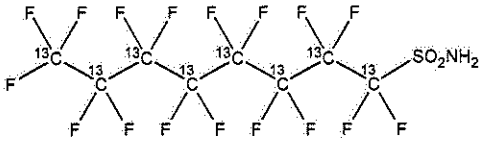
PFC_ST_05002

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST - 05002, 5003, 5004

PRODUCT CODE.	M8FOSA-I	**LOT NUMBER.**	M8FOSA0525I
COMPOUND.	Perfluoro-1-($^{13}C_8$)octanesulfonamide		
STRUCTURE.		**CAS #.**	1365803-60-6



410-8470197

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
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
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 0% of perfluoro-1 ($^{13}C_4$)octanesulfonamide ~0 1% of perfluoro-1-($^{13}C_7$)heptanesulfonamide and ~0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA)

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 06/04/2025 (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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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:

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:

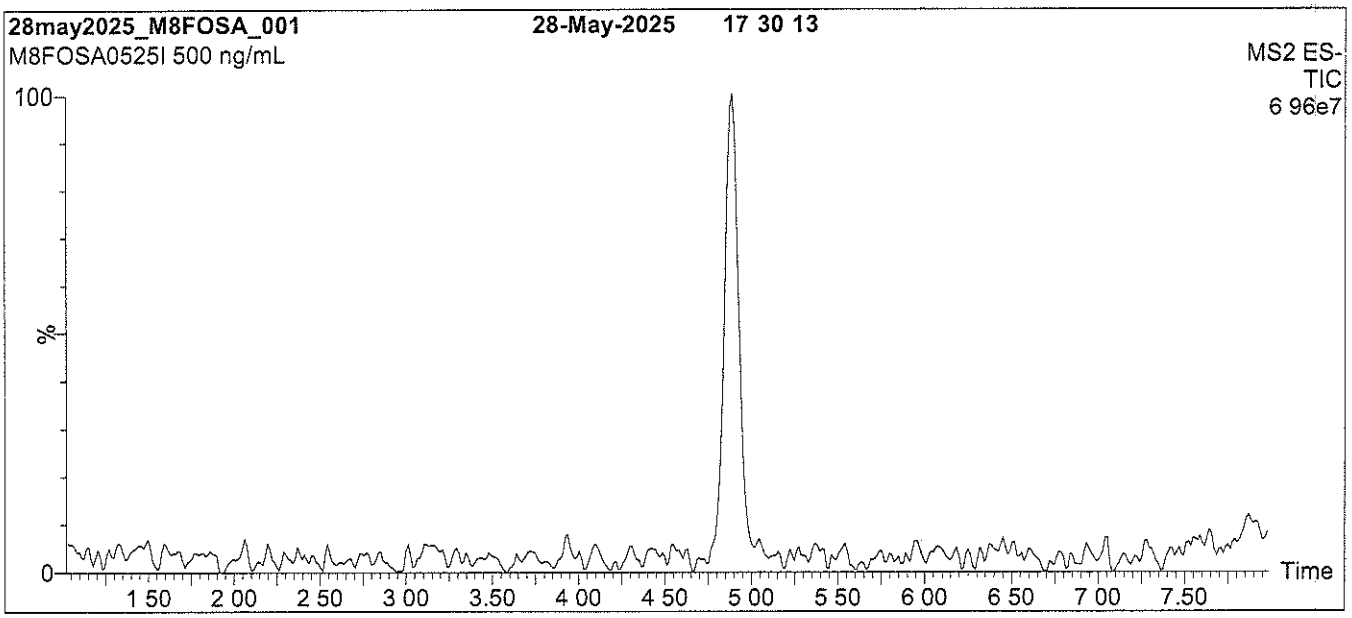
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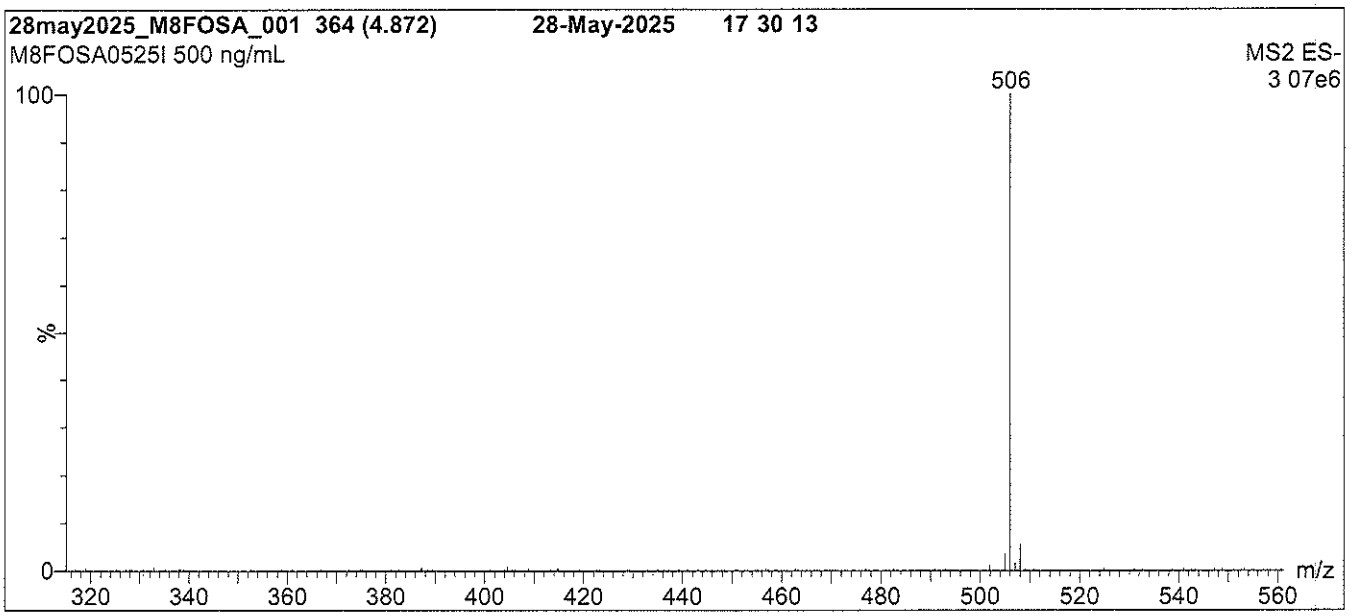
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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.

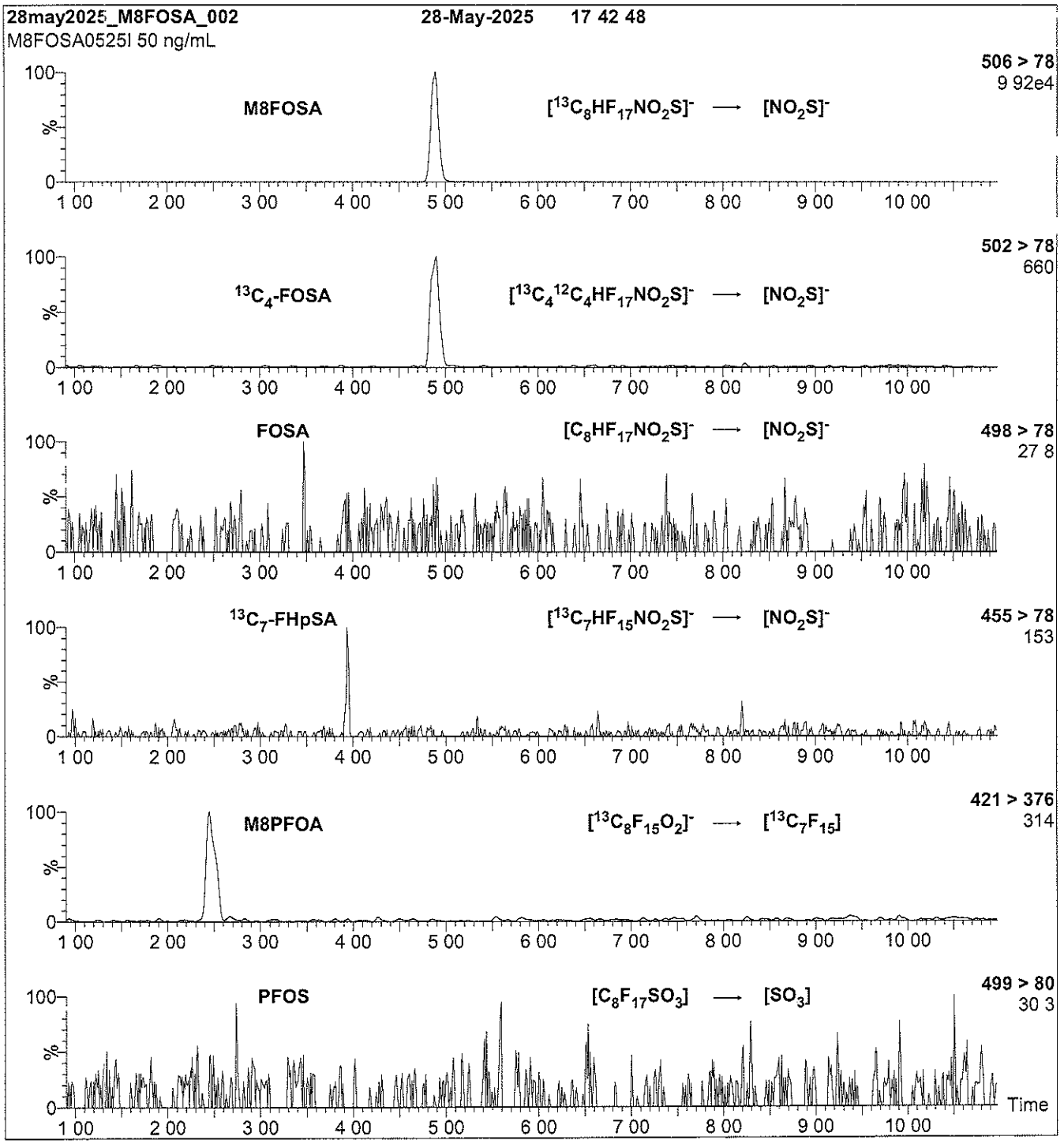
Column	Acquity UPLC BEH Shield RP$_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.50
Cone Voltage (V) = 20 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.43e-3
Collision Energy (eV) = 30

Reagent

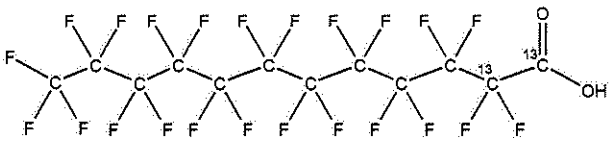
PFC_ST_05016

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC ST 050125, 5010

PRODUCT CODE.	MPFDoA	**LOT NUMBER.**	MPFDoA0525
COMPOUND.	Perfluoro-n-(1 2 $^{13}C_2$)dodecanoic acid		
STRUCTURE.		**CAS #.**	960315-52-0



410-847542

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
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
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** 05/30/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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EXPIRY DATE / PERIOD OF VALIDITY:

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QUALITY MANAGEMENT:

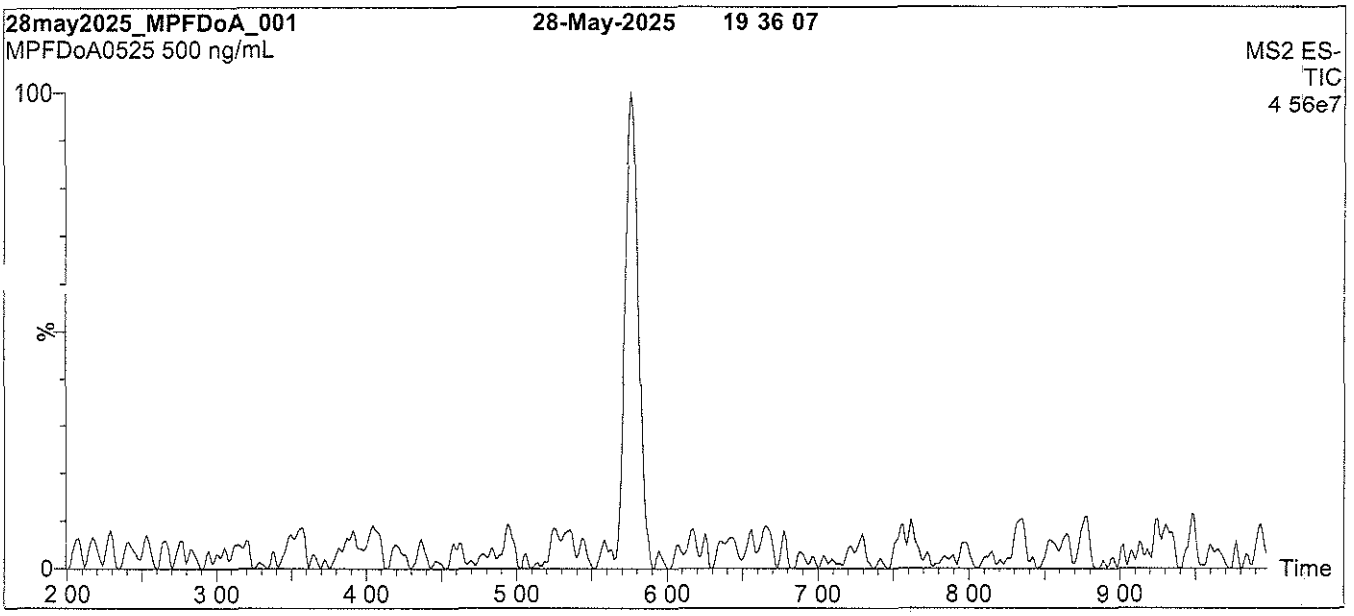
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

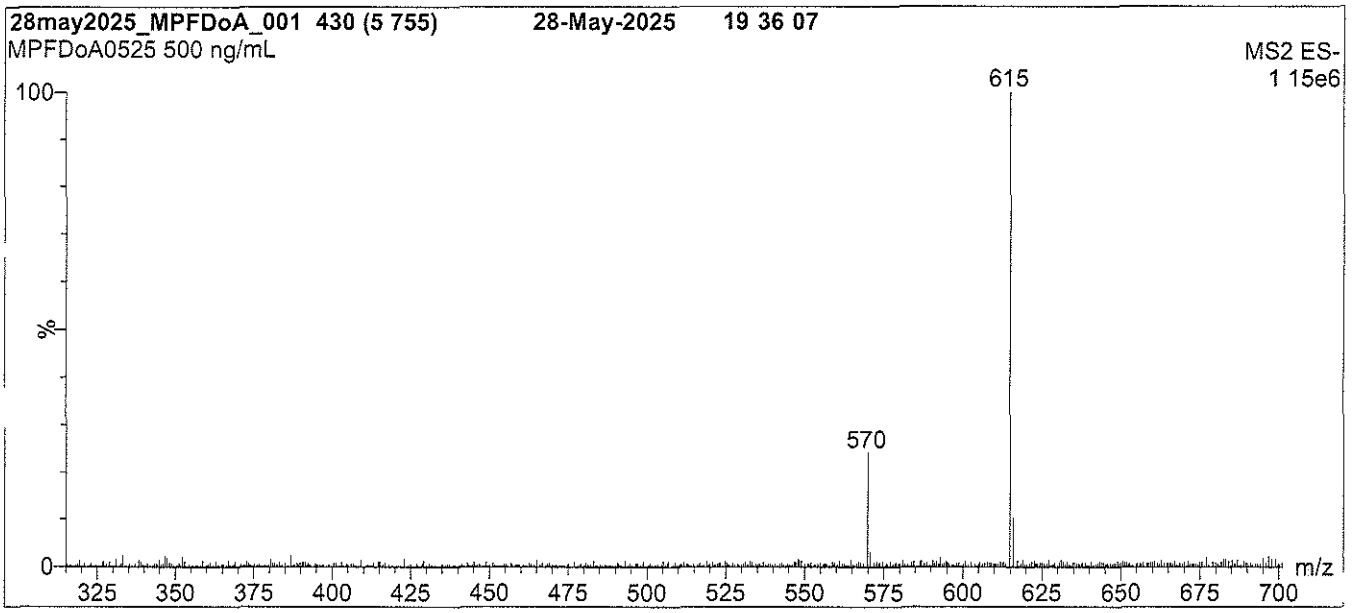
CALA Testing Accreditation No. A 226

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. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time 12 min

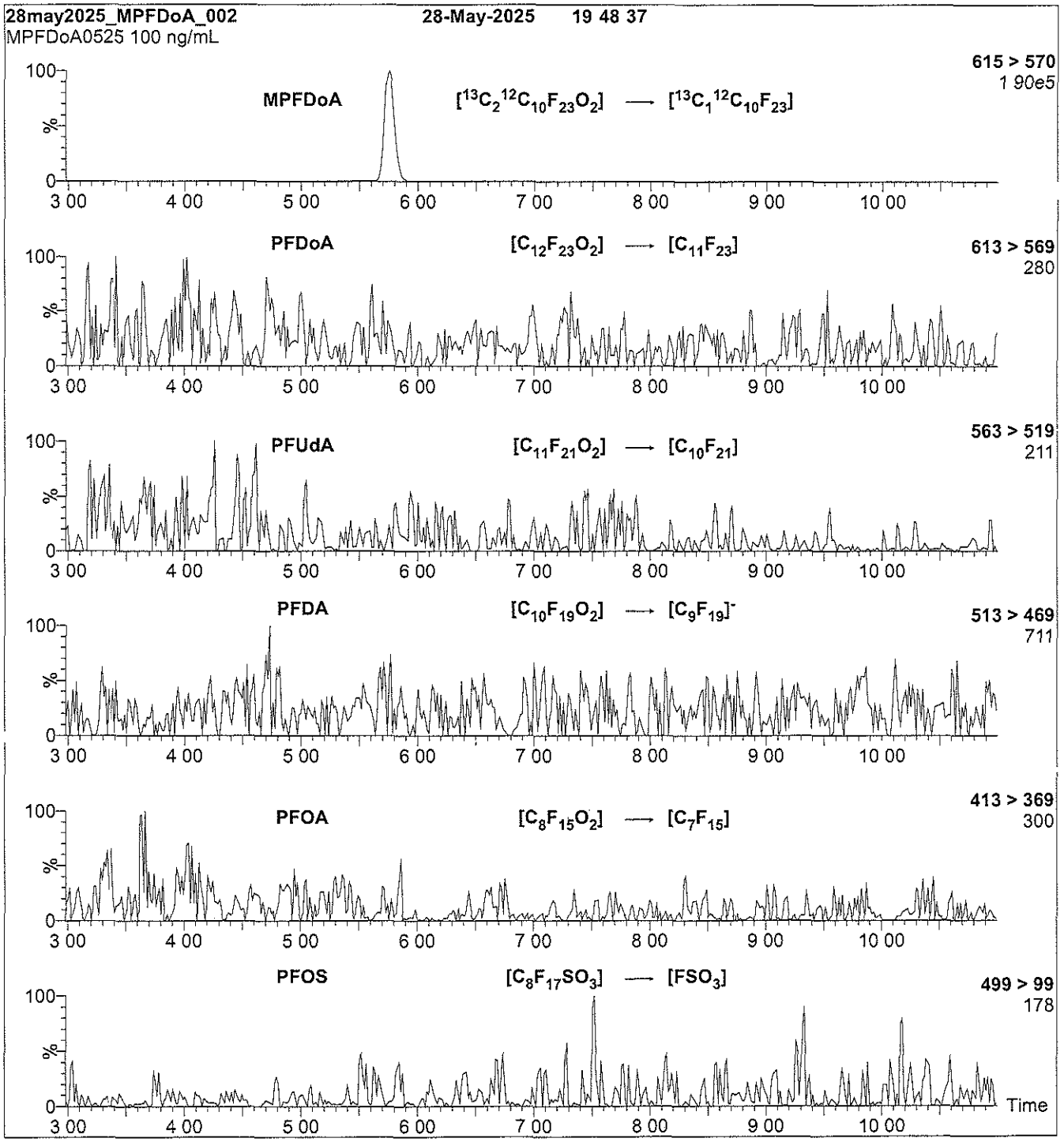
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 4.46e-3
Collision Energy (eV) = 12

Reagent

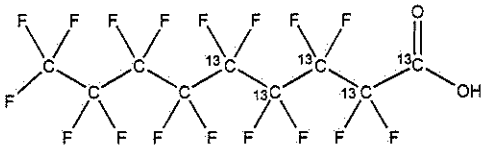
PFC_ST_05025

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC ST 5025 5026

PRODUCT CODE.	MPFNA	**LOT NUMBER.**	MPFNA0425
COMPOUND.	Perfluoro-n-(1 2 3 4 5-$^{13}C_5$)nonanoic acid		
STRUCTURE.		**CAS #.**	960315-49-5



410-8475507

MOLECULAR FORMULA.	$^{13}C_5{}^{12}C_4HF_{17}O_2$	**MOLECULAR WEIGHT:**	469 04
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	04/09/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/09/2030		
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** 05/01/2025 (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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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 x_2, x_n on which it depends is

$$u_c(y(x_1\ x,\quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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

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QUALITY MANAGEMENT:

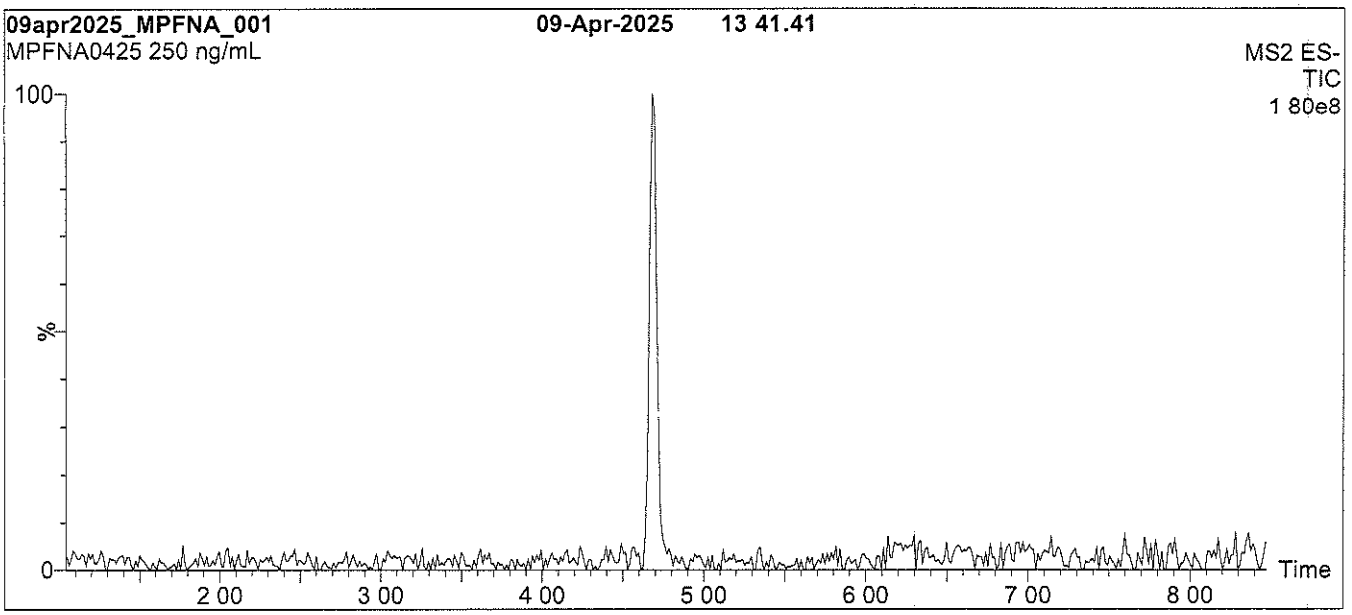
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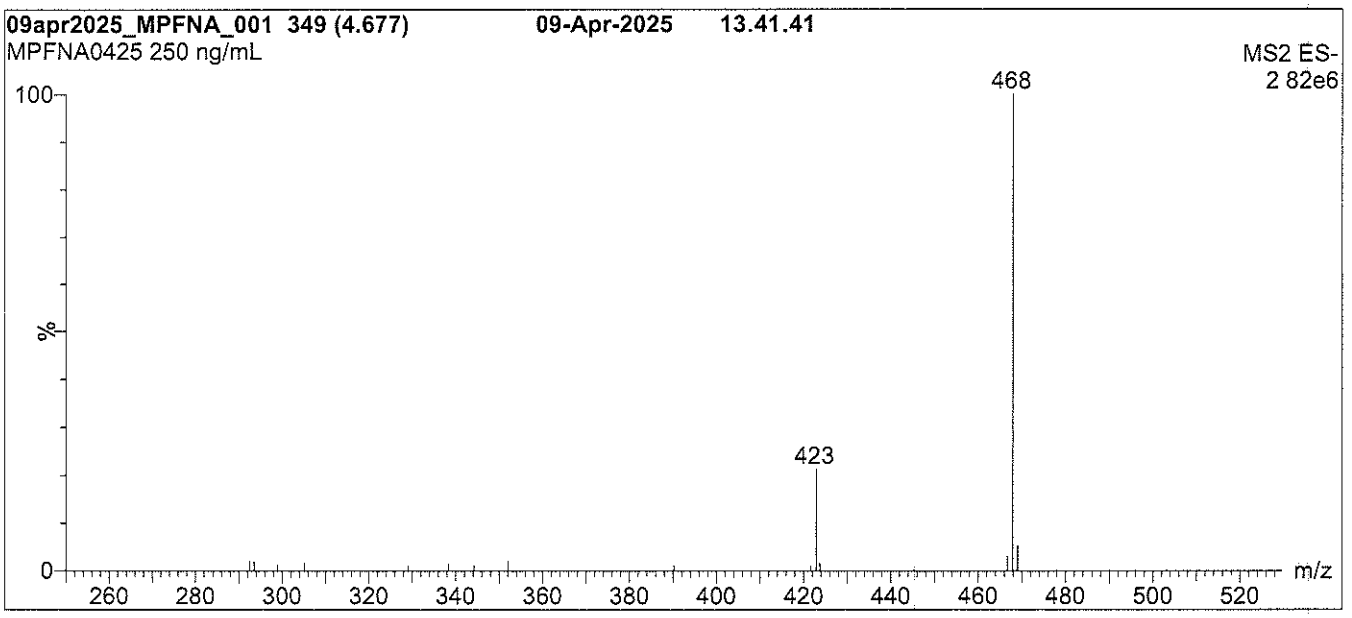
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **MPFNA, 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.

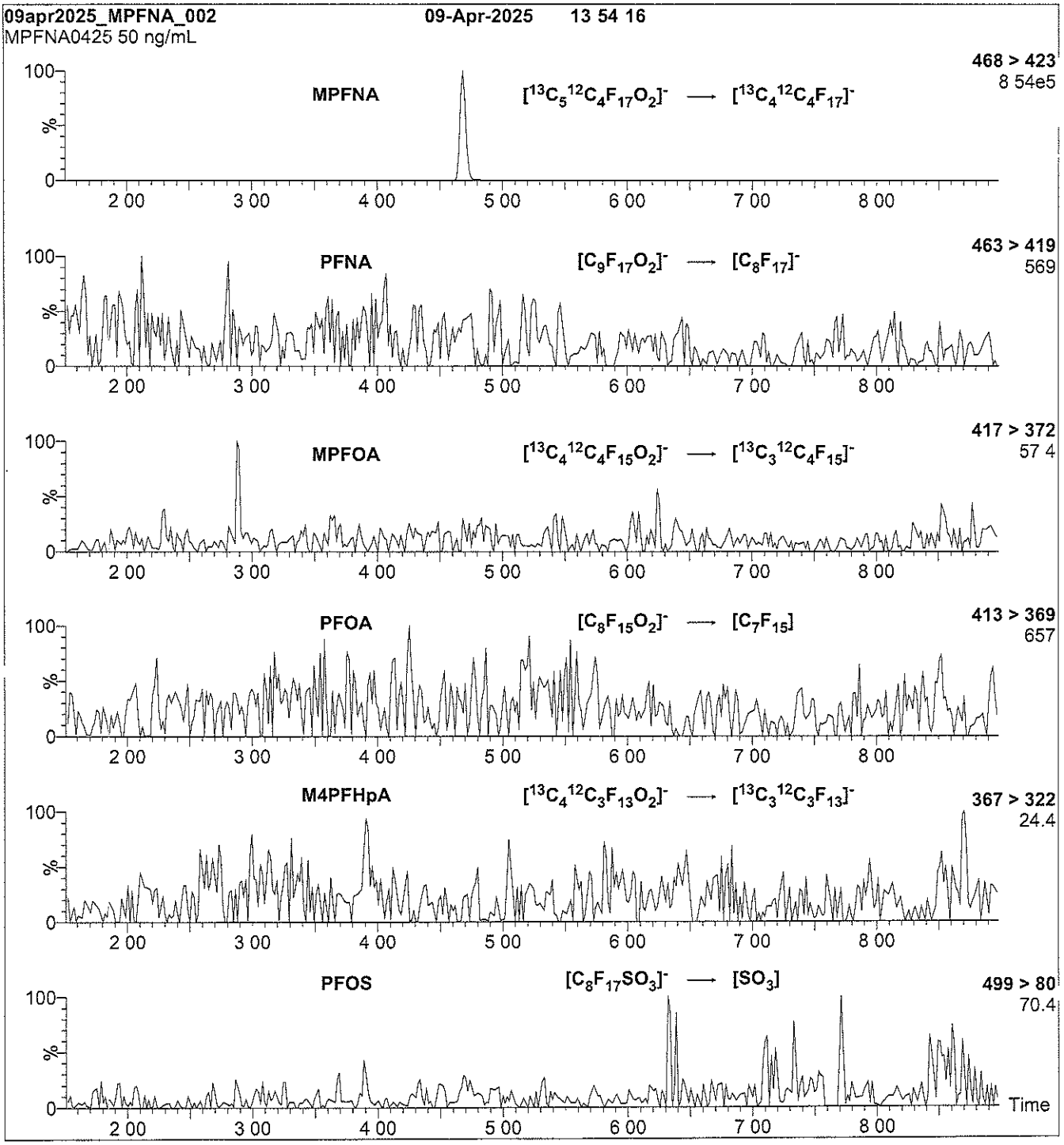
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time· 12 min
Flow·	300 µL/min

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. **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) = 5.91e-3
Collision Energy (eV) = 10

Reagent

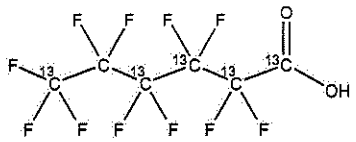
PFC_ST_05037

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

REC ST 5035, 5036, 5037, 5038

PRODUCT CODE.	M5PFHxA	**LOT NUMBER.**	M5PFHxA0925
COMPOUND.	Perfluoro-n-(1 2 3 4 6-$^{13}C_5$)hexanoic acid		
STRUCTURE.		**CAS #.**	2328024-54-8



410-8475562

MOLECULAR FORMULA.	$^{13}C_5{}^{12}C_1HF_{11}O_2$	**MOLECULAR WEIGHT:**	319 02
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	09/15/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/15/2030		
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** 09/16/2025 (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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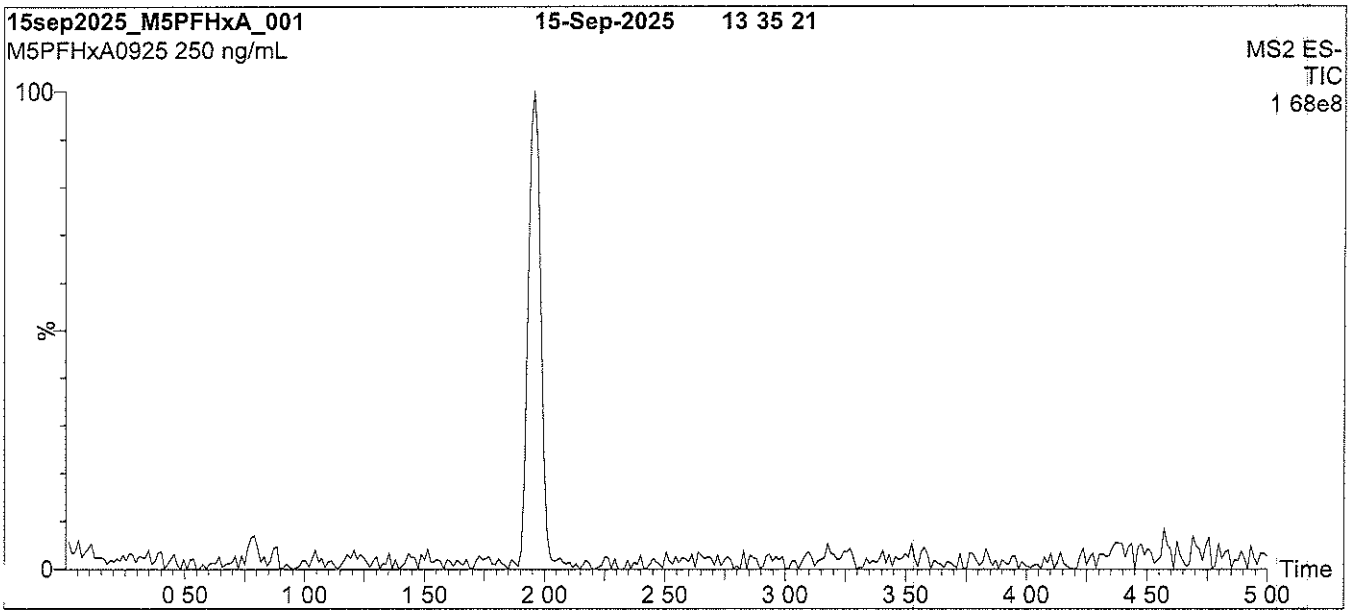
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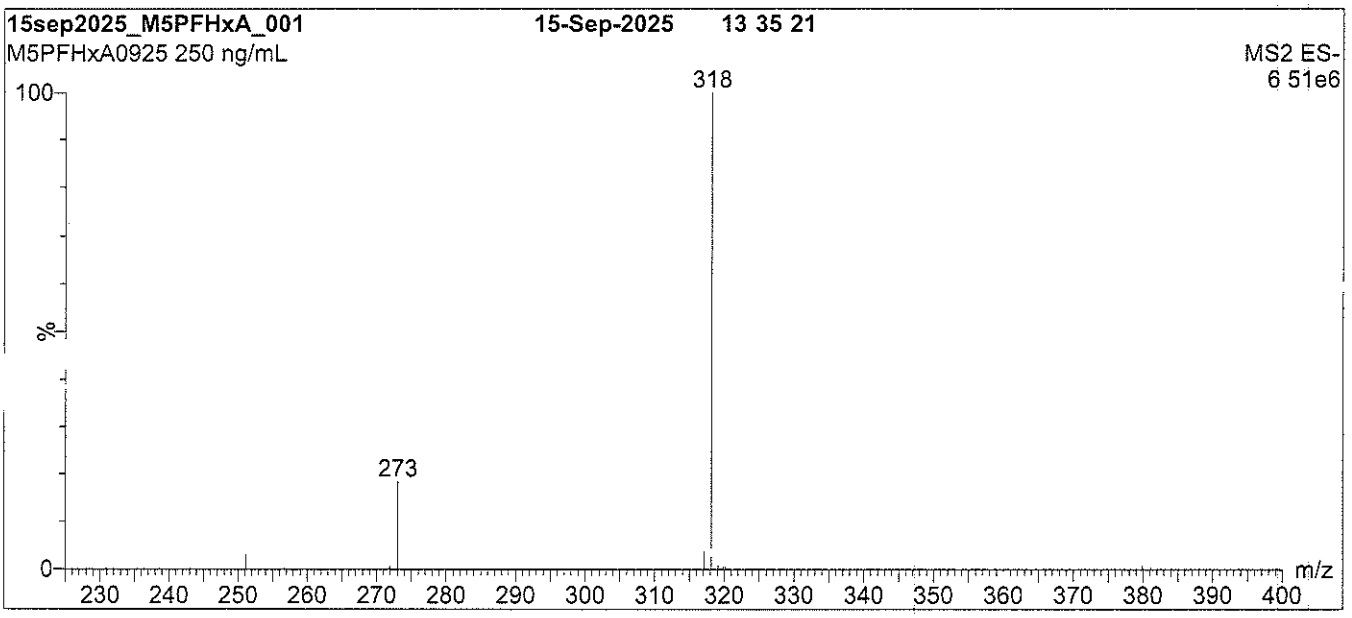
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time 12 min

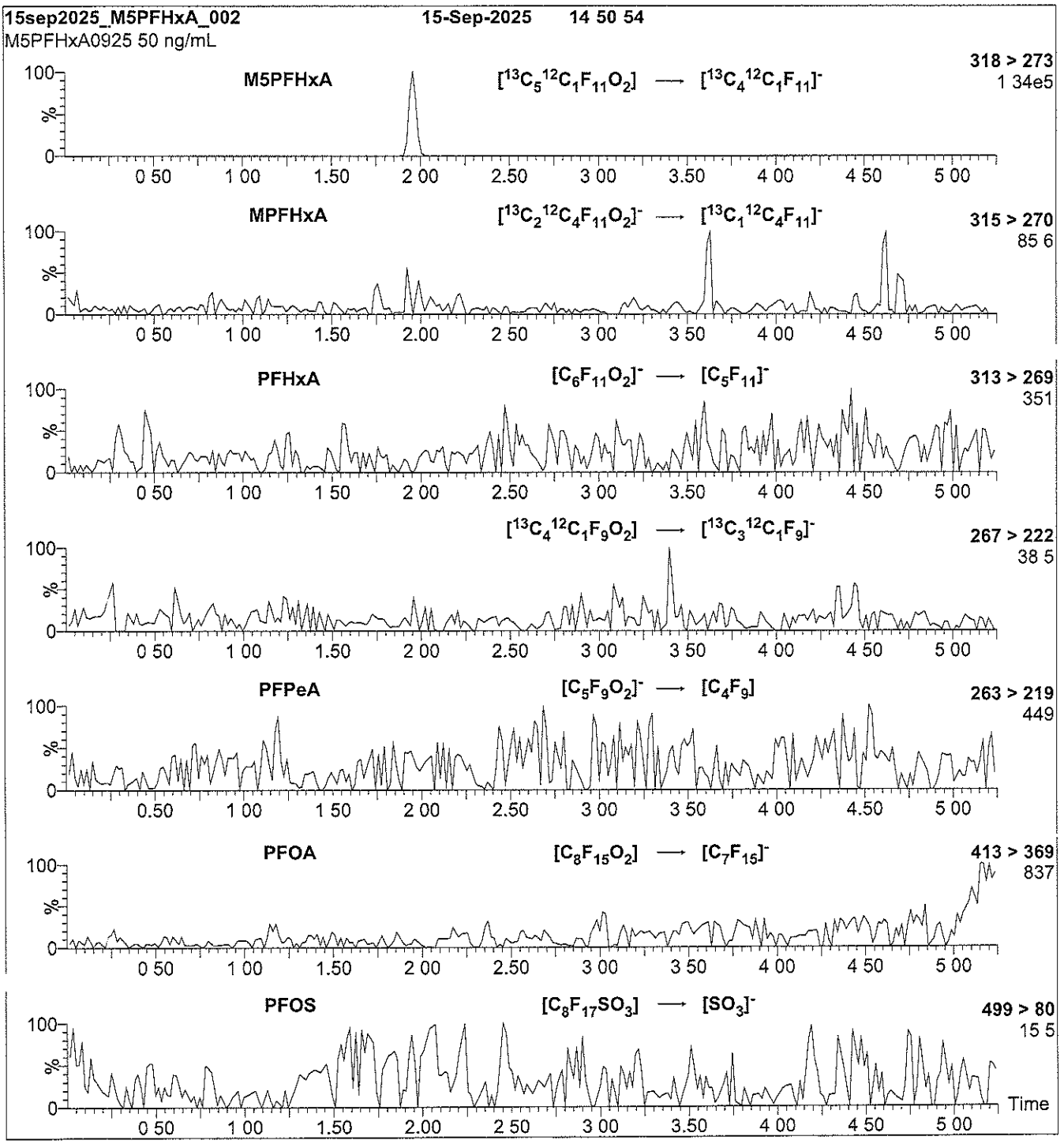
Flow: 300 µL/min

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. **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 71e-3
Collision Energy (eV) = 8 (318 > 273)

Reagent

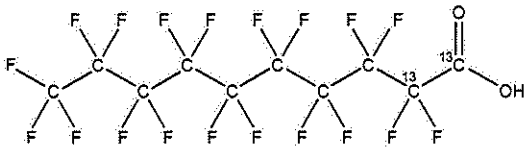
PFC_ST_05044

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC ST 5043, 5044

PRODUCT CODE.	MPFDA	**LOT NUMBER.**	MPFDA1024
COMPOUND.	Perfluoro-n-(1 2-$^{13}C_2$)decanoic acid		
STRUCTURE.		**CAS #:**	960315-50-8



410-8475678

MOLECULAR FORMULA.	$^{13}C_2{}^{12}C_8HF_{19}O_2$	**MOLECULAR WEIGHT:**	516 07
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY.**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	10/07/2024		
EXPIRY DATE. (mm/dd/yyyy)	10/07/2029		
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** 10/17/2024 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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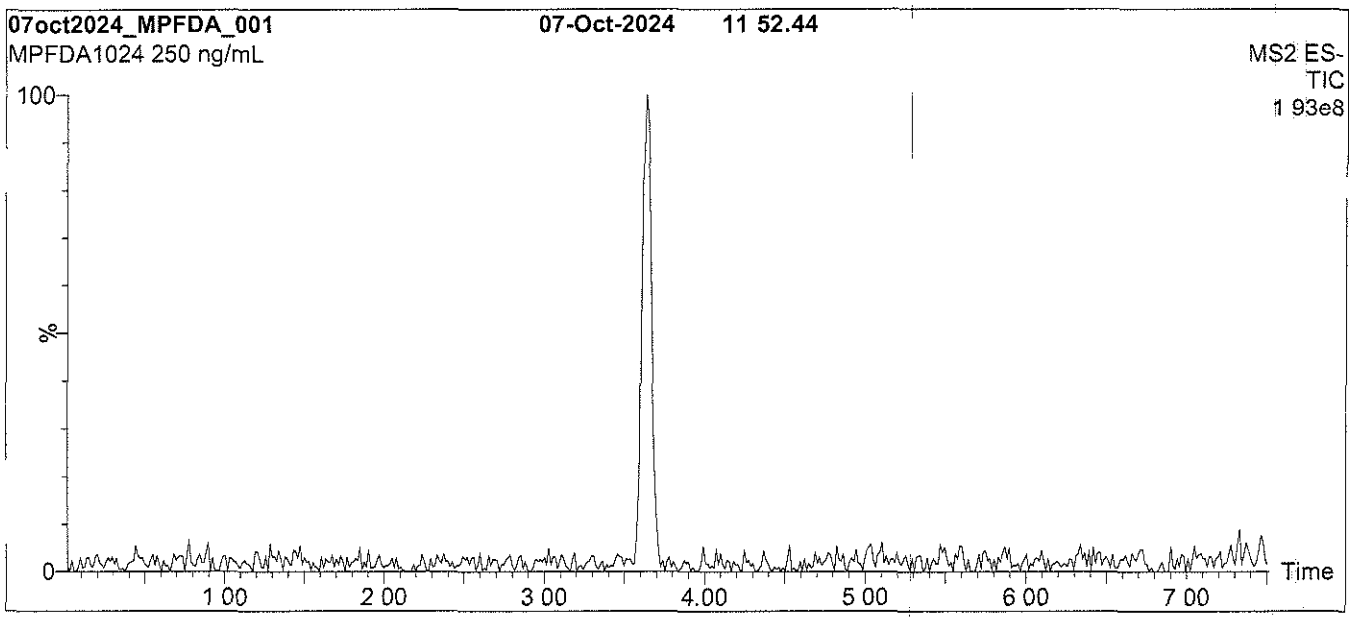
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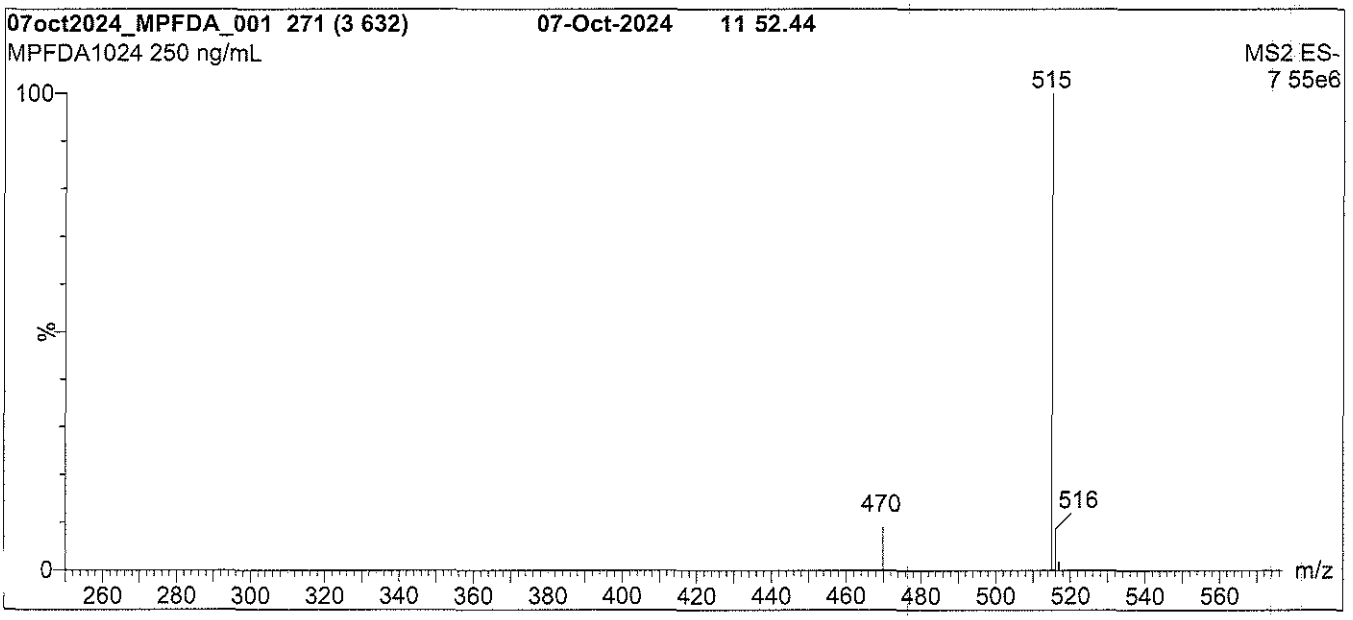
CALA Testing Accreditation No. A 226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

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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 0.5 min
Time 12 min

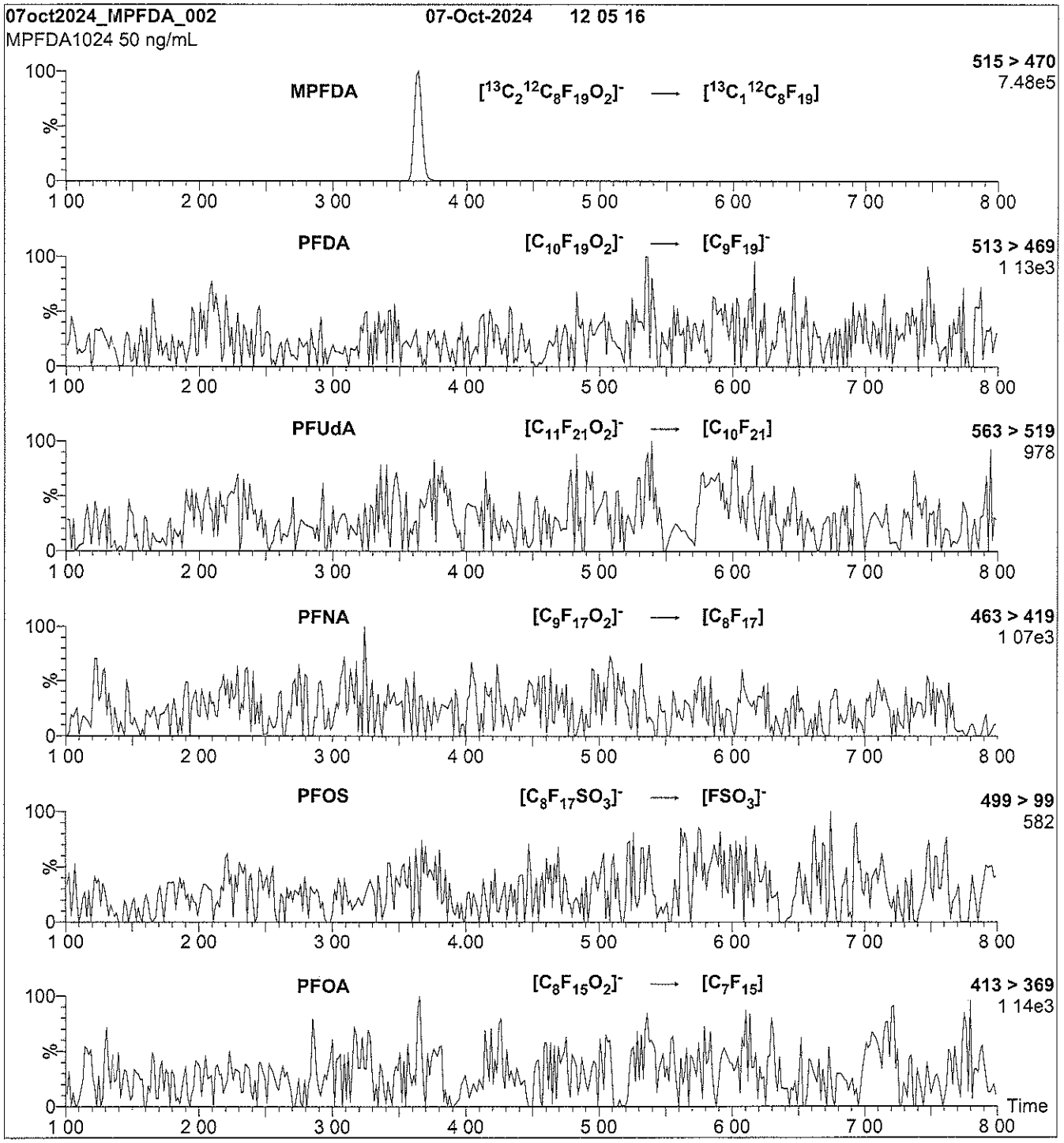
Flow: 300 µL/min

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. **MPFDA, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (MPFDA)
Mobile phase	Same as Figure 1
Flow	300 µL/min

MS Parameters.

Collision Gas (mbar) = 4.26e-3
Collision Energy (eV) = 10

Reagent

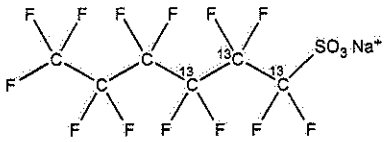
PFC_ST_05059

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFCST 5056, 5057, 5058, 5059, 5060

PRODUCT CODE.	M3PFHxS	**LOT NUMBER.**	M3PFHxS0425
COMPOUND.	Sodium perfluoro-1-(1 2 3-$^{13}C_3$)hexanesulfonate		
STRUCTURE.		**CAS #.**	2708218-86-2



410-8475834

MOLECULAR FORMULA.	$^{13}C_3{}^{12}C_3F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	425 07
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47.4 ± 2.4 µg/mL (M3PFHxS acid)		
	47.3 ± 2.4 µg/mL (M3PFHxS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY.**	≥99% ^{3}C
LAST TESTED. (mm/dd/yyyy)	04/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/23/2030		
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** 04/30/2025 (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.

Ou 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 SFC/UV/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 and/or SFC/UV/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 x_2, x_n on which it depends is.

$$u_c(y(x \quad x \quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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 (ca ibration 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%) has been assigned to this product.

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:

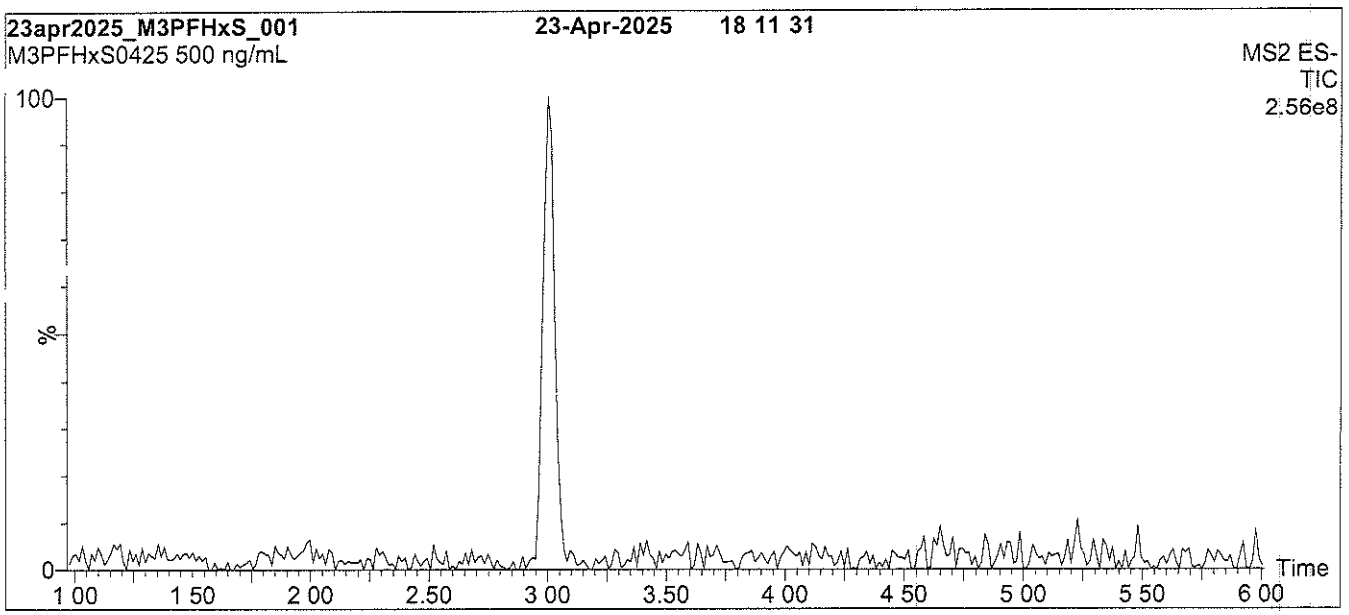
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

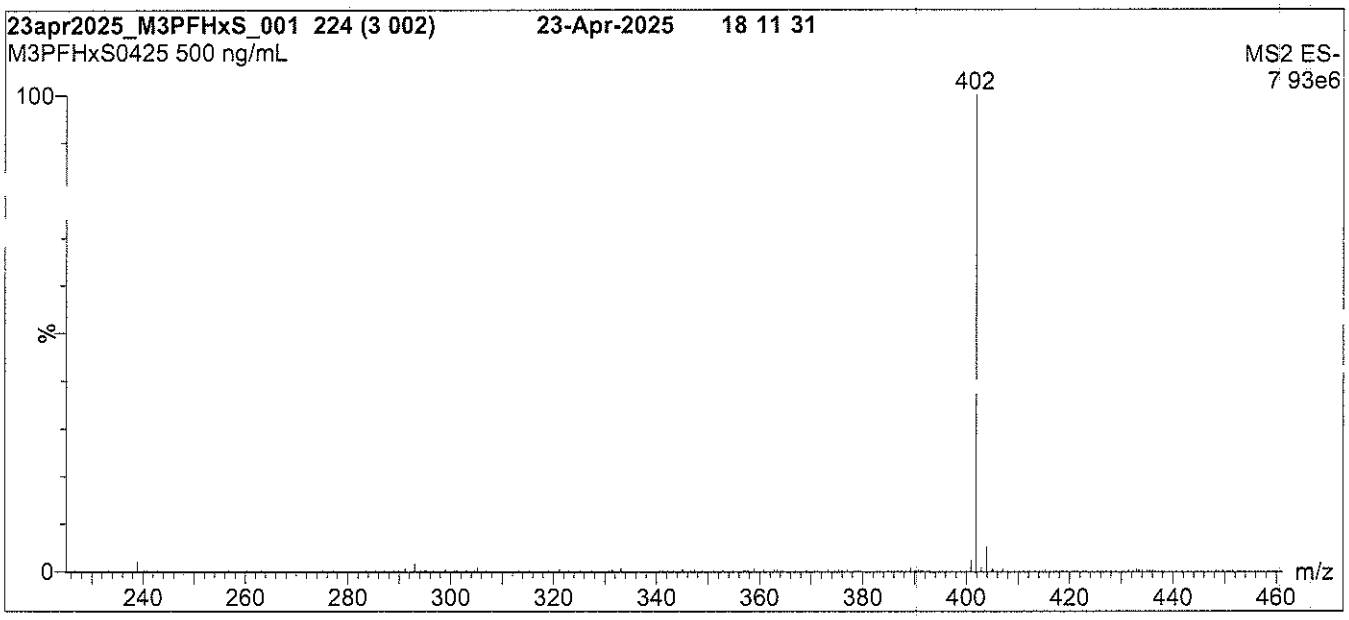
CALA Testing Accreditation No. A 226

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. **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.

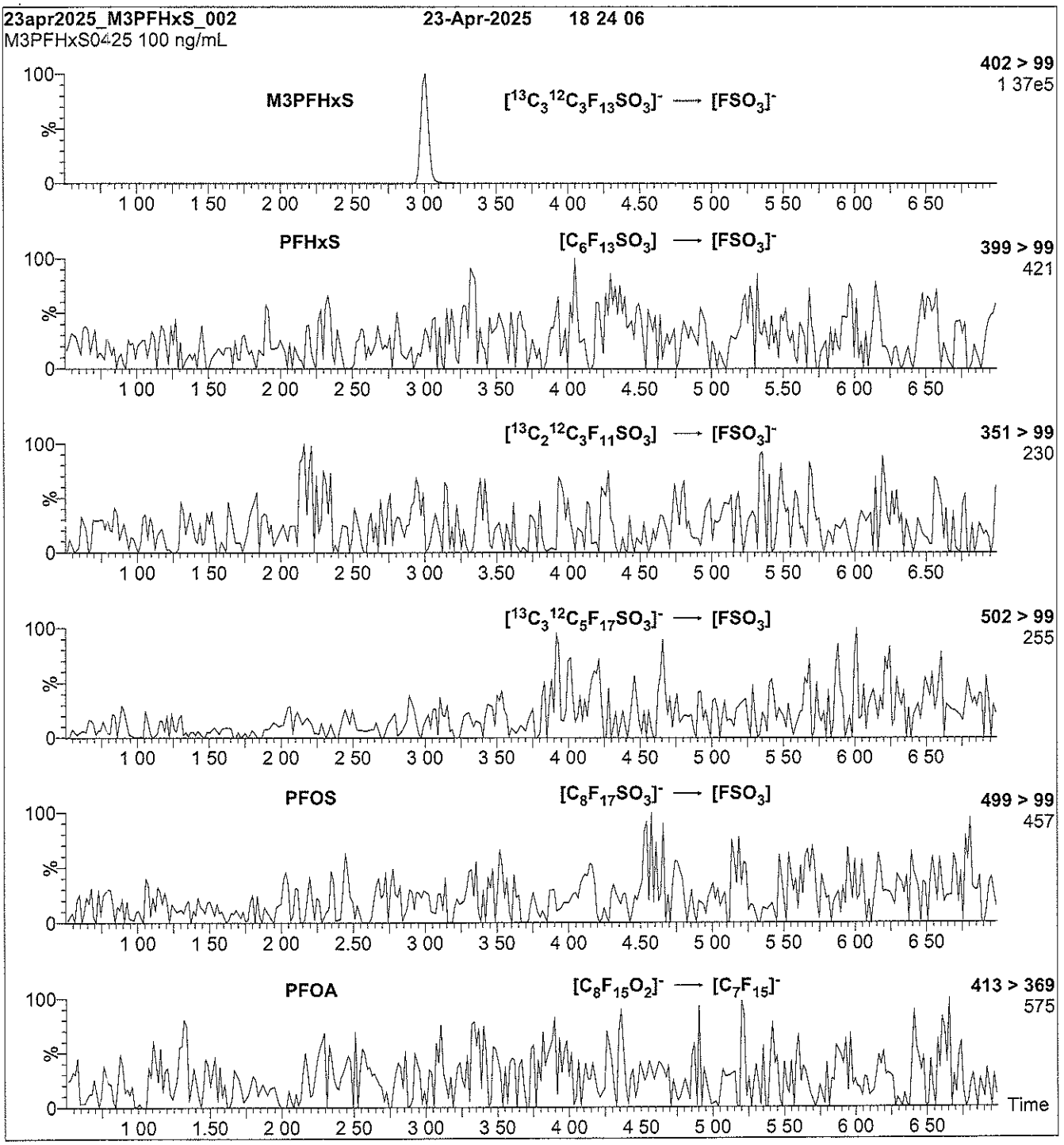
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time· 12 min
Flow·	300 µL/min

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. **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) = 4.31e-3
Collision Energy (eV) = 32

Reagent

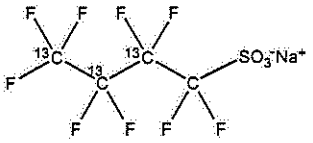
PFC_ST_05061

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFCST 5061, 5062, 5063, 5064, 5065

PRODUCT CODE.	M3PFBS	**LOT NUMBER.**	M3PFBS0825
COMPOUND.	Sodium perfluoro-1-(2 3 4-$^{13}C_3$)butanesulfonate		
STRUCTURE.		**CAS #:**	2708218-84-0



410-8475977

MOLECULAR FORMULA.	$^{13}C_3{}^{12}CF_9SO_3Na$	**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
LAST TESTED. (mm/dd/yyyy)	08/21/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/21/2030		
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** 09/03/2025 (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.

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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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.

$$u_c(y(x_1\ x,\quad x_n)) = \sqrt{\sum^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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 tc 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:

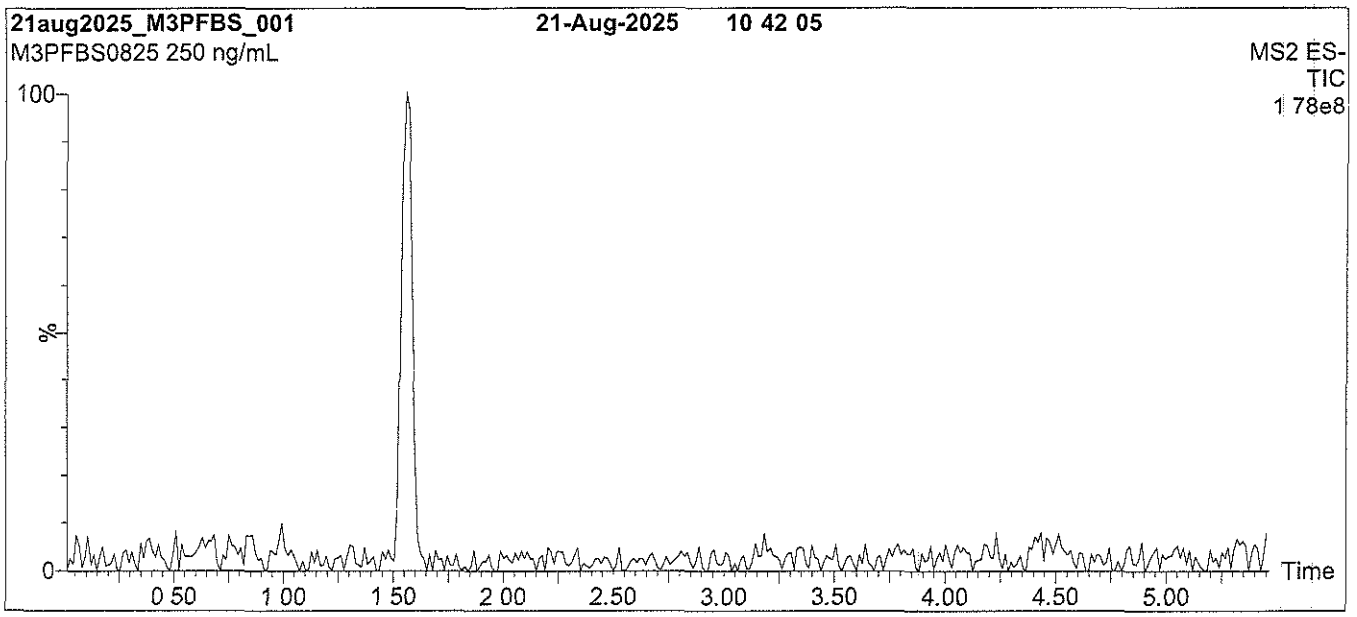
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523)

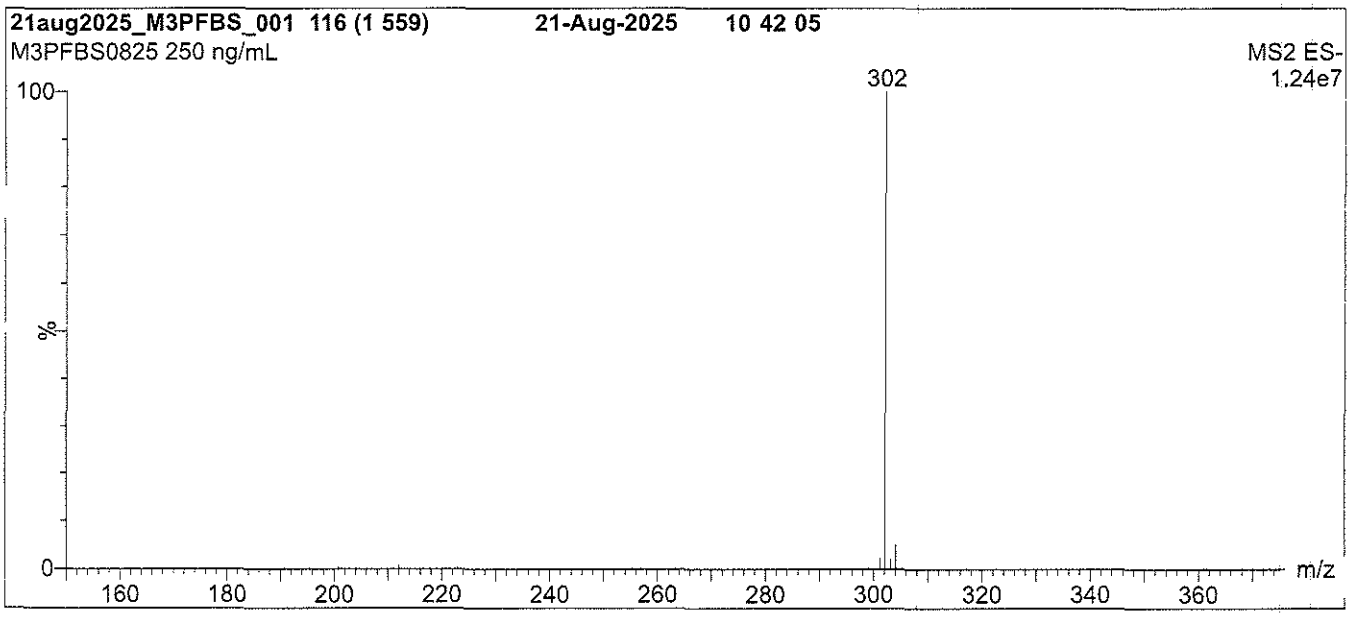
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for
1 min before returning to initial conditions in 0 5 min
Time 12 min

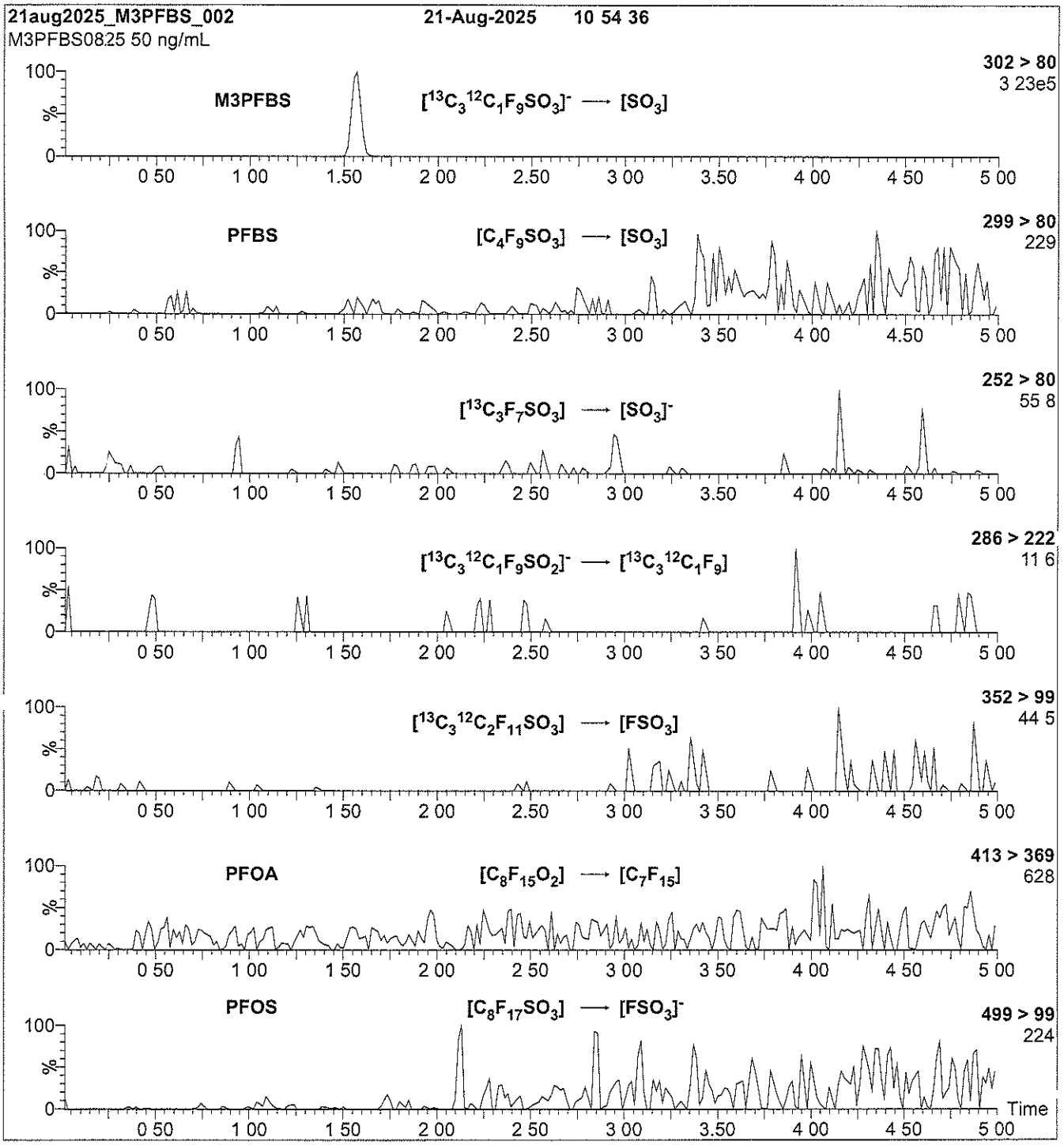
Flow: 300 µL/min

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

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) = 3.57e-3
Collision Energy (eV) = 30 (302 > 80)

Reagent

PFC_ST_05074

WELLINGTON LABORATORIES

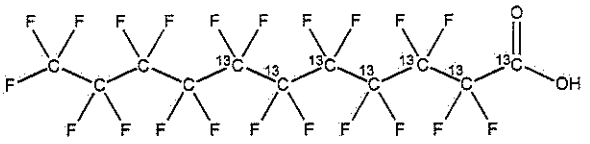
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC ST 5072, 5073, 5074

PRODUCT CODE. M7PFUdA **LOT NUMBER.** M7PFUdA0725

COMPOUND. Perfluoro-n-(1 2 3 4 5 6 7 $^{13}C_7$)undecanoic acid

STRUCTURE. **CAS #:** Not available



410-8476254

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
LAST TESTED. (mm/dd/yyyy)	07/18/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/18/2030		
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-(1 2 3 4 5 6-$^{13}C_6$)decanoic acid (M6PFDA)

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Certified By _____ **Date** 07/23/2025 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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:

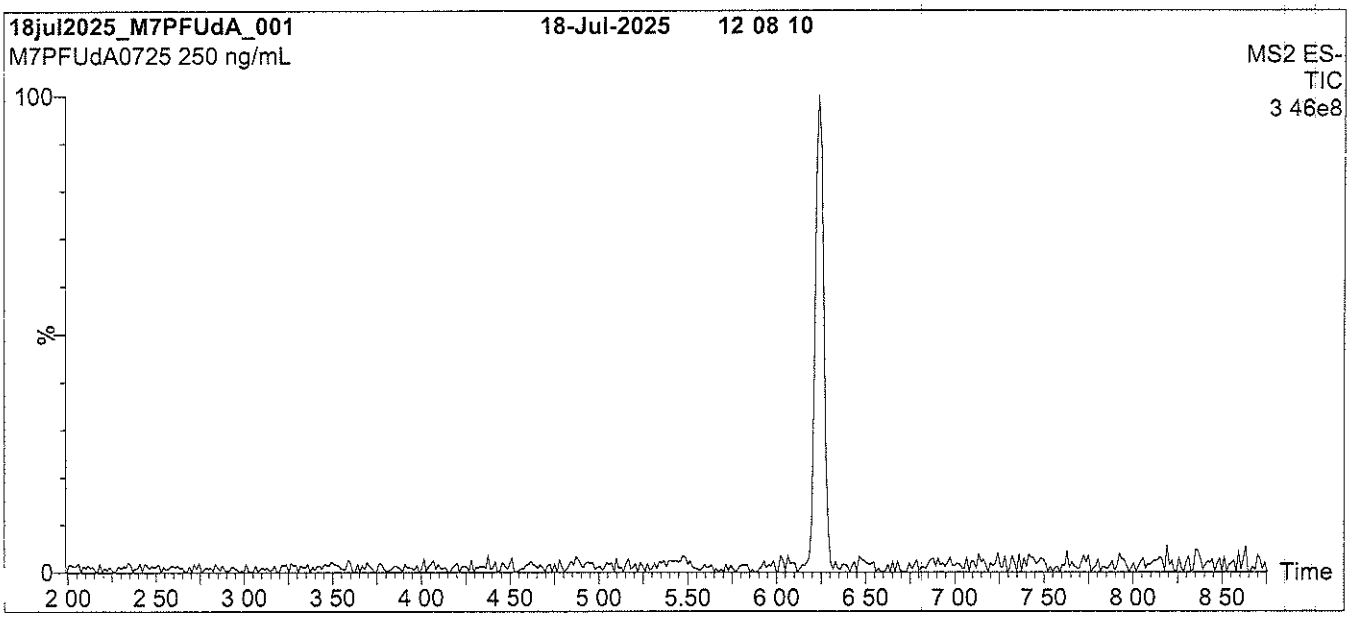
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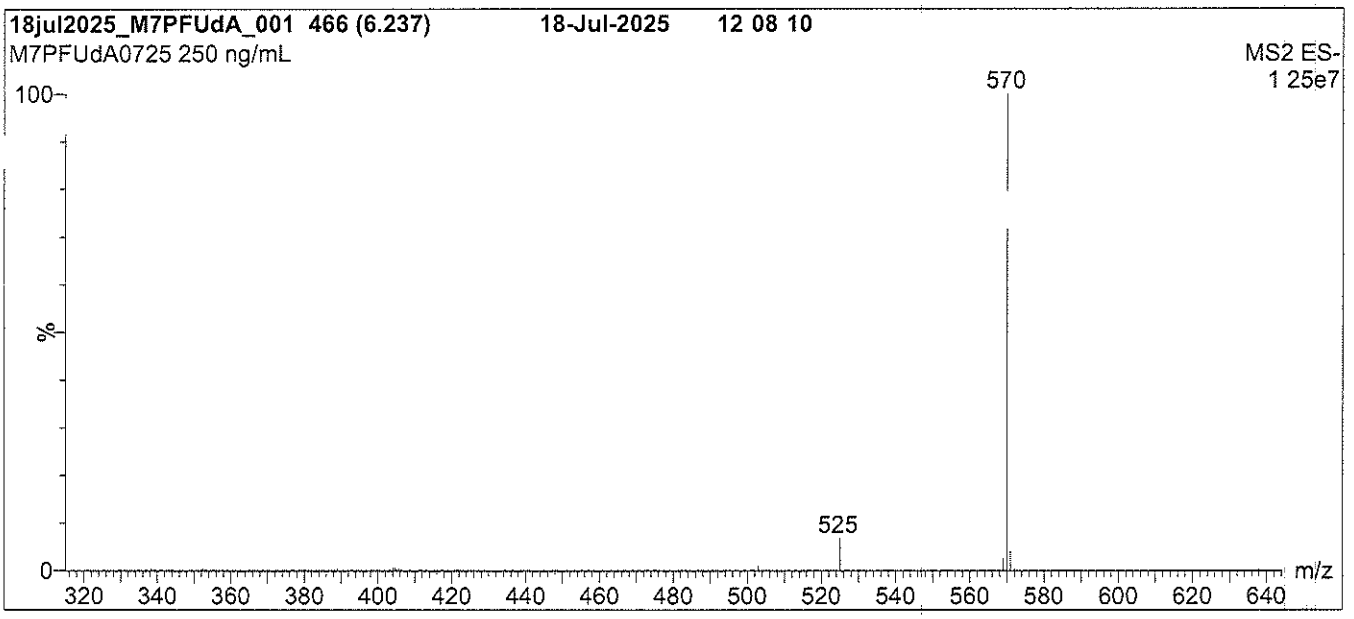
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M7PFUdA, 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.

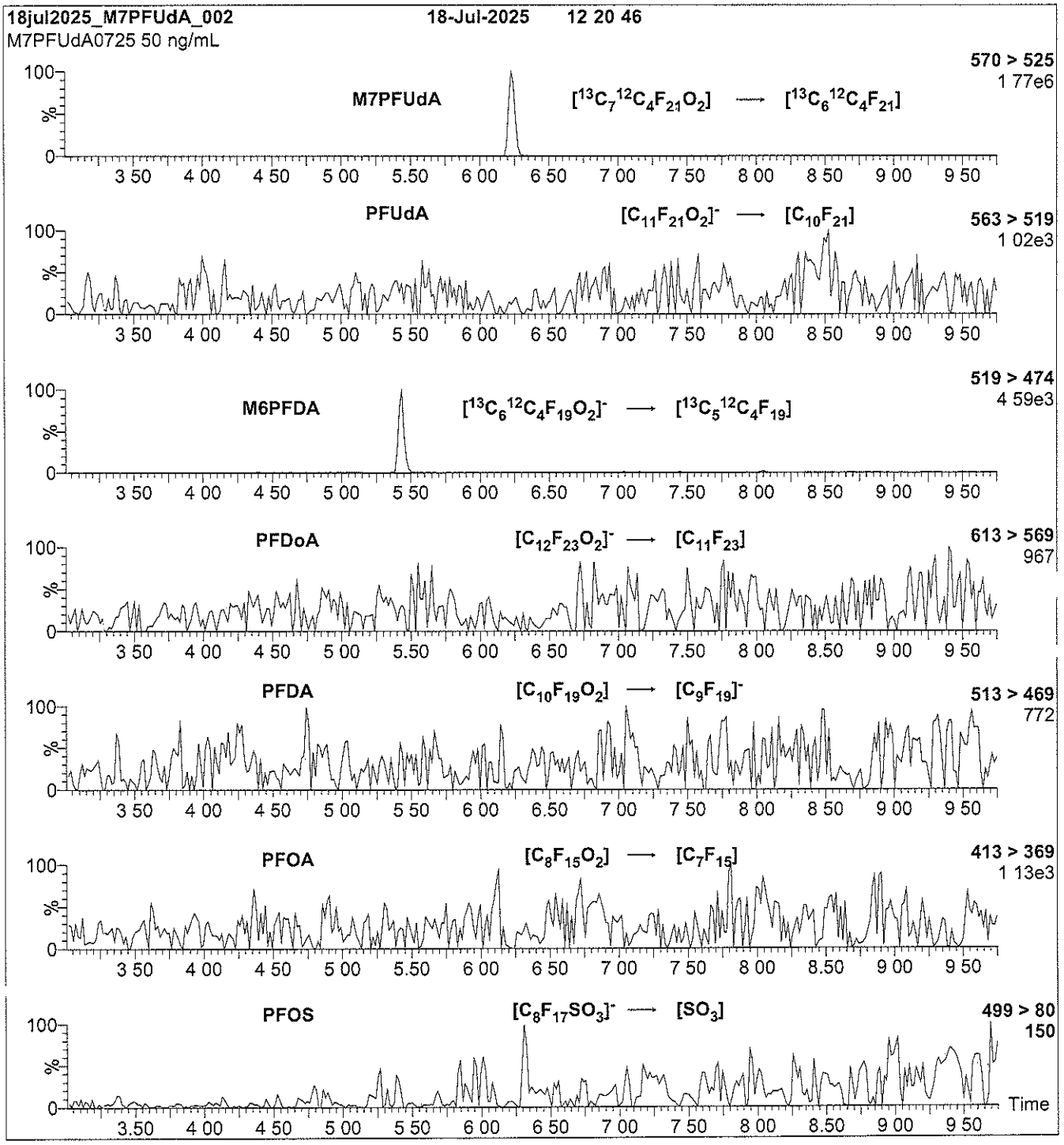
Column	Acquity UPLC BEH Shield RP $_6$ 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start. 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time 12 min
Flow	300 µL/min

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. **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) = 3.49e-3
Collision Energy (eV) = 12

Reagent

PFC_ST_05078

10

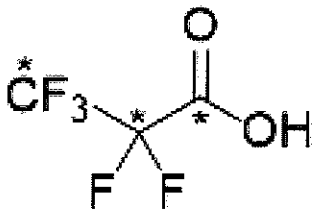
Cambridge Isotope Laboratories, Inc.

50 Frontage Road
Andover MA 01810 USA

PFC_ST_ 5078, 5079, 5080, 5081, 5082, 5083, 5084, 5085, 5086, 5087

Certificate of Analysis

Perfluoropropanoic acid (PFPrA) ($^{13}C_3$,99%) 50 µg/mL in MeOH w/4 molar equivalents NaOH



Catalog #:	CLM 11324-A-S
Batch #:	**B003784**
Chemical Formula.	*C3HF5O2
Molecular Weight:	167 01
Labeled CAS #:	NA
Unlabeled CAS #:	422-64-0
Manufacture Date:	4/9/2025
Retest Date:	4/8/2030

410-8489406

Storage: Store at room temperature away from light and moisture.

Intended Use: For Research Use Only Not for use in diagnostic procedures.

Quality Control Tests and Results

Test	Specification	Result
Concentration Based on Gravimetry	50 ± 5 µg/mL	50.0 ± 0.4 µg/mL, (k=2)

Certification

- Cambridge Isotope Laboratories, Inc. certifies that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. The COA also applies to the CIL finished good catalog number Some possible packaging sizes and their corresponding suffix are 1.2, 1, -0 5 10, or -0 1 The expiration date is valid only for unopened vials or ampoules that have been stored as recommended. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.
- Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025 and applicable subdocuments.
- For compounds that are enriched at 2 or more sites within the molecule, the value given for isotopic enrichment will be different from the percent species abundance of the fully enriched molecule. To learn more about isotopic enrichment and species abundance, please visit https.//isotope.com/en-us/enrichment.
- Concentration is verified through multiple analysis and is calculated as the average of the multiple analysis compared to an independently prepared calibration solution. The calculation and reporting of uncertainty conforms to the practices outlined in the Eurachem/CITAC Guide. 'Quantifying Uncertainty in Analytical Measurement' Second Edition.

Marina Klionsky
Quality Review

Date: 4/23/2025

Revision 1

Reagent

PFC_ST_05090

EPA-1633STK

410-8533958

U.S. EPA Method 1633
Native PFAS Stock Solution/Mixture

PRODUCT CODE.	EPA-1633STK
LOT NUMBER.	1633STK0625
SOLVENT(S).	Methanol/Isopropanol (0 5%)/Water (<1%)
DATE PREPARED. (mm/dd/yyyy)	06/06/2025
LAST TESTED. (mm/dd/yyyy)	06/11/2025
EXPIRY DATE. (mm/dd/yyyy)	06/11/2029
RECOMMENDED STORAGE.	Refrigerate ampoule

DESCRIPTION.

EPA-1633STK is a solution/mixture of native perfluoroalkylcarboxylic acids (C_4-C_7, C_{10}-C_{14} linear· C_8 and C_9 linear and branched) perfluoroalkanesulfonates (C_4, C_5, C_7, C_9, C_{10} and C_{12} linear· C_6 and C_8 linear and branched) fluorotelomer sulfonates (4 2 6.2 and 8 2) perfluorooctanesulfonamides (linear and branched) perfluorooctanesulfonamidoacetic acids (linear and branched) perfluorooctanesulfonamidoethanols (linear and branched) hexafluoropropylene oxide dimer acid (GenX HFPO-DA) sodium dodecafluoro-3H-4 8-dioxanonanoate (NaDONA) perfluoroalkyl ether carboxylic acids (PF4OPeA PF5OHxA, and 3 6-OPFHpA) the major and minor components of F-53B (9Cl PF3ONS and 11Cl PF3OUdS) a perfluoroalkyl ether sulfonate (PFEESA) and fluorotelomer carboxylic acids The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%

DOCUMENTATION/ DATA ATTACHED.

Table A	Components and Concentrations of the Solution/Mixture		
Table B	Isomeric Composition of PFOA	Table H	Isomeric Composition of N-EtFOSAA
Table C	Isomeric Composition of PFNA	Table I	Isomeric Composition of N MeFOSE
Table D	Isomeric Composition of FOSA	Table J	Isomeric Composition of N-EtFOSE
Table E	Isomeric Composition of N-MeFOSA	Table K	Isomeric Composition of PFHxSK
Table F	Isomeric Composition of N-EtFOSA	Table L	Isomeric Composition of PFOSK
Table G	Isomeric Composition of N-MeFOSAA	Figure 1	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 acids to their respective methyl esters
- It is recommended to integrate and quantify the linear and branched isomers separately as their response factors can vary depending on optimized acquisition parameters

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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 compound(s) 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 SFC/UV/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 nto 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 and/or SFC/UV/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 or equivalent products 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 shou d 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, $.x_n$ on which it depends is

$$u_c(y(x \quad x \quad .x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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

The ndividual 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%) has been assigned to this product.

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 Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the 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. EPA-1633STK, Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (0 5%)/water (<1%))

Compound	Acronym	CAS #	Concentration* (ng/mL)	
Perfluoro-n-butanoic acid	PFBA	375-22-4	1000	
Perfluoro-n-pentanoic acid	PFPeA	2706-90-3	500	
Perfluoro-n-hexanoic acid	PFHxA	307-24-4	250	
Perfluoro-n-heptanoic acid	PFHpA	375-85-9	250	
Perfluorooctanoic acid[a]	PFOA, linear isomer	335-67 1	250	166
	PFOA, ∑ branched isomers			84.3
Perfluorononanoic acid[b]	PFNA, linear isomer	375-95-1	250	163
	PFNA, ∑ branched isomers			86.8
Perfluoro-n-decanoic acid	PFDA	335-76-2	250	
Perfluoro-n-undecanoic acid	PFUdA	2058-94-8	250	
Perfluoro-n-dodecanoic acid	PFDoA	307-55-1	250	
Perfluoro-n-tridecanoic acid	PFTrDA	72629-94-8	250	
Perfluoro-n-tetradecanoic acid	PFTeDA	376-06-7	250	
Perfluorooctanesulfonamide[c]	FOSA, linear isomer	754-91-6	250	167
	FOSA, ∑ branched isomers			84.0
N-Methylperfluorooctanesulfonamide[d]	N-MeFOSA, linear isomer	31506-32-8	250	181
	N-MeFOSA, ∑ branched isomers			69 1
N-Ethylperfluorooctanesulfonamide[e]	N-EtFOSA, linear isomer	4151-50-2	250	185
	N-EtFOSA, ∑ branched isomers			65.5
N-Methylperfluorooctanesulfonamidoacetic acid[f]	N-MeFOSAA, linear isomer	2355-31-9	250	190
	N-MeFOSAA, ∑ branched isomers			60 0
N-Ethylperfluorooctanesulfonamidoacetic acid[g]	N-EtFOSAA, linear isomer	2991-50-6	250	194
	N-EtFOSAA, ∑ branched isomers			56.3
2-(N-Methylperfluorooctanesulfonamido)ethanol[h]	N-MeFOSE: linear isomer	24448-09-7	2500	1690
	N-MeFOSE, ∑ branched isomers			813
2-(N-Ethylperfluorooctanesulfonamido)ethanol[i]	N-EtFOSE, linear isomer	1691-99-2	2500	1620
	N-EtFOSE, ∑ branched isomers			888
rac-2,3 3,3-Tetrafluoro-2-(1 1,2,2,3,3,3-heptafluoropropoxy)propanoic acid	HFPO-DA	13252-13-6	1000	
Perfluoro-4-oxapentanoic acid	PF4OPeA	377 73-1	500	
Perfluoro-5-oxahexanoic acid	PF5OHxA	863090-89-5	500	
Perfluoro-3,6-dioxaheptanoic acid	3,6-OPFHpA	151772-58-6	500	
3-Perfluoropropyl propanoic acid	FPrPA	356-02-5	1250	
3-Perfluoropentyl propanoic acid	FPePA	914637-49-3	6250	
3-Perfluoroheptyl propanoic acid	FHpPA	812-70-4	6250	

* Concentrations have been rounded to three significant figures

[a] See Table B for percent composition of linear and branched PFOA isomers
[b] See Table C for percent composition of linear and branched PFNA isomers
See Table D for percent composition of linear and branched FOSA isomers
[d] See Table E for percent composition of linear and branched N-MeFOSA isomers.
[e] See Table F for percent composition of linear and branched N-EtFOSA isomers
See Table G for percent composition of linear and branched N-MeFOSAA isomers.
[g] See Table H for percent composition of linear and branched N-EtFOSAA isomers
[h] See Table I for percent composition of linear and branched N-MeFOSE isomers.
See Table J for percent composition of linear and branched N-EtFOSE isomers.

Table A. **EPA-1633STK, Components and Concentrations (ng/mL, ± 5% in methanol/isopropanol (0 5%)/water (<1%))**

Compound	Acronym	CAS #	Concentration* (ng/mL)		
			as the salt		as the acid
Potassium perfluoro-1-butanesulfonate	L-PFBS	29420-49-3	250		222
Sod um perfluoro-1-pentanesulfonate	L-PFPeS	630402-22-1	250		235
Potassium perfluorohexanesulfonate[j]	PFHxSK. inear isomer	3871-99-6	250	203	185
	PFHxSK: ∑ branched isomers			47.3	43.1
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	21934-50-9	250		238
Potassium perfluorooctanesulfonate[k]	PFOSK: linear isomer	2795-39-3	250	197	183
	PFOSK. ∑ branched isomers			52.8	49.0
Sodium perfluoro-1-nonanesulfonate	L-PFNS	98789-57-2	250		240
Sodium perfluoro-1-decanesulfonate	L-PFDS	2806-15-7	250		241
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	1260224-54-1	250		242
Sodium 1H 1H,2H,2H-perfluorohexanesulfonate	4:2FTS	27619-93-8	1000		937
Sodium 1H 1H,2H 2H-perfluorooctanesulfonate	6:2FTS	27619-94-9	1000		951
Sodium 1H 1H,2H,2H-perfluorodecanesulfonate	8.2FTS	27619-96-1	1000		960
Sodium *rac*-dodecafluoro-3H-4,8-dioxanonanoate	NaDONA	2250081-67-3	1000		945
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	9Cl-PF3ONS	73606-19-6	1000		933
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	11Cl-PF3OUdS	83329-89-9	1000		943
Potassium perfluoro(2-ethoxyethane)sulfonate	PFEESA	117205-07-9	500		446

* Concentrations have been rounded to three significant figures.

[j] See Table K for percent composition of linear and branched PFHxSK isomers
[k] See Table L for percent composition of linear and branched PFOSK isomers.

Certified By _____ **Date** 06/16/2025 (mm/dd/yyyy)
B G. Chittim General Manager

Table B. **PFOA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	Perfluoro-n-octanoic acid	66 3	66.3
2	Perfluoro-3-methylheptanoic acid	5 0	33 7
3	Perfluoro-4-methylheptanoic acid	6 9	
4	Perfluoro-5-methylheptanoic acid	7 2	
5	Perfluoro-6-methylheptanoic acid	13 3	
6	Perfluoro-5 5-dimethylhexanoic acid	0 4	
7	Perfluoro-4 5-dimethylhexanoic acid	0 5	
8	Perfluoro-3 5-dimethylhexanoic acid	0 2	
9	Perfluoro-4 4-dimethylhexanoic acid	0 2	
10	Perfluoro-3 3-dimethylhexanoic acid		

* Percent of total perfluorooctanoic acid isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages

Table C. **PFNA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	Perfluoro-n-nonanoic acid	65 2	65 2
2	Perfluoro-4-methyloctanoic acid	5 7	34.7
3	Perfluoro-5-methyloctanoic acid	4 9	
4	Perfluoro-6-methyloctanoic acid	8 1	
5	Perfluoro-7-methyloctanoic acid	14 6	
6	Perfluoro-6 6-dimethylheptanoic acid	0 4	
7	Unknown Double Branched Isomers	1 0	

* Percent of total perfluorononanoic acid isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

Table D. **FOSA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	Perfluoro-1-octanesulfonamide	66 6	66 6
2	Perfluoro-1-methyl-1-heptanesulfonamide**	0 8	33 6
3	Perfluoro-2-methyl 1-heptanesulfonamide	0 3	
4	Perfluoro-3-methyl-1-heptanesulfonamide	4 2	
5	Perfluoro-4-methyl-1-heptanesulfonamide	3 5	
6	Perfluoro-5-methyl-1-heptanesulfonamide	7 8	
7	Perfluoro-6-methyl 1-heptanesulfonamide	16 8	
8	Perfluoro-5 5-dimethyl-1-hexanesulfonamide	0 2	

* Percent of total perfluorooctanesulfonamide isomers only. Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

** Systematic Name Perfluoro-2-octanesulfonamide

Table E. **N-MeFOSA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	N-Methylperfluoro-1-octanesulfonamide	72 3	72.3
2	N-Methylperfluoro-3-methyl-1-heptanesulfonamide	2 1	27 6
3	N-Methylperfluoro-4-methyl-1-heptanesulfonamide	2 6	
4	N-Methylperfluoro-5-methyl-1-heptanesulfonamide	6 7	
5	N-Methylperfluoro-6-methyl-1-heptanesulfonamide	16 2	
6	N-Methylperfluoro-5 5-dimethyl-1-hexanesulfonamide	0 04	

* Percent of total N-methylperfluorooctanesulfonamide isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages

Table F. **N-EtFOSA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	N-Ethylperfluoro-1-octanesulfonamide	73 8	73 8
2	N-Ethylperfluoro-1-methyl-1-heptanesulfonamide**	0 1	26 2
3	N-Ethylperfluoro-3-methyl-1-heptanesulfonamide	2 3	
4	N-Ethylperfluoro-4-methyl-1-heptanesulfonamide	2 6	
5	N-Ethylperfluoro-5-methyl-1-heptanesulfonamide	6.2	
6	N-Ethylperfluoro-6-methyl-1-heptanesulfonamide	14 8	
7	N-Ethylperfluoro-5 5-dimethyl-1-hexanesulfonamide	0.2	

* Percent of total N-ethylperfluorooctanesulfonamide isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages
** Systematic Name N-Ethylperfluoro-2-octanesulfonamide

Table G. **N-MeFOSAA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	N-Methylperfluoro-1-octanesulfonamidoacetic acid	76 0	76 0
2	N-Methylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	0 7	24 0
3	N-Methylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	2 0	
4	N-Methylperfluoro-5-methyl-1-heptanesulfonamidoacetic acid	6 0	
5	N-Methylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	14 0	
6	N-Methylperfluoro-5,5-dimethyl-1-hexanesulfonamidoacetic acid	0 2	
7	Other Unidentified Isomers	1 1	

* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages

Table H. **N-EtFOSAA, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	N Ethylperfluoro-1-octanesulfonamidoacetic acid	77 5	77 5
2	N-Ethylperfluoro-3-methyl-1-heptanesulfonamidoacetic acid	2 3	22.5
3	N-Ethylperfluoro-4-methyl-1-heptanesulfonamidoacetic acid	2 2	
4	N-Ethylperfluoro-5-methyl 1-heptanesulfonamidoacetic acid	5 4	
5	N-Ethylperfluoro-6-methyl-1-heptanesulfonamidoacetic acid	10.4	
6	N-Ethylperfluoro-5 5-dimethyl 1-hexanesulfonamidoacetic acid	0 3	
7	N-Ethylperfluoro-4 5-dimethyl 1-hexanesulfonamidoacetic acid	0 3	
8	N Ethylperfluoro-3 5-dimethyl-1-hexanesulfonamidoacetic acid	0 3	
9	Other Unidentified Isomers	1 3	

* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages

Table I. **N-MeFOSE, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	2-(N-Methylperfluoro-1-octanesulfonamido)ethanol	67 6	67 6
2	2-(N-Methylperfluoro-3-methyl-1-heptanesulfonamido)ethanol	3 9	32 5
3	2-(N-Methylperfluoro-4-methyl 1-heptanesulfonamido)ethanol	3.2	
4	2-(N-Methylperfluoro-5-methyl-1-heptanesulfonamido)ethanol	7 7	
5	2-(N-Methylperfluoro-6-methyl-1-heptanesulfonamido)ethanol	17 5	
6	2-(N Methylperfluoro-5 5-dimethyl-1-hexanesulfonamido)ethanol	0 2	

* Percent of total 2-(N-methylperfluorooctanesulfonamido)ethanol isomers only Additional branched isomers may be present at levels below the detection limit of the ^{9}F NMR analysis which would not significantly impact the above percentages

Table J. **N-EtFOSE, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	2-(N-Ethylperfluoro-1-octanesulfonamido)ethanol	64 6	64 6
2	2-(N Ethylperfluoro-2-methyl-1-heptanesulfonamido)ethanol	0 2	35 5
3	2-(N-Ethylperfluoro-3-methyl-1-heptanesulfonamido)ethanol	4 1	
4	2-(N-Ethylperfluoro-4-methyl 1-heptanesulfonamido)ethanol	4 3	
5	2-(N-Ethylperfluoro-5-methyl-1-heptanesulfonamido)ethanol	8 8	
6	2-(N-Ethylperfluoro-6-methyl 1-heptanesulfonamido)ethanol	17 8	
7	2-(N-Ethylperfluoro-5 5-dimethyl-1-hexanesulfonamido)ethanol	0 3	

* Percent of total 2-(N-ethylperfluorooctanesulfonamido)ethanol isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

Table K. **PFHxSK, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	Potassium perfluoro-1-hexanesulfonate	81 1	81 1
2	Potassium perfluoro-1-methyl-1-pentanesulfonate**	2 9	18 9
3	Potassium perfluoro-2-methyl-1-pentanesulfonate	1.4	
4	Potassium perfluoro-3-methyl-1-pentanesulfonate	5 0	
5	Potassium perfluoro-4-methyl-1-pentanesulfonate	8 9	
6	Potassium perfluoro-3 3-dimethyl-1-butanesulfonate	0 2	
7	Other Unidentified Isomers	0 5	

* Percent of total perfluorohexanesulfonate isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages

** Systematic Name: Potassium perfluorohexane-2-sulfonate

Table L. **PFOSK, Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Percent Composition by ^{19}F-NMR	
1	Potassium perfluoro-1-octanesulfonate	78 8	78 8
2	Potassium perfluoro-1-methyl-1-heptanesulfonate**	1 2	21 1
3	Potassium perfluoro-2-methyl-1-heptanesulfonate	0 6	
4	Potassium perfluoro-3-methyl-1-heptanesulfonate	1 9	
5	Potassium perfluoro-4-methyl-1-heptanesulfonate	2.2	
6	Potassium perfluoro-5-methyl-1-heptanesulfonate	4 5	
7	Potassium perfluoro-6-methyl-1-heptanesulfonate	10 0	
8	Potassium perfluoro-5 5-dimethyl-1-hexanesulfonate	0 2	
9	Potassium perfluoro-4,4-dimethyl-1-hexanesulfonate	0 03	
10	Potassium perfluoro-4 5-dimethyl-1-hexanesulfonate	0 4	
11	Potassium perfluoro-3,5-dimethyl-1-hexanesulfonate	0 07	

* Percent of total perfluorooctanesulfonate isomers only Additional branched isomers may be present at levels below the detection limit of the ^{19}F NMR analysis which would not significantly impact the above percentages.

** Systematic Name Potassium perfluoro-2-octanesulfonate

Figure 1. **EPA-1633STK, LC/MS/MS Data (Selected MRM Transitions)**

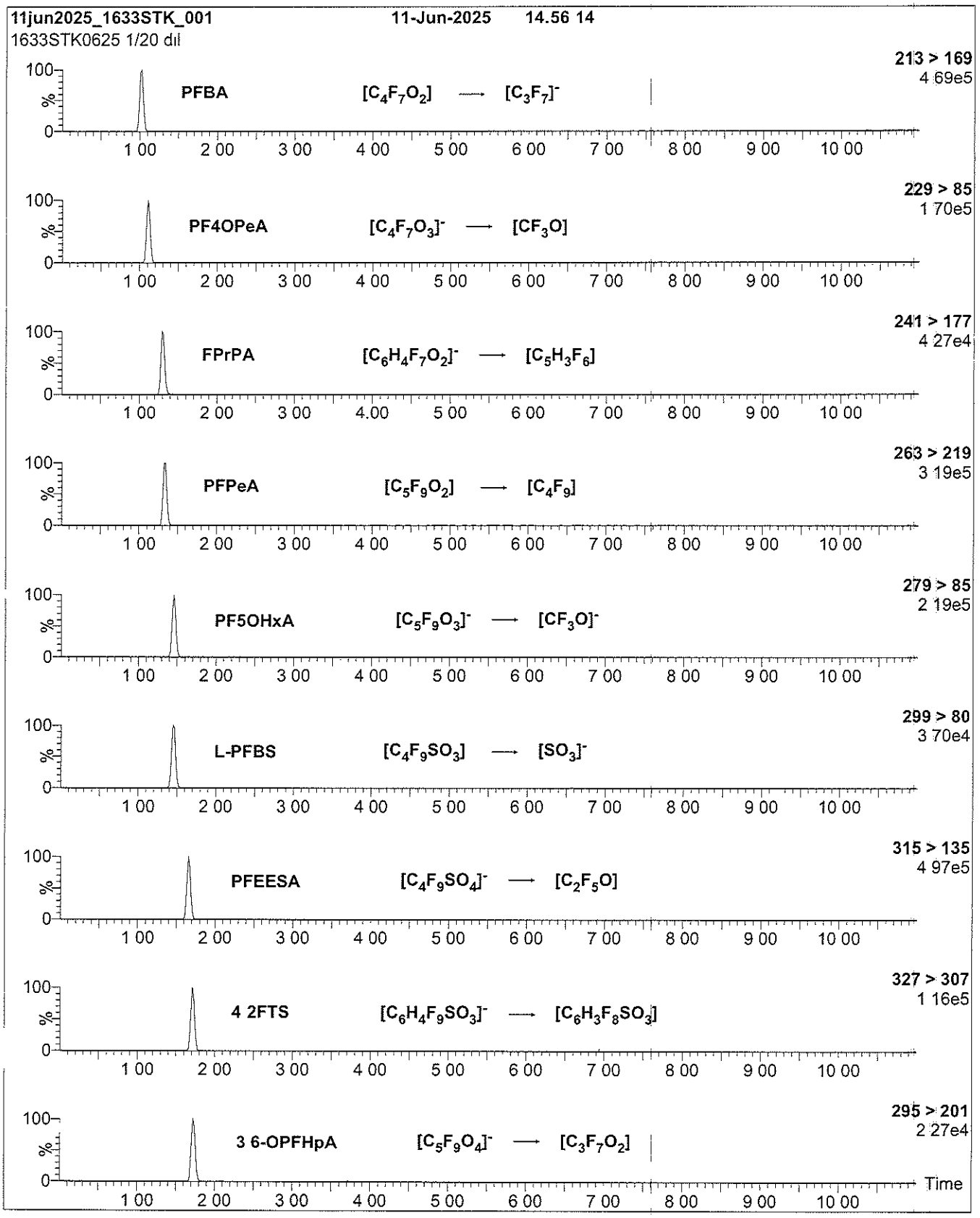


Figure 1. **EPA-1633STK, LC/MS/MS Data (Selected MRM Transitions)**

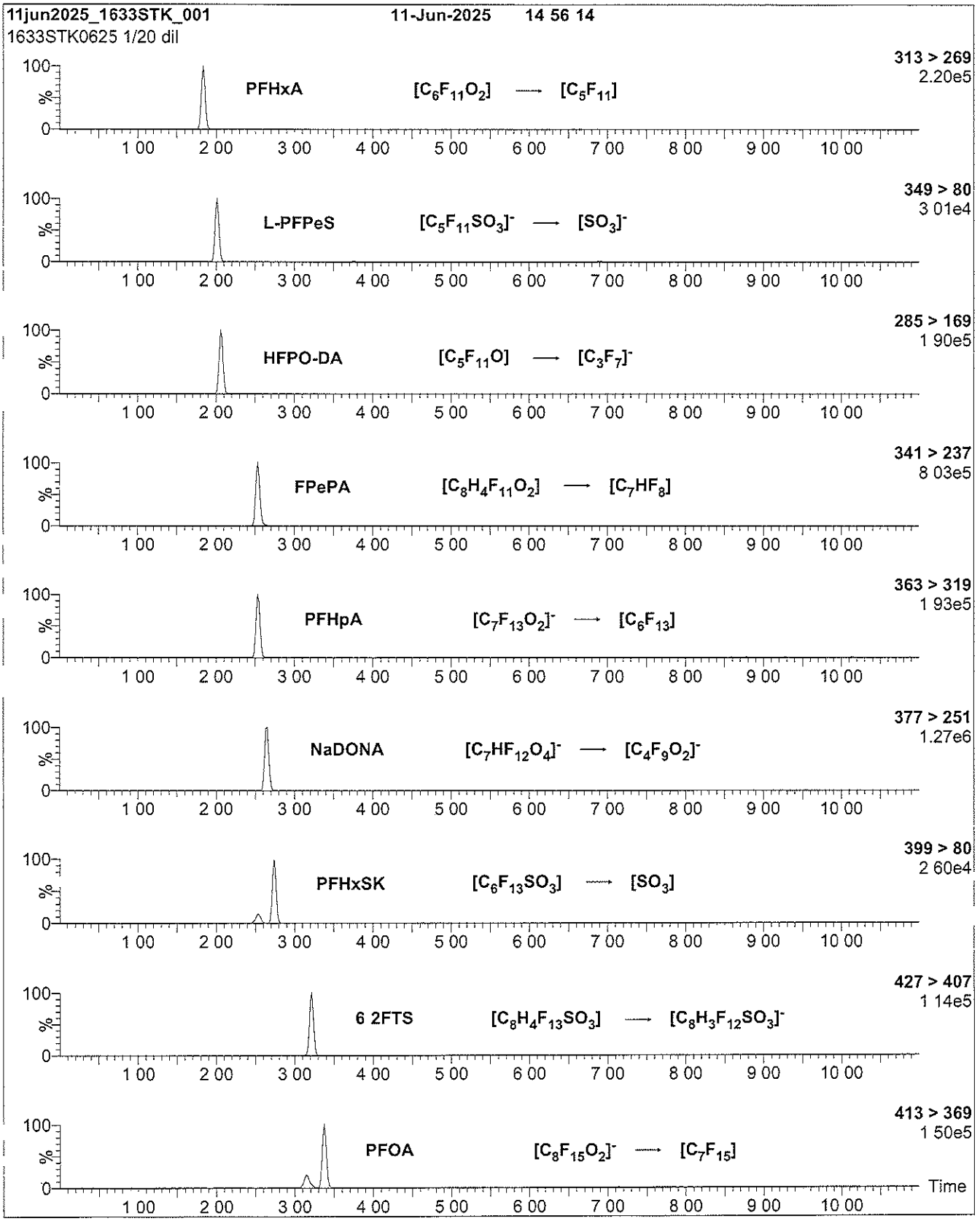


Figure 1. **EPA-1633STK, LC/MS/MS Data (Selected MRM Transitions)**

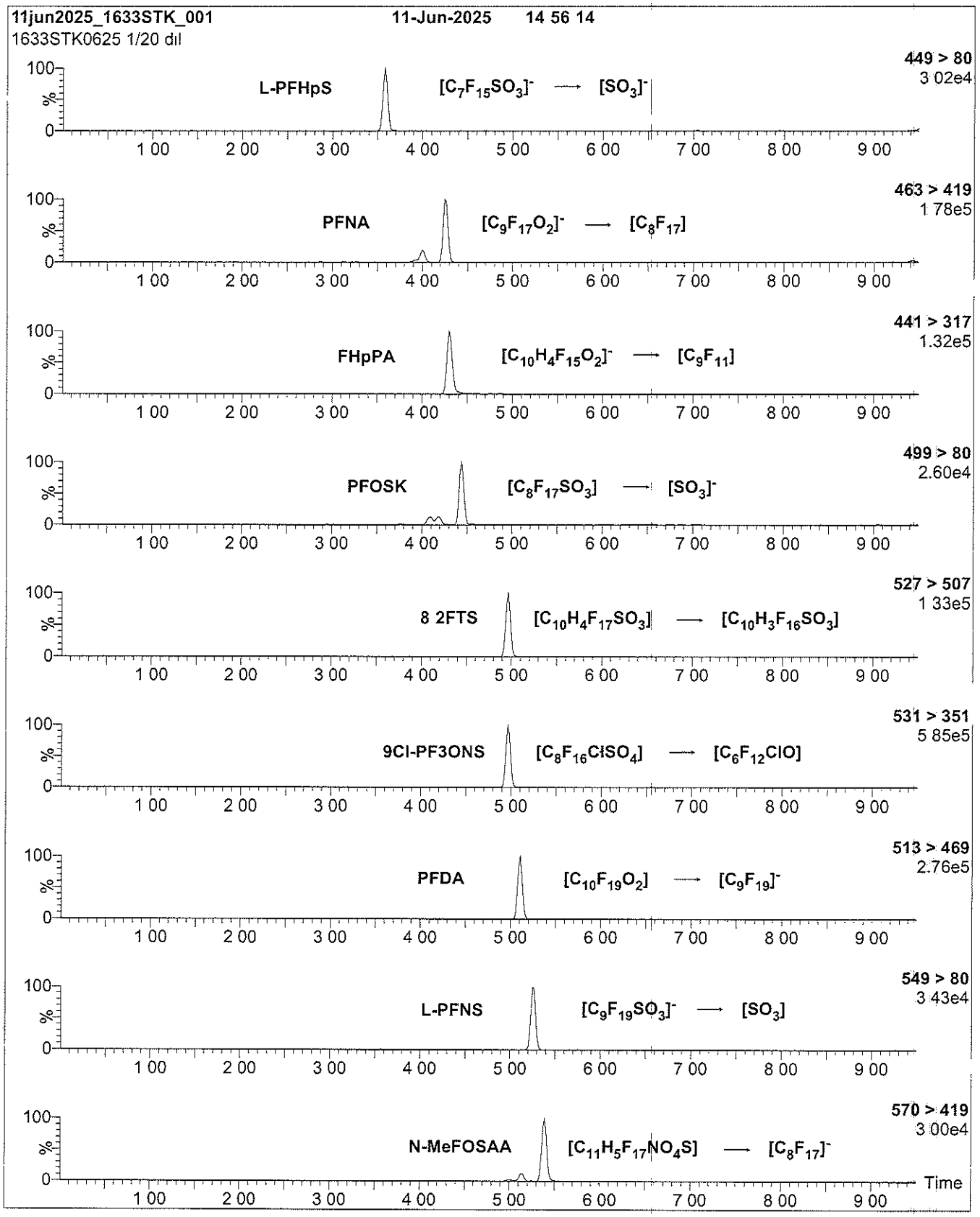


Figure 1. EPA-1633STK, LC/MS/MS Data (Selected MRM Transitions)

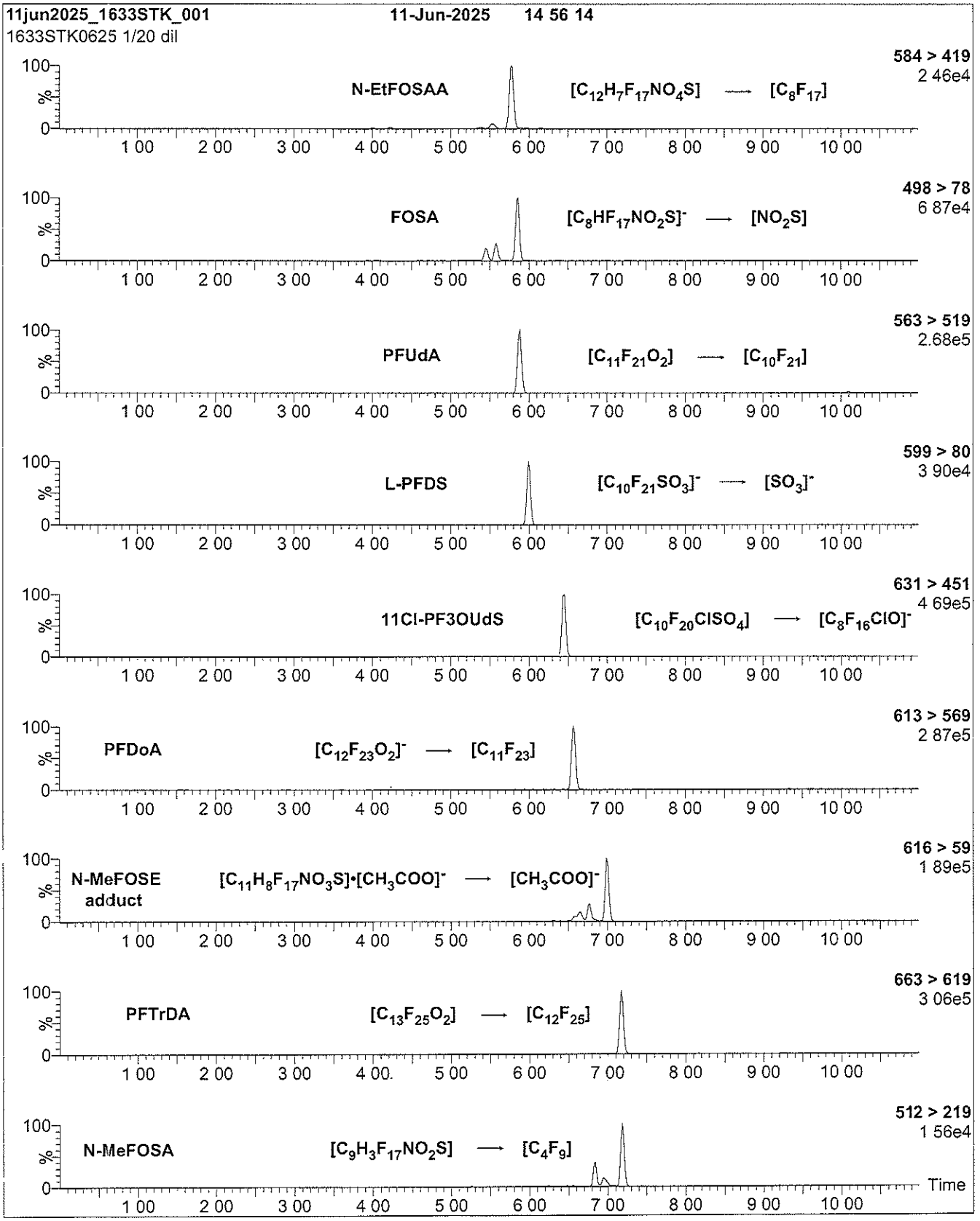
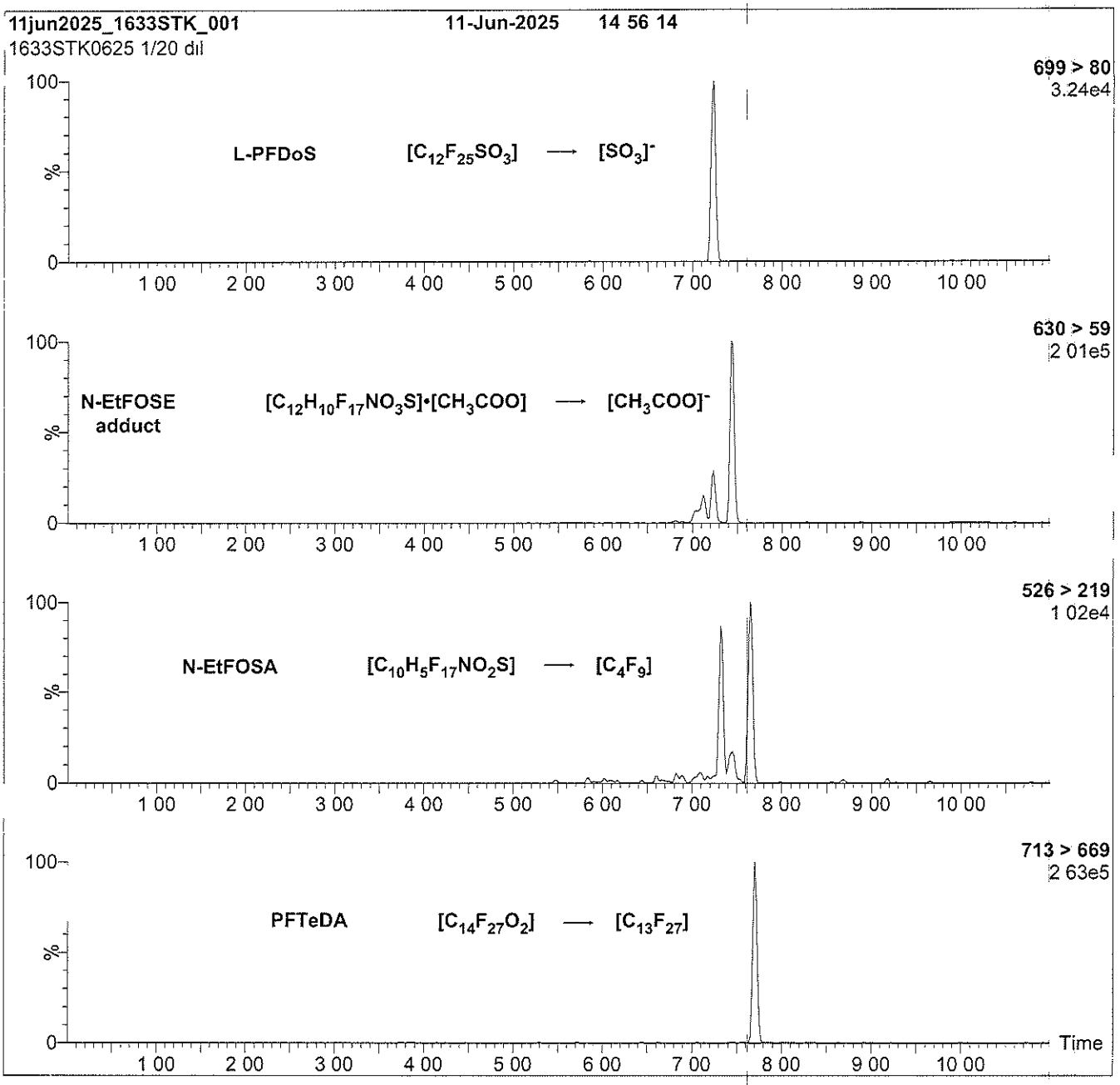


Figure 1. **EPA-1633STK, LC/MS/MS Data (Selected MRM Transitions)**



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)
Flow	300 µL/min
Mobile phase	Gradient Start: 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time. 12 min

MS Parameters.

Source Electrospray (negative)

Capilary Voltage (kV) = 2.00
Cone Voltage (V) = 2-74
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000
Collision Gas (mbar) = 3.91e-3
Collision Energy (eV) = 6-60

Reagent

PFC_ST_05107

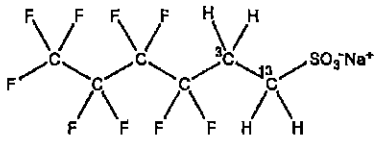
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. M2-4 2FTS **LOT NUMBER.** M242FTS0725

COMPOUND. Sodium 1H 1H 2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate ($^{13}C_2$-4 2 FTS)

STRUCTURE.



CAS #. 2708218-88-4

410-8591520

MOLECULAR FORMULA.	$^{13}C_2\ ^2C_4H_4F_9SO_3Na$	**MOLECULAR WEIGHT:**	352 12
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	46 9 ± 2 3 µg/mL (M2-4 2FTS acid)		
	46 7 ± 2 3 µg/mL (M2-4 2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/23/2030		
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
- It is known that elevated concentrations of 4 2FTS will contribute to the response of the m/z 329 > 309 MRM transition of M2-4 2FTS due to the natural abundance of ^{34}S (~4 2% relative to ^{32}S) in the native compound Therefore use of the alternative product ion (m/z 81 [$^{32}SO_3H]^-$) is recommended The analogous transition for the ^{34}S native analyte would produce m/z 83 [$^{34}SO_3H]^-$ from the same nominal mass precursor ion thereby eliminating the potential interference
- Contains ≤0 5% of sodium 1H 2H-perfluoro-1-(1 2- $^3C_2$)hexenesulfonate by ^{19}F NMR

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Certified By _____ **Date** 08/12/2025 (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(s) 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 SFC/UV/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 and/or SFC/UV/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 x_n on which it depends is.

$$u_c(y(x_1\ x_2\ \ x\ )) = \sqrt{\sum u(y\ x_i)^2}$$

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%) has been assigned to this product.

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:

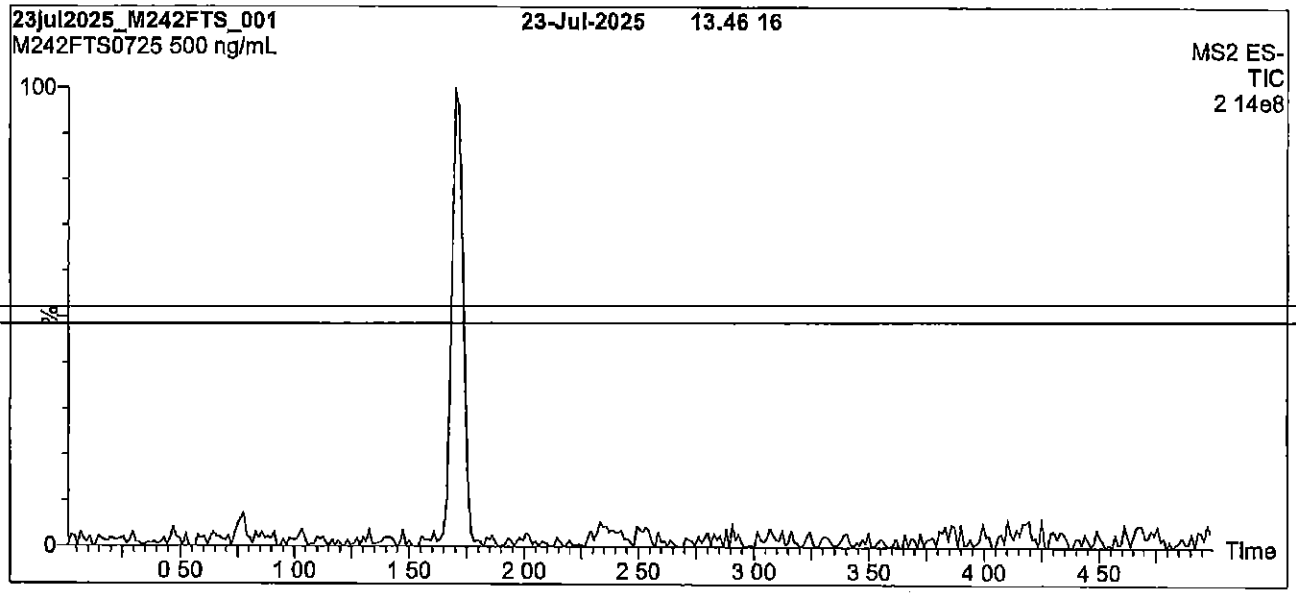
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

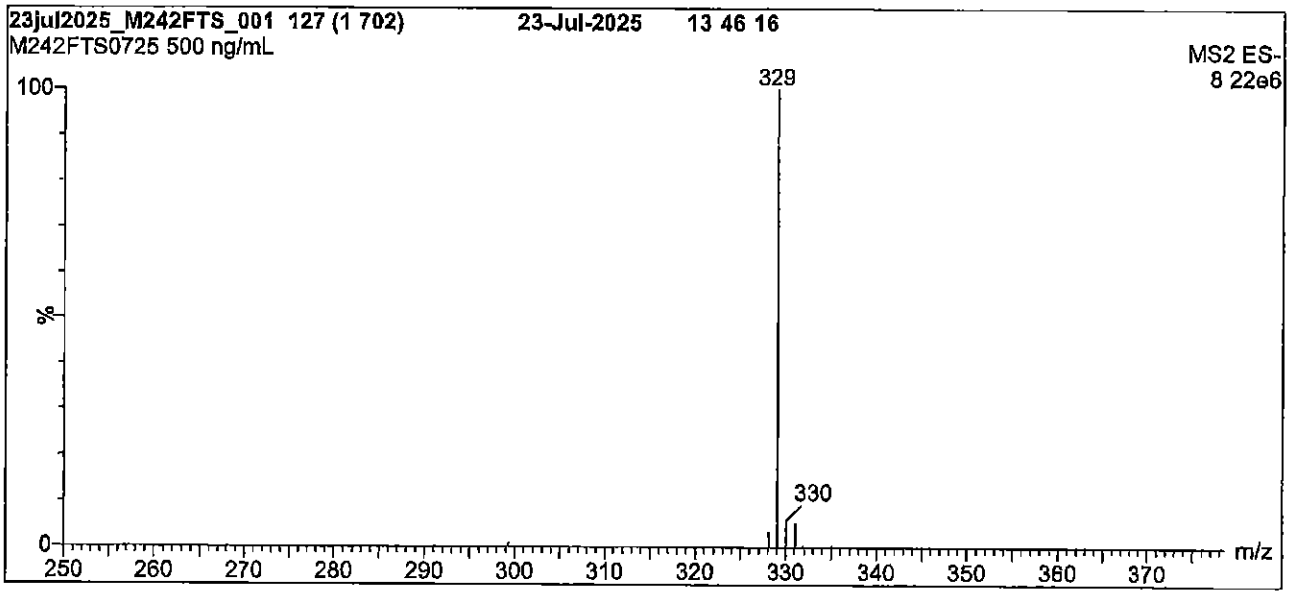
CALA Testing Accreditation No. A1226

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: 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.

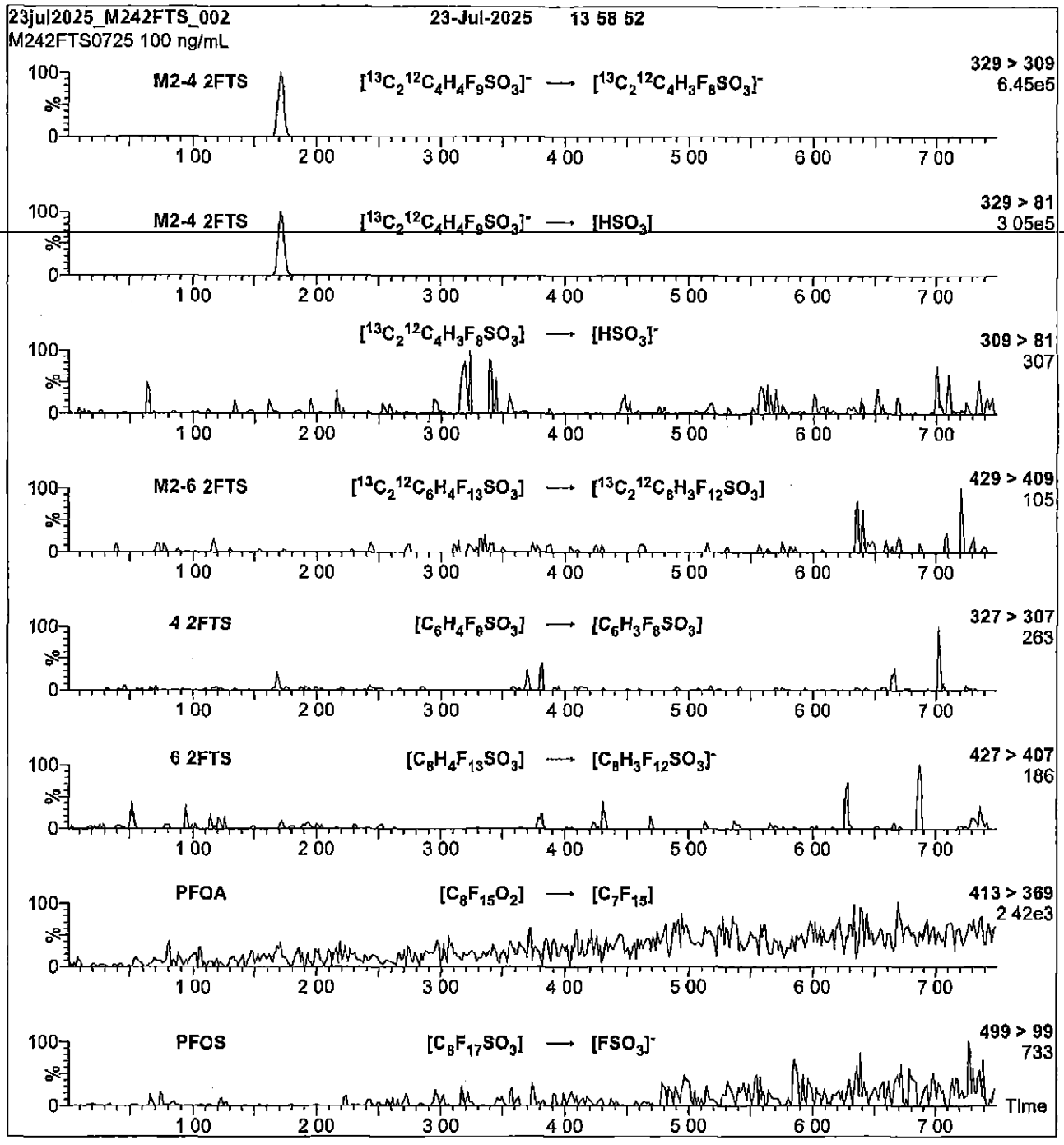
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start 50% H_2O / 50% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time· 12 min
Flow·	300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source· Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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



Conditions for Figure 2.

Injection	On-column (M2-4.2FTS)	**MS Parameters.**	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 3.65e-3 Collision Energy (eV) = 18	
Flow	300 µL/min		

Reagent

PFC_ST_05111

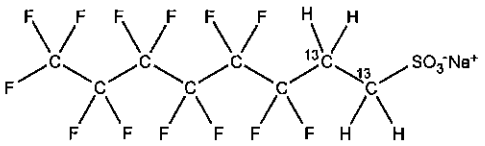
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. M2-6 2FTS **LOT NUMBER.** M262FTS0625

COMPOUND. Sodium 1H 1H 2H 2H-perfluoro(1 2-$^{13}C_2$)octanesulfonate

STRUCTURE. **CAS #.** 2708218-89-5



410-8591601

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)	**SOLVENT(S).**	Methanol
	47 6 ± 2 4 µg/mL (M2-6 2FTS acid)		
	47 5 ± 2 4 µg/mL (M2-6 2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/26/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/26/2030		
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 MRM 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)

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Certified By _____ **Date** 07/15/2025 (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(s) 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 SFC/UV/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 and/or SFC/UV/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, x_n on which it depends is

$$u_c(y(x_1\ x_2\quad x_n)) = \sqrt{\sum_{=1}^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

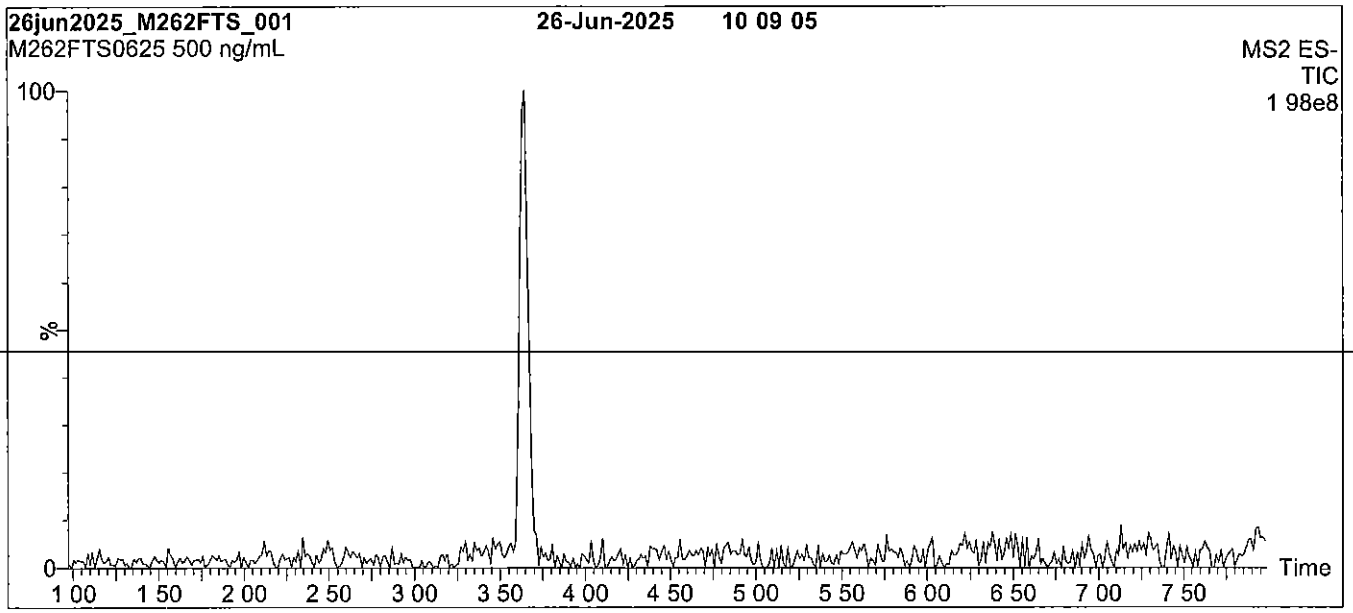
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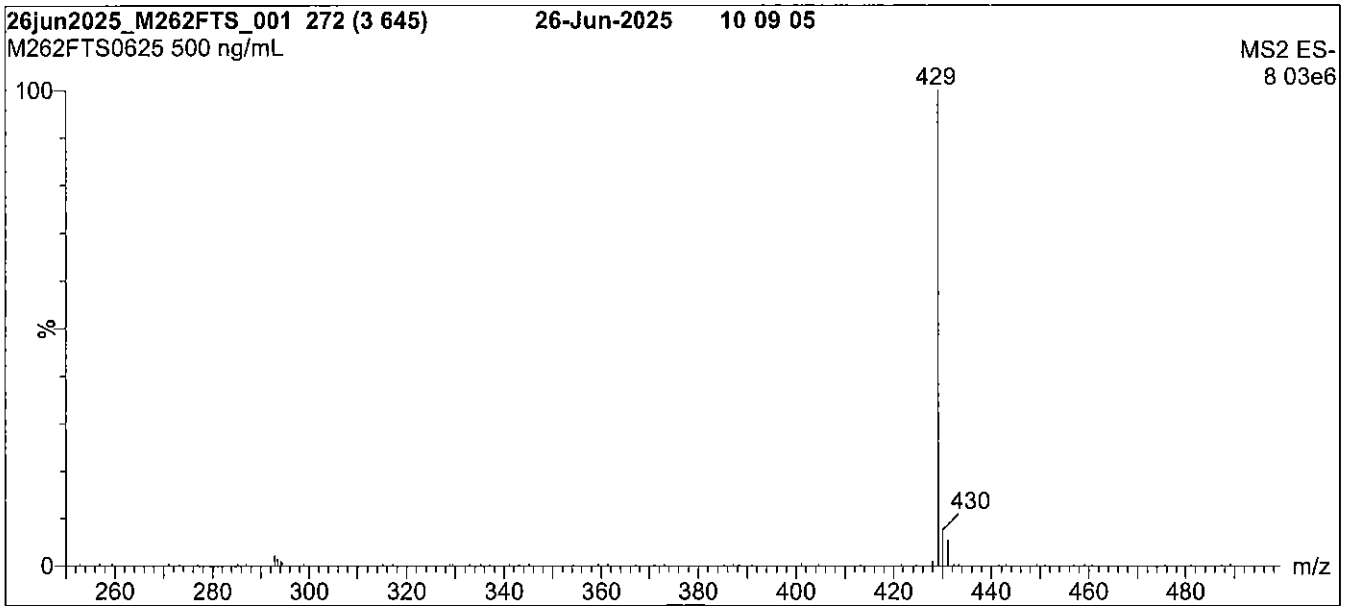
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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.

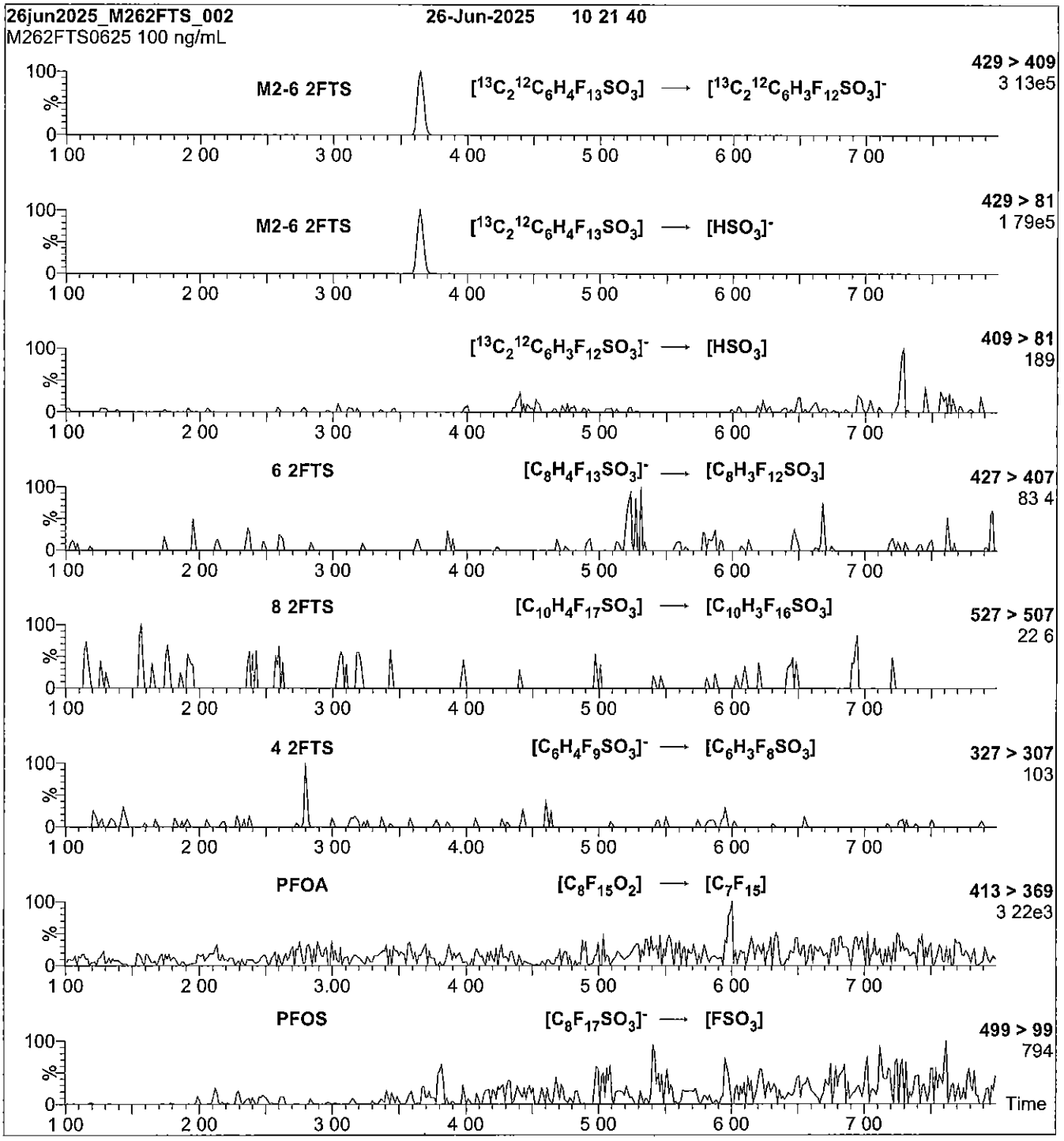
Column	Acquity UPLC BEH Shield RP $_8$ 1 7 µm 2 1 x 100 mm
Mobile phase	Gradient Start: 50% H_2O / 50% (80.20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = 25 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 3.73e-3
Collision Energy (eV) = 20

Reagent

PFC_ST_05121

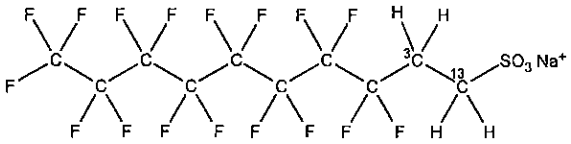
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. M2-8.2FTS **LOT NUMBER.** M282FTS0425

COMPOUND. Sodium 1H 1H 2H 2H-perfluoro(1 2-$^{13}C_2$)decanesulfonate

STRUCTURE: **CAS #:** 2708218-90-8



410-85916f2

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
LAST TESTED. (mm/dd/yyyy)	04/09/2025		
EXPIRY DATE: (mm/dd/yyyy)	04/09/2030		
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)

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Certified By· _____ **Date** 04/23/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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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%) has been assigned to this product.

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:

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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:

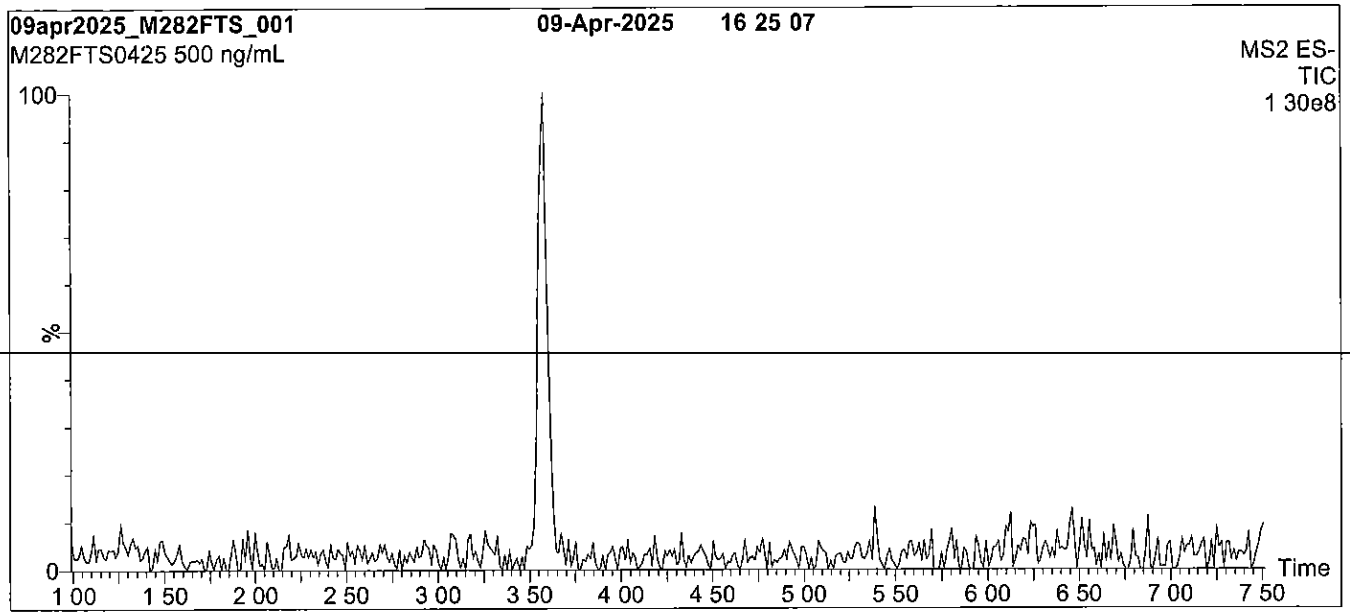
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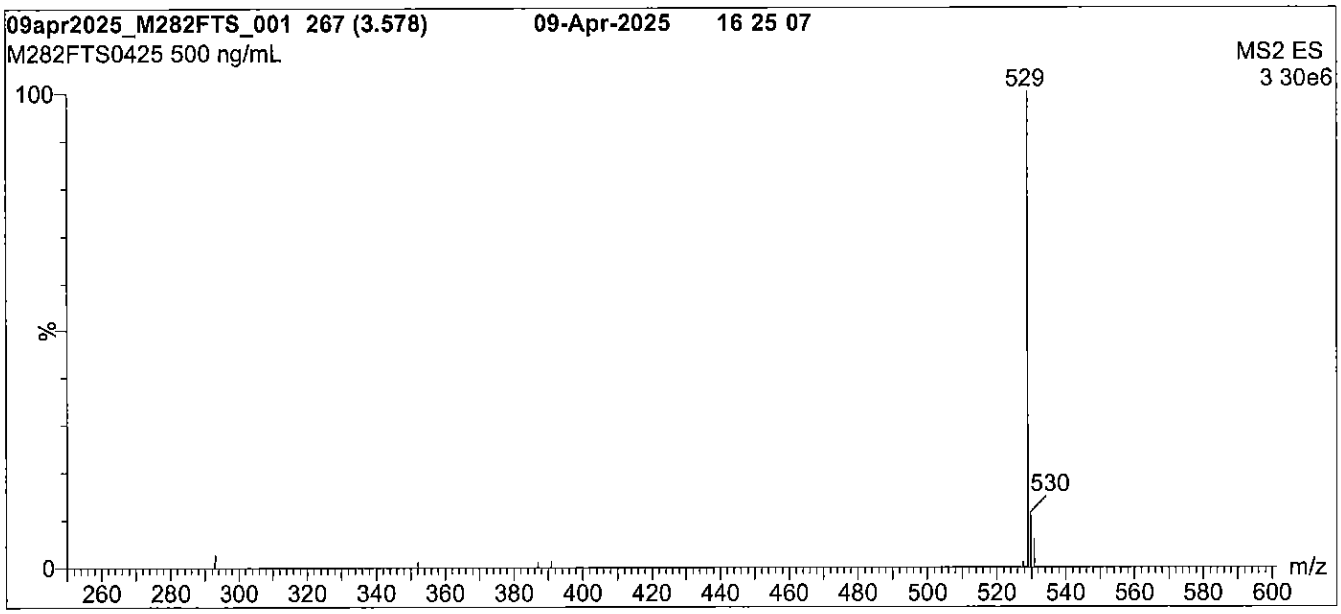
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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.

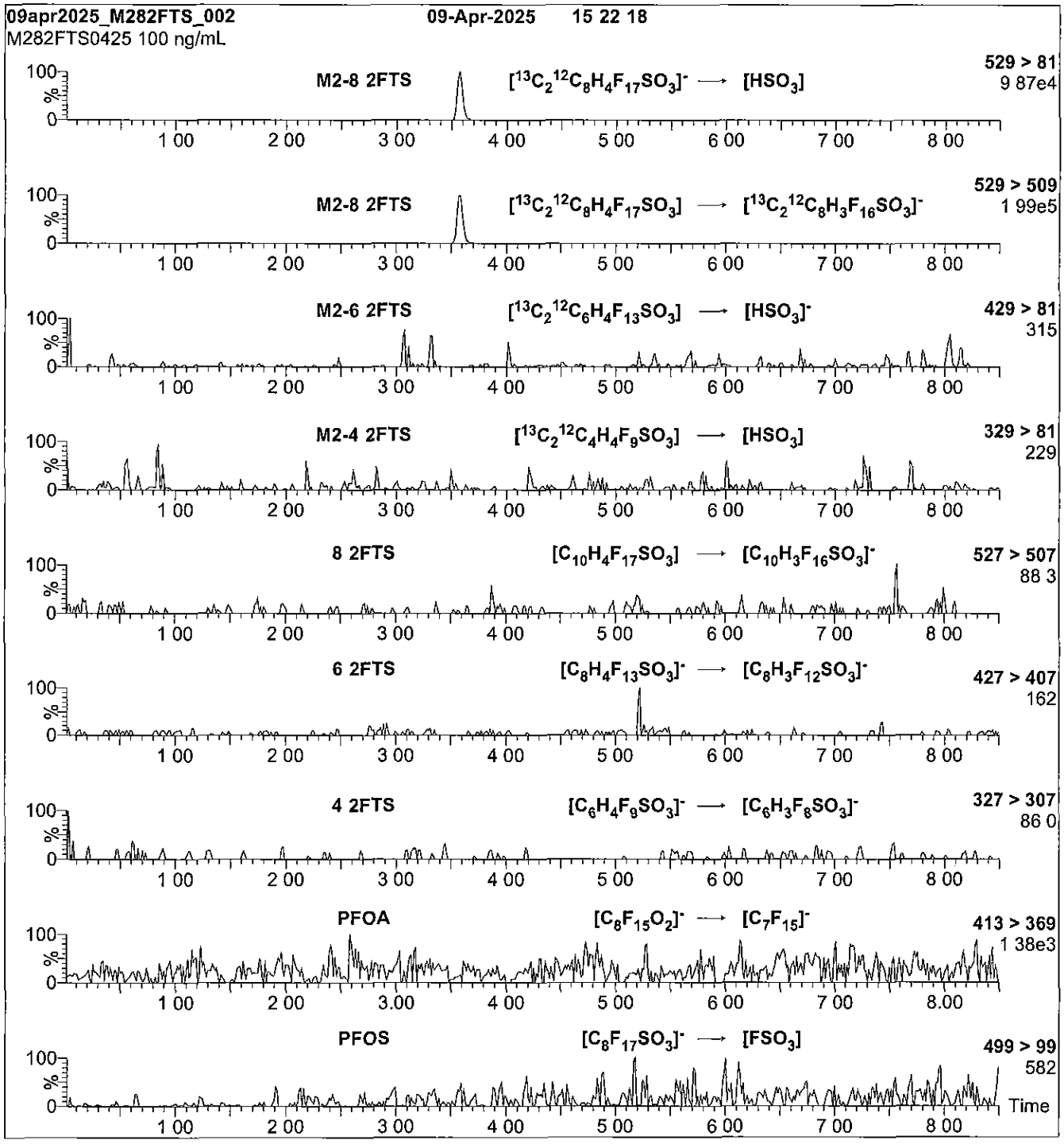
Column	Acquity UPLC BEH Shield RP$_{18}$ 1 7 µm, 2.1 x 100 mm
Mobile phase	Gradient Start. 40% H_2O / 60% (80 20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0 5 min Time 12 min
Flow·	300 µL/min

MS Parameters.

Experiment: Full Scan (250 - 850 amu)

Source Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = 25 00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 5.91e-3
Collision Energy (eV) = 26

Reagent

PFC_ST_05137

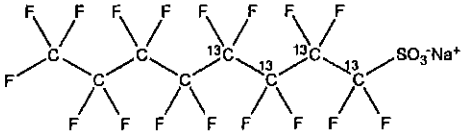
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. MPFOS **LOT NUMBER.** MPFOS0825

COMPOUND: Sodium perfluoro-1-(1 2,3,4-$^{13}C_4$)octanesulfonate

STRUCTURE. **CAS #:** 960315-53-1



410-8632304

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
LAST TESTED. (mm/dd/yyyy)	08/19/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/19/2030		
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 1% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA), and 1 4% of an unknown impurity

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 08/22/2025 (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(s) 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 SFC/UV/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 and/or SFC/UV/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, x_n on which it depends is.

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

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%) has been assigned to this product.

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:

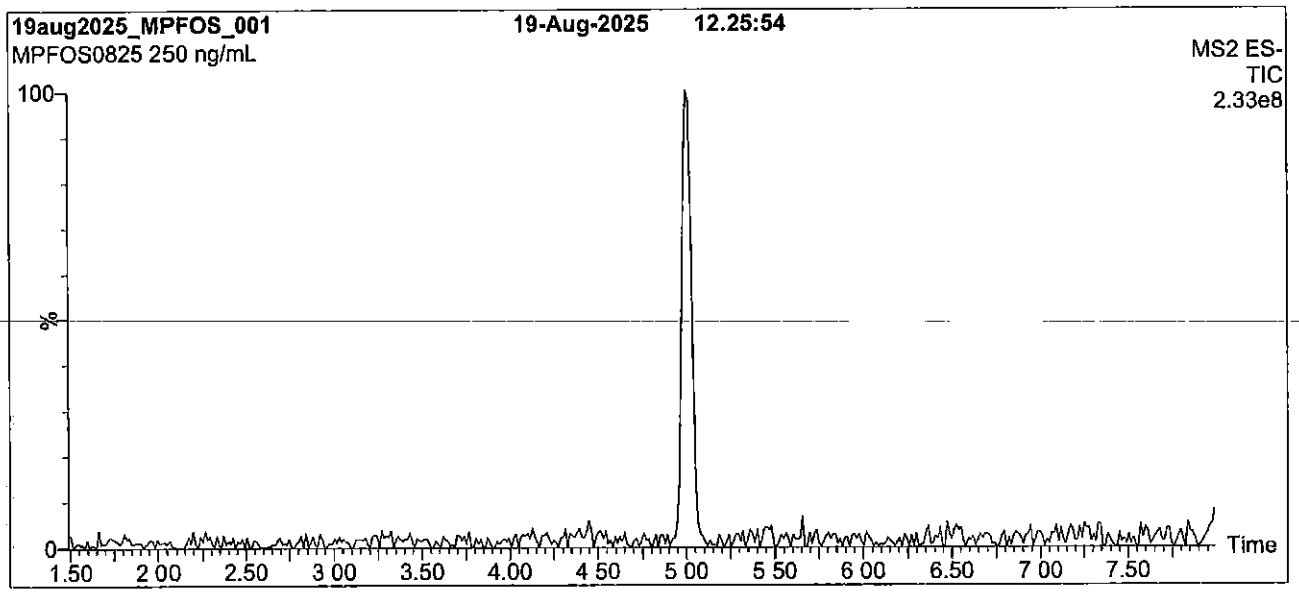
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

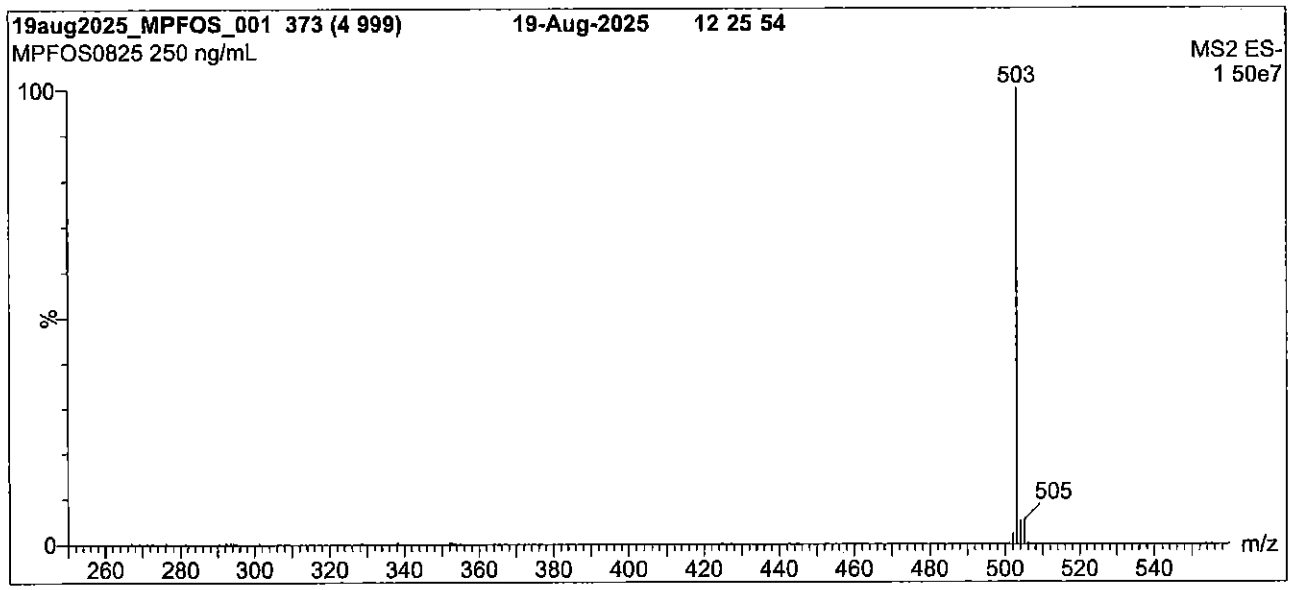
CALA Testing Accreditation No. A1226

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: **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. 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

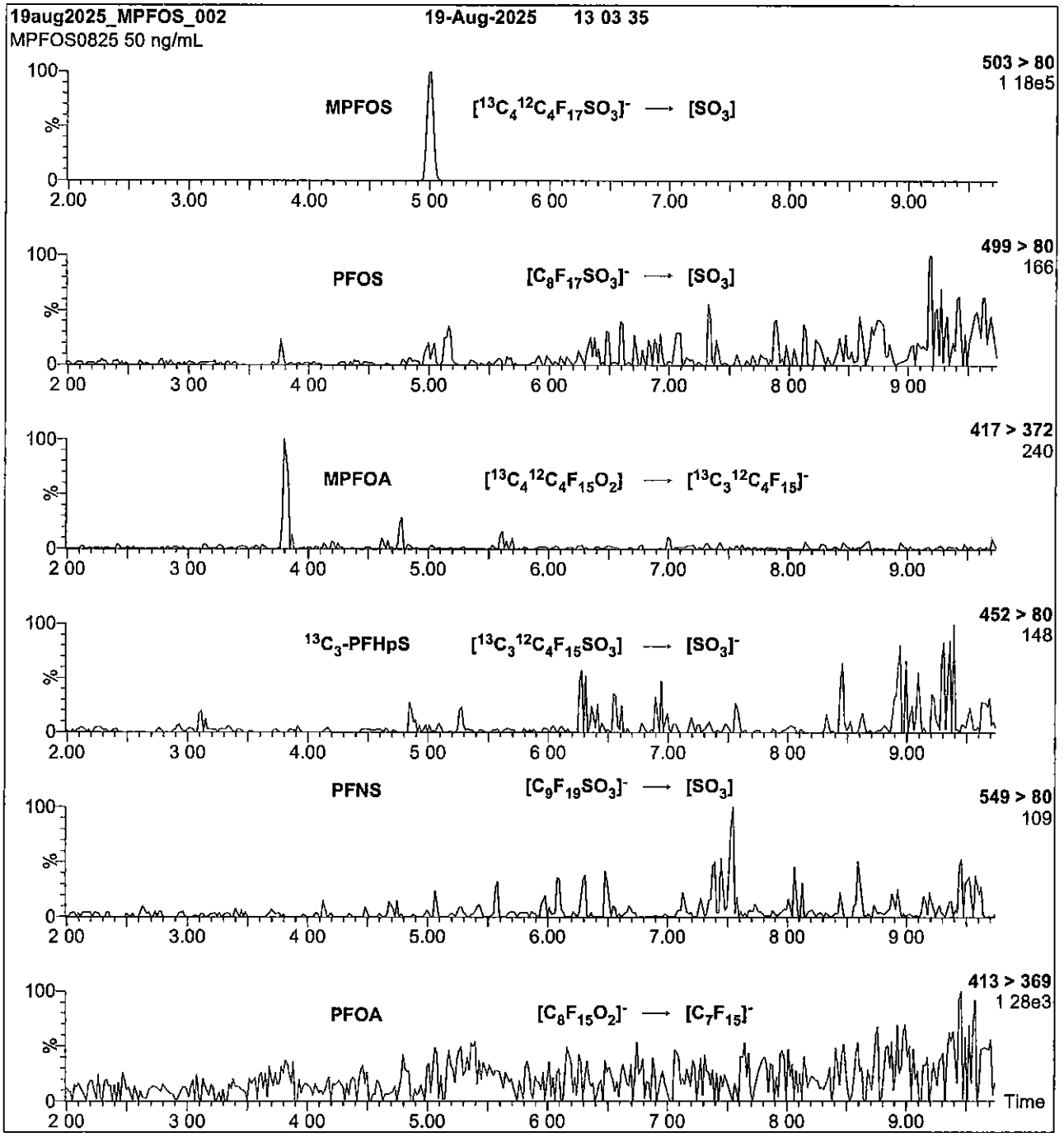
Flow: 300 µL/min

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. **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) = 3.57e-3
Collision Energy (eV) = 42 (503 > 80)

Reagent

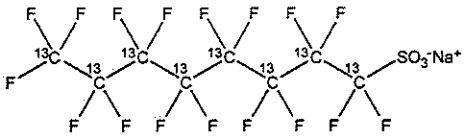
PFC_ST_05167

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-05165, 5166, 5167

PRODUCT CODE.	M8PFOS	**LOT NUMBER:**	M8PFOS1224
COMPOUND.	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		
STRUCTURE.		**CAS #:**	2522762-16-7



410-8660132

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
LAST TESTED. (mm/dd/yyyy)	01/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/02/2030		
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 ~1 1% of sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate (MPFOS) and <0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim, General Manager **Date** 01/06/2025 (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, SFC/UV/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, and/or SFC/UV/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, $.x_n$ on which it depends is:

$$u_c(y(x_1\ x_2\ ..x_n)) = \sqrt{\sum_{i=1}^{n} u(y\ x)}$$

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%) has been assigned to this product.

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:

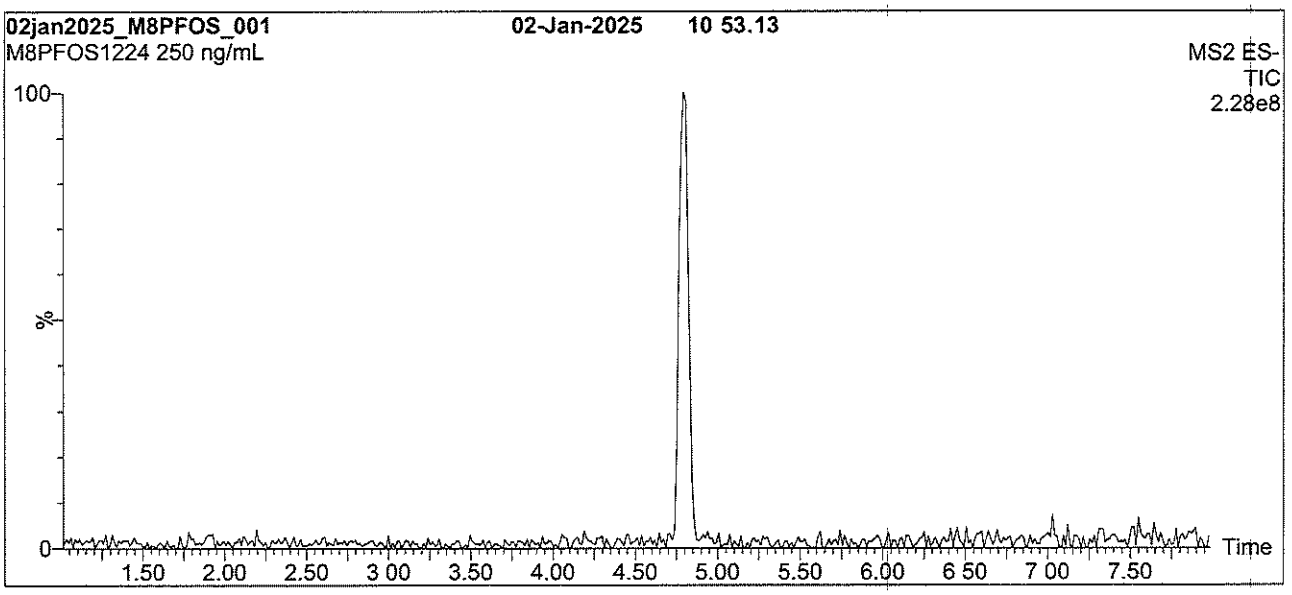
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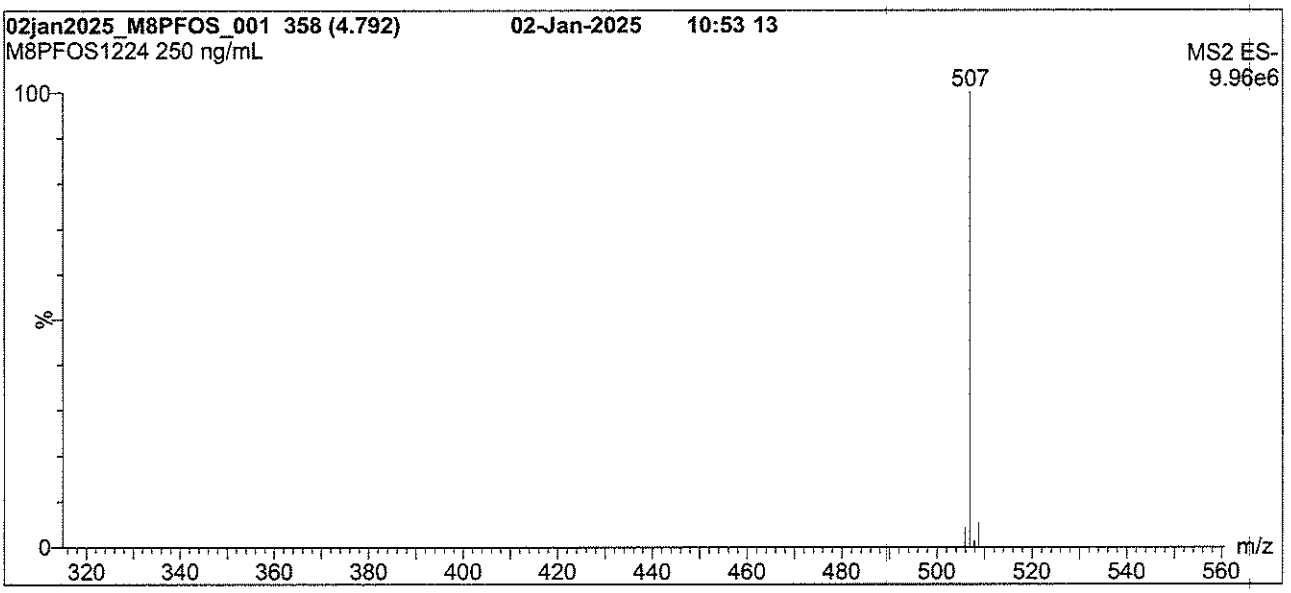
CALA Testing Accreditation No. A1226

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 1: **M8PFOS, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

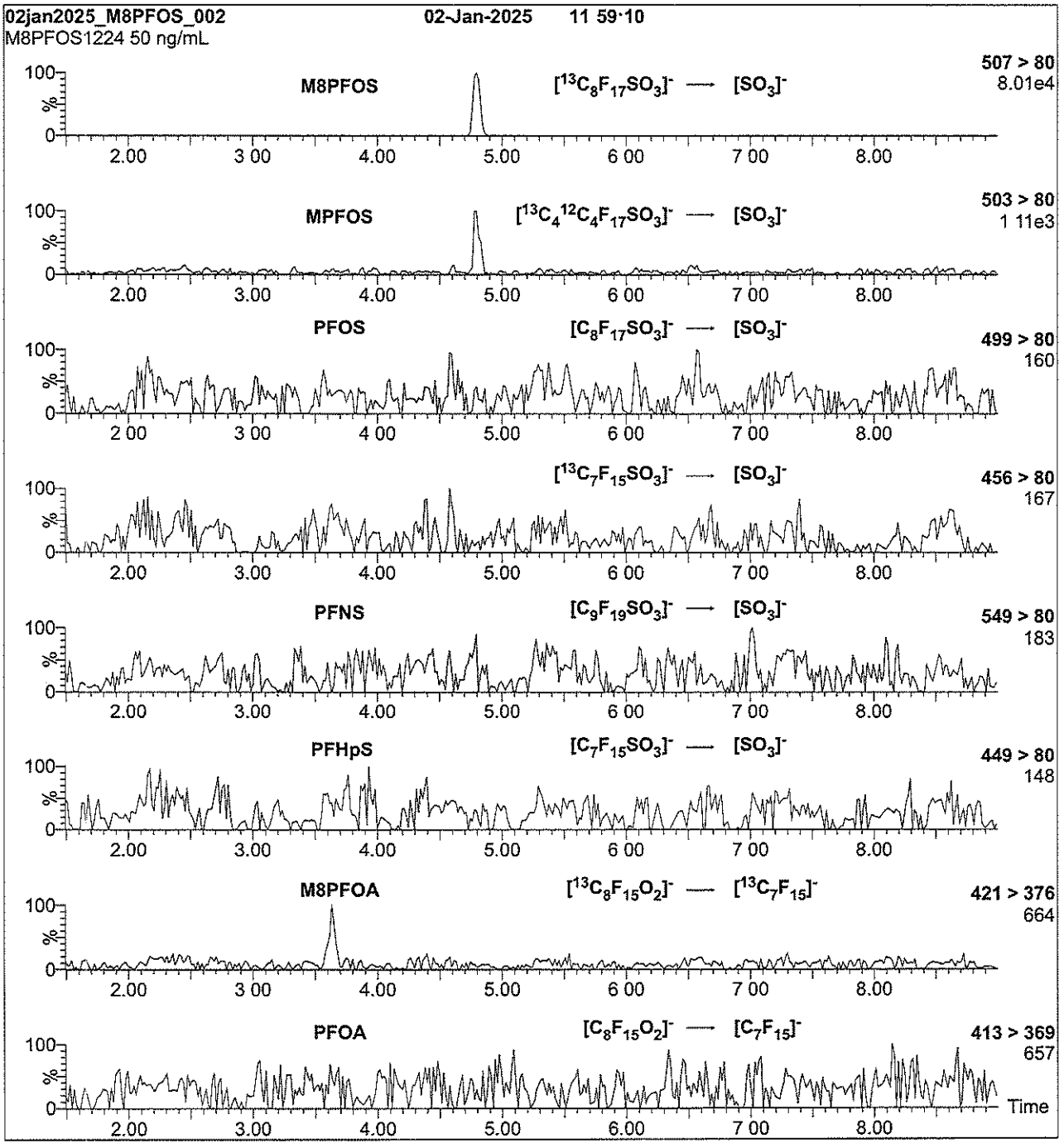
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 5.87e-3
Collision Energy (eV) = 64

Reagent

PFC_ST_05176

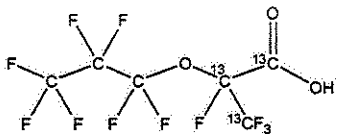
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST_ 5174, 5175, 5176, 5177, 5178

PRODUCT CODE.	M3HFPO-DA	**LOT NUMBER:**	M3HFPODA0825
COMPOUND.	$^{13}C_3$-Hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX)		
IUPAC NAME.	*rac*-2,3,3,3-Tetrafluoro-2-(1 1 2,2,3,3 3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		

STRUCTURE.



CAS #: 3030247-97-0

410-8660543

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
LAST TESTED: (mm/dd/yyyy)	08/19/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/19/2029		
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 compound is the $^{13}C_3$-labelled analogue of the major component of the commercial formulation known as GenX.
- M3HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date** 08/28/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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:

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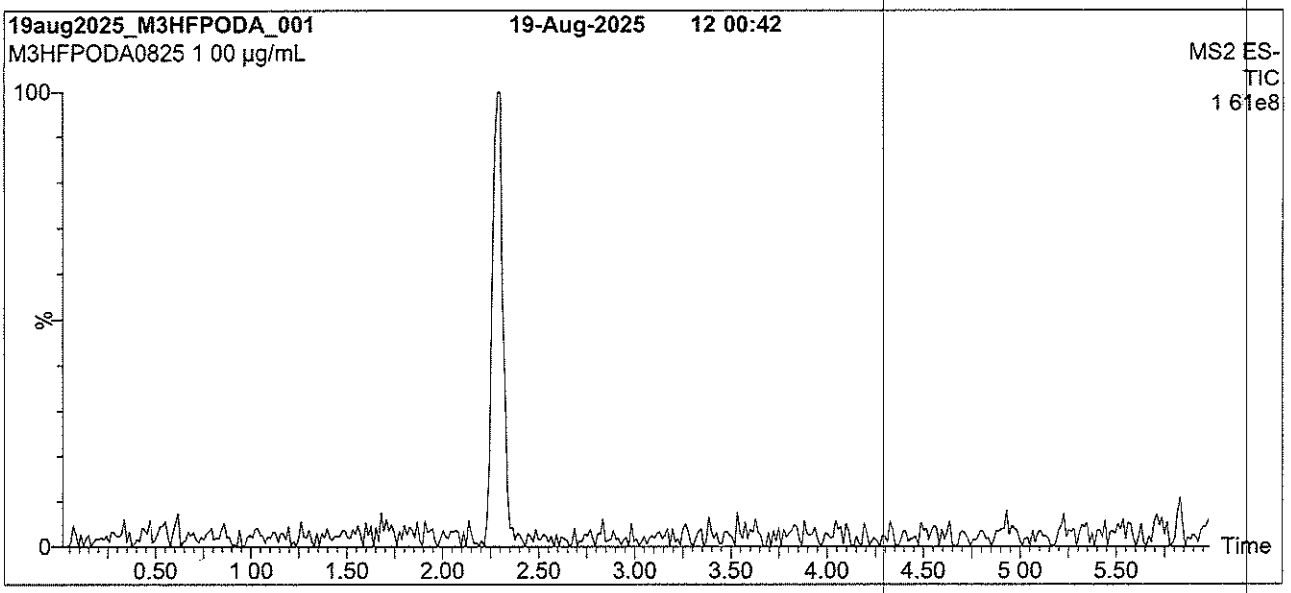
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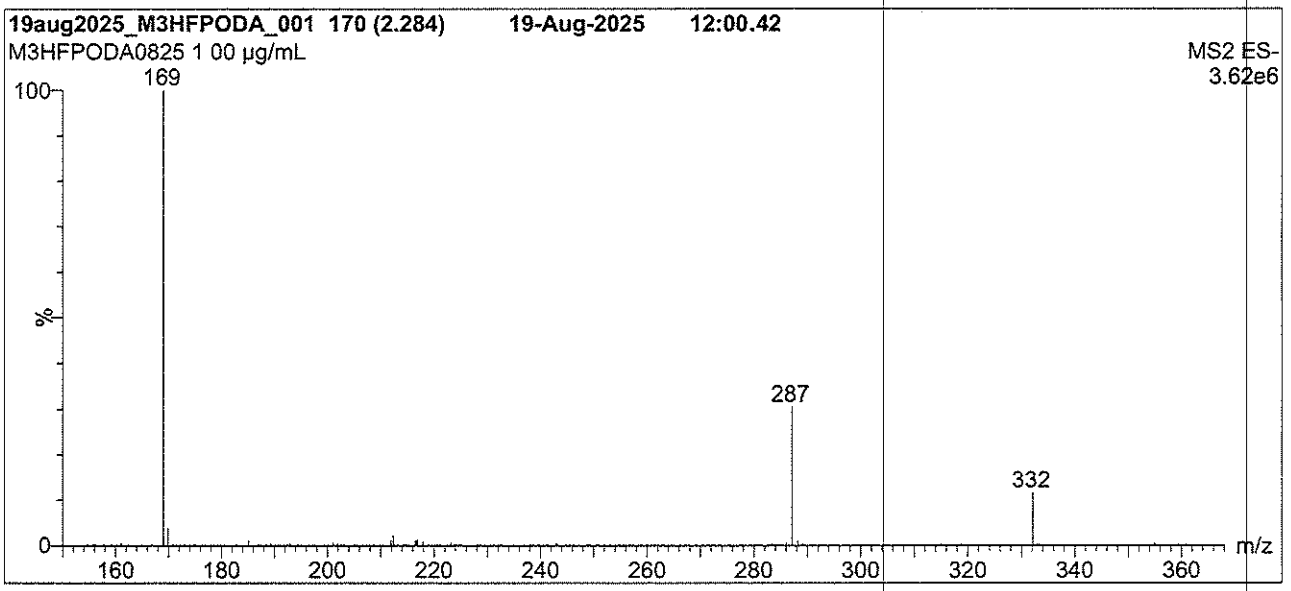
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

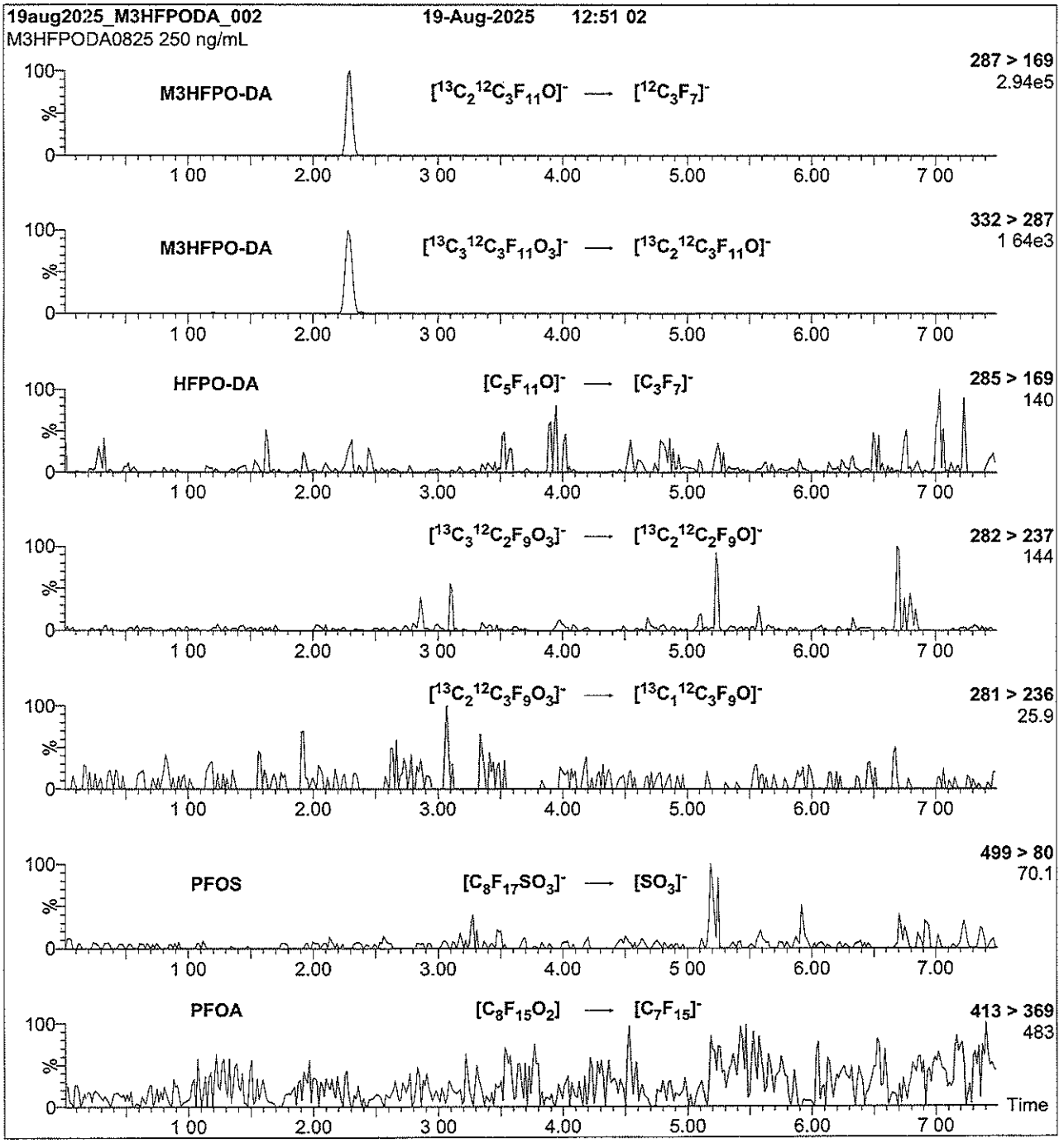
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 350
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) = 3.57e-3
Collision Energy (eV) = 8 (287 > 169)

Reagent

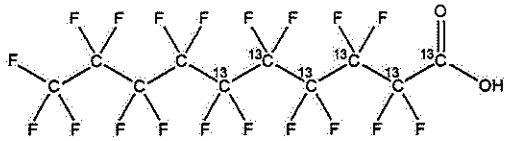
PFC_ST_05191

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ 5192, 5191, 5190, 5189

PRODUCT CODE.	M6PFDA	**LOT NUMBER.**	M6PFDA0925
COMPOUND.	Perfluoro-n-(1 2,3,4,5 6-$^{13}C_5$)decanoic acid		
STRUCTURE.		**CAS #:**	2328024-56-0



410-8660/44

MOLECULAR FORMULA:	$^{13}C_6{}^{12}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520.04
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	09/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/23/2030		
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-(1,2,3,4,5-$^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date·** 09/24/2025 (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:

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, SFC/UV/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, and/or SFC/UV/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 $..x_n$ on which it depends is.

$$u_c(y(x_1\ x_2\ ..x_n)) = \sqrt{\sum_{i=1}^{n} u(y\ x)}$$

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%) has been assigned to this product.

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:

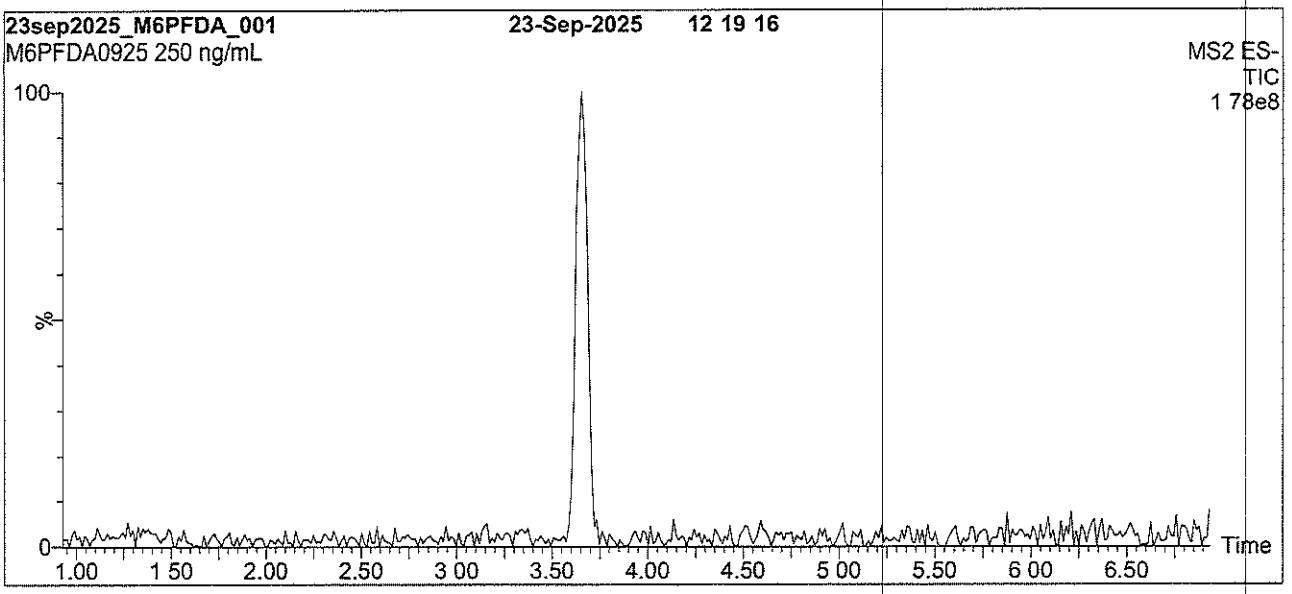
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

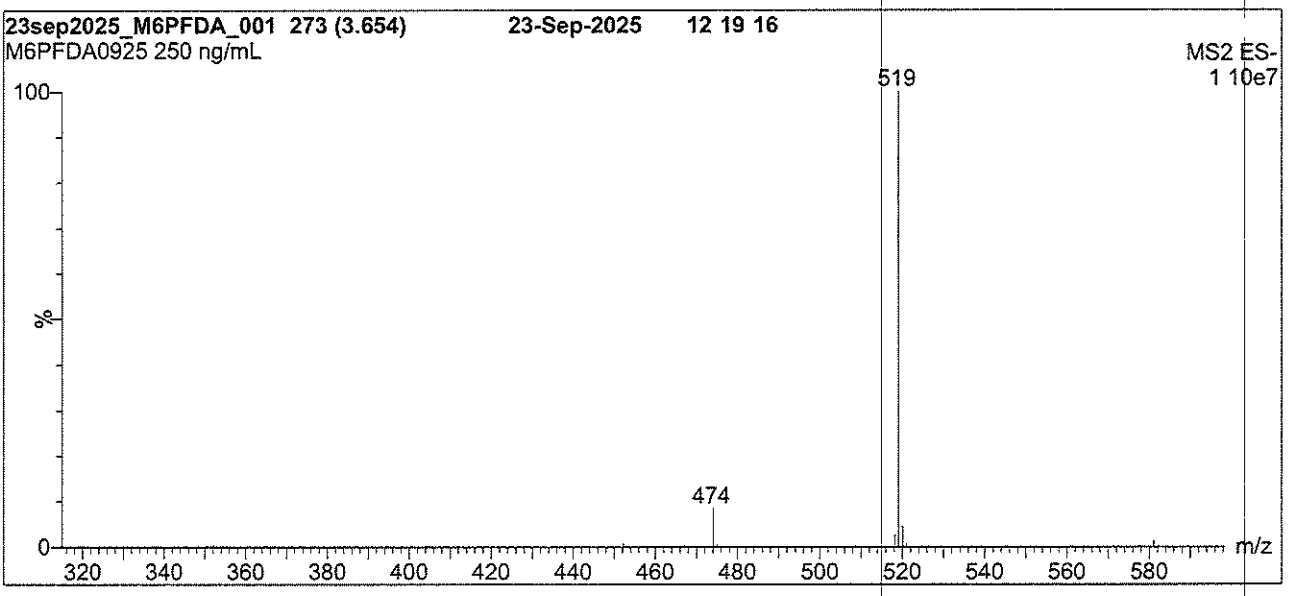
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M6PFDA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

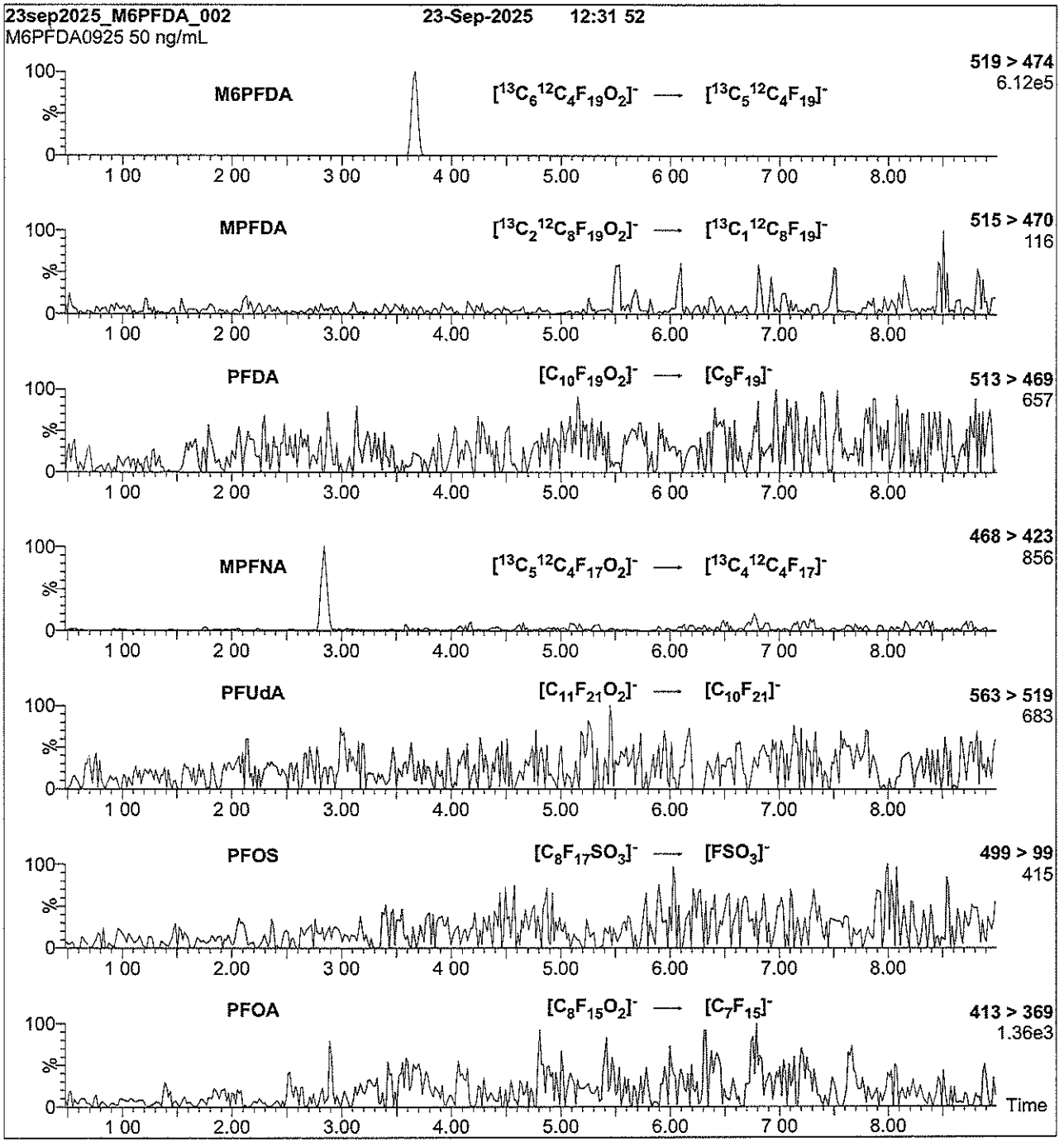
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 3.71e-3
Collision Energy (eV) = 10 (519 > 474)

Reagent

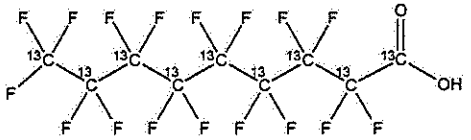
PFC_ST_05195

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ 5193, 5194, 5195, 5196

PRODUCT CODE.	M9PFNA	**LOT NUMBER.**	M9PFNA0625
COMPOUND.	Perfluoro-n-($^{13}C_9$)nonanoic acid		
STRUCTURE.		**CAS #:**	2283397-80-6



410-8660782

MOLECULAR FORMULA:	$^{13}C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	473.01
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/04/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/04/2030		
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 ~1 0% of perfluoro-n-($^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By· _____ **Date** 07/15/2025 (mm/dd/yyyy)
B.G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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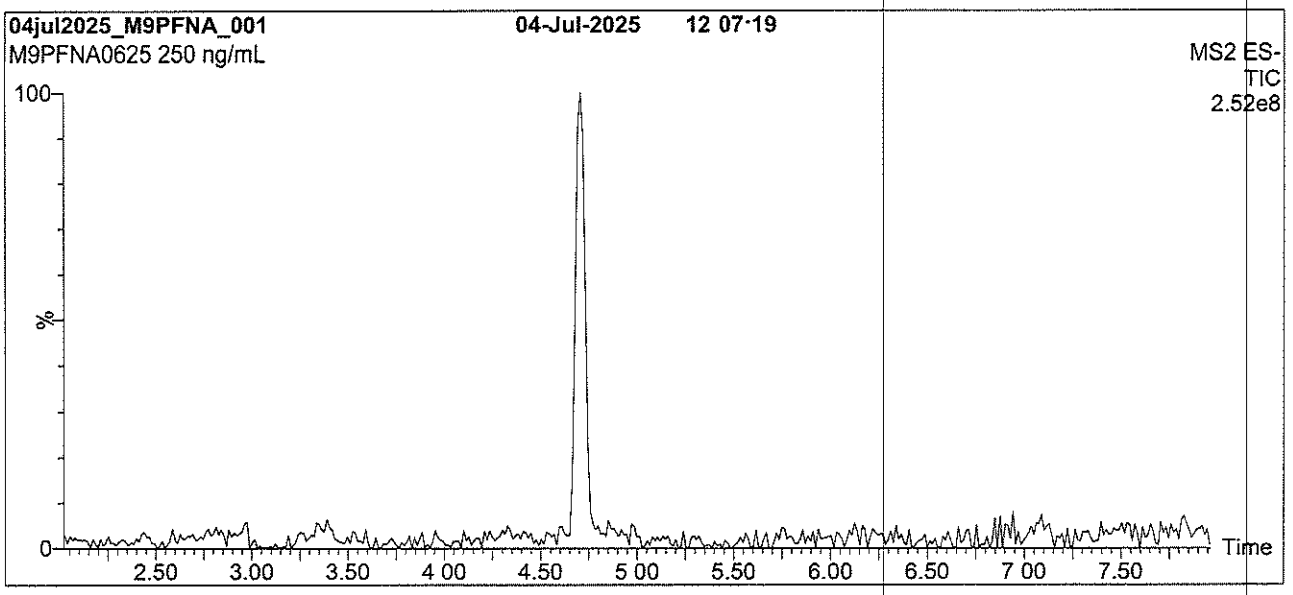
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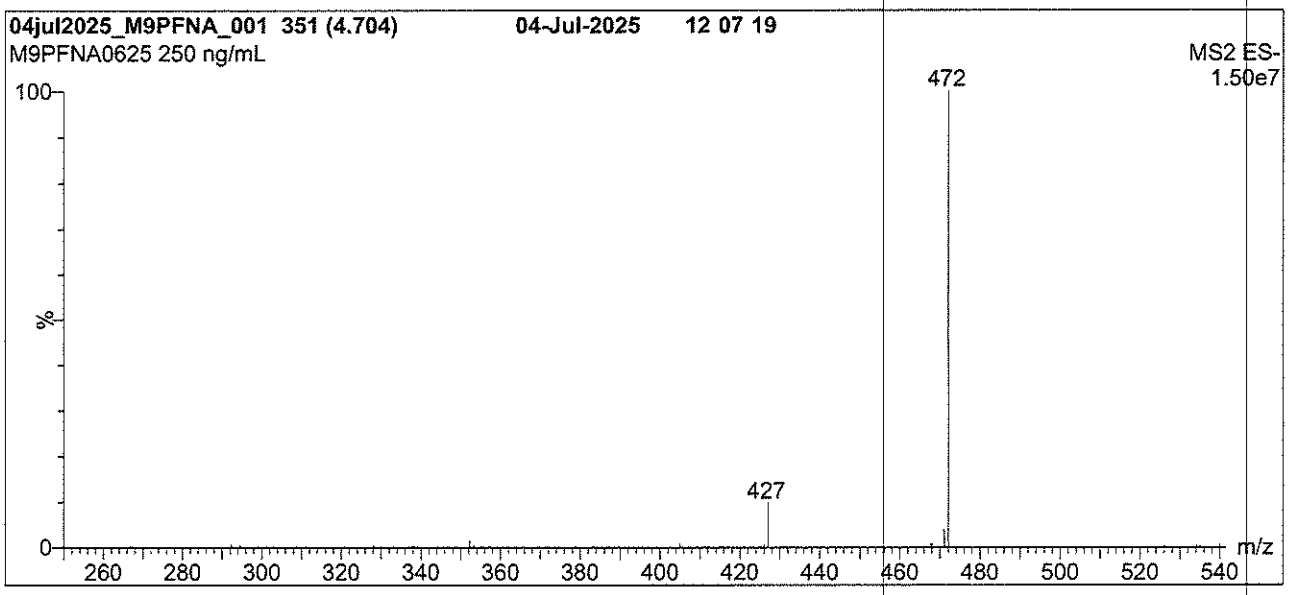
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

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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: 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

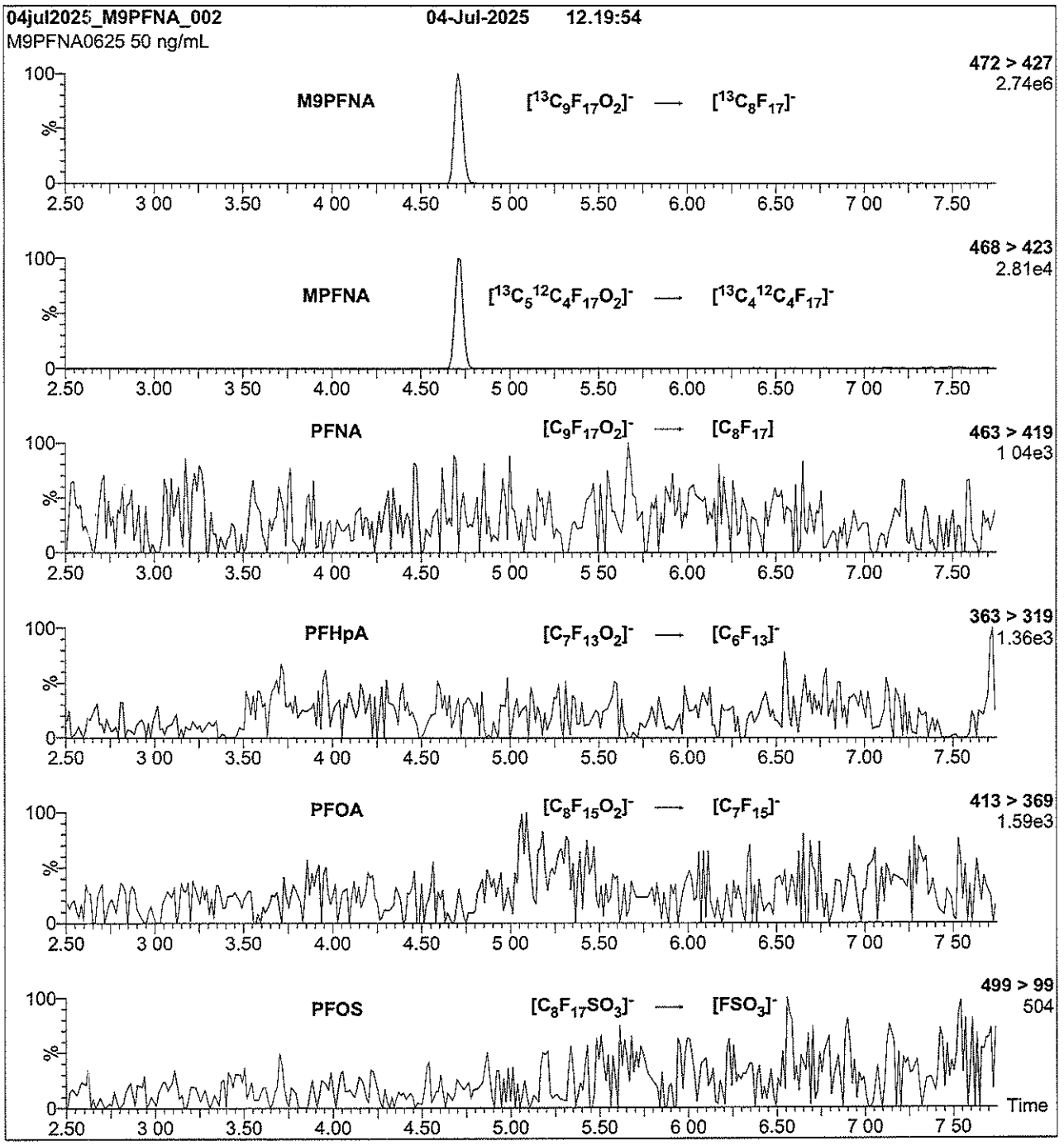
Flow: 300 µL/min

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. **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) = 4.09e-3
Collision Energy (eV) = 10

Reagent

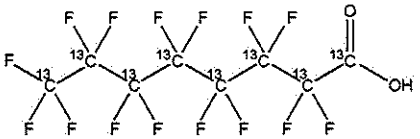
PFC_ST_05200

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST-GS197, 5198, 5199, 5200

PRODUCT CODE.	M8PFOA	**LOT NUMBER.**	M8PFOA0625
COMPOUND:	Perfluoro-n-($^{13}C_8$)octanoic acid		
STRUCTURE.		**CAS #:**	1350614-84-4



410-866078/

MOLECULAR FORMULA.	$^{13}C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	422 01
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/30/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/30/2030		
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 ~1 1% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 07/08/2025 (mm/dd/yyyy)
B G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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where x is expressed as a relative standard uncertainty of the individual parameter

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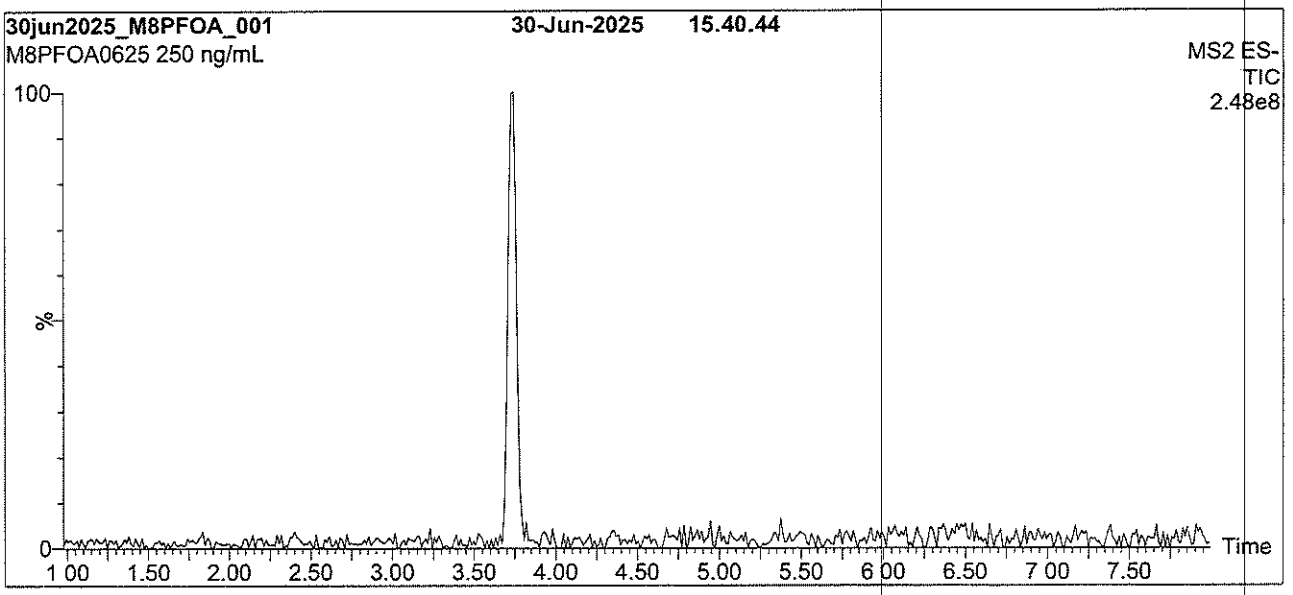
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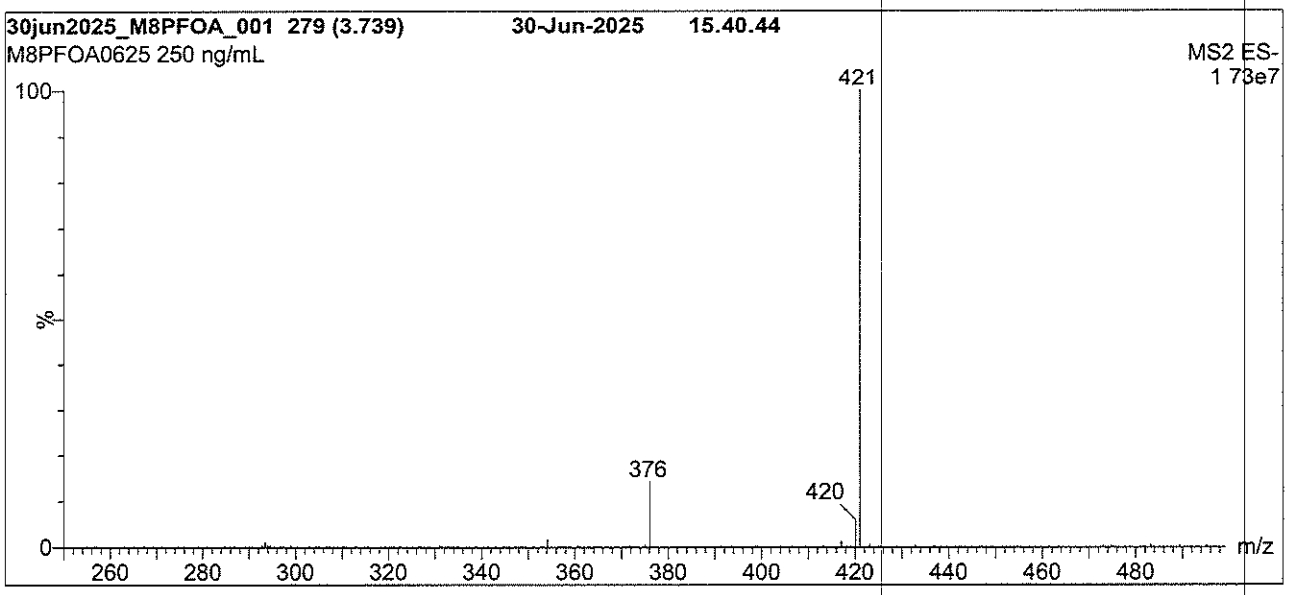
CALA Testing Accreditation No. A1226

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Figure 1: **M8PFOA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

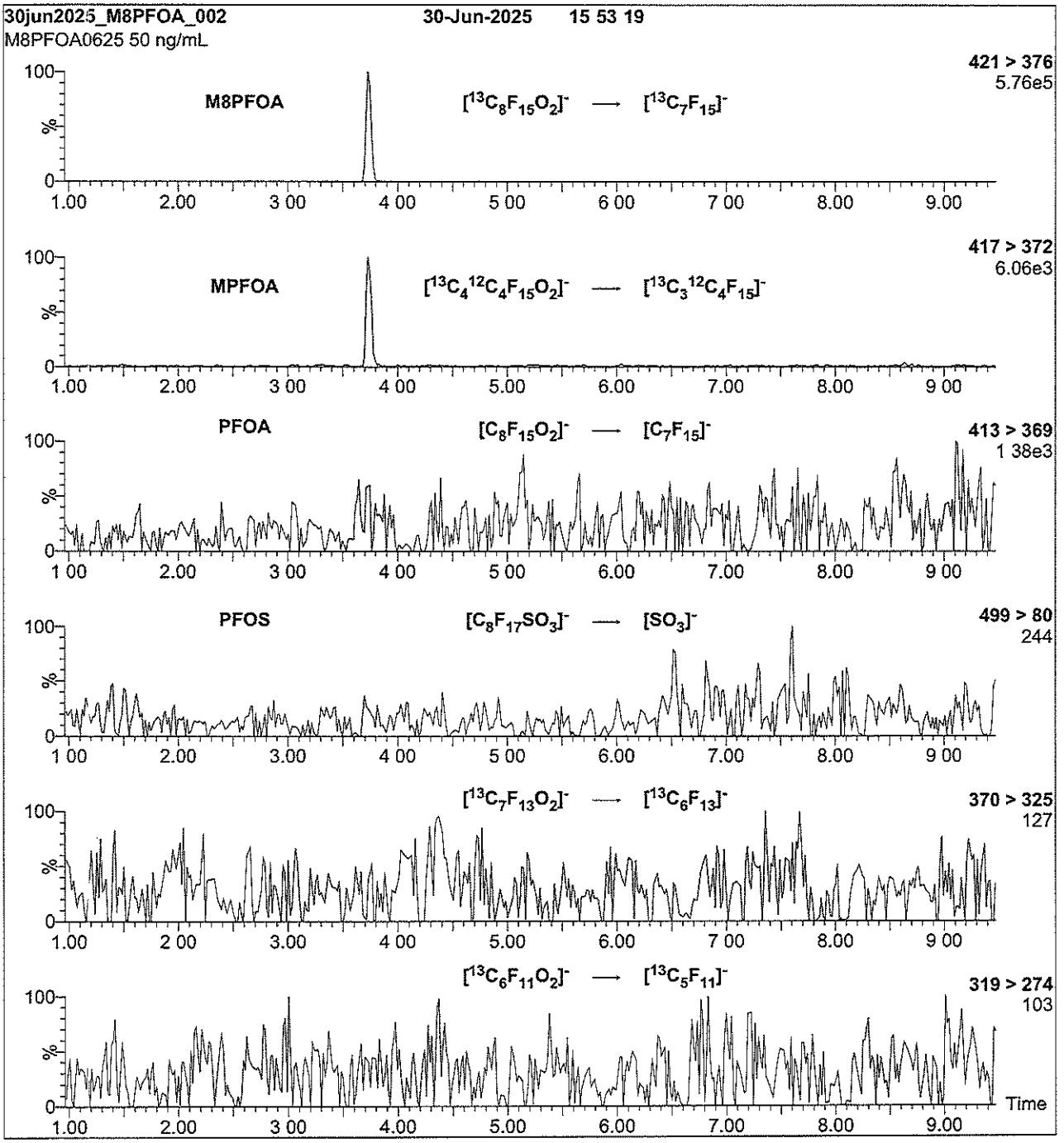
Flow: 300 µL/min

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. **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) = 3.57e-3
Collision Energy (eV) = 8

Reagent

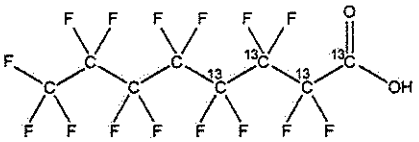
PFC_ST_05201

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_S20!

PRODUCT CODE.	MPFOA	**LOT NUMBER.**	MPFOA0525
COMPOUND.	Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid		
STRUCTURE.		**CAS #:**	960315-48-4



410-8660862

MOLECULAR FORMULA.	$^{13}C_4{}^{12}C_4HF_{15}O_2$	**MOLECULAR WEIGHT:**	418.04
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

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ADDITIONAL INFORMATION.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

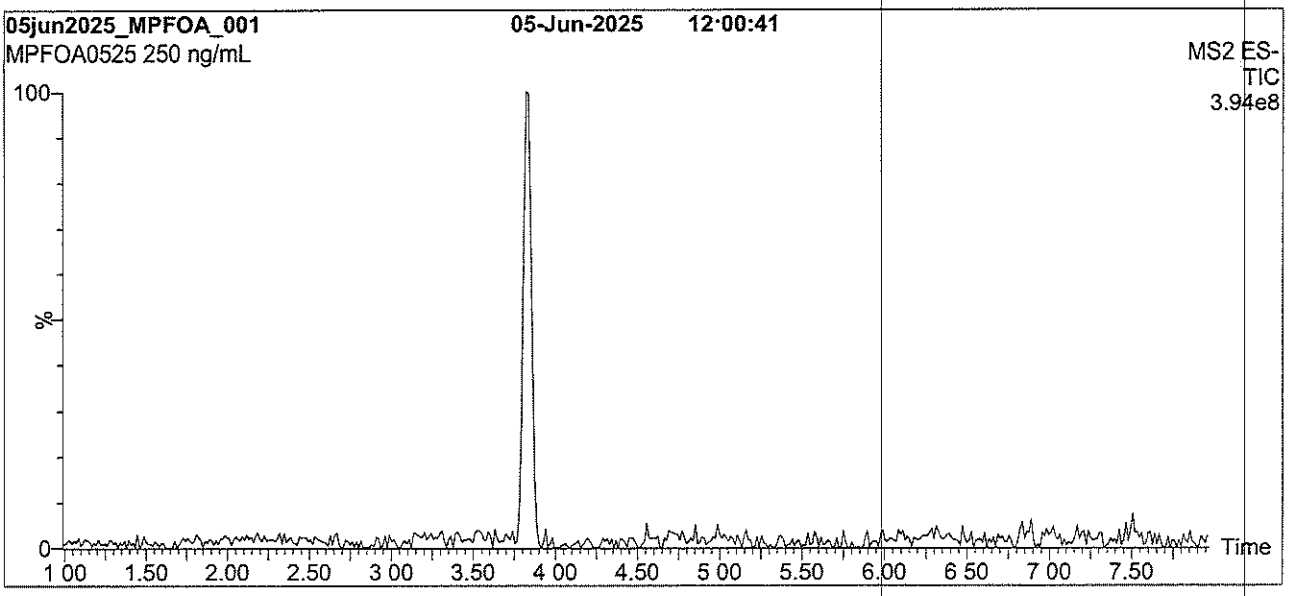
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 7025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

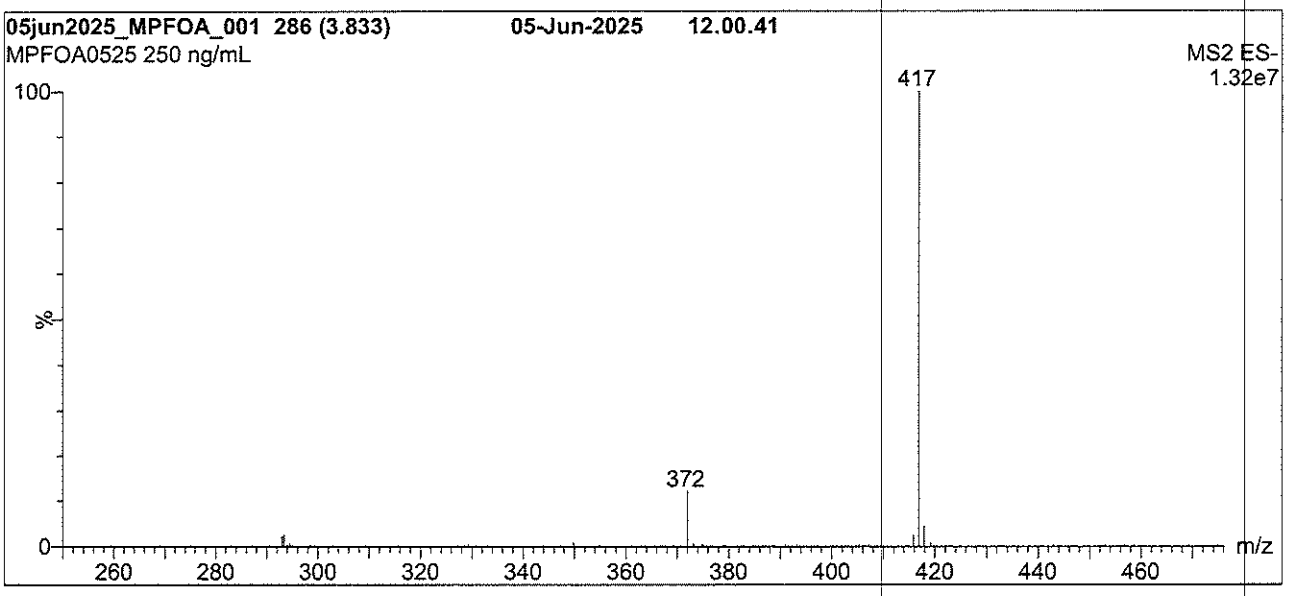
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 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. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

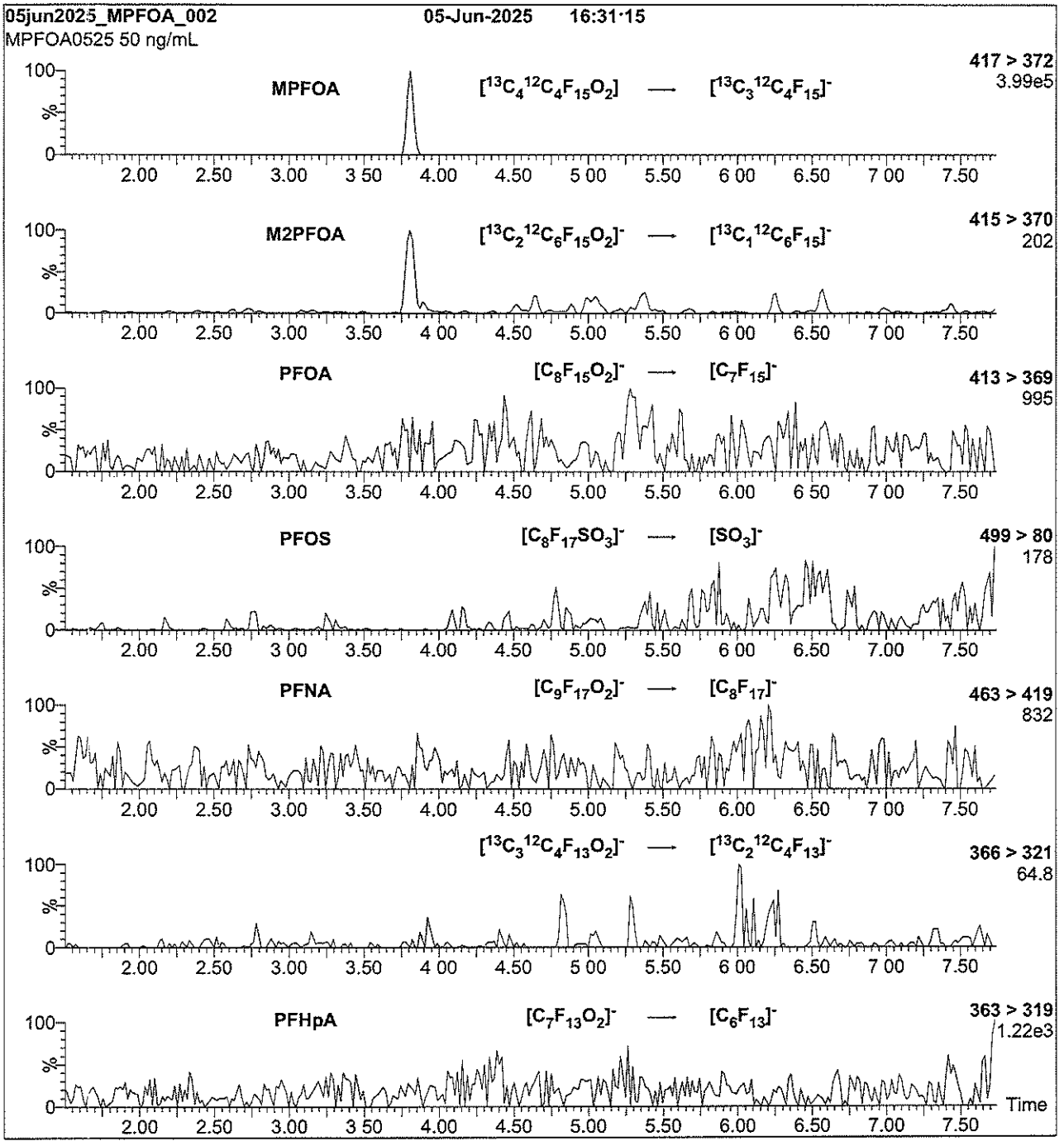
Flow: 300 µL/min

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. **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) = 3.76e-3
Collision Energy (eV) = 8

Reagent

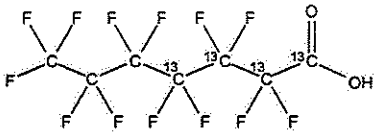
PFC_ST_05207

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST- 5207, 5206, 5205, 5204

PRODUCT CODE.	M4PFHpA	**LOT NUMBER.**	M4PFHpA0725
COMPOUND.	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		
STRUCTURE.		**CAS #:**	2328024-55-9



410-8660944

MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_3HF_{13}O_2$	**MOLECULAR WEIGHT:**	368.03
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/16/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/16/2030		
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** 07/30/2025 (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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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 x_2, x_n on which it depends is.

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

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%) has been assigned to this product.

TRACEABILITY:

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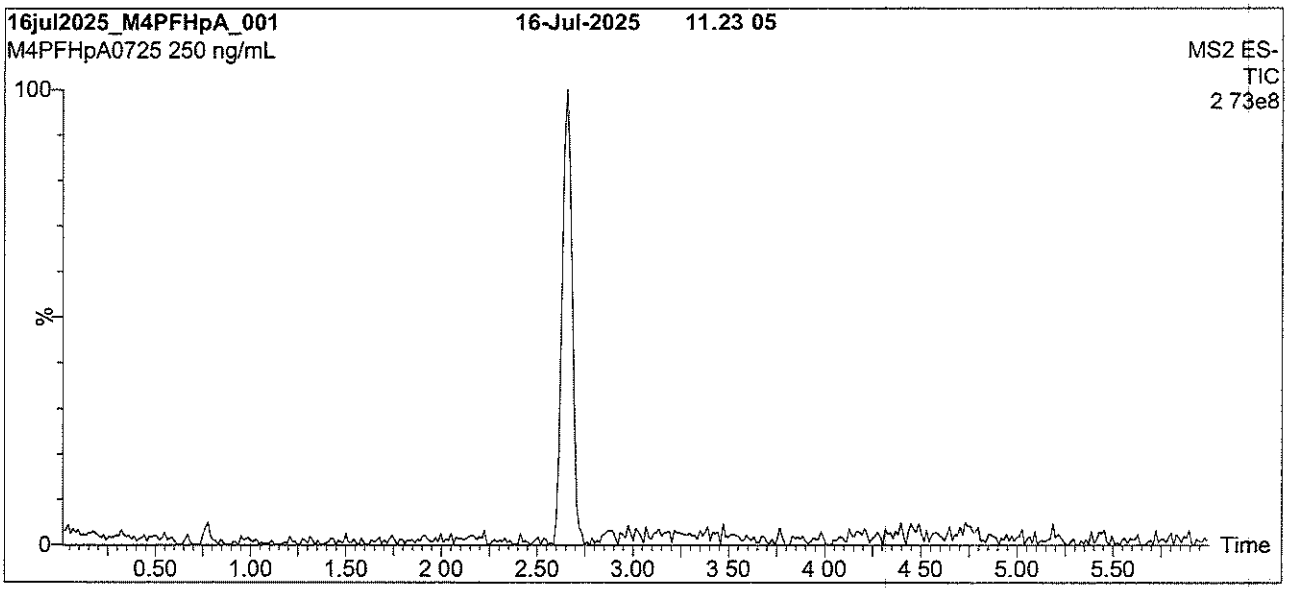
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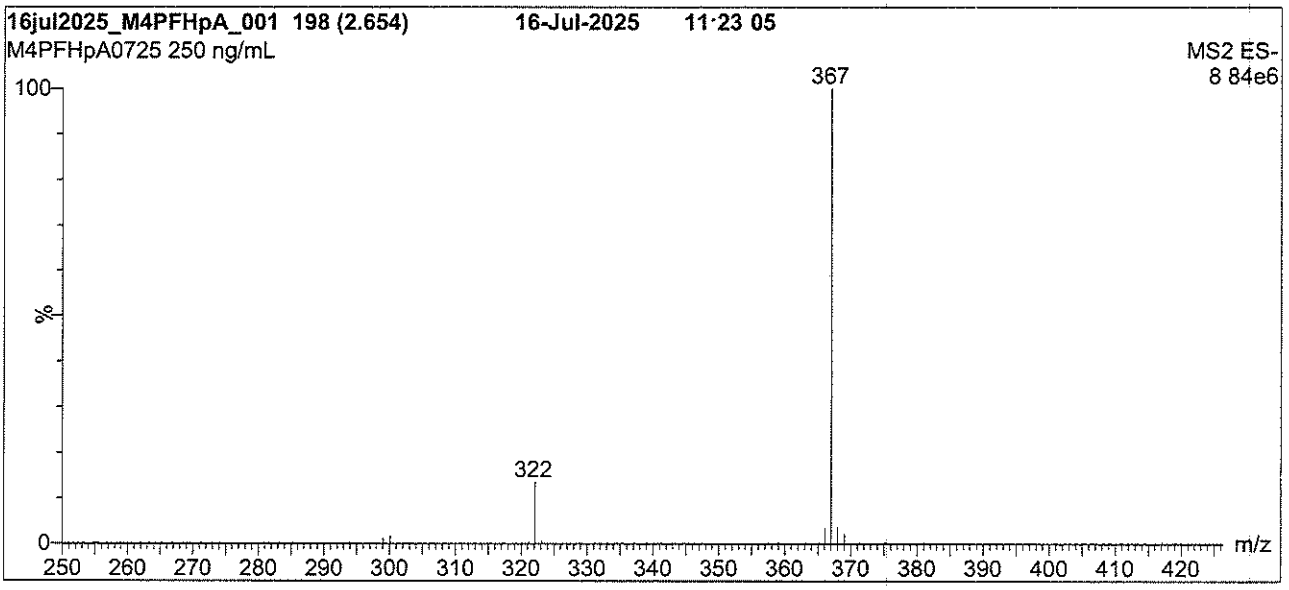
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

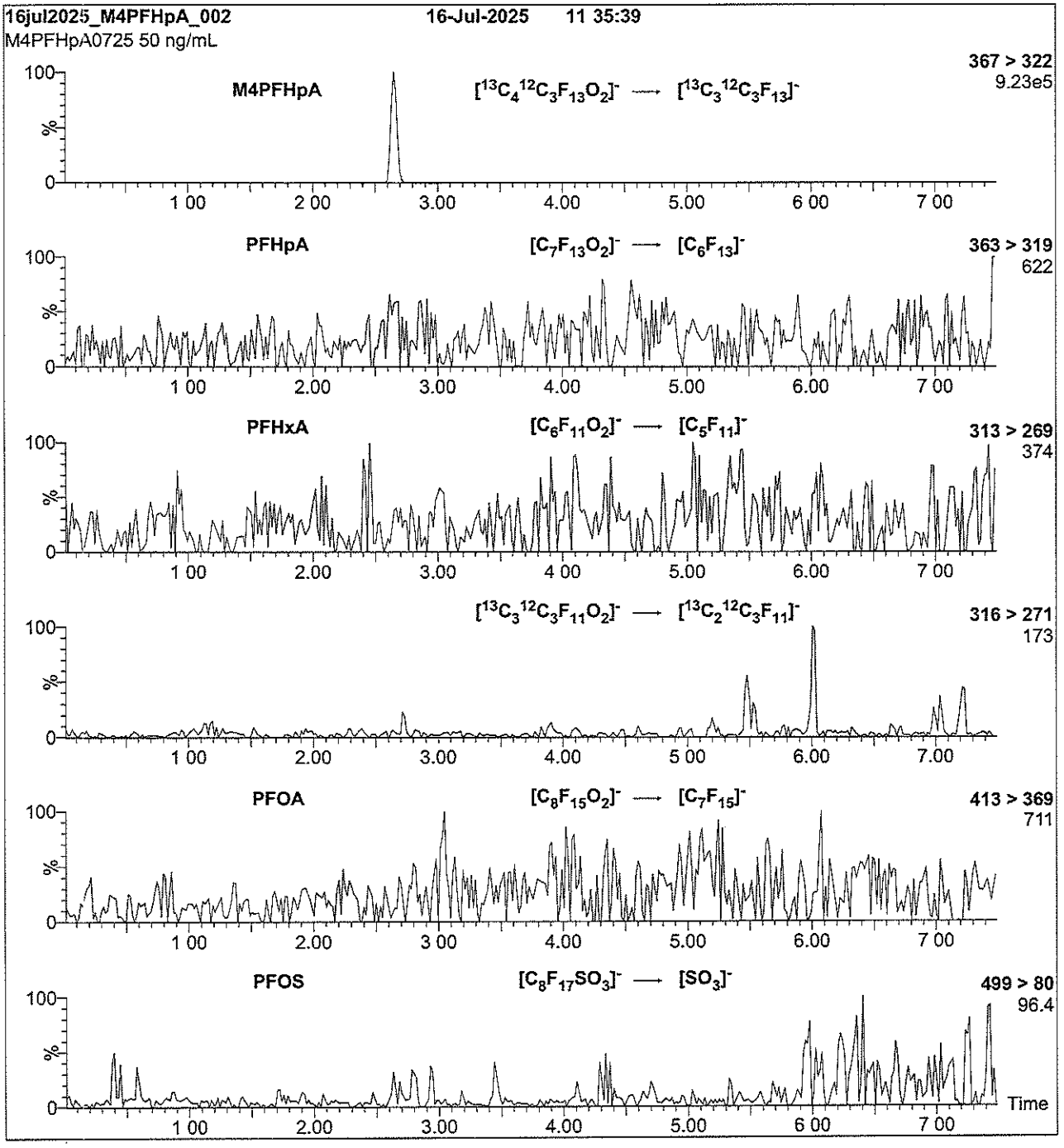
Flow: 300 µL/min

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. **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) = 3.49e-3
Collision Energy (eV) = 8

Reagent

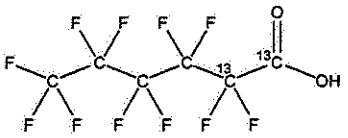
PFC_ST_05211

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST – S211, S212, S213

PRODUCT CODE.	MPFHxA	**LOT NUMBER.**	MPFHxA0825
COMPOUND.	Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		
STRUCTURE.		**CAS #:**	960315-47-3



410-86609b8

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
LAST TESTED. (mm/dd/yyyy)	08/13/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/13/2030		
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** 08/14/2025 (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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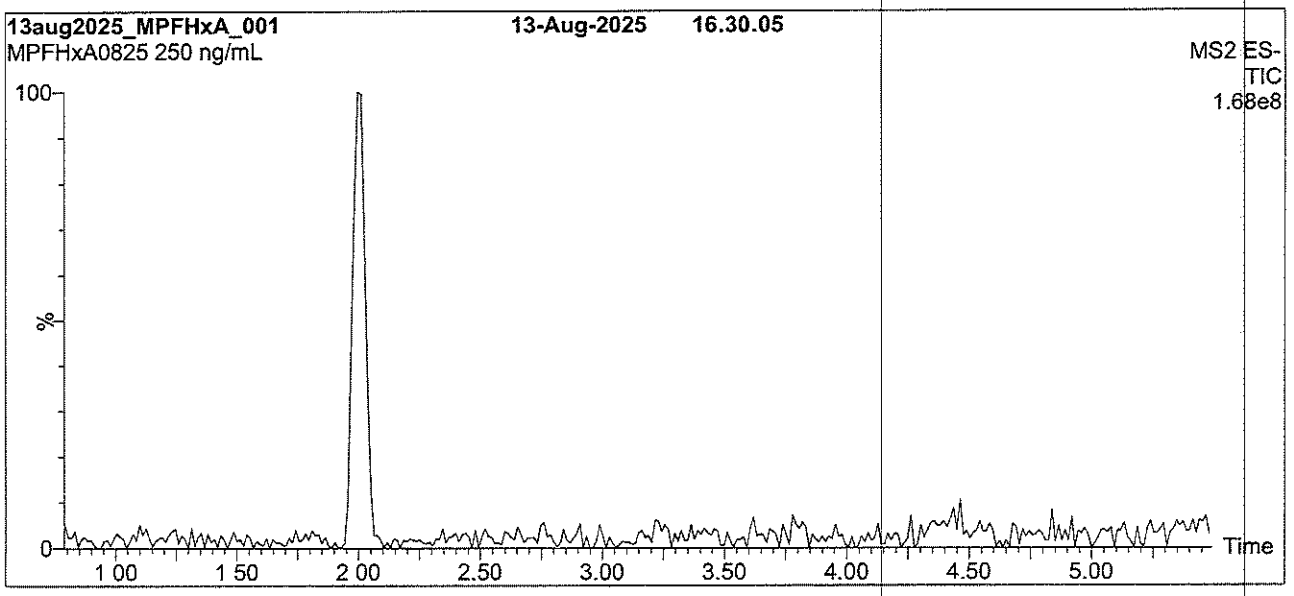
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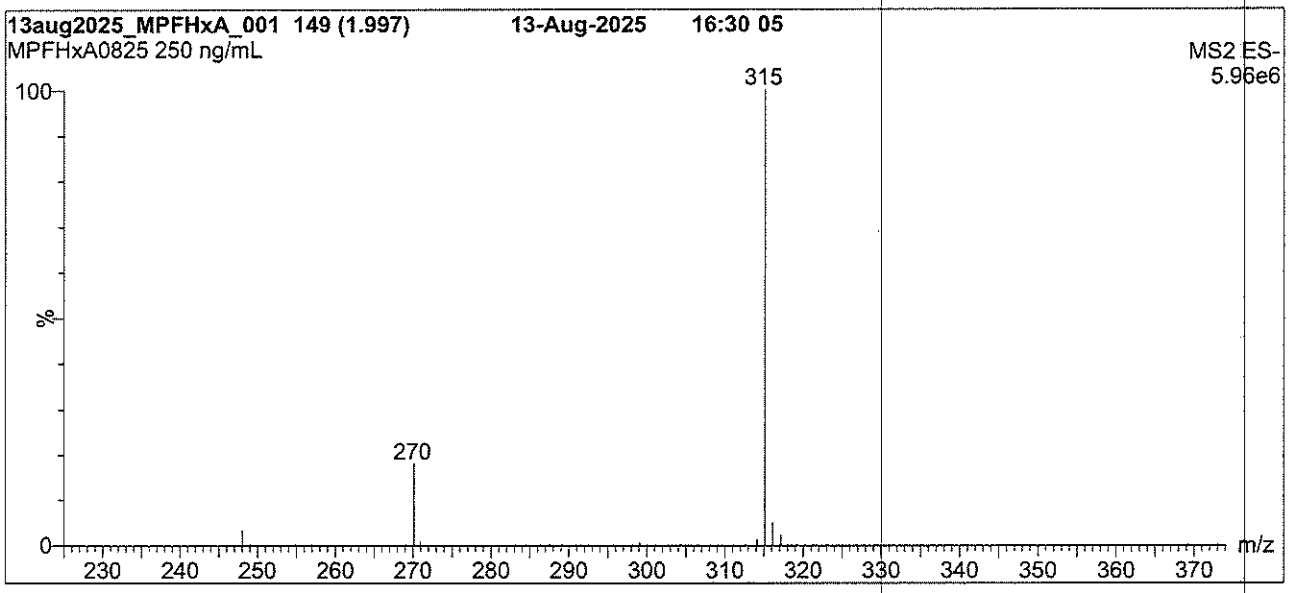
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **MPFHxA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

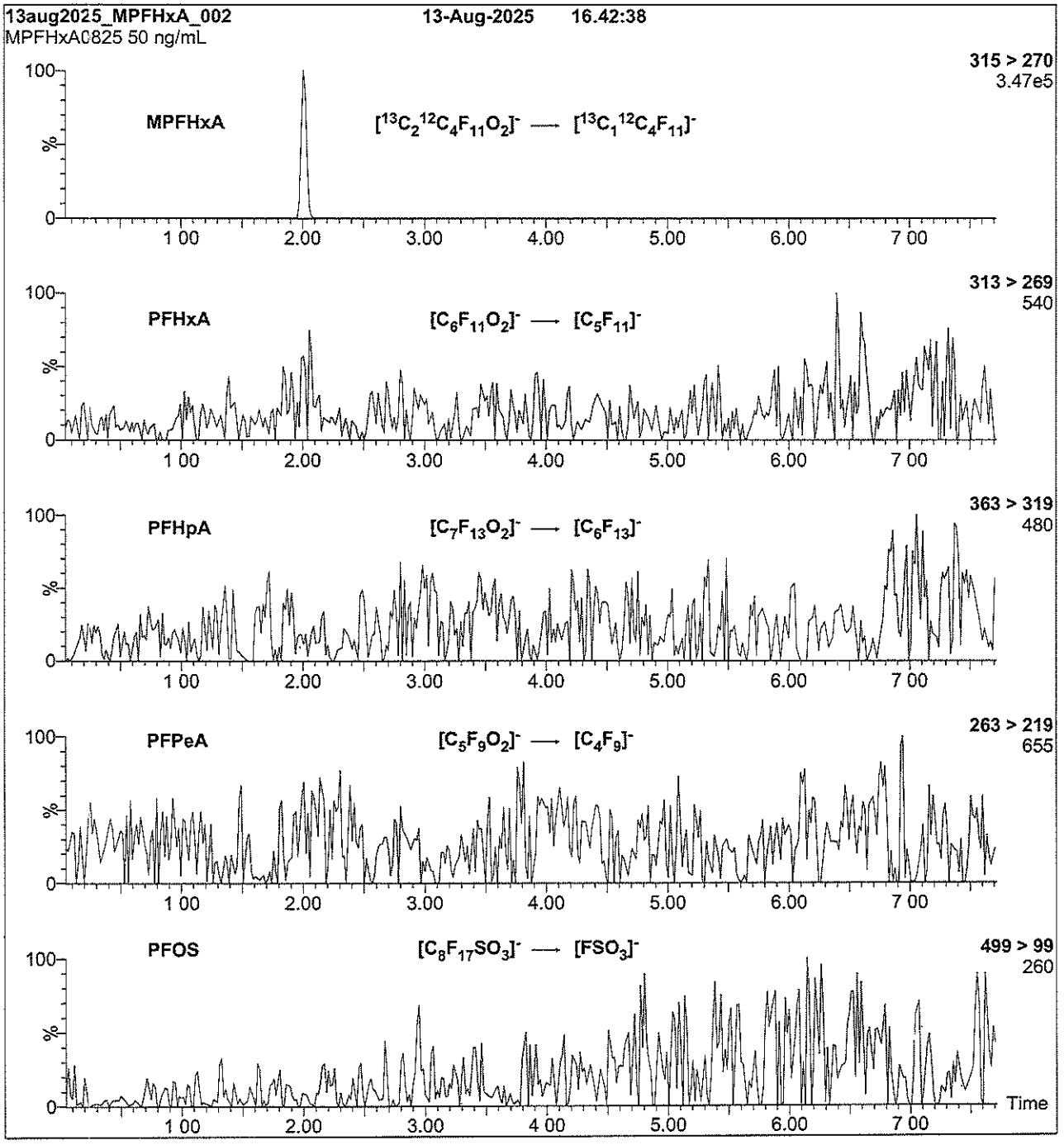
Flow· 300 µL/min

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. **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) = 4.67e-3
Collision Energy (eV) = 8 (315 > 270)

Reagent

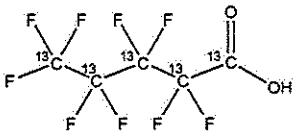
PFC_ST_05214

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ 5216, 5215, 5214

PRODUCT CODE.	M5PFPeA	**LOT NUMBER.**	M5PFPeA0825
COMPOUND.	Perfluoro-n-($^{13}C_5$)pentanoic acid		
STRUCTURE.		**CAS #:**	2283397-79-3



410-86609 74

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
LAST TESTED: (mm/dd/yyyy)	08/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/28/2030		
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** 08/29/2025 (mm/dd/yyyy)
B.G. Chittim General Manager

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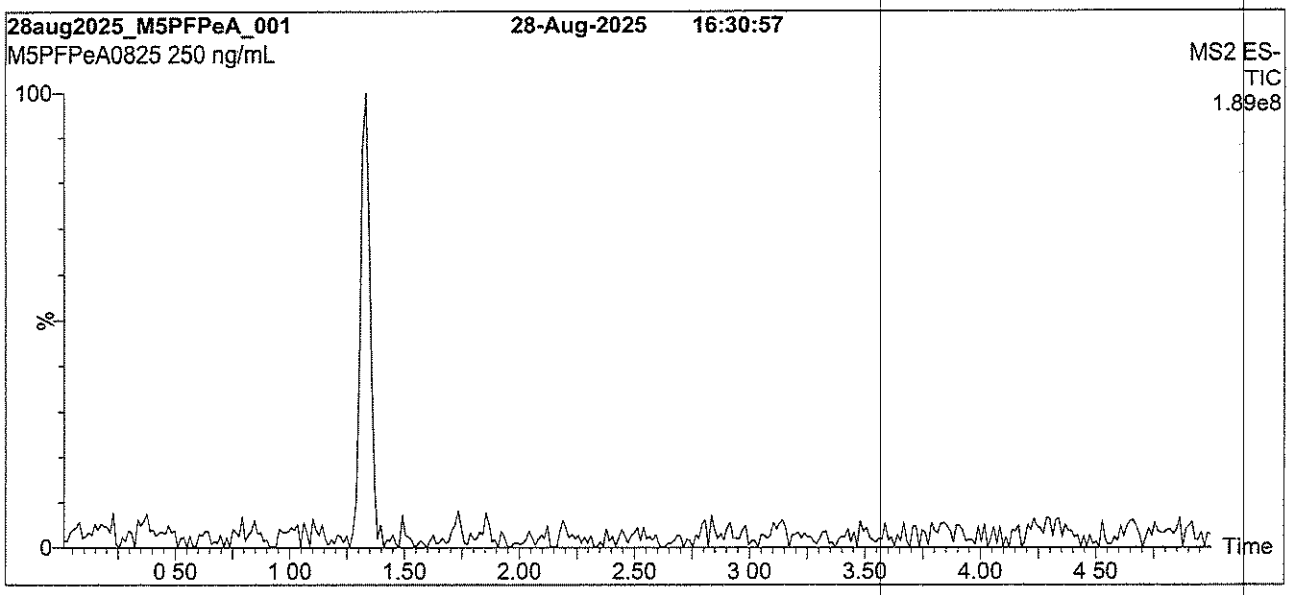
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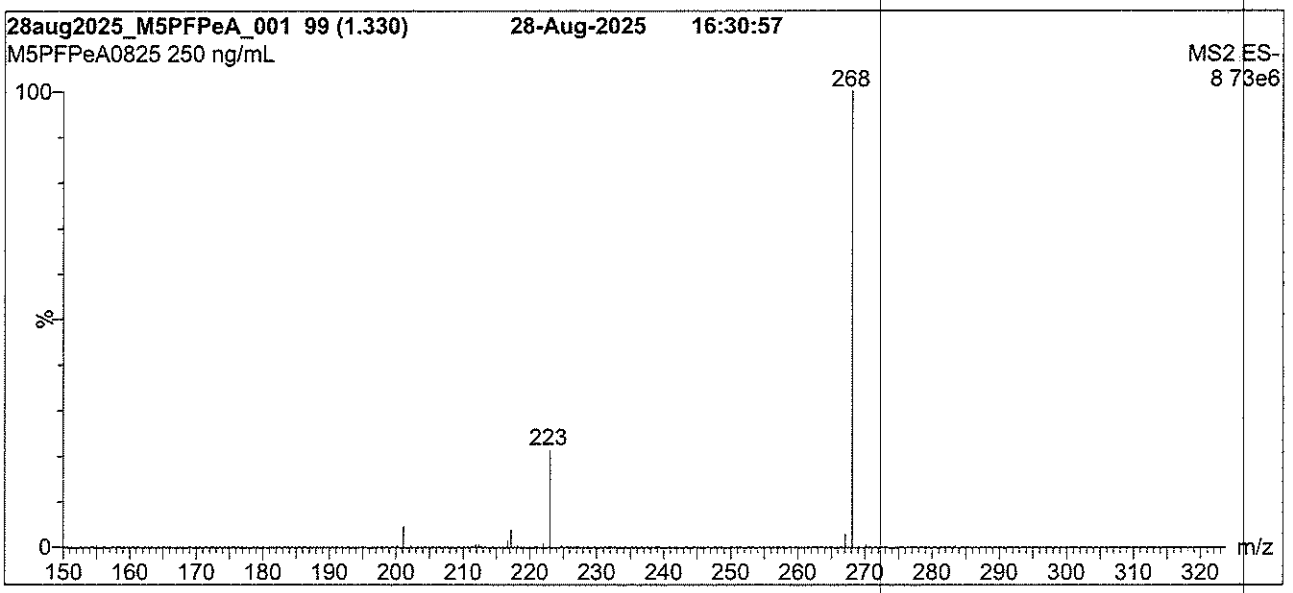
CALA Testing Accreditation No. A1226

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Figure 1: **M5PFPeA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

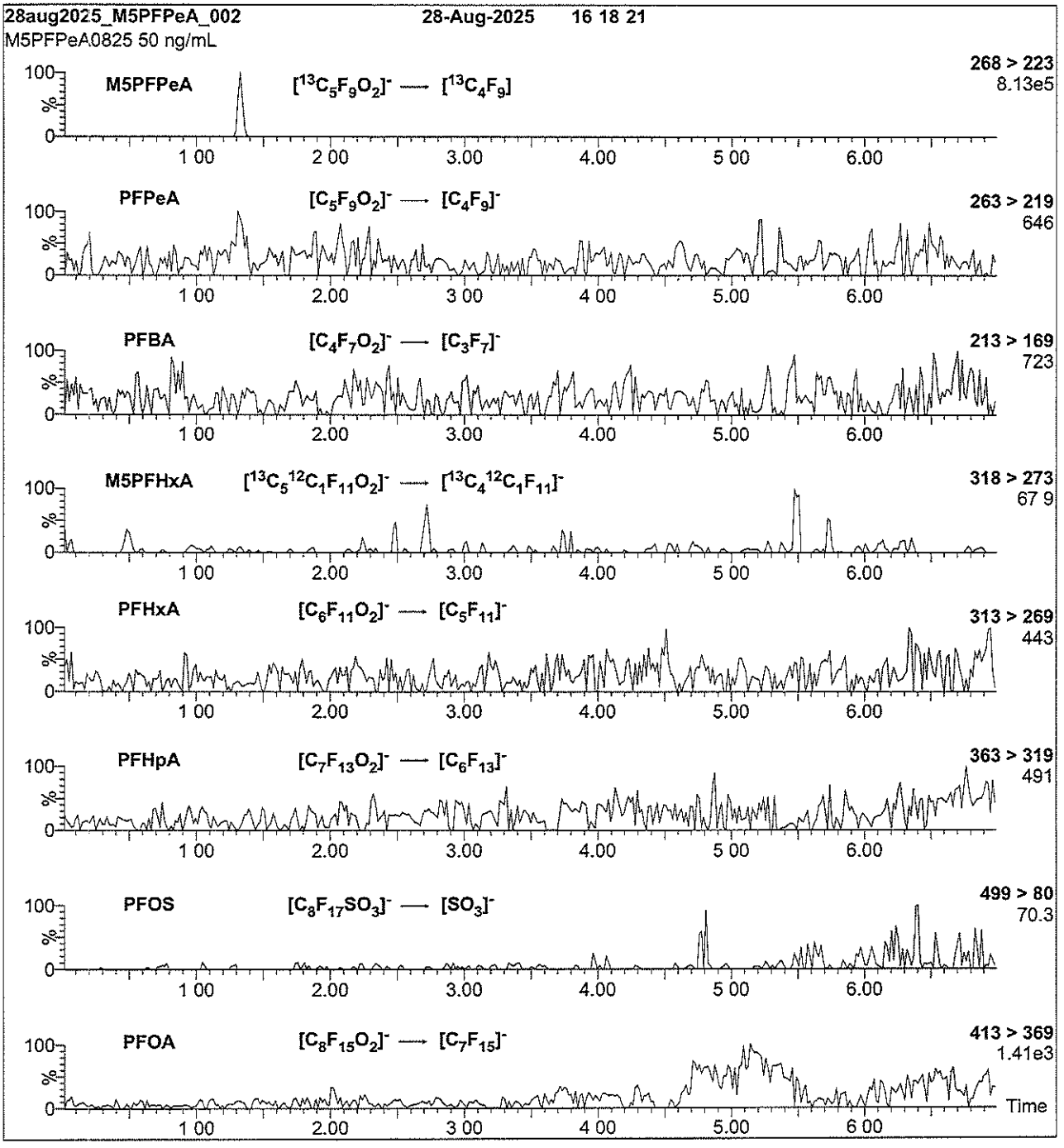
Flow: 300 µL/min

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

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) = 4.64e-3
Collision Energy (eV) = 8 (268 > 223)

Reagent

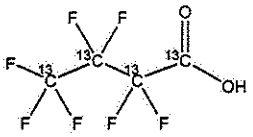
PFC_ST_05217

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST- 5219, 5218, 5217

PRODUCT CODE.	MPFBA	**LOT NUMBER.**	MPFBA0725
COMPOUND.	Perfluoro-n-($^{13}C_4$)butanoic acid		
STRUCTURE.		**CAS #:**	1017281-29-6



410-8660997

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
LAST TESTED: (mm/dd/yyyy)	07/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/28/2030		
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** 07/28/2025 (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(s) 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, SFC/UV/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 and/or SFC/UV/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, x_n on which it depends is:

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

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%) has been assigned to this product.

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:

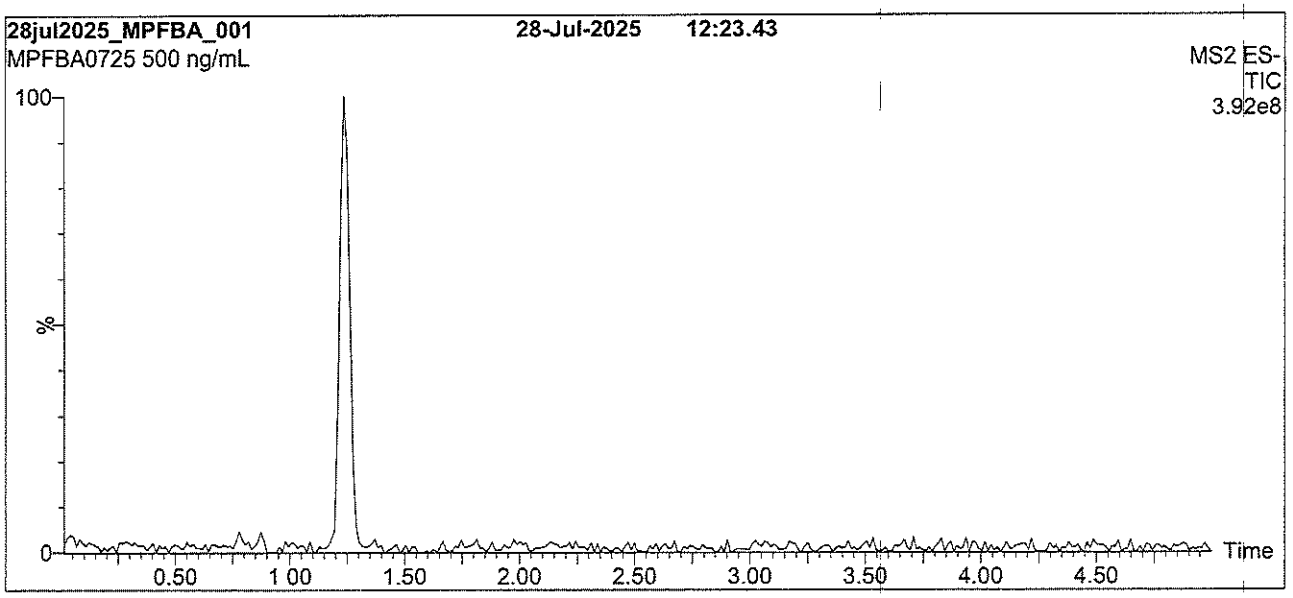
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB, AR-1523).

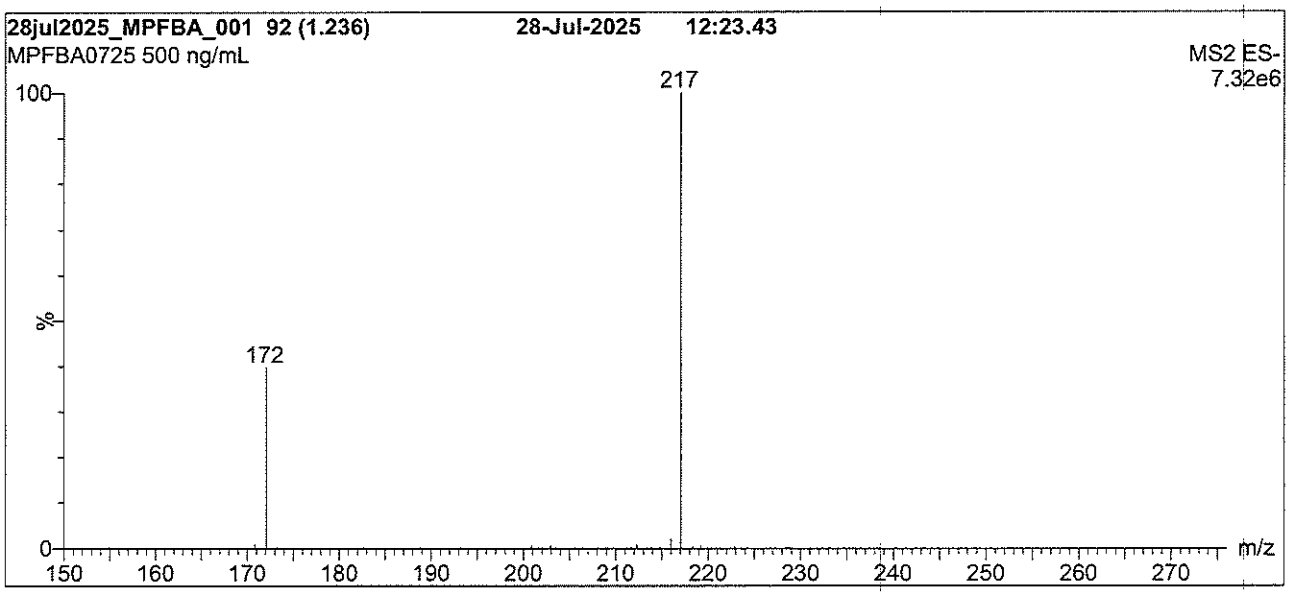
CALA Testing Accreditation No. A1226

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. **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)
Hold for 1 min, then ramp to 80% organic over 8 min and hold for 2 min before returning to initial conditions in 0.5 min
Time: 12 min

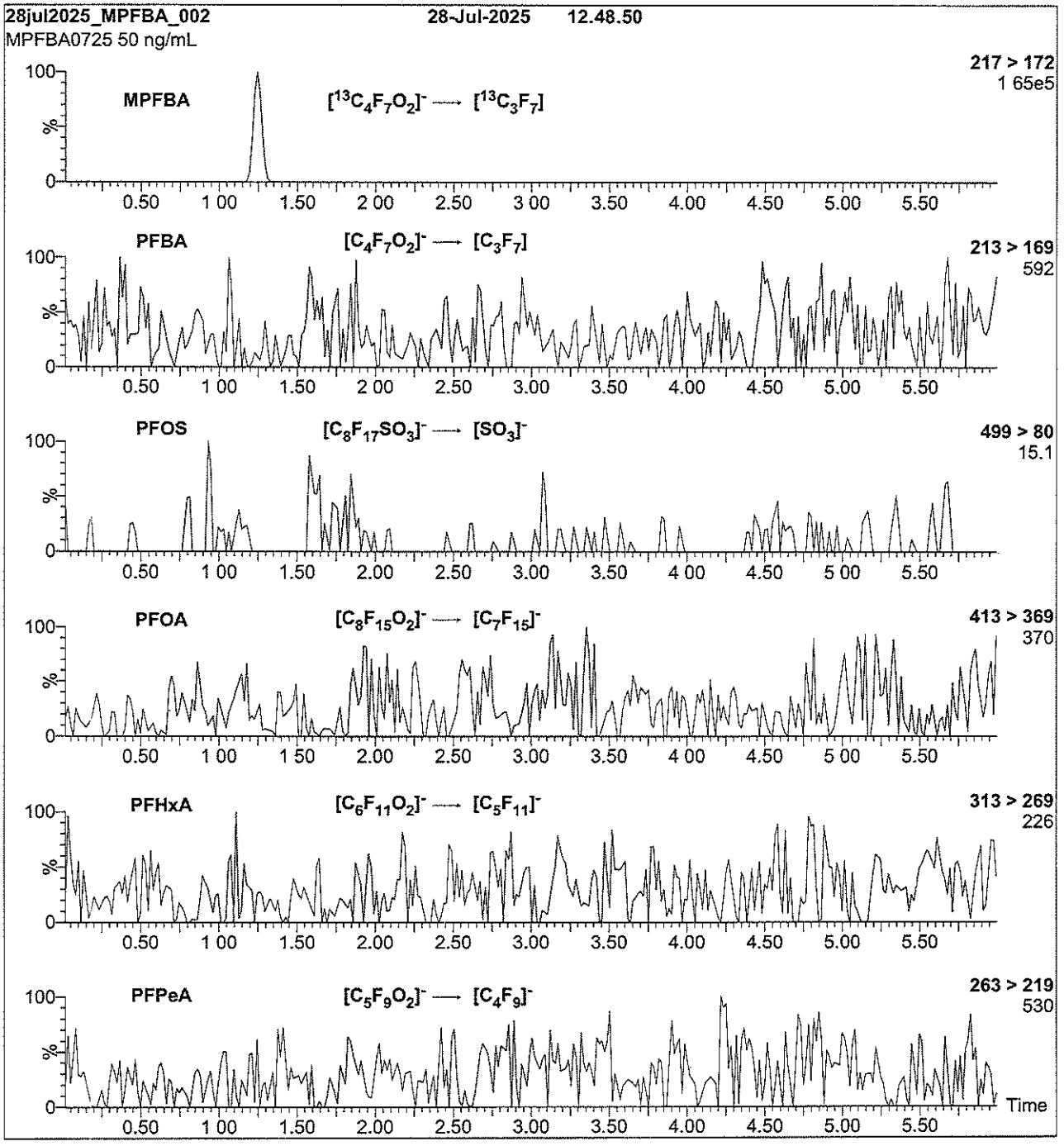
Flow 300 µL/min

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) = 3.71e-3
Collision Energy (eV) = 8

Reagent

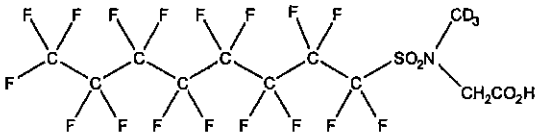
PFC_ST_05236

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d3-N-MeFOSAA **LOT NUMBER.** d3NMeFOSAA0925
COMPOUND. N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE. **CAS #.** 1400690-70-1



410-87 10489

MOLECULAR FORMULA.	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% ^2H (D)
LAST TESTED. (mm/dd/yyyy)	09/08/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/08/2030		
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
- Contains ~0 2% of a branched isomer of d3-N-MeFOSAA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date** 10/08/2025 (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.

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, SFC/UV/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 and/or SFC/UV/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, x_n on which it depends is

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

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%) has been assigned to this product.

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:

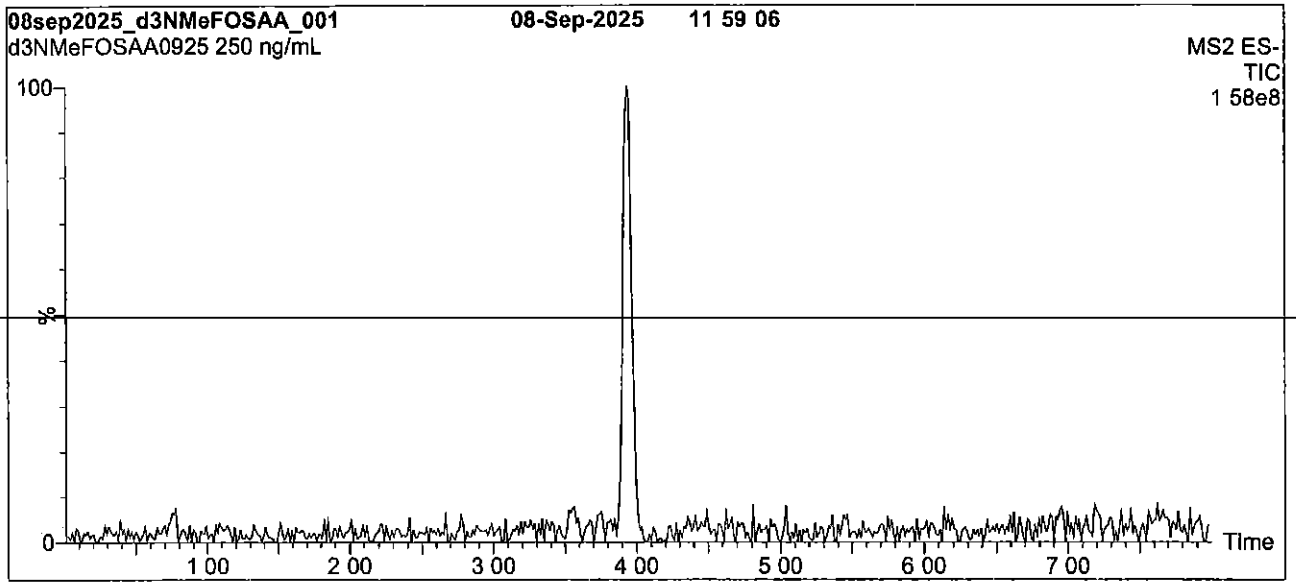
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

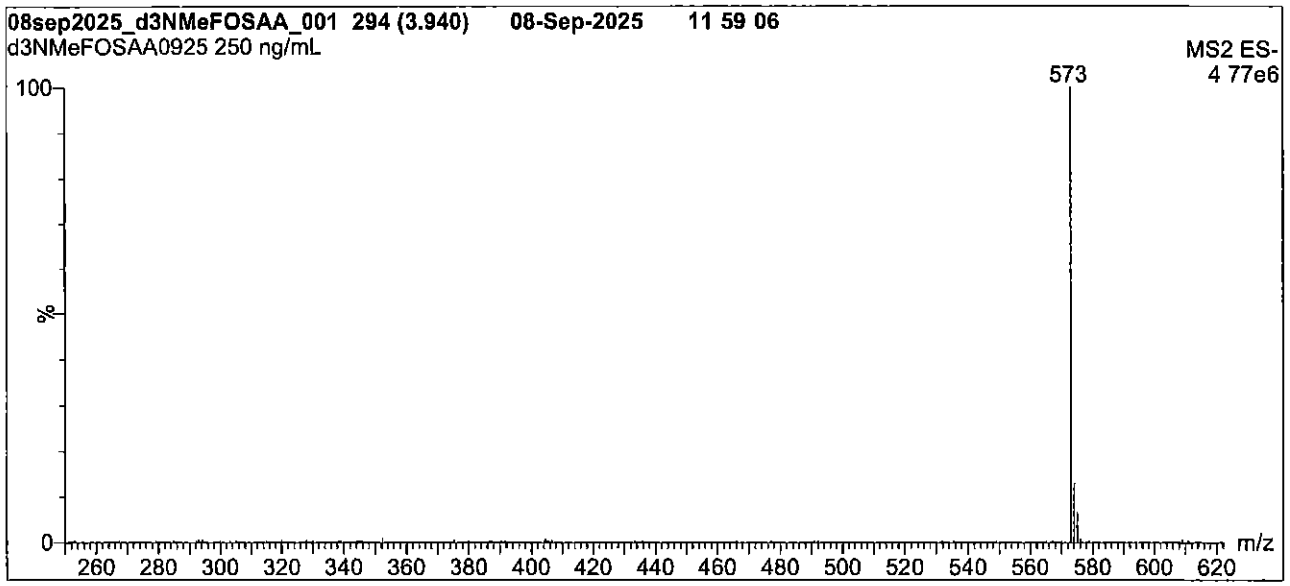
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d3-N-MeFOSAA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

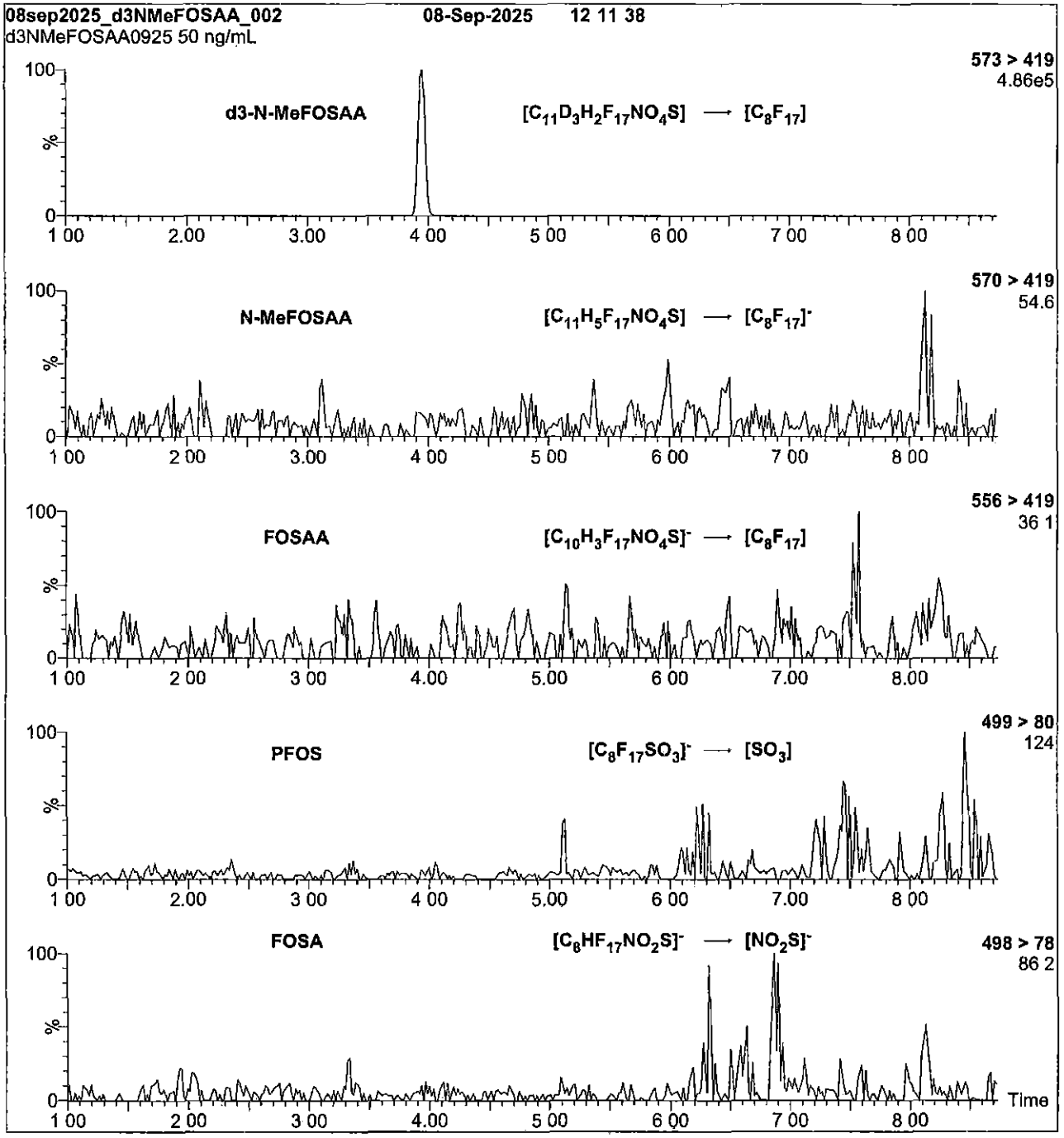
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2 00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 3.47e-3
Collision Energy (eV) = 18 (573 > 419)

Reagent

PFC_ST_05251

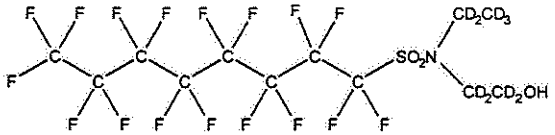
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	d9-N-EtFOSE-M	**LOT NUMBER.**	d9NEtFOSE0425M
COMPOUND.	2-(N-Ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol		

STRUCTURE.

CAS #: 1265205-96-6



410-8763249

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)	04/17/2025 (HRGC/LRMS) 04/09/2025 (LC/MS)		
EXPIRY DATE. (mm/dd/yyyy)	04/17/2030		
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
- Contains ~0 7% of branched 2-(N-ethyl-d5-perfluorooctanesulfonamido)ethan-d4-ol by ^{19}F NMR.

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Certified By _____ **Date** 04/23/2025 (mm/dd/yyyy)

B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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 and/or SFC/UV/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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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%) has been assigned to this product.

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:

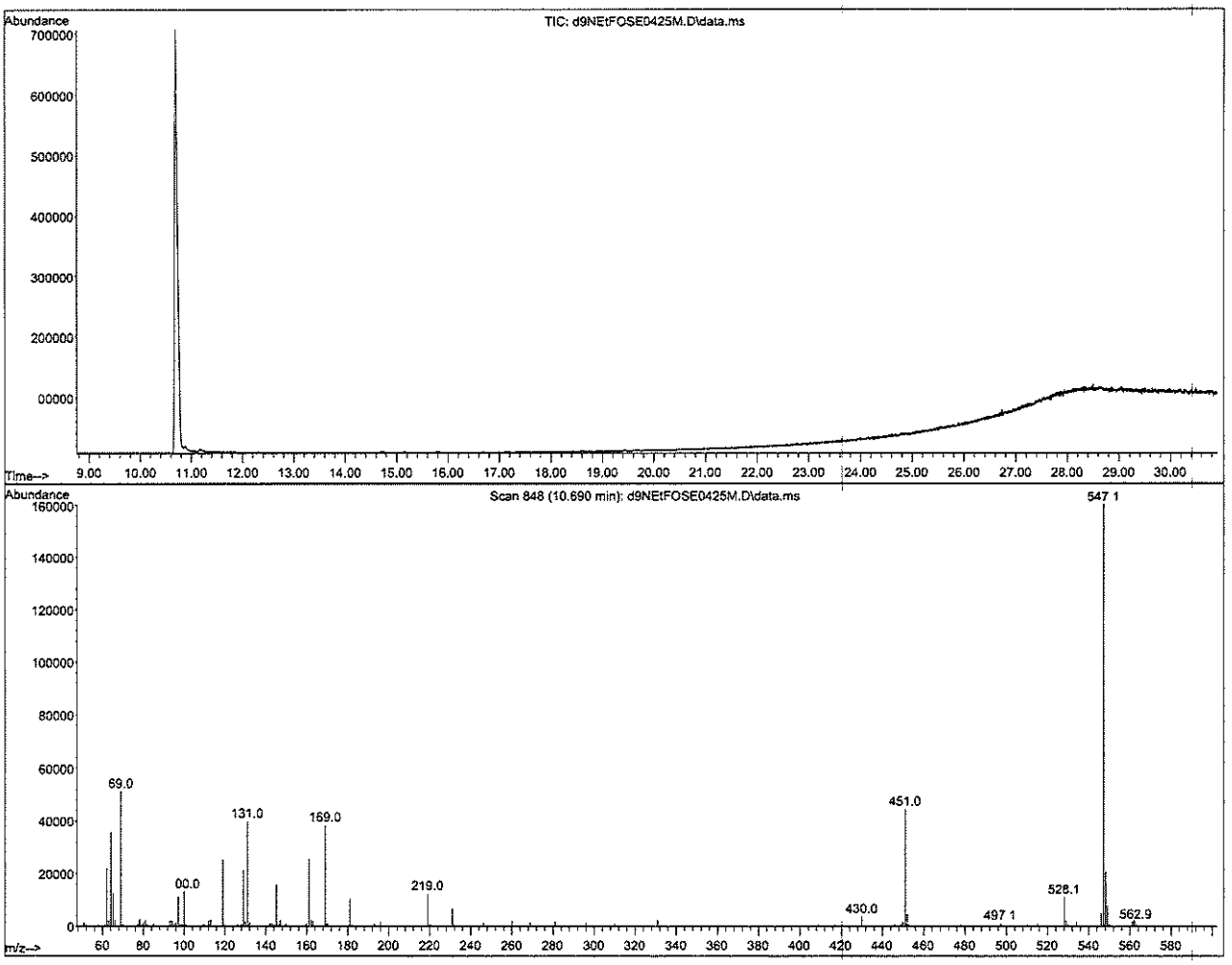
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d9-N-EtFOSE-M, HRGC/LRMS Data (Full Scan and Mass Spectrum)**



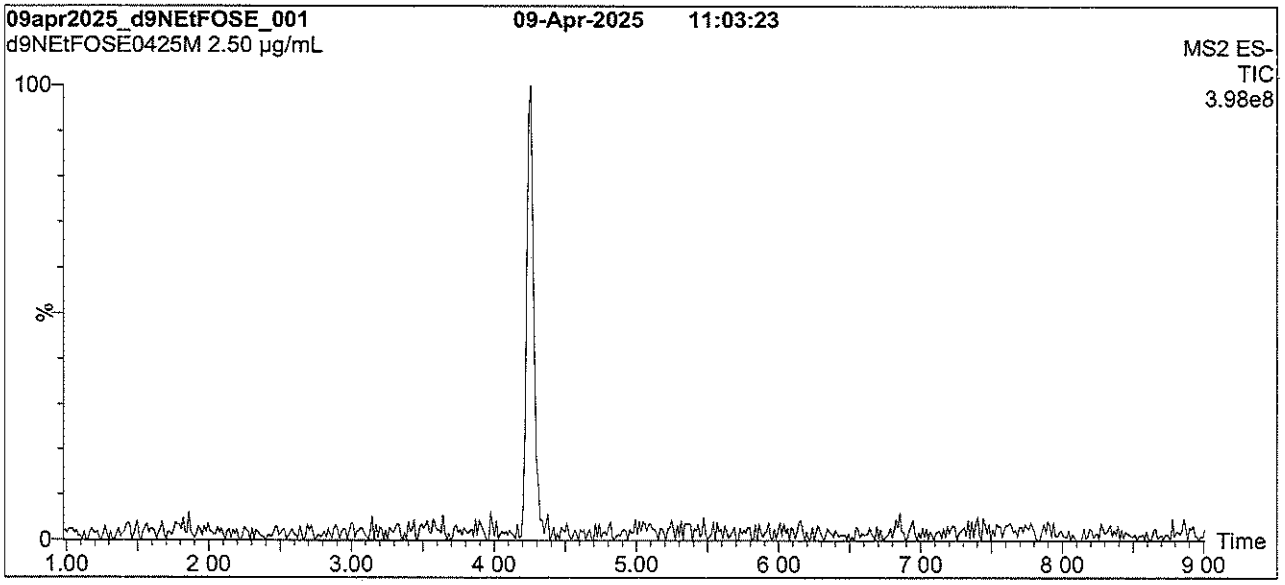
Conditions for Figure 1.

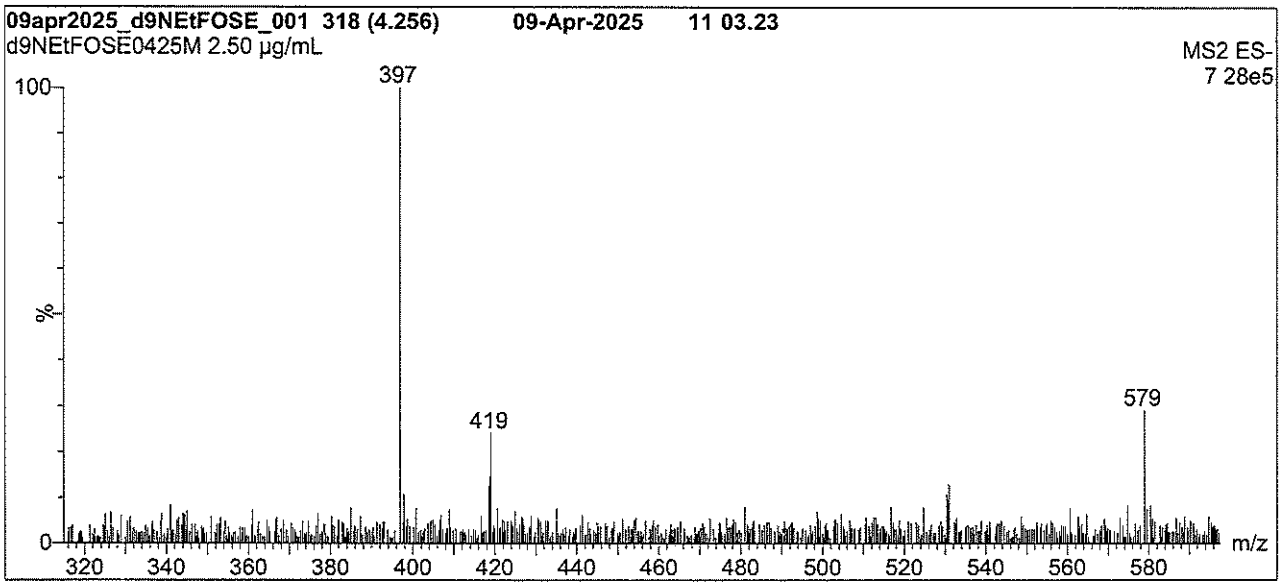
Agilent 7890A HRGC
Agilent 5975C MSD

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-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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

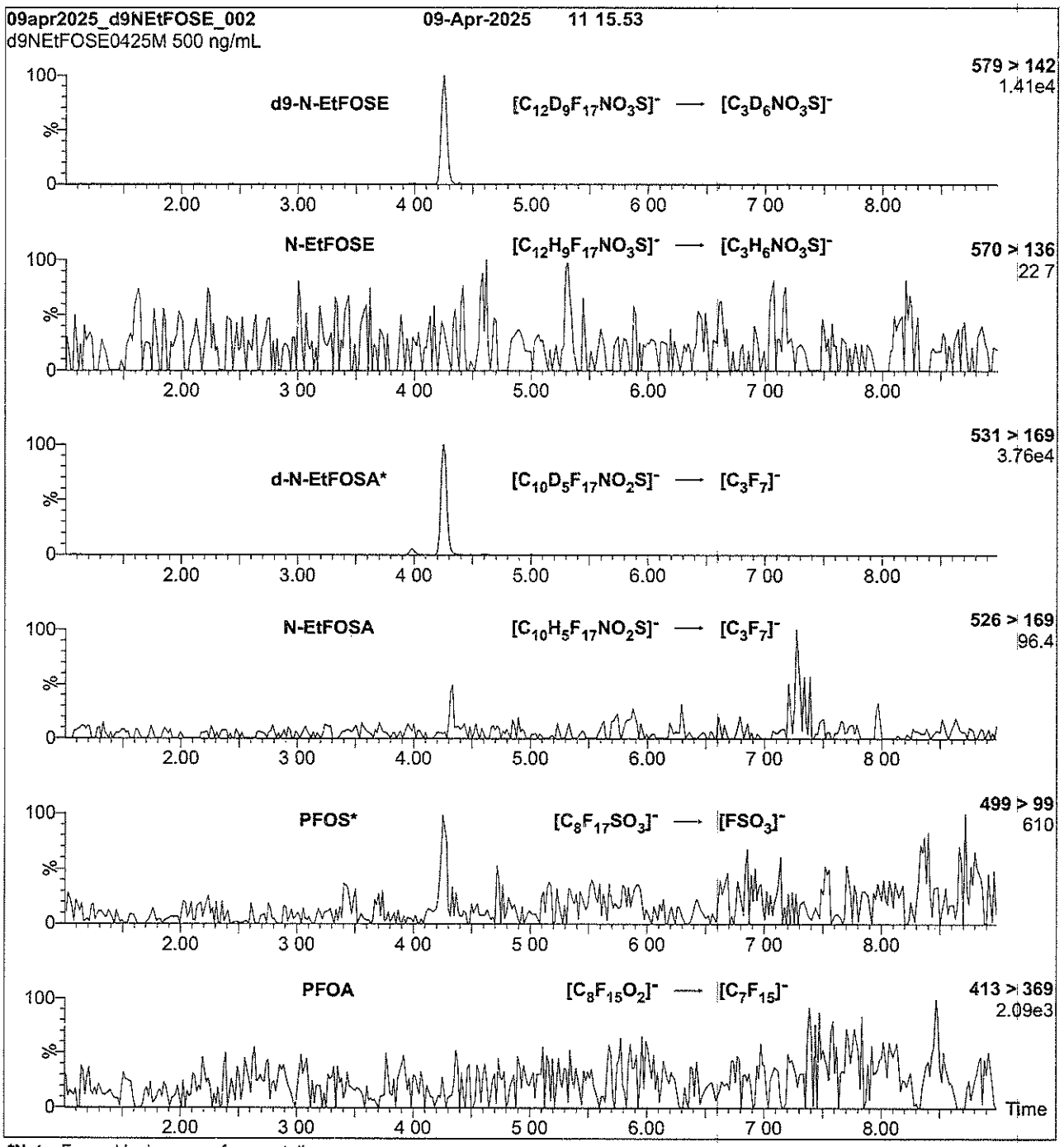
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 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)**



*Note: Formed by in-source fragmentation.

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) = 5.98e-3
Collision Energy (eV) = 32

Reagent

PFC_ST_05259

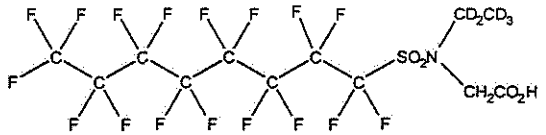
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0525

COMPOUND. N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE. **CAS #:** 1265205-97-7



410-8763258

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 (D)
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
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 _____ **Date** 06/09/2025 (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.

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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, $..x_n$ on which it depends is:

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

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%) has been assigned to this product.

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:

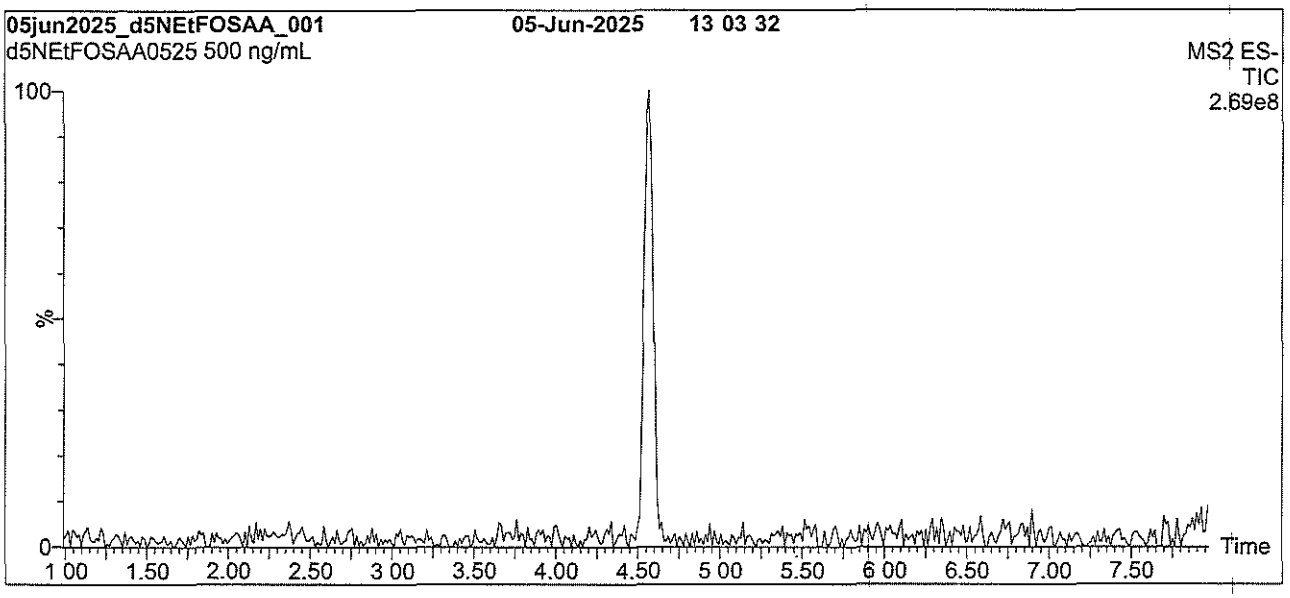
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB, AR-1523).

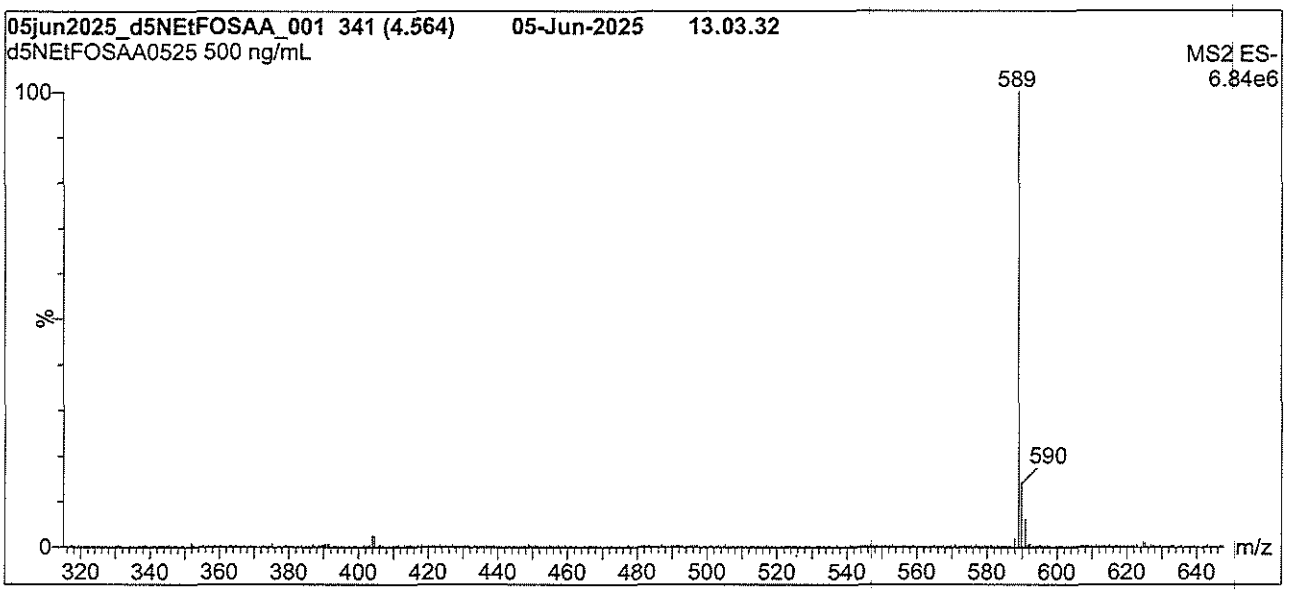
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

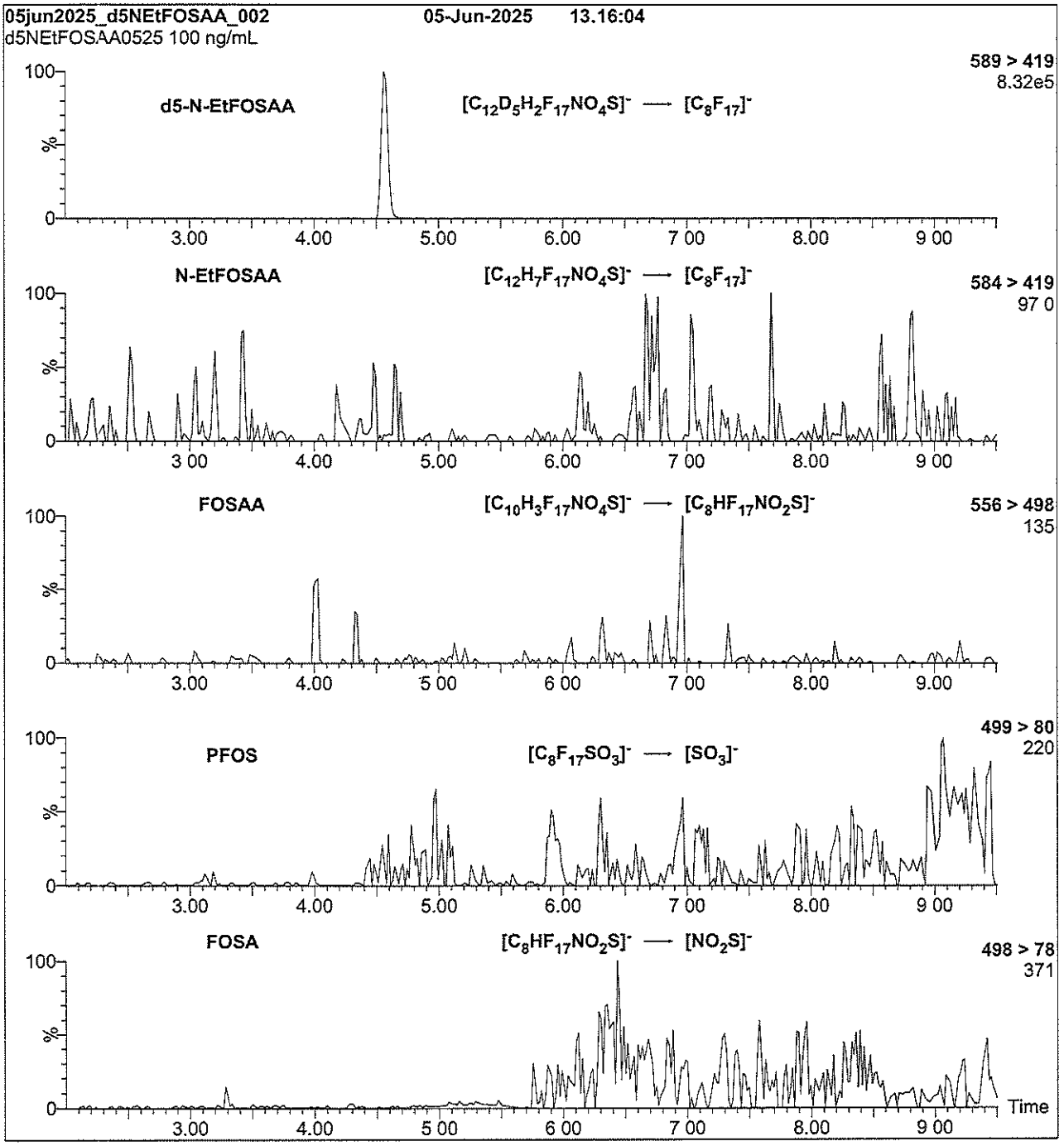
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 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. **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) = 3.76e-3
Collision Energy (eV) = 18

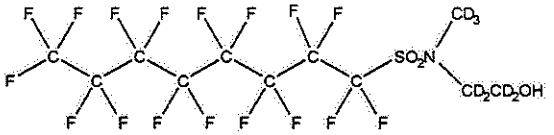
Reagent

PFC_ST_05275

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	d7-N-MeFOSE-M	**LOT NUMBER.**	d7NMeFOSE0925M
COMPOUND.	2-(N-Methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol		
STRUCTURE.		**CAS #:**	1265205-95-5



410-8763276

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)	09/30/2025 (HRGC/LRMS) 10/09/2025 (LC/MS)		
EXPIRY DATE. (mm/dd/yyyy)	10/09/2030		
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
- Contains ~0.8% of a branched isomer of d7-N-MeFOSE by ^{19}F NMR.

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Certified By· _____ **Date** 10/16/2025 (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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SYNTHESIS / CHARACTERIZATION.

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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%) has been assigned to this product.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

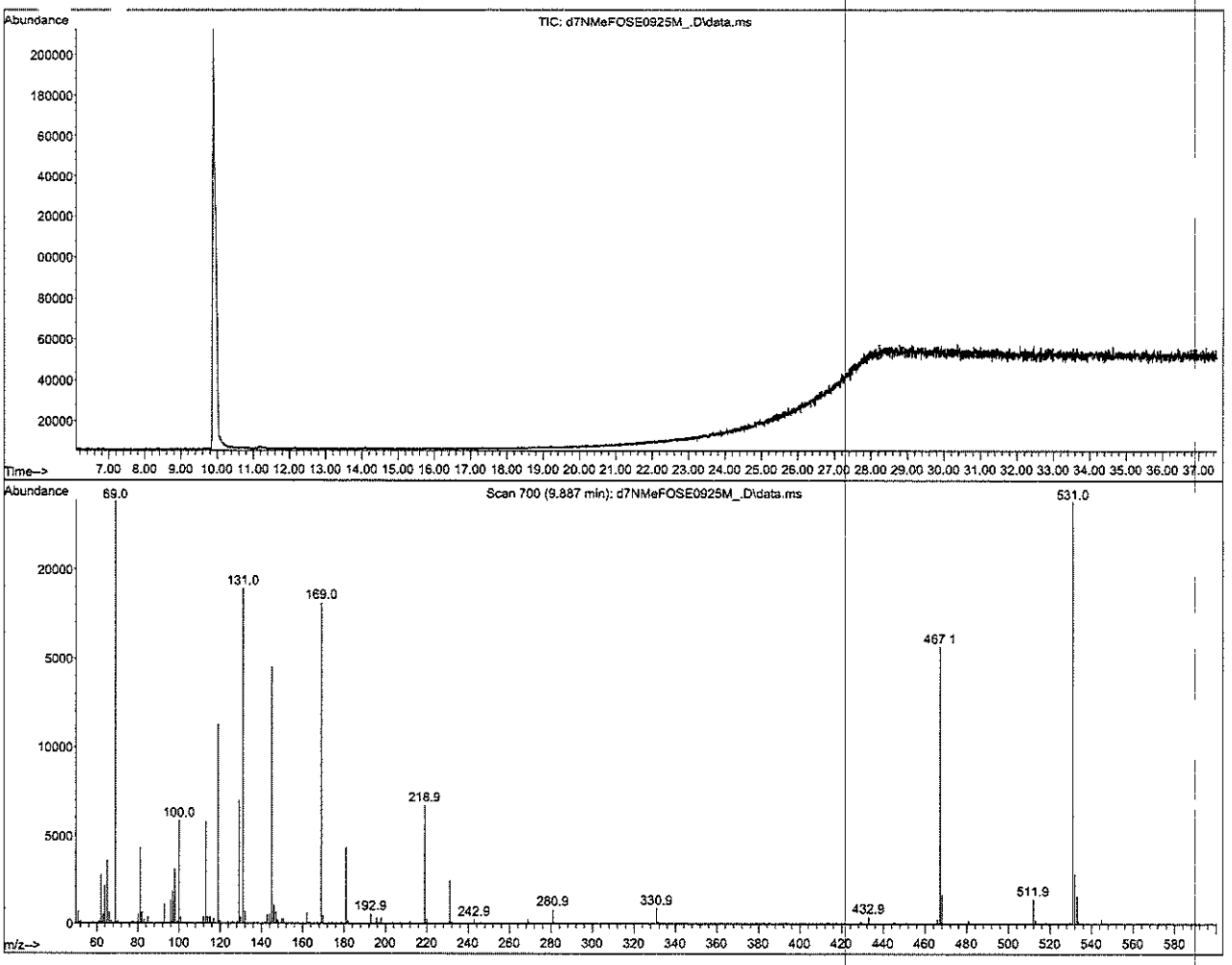
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **d7-N-MeFOSE-M, HRGC/LRMS Data (Full Scan and Mass Spectrum)**



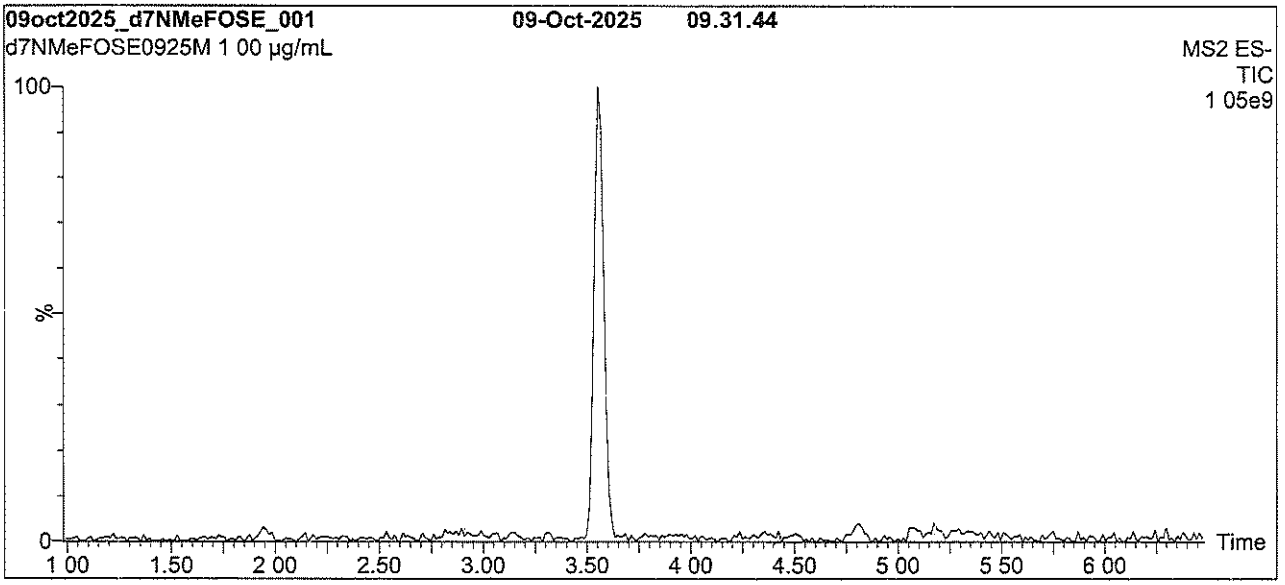
Conditions for Figure 1.

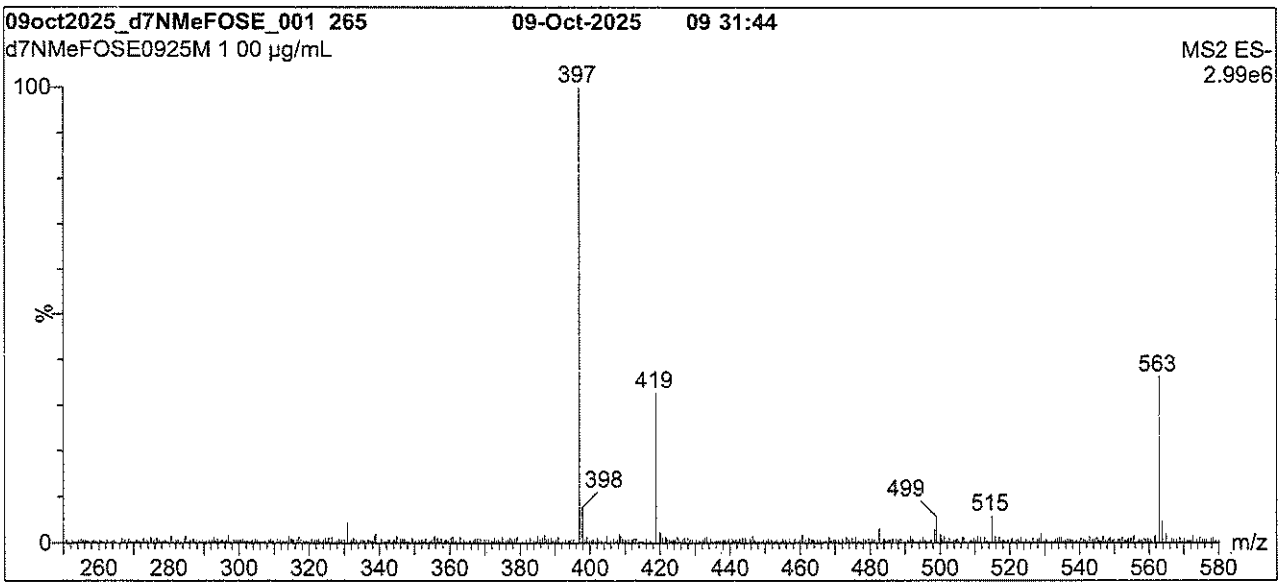
Agilent 7890A HRGC
Agilent 5975C MSD

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% (80:20 MeOH.ACN)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

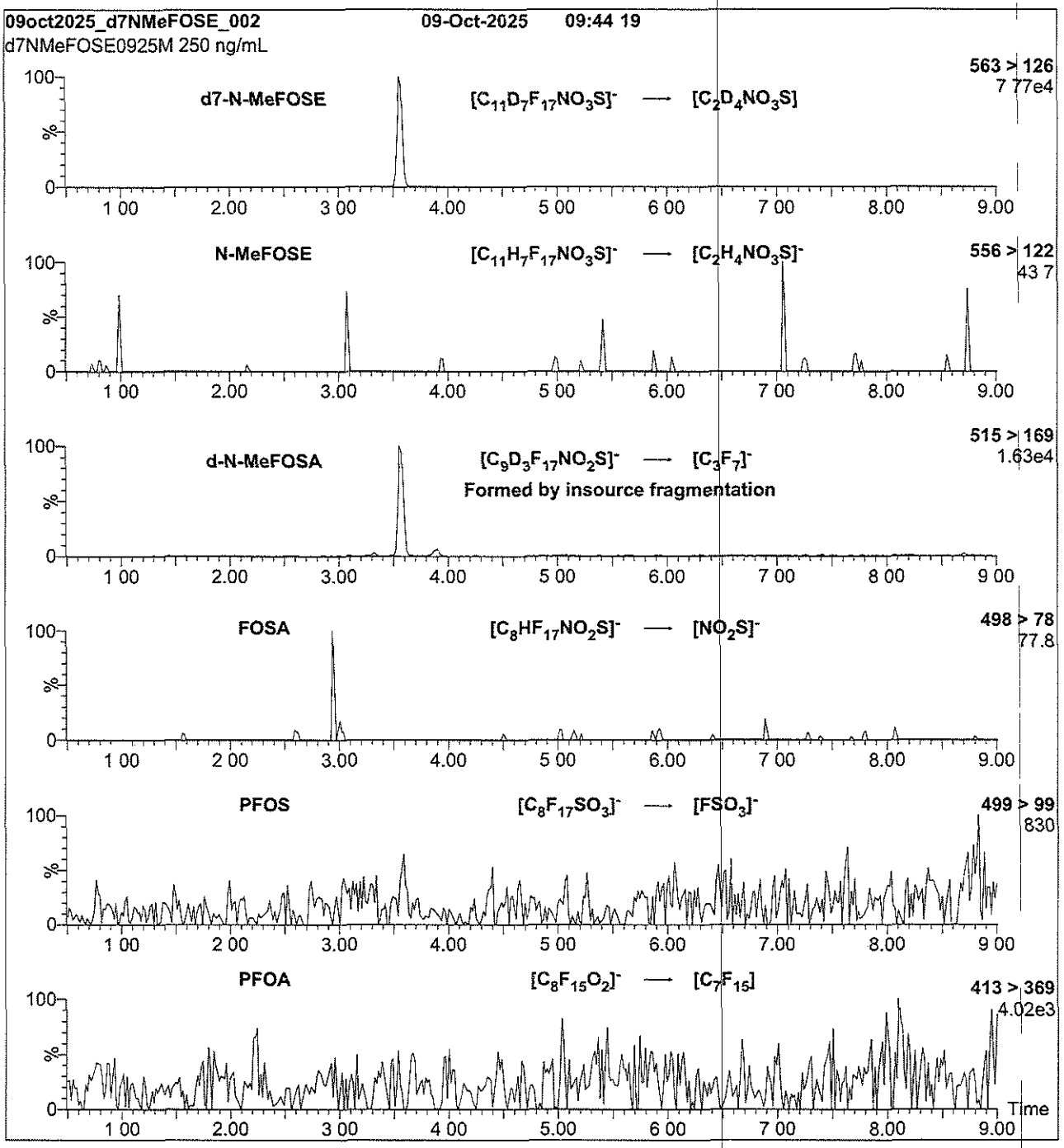
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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)	**MS Parameters:**	
Mobile phase:	Same as Figure 2	Collision Gas (mbar) = 3.89e-3 Collision Energy (eV) = 36 (563 > 126)	
Flow:	300 µL/min		

Reagent

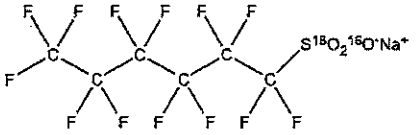
PFC_ST_05282

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE. MPFHxS
LOT NUMBER. MPFHxS0924
COMPOUND. Sodium perfluoro-1 hexane($^{18}O_2$)sulfonate

STRUCTURE.



CAS #. 1585941-14-5

7639630
ID: PFC_ST_04194
Exp:09/11/29 Prpd:PTEB Opn:
Labeled 18O2 PFHxS Stock

7639631
ID: PFC_ST_04195
Exp:09/11/29 Prpd:PTEB Opn:
Labeled 18O2 PFHxS Stock

MOLECULAR FORMULA.	$C_6F_{13}S^{18}O_2{}^{18}ONa$	**MOLECULAR WEIGHT:**	426 10
CONCENTRATION.	50 0 ± 2 5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47.4 ± 2 4 µg/mL (MPFHxS acid)		
	47 3 ± 2 4 µg/mL (MPFHxS anion)		
CHEMICAL PURITY.	>98%	**ISOTOPIC PURITY:**	>94% ^{18}O
LAST TESTED. (mm/dd/yyyy)	09/11/2024		
EXPIRY DATE. (mm/dd/yyyy)	09/11/2029		
RECOMMENDED STORAGE.	Store ampoule in a cool dark place		

410-8785873

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 ($C_6F_{13}S^{18}O_2{}^{18}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{18}O_3^-$) 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 >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

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Certified By _____ **Date** 09/12/2024 (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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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:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

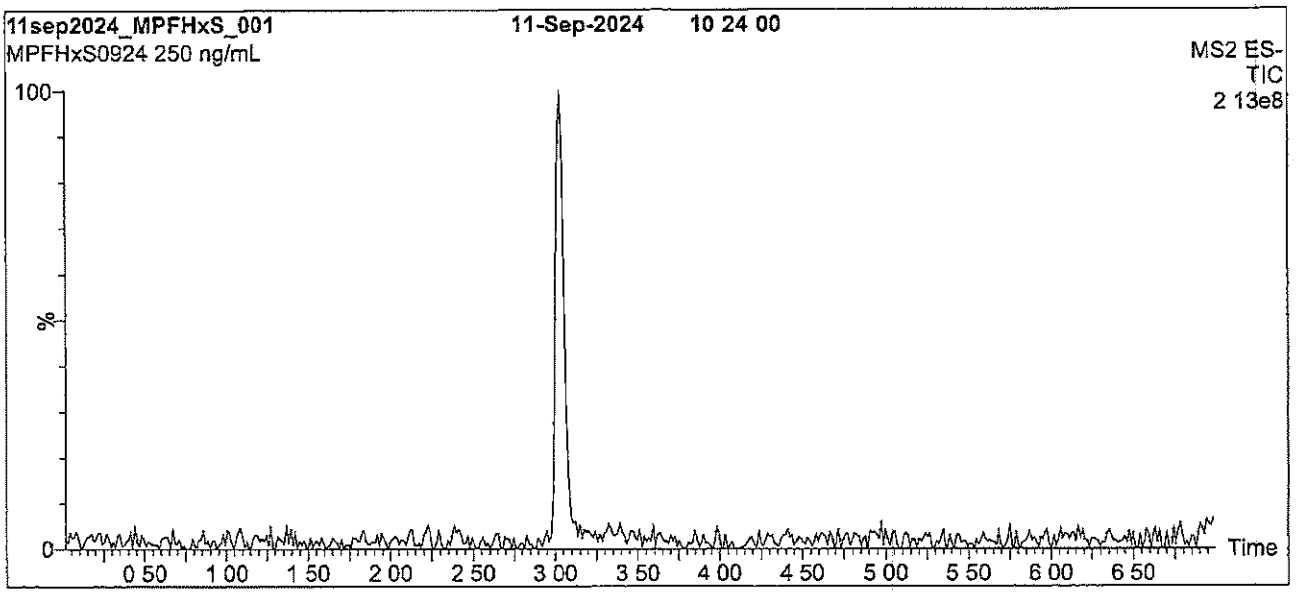
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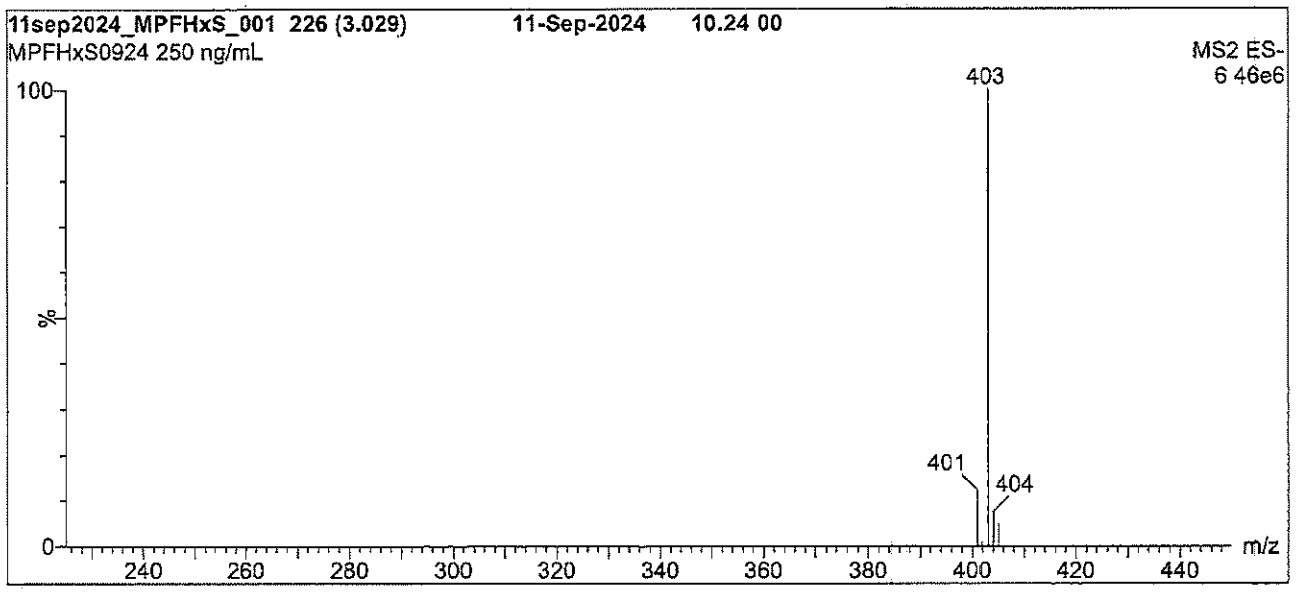
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time 12 min

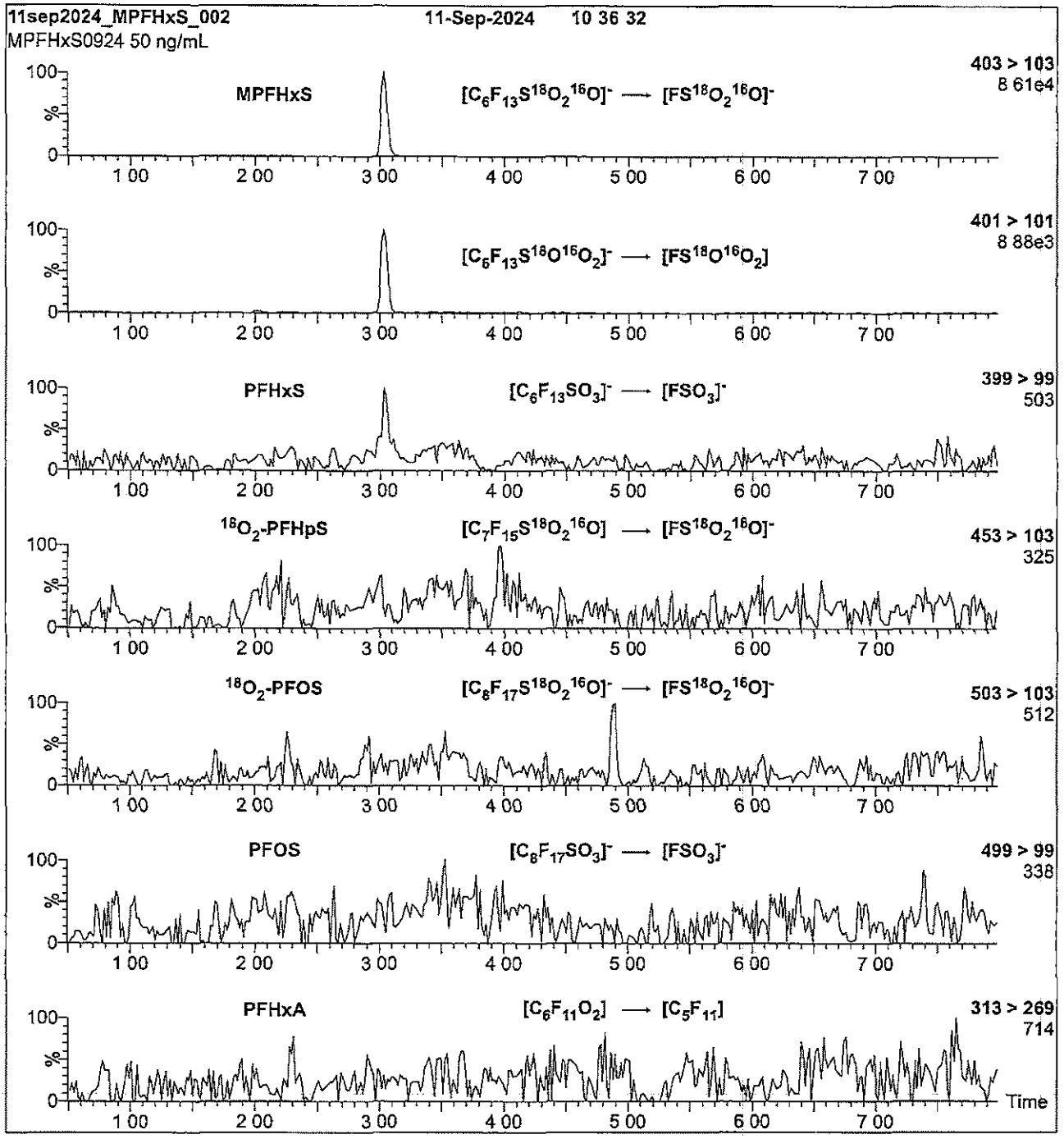
Flow: 300 µL/min

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. **MPFHxS, LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.			
Injection	On-column (MPFHxS)	MS Parameters.	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 4.29e-3 Collision Energy (eV) = 32	
Flow	300 µL/min		

Reagent

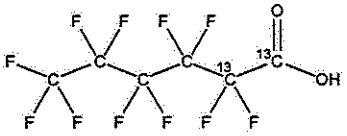
PFC_ST_05297

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5296, 5297, 5298

PRODUCT CODE.	MPFHxA	**LOT NUMBER.**	MPFHxA0825
COMPOUND.	Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid		
STRUCTURE.		**CAS #:**	960315-47-3



4 0-8/98002

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
LAST TESTED. (mm/dd/yyyy)	08/13/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/13/2030		
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** 08/14/2025 (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 SFC/UV/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, and/or SFC/UV/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, x_n on which it depends is:

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

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%) has been assigned to this product.

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:

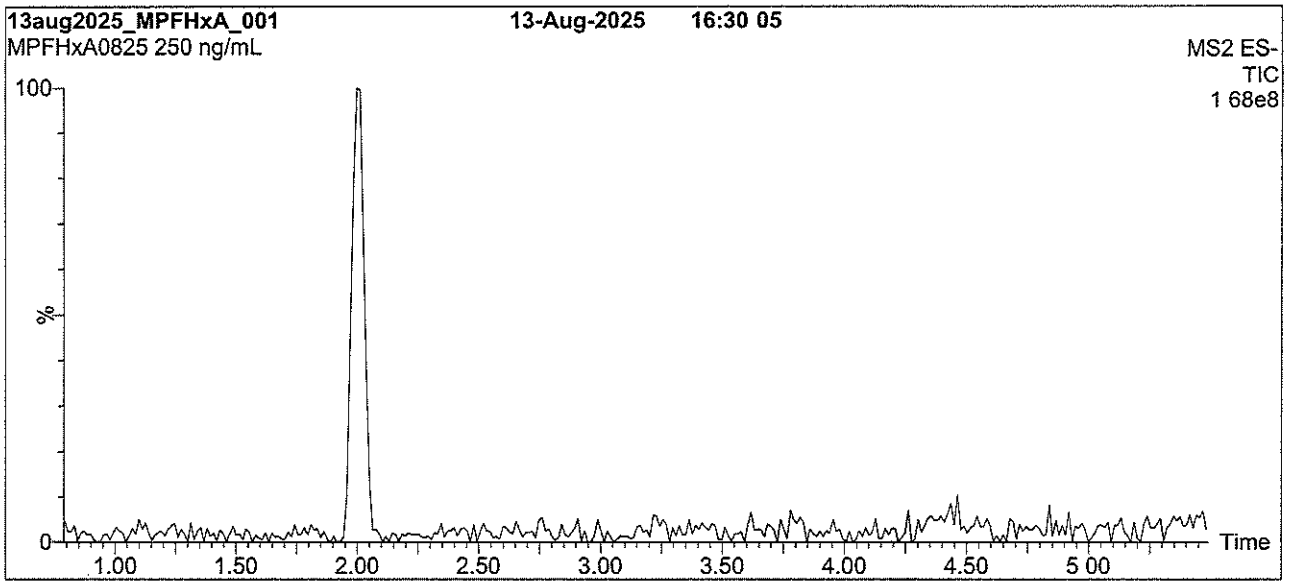
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

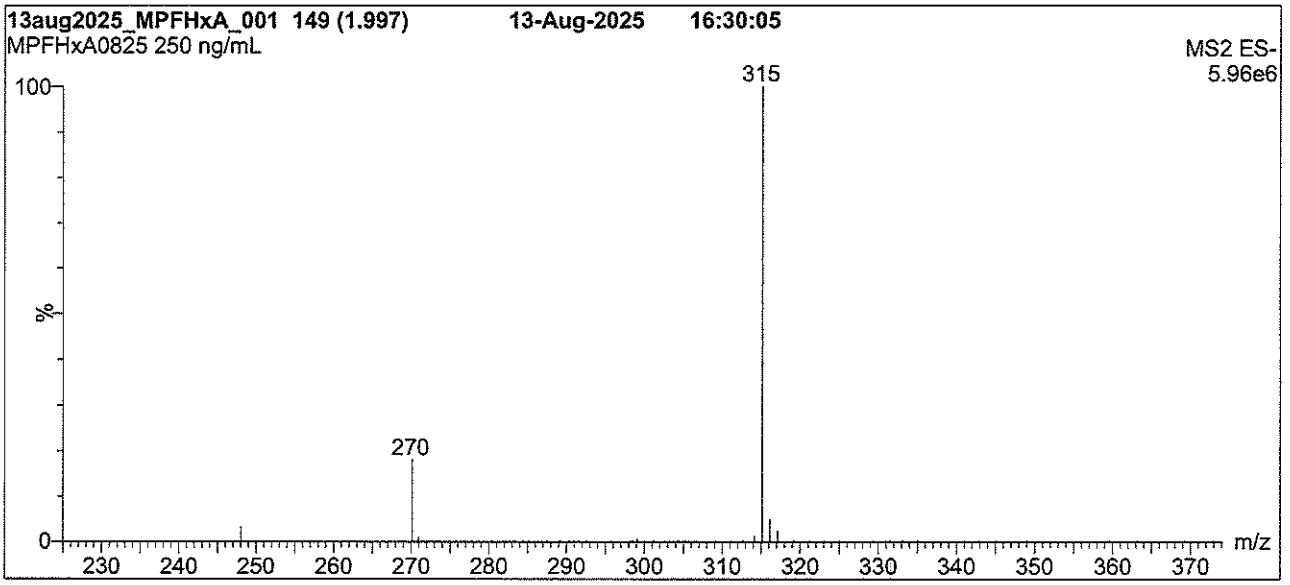
CALA Testing Accreditation No. A1226

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. **MPFHxA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

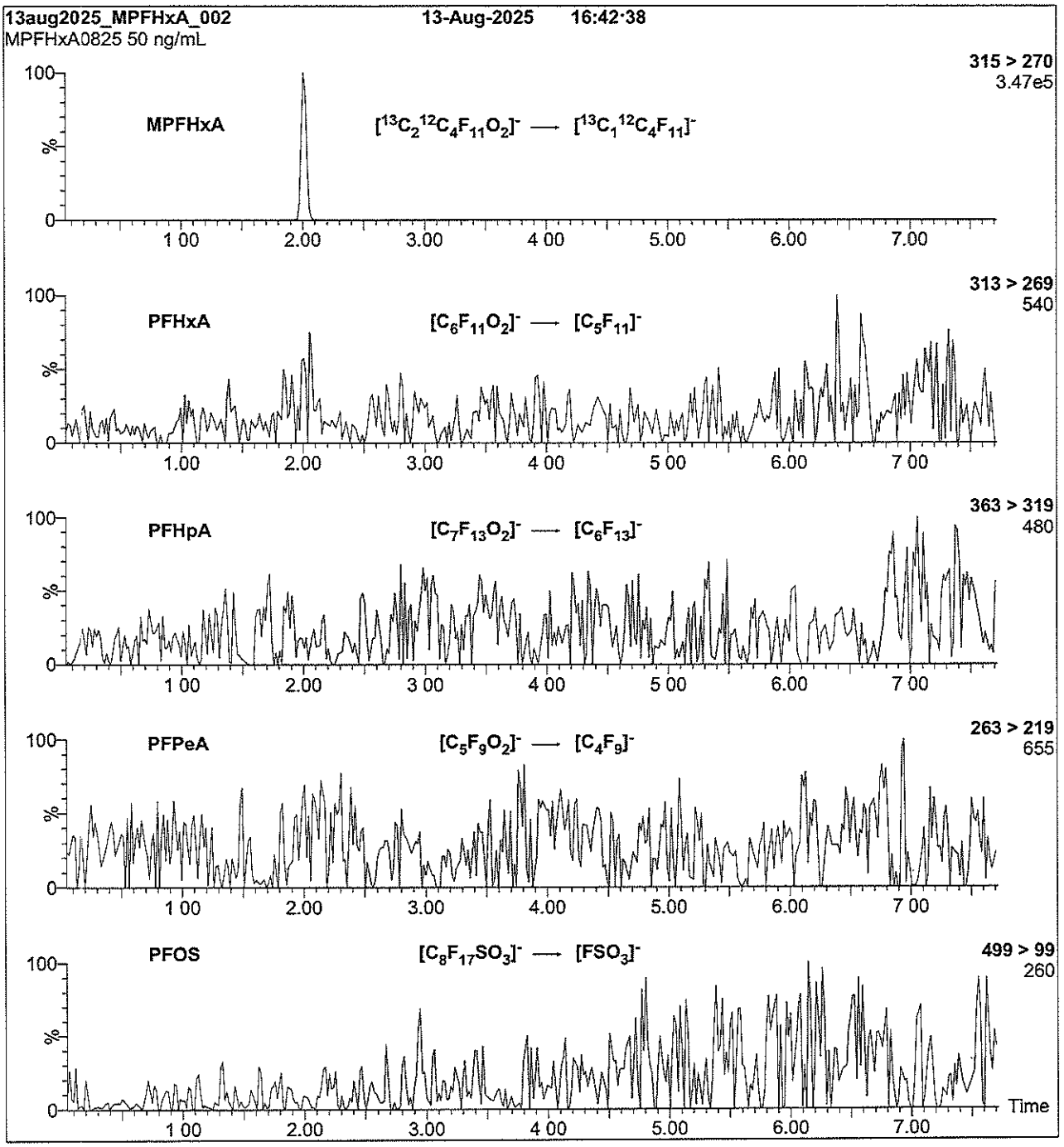
Flow: 300 µL/min

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. **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) = 4.67e-3
Collision Energy (eV) = 8 (315 > 270)

Reagent

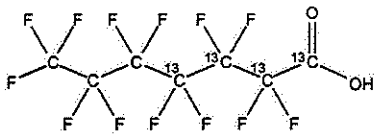
PFC_ST_05300

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST- 5299, 5300, 5301, 5302

PRODUCT CODE.	M4PFHpA	**LOT NUMBER.**	M4PFHpA0725
COMPOUND.	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		
STRUCTURE.		**CAS #:**	2328024-55-9



410-8798006

MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_3HF_{13}O_2$	**MOLECULAR WEIGHT:**	368 03
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/16/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/16/2030		
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** 07/30/2025 (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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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:

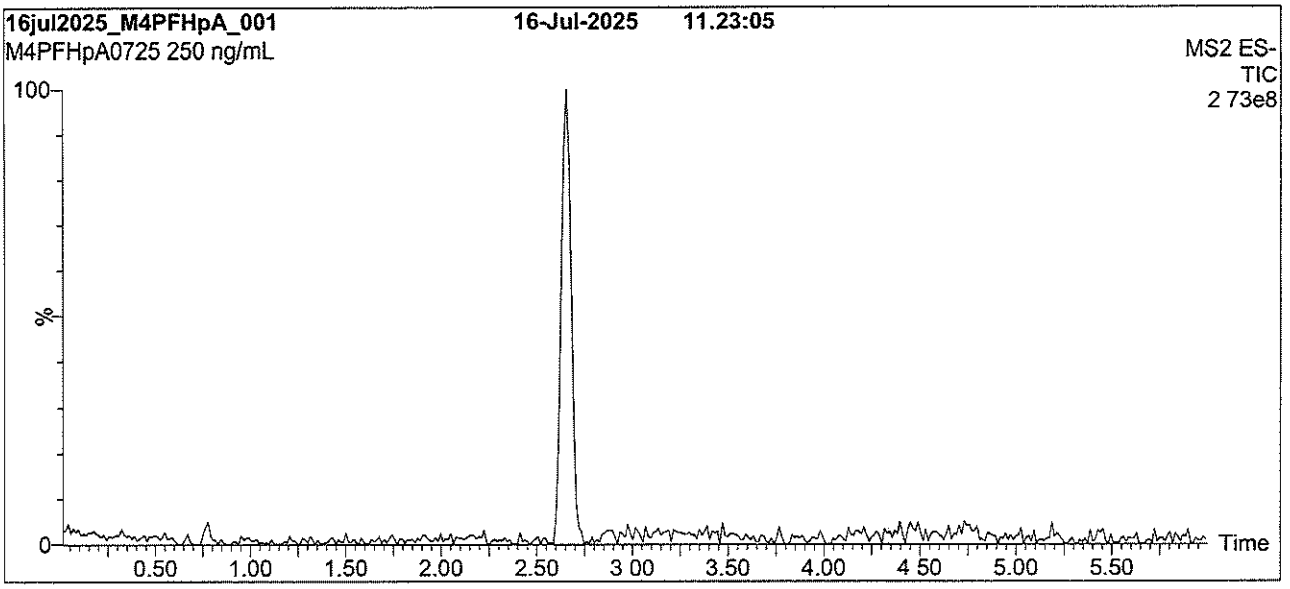
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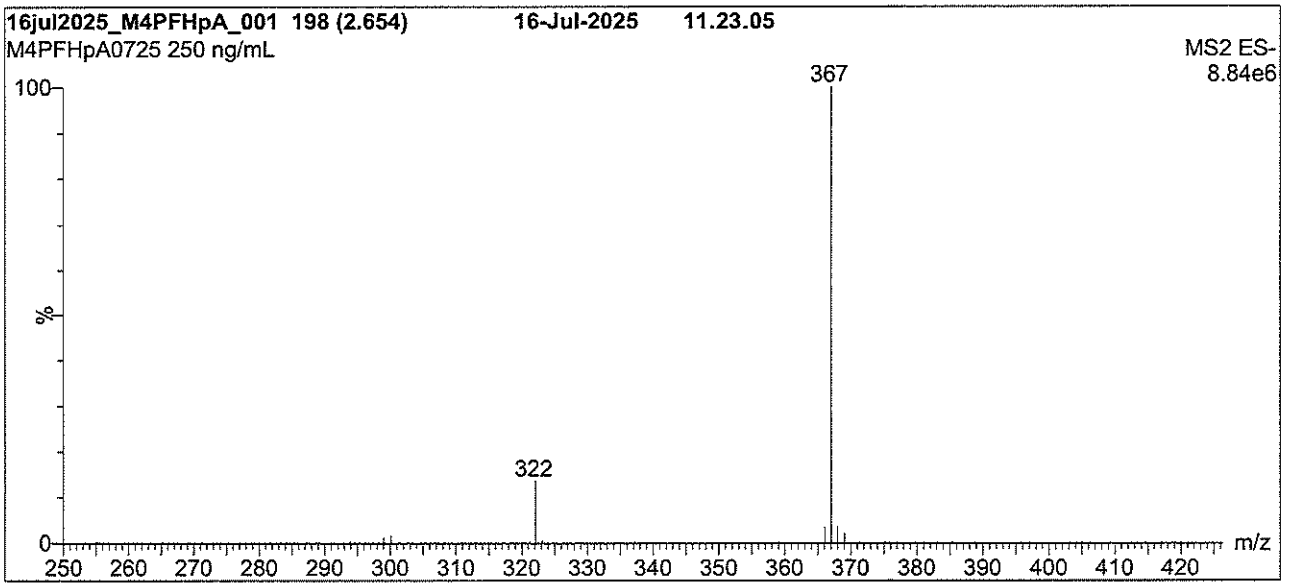
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

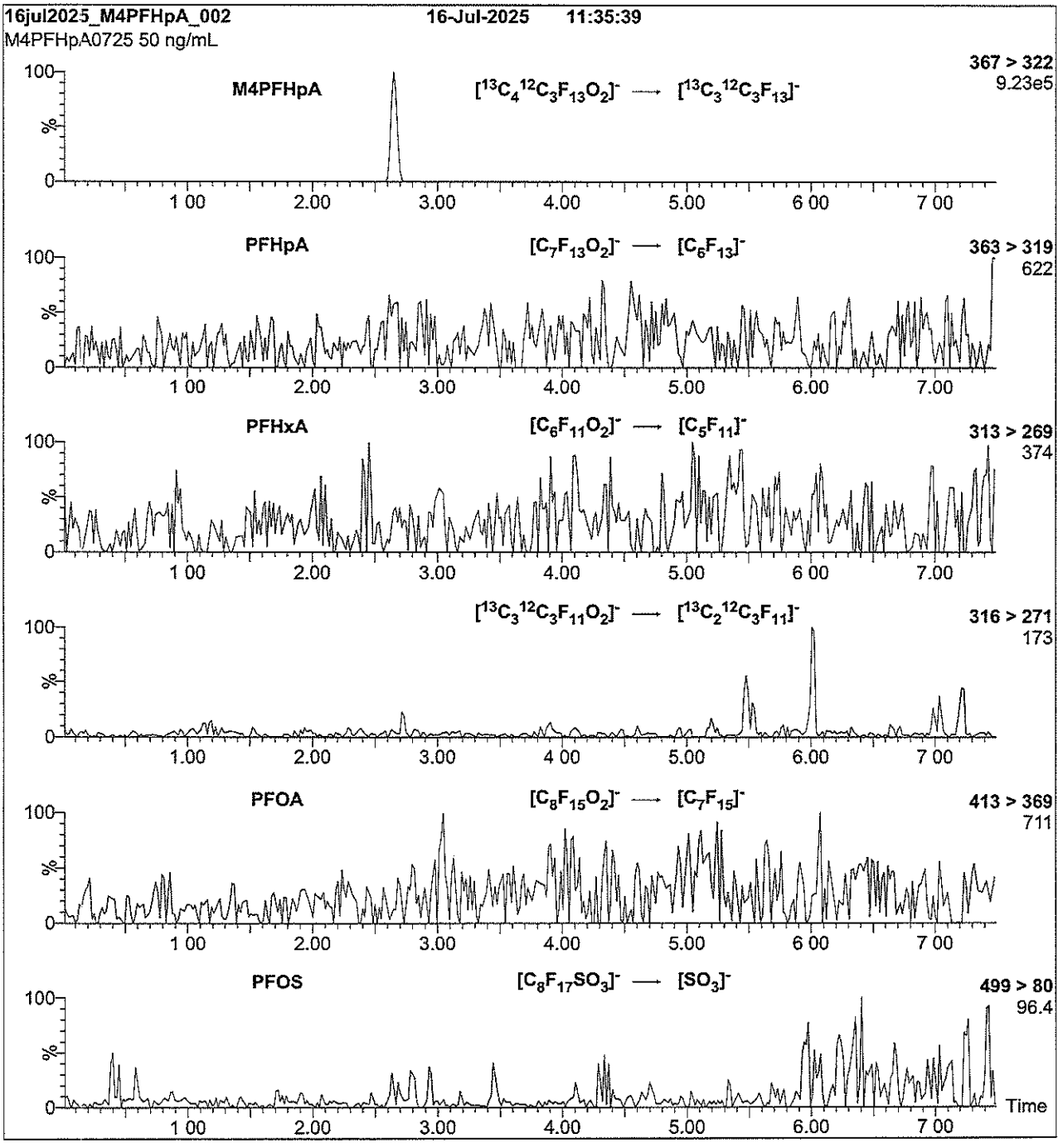
Flow: 300 µL/min

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. **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) = 3.49e-3
Collision Energy (eV) = 8

Reagent

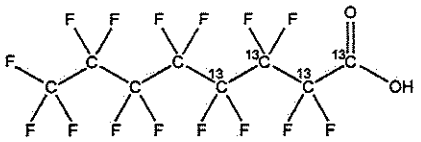
PFC_ST_05307

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-5307, 5306

PRODUCT CODE.	MPFOA	**LOT NUMBER.**	MPFOA0525
COMPOUND.	Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid		
STRUCTURE.		**CAS #:**	960315-48-4



410-87980

MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_4HF_{15}O_2$	**MOLECULAR WEIGHT:**	418 04
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
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** 06/20/2025 (mm/dd/yyyy)
B.G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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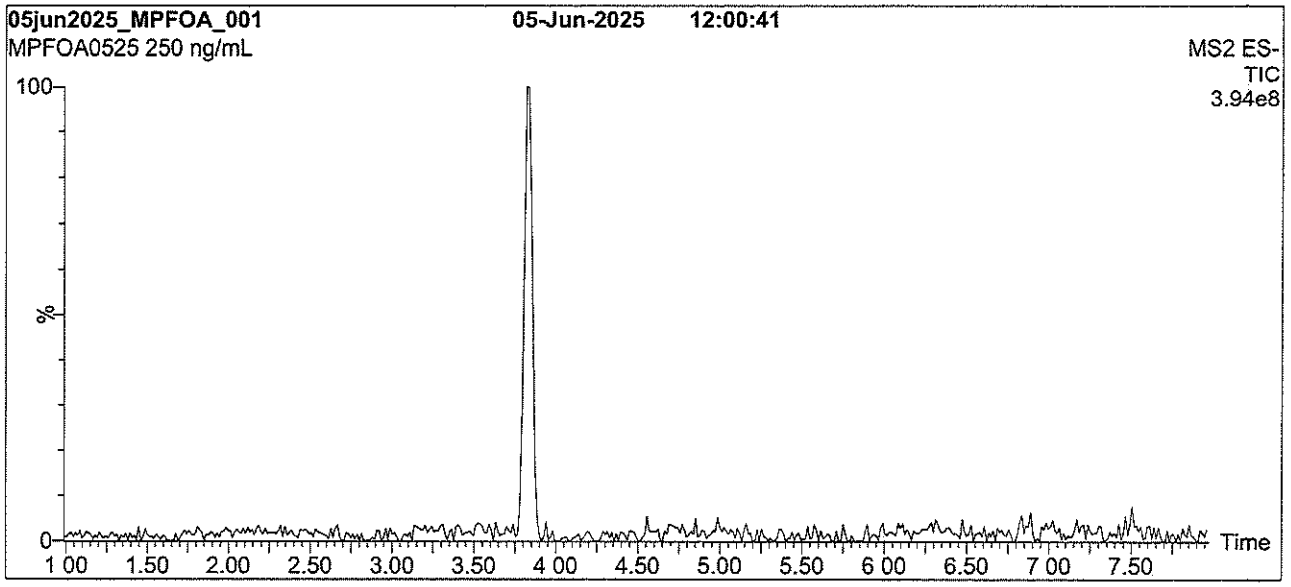
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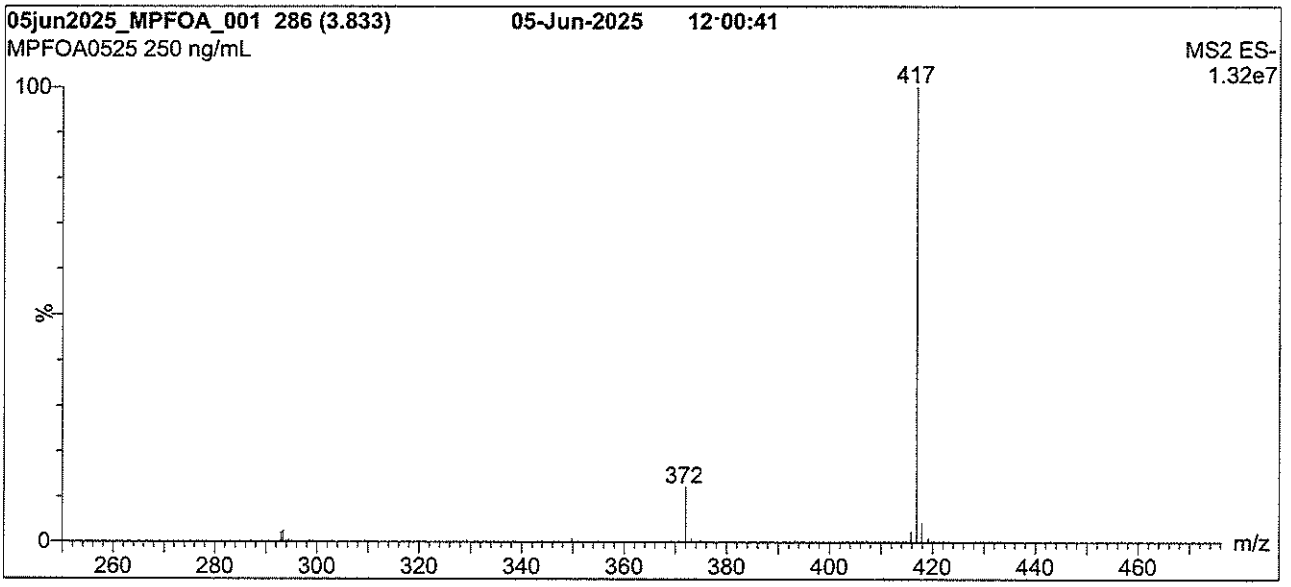
CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

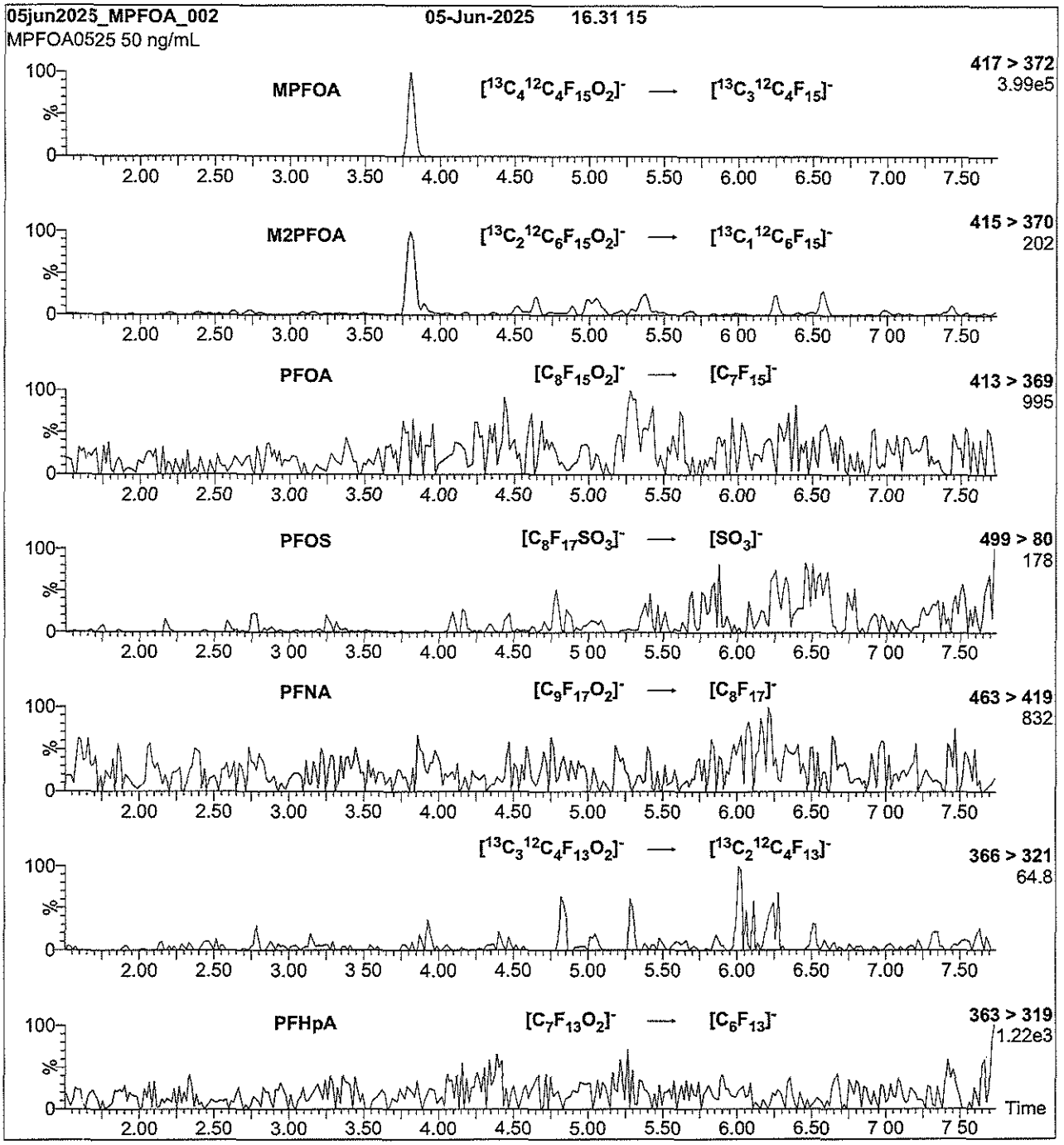
Flow: 300 µL/min

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. **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) = 3.76e-3
Collision Energy (eV) = 8

Reagent

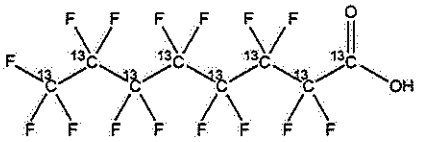
PFC_ST_05310

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST-GS197, 5198, 5199, 5200

PRODUCT CODE.	M8PFOA	**LOT NUMBER.**	M8PFOA0625
COMPOUND:	Perfluoro-n-($^{13}C_8$)octanoic acid		
STRUCTURE.		**CAS #:**	1350614-84-4



410-8798075

MOLECULAR FORMULA.	$^{13}C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	422.01
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/30/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/30/2030		
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 ~1 1% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date.** 07/08/2025 (mm/dd/yyyy)
B.G. Chittim General Manager

Wellington Laboratories Inc., 345 Southgate Dr Guelph ON N1G 3M5 CANADA
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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 and/or SFC/UV/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 x_2, $.x_n$ on which it depends is:

$$u_c(y(x_1\ x_2\ ..x_n)) = \sqrt{\sum_{i=1}^{n} u(y\ x)}$$

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%) has been assigned to this product.

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:

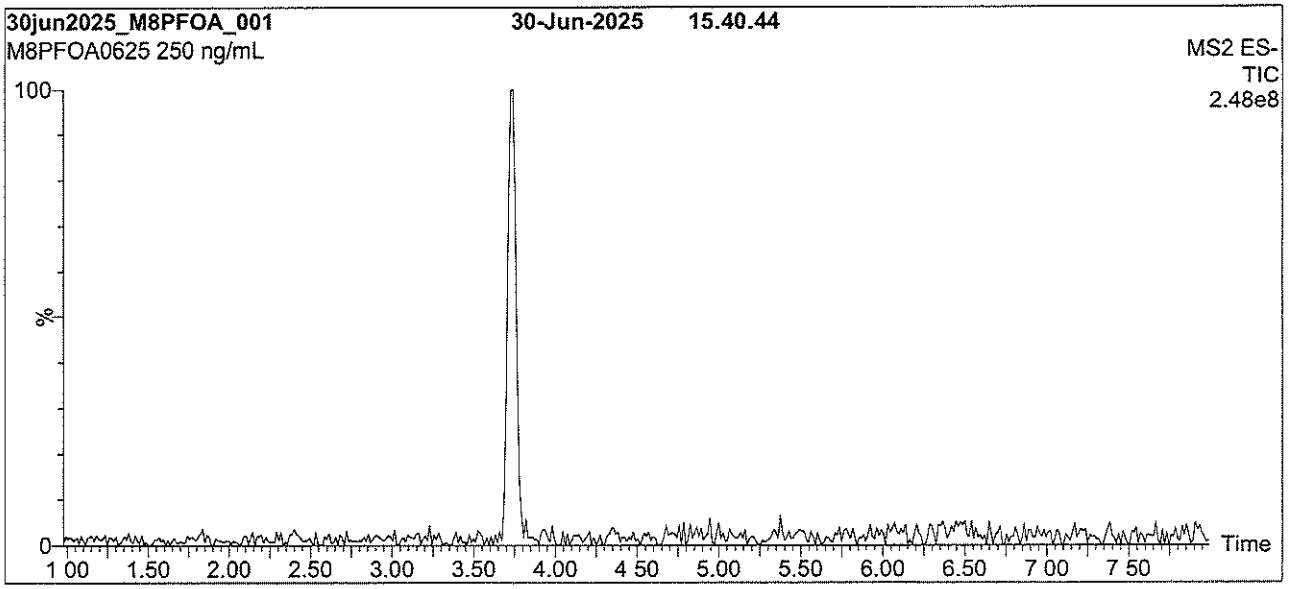
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

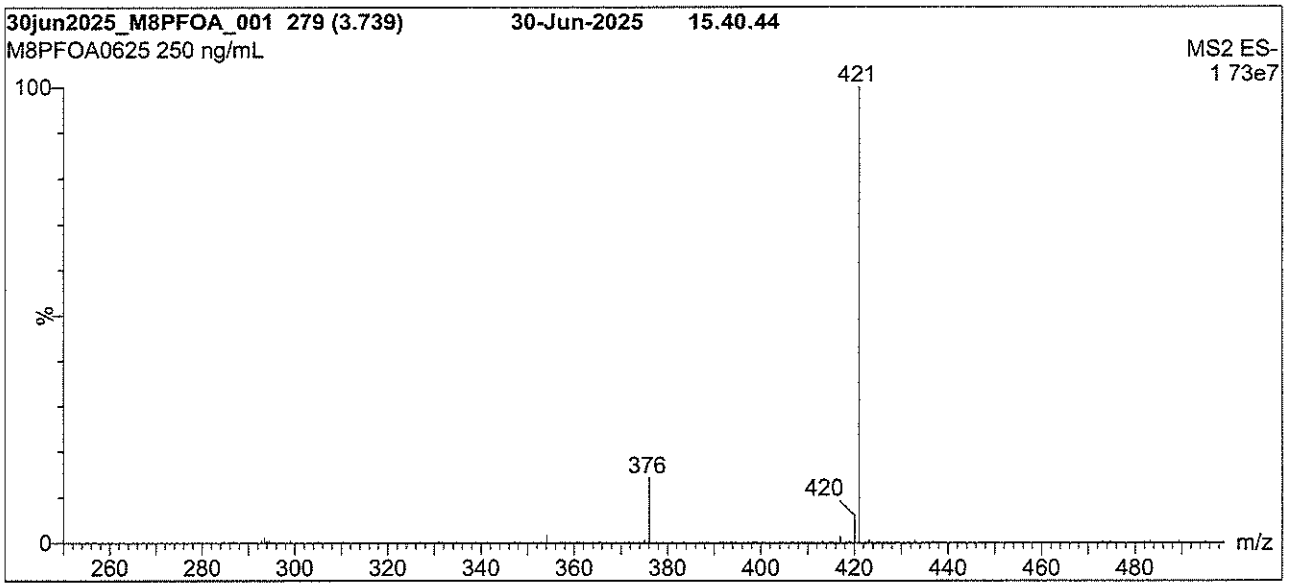
CALA Testing Accreditation No. A1226

ANAB 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: **M8PFOA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

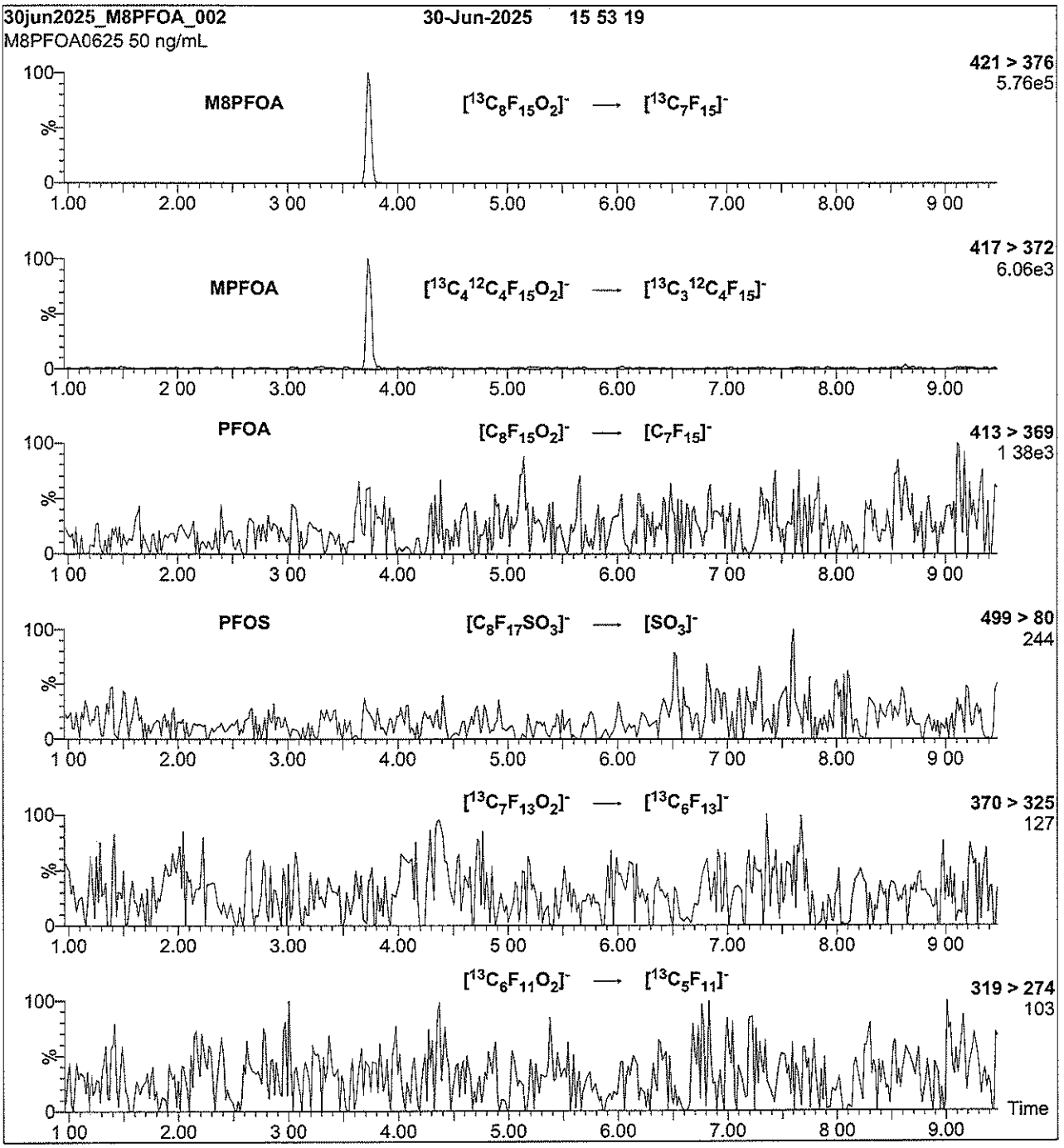
Flow: 300 µL/min

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. **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) = 3.57e-3
Collision Energy (eV) = 8

Reagent

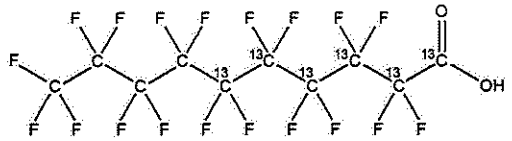
PFC_ST_05325

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ 5192, 5191, 5190, 5189

PRODUCT CODE.	M6PFDA	**LOT NUMBER.**	M6PFDA0925
COMPOUND.	Perfluoro-n-(1 2,3,4,5 6-$^{13}C_5$)decanoic acid		
STRUCTURE.		**CAS #:**	2328024-56-0



410-8660/44

MOLECULAR FORMULA:	$^{13}C_6{}^{12}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520.04
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	09/23/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/23/2030		
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-(1,2,3,4,5-$^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date·** 09/24/2025 (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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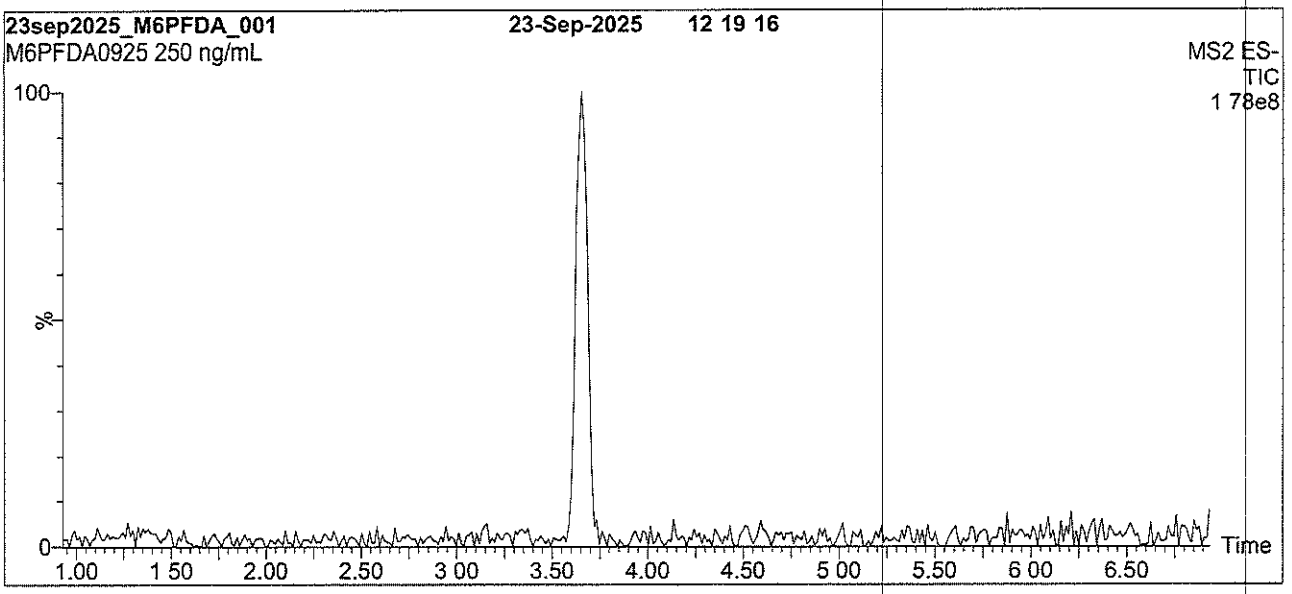
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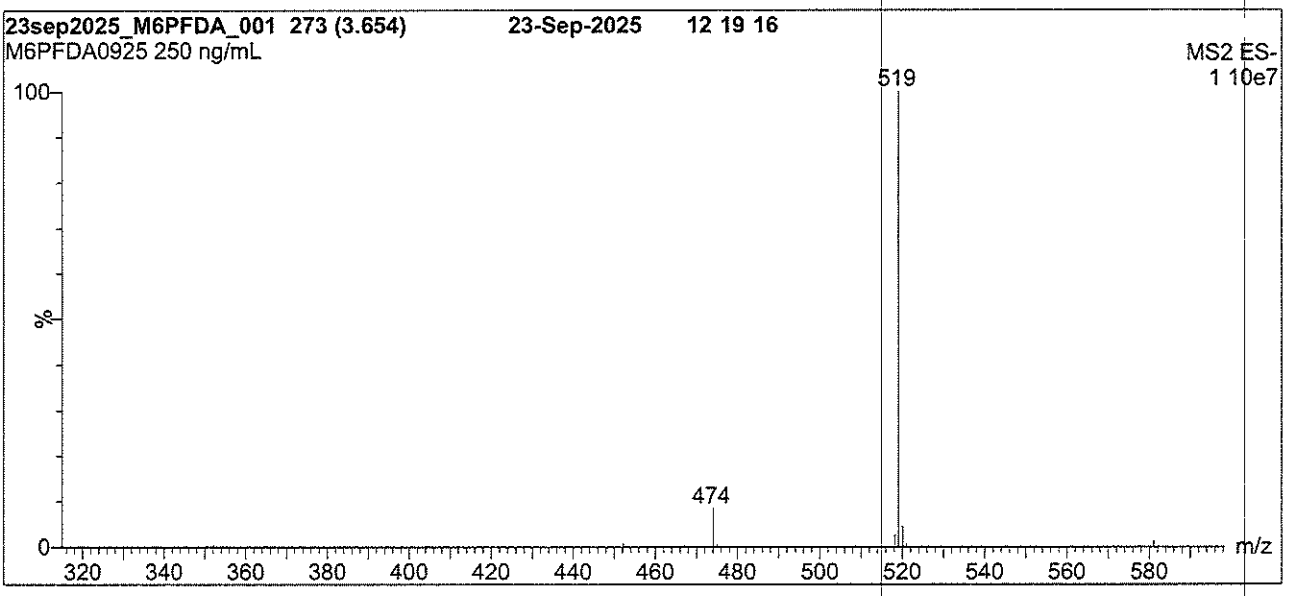
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M6PFDA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

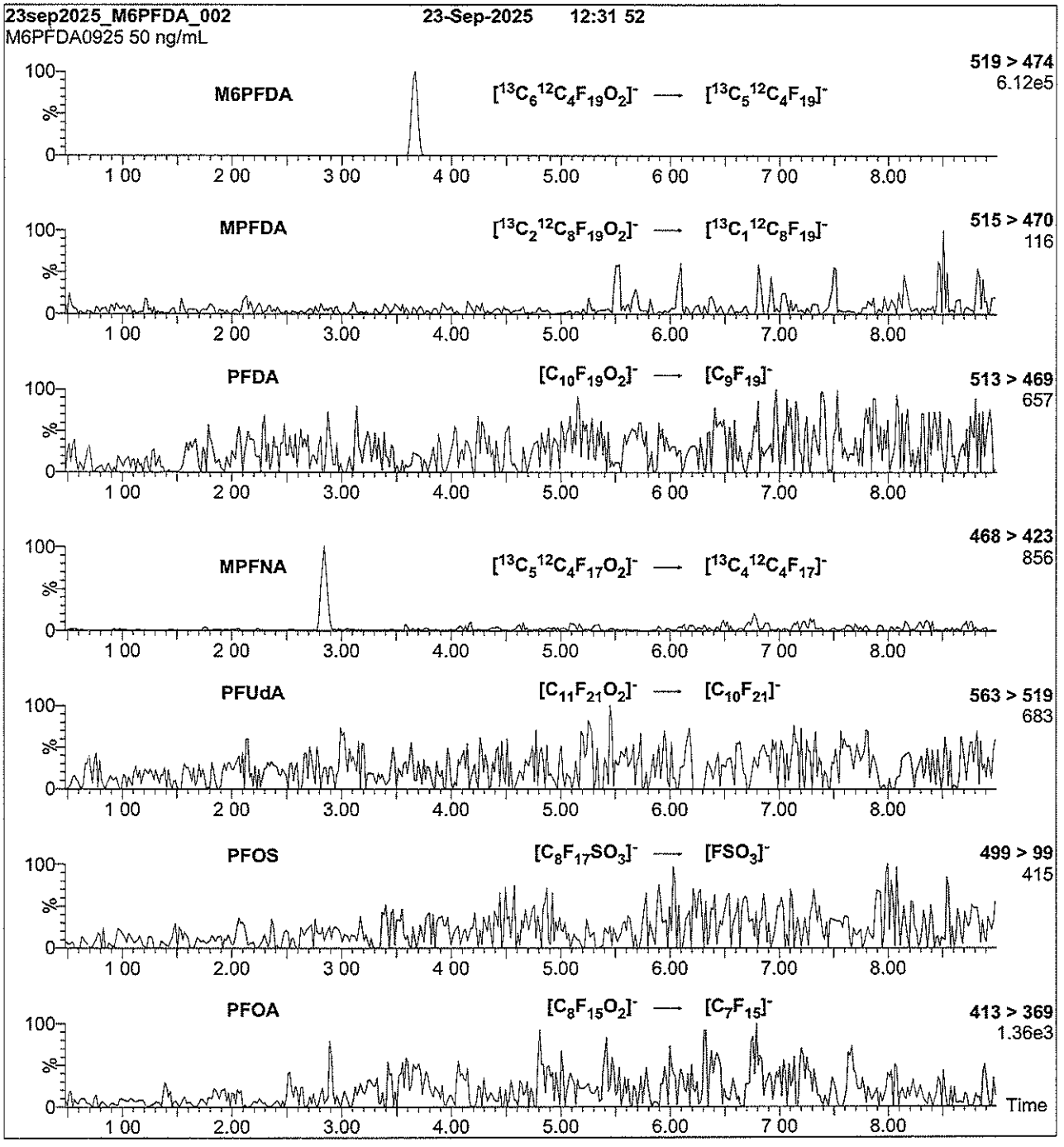
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 3.71e-3
Collision Energy (eV) = 10 (519 > 474)

Reagent

PFC_ST_05332

WELLINGTON LABORATORIES

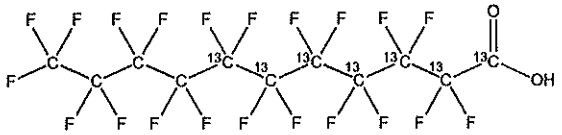
CERTIFICATE OF ANALYSIS
DOCUMENTATION

5329, 5330, 5331, 5332

PRODUCT CODE. M7PFUdA **LOT NUMBER.** M7PFUdA0925

COMPOUND. Perfluoro-n-(1 2 3,4,5 6 7-$^{13}C_7$)undecanoic acid

STRUCTURE. **CAS #.** Not available



410-8798611

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
LAST TESTED. (mm/dd/yyyy)	09/17/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/17/2030		
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** 09/22/2025 (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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UNCERTAINTY:

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

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

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

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

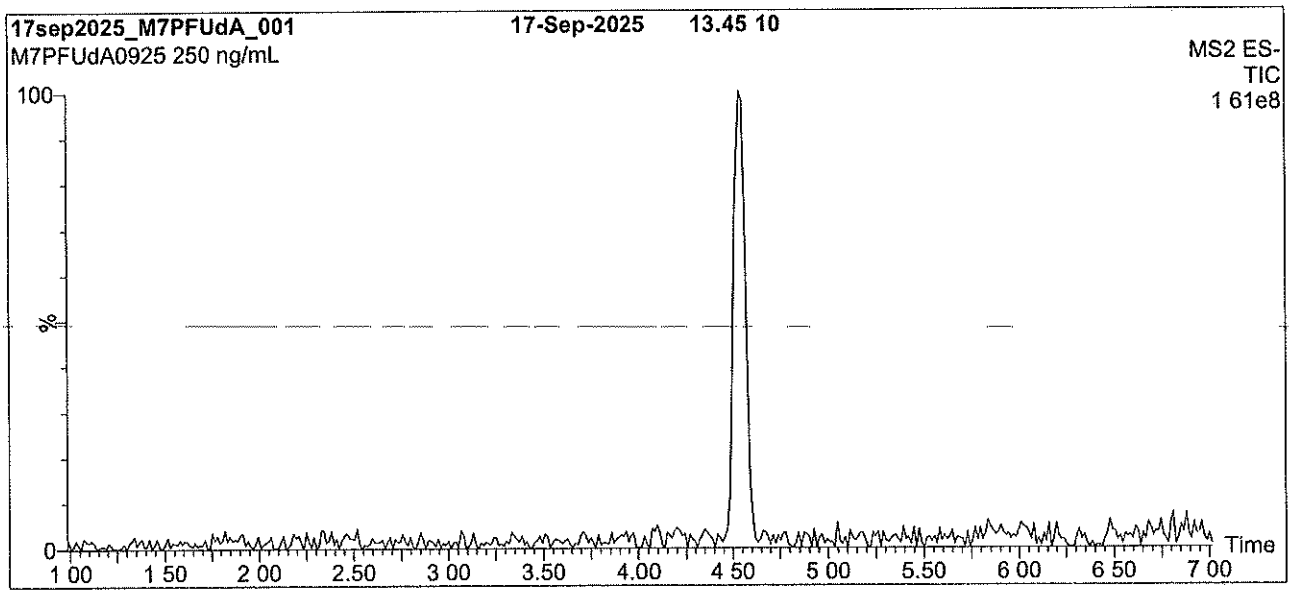
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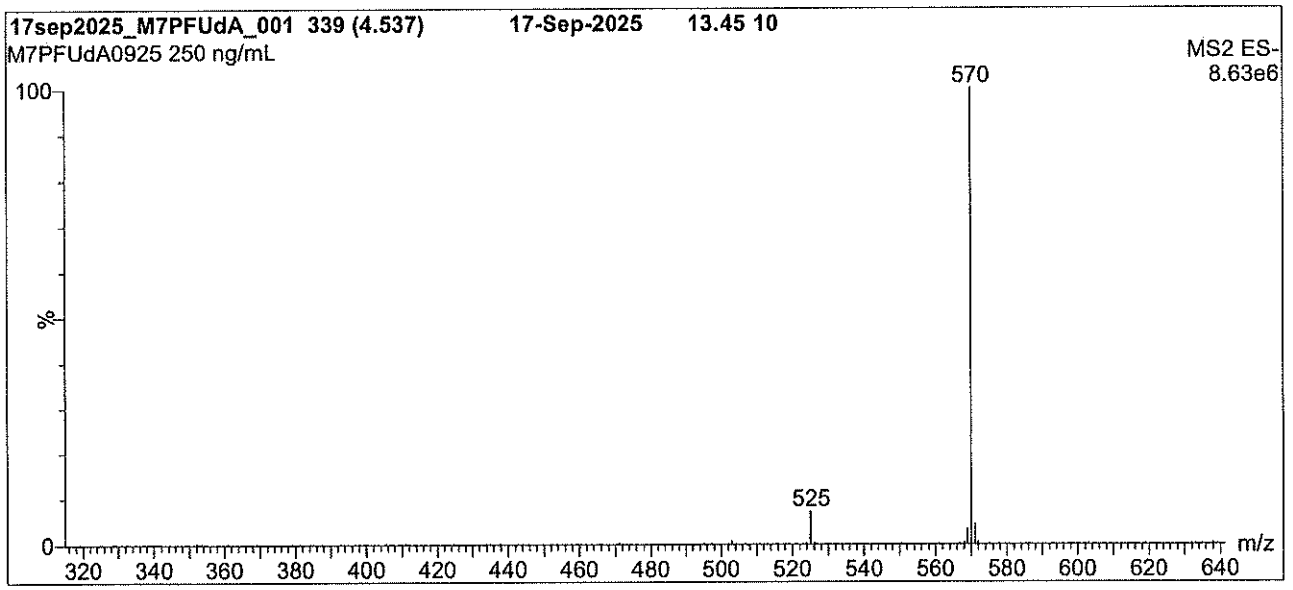
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M7PFUdA; 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.

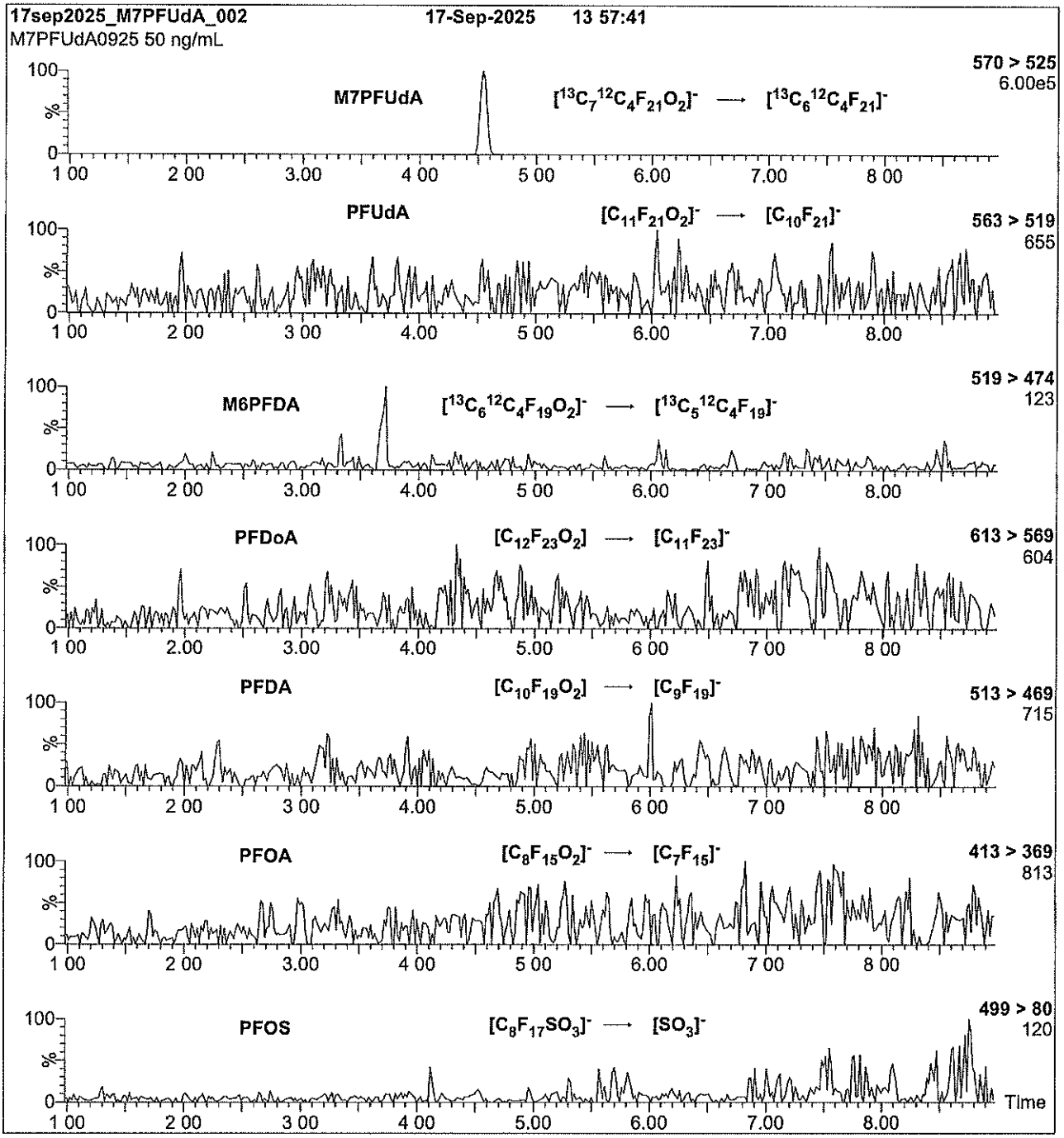
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm 2.1 x 100 mm
Mobile phase	Gradient Start: 40% H_2O / 60% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 9 min and hold for 1 min before returning to initial conditions in 0.5 min Time: 12 min
Flow	300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 3.57e-3
Collision Energy (eV) = 12 (570 > 525)

Reagent

PFC_ST_05335

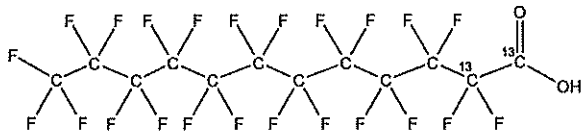
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

5333, 5334, 5335, 5336

PRODUCT CODE. MPFDoA
LOT NUMBER. MPFDoA0525
COMPOUND. Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid

STRUCTURE.
CAS #: 960315-52-0



410-87988-35

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
LAST TESTED. (mm/dd/yyyy)	05/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	05/28/2030		
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 B.G. Chittim General Manager **Date** 05/30/2025 (mm/dd/yyyy)

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QUALITY MANAGEMENT:

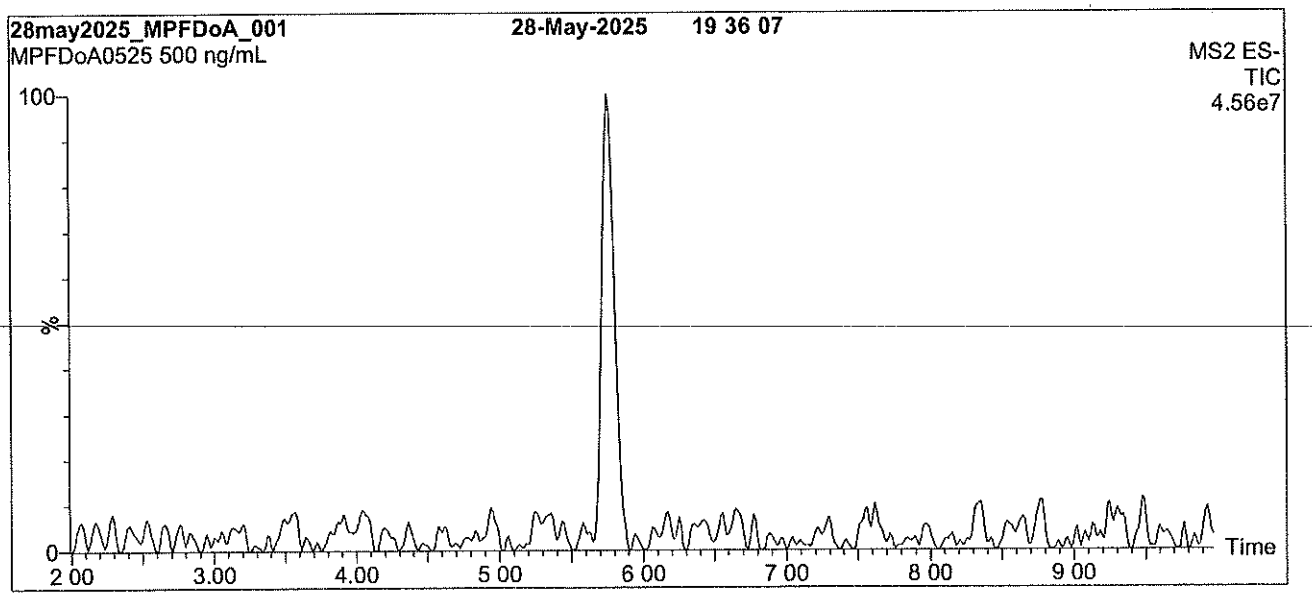
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB, AR-1523).

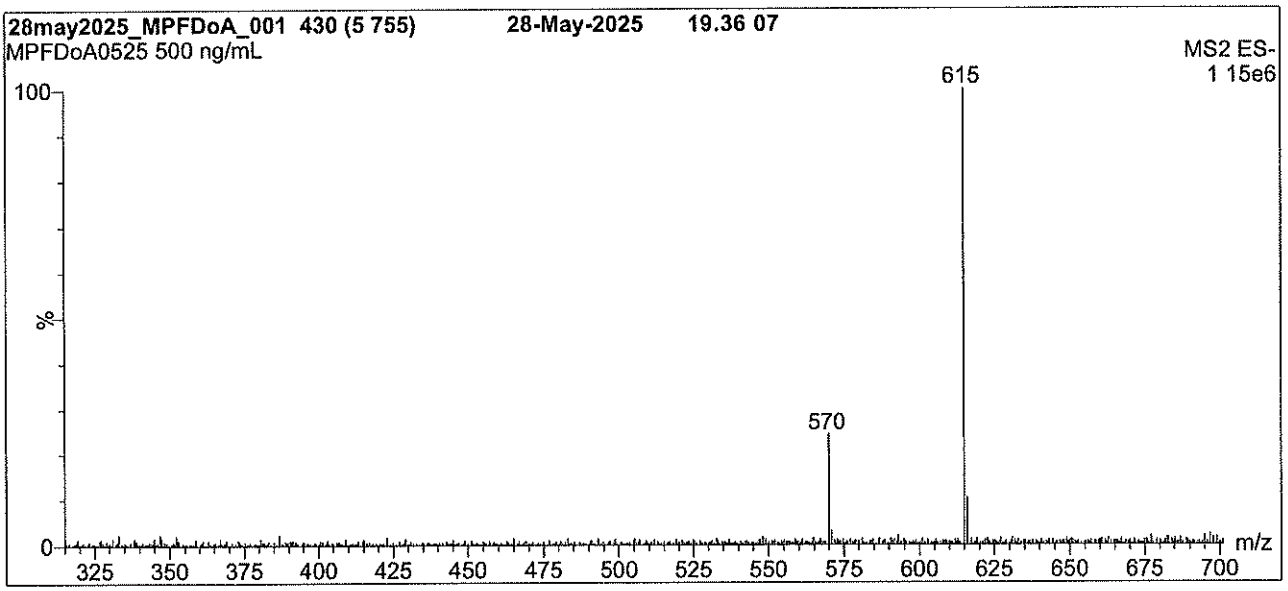
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time. 12 min

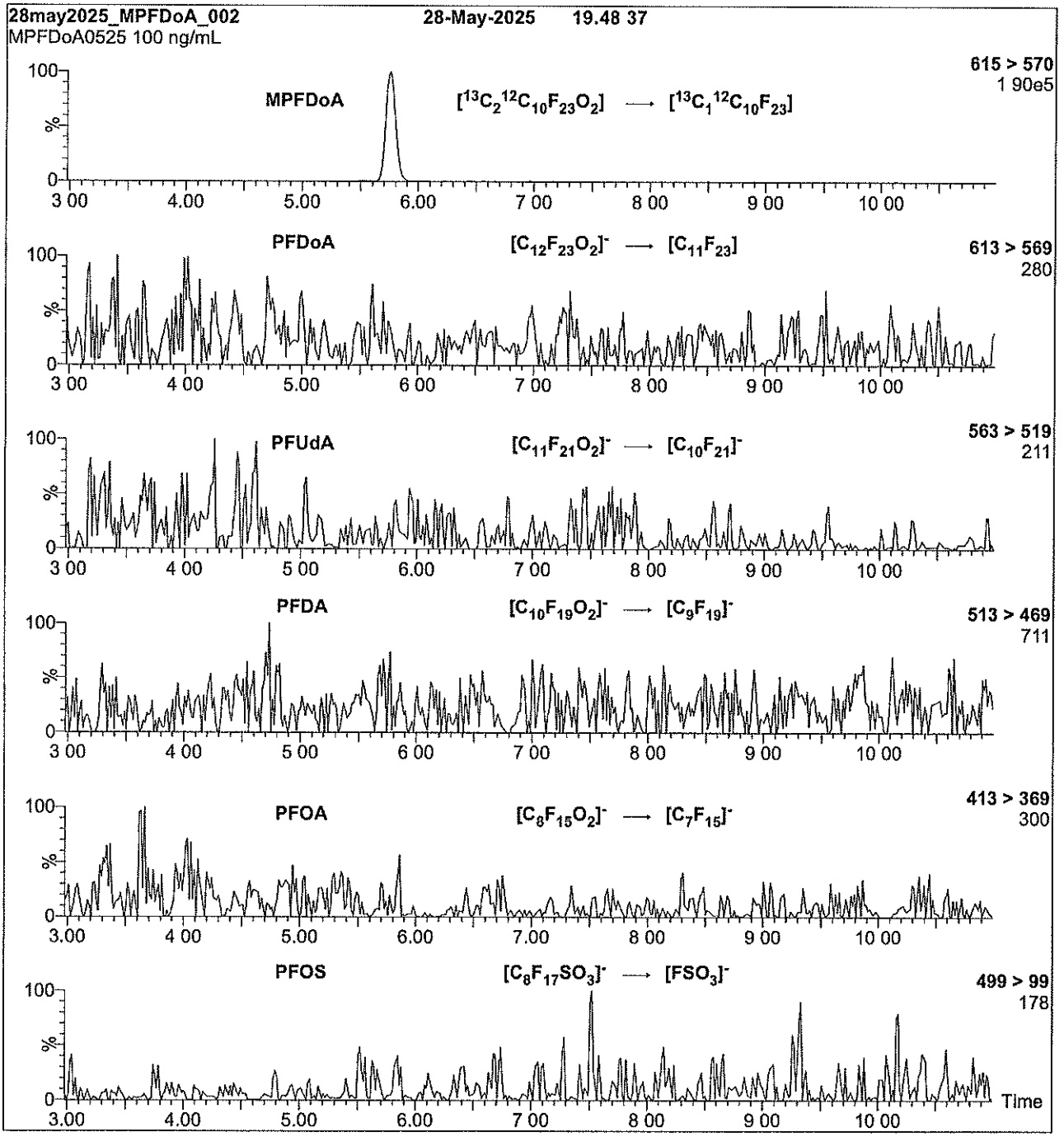
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 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. **MPFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2.

Injection	On-column (MPFDoA)	**MS Parameters.**	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 4.46e-3 Collision Energy (eV) = 12	
Flow	300 µL/min		

Reagent

PFC_ST_05339

WELLINGTON LABORATORIES

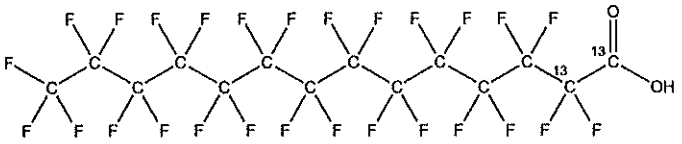
CERTIFICATE OF ANALYSIS
DOCUMENTATION

5337, 5338, 5339, 5340

PRODUCT CODE.	M2PFTeDA	**LOT NUMBER.**	M2PFTeDA0525
COMPOUND.	Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid		

STRUCTURE.

CAS #: 2708218-82-8



410-879934

MOLECULAR FORMULA.	$^{13}C_2{}^{12}C_{12}HF_{27}O_2$	**MOLECULAR WEIGHT:**	716 10
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE. (mm/dd/yyyy)	06/05/2030		
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** 06/06/2025 (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(s) 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, SFC/UV/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, and/or SFC/UV/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, x_n on which it depends is:

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

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%) has been assigned to this product.

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:

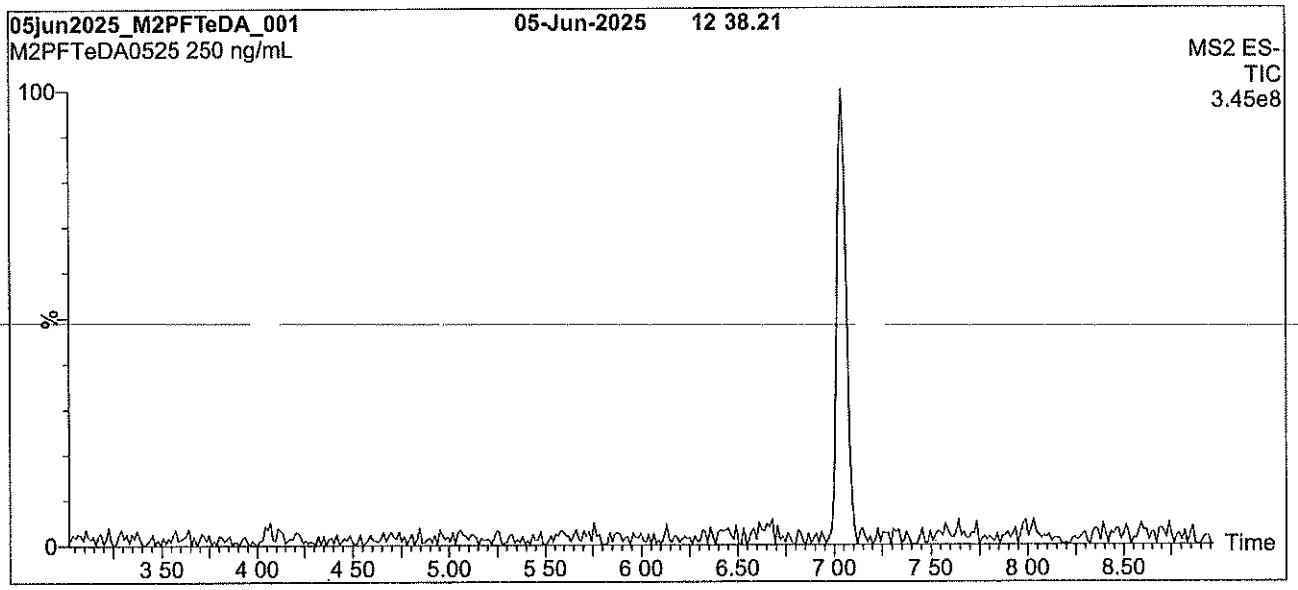
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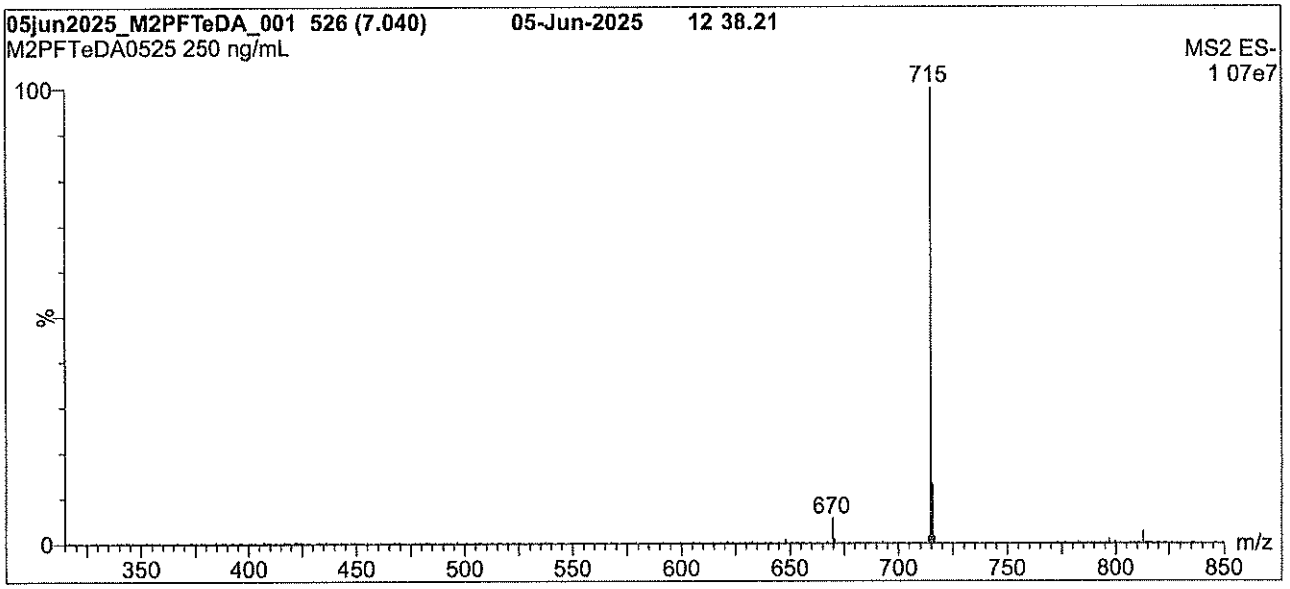
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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: 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 0.5 min
Time: 12 min

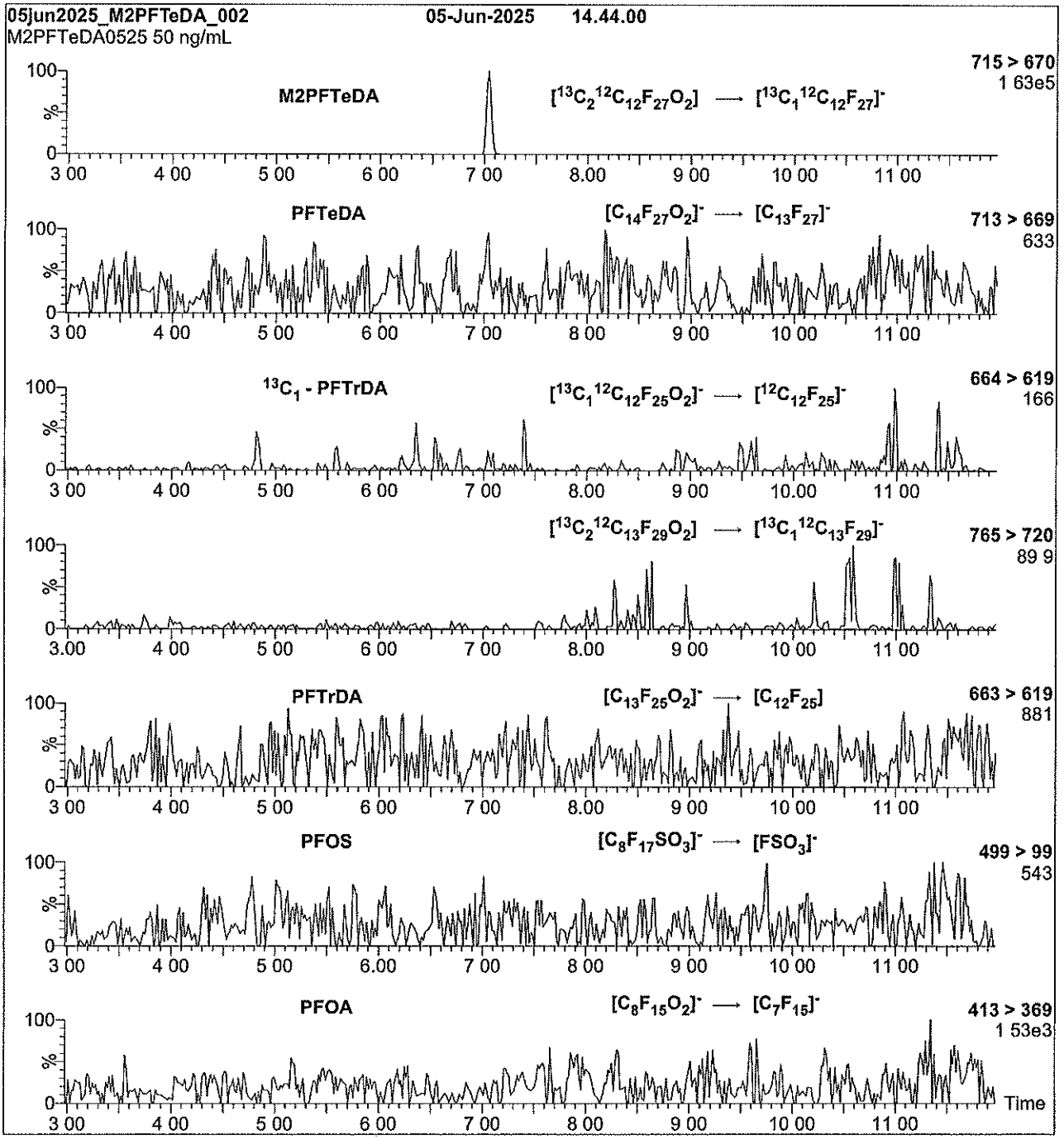
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (315 850 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. **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) = 3.76e-3
Collision Energy (eV) = 14

Reagent

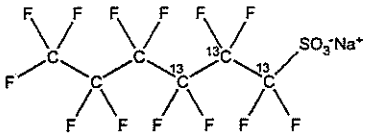
PFC_ST_05354

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST– 5354, 5355, 5356, 5357

PRODUCT CODE.	M3PFHxS	**LOT NUMBER.**	M3PFHxS1025
COMPOUND.	Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate		
STRUCTURE.		**CAS #:**	2708218-86-2



410-8800474

MOLECULAR FORMULA.	$^{13}C_3{}^{12}C_3F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	425.07
CONCENTRATION.	50.0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47.4 ± 2.4 µg/mL (M3PFHxS acid)		
	47.3 ± 2.4 µg/mL (M3PFHxS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	10/16/2025		
EXPIRY DATE. (mm/dd/yyyy)	10/16/2030		
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 ~0.6% sodium perfluoro(1,2-$^{13}C_2$)pentanesulfonate ($^{13}C_2$-PFPeS) and ~0.3% perfluoro-n-(1,2,3-$^{13}C_3$)hexanoic acid ($^{13}C_3$-PFHxA)

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date** 10/17/2025 (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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SYNTHESIS / CHARACTERIZATION.

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

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:

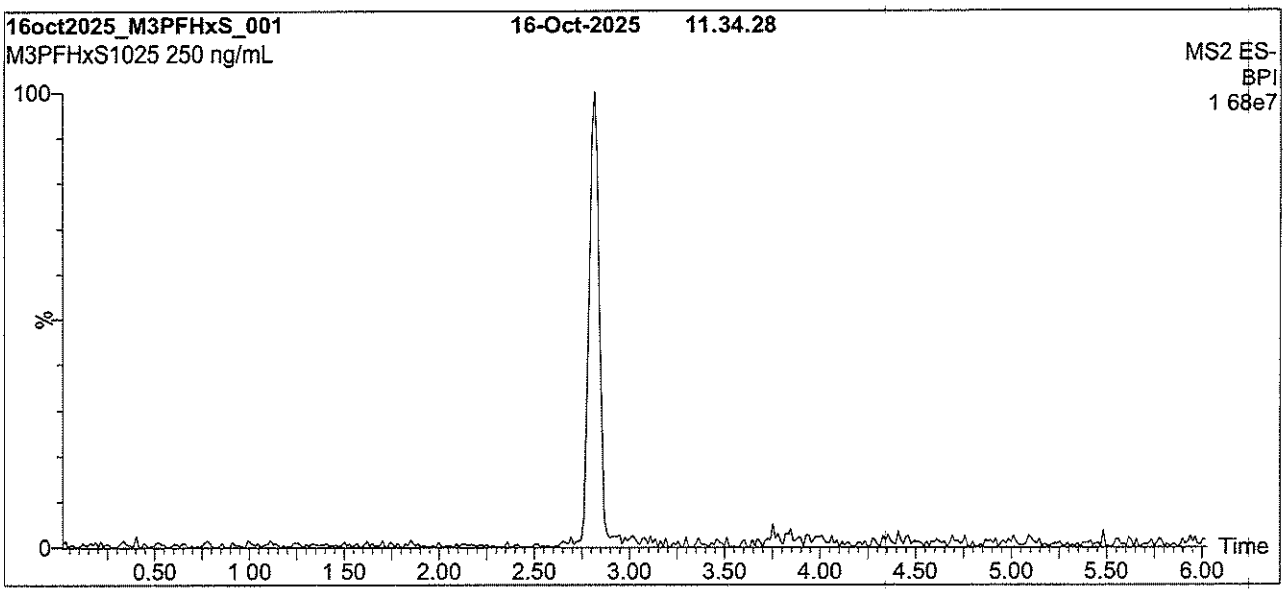
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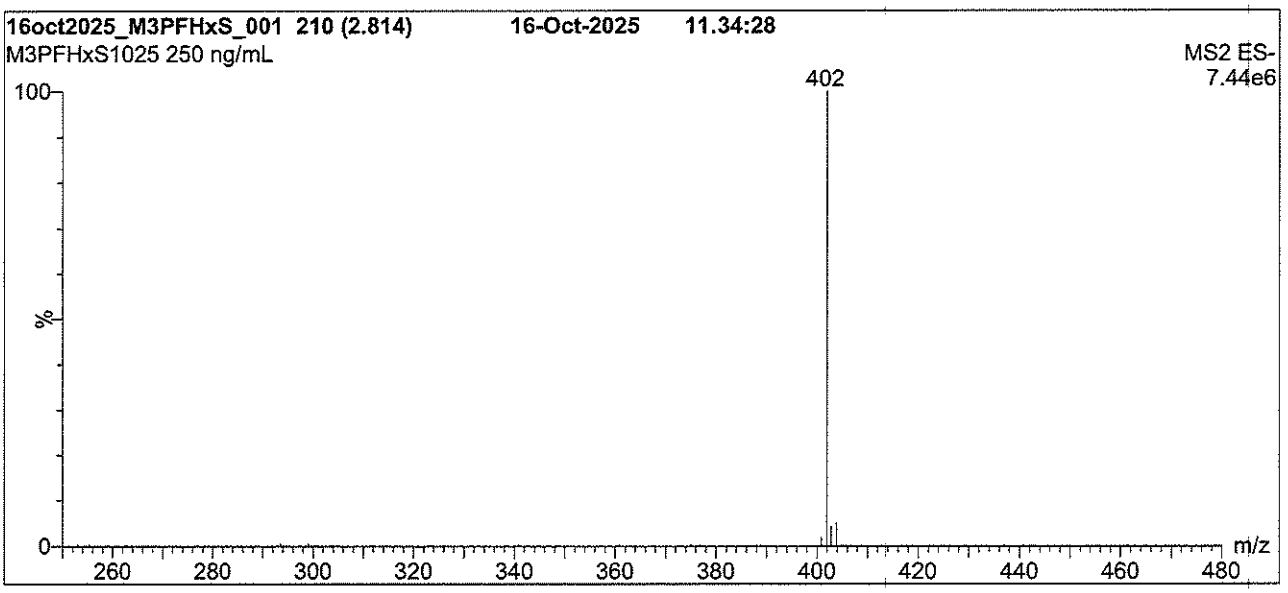
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

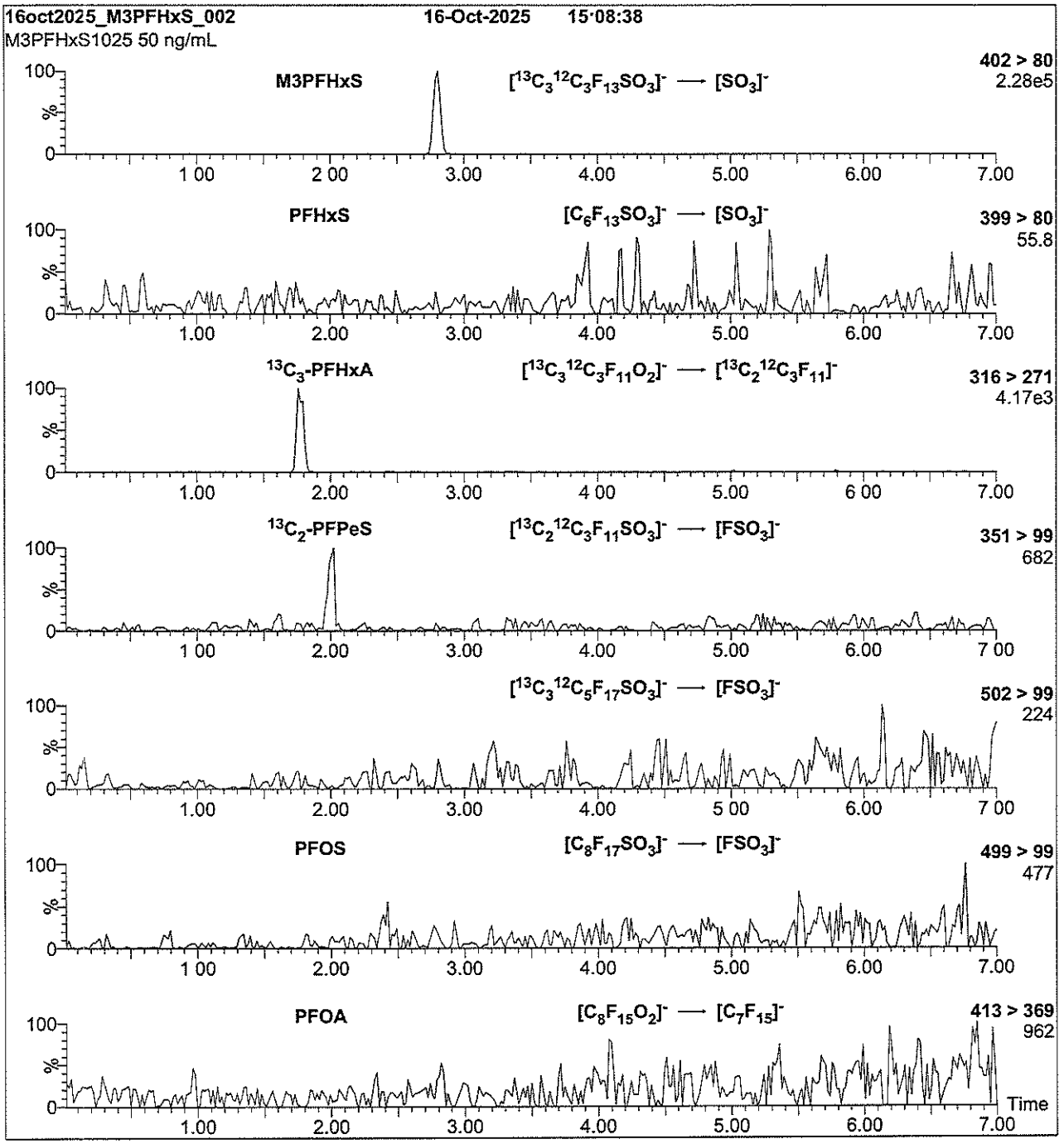
Flow: 300 µL/min

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. **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) = 4.49e-3
Collision Energy (eV) = 42 (402 > 80)

Reagent

PFC_ST_05446

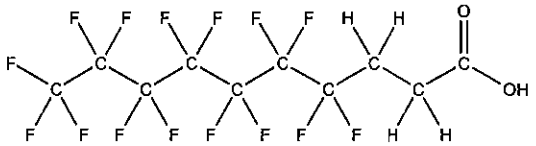
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST-03994
PFC_ST-03995

PRODUCT CODE. FHpPA **LOT NUMBER.** FHpPA1224
COMPOUND. 3-Perfluoroheptyl propanoic acid (7 3 FTCA)

STRUCTURE. **CAS #:** 812-70-4



7626701
ID: PFC_ST_03994
Exp:12/16/29 Prpd:JVK6 Opn:
Native FHpPA Stock (7:3 FTCA)

7626702
ID: PFC_ST_03995
Exp:12/16/29 Prpd:JVK6 Opn:
Native FHpPA Stock (7:3 FTCA)

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)	12/16/2024		
EXPIRY DATE. (mm/dd/yyyy)	12/16/2029		
RECOMMENDED STORAGE.	Refrigerate ampoule		

410-7626702

DOCUMENTATION/ DATA ATTACHED.

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

ADDITIONAL INFORMATION.

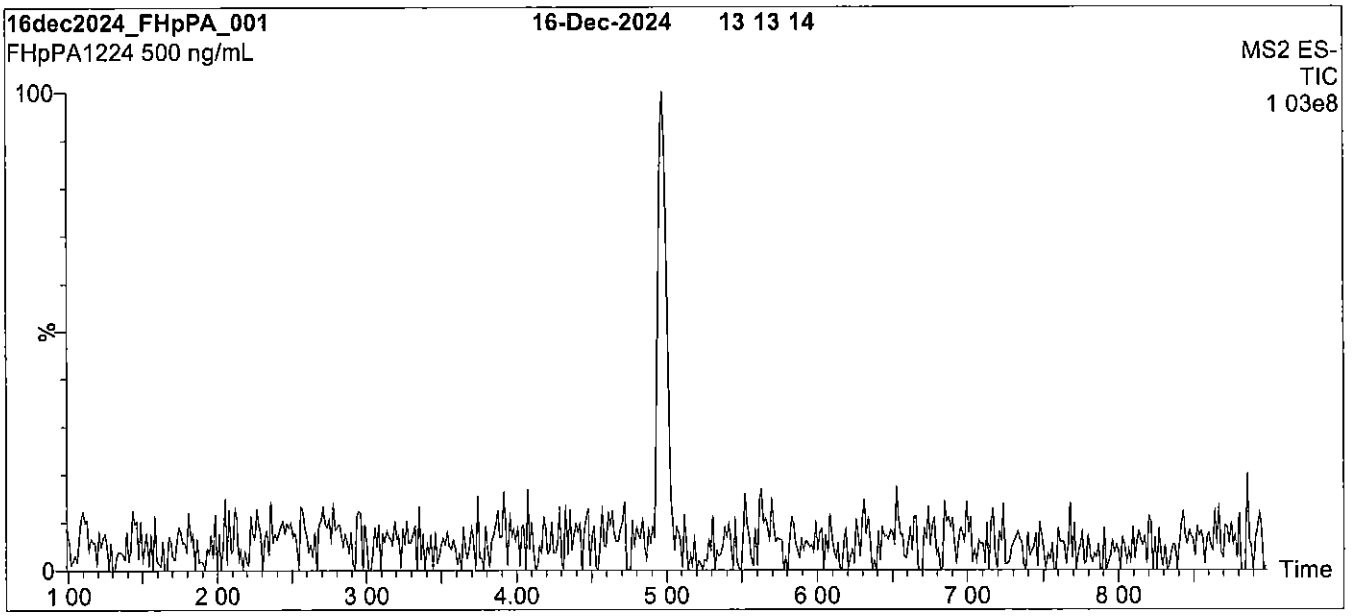
- See page 2 for further details
- Contains ~0 2% of 3-perfluorohexyl propanoic acid (6 3 FTCA)

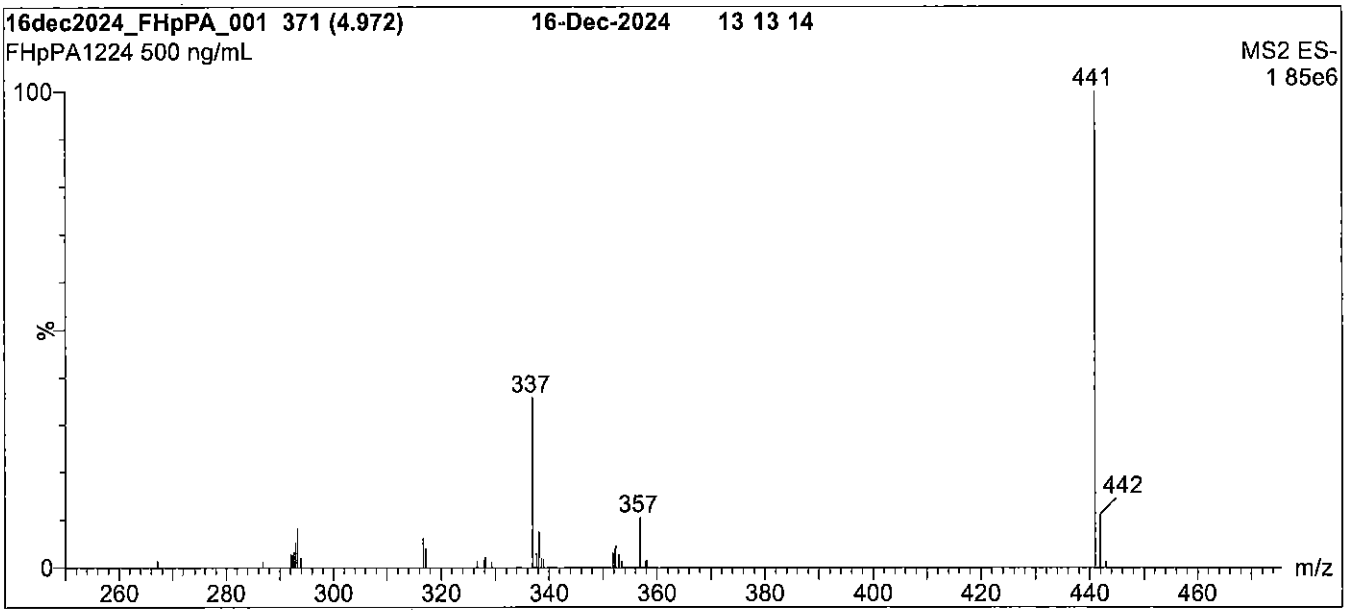
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Certified By _____ **Date** 02/18/2025 (mm/dd/yyyy)
B G. Chittim General Manager

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

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$_8$ 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 mln

Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 - 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

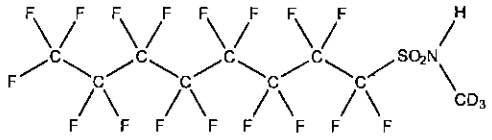
Reagent

PFC_ST_05455

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	d-N-MeFOSA-M	**LOT NUMBER:**	dNMeFOSA1024M
COMPOUND:	N-Methyl-d_3-perfluoro-1-octanesulfonamide		
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 (D)
LAST TESTED: (mm/dd/yyyy)	10/15/2024		
EXPIRY DATE: (mm/dd/yyyy)	10/15/2029		
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)

7760675
ID: PFC_ST_04344
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d3-NMePFOSA Stock

7760676
ID: PFC_ST_04345
Exp:10/15/29 Prpd:WTU3 Opn:
Labeled d3-NMePFOSA Stock

ADDITIONAL INFORMATION:

- See page 2 for further details.

410-7760675

410-7760676

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Certified By: _____ **Date:** 10/18/2024 (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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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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

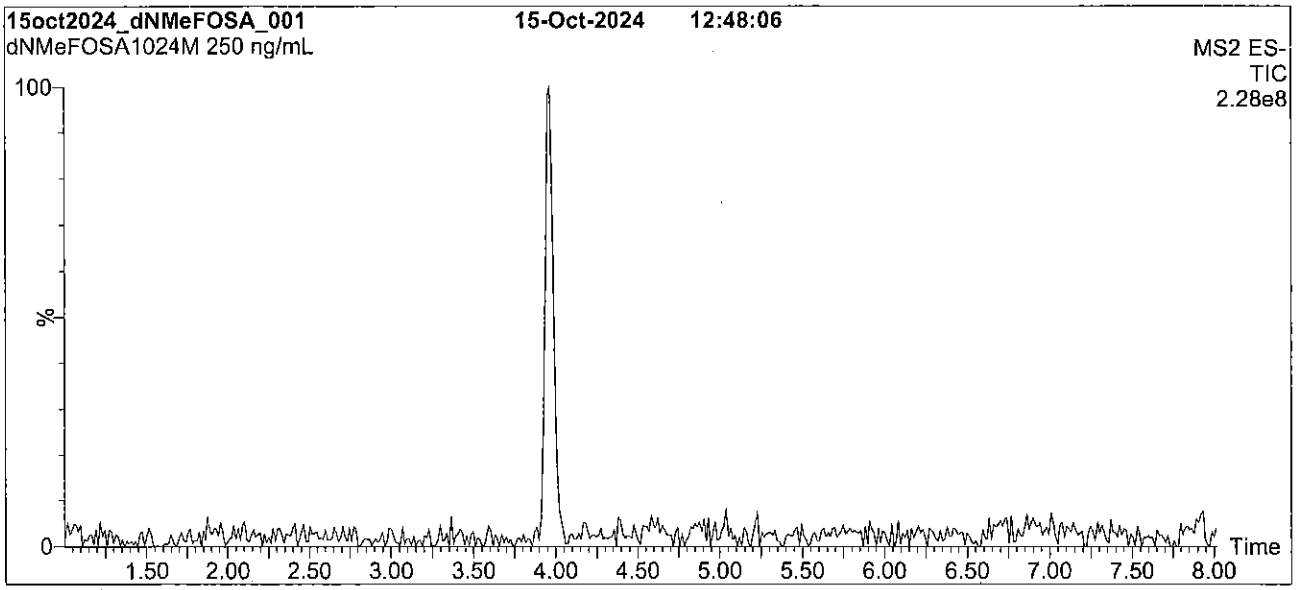
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

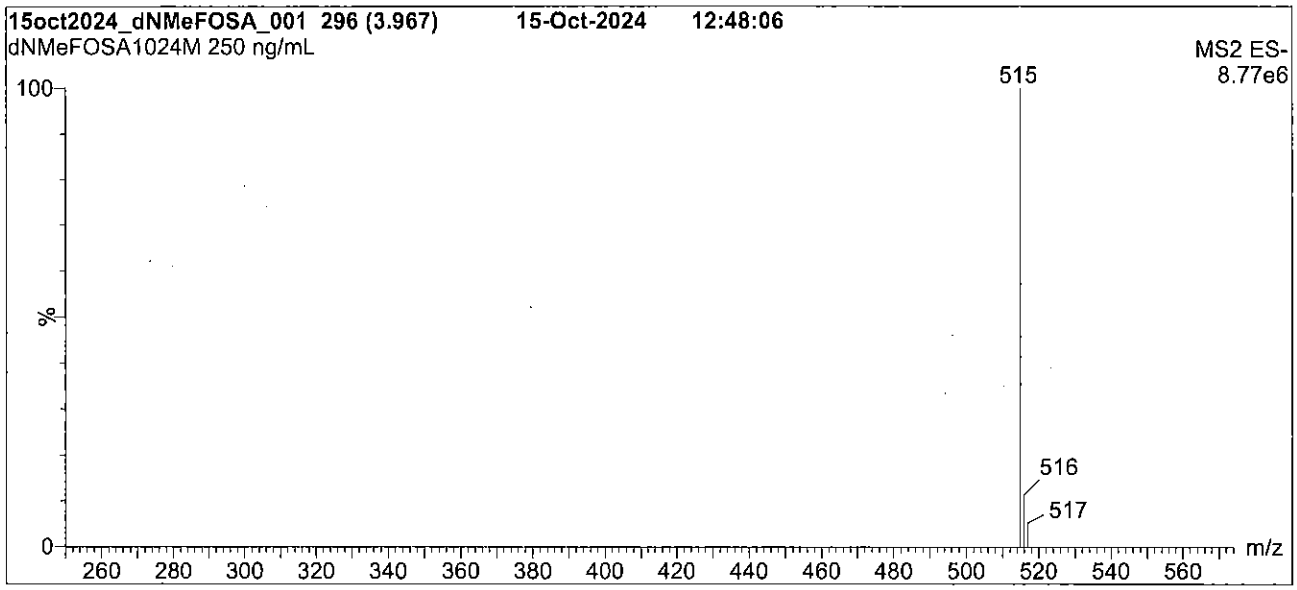
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

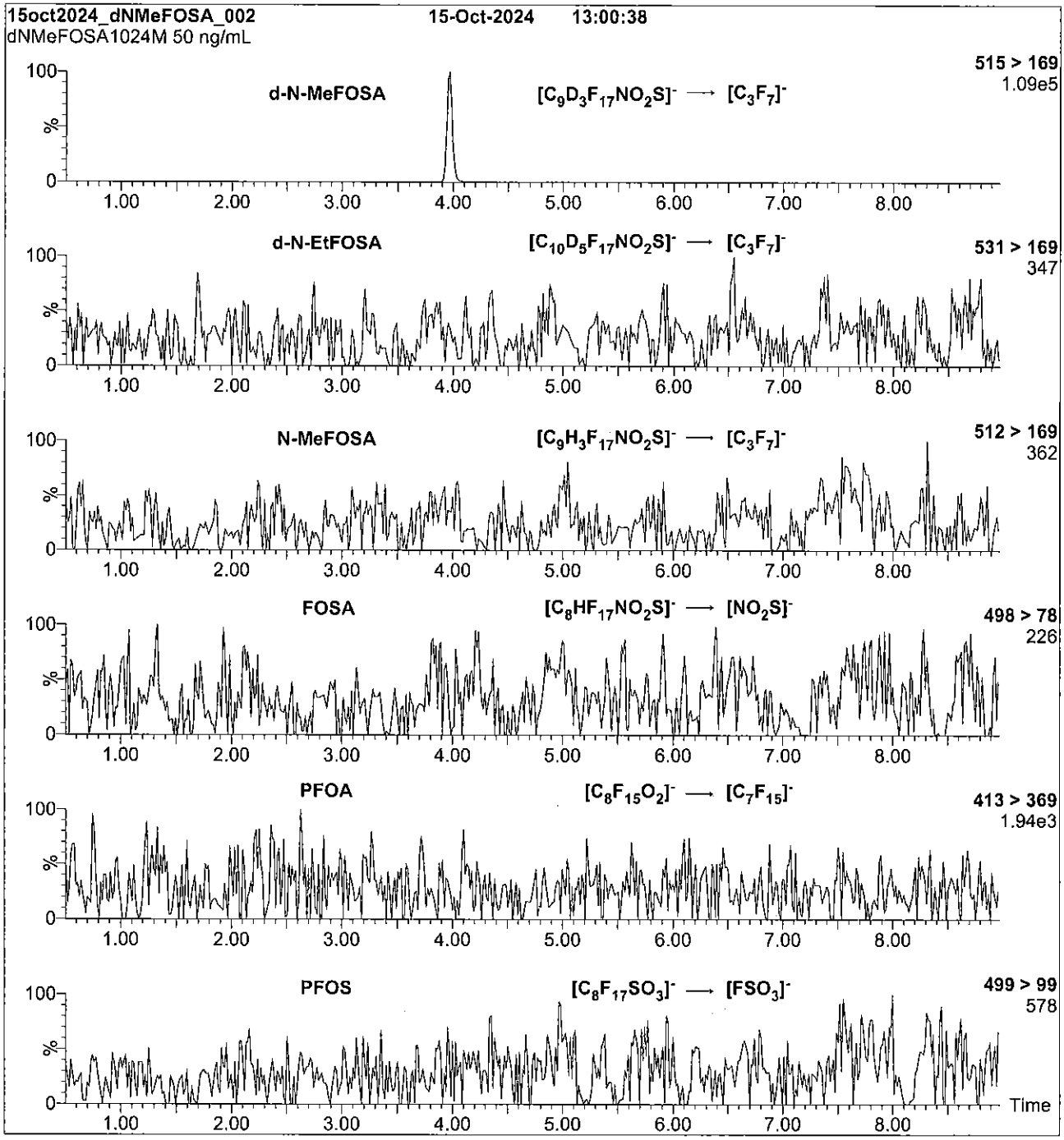
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.24e-3
Collision Energy (eV) = 24

Reagent

PFC_ST_05463

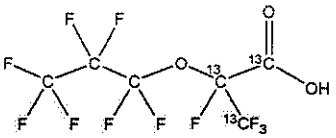
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST_ 5174, 5175, 5176, 5177, 5178

PRODUCT CODE.	M3HFPO-DA	**LOT NUMBER.**	M3HFPODA0825
COMPOUND.	$^{13}C_3$-Hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX)		
IUPAC NAME.	*rac*-2,3 3 3-Tetrafluoro-2-(1 1,2,2 3 3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		

STRUCTURE.



CAS #: 3030247-97-0

410-8827051

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
LAST TESTED. (mm/dd/yyyy)	08/19/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/19/2029		
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 compound is the $^{13}C_3$-labelled analogue of the major component of the commercial formulation known as GenX.
- M3HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions.

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By· _____ **Date** 08/28/2025 (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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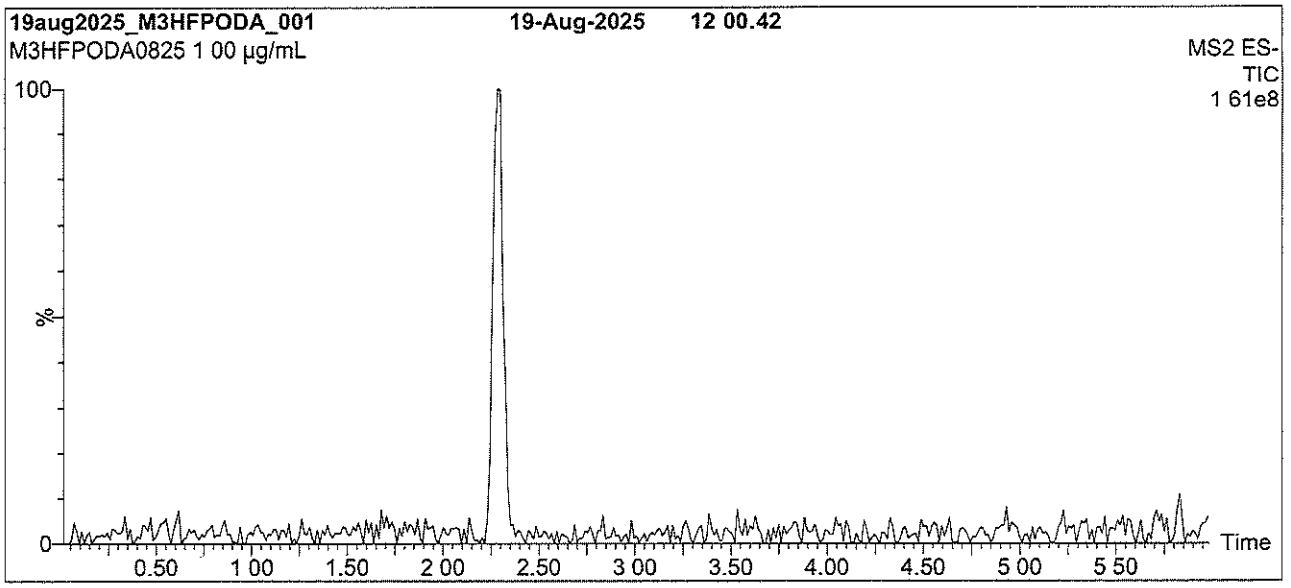
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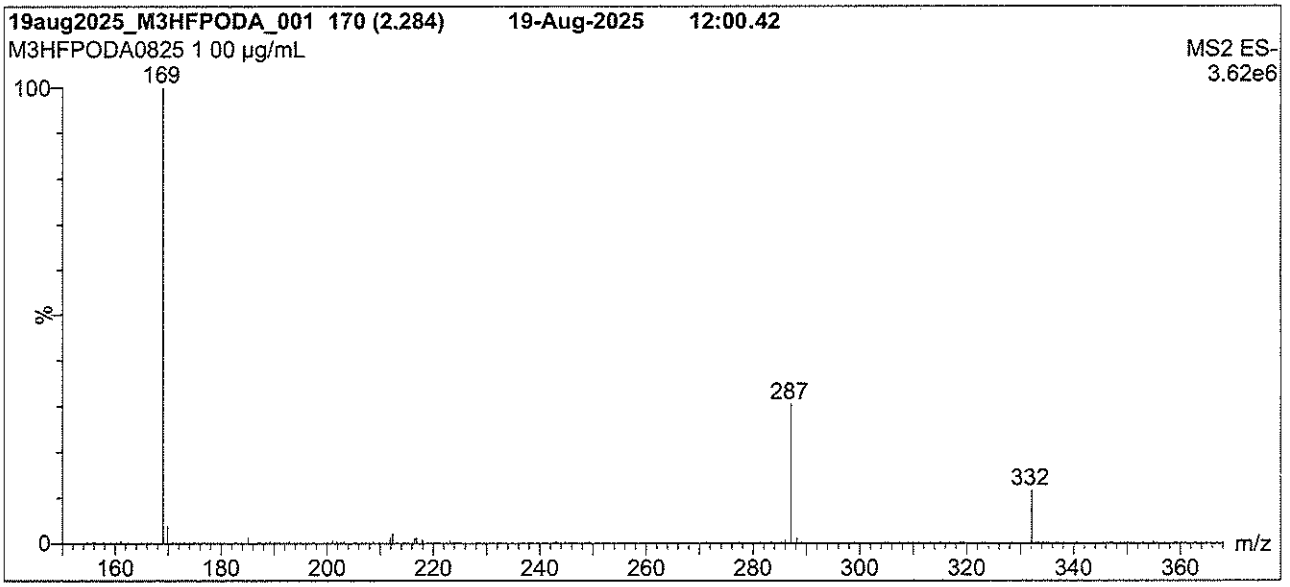
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

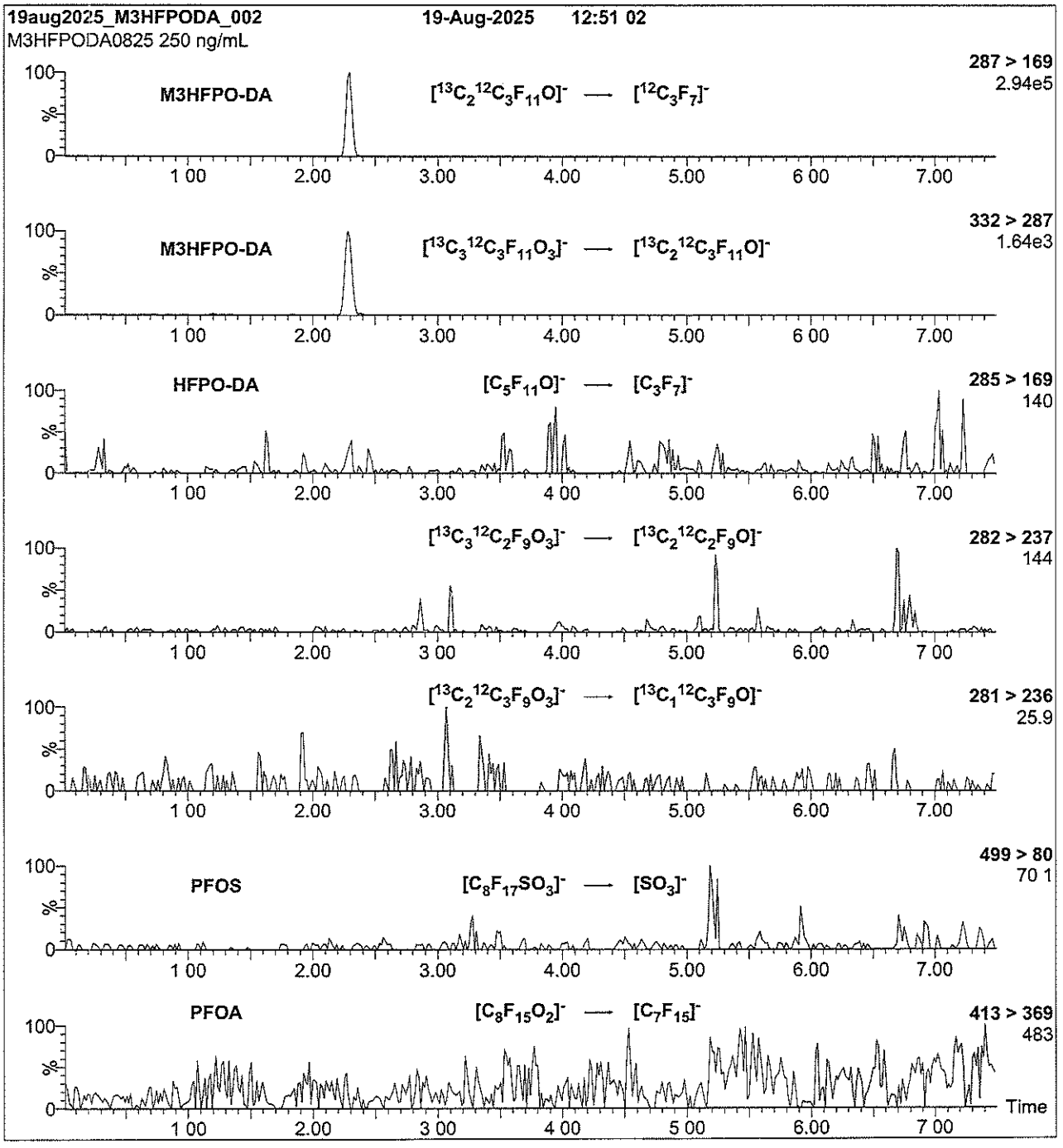
Flow· 300 µL/min

MS Parameters.

Experiment: Full Scan (150 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 350
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) = 3.57e-3
Collision Energy (eV) = 8 (287 > 169)

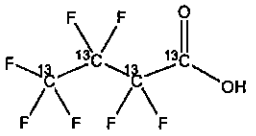
Reagent

PFC_ST_05473

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE.	MPFBA	**LOT NUMBER.**	MPFBA0725
COMPOUND.	Perfluoro-n-($^{13}C_4$)butanoic acid		
STRUCTURE.		**CAS #:**	1017281-29-6



410-8827309

MOLECULAR FORMULA.	$^{3}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218 01
CONCENTRATION.	50 0 ± 2 5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/28/2030		
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** 07/28/2025 (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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HOMOGENEITY:

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UNCERTAINTY:

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$$u_c(y(x_1, x_2 \quad x)) = \sqrt{\sum_{i=}^{n} u(y\ x)^2}$$

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:

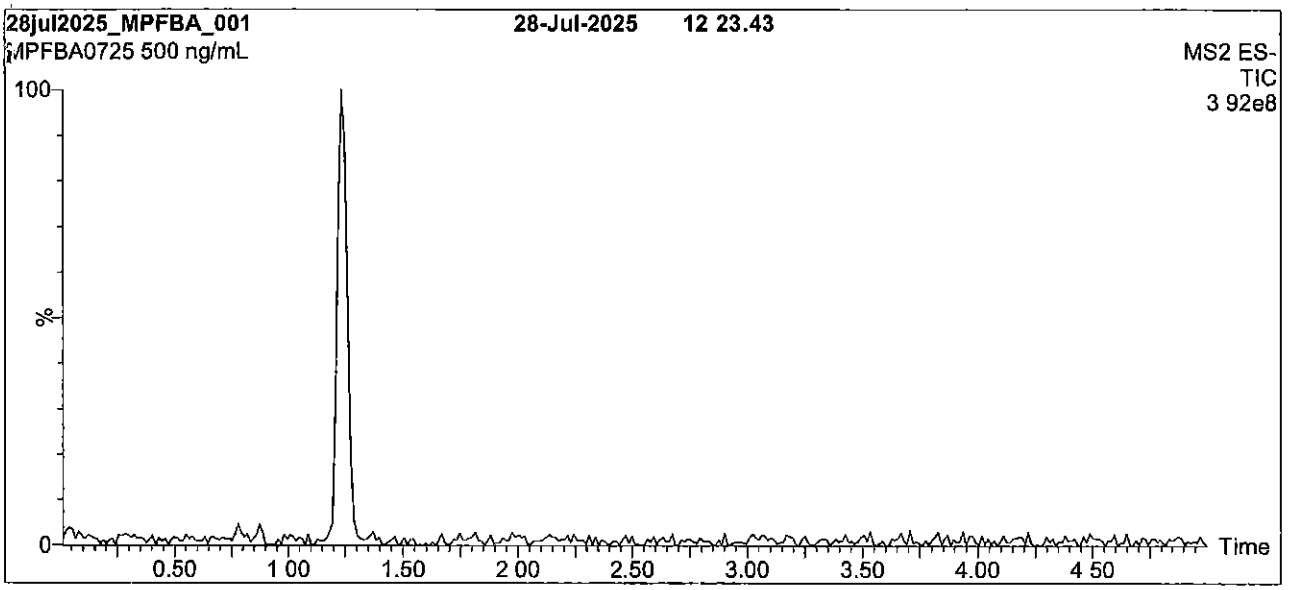
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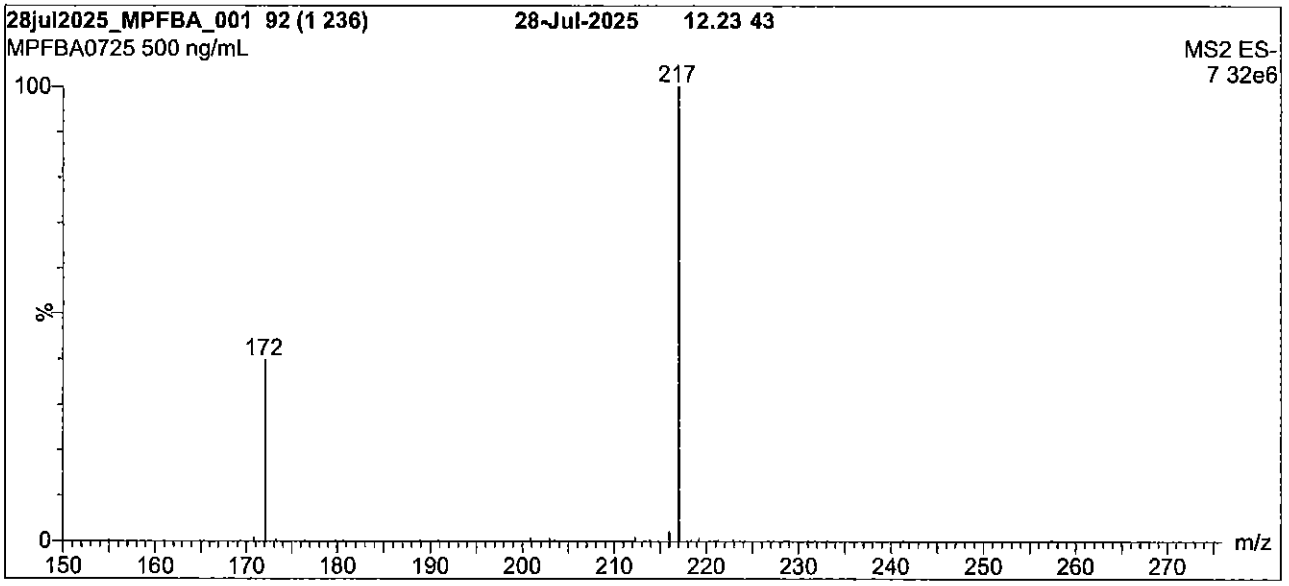
CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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.

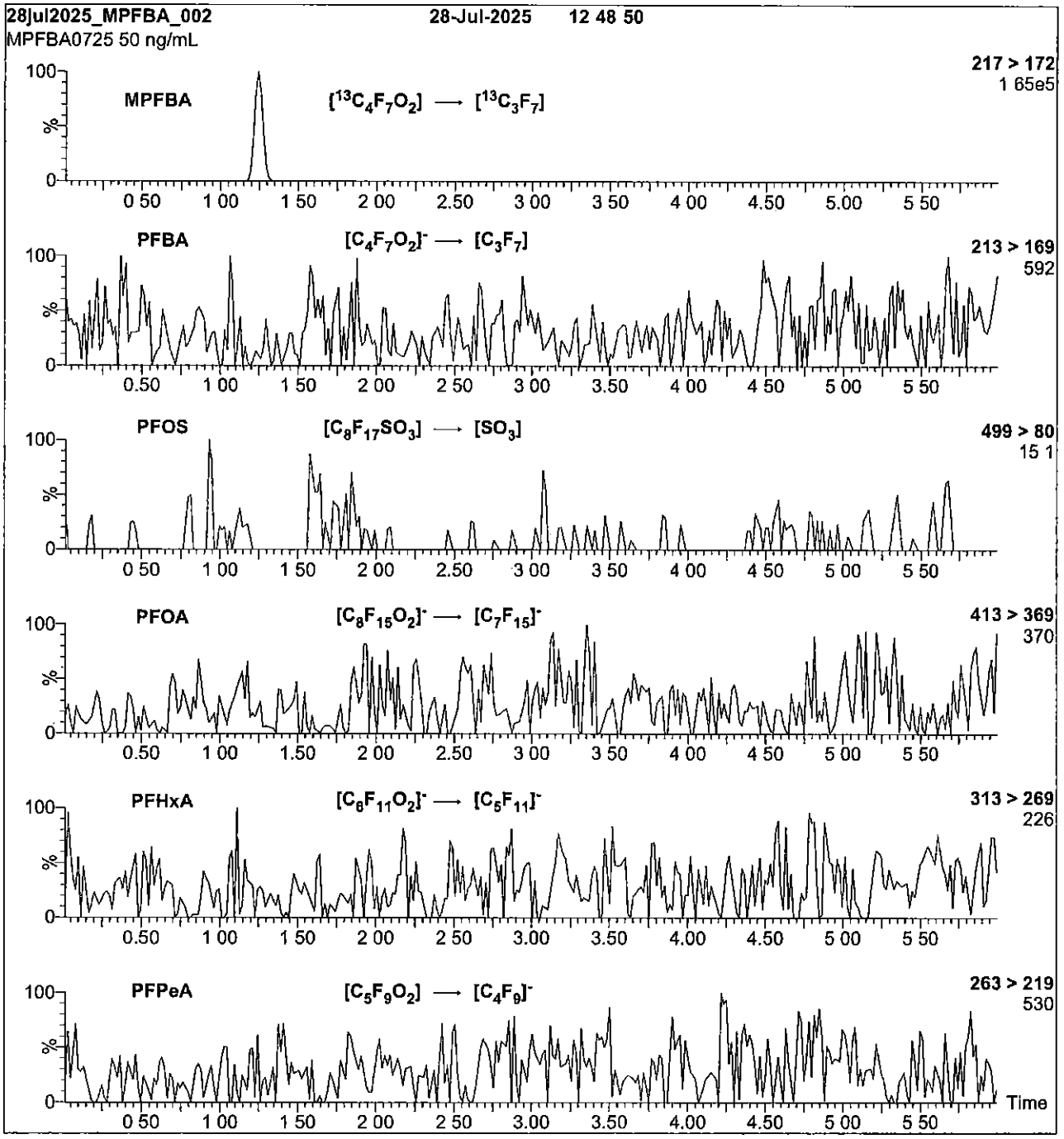
Column	Acquity UPLC BEH Shield RP_{18} 1 7 µm, 2.1 x 100 mm
Mobile phase	Gradient Start: 60% H_2O / 40% (80:20 MeOH.ACN) (both with 10 mM NH_4OAc buffer) Hold for 1 min then ramp to 80% organic over 8 min and hold for 2 min before returning to initial conditions in 0.5 min. Time: 12 min
Flow	300 µL/min

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)	**MS Parameters:**	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 3 71e-3 Collision Energy (eV) = 8	
Flow	300 µL/min		

Reagent

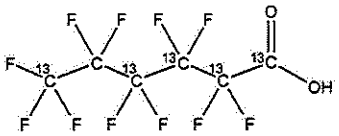
PFC_ST_05477

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ 5208, 5209, 5210

PRODUCT CODE.	M5PFHxA	**LOT NUMBER:**	M5PFHxA0925
COMPOUND.	Perfluoro-n-(1,2,3,4 6-$^{13}C_5$)hexanoic acid		
STRUCTURE.		**CAS #:**	2328024-54-8



410-8660952

MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_1HF_{11}O_2$	**MOLECULAR WEIGHT:**	319.02
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	09/15/2025		
EXPIRY DATE. (mm/dd/yyyy)	09/15/2030		
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** 09/16/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

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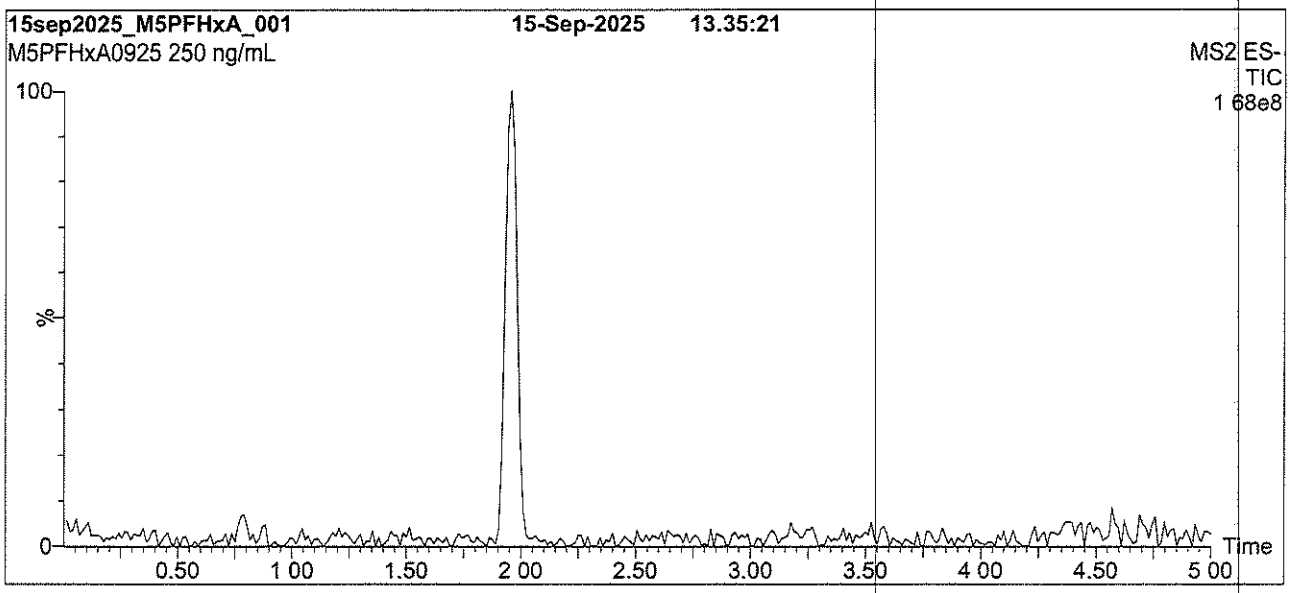
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

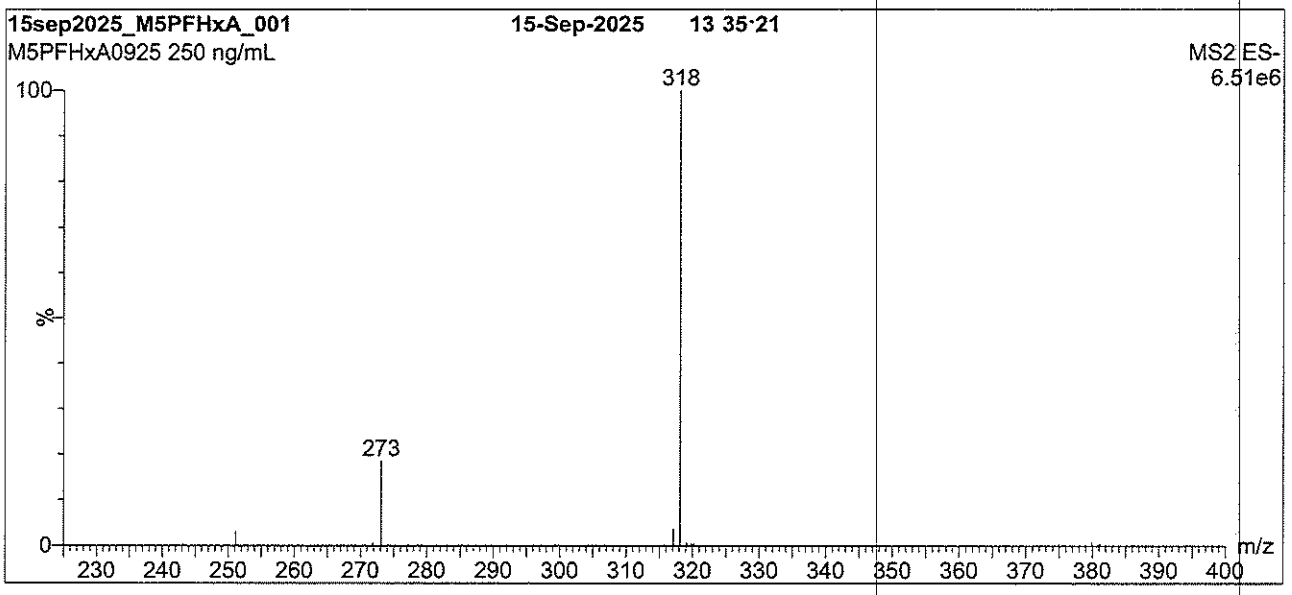
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

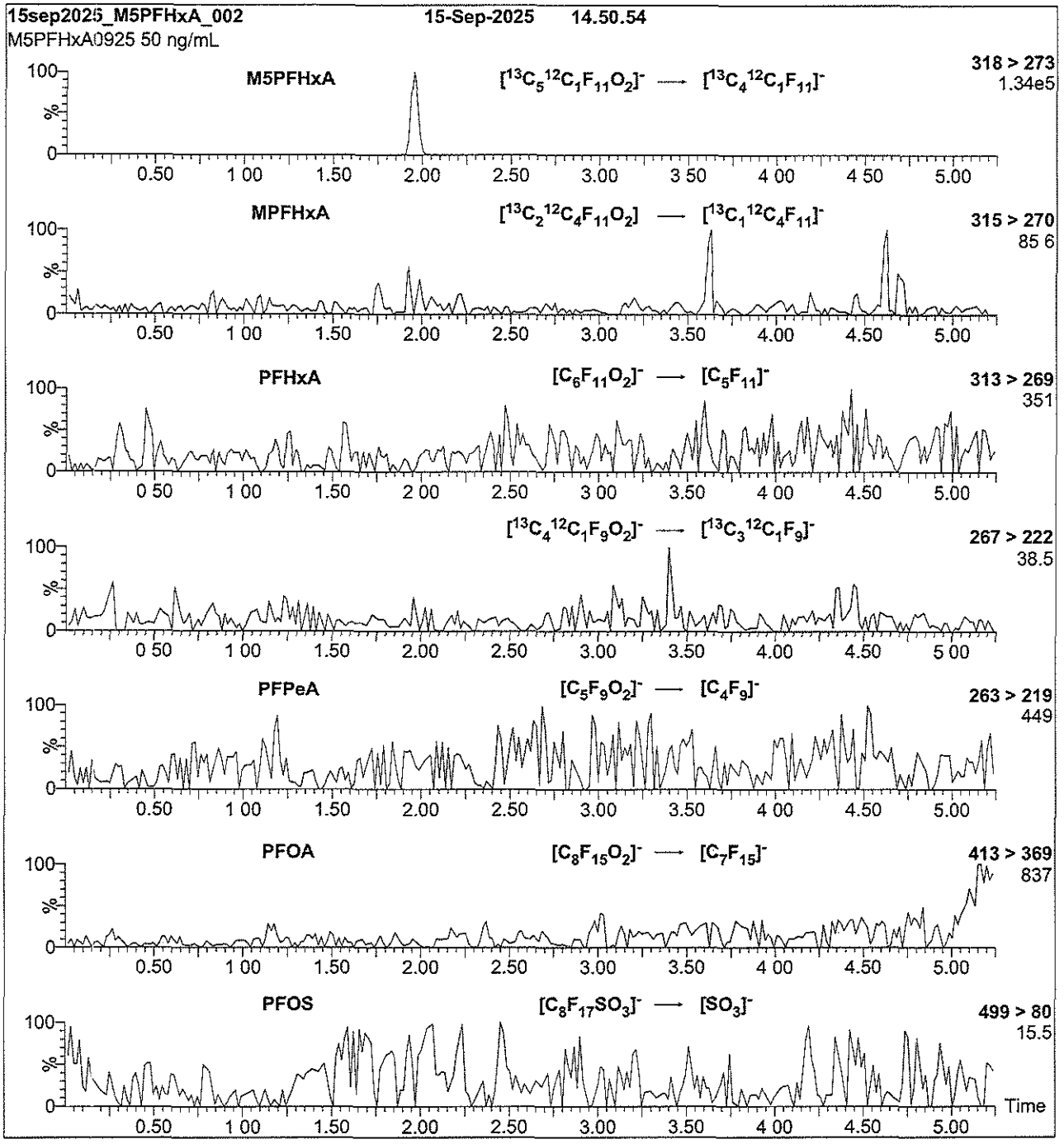
Flow: 300 µL/min

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. **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 71e-3
Collision Energy (eV) = 8 (318 > 273)

Reagent

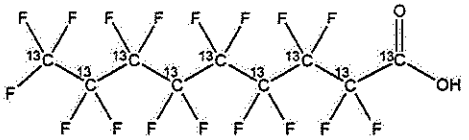
PFC_ST_05480

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST- 5480, 5481, 5482, 5483, 5484

PRODUCT CODE.	M9PFNA	**LOT NUMBER.**	M9PFNA0625
COMPOUND.	Perfluoro-n-($^{13}C_9$)nonanoic acid		
STRUCTURE.		**CAS #:**	2283397-80-6





MOLECULAR FORMULA.	$^{13}C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	473.01
CONCENTRATION.	50 0 ± 2.5 µg/mL	**SOLVENT(S).**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED. (mm/dd/yyyy)	07/04/2025		
EXPIRY DATE. (mm/dd/yyyy)	07/04/2030		
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 ~1 0% of perfluoro-n-($^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY· NOT FOR HUMAN OR DRUG USE

Certified By· _____ **Date·** 07/15/2025 (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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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, and/or SFC/UV/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, x_n on which it depends is.

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

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%) has been assigned to this product.

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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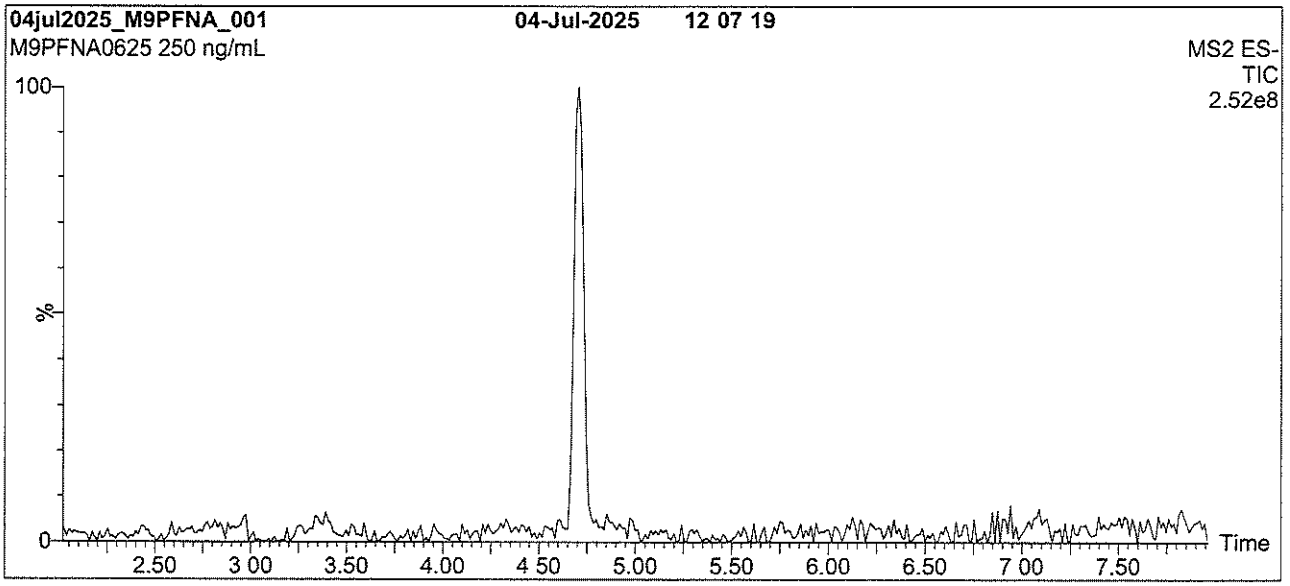
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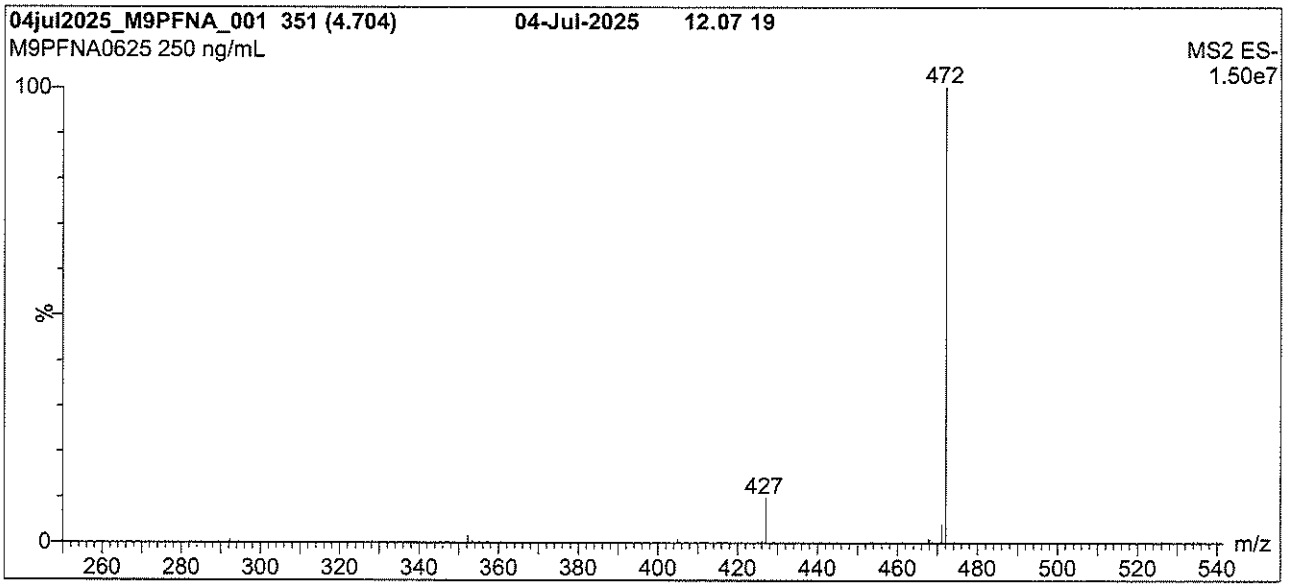
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **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: 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

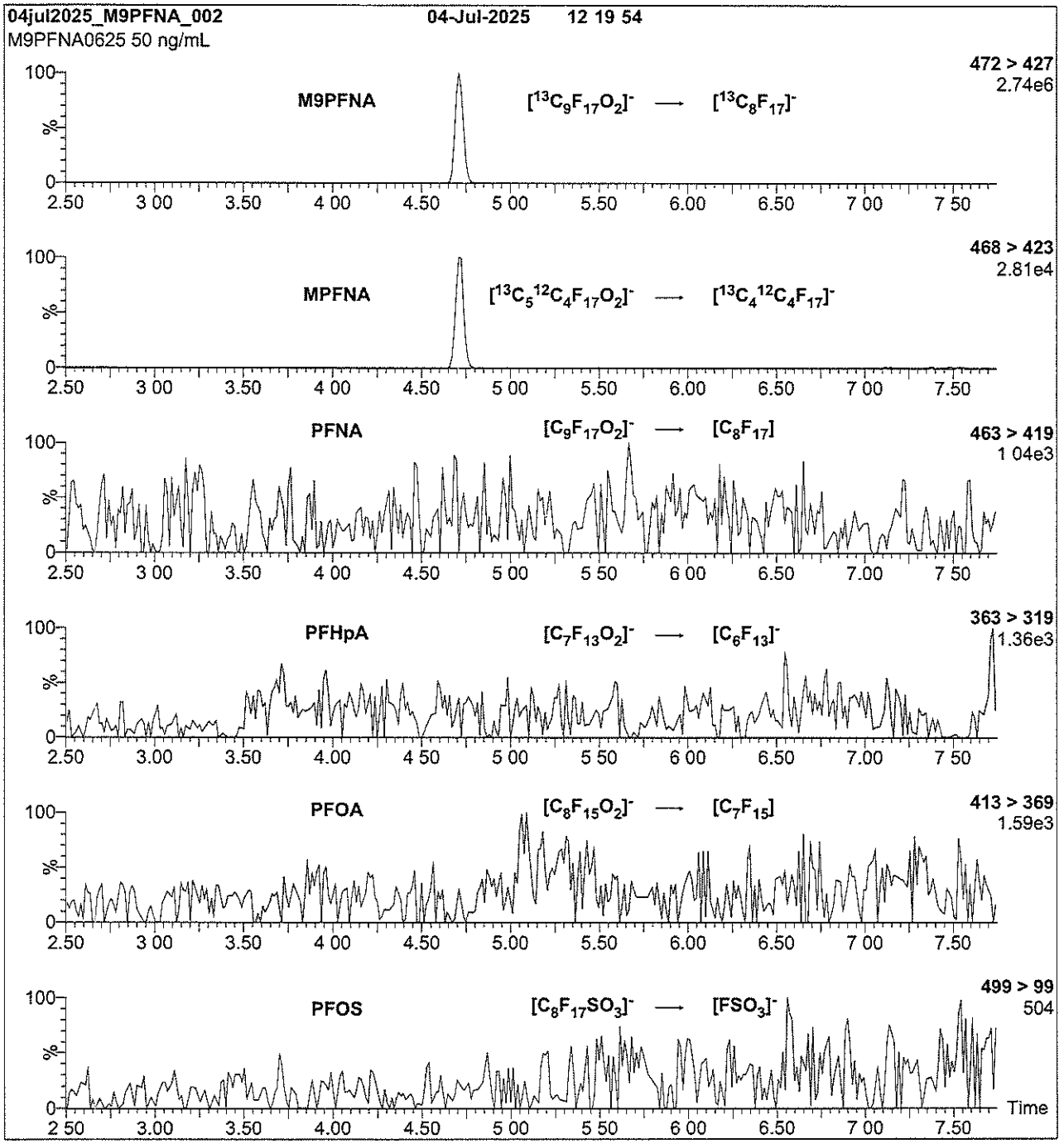
Flow: 300 µL/min

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. **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) = 4.09e-3
Collision Energy (eV) = 10

Reagent

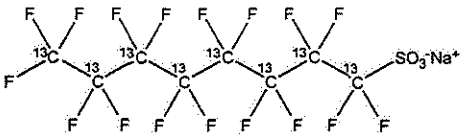
PFC_ST_05485

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-05165, 5166, 5167

PRODUCT CODE.	M8PFOS	**LOT NUMBER.**	M8PFOS1224
COMPOUND.	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		
STRUCTURE.		**CAS #:**	2522762-16-7



410-8827333

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
LAST TESTED: (mm/dd/yyyy)	01/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/02/2030		
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 ~1 1% of sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate (MPFOS) and <0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim General Manager **Date** 01/06/2025 (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.

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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, SFC/UV/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, x_n on which it depends is.

$$u_c(y(x \quad x, \quad x_n)) = \sqrt{\sum_{i=1}^{n} u(y \; x)}$$

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%) has been assigned to this product.

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:

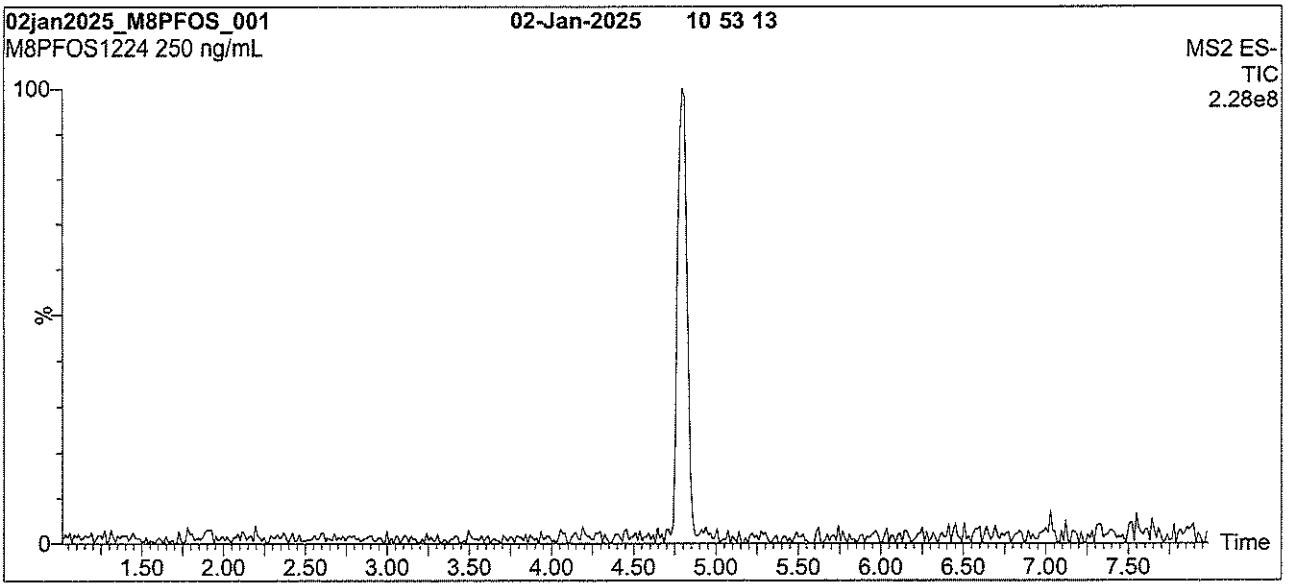
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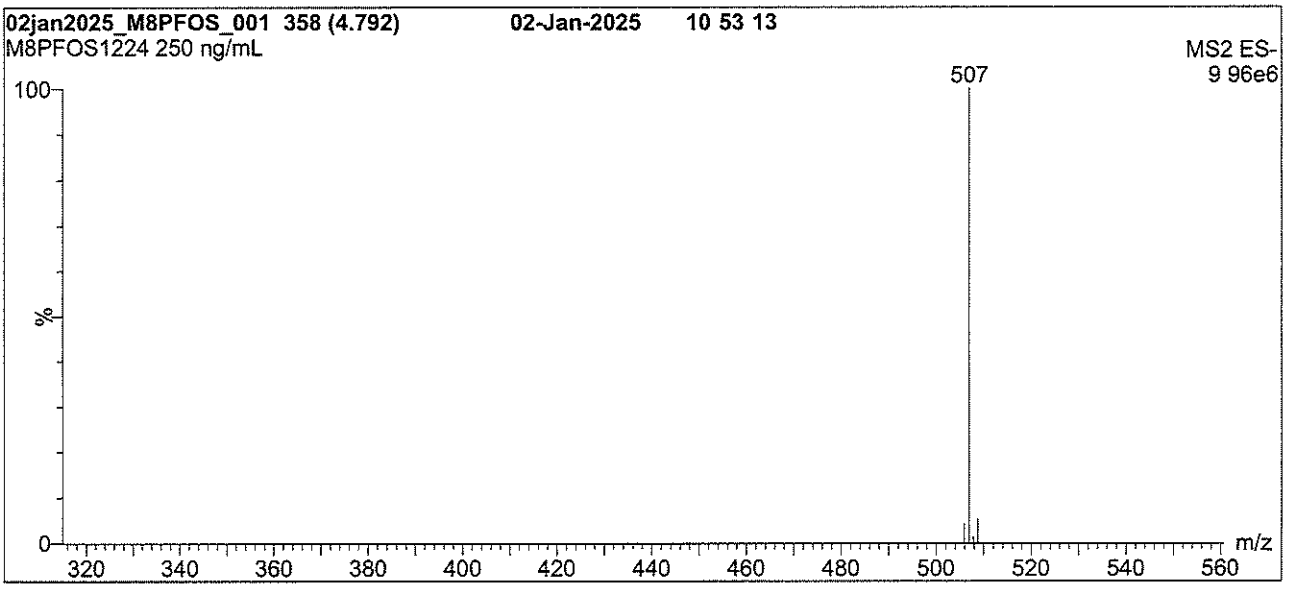
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1. **M8PFOS, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

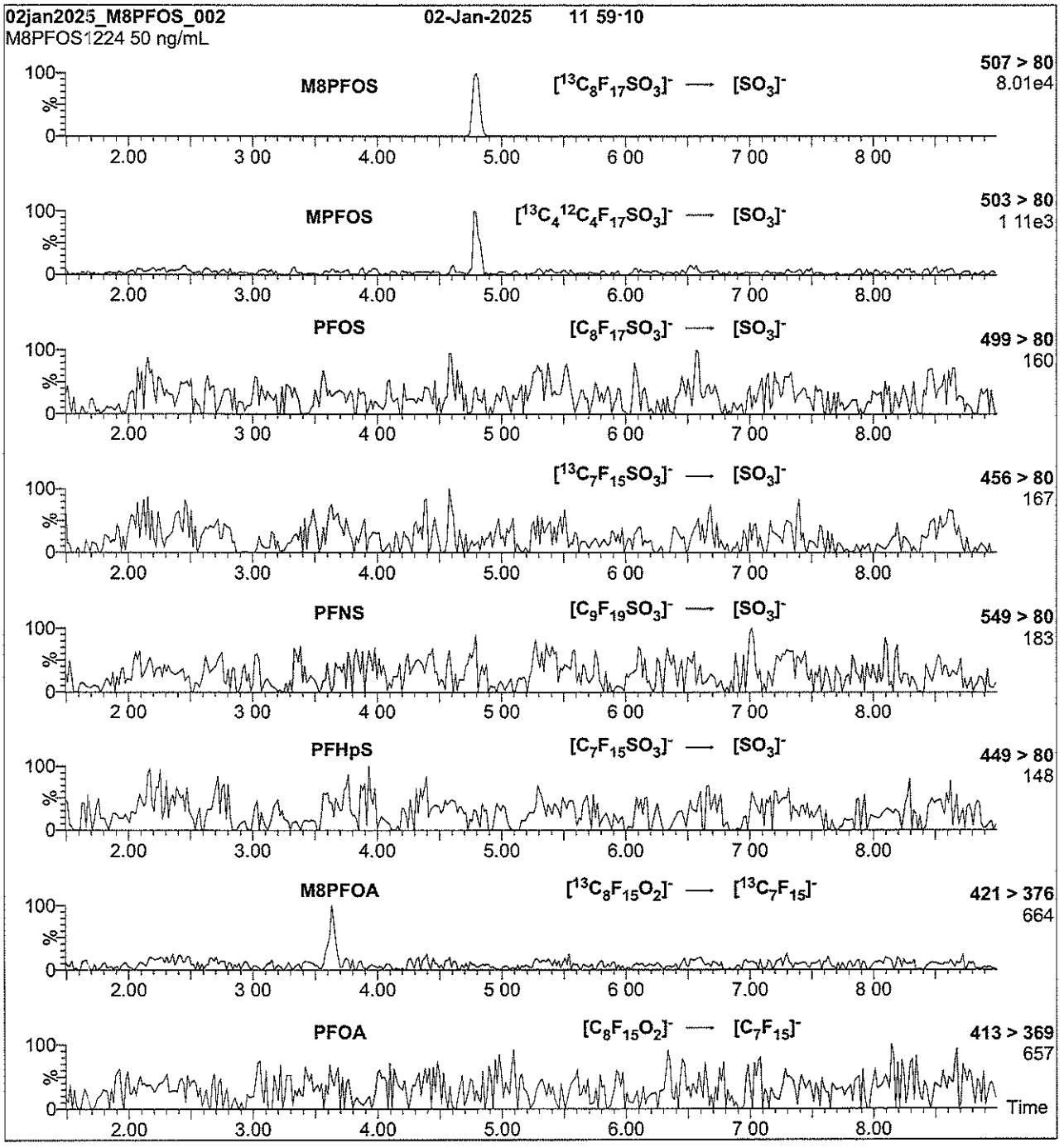
Flow· 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 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. **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) = 5.87e-3
Collision Energy (eV) = 64

Reagent

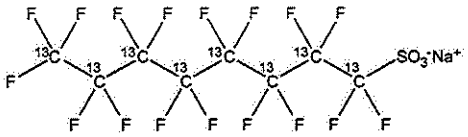
PFC_ST_05486

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST-05165, 5166, 5167

PRODUCT CODE.	M8PFOS	**LOT NUMBER.**	M8PFOS1224
COMPOUND.	Sodium perfluoro-1-($^{13}C_8$)octanesulfonate		
STRUCTURE.		**CAS #:**	2522762-16-7



410-8827334

MOLECULAR FORMULA:	$^{13}C_8F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	530 05
CONCENTRATION.	50 0 ± 2.5 µg/mL (Na salt)	**SOLVENT(S).**	Methanol
	47 9 ± 2.4 µg/mL (M8PFOS acid)		
	47.8 ± 2.4 µg/mL (M8PFOS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	01/02/2025		
EXPIRY DATE. (mm/dd/yyyy)	01/02/2030		
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 ~1 1% of sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate (MPFOS) and <0 1% of perfluoro-n-($^{13}C_8$)octanoic acid (M8PFOA).

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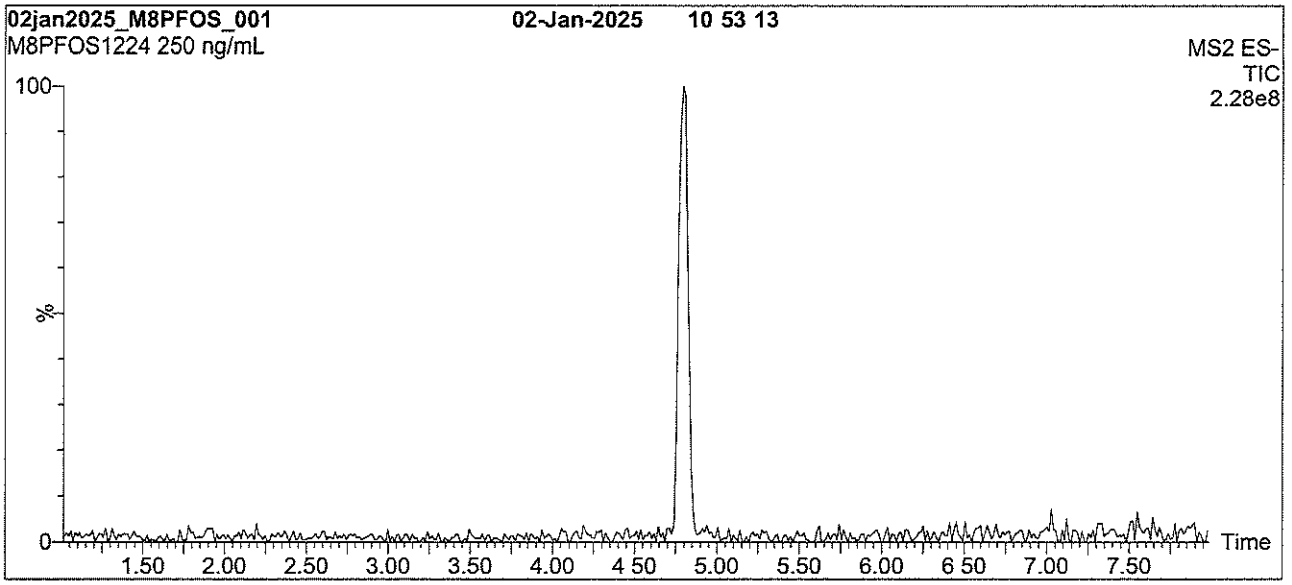
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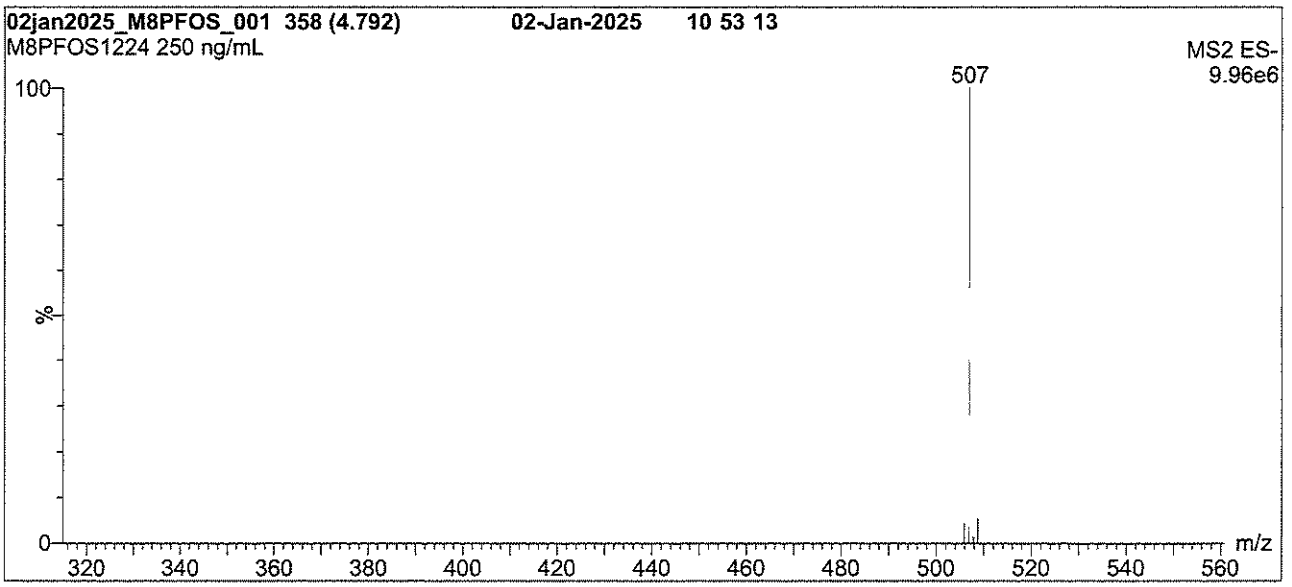
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Waters Xevo TQ-S micro MS

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before returning to initial conditions in 0.5 min
Time: 12 min

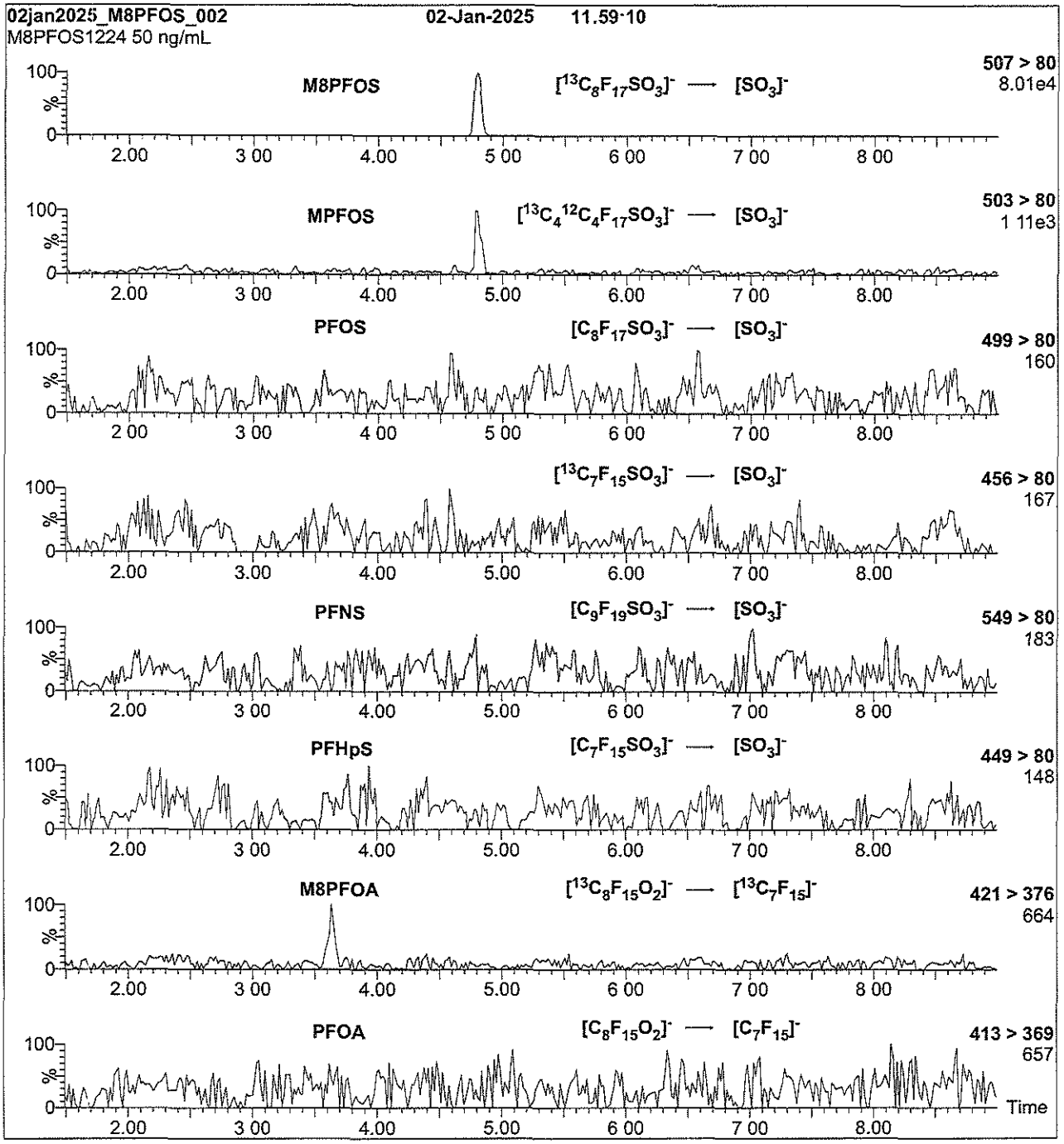
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 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. **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) = 5.87e-3
Collision Energy (eV) = 64

Reagent

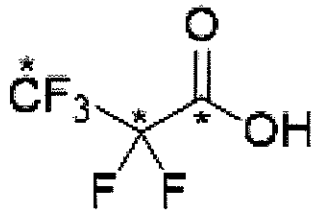
PFC_ST_05500

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover MA 01810 USA

410-8935808

Certificate of Analysis

Perfluoropropanoic acid (PFPrA) ($^{13}C_3$,99%) 50 µg/mL in MeOH w/4 molar equivalents NaOH



Catalog #:	CLM-11324-A-S
Batch #:	**B003784**
Chemical Formula.	*C3HF5O2
Molecular Weight:	167 01
Labeled CAS #:	NA
Unlabeled CAS #:	422-64-0
Manufacture Date:	4/9/2025
Retest Date:	4/8/2030

Storage: Store at room temperature away from light and moisture.
Intended Use: For Research Use Only Not for use in diagnostic procedures.

PFC_ST_ 04997, 05497, 5498, 5499, 5500

Quality Control Tests and Results

Test	Specification	Result
Concentration Based on Gravimetry	50 ± 5 µg/mL	50.0 ± 0.4 µg/mL, (k=2)

Certification

- Cambridge Isotope Laboratories, Inc. certifies that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. The COA also applies to the CIL finished good catalog number Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0 1 The expiration date is valid only for unopened vials or ampoules that have been stored as recommended. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.
- Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.
- For compounds that are enriched at 2 or more sites within the molecule, the value given for isotopic enrichment will be different from the percent species abundance of the fully enriched molecule. To learn more about isotopic enrichment and species abundance, please visit https://isotope.com/en-us/enrichment.
- Concentration is verified through multiple analysis and is calculated as the average of the multiple analysis compared to an independently prepared calibration solution. The calculation and reporting of uncertainty conforms to the practices outlined in the Eurachem/CITAC Guide. "Quantifying Uncertainty in Analytical Measurement' , Second Edition.

Marina Kleonsky
Quality Review

Date: 4/23/2025

Revision 1

Reagent

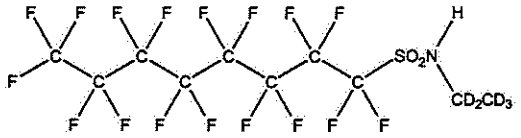
PFC_ST_05511

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST_5511, 5512

PRODUCT CODE.	d-N-EtFOSA-M	**LOT NUMBER.**	dNEtFOSA1125M
COMPOUND.	N-Ethyl-d_5-perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	936109-40-9



410-8943837

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 (D)
LAST TESTED: (mm/dd/yyyy)	11/20/2025		
EXPIRY DATE. (mm/dd/yyyy)	11/20/2030		
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:** 11/25/2025 (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(s) 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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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%) has been assigned to this product.

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:

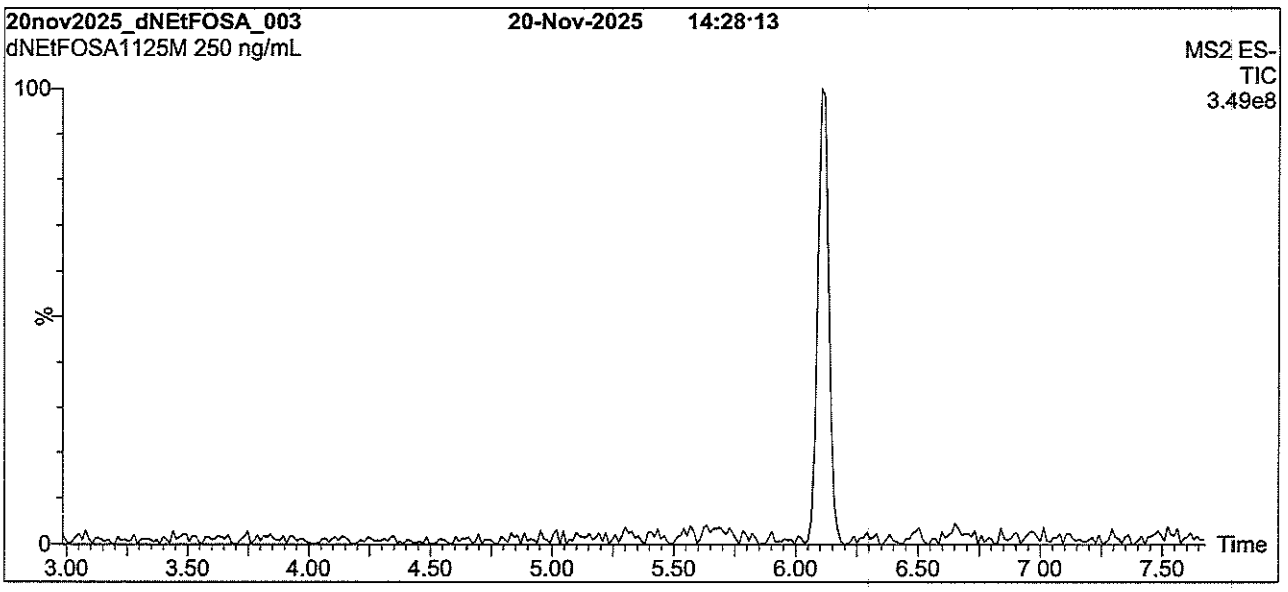
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

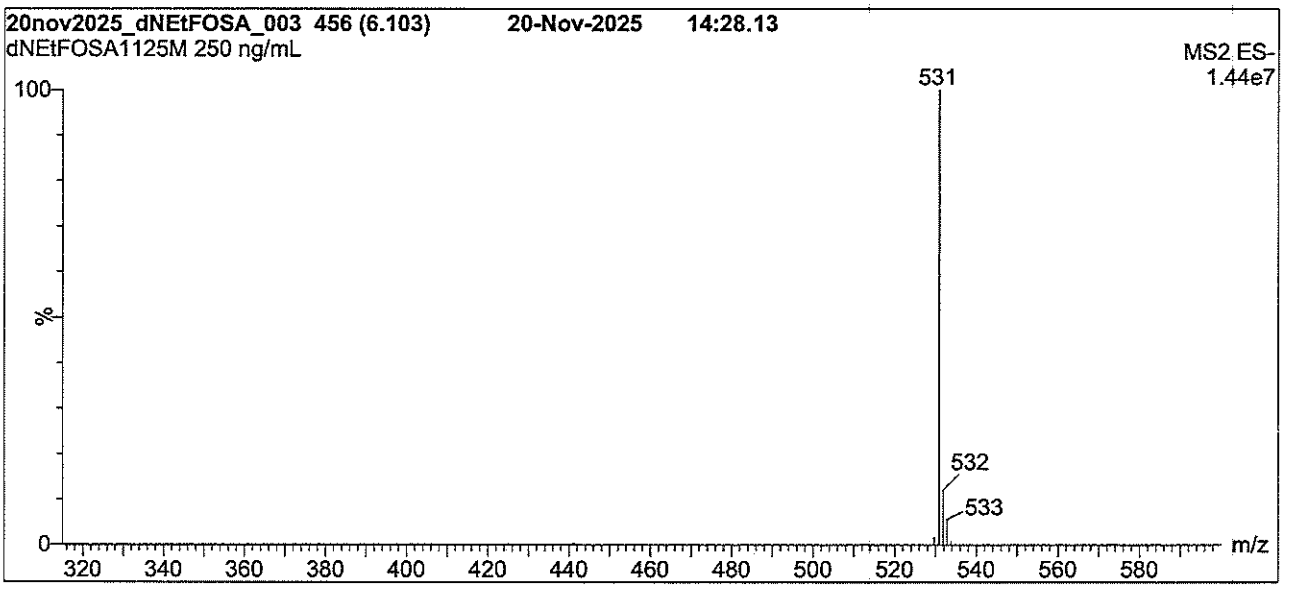
CALA Testing Accreditation No. A1226

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: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

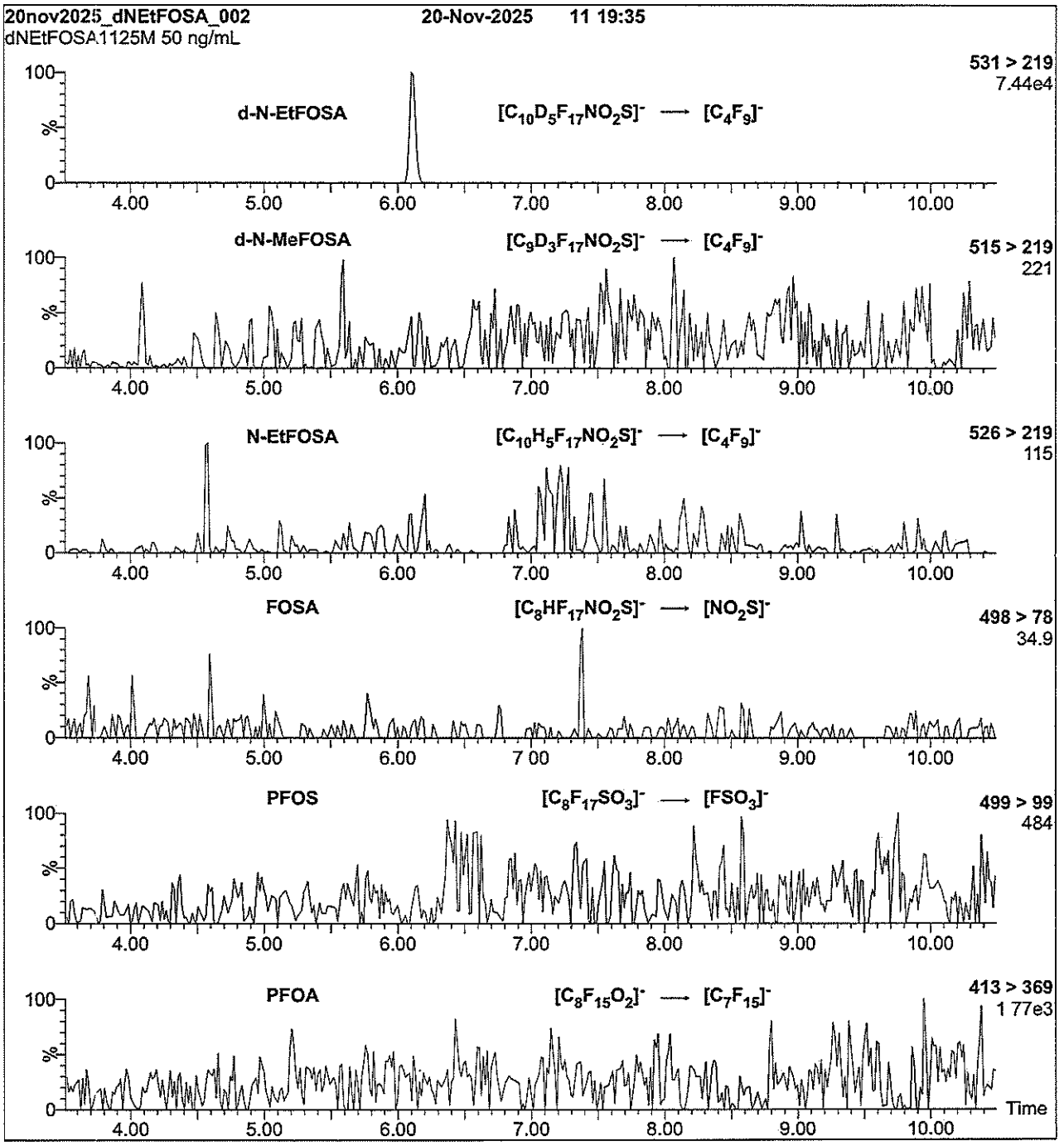
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 4.51e-3
Collision Energy (eV) = 24 (531 > 219)

Reagent

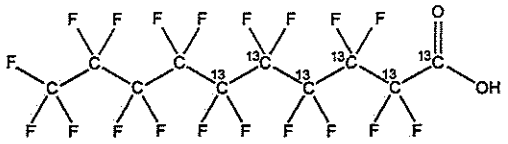
PFC_ST_05525

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST_ 5524, 5525

PRODUCT CODE.	M6PFDA	**LOT NUMBER:**	M6PFDA1125
COMPOUND:	Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid		
STRUCTURE.		**CAS #:**	2328024-56-0



410-8943931

MOLECULAR FORMULA:	$^{13}C_6{}^{12}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520.04
CONCENTRATION.	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	11/20/2025		
EXPIRY DATE: (mm/dd/yyyy)	11/20/2030		
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% perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid (MPFNA), as well as three additional minor impurities.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/28/2025 (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, SFC/UV/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,. .x_n on which it depends is:

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

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%) has been assigned to this product.

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:

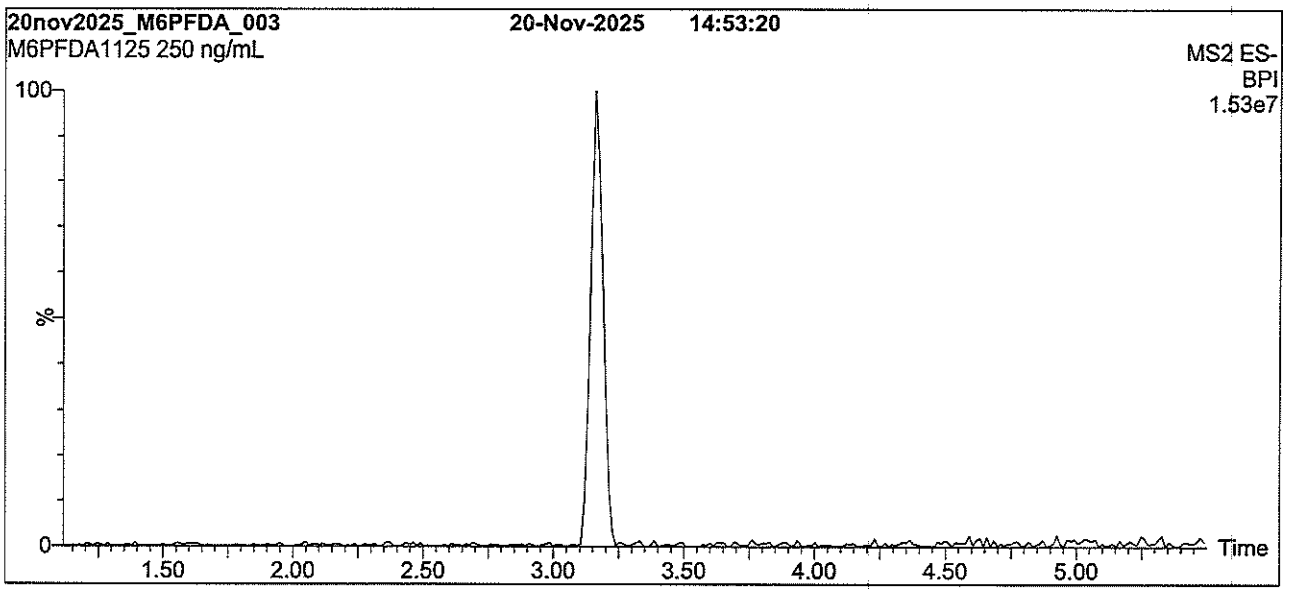
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

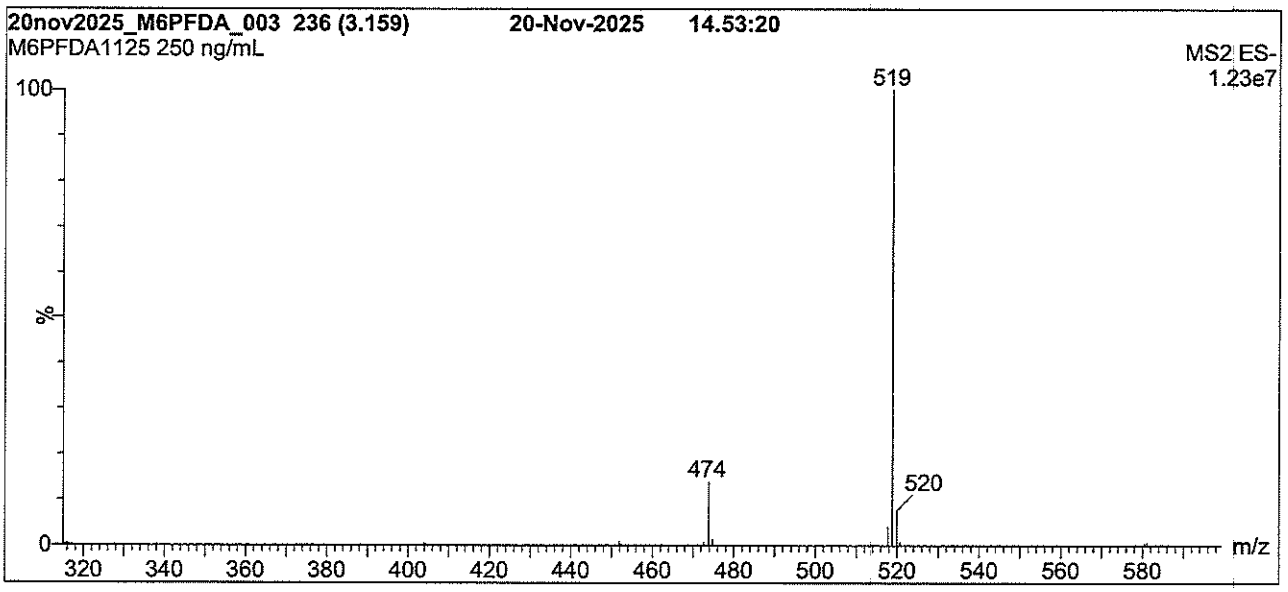
CALA Testing Accreditation No. A1226

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: **M6PFDA, 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

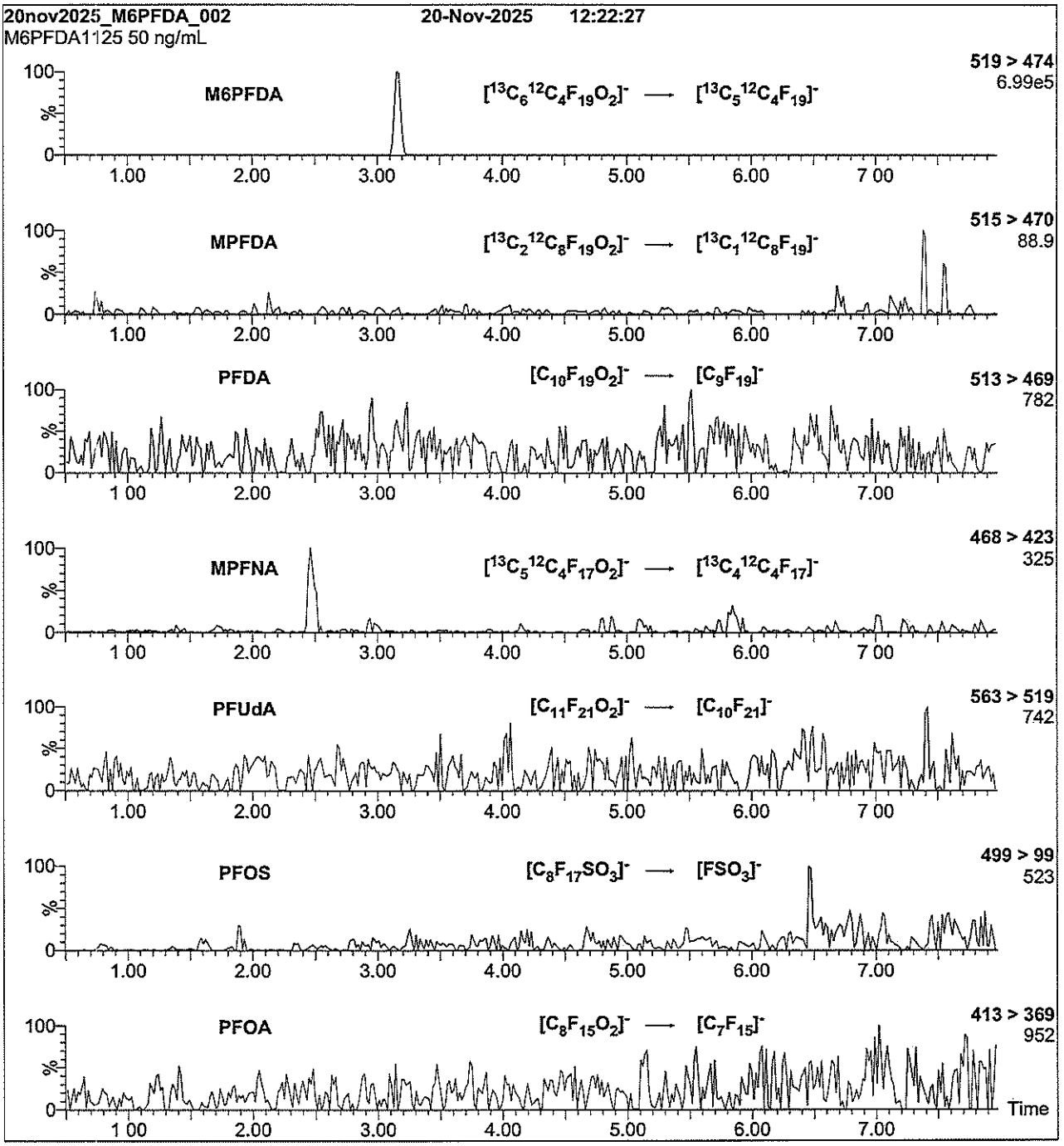
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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. **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) = 4.51e-3
Collision Energy (eV) = 10 (519 > 474)

Reagent

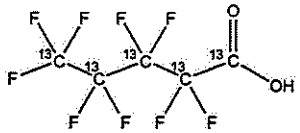
PFC_ST_05531

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-51 5531, 5532, 5533, 5534, 5535, 5536

PRODUCT CODE.	M5PFPeA	**LOT NUMBER.**	M5PFPeA0825
COMPOUND:	Perfluoro-n-($^{13}C_5$)pentanoic acid		
STRUCTURE.		**CAS #:**	2283397-79-3



410-8944101

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
LAST TESTED: (mm/dd/yyyy)	08/28/2025		
EXPIRY DATE. (mm/dd/yyyy)	08/28/2030		
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: B.G. Chittim, General Manager **Date.** 08/29/2025 (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

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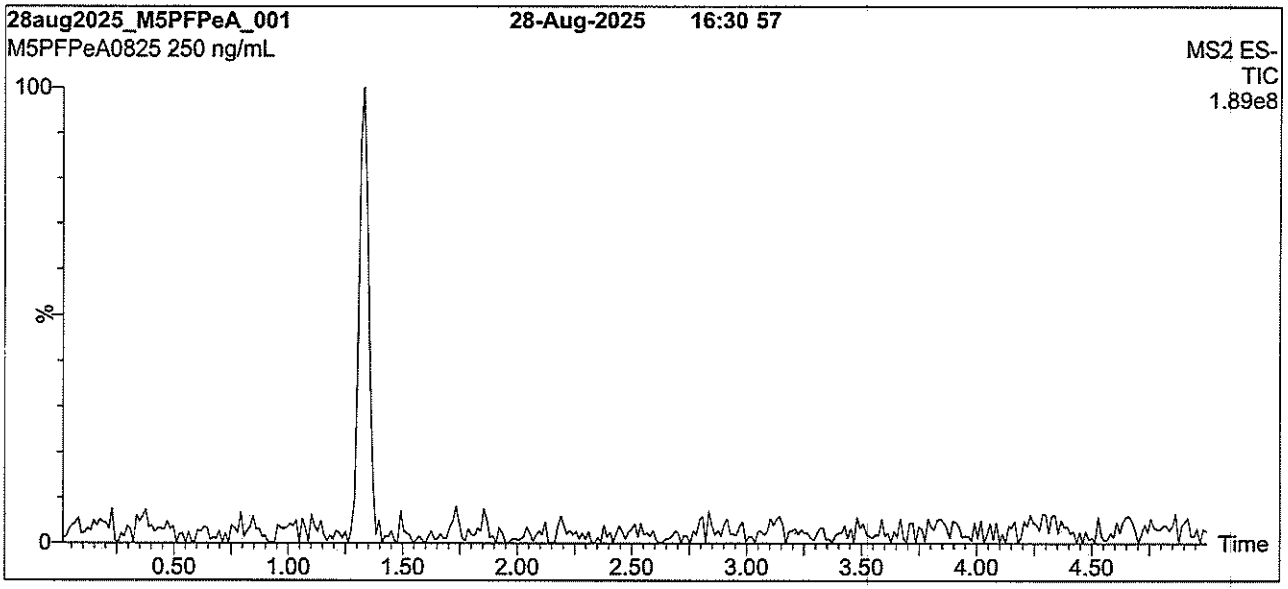
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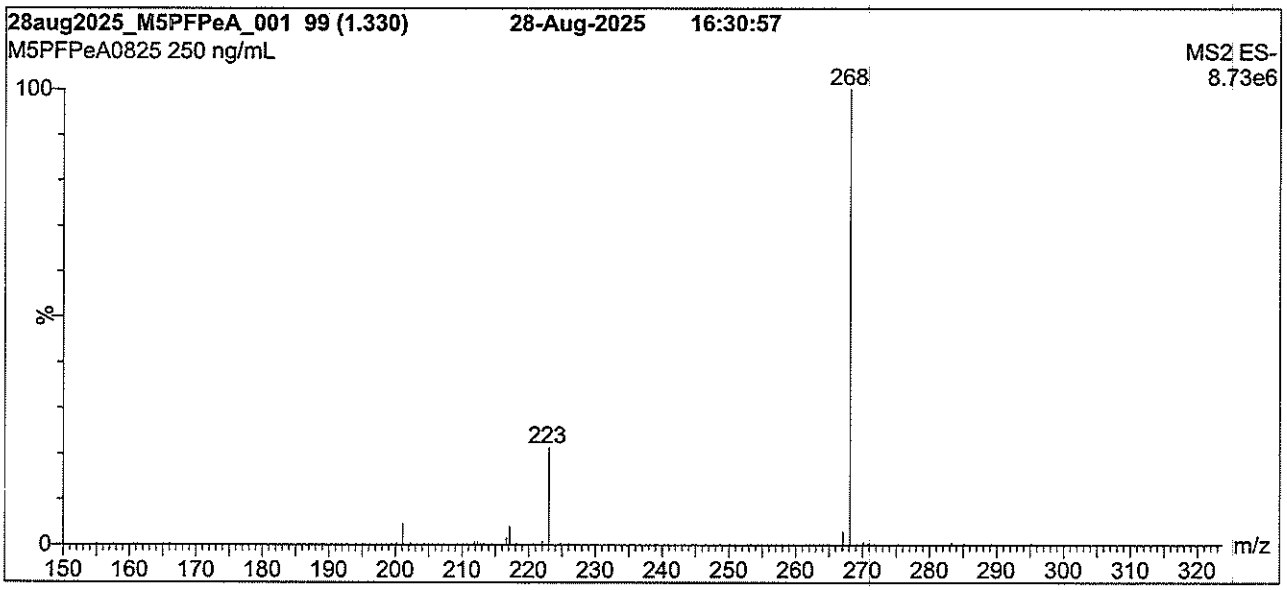
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **M5PFPeA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

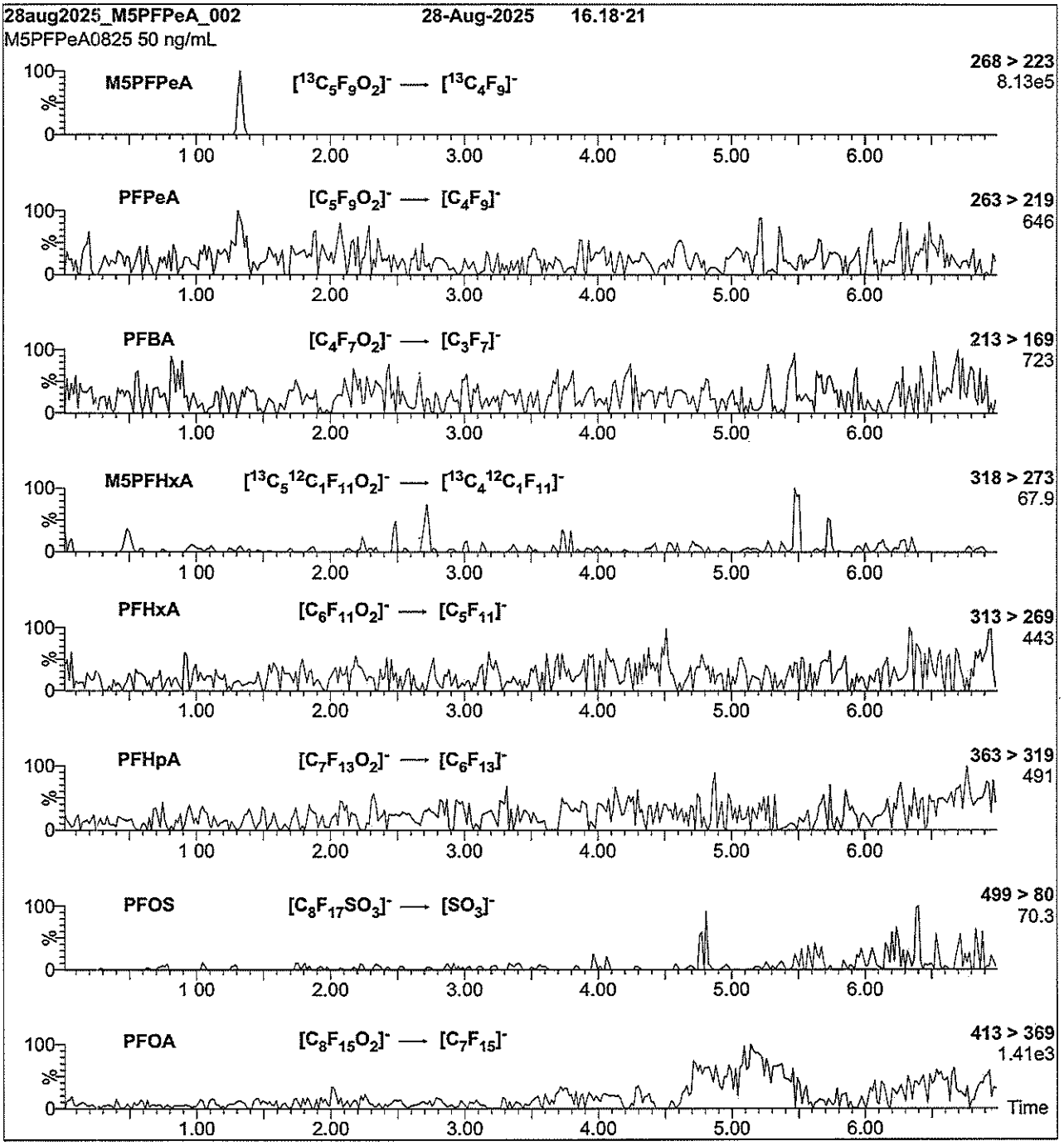
Flow: 300 µL/min

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

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) = 4.64e-3
Collision Energy (eV) = 8 (268 > 223)

Reagent

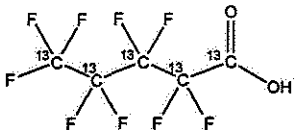
PFC_ST_05534

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-51 5531, 5532, 5533, 5534, 5535, 5536

PRODUCT CODE.	M5PFPeA	**LOT NUMBER.**	M5PFPeA0825
COMPOUND:	Perfluoro-n-($^{13}C_5$)pentanoic acid		
STRUCTURE.		**CAS #:**	2283397-79-3



410-8944104

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
LAST TESTED: (mm/dd/yyyy)	08/28/2025		
EXPIRY DATE: (mm/dd/yyyy)	08/28/2030		
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** 08/29/2025 (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(s) 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, SFC/UV/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, and/or SFC/UV/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, ..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%) has been assigned to this product.

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:

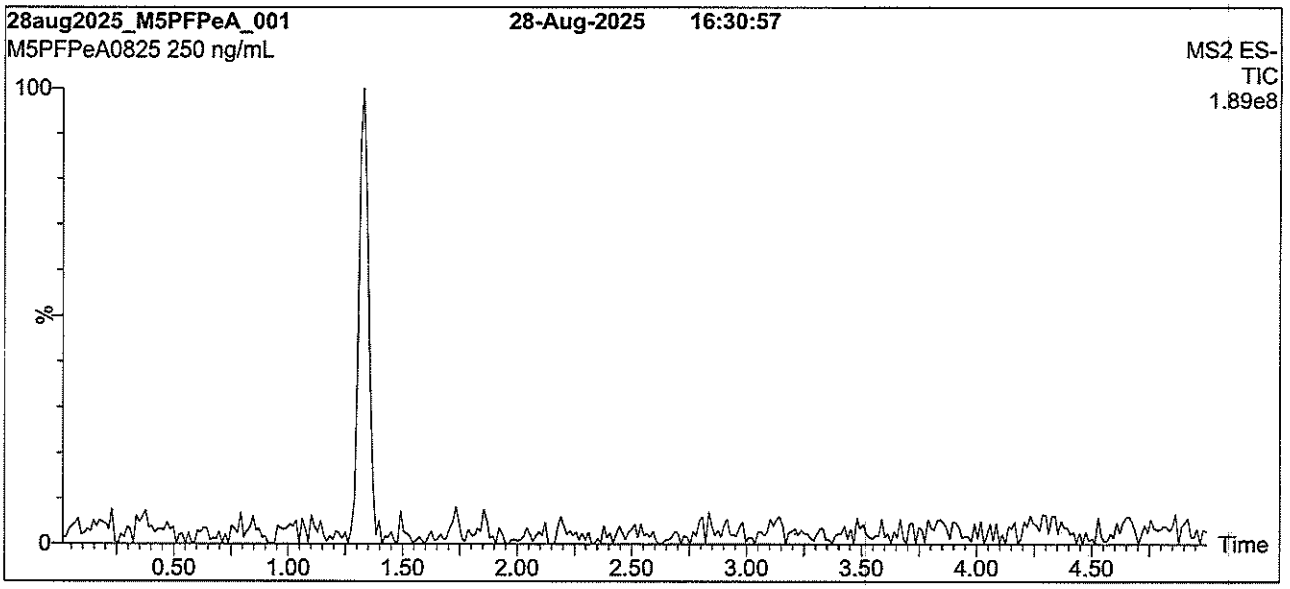
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB, AR-1523).

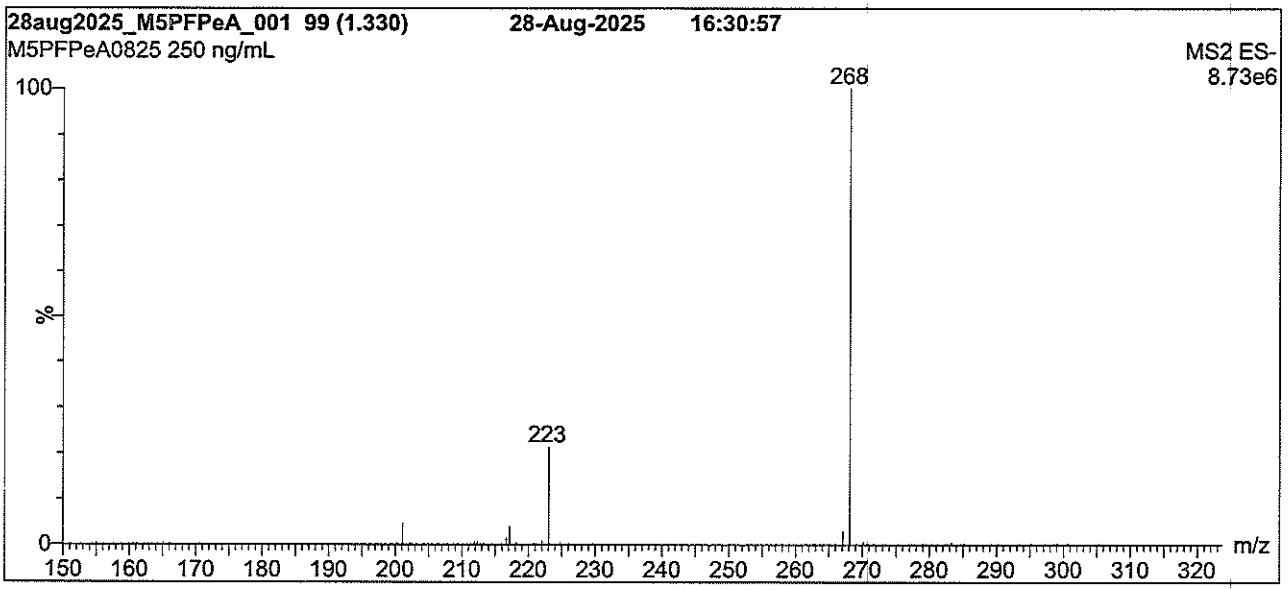
CALA Testing Accreditation No. A1226

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: **M5PFPeA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

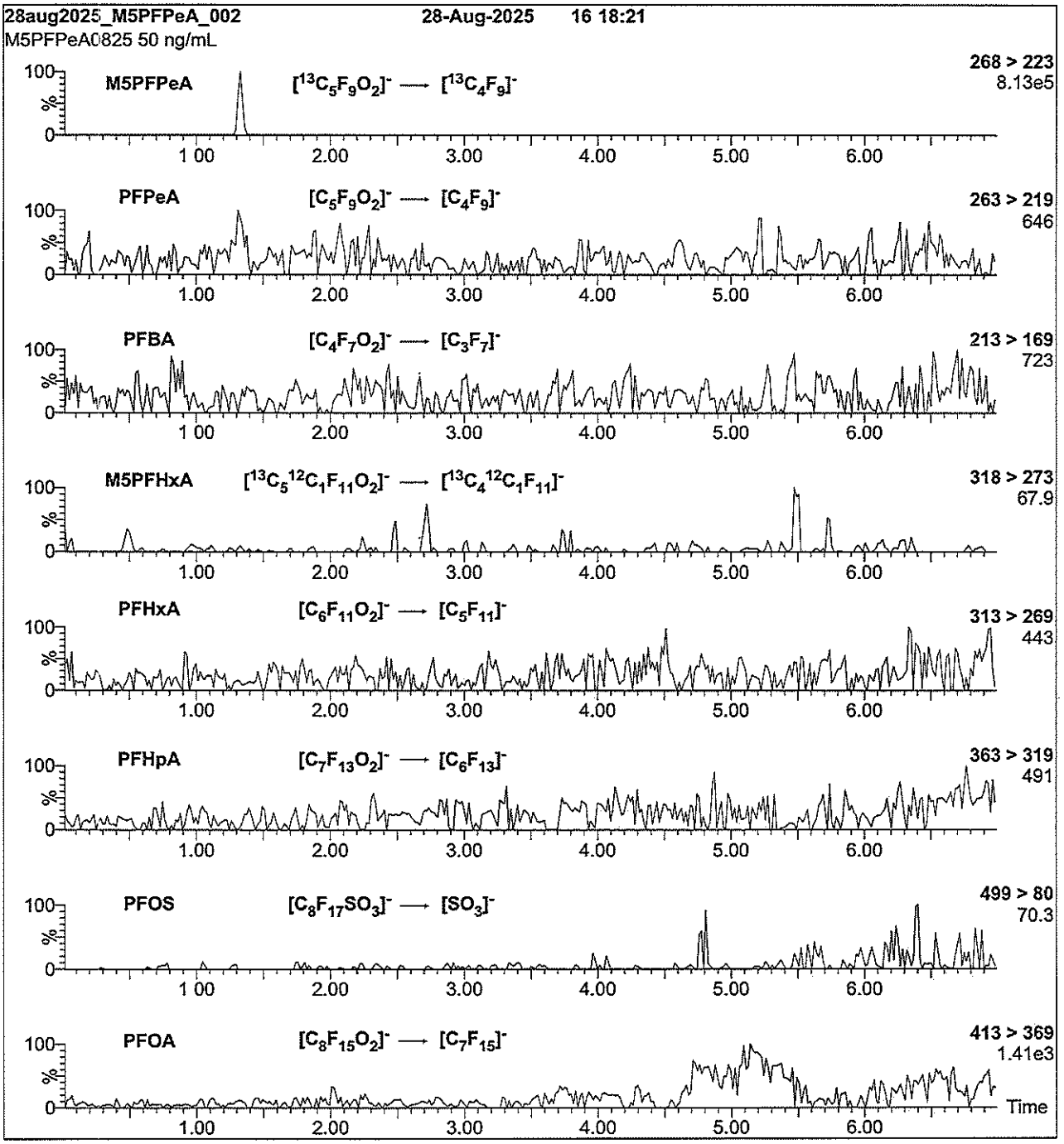
Flow: 300 µL/min

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

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) = 4.64e-3
Collision Energy (eV) = 8 (268 > 223)

Reagent

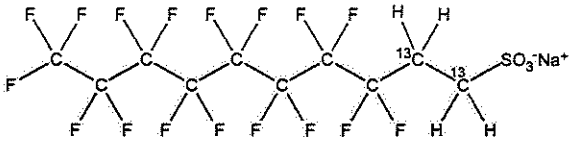
PFC_ST_05560

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5552, 5558, 5559, 5560, 5561, 5562

PRODUCT CODE.	M2-8:2FTS	**LOT NUMBER:**	M282FTS0425
COMPOUND.	Sodium 1H 1H 2H 2H-perfluoro(1,2 $^{13}C_2$)decanesulfonate		
STRUCTURE.		**CAS #:**	2708218-90-8



410-8990555

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
LAST TESTED. (mm/dd/yyyy)	04/09/2025		
EXPIRY DATE. (mm/dd/yyyy)	04/09/2030		
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: _____ **Date:** 04/23/2025 (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, SFC/UV/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 and/or SFC/UV/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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$$u_c(y(x_1\ x,\ \ .x_n)) = \sqrt{\sum_{=1}^{n} u(y\ x)^2}$$

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%) has been assigned to this product.

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:

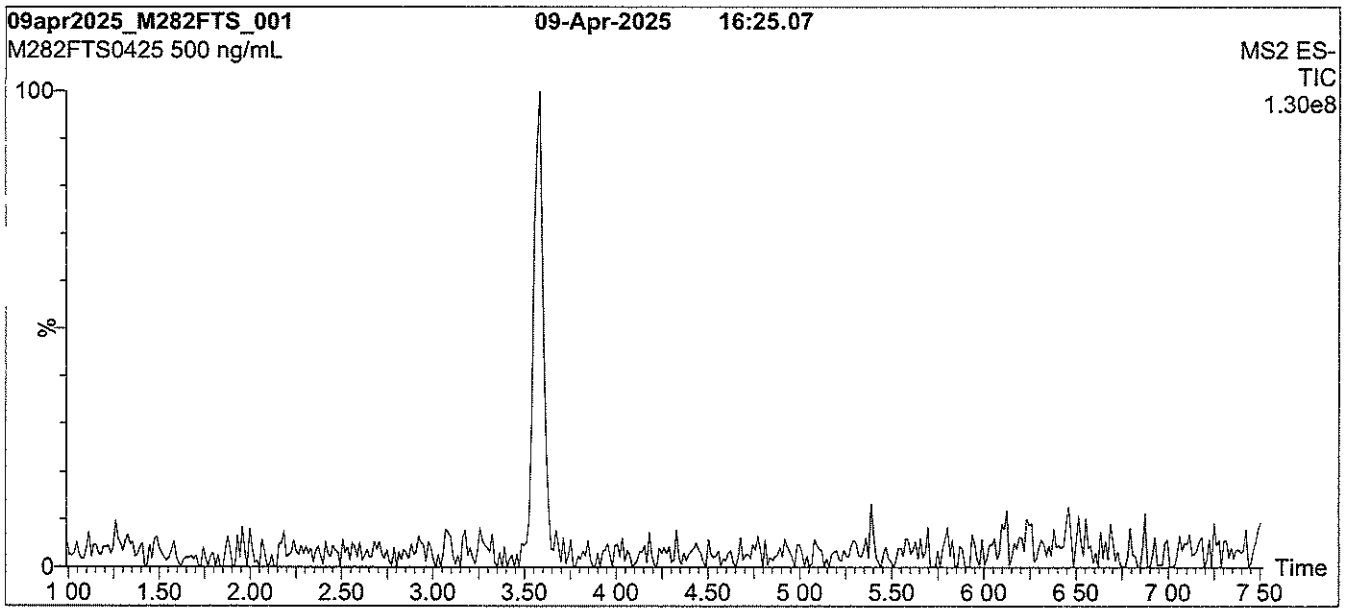
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB AR-1523).

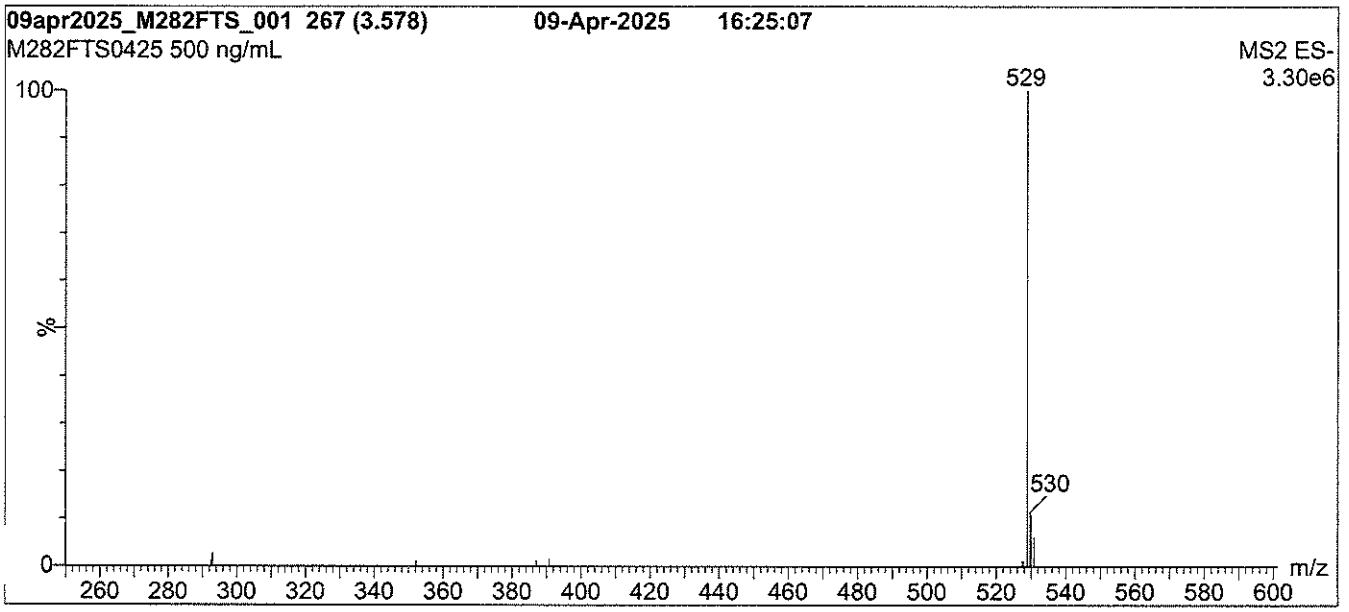
CALA Testing Accreditation No. A1226

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. **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min
Time: 12 min

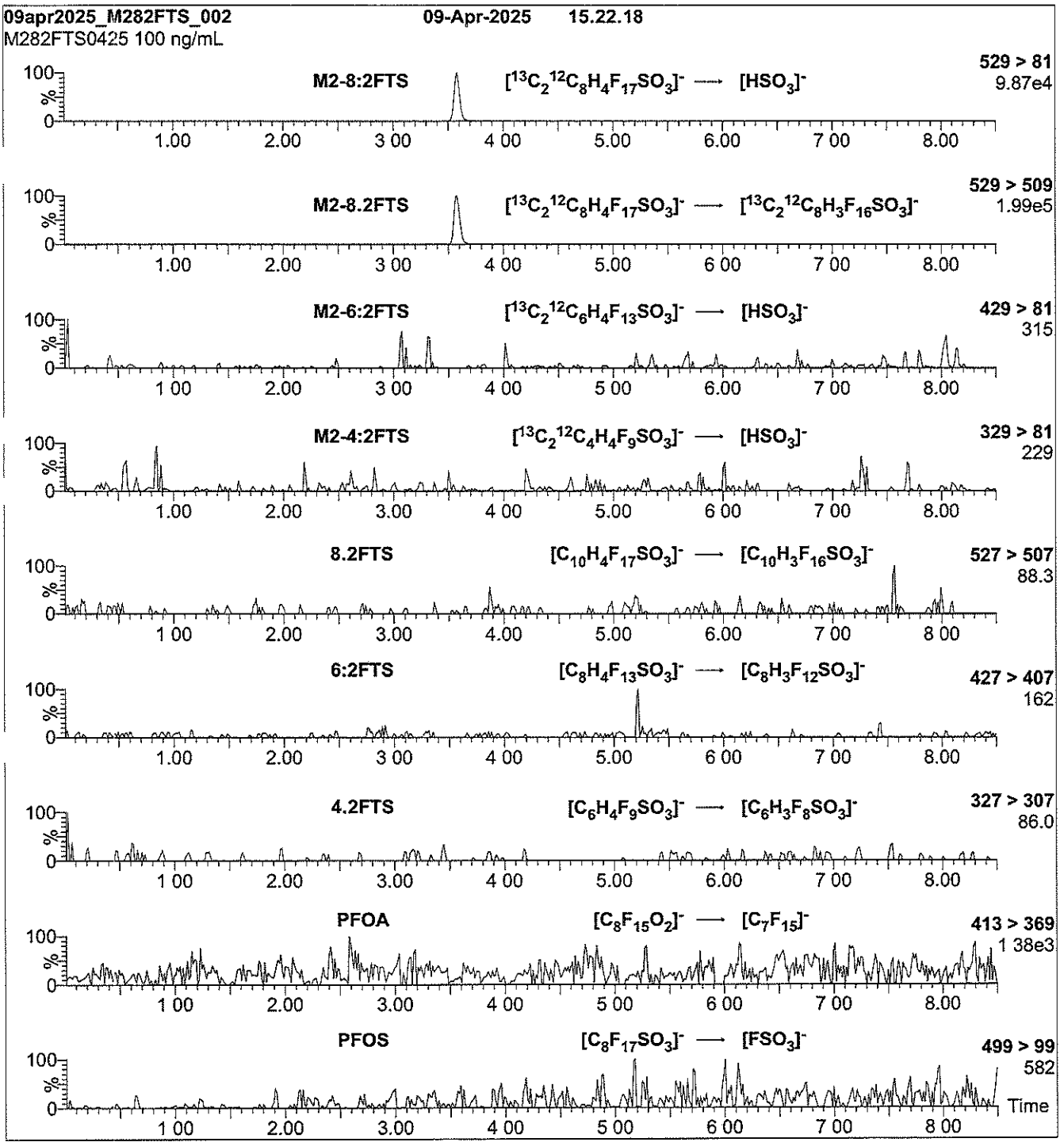
Flow: 300 µL/min

MS Parameters.

Experiment: Full Scan (250 850 amu)

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

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) = 5.91e-3
Collision Energy (eV) = 26

Reagent

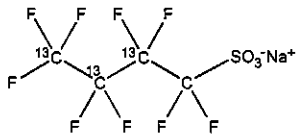
PFC_ST_05577

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFCST 5572 -> 5585

PRODUCT CODE:	M3PFBS	**LOT NUMBER:**	M3PFBS0825
COMPOUND:	Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		
STRUCTURE:		**CAS #:**	2708218-84-0



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CF_9SO_3Na$	**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
LAST TESTED: (mm/dd/yyyy)	08/21/2025		
EXPIRY DATE: (mm/dd/yyyy)	08/21/2030		
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:** 09/03/2025 (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.

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%) has been assigned to this product.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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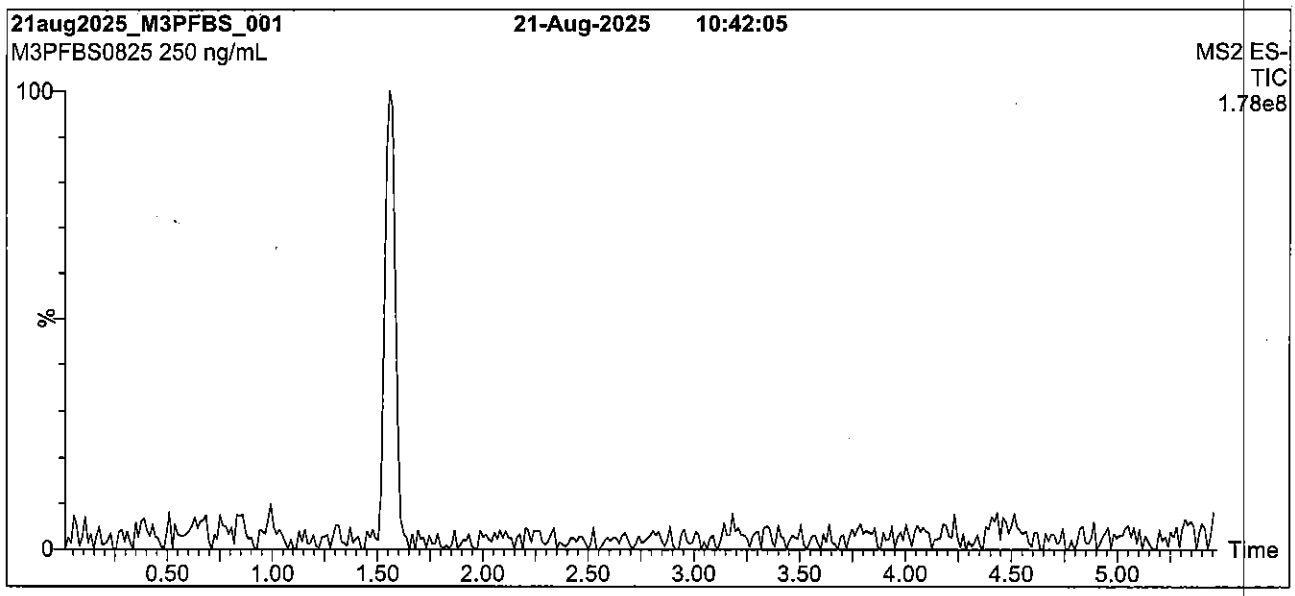
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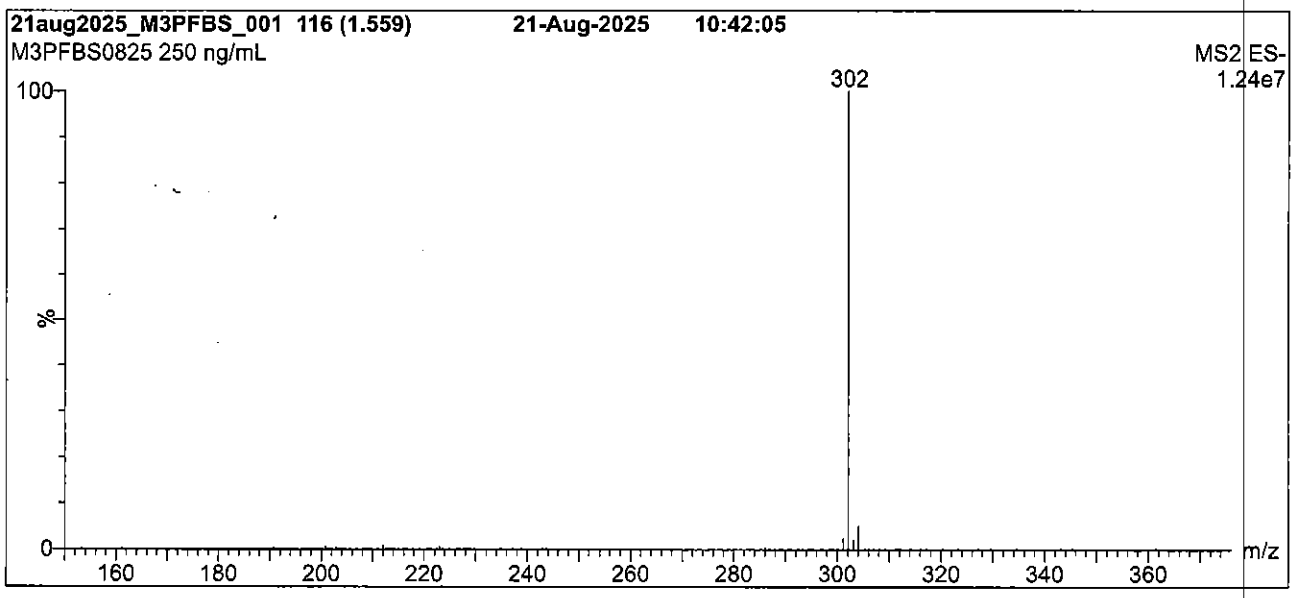
CALA Testing Accreditation No. A1226

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: **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 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

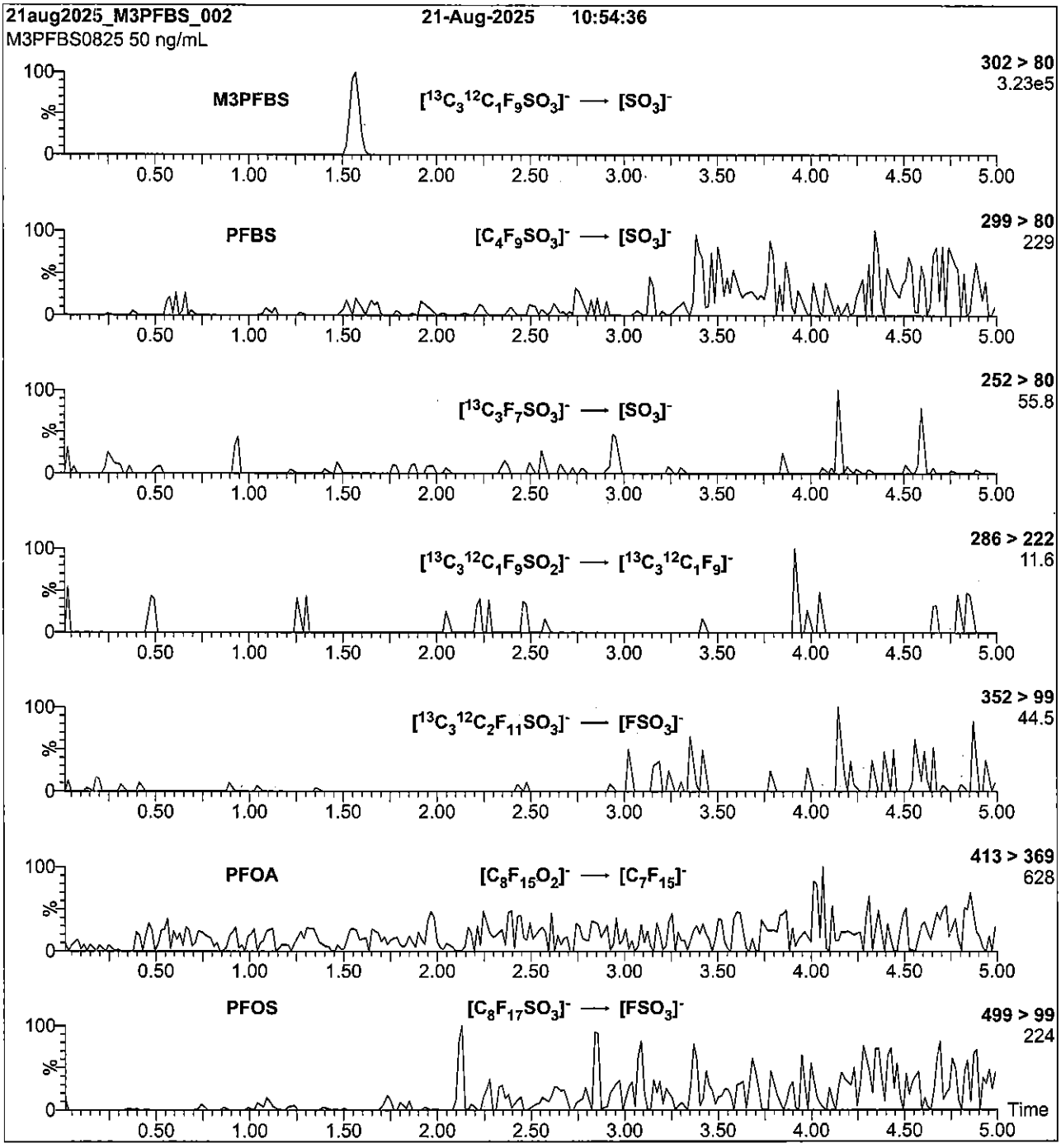
Flow: 300 µL/min

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

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) = 3.57e-3
Collision Energy (eV) = 30 (302 > 80)

Reagent

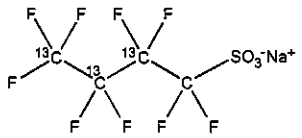
PFC_ST_05583

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFCST 5572 -> 5585

PRODUCT CODE:	M3PFBS	**LOT NUMBER:**	M3PFBS0825
COMPOUND:	Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate		
STRUCTURE:		**CAS #:**	2708218-84-0



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CF_9SO_3Na$	**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
LAST TESTED: (mm/dd/yyyy)	08/21/2025		
EXPIRY DATE: (mm/dd/yyyy)	08/21/2030		
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:** 09/03/2025 (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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

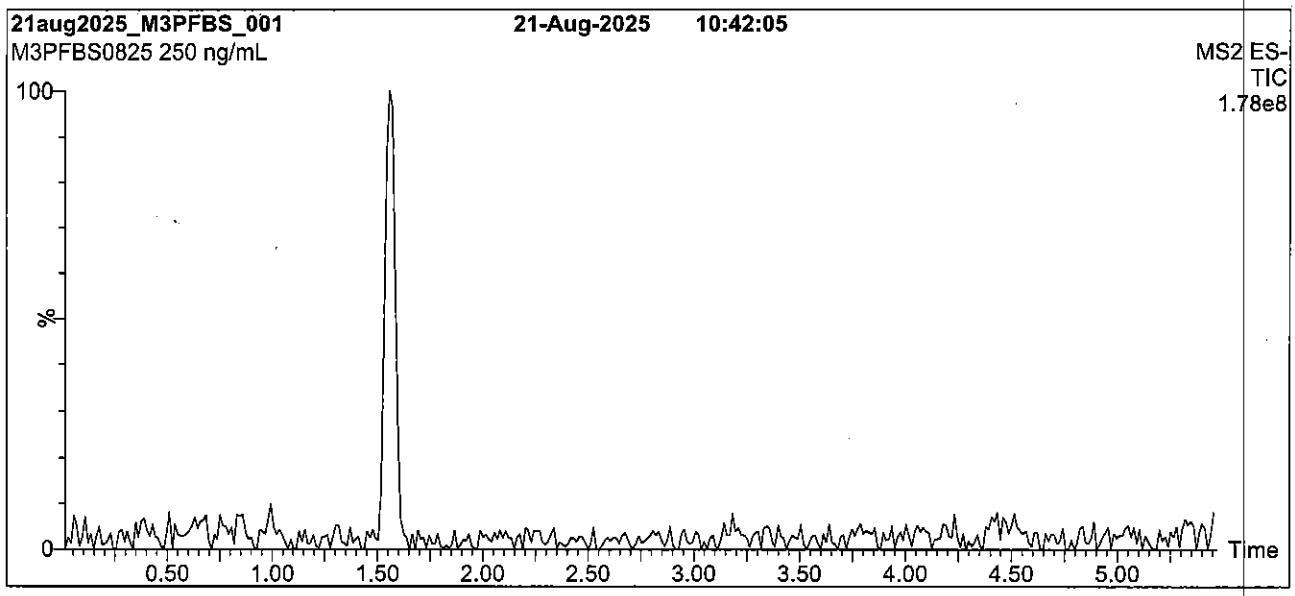
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

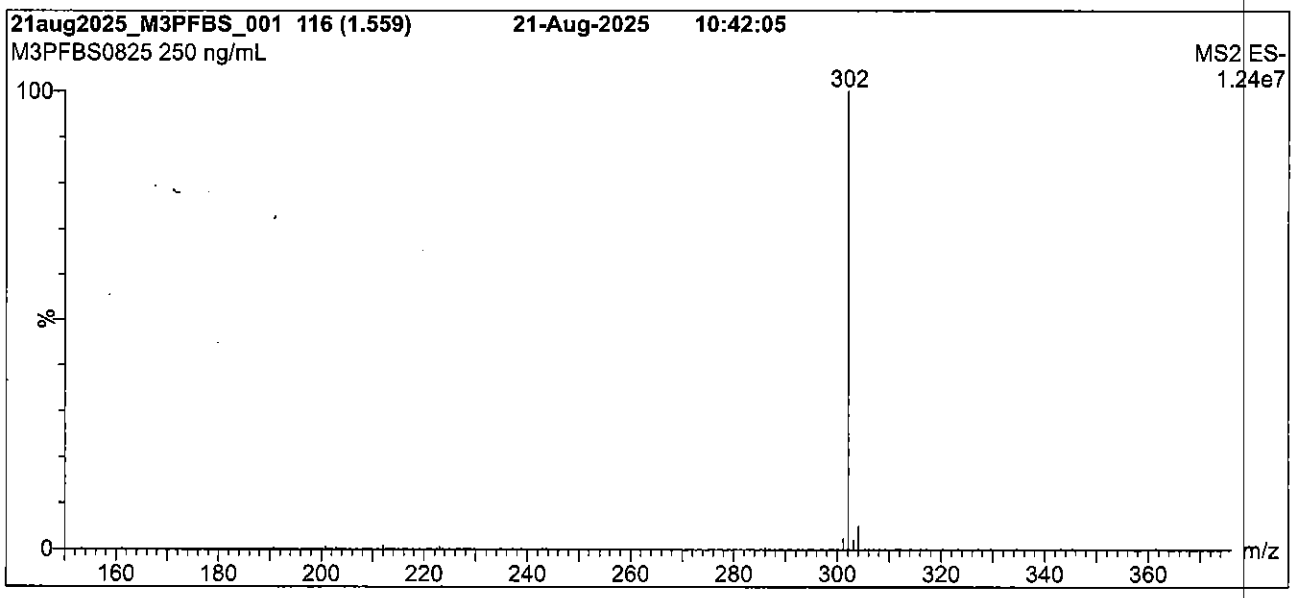
CALA Testing Accreditation No. A1226

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: **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 9 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 12 min

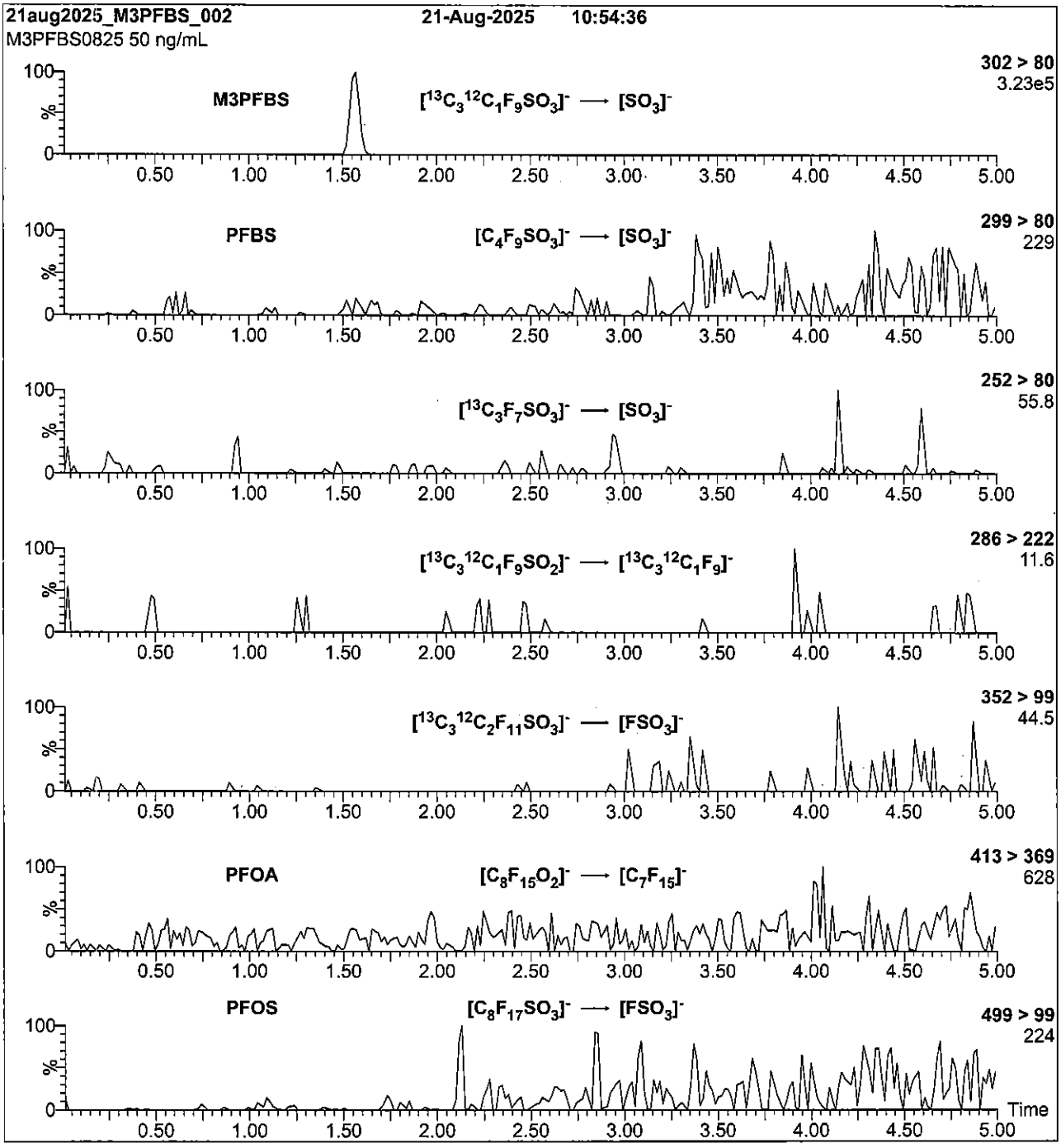
Flow: 300 µL/min

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

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) = 3.57e-3
Collision Energy (eV) = 30 (302 > 80)

Reagent

PFC_ST_05588

WELLINGTON LABORATORIES

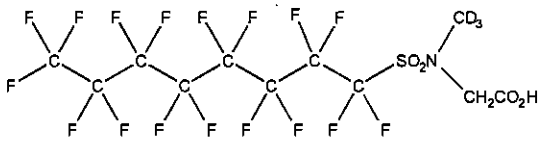
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5586 → 5605

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA0925

COMPOUND: N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 1400690-70-1



MOLECULAR FORMULA:	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% ^2H (D)
LAST TESTED: (mm/dd/yyyy)	09/08/2025		
EXPIRY DATE: (mm/dd/yyyy)	09/08/2030		
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.
- Contains ~0.2% of a branched isomer of d3-N-MeFOSAA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/08/2025 (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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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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%) has been assigned to this product.

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:

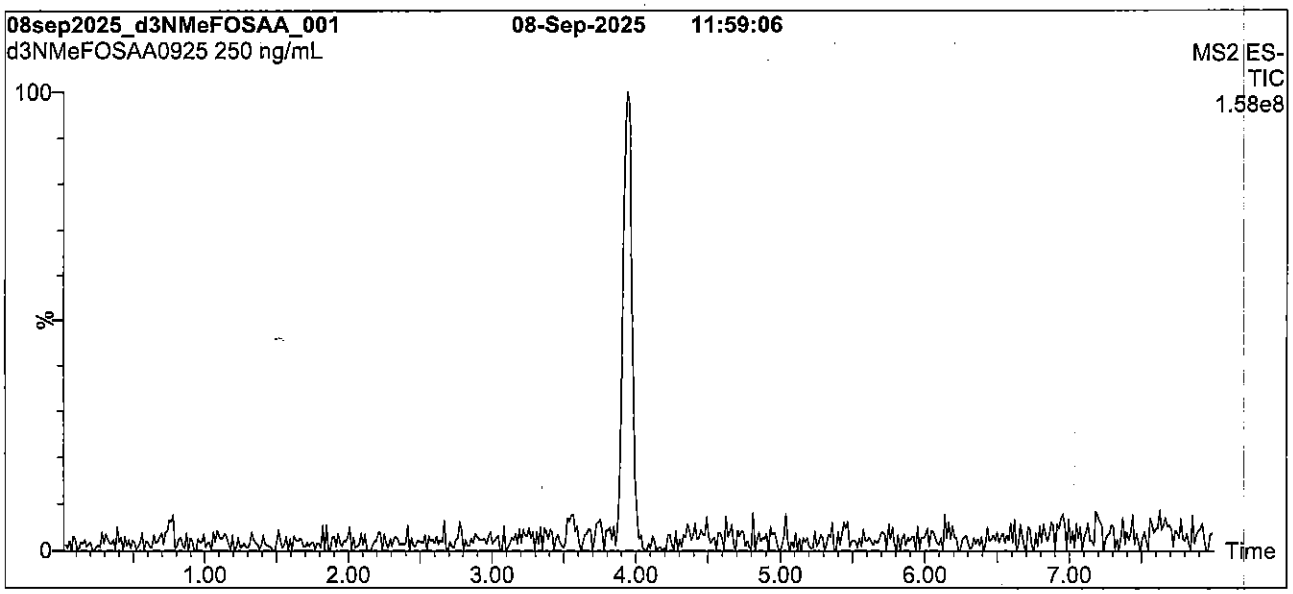
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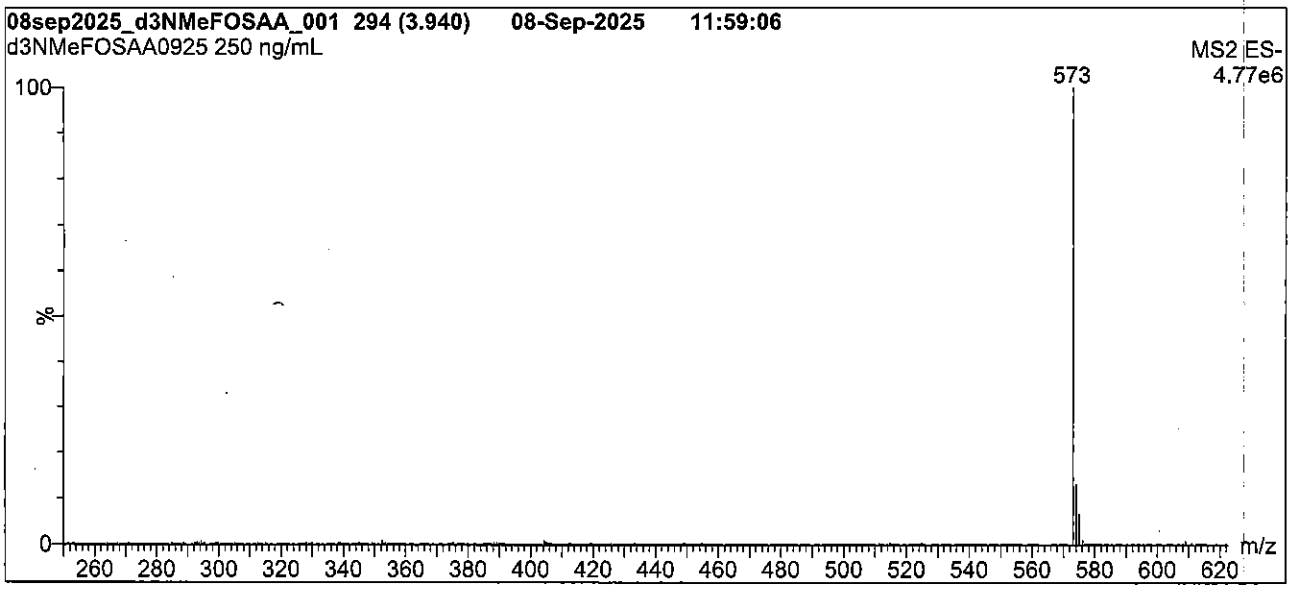
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d3-N-MeFOSAA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

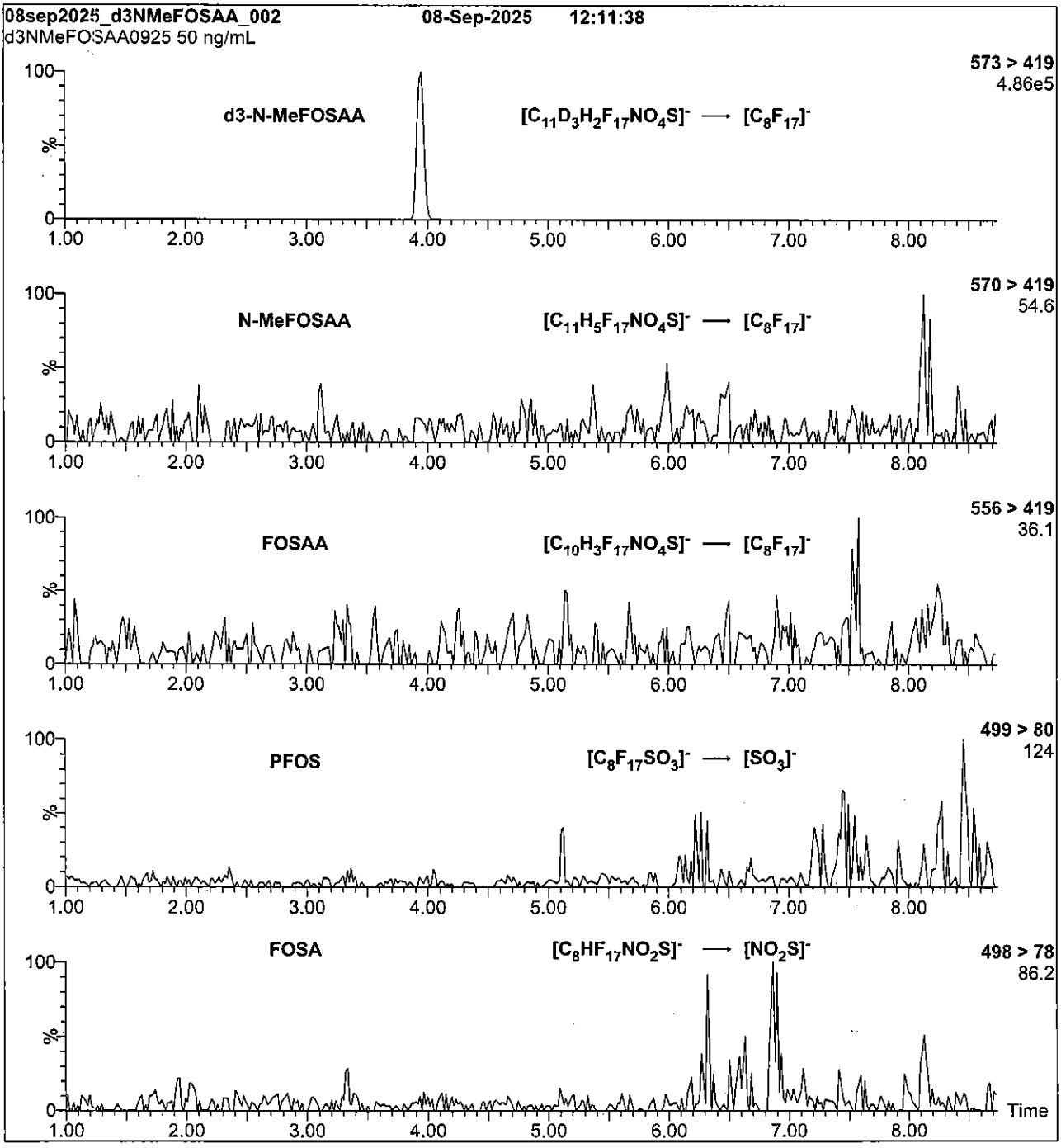
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 3.47e-3
Collision Energy (eV) = 18 (573 > 419)

Reagent

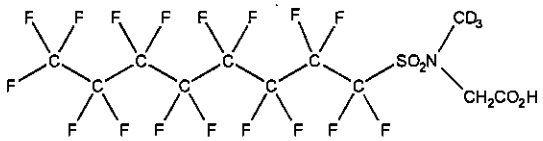
PFC_ST_05590

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5586 → 5605

PRODUCT CODE:	d3-N-MeFOSAA	**LOT NUMBER:**	d3NMeFOSAA0925
COMPOUND:	N-Methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid		
STRUCTURE:		**CAS #:**	1400690-70-1



MOLECULAR FORMULA:	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% ^2H (D)
LAST TESTED: (mm/dd/yyyy)	09/08/2025		
EXPIRY DATE: (mm/dd/yyyy)	09/08/2030		
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.
- Contains ~0.2% of a branched isomer of d3-N-MeFOSAA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/08/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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where x is expressed as a relative standard uncertainty of the individual parameter.

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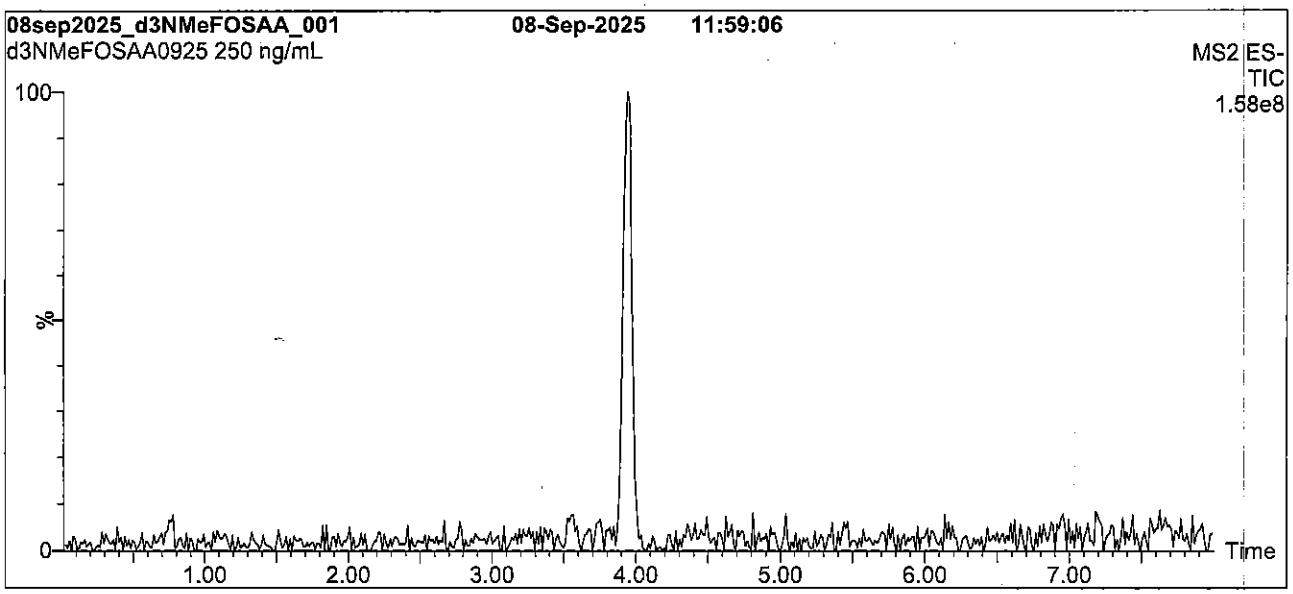
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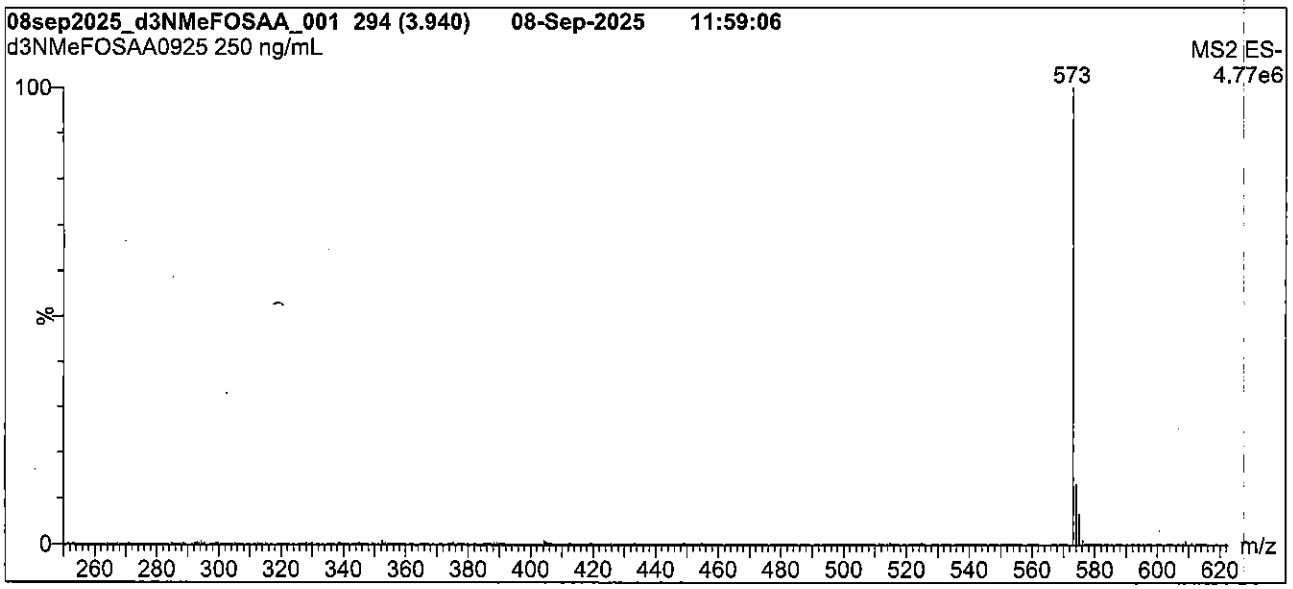
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d3-N-MeFOSAA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

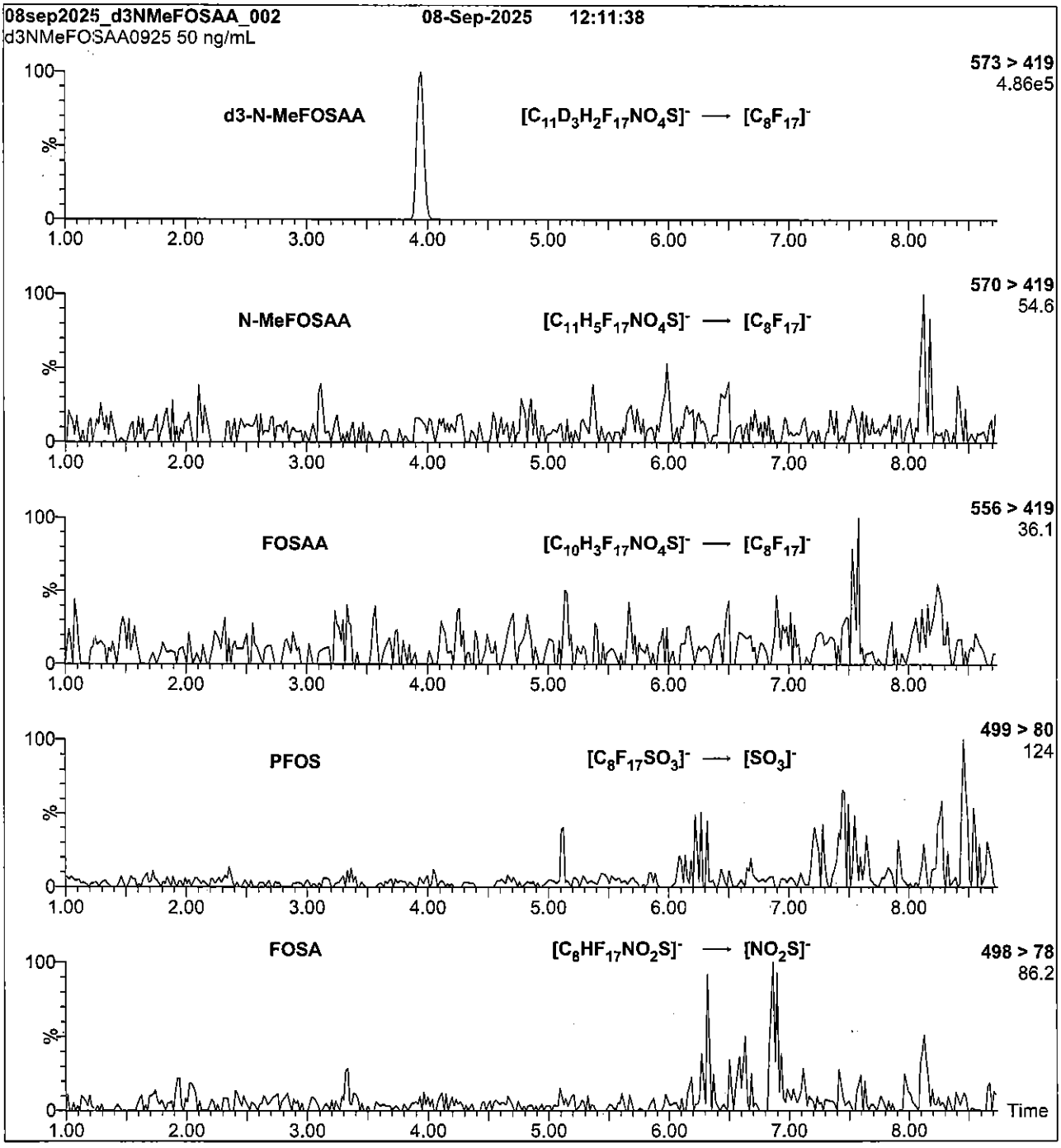
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (L/hr) = 1000

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) = 3.47e-3
Collision Energy (eV) = 18 (573 > 419)

Reagent

PFC_ST_05610

WELLINGTON LABORATORIES

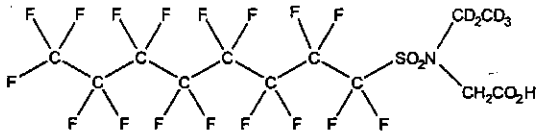
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5606 → 5624

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0525

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 (D)
LAST TESTED: (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE: (mm/dd/yyyy)	06/05/2030		
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: _____ **Date:** 06/09/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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,...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%) has been assigned to this product.

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:

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QUALITY MANAGEMENT:

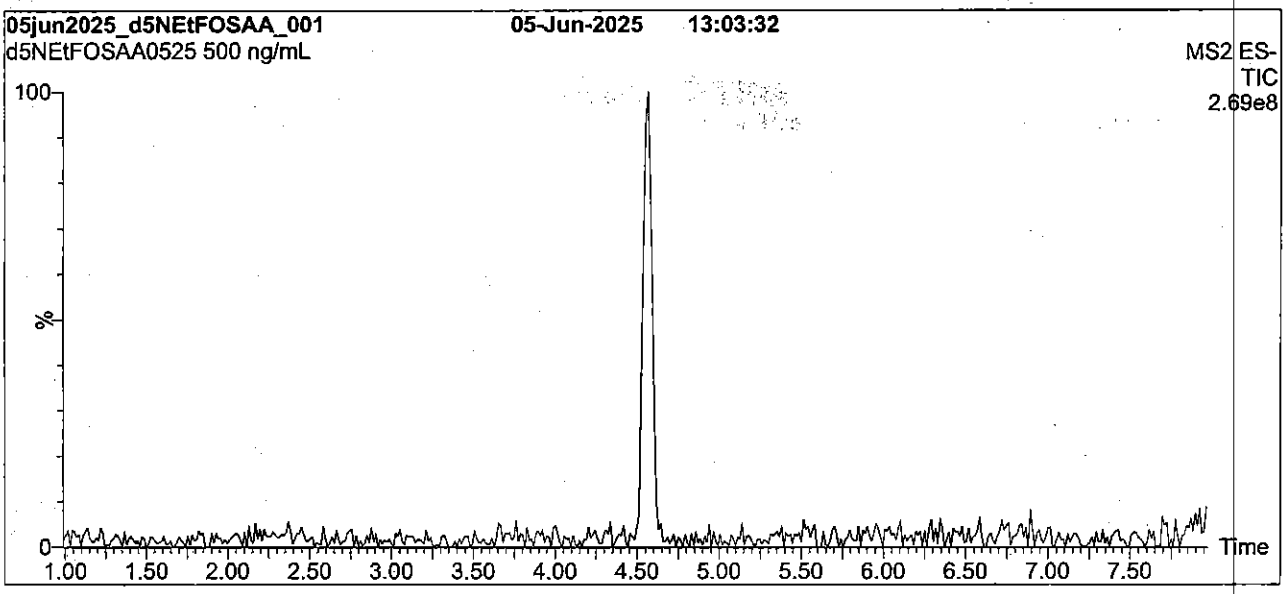
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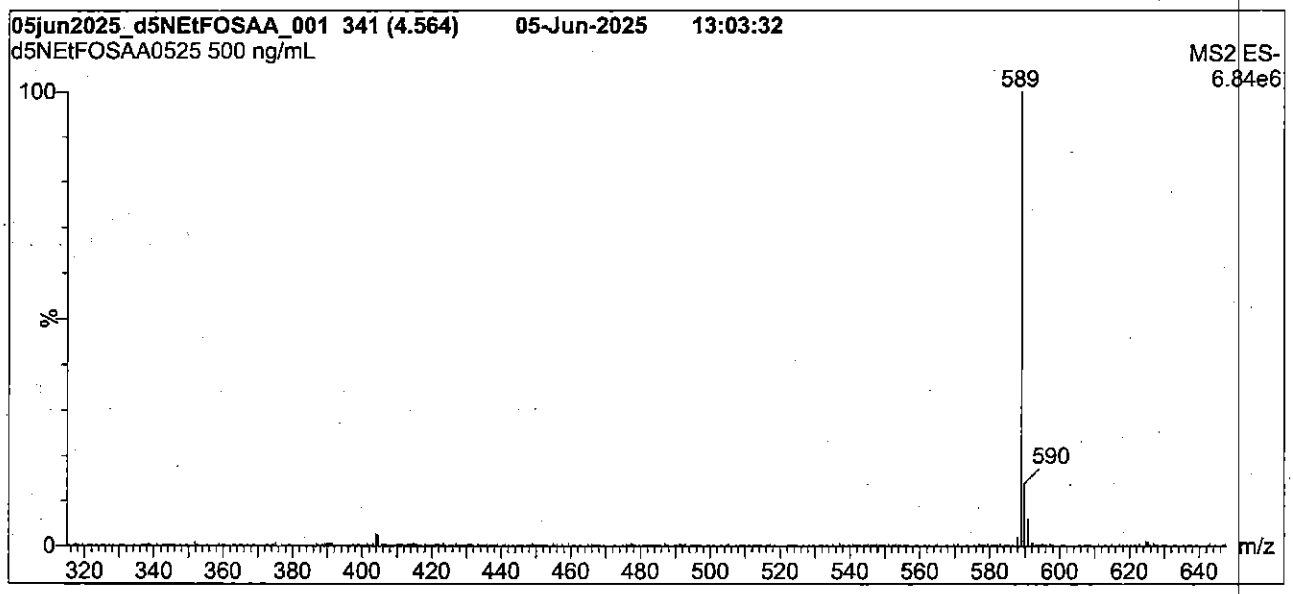
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

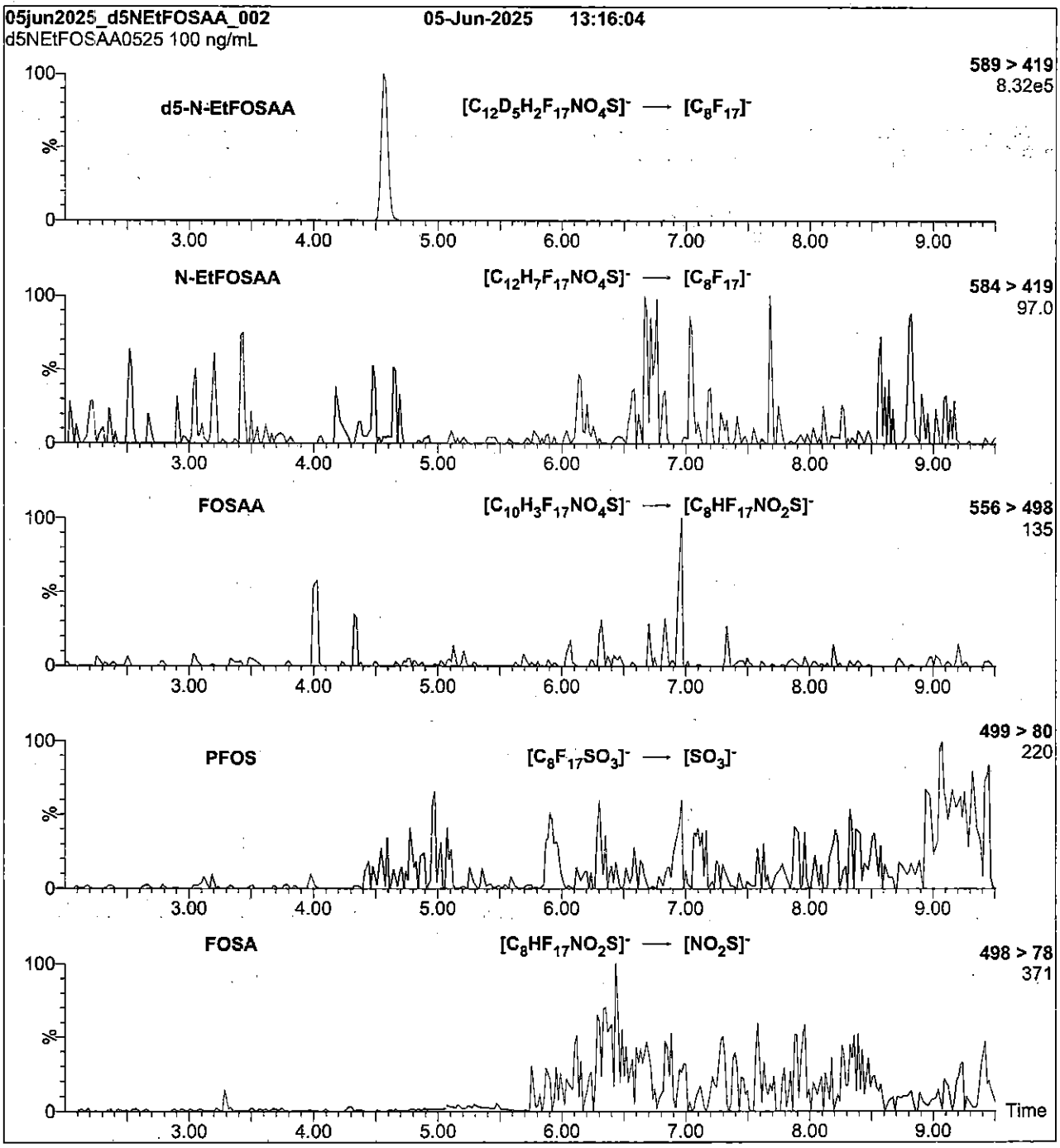
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 3.76e-3
Collision Energy (eV) = 18

Reagent

PFC_ST_05614

WELLINGTON LABORATORIES

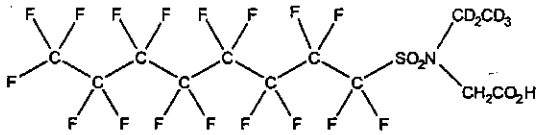
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_5606 → 5624

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0525

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 (D)
LAST TESTED: (mm/dd/yyyy)	06/05/2025		
EXPIRY DATE: (mm/dd/yyyy)	06/05/2030		
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.

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Certified By: _____ **Date:** 06/09/2025 (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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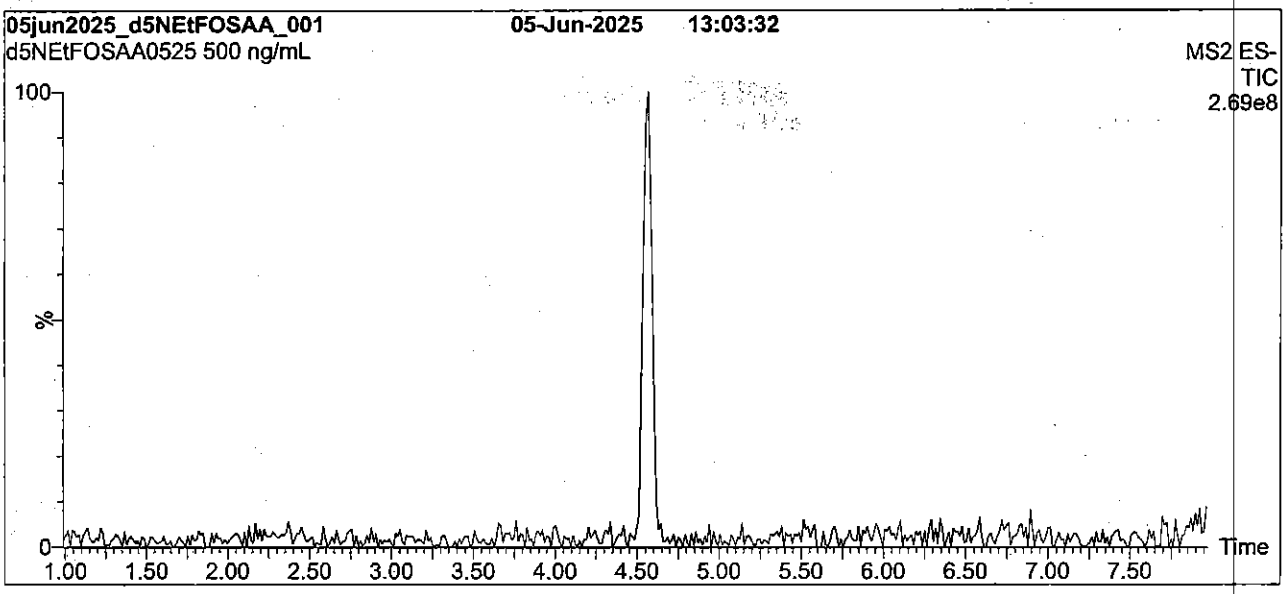
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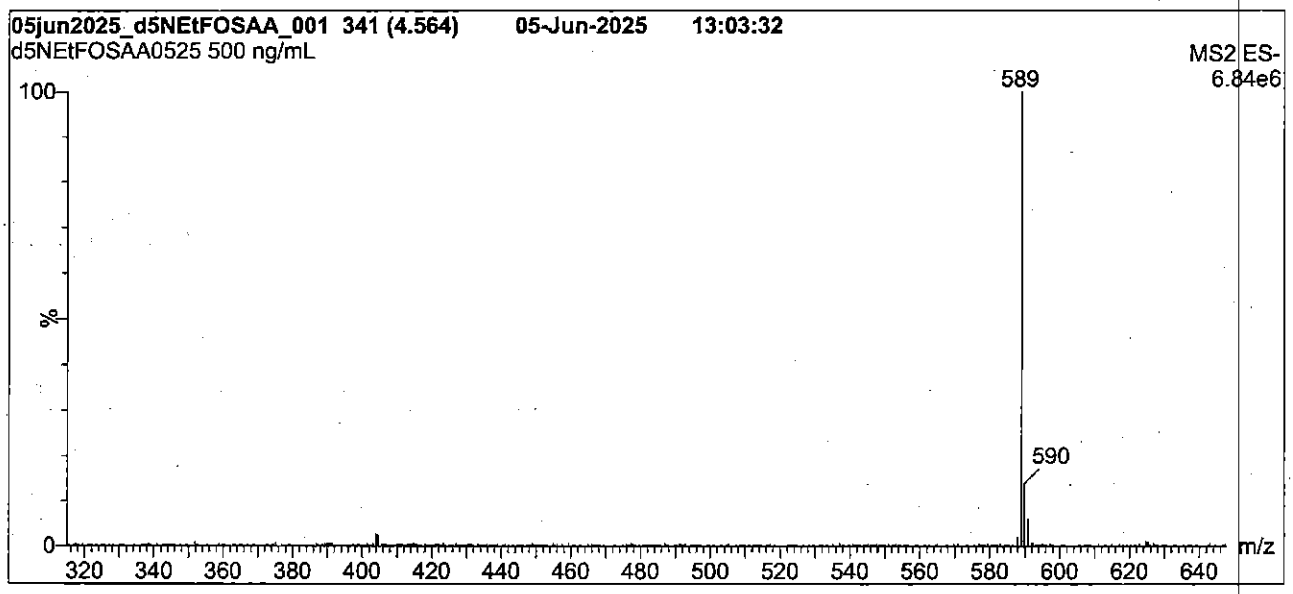
CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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Figure 1: **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}
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(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

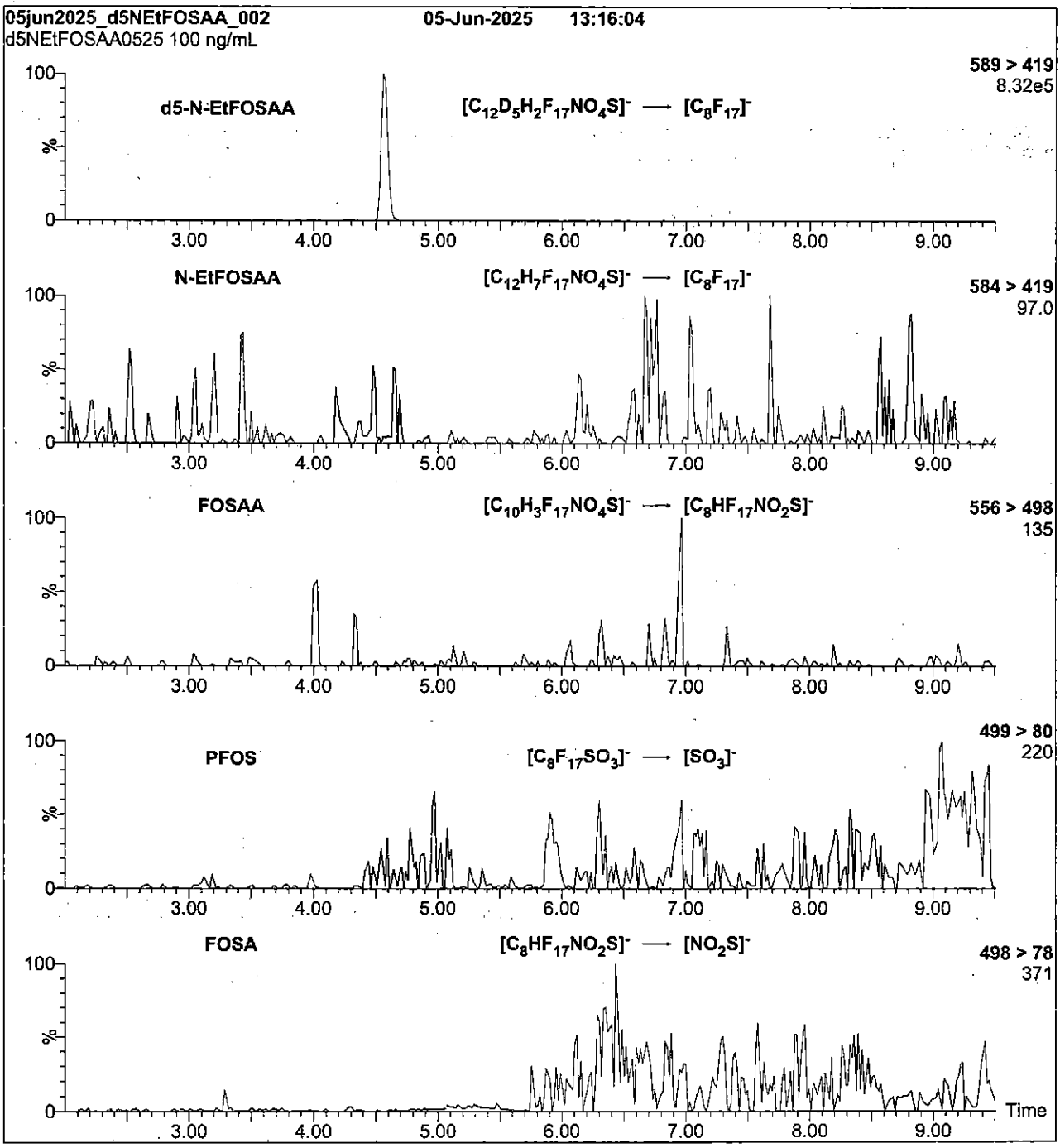
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 3.76e-3
Collision Energy (eV) = 18

Reagent

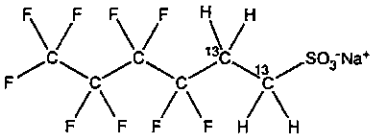
PFC_ST_05640

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST- SG25 → SG44

PRODUCT CODE:	M2-4:2FTS	**LOT NUMBER:**	M242FTS1225
COMPOUND:	Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate ($^{13}C_2$-4:2 FTS)		
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
LAST TESTED: (mm/dd/yyyy)	12/22/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/22/2030		
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.
- It is known that elevated concentrations of 4:2FTS will contribute to the response of the m/z 329 > 309 MRM transition of M2-4:2FTS due to the natural abundance of ^{34}S (~4.2% relative to ^{32}S) in the native compound. Therefore, use of the alternative product ion (m/z 81 $[^{32}SO_3H]^-$) is recommended. The analogous transition for the ^{34}S native analyte would produce m/z 83 $[^{34}SO_3H]^-$ from the same nominal mass precursor ion thereby eliminating the potential interference.
- Contains ≤0.5% of sodium 1H,2H-perfluoro-1-(1,2-$^{13}C_2$)hexenesulfonate by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/22/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

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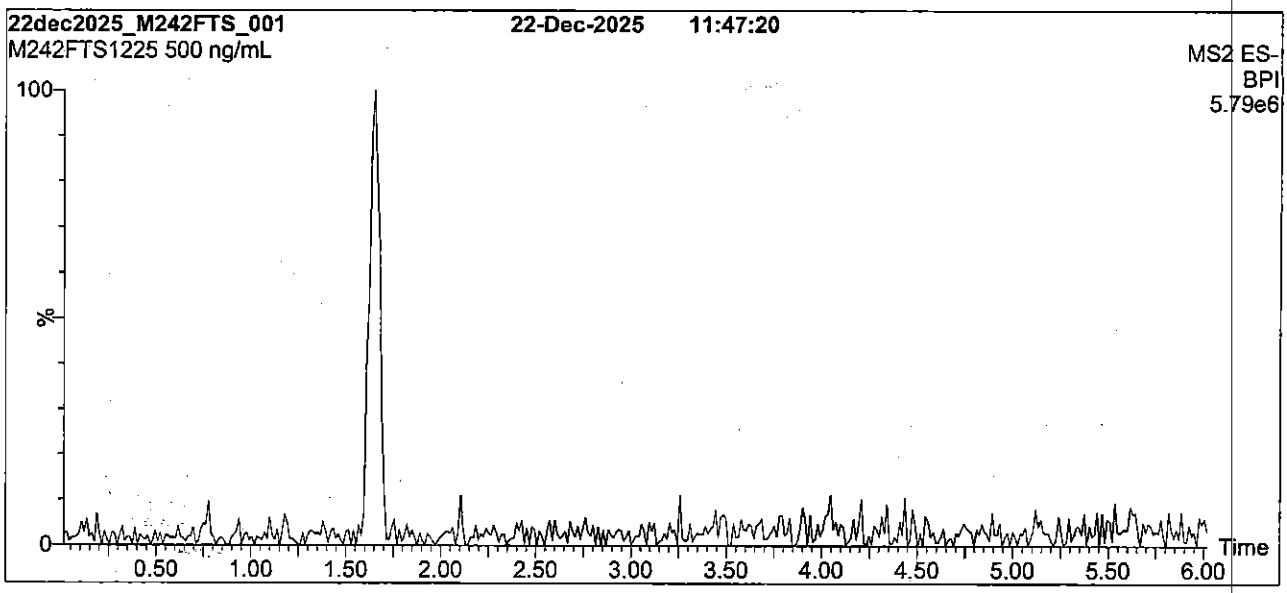
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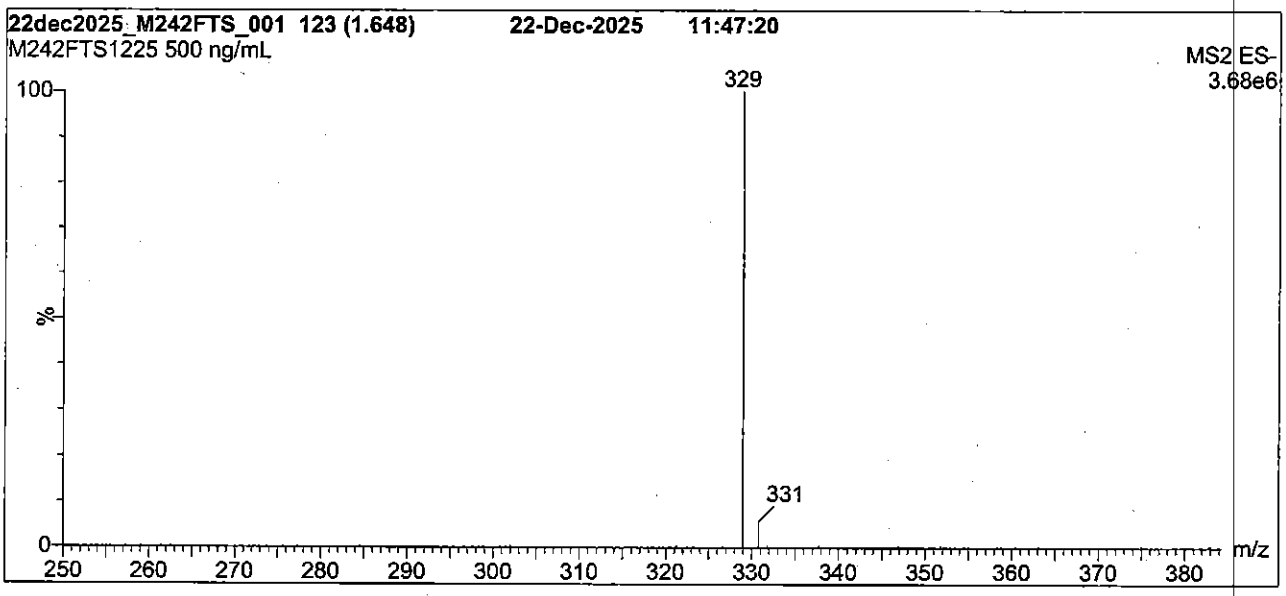
CALA Testing Accreditation No. A1226

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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: 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

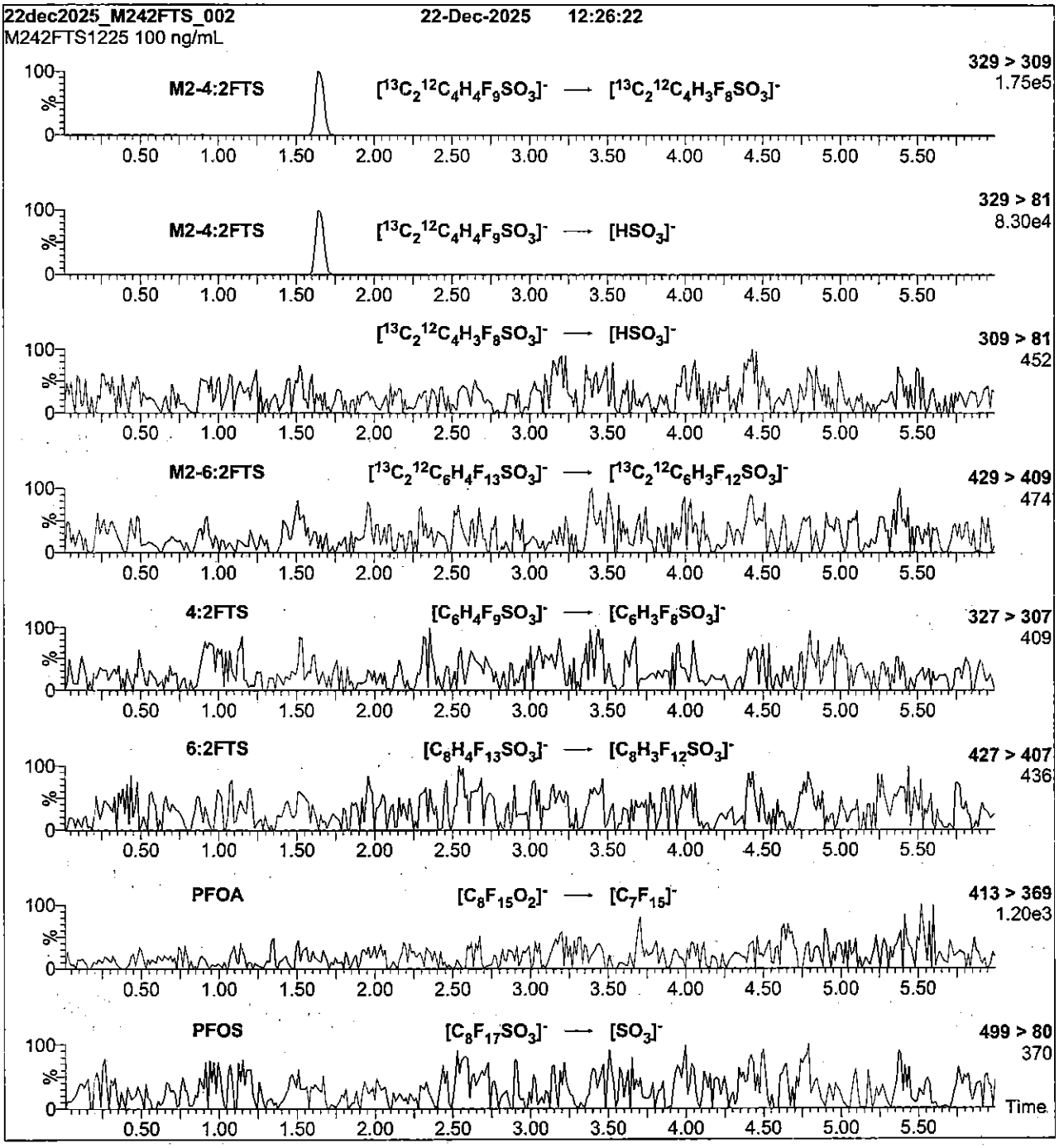
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

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

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) = 3.59e-3
Collision Energy (eV) = 18 (329 > 309)

Reagent

PFC_ST_05643

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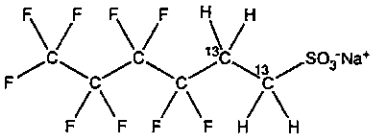
CERTIFICATE OF ANALYSIS DOCUMENTATION

PFC_ST- SG25 → SG44

PRODUCT CODE: M2-4:2FTS **LOT NUMBER:** M242FTS1225

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro(1,2-$^{13}C_2$)hexanesulfonate ($^{13}C_2$-4:2 FTS)

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
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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%) has been assigned to this product.

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:

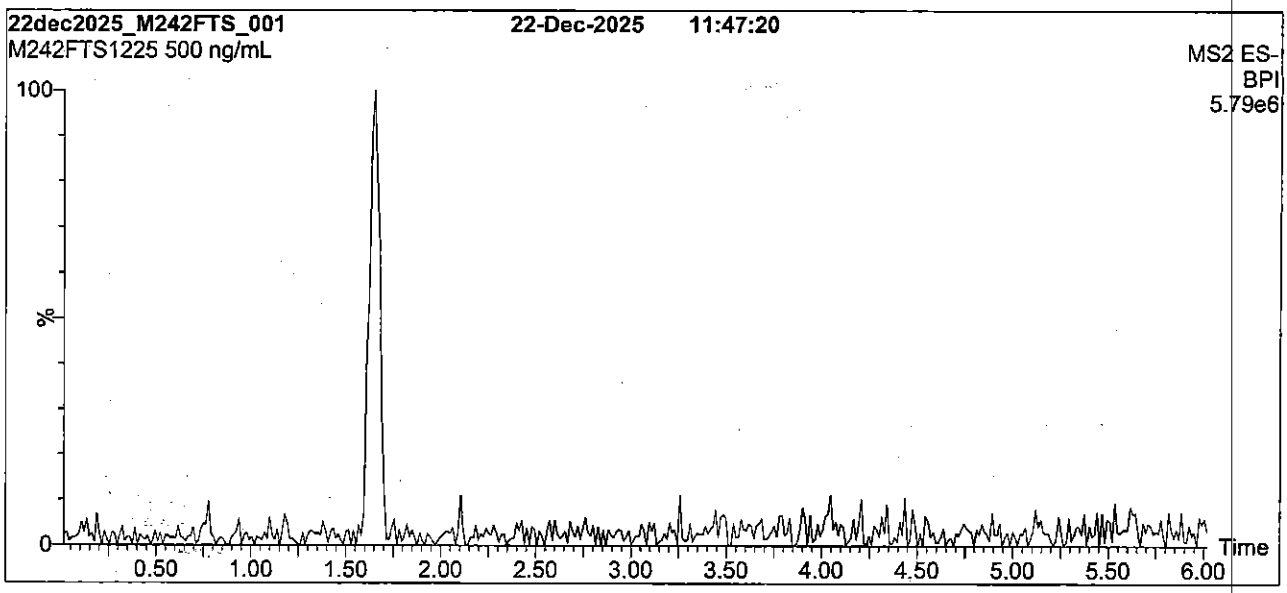
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

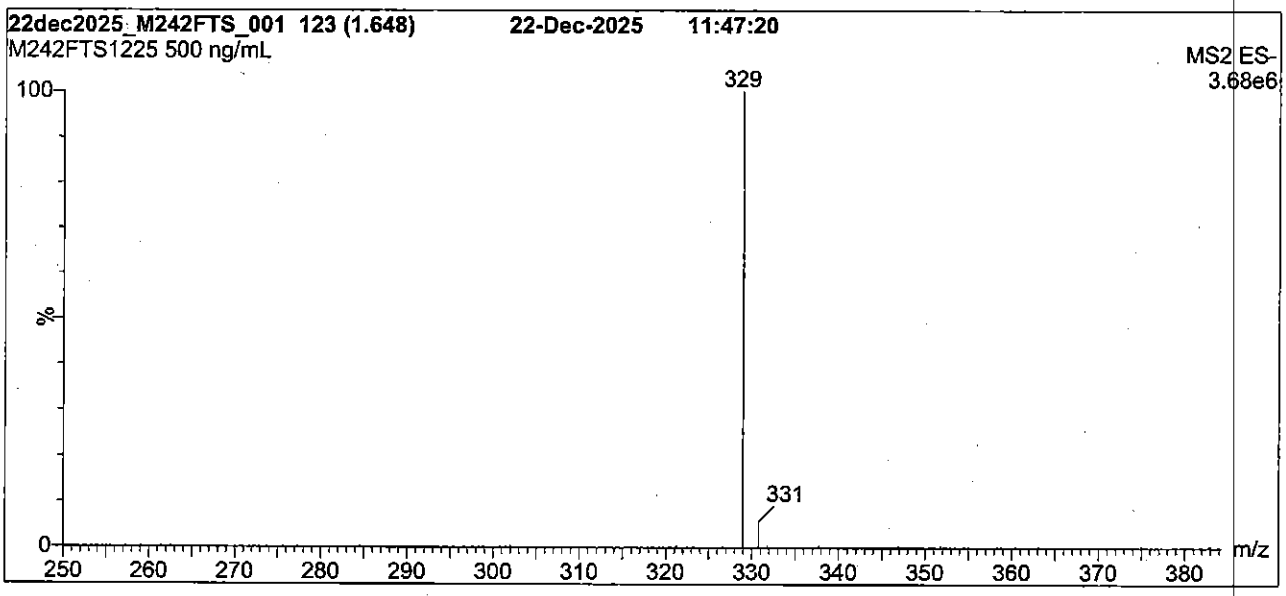
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED Testing REFERENCE MATERIAL PRODUCER

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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: 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

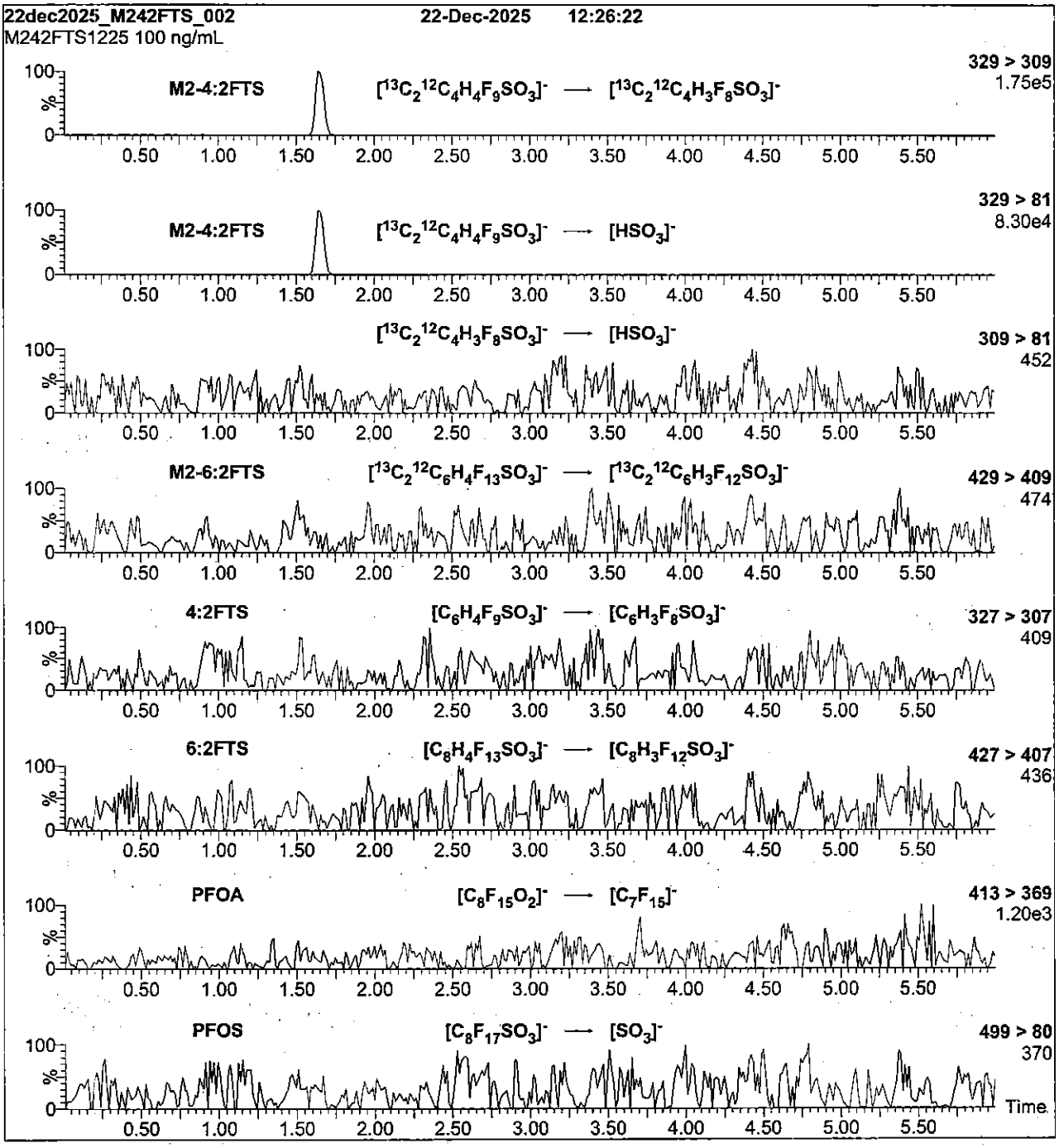
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

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

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) = 3.59e-3
Collision Energy (eV) = 18 (329 > 309)

Reagent

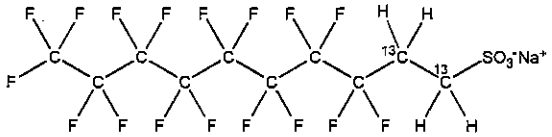
PFC_ST_05650

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ SG45→ SG64

PRODUCT CODE:	M2-8:2FTS	**LOT NUMBER:**	M282FTS0425
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
LAST TESTED: (mm/dd/yyyy)	04/09/2025		
EXPIRY DATE: (mm/dd/yyyy)	04/09/2030		
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: _____ **Date:** 04/23/2025 (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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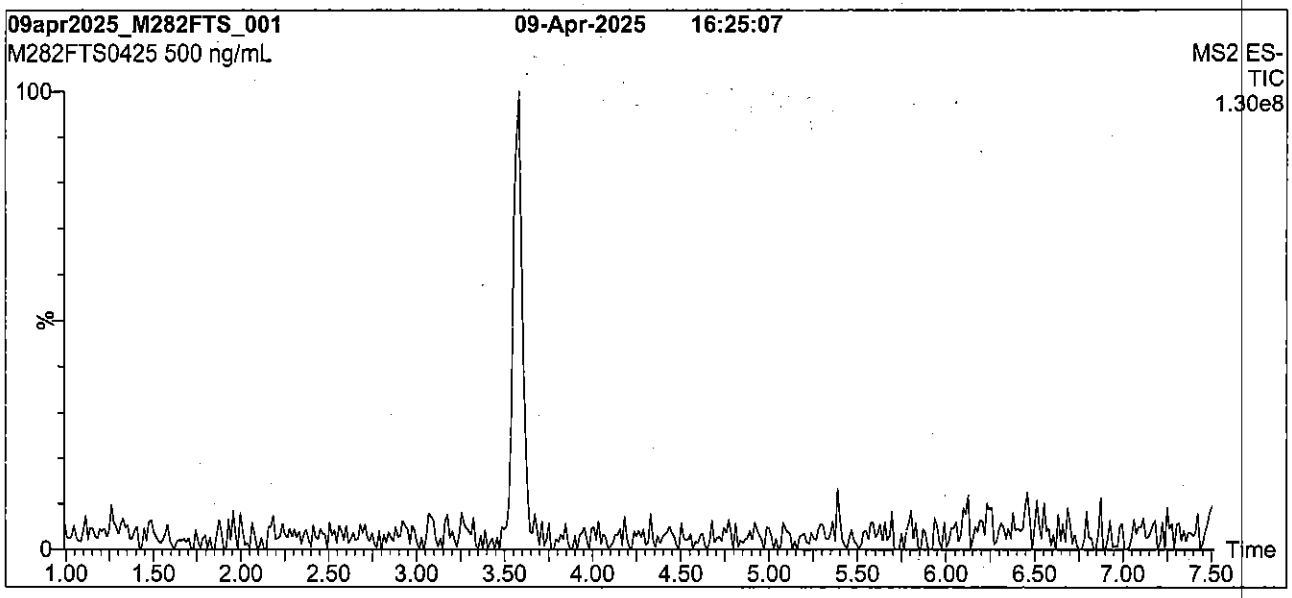
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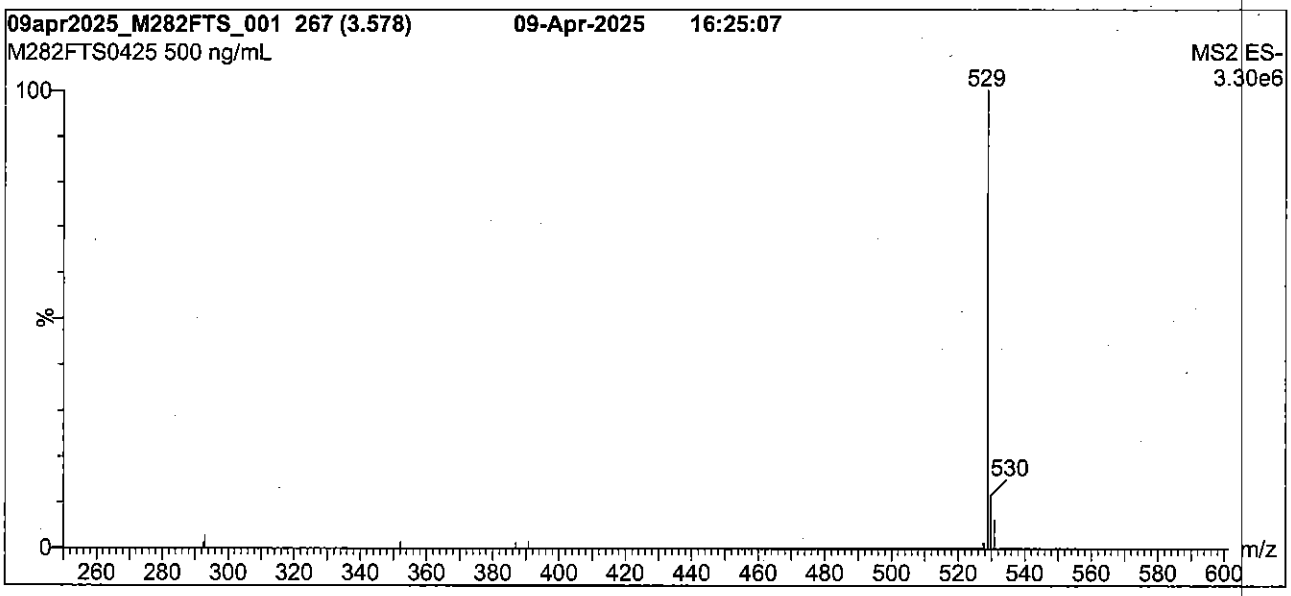
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

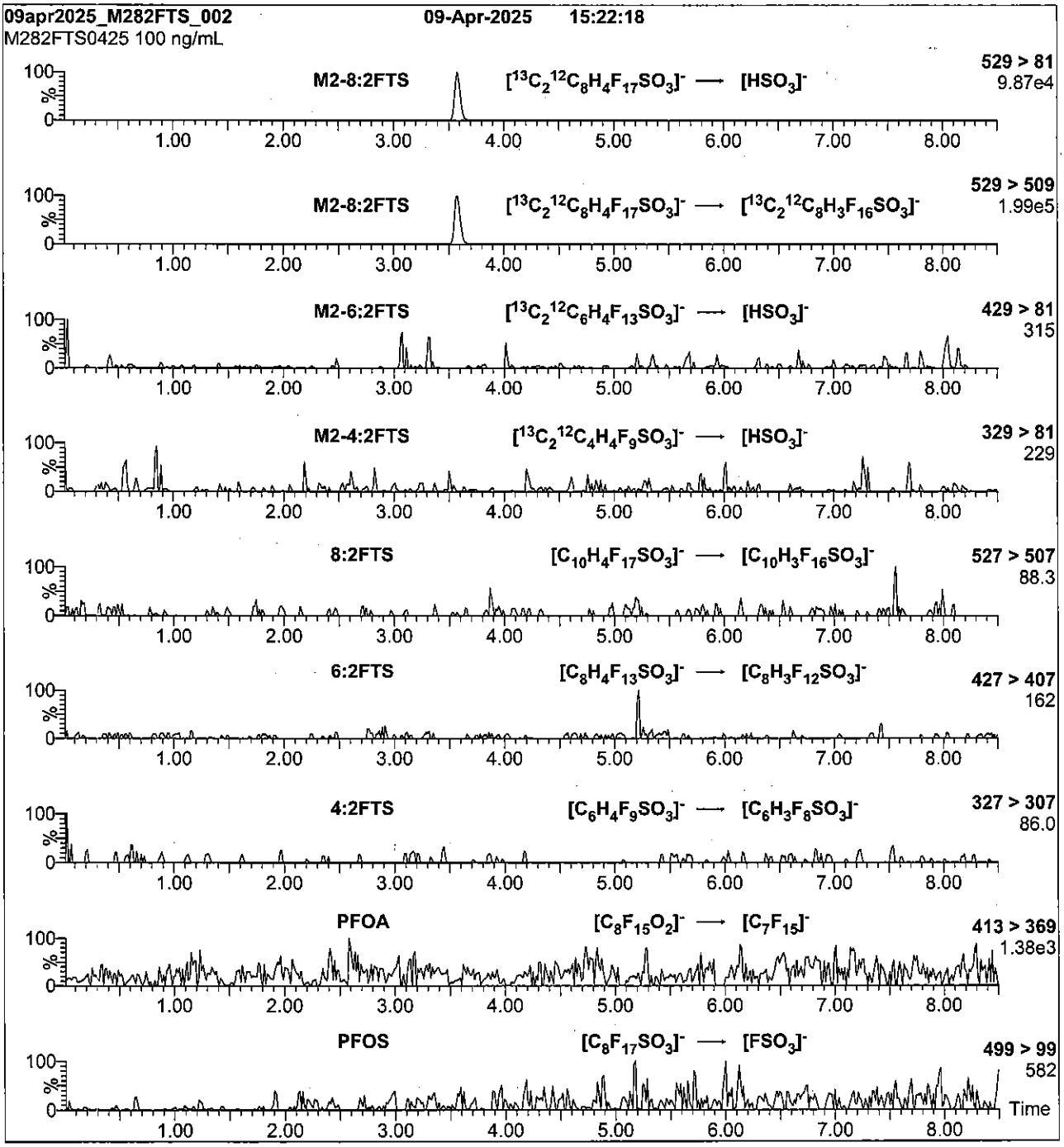
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (250 - 850 amu)

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

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) = 5.91e-3
Collision Energy (eV) = 26

Reagent

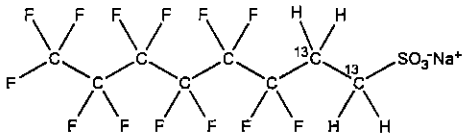
PFC_ST_05701

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ 5700 → 5719

PRODUCT CODE:	M2-6:2FTS	**LOT NUMBER:**	M262FTS1125
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)	**SOLVENT(S):**	Methanol
	47.6 ± 2.4 µg/mL (M2-6:2FTS acid)		
	47.5 ± 2.4 µg/mL (M2-6:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	11/11/2025		
EXPIRY DATE: (mm/dd/yyyy)	11/11/2030		
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.
- It is known that elevated concentrations of 6:2FTS will contribute to the response of the 429 > 409 MRM transition of M2-6:2FTS due to the natural abundance of the ^{34}S (~4.2% relative to ^{32}S) in the native compound. Therefore, use of the alternative product ion (m/z 81 $[^{32}SO_3H]^-$) is recommended. The analagous transition for the ^{34}S native analyte would produce m/z 83 $[^{34}SO_3H]^-$ from the same nominal mass precursor ion thereby eliminating the potential interference.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/17/2025 (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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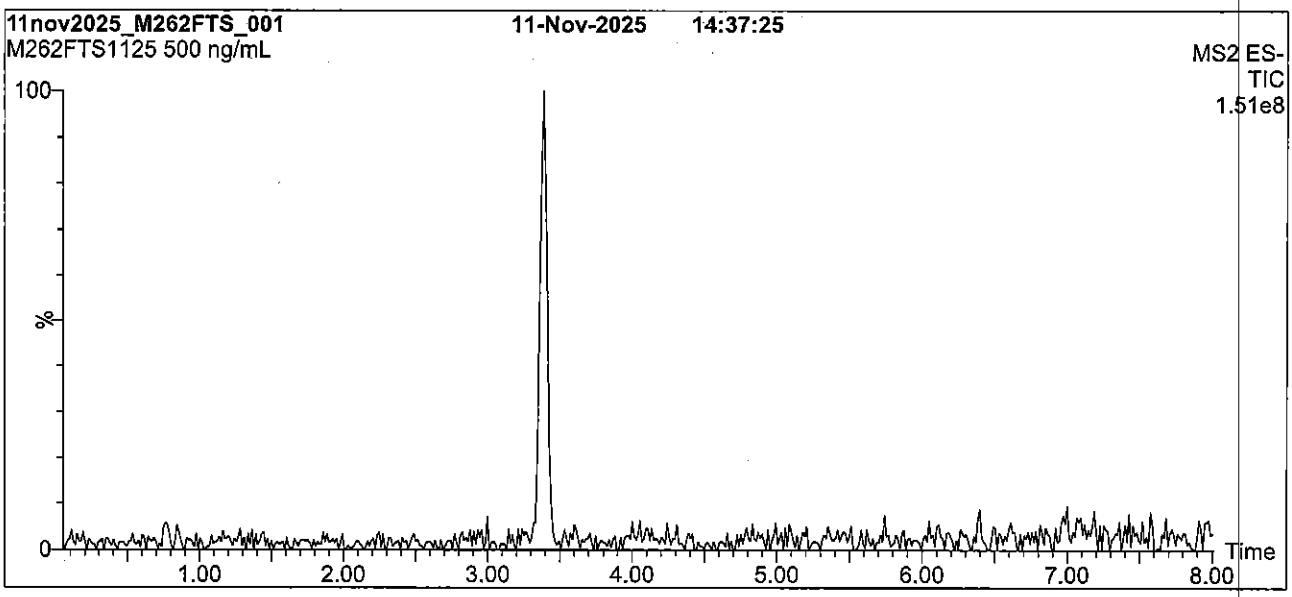
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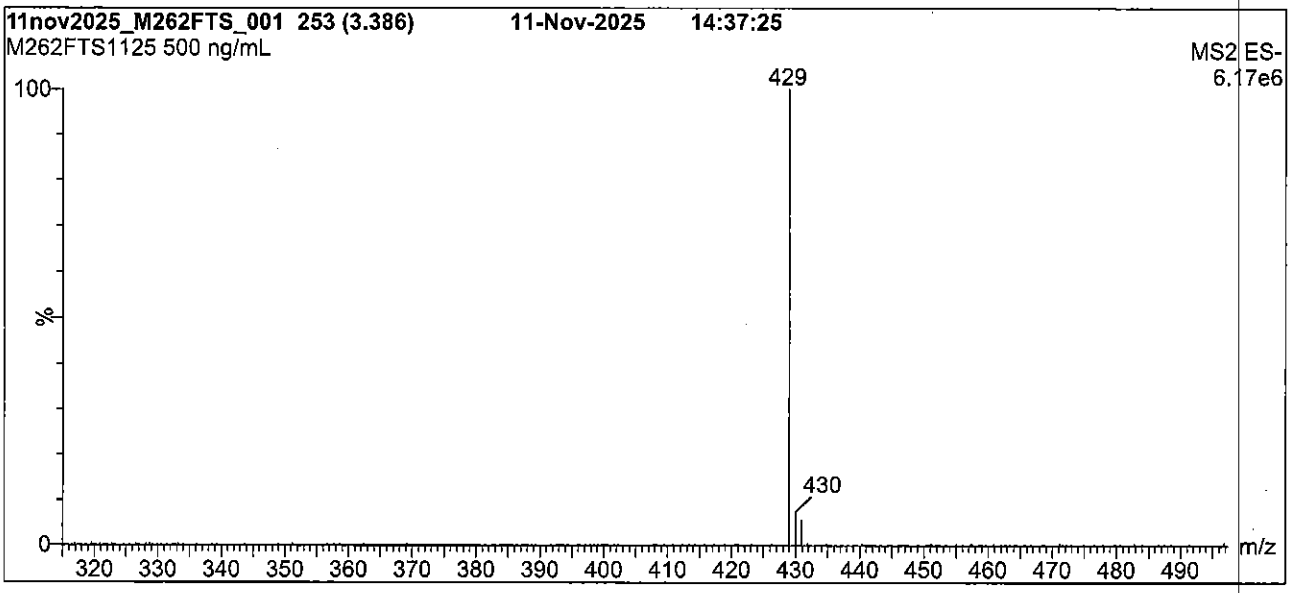
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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: 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

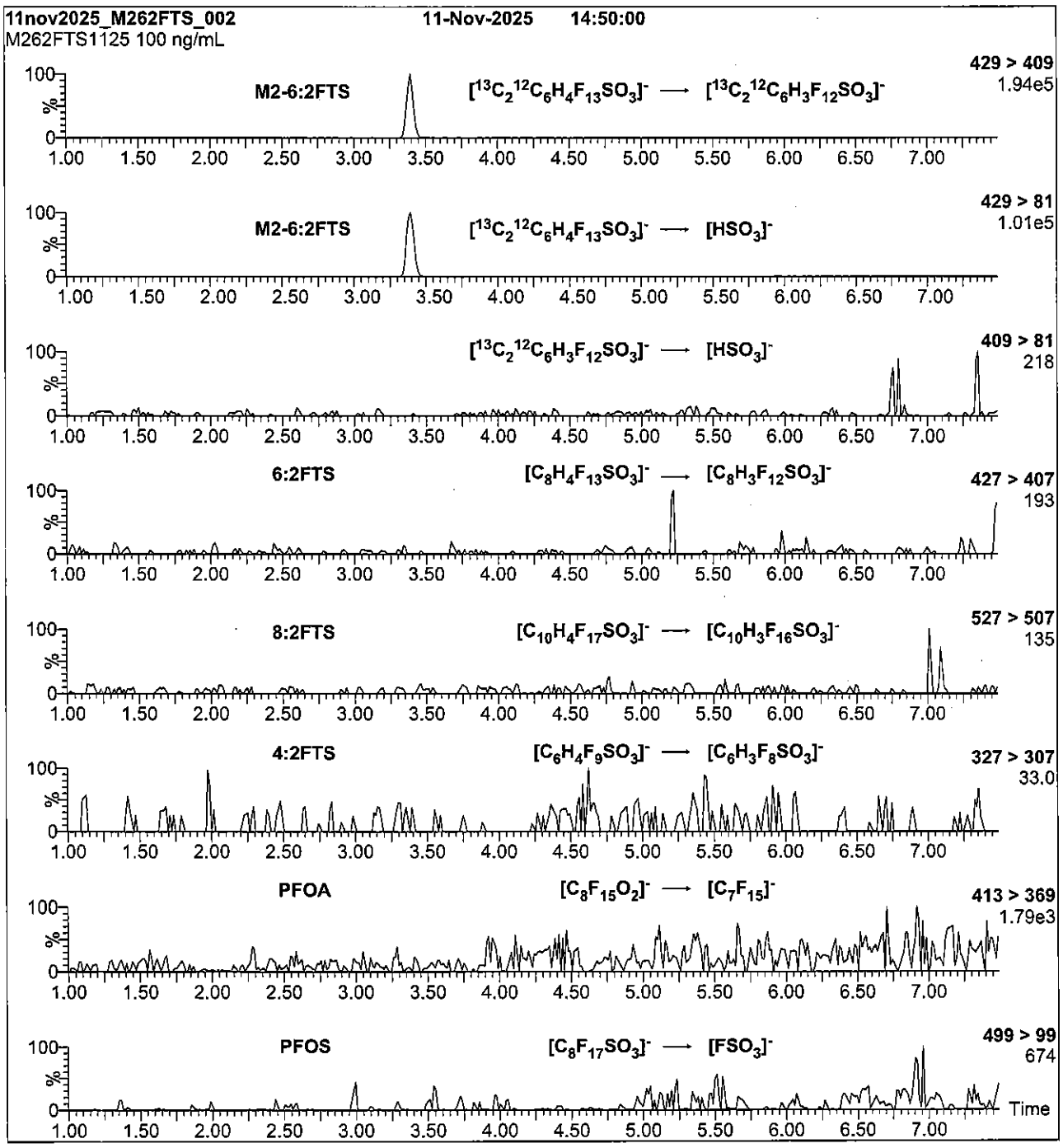
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 4.70e-3
Collision Energy (eV) = 20 (429 > 409)

Reagent

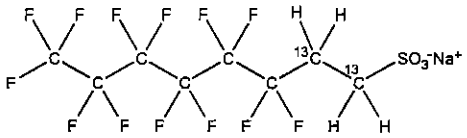
PFC_ST_05715

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC_ST_ 5700 → 5719

PRODUCT CODE:	M2-6:2FTS	**LOT NUMBER:**	M262FTS1125
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)	**SOLVENT(S):**	Methanol
	47.6 ± 2.4 µg/mL (M2-6:2FTS acid)		
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CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	11/11/2025		
EXPIRY DATE: (mm/dd/yyyy)	11/11/2030		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

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

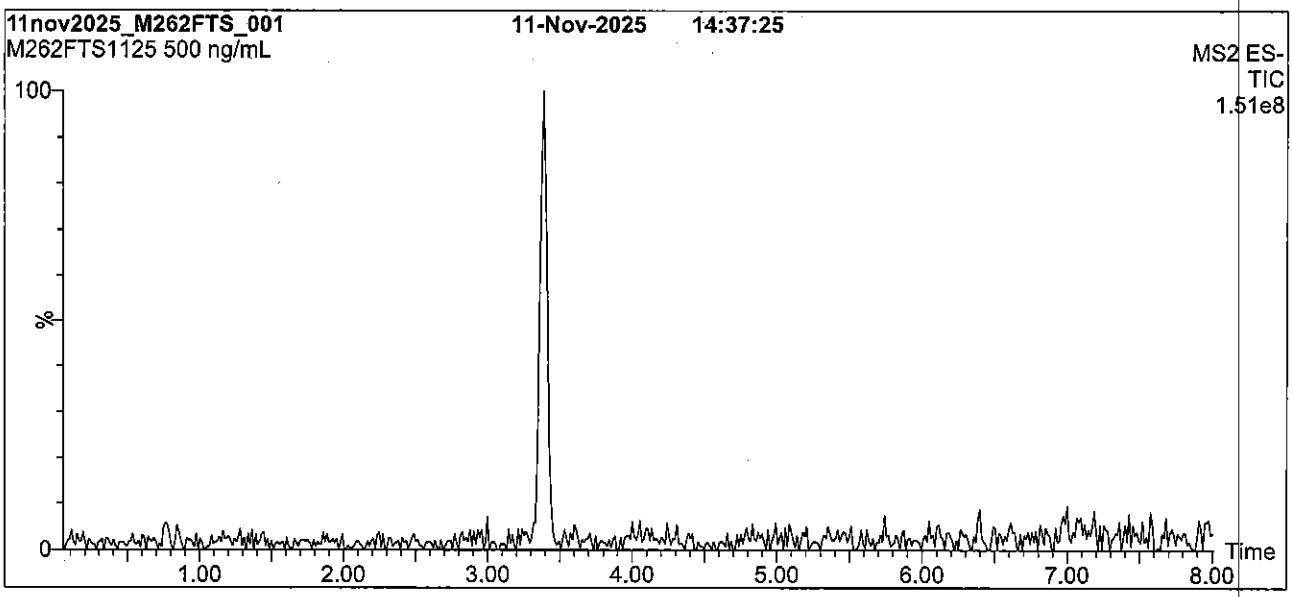
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

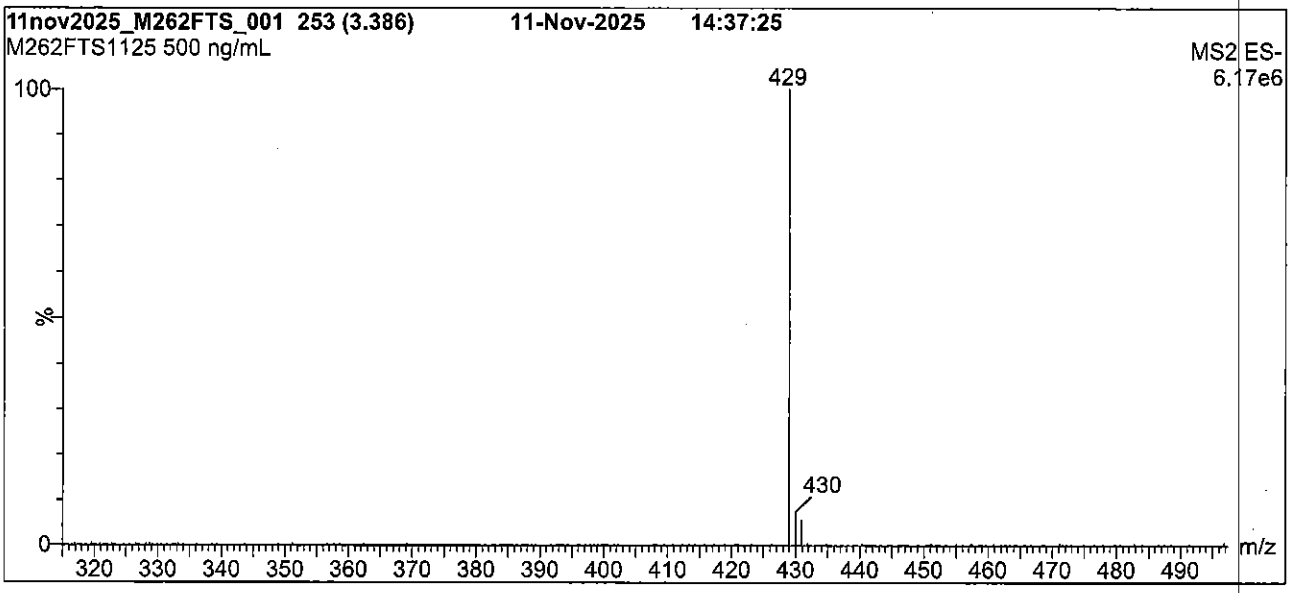
CALA Testing Accreditation No. A1226

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: **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: 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

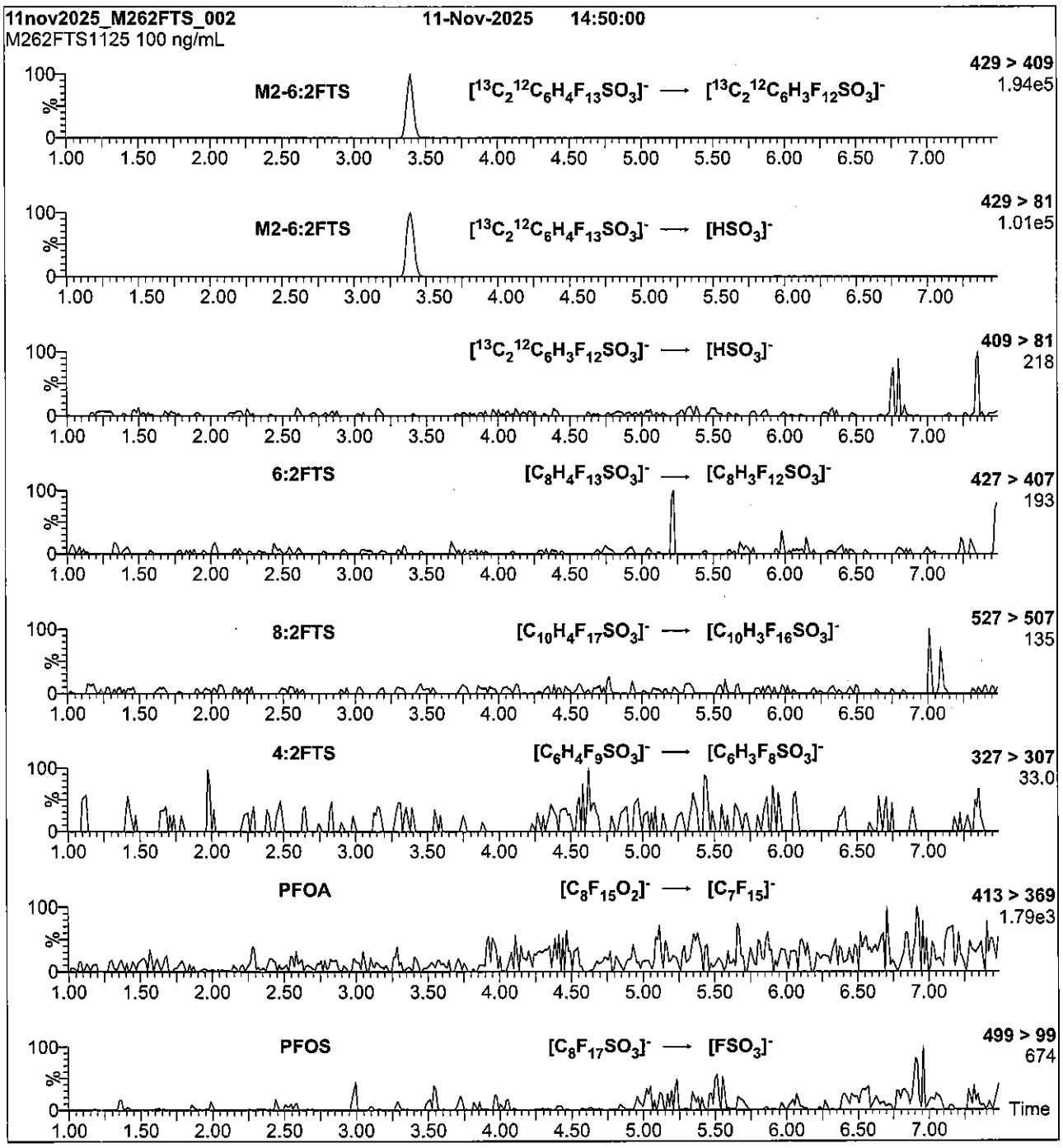
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 4.70e-3
Collision Energy (eV) = 20 (429 > 409)

Reagent

PFC_ST_05727

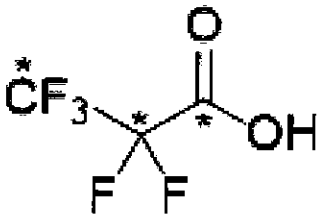
Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810 USA

12

PFC_ST_ 5720 → 5731

Certificate of Analysis

Perfluoropropanoic acid (PFPrA) ($^{13}C_3$,99%) 50 µg/mL in MeOH w/4 molar equivalents NaOH



Catalog #:	CLM-11324-A-S
Batch #:	**B003784**
Chemical Formula:	*C3HF5O2
Molecular Weight:	167.01
Labeled CAS #:	NA
Unlabeled CAS #:	422-64-0
Manufacture Date:	4/9/2025
Retest Date:	4/8/2030

Storage: Store at room temperature away from light and moisture.

Intended Use: For Research Use Only. Not for use in diagnostic procedures.

Quality Control Tests and Results

Test	Specification	Result
Concentration Based on Gravimetry	50 ± 5 µg/mL	50.0 ± 0.4 µg/mL, (k=2)

Certification

- Cambridge Isotope Laboratories, Inc. certifies that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1. The expiration date is valid only for unopened vials or ampoules that have been stored as recommended. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.
- Gravimetric concentrations are compensated for the measured Chemical Purity of the neat material. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the SI through NIST. The calibrations also meet specifications outlined in ISO 17034, ISO/IEC 17025, and applicable subdocuments.
- For compounds that are enriched at 2 or more sites within the molecule, the value given for isotopic enrichment will be different from the percent species abundance of the fully enriched molecule. To learn more about isotopic enrichment and species abundance, please visit https://isotope.com/en-us/enrichment.
- Concentration is verified through multiple analysis and is calculated as the average of the multiple analysis compared to an independently prepared calibration solution. The calculation and reporting of uncertainty conforms to the practices outlined in the Eurachem/CITAC Guide. "Quantifying Uncertainty in Analytical Measurement", Second Edition.

Marina Klionsky
Quality Review

Date: 4/23/2025

Revision 1

Reagent

PFC_ST_05739

LGC | DR EHRENSTORFER™

REFERENCE MATERIAL CERTIFICATE ISO 17034

Certified Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Name
Perfluorododecanesulfonic acid 13C3 (1,2,3-13C3) sodium 50 µg/mL in Methanol:Water

Product Code
DRE-A15986645MW-50

CAS No.

Mol. Weight
725.12

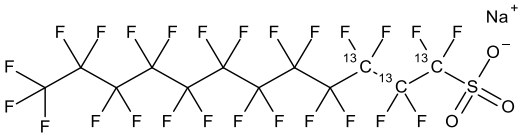
Mol. Formula
$^{13}C_3C_9F_{25}O_3S \cdot Na$

Lot Number
1-H1536184MW

Format
Solution

Expiry Date
17 Aug 2026

Storage Temp
-18°C ± 4°C



CERTIFIED	CERTIFIED
Concentration 49.96 µg/mL	Expanded Uncertainty (U) 4.05 µg/mL

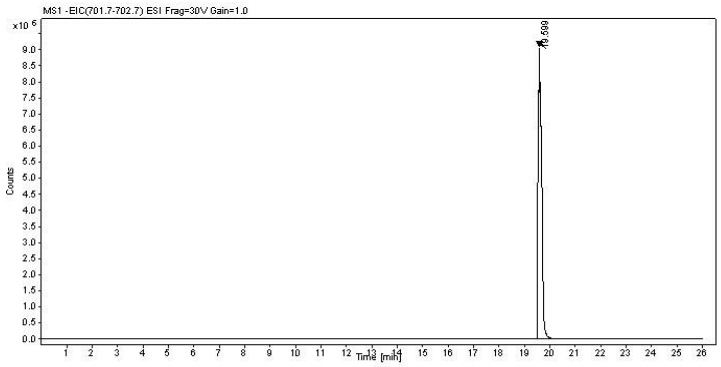
Uncertainty
The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity and stability testing. Stability values are based on real evidence opposed to simulation.

The producer certifies that this certified reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this certified reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON		
L. Messerschmid	17 Feb 2025	L. Messerschmid	RM Release

REFERENCE MATERIAL CERTIFICATE ISO 17034

CHROMATOGRAM



Signal:	MS1 -EIC(701.7-702.7) ESI Frag=30V Gain=1.0			
Nr.	RT [min]	Area	Height	Area%
1	19.60	86623448.38539	9065685.67	100.00

Instrument
HPLC/DAD+MS

Column
Synergi Polar-RP 4 µm 250 x 4.6 mm

Method Details
Eluent A: 100% Acetonitrile
Eluent B: Water + Formic Acid

Time [min]	Eluent A [%]	Eluent B [%]
0	10	90
1	10	90
21	98	2
25	98	2

Flow
0.5 mL/min

Method of Preparation
The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information
Solvent: Methanol, Lot No. V2N046033A10 / Water, Lot No. O044004, 96:4, 40.00 mL.
Concentration calculation based on Combined Purity = Chemical Purity * Isotopic Value.

Gravimetric Data

Compound Name	Lot No.	Combined Purity (%)	Weight (mg)	Chemical Purity (%)	Isotopic Purity (%)
Perfluorododecanesulfonic acid 13C3 (1,2,3-13C3) sodium	1536129	73.9	2.704	74.5	99.2

Intended Use
This CRM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

Safety
Proper precautions should be observed while handling. See Safety Data Sheet.

Traceability
The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (DKD). The calibration of the balances is verified daily internally and annually by an external accredited calibration service. Chromatographic methods are traceable to the International System of Units (SI).

Homogeneity
Random replicate samples of the final packaged CRM have been analysed to prove homogeneity compliant with ISO 17034.

Storage
The CRM should be stored in the original sealed container at the indicated temperature.

Instructions for use
The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 mL as the minimum sample size and if less material is used, to increase the certified uncertainty by a factor of two for half sample and four for a quarter of sample. If storage after opening is necessary, the CRM should be tightly closed and kept from light and moisture. If the CRM was in a sealed ampoule, it should be transferred to a vial with minimum head space. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

LGC Labor GmbH
Bgm.-Schlosser-Straße 6A
86199 Augsburg, Germany
T | +49 821 906080
F | +49 821 9060888
E | dr.ehrenstorfer@lgcgroup.com

LGC Labor GmbH is accredited by DAkkS as reference material producer on ISO 17034 (D-RM-19883-01-00).

All characterisation measurements at LGC Labor GmbH are accredited methods to ISO/IEC 17025.

DAkkS Deutsche Akkreditierungsstelle D-RM-19883-01-00

Reagent

PFC_ST_05825

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

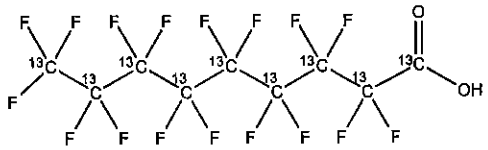
PFC_ST_ 5822, 5823, 5824, 5825

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-($^{13}C_9$)nonanoic acid

LOT NUMBER: M9PFNA0625

STRUCTURE:

CAS #: 2283397-80-6



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%
ISOTOPIC PURITY: ≥99% ^{13}C

LAST TESTED: (mm/dd/yyyy) 07/04/2025
EXPIRY DATE: (mm/dd/yyyy) 07/04/2030
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 ~1.0% of perfluoro-n-($^{13}C_5$)nonanoic acid (MPFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/15/2025 (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(s) 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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

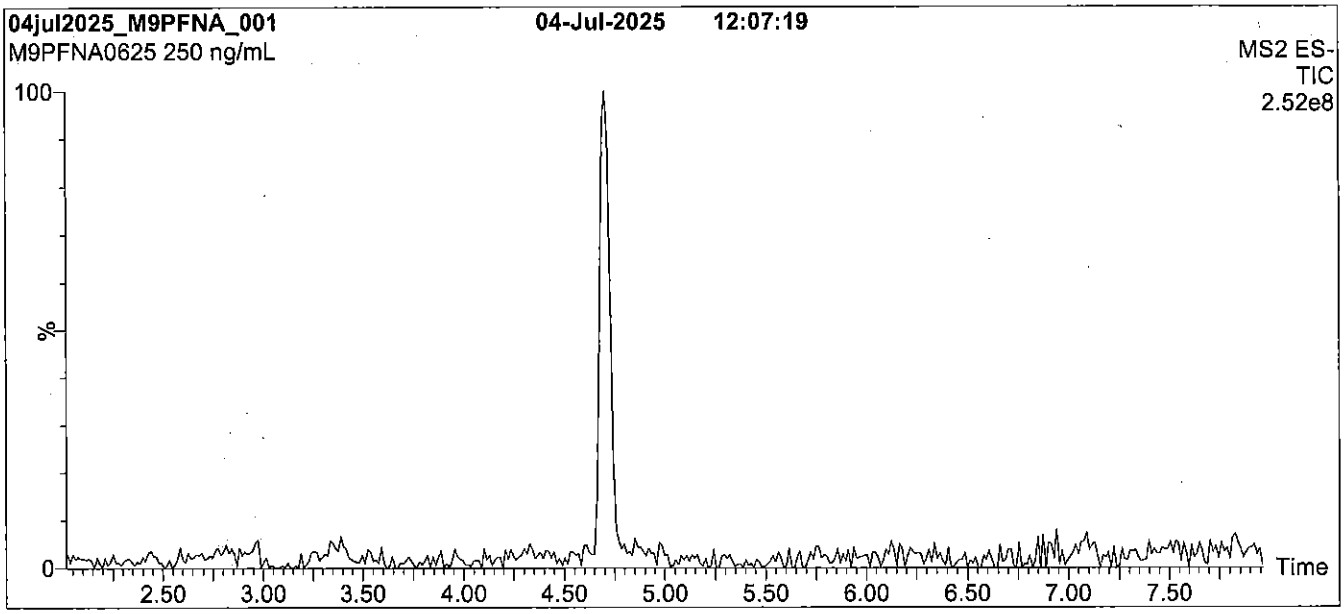
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

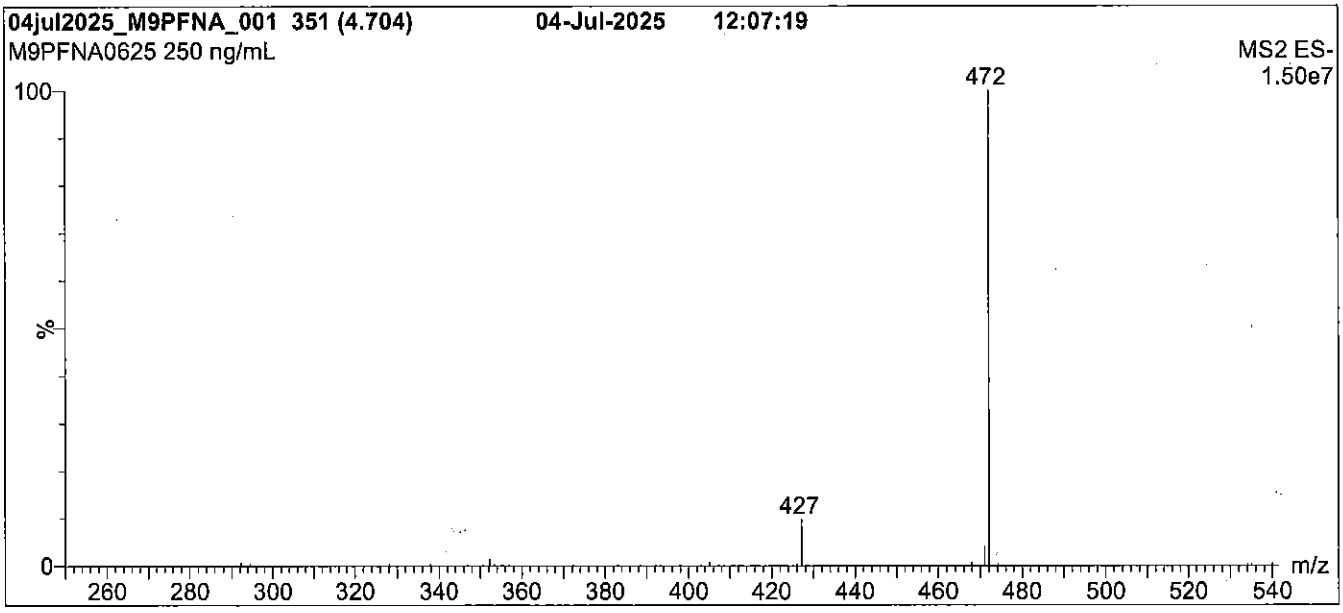
CALA Testing Accreditation No. A1226

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: **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: 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

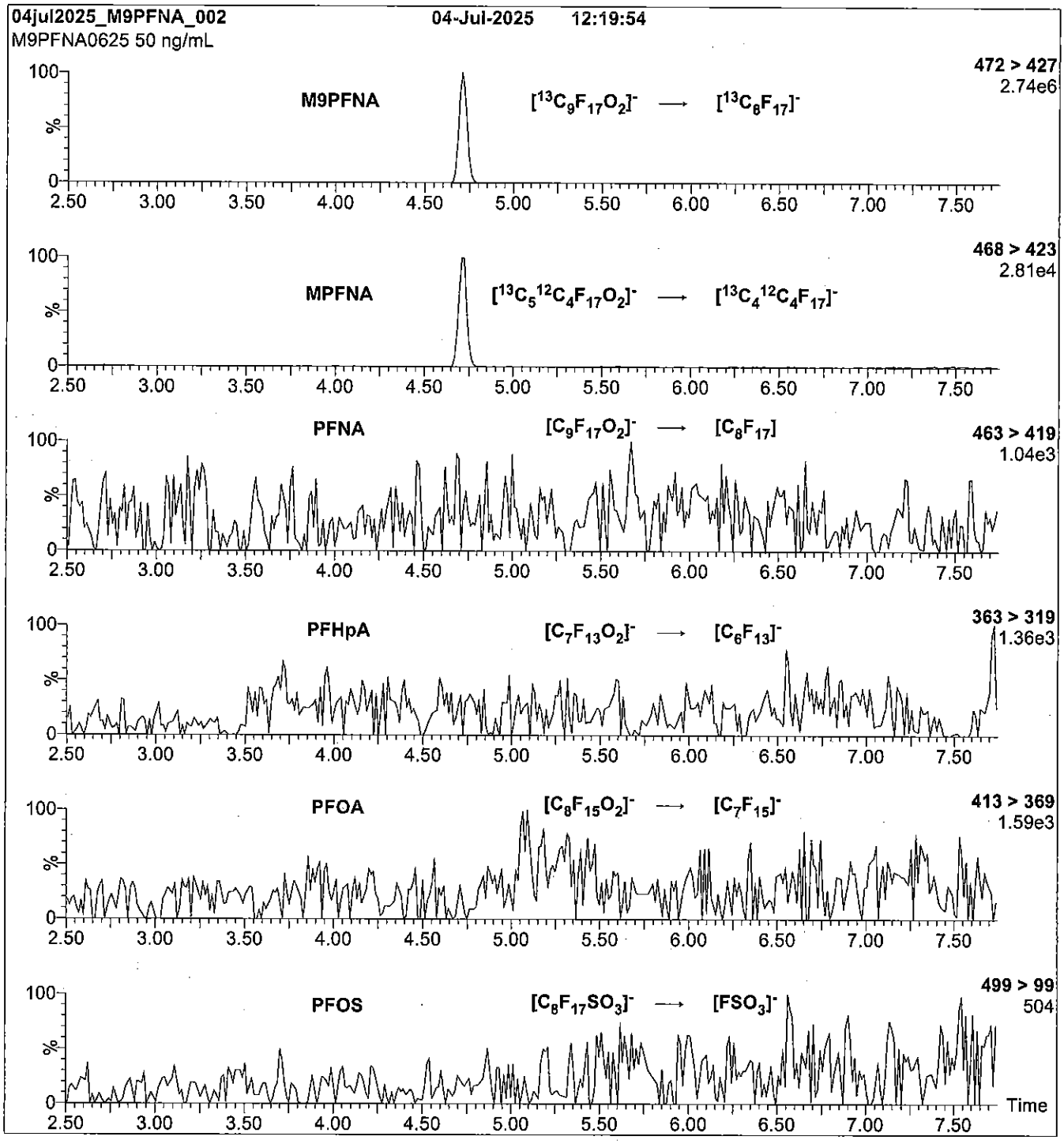
Flow: 300 µL/min

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: **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) = 4.09e-3
Collision Energy (eV) = 10

Reagent

PFC_ST_05846

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

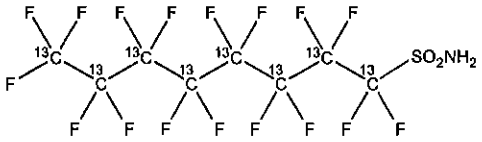
PFC-ST- 5846, 5847, 5848, 5849

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

LOT NUMBER: M8FOSA1225I

STRUCTURE:

CAS #: 1365803-60-6



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
LAST TESTED: (mm/dd/yyyy)	12/22/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/22/2030		
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 ~0.7% of perfluoro-1-($^{13}C_4$)octanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/24/2025 (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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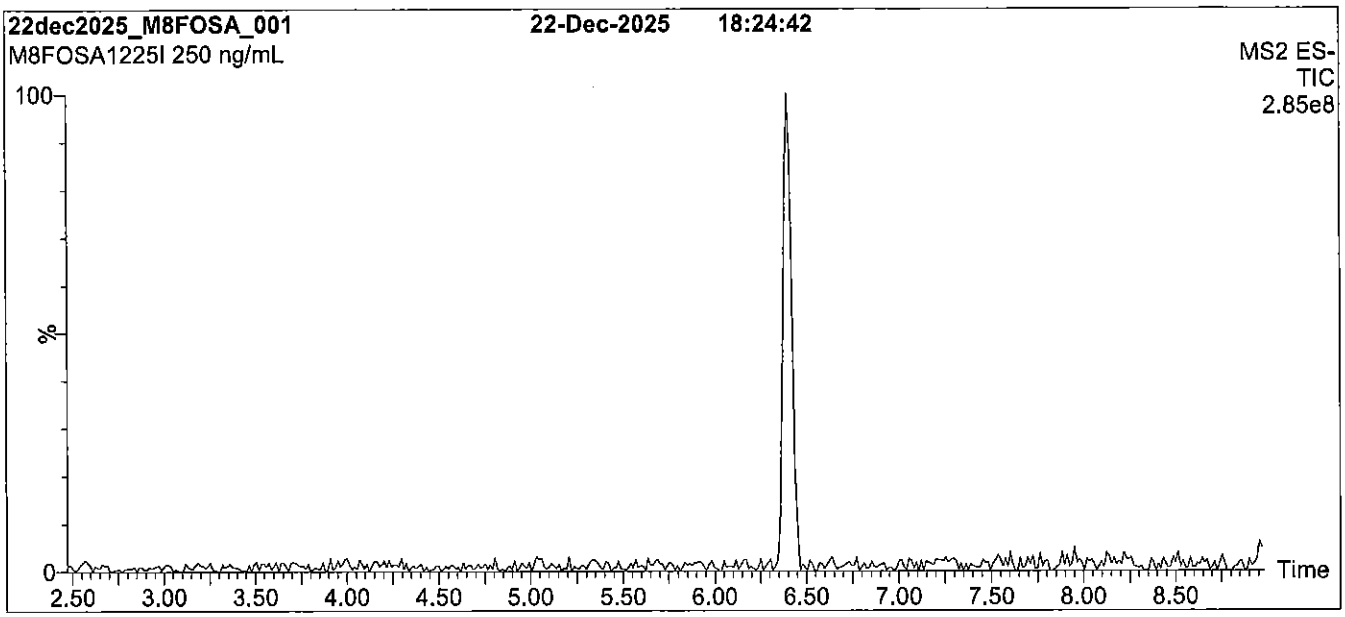
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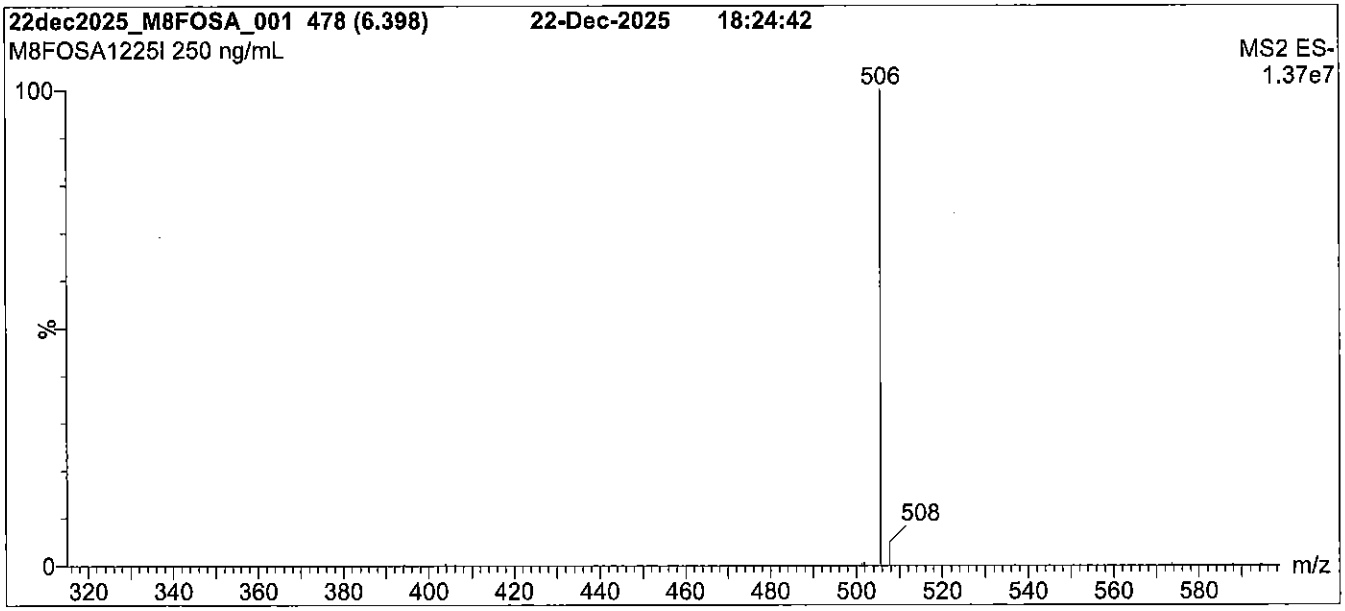
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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

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

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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

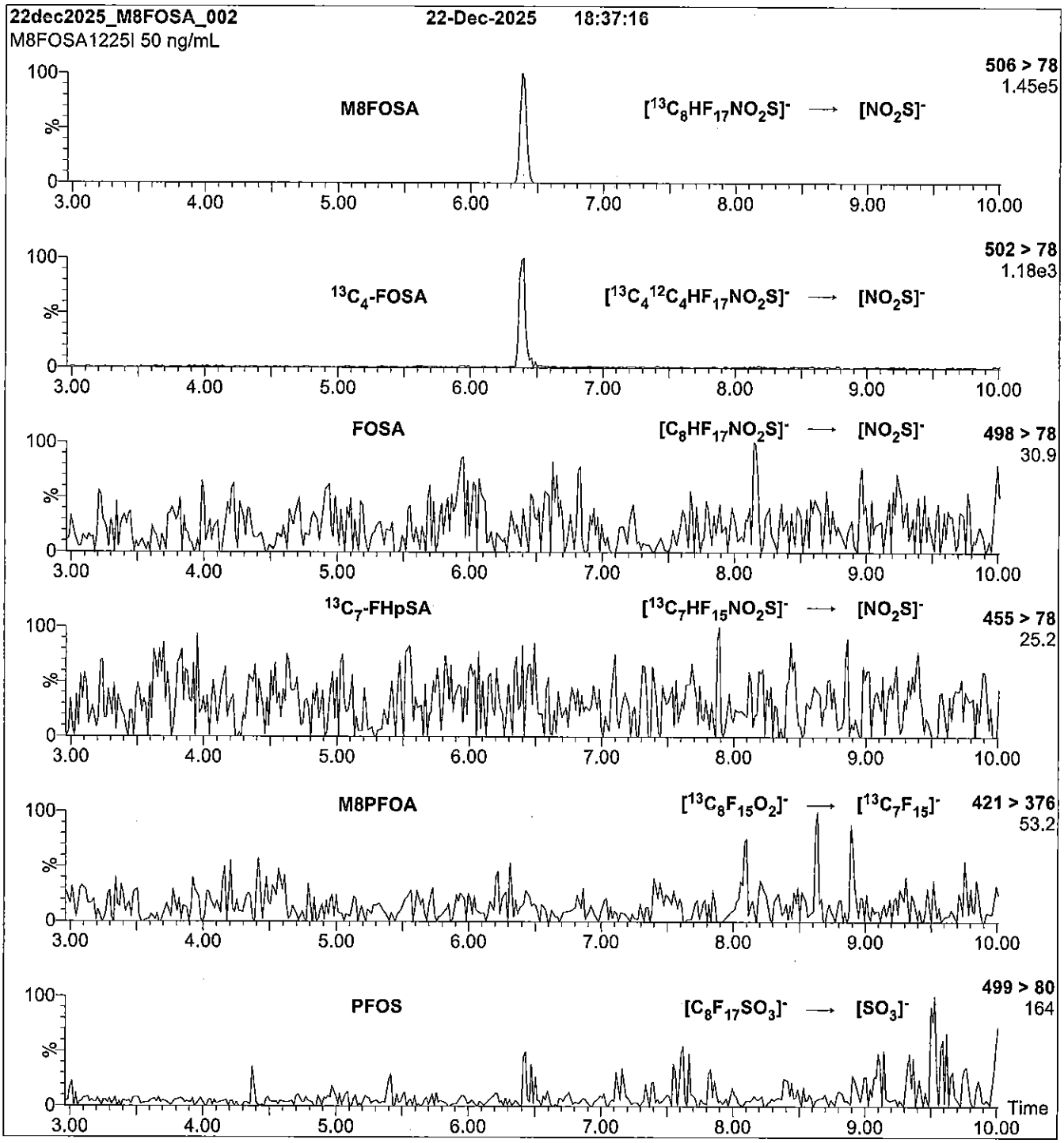
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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

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) = 3.57e-3
Collision Energy (eV) = 30 (506 > 78)

Reagent

PFC_ST_05878

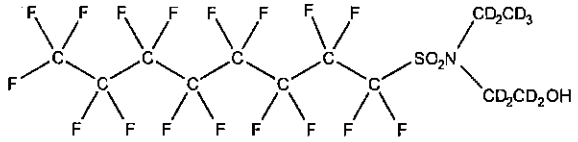
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFOST 5878, 5879, 5880, 5881, 5882, 5887
5884, 5885, 5886

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1025M
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)	11/05/2025 (HRGC/LRMS) 10/21/2025 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	11/05/2030		
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.
- Contains ~0.7% of branched 2-(N-ethyl-d5-perfluorooctanesulfonamido)ethan-d4-ol by ^{19}F NMR and ~0.5% of an uknown impurity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/07/2025 (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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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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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%) has been assigned to this product.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

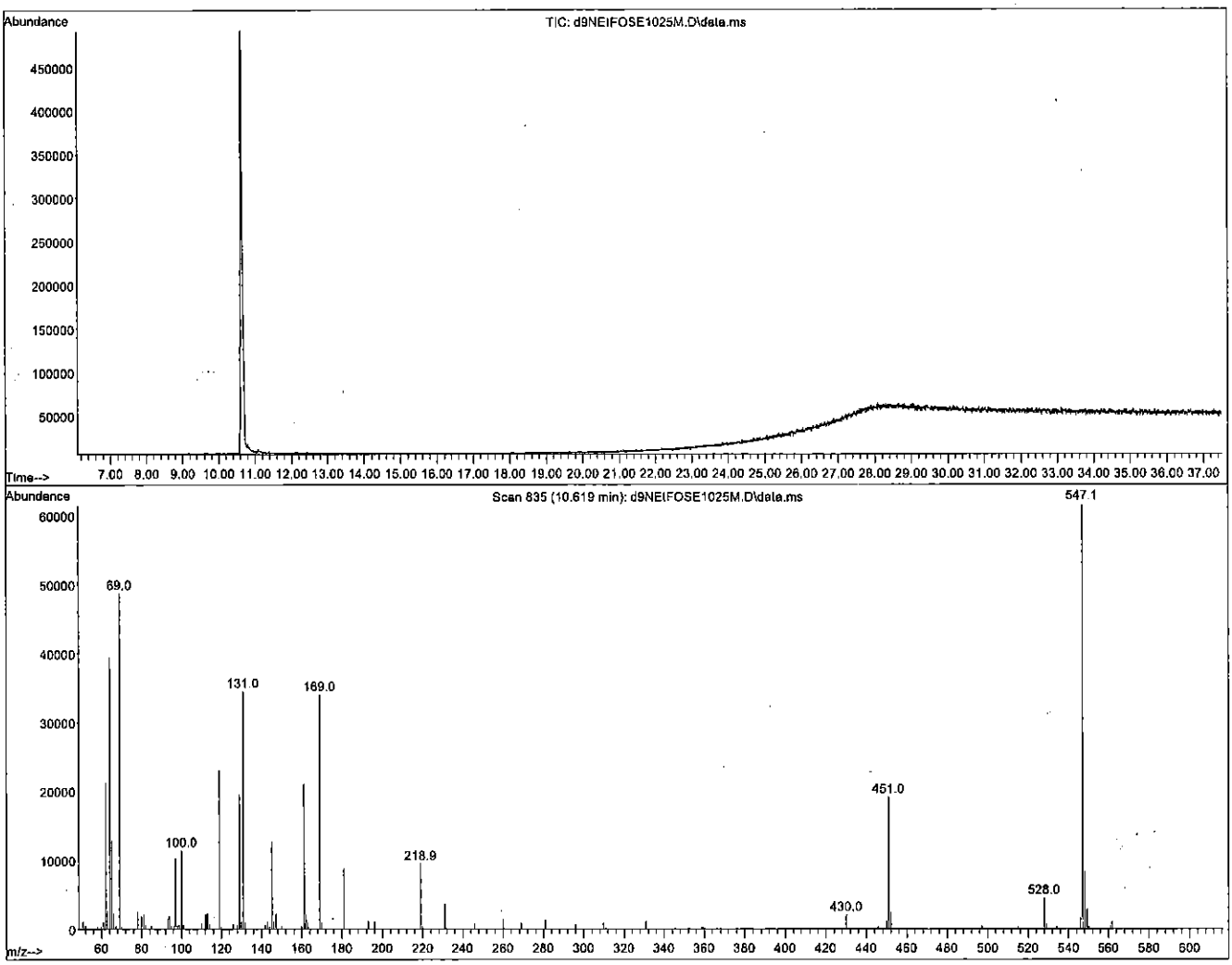
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d9-N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



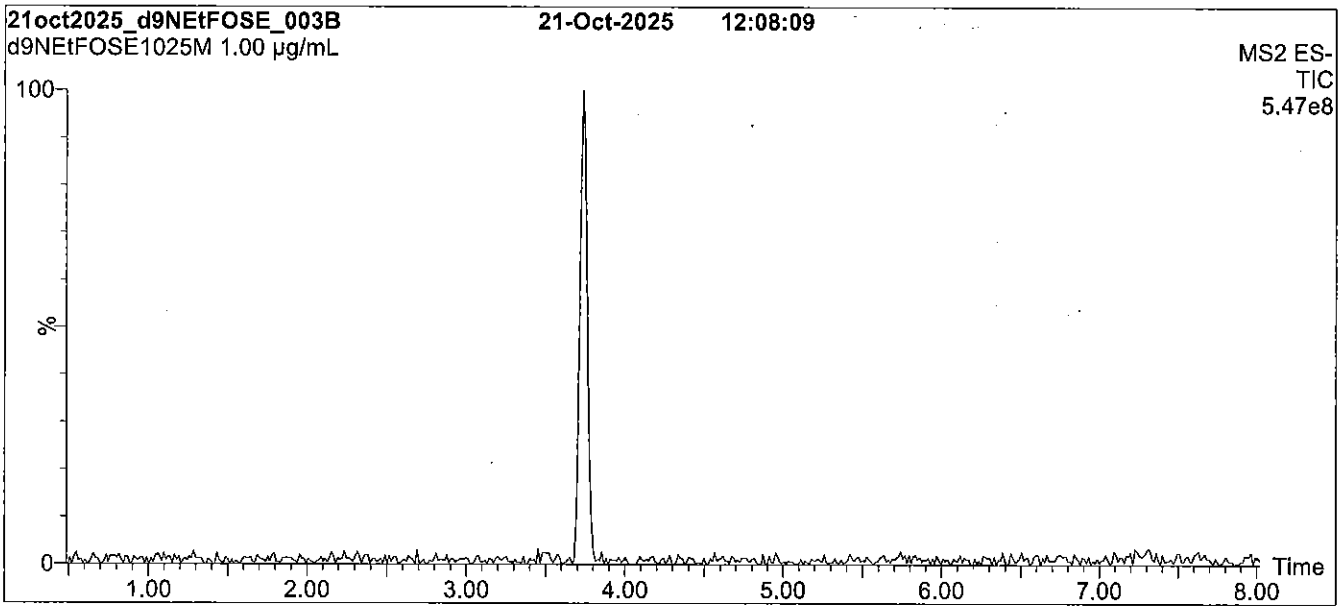
Conditions for Figure 1:

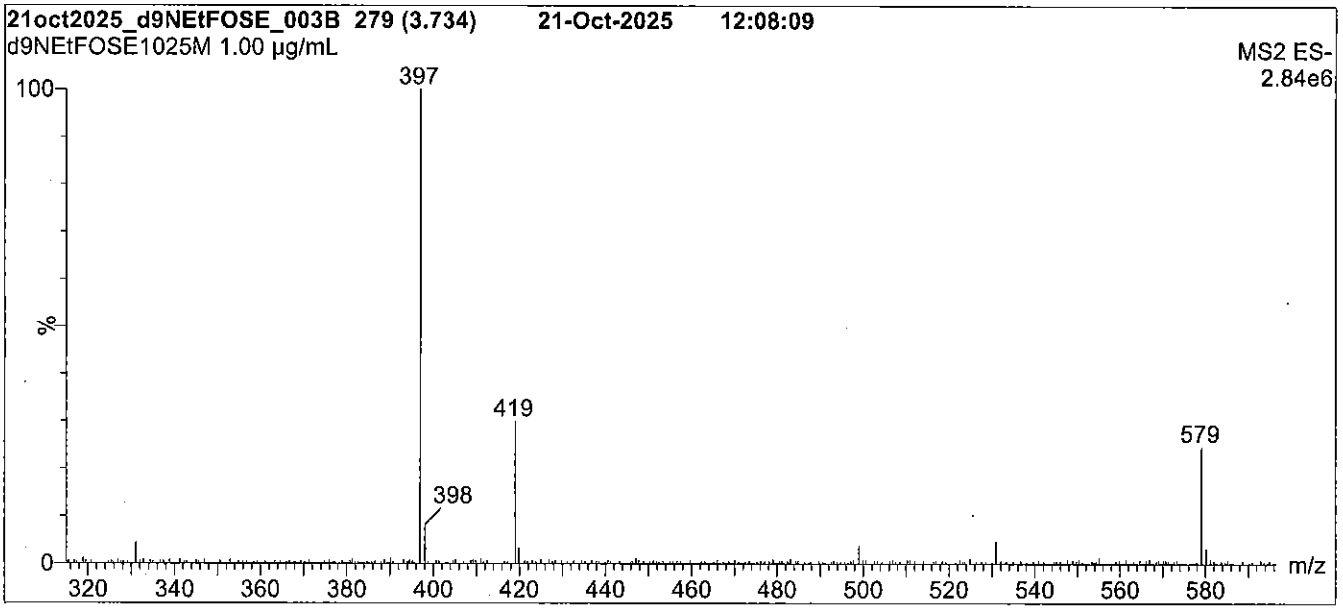
Agilent 7890A HRGC
Agilent 5975C MSD

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-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

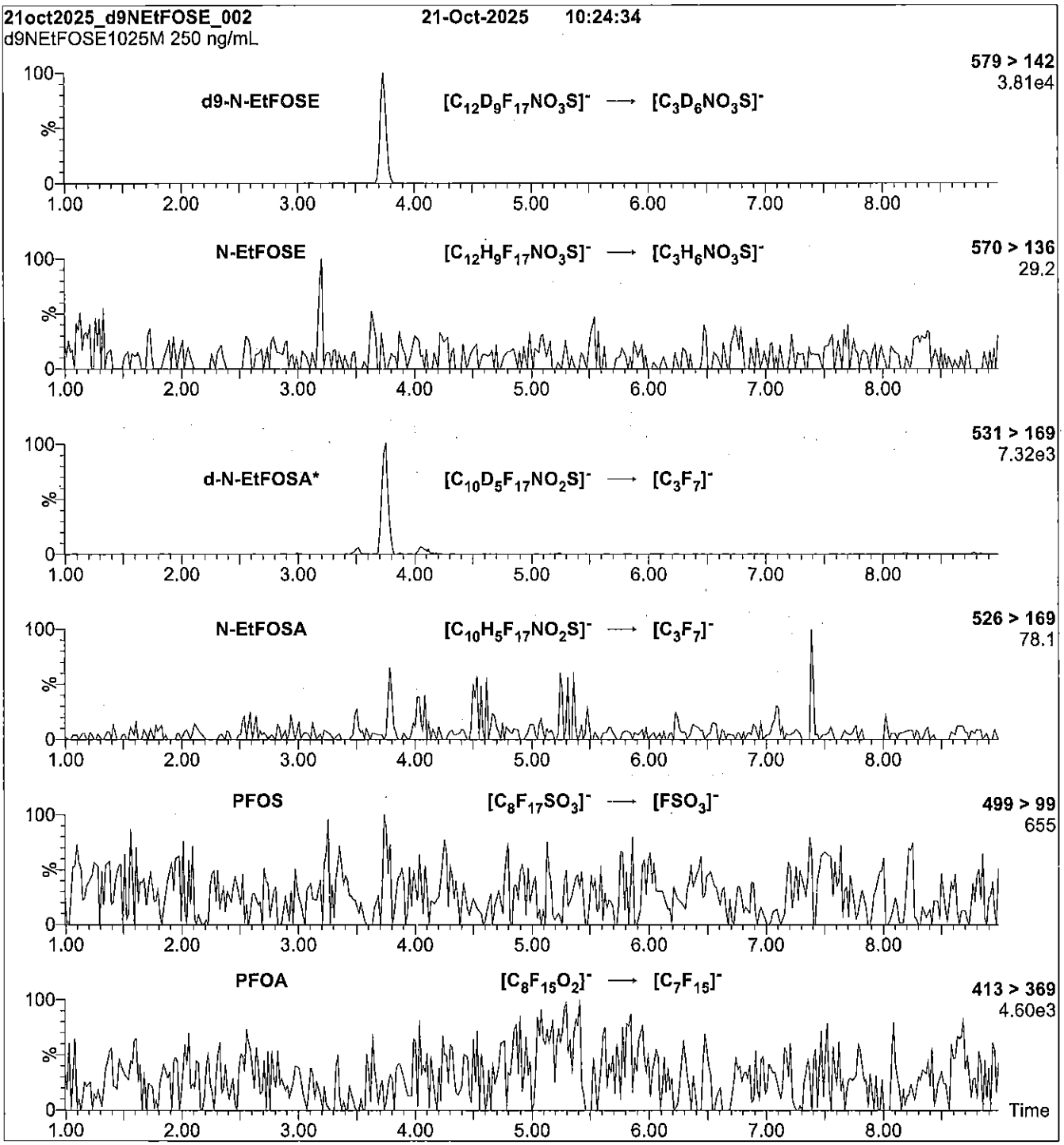
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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)**



*__Note__: Formed by in-source fragmentation.

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) = 3.89e-3
Collision Energy (eV) = 32 (579 > 142)

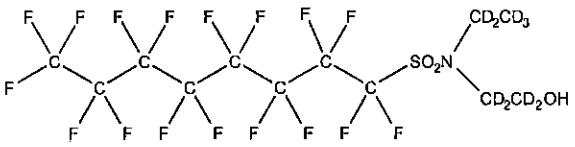
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1025M

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)	11/05/2025 (HRGC/LRMS) 10/21/2025 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	11/05/2030		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

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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.
- Contains ~0.7% of branched 2-(N-ethyl-d5-perfluorooctanesulfonamido)ethan-d4-ol by ^{19}F NMR and ~0.5% of an uknown impurity.

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QUALITY MANAGEMENT:

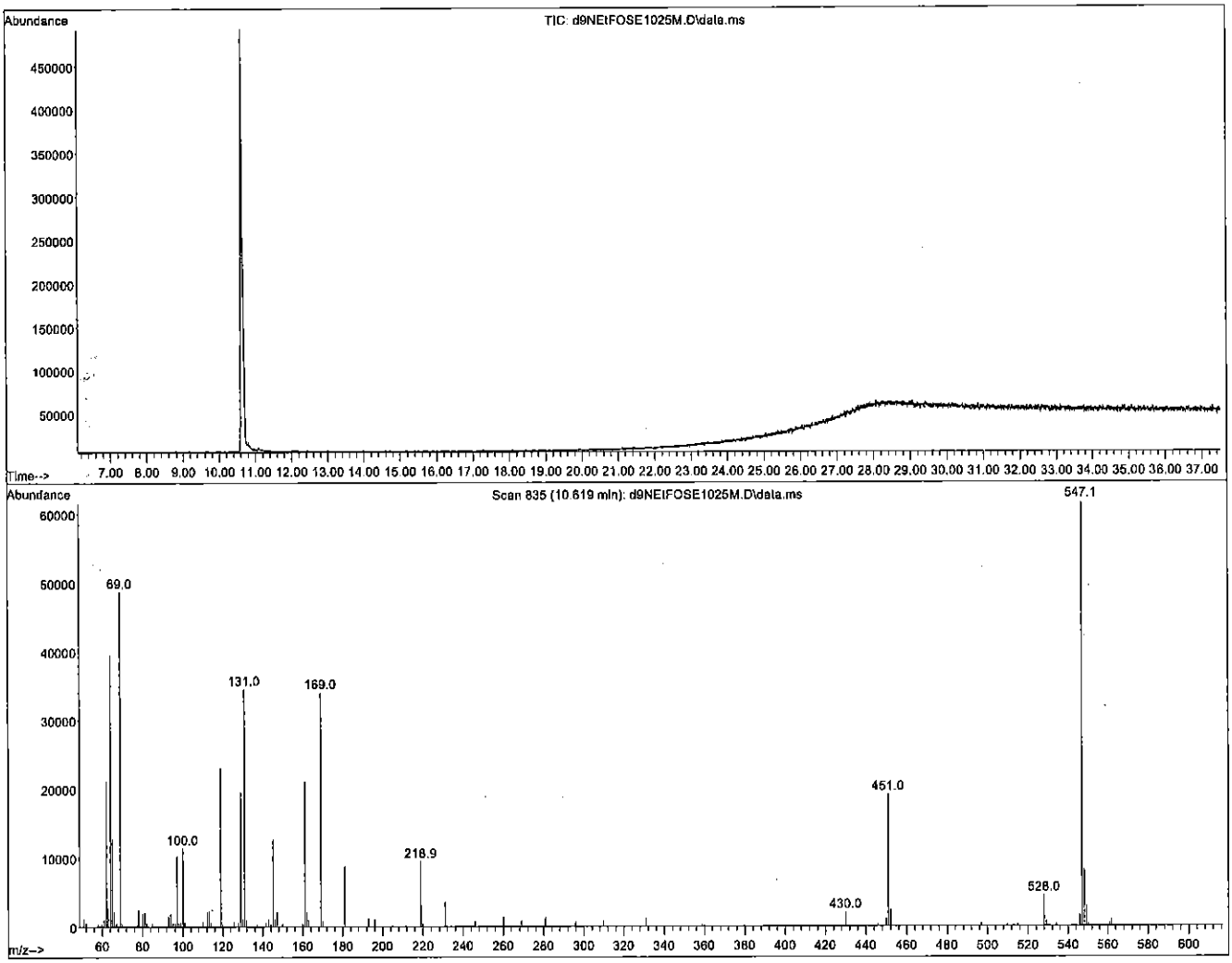
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d9-N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



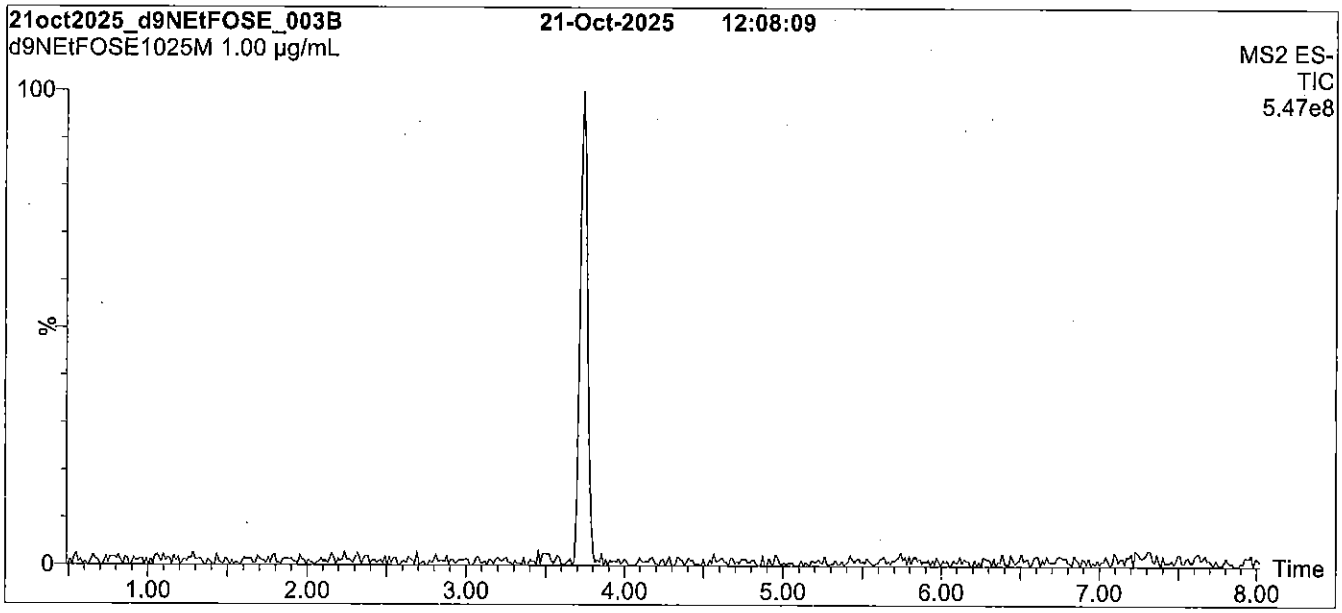
Conditions for Figure 1:

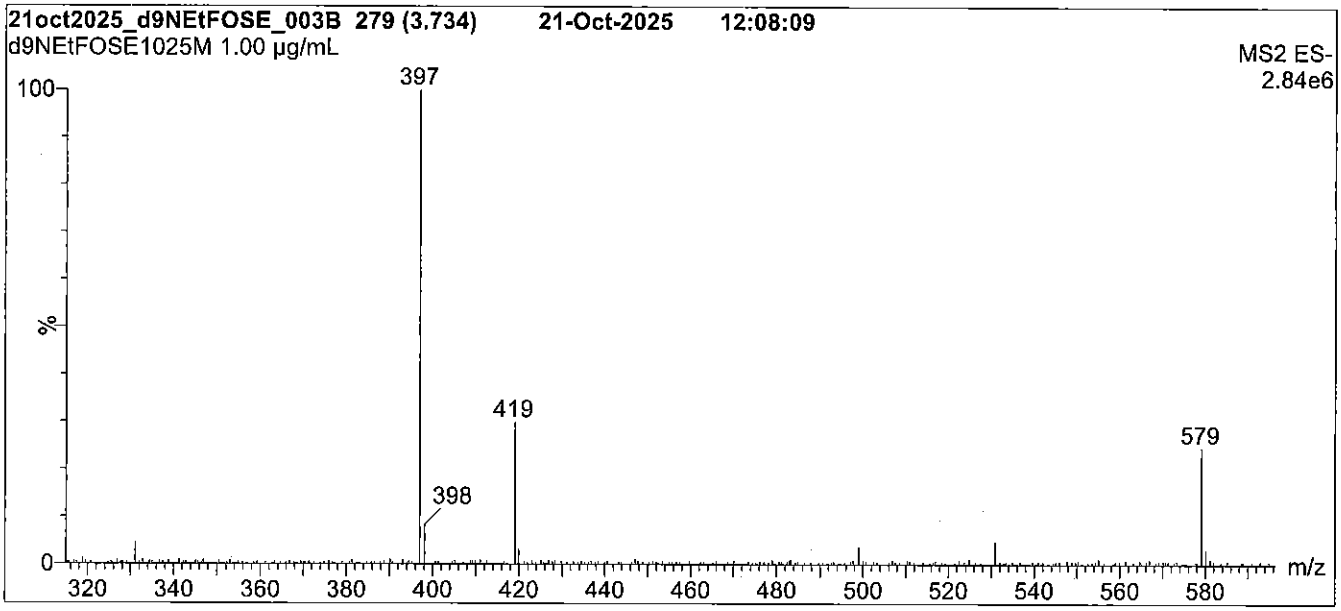
Agilent 7890A HRGC
Agilent 5975C MSD

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-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

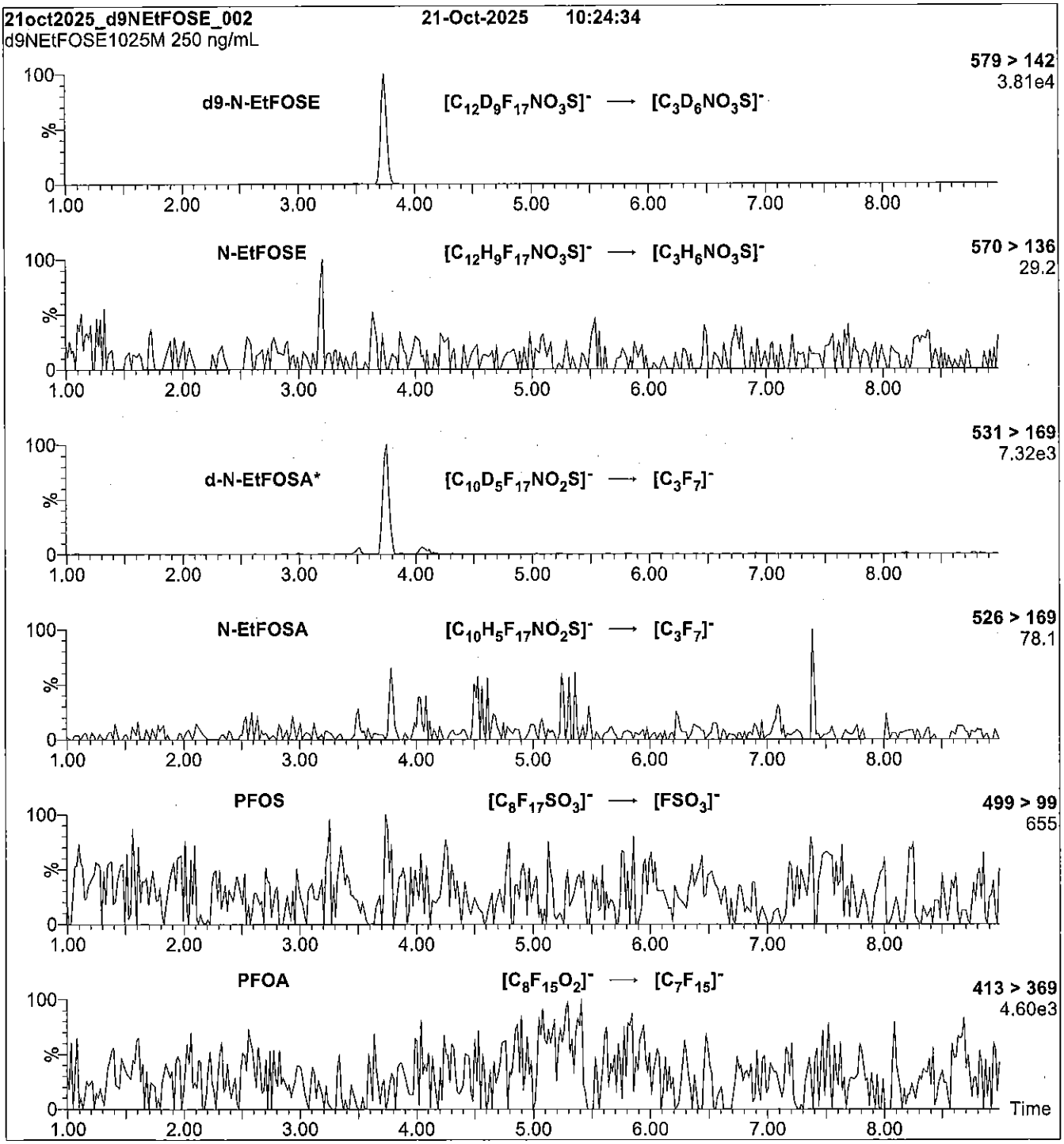
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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)**



*Note: Formed by In-source fragmentation.

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) = 3.89e-3
Collision Energy (eV) = 32 (579 > 142)

Reagent

PFC_ST_05886

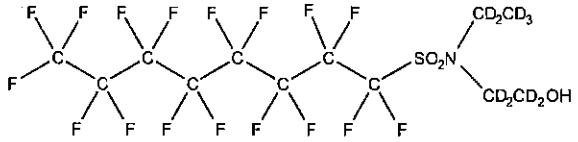
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFOST 5878, 5879, 5880, 5881, 5882, 5887
5884, 5885, 5886

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1025M
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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.
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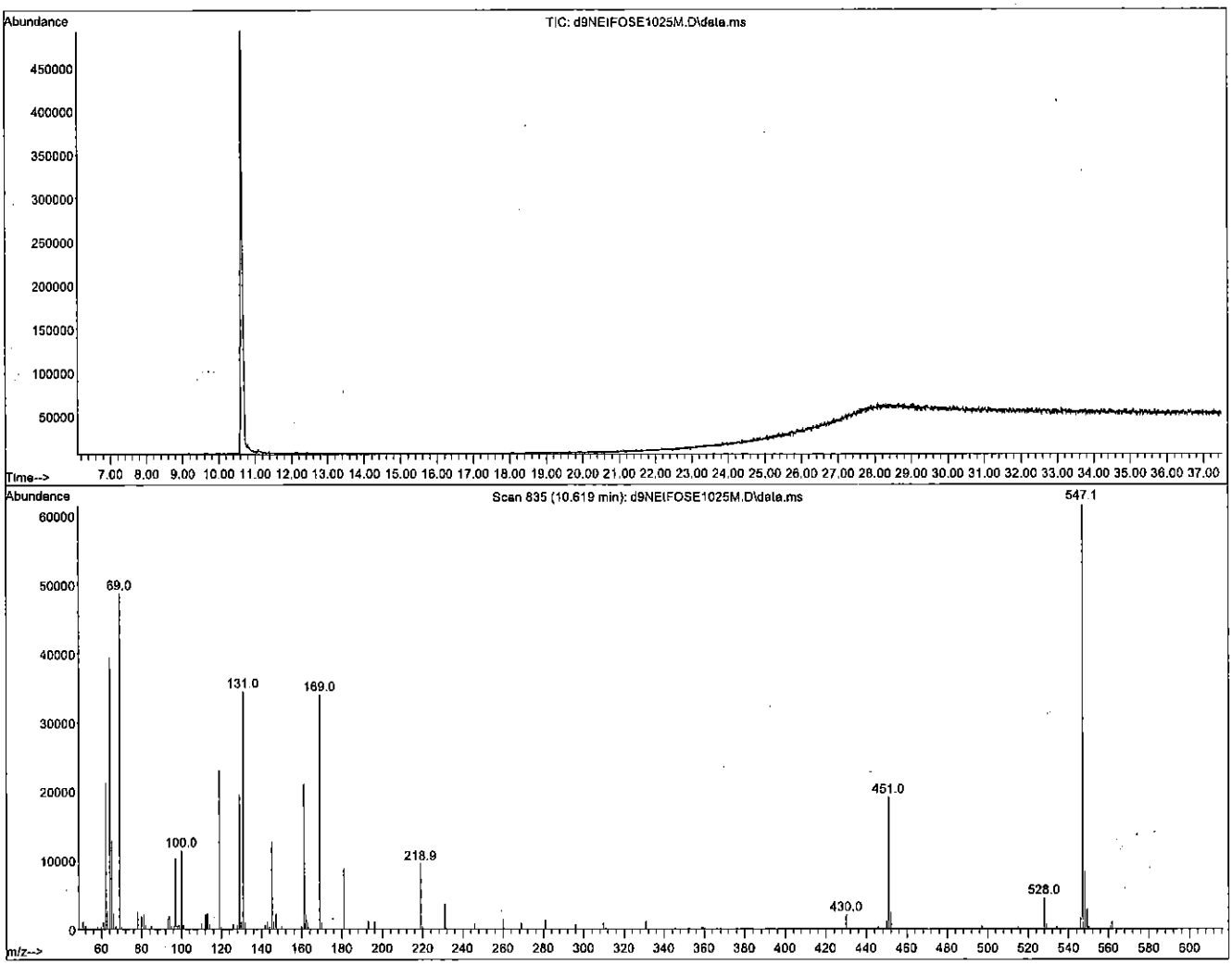
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CALA Testing Accreditation No. A1226

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Figure 1: **d9-N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



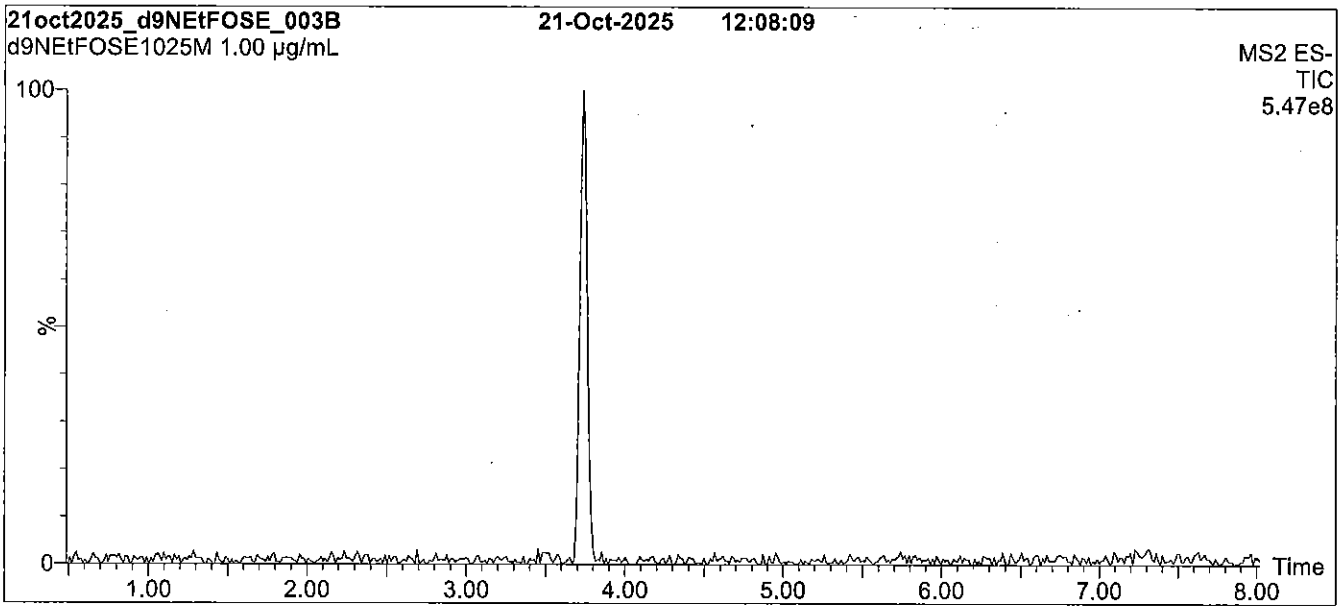
Conditions for Figure 1:

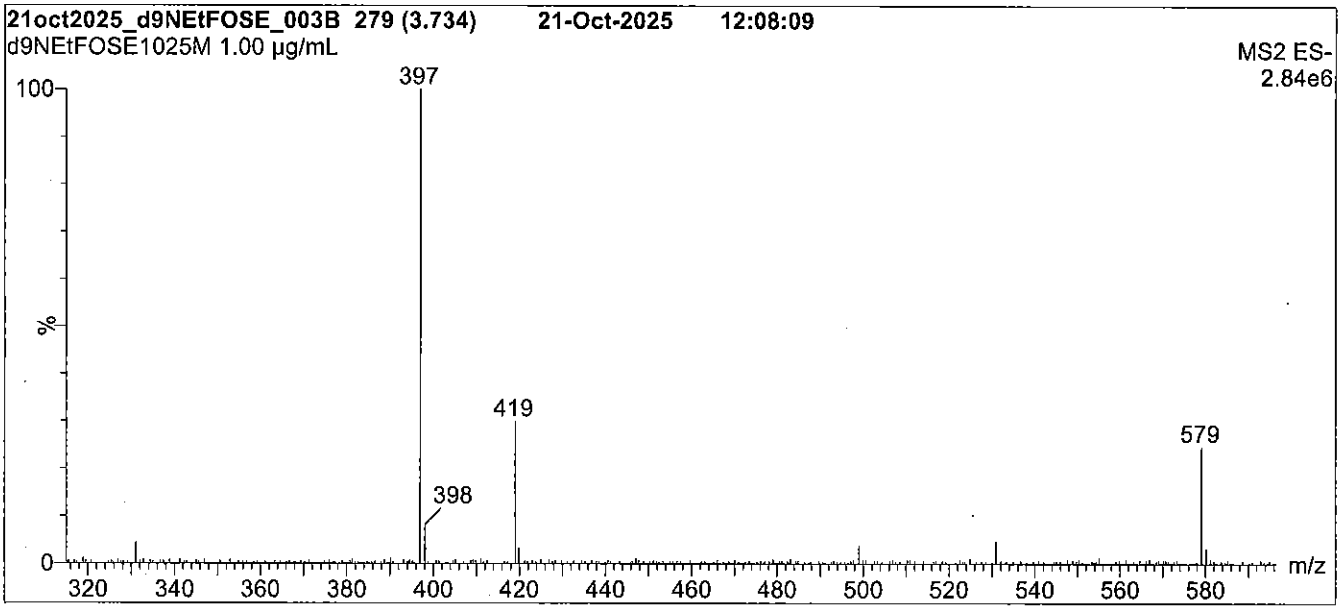
Agilent 7890A HRGC
Agilent 5975C MSD

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-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

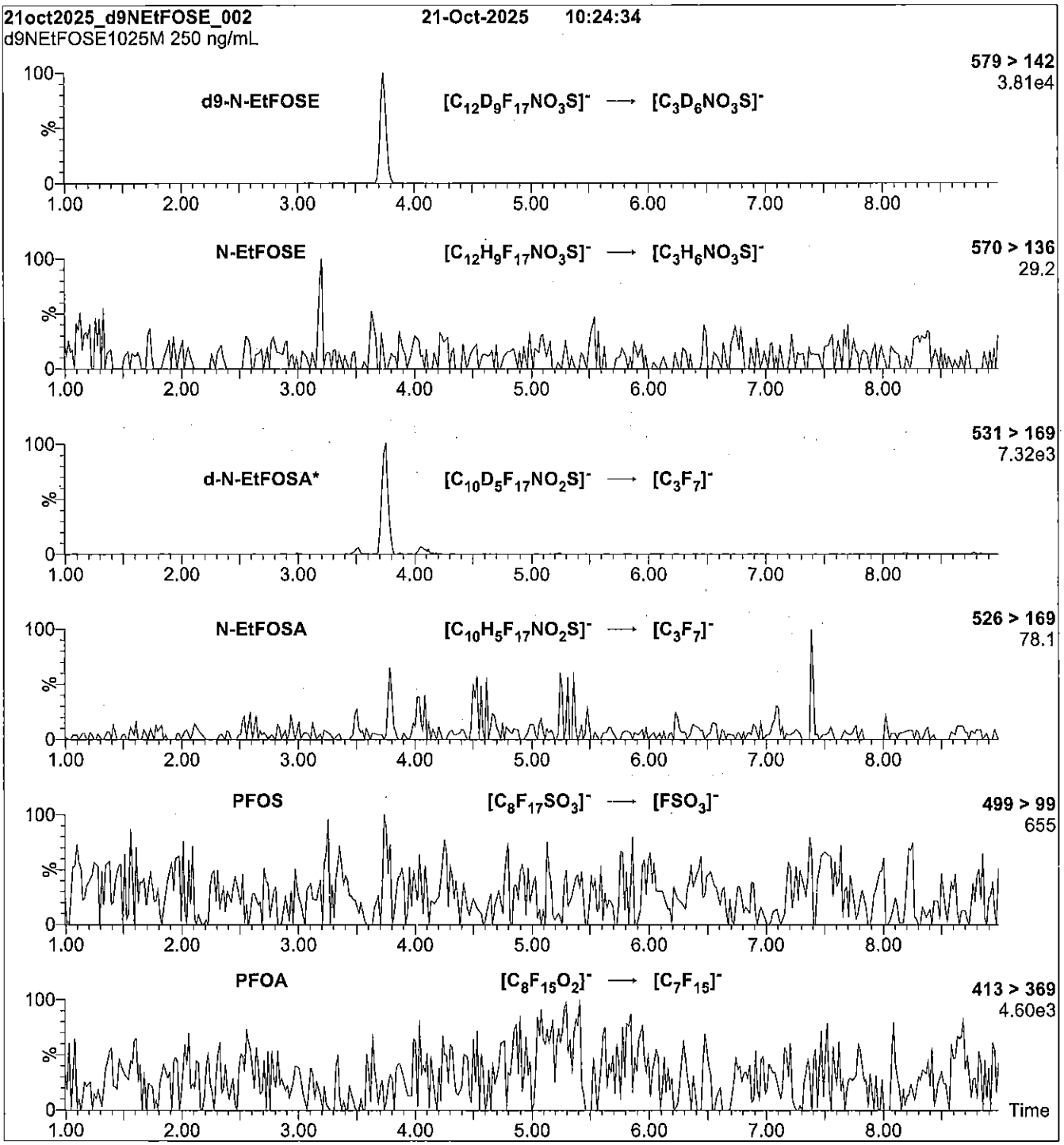
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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)**



*__Note__: Formed by in-source fragmentation.

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) = 3.89e-3
Collision Energy (eV) = 32 (579 > 142)

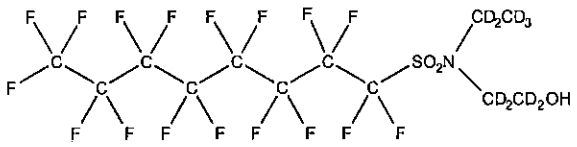
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1025M

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% ^{2}H (D)
LAST TESTED: (mm/dd/yyyy)	11/05/2025 (HRGC/LRMS) 10/21/2025 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	11/05/2030		
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.
- Contains ~0.7% of branched 2-(N-ethyl-d5-perfluorooctanesulfonamido)ethan-d4-ol by ^{19}F NMR and ~0.5% of an uknown impurity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/07/2025 (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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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, and/or SFC/UV/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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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:

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

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%) has been assigned to this product.

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:

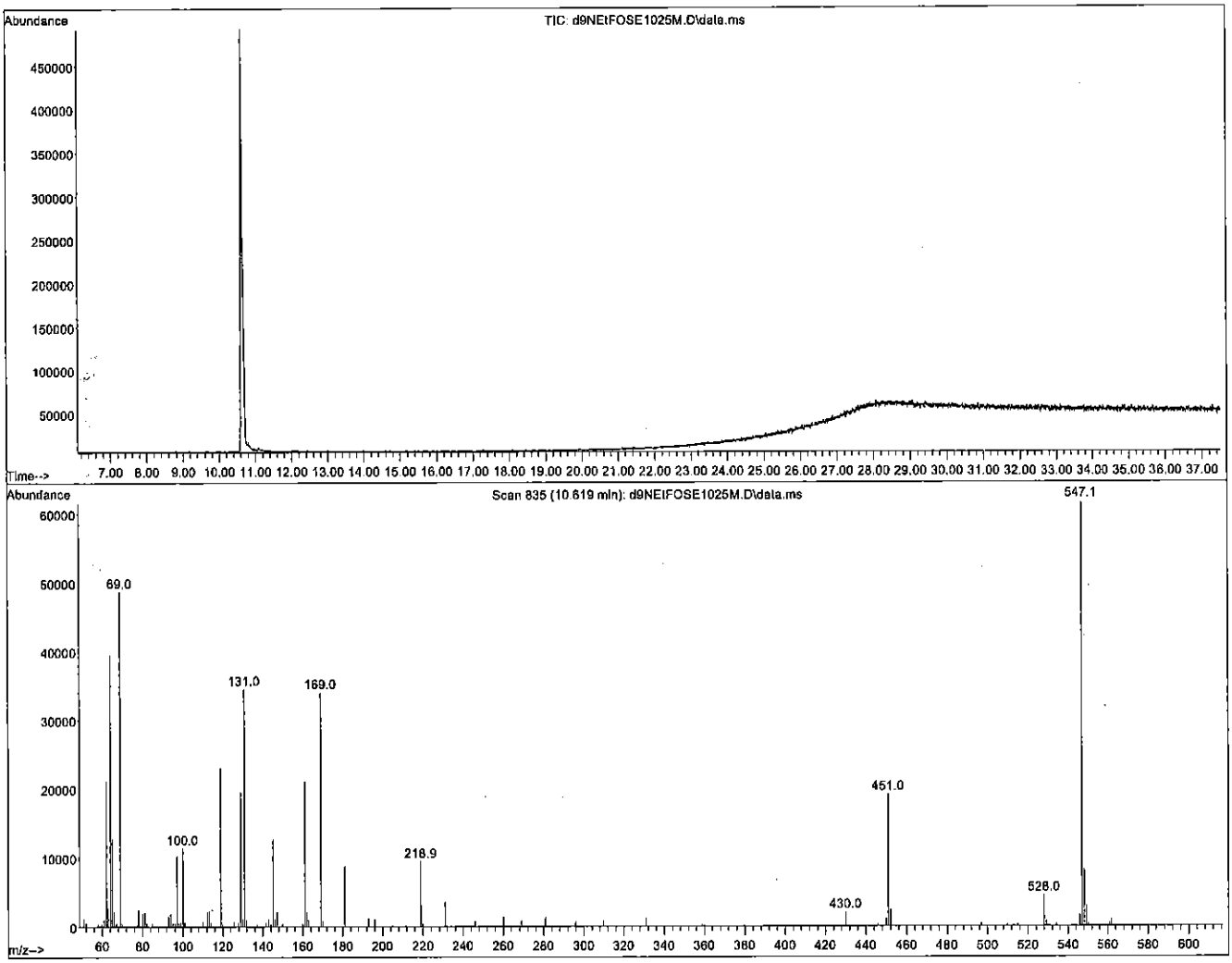
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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d9-N-EtFOSE-M; HRGC/LRMS Data (Full Scan and Mass Spectrum)**



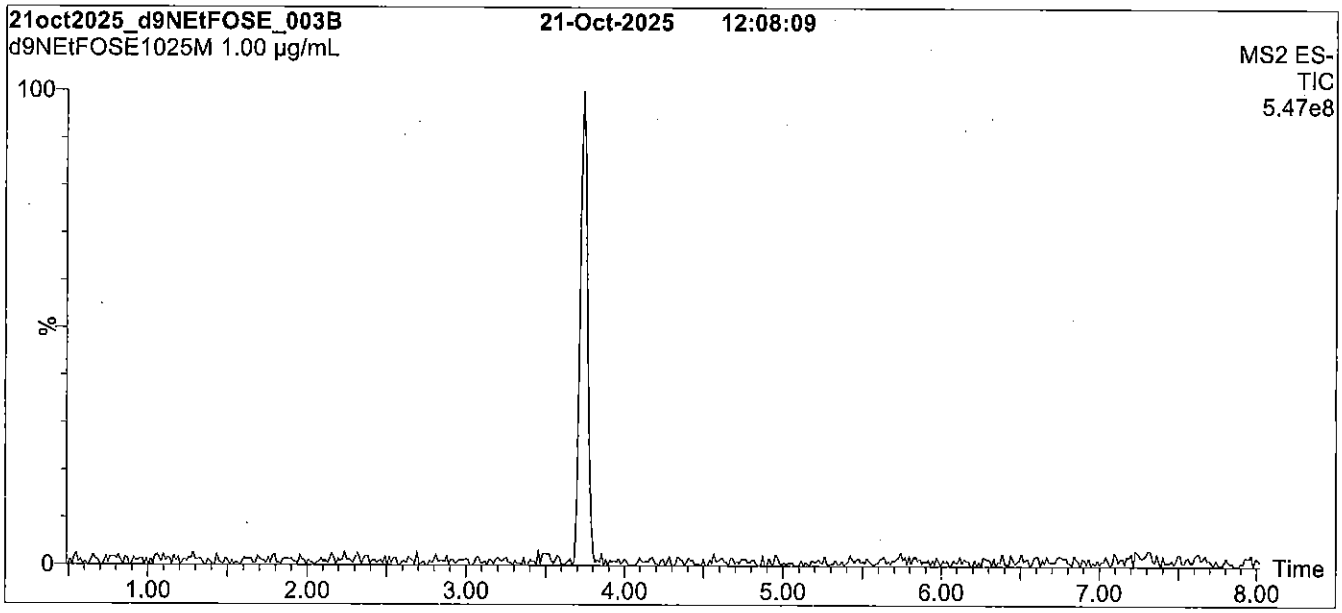
Conditions for Figure 1:

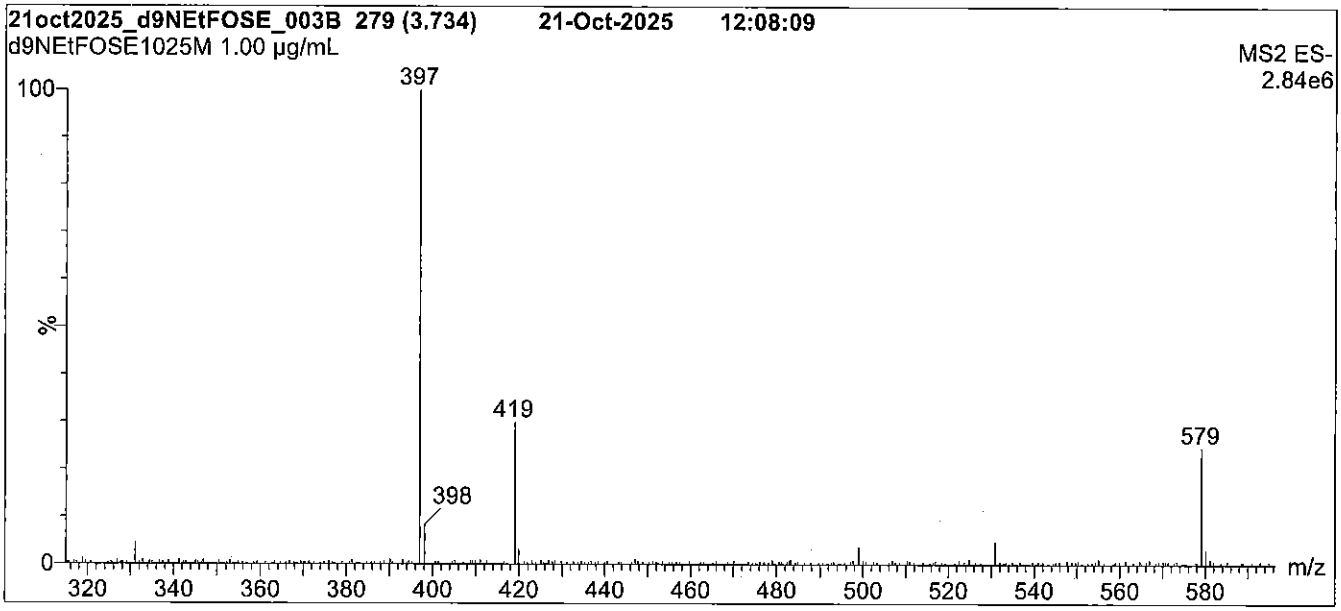
Agilent 7890A HRGC
Agilent 5975C MSD

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-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

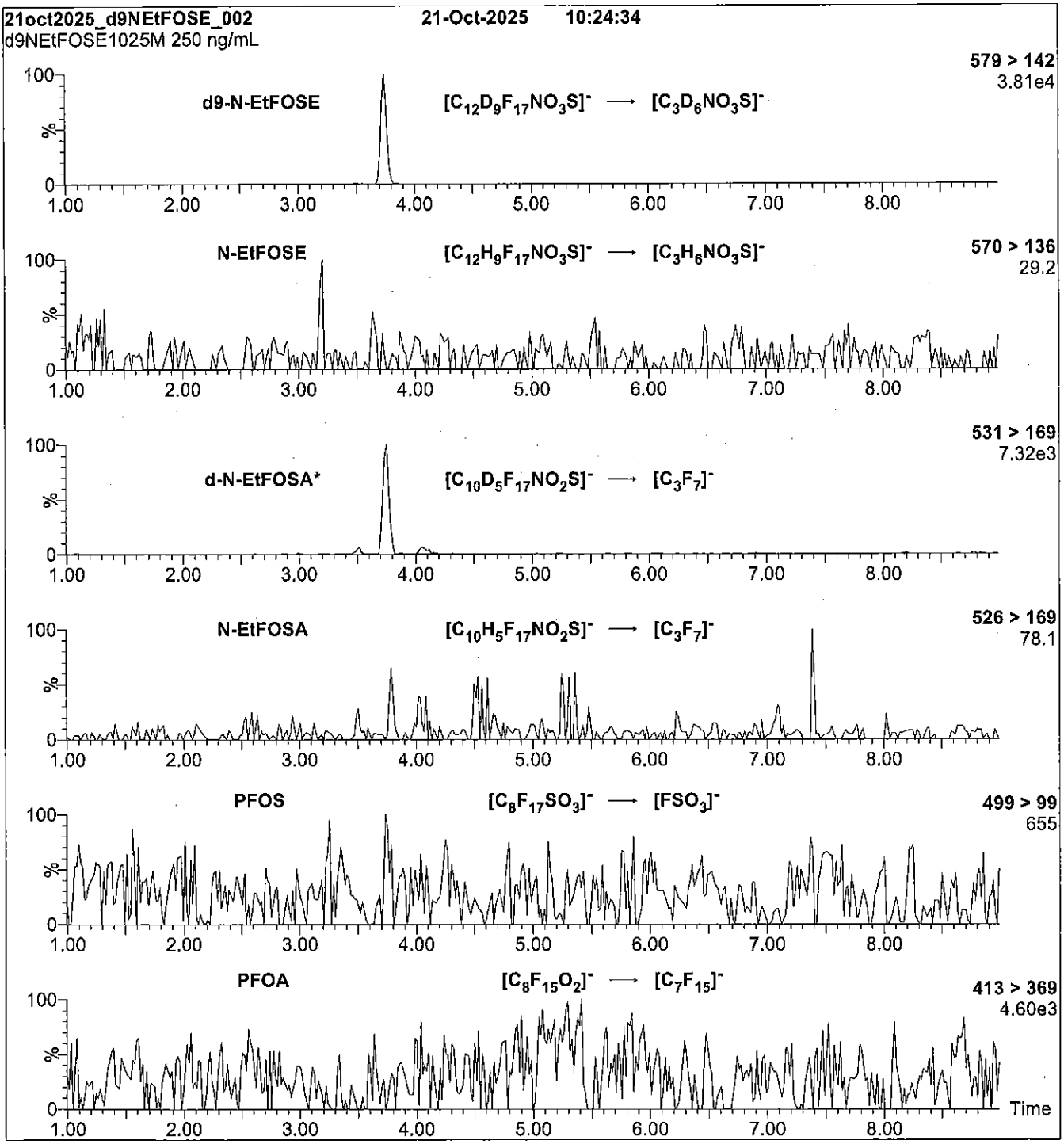
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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)**



*Note: Formed by In-source fragmentation.

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) = 3.89e-3
Collision Energy (eV) = 32 (579 > 142)

Reagent

PFC_ST_05892

WELLINGTON LABORATORIES

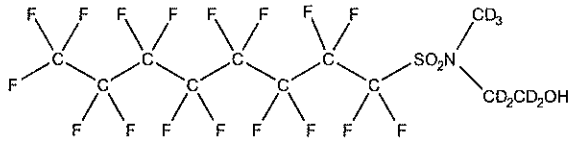
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST_ 5887, 5888, 5889, 5890, 5891, 5892, 5893

PRODUCT CODE: d7-N-MeFOSE-M **LOT NUMBER:** d7NMeFOSE1225M

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)	12/08/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/08/2030		
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.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.
- Contains ~0.8% of a branched isomer of d7-N-MeFOSE by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/11/2025 (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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SYNTHESIS / CHARACTERIZATION:

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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%) has been assigned to this product.

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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:

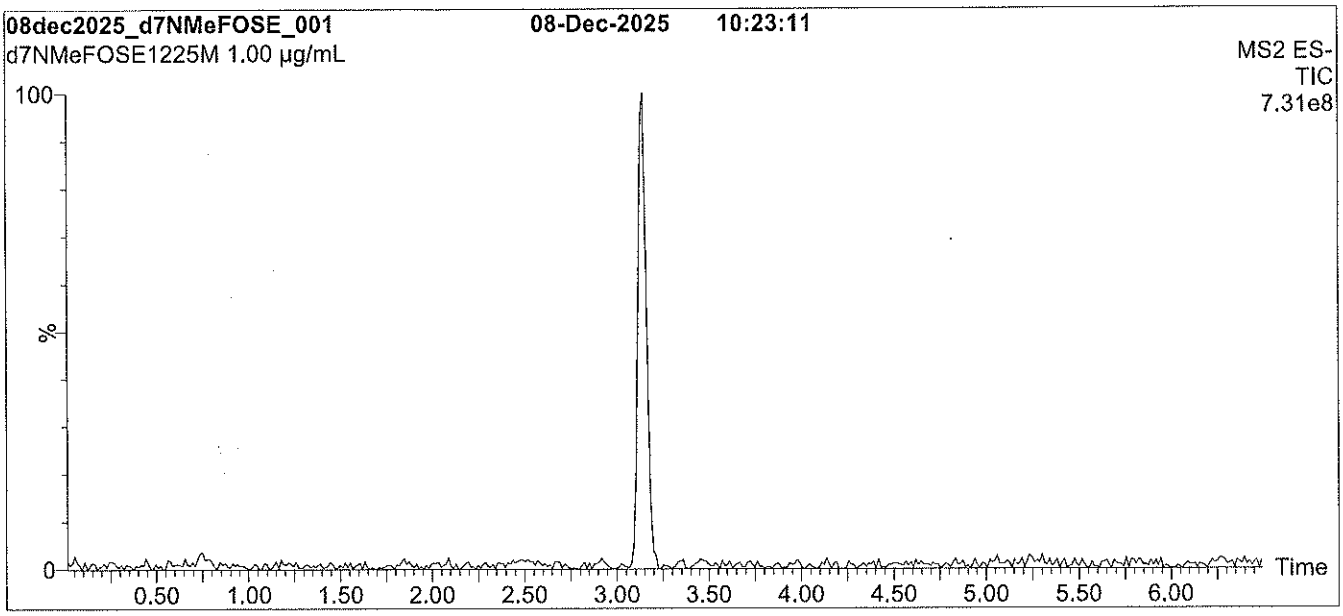
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

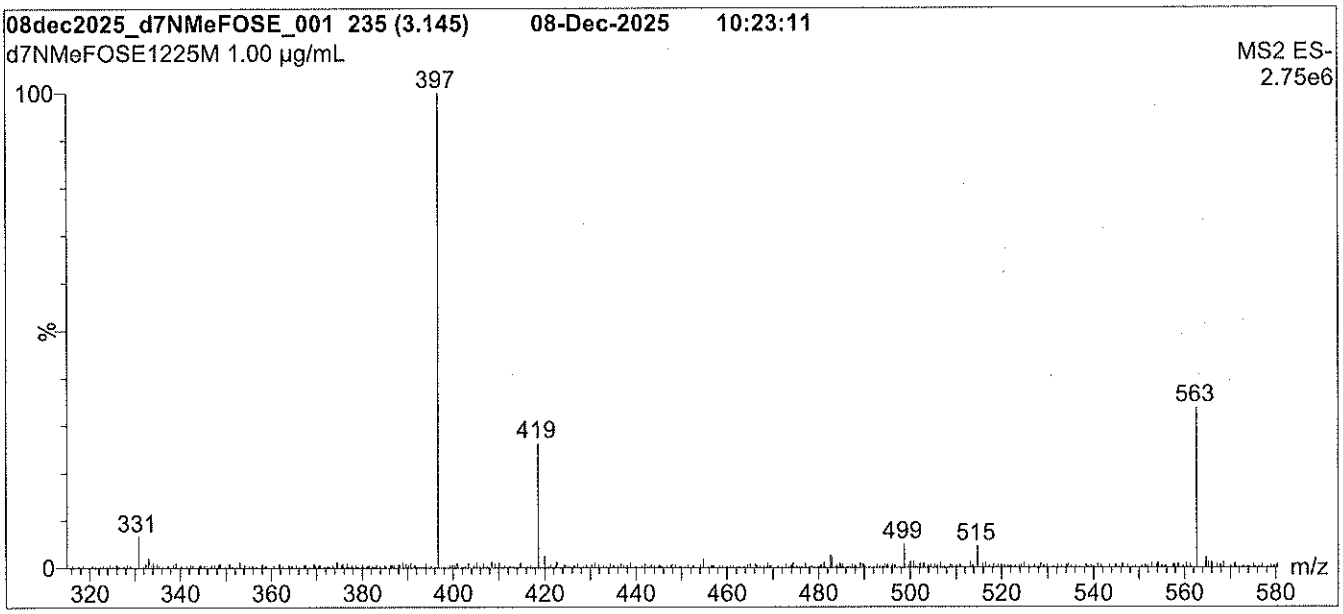
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d7-N-MeFOSE-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

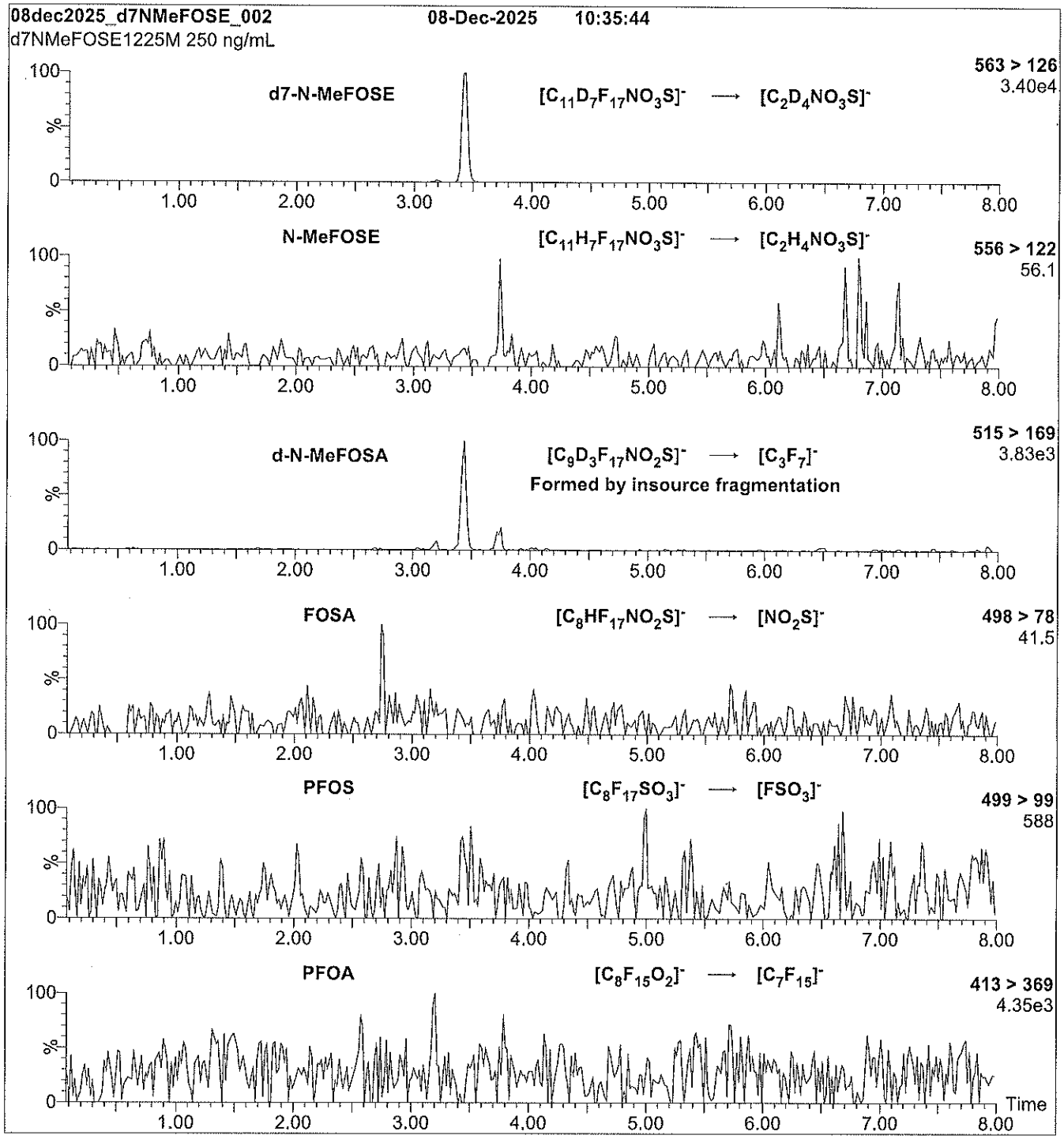
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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 2: **d7-N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d7-N-MeFOSE-M)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

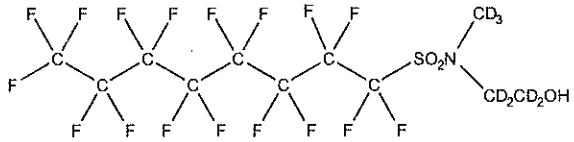
Collision Gas (mbar) = 4.07e-3
Collision Energy (eV) = 36 (563 > 126)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d7-N-MeFOSE-M **LOT NUMBER:** d7NMeFOSE1225M
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)	12/08/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/08/2030		
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.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.
- Contains ~0.8% of a branched isomer of d7-N-MeFOSE by ^{19}F NMR.

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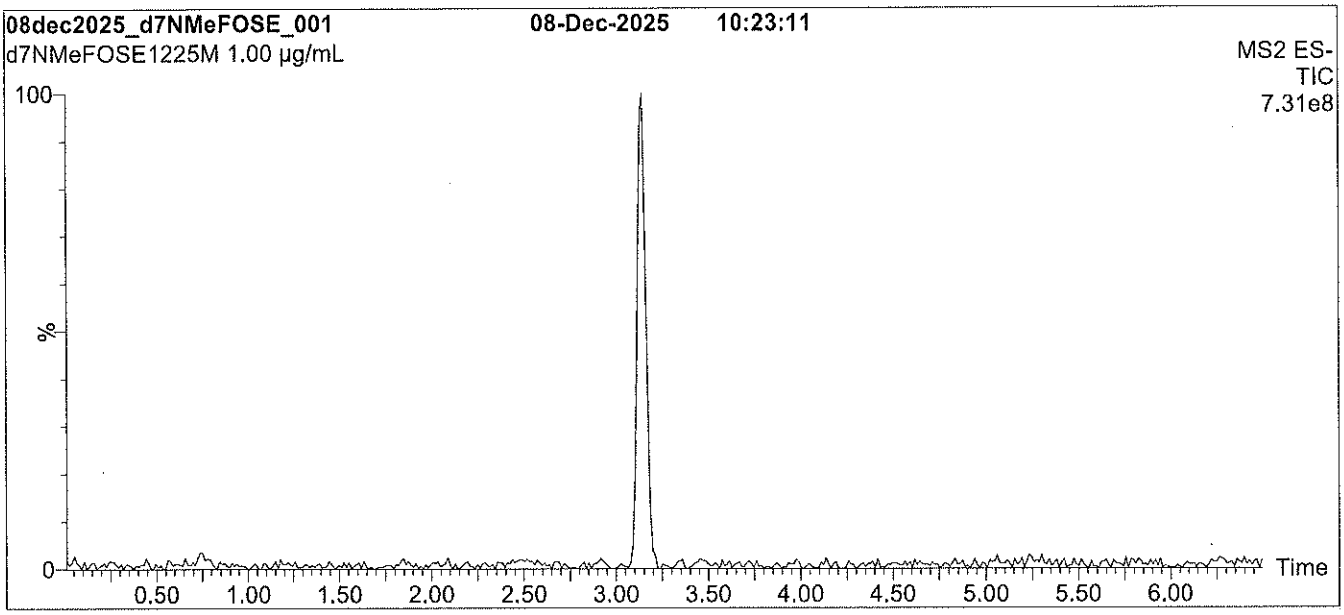
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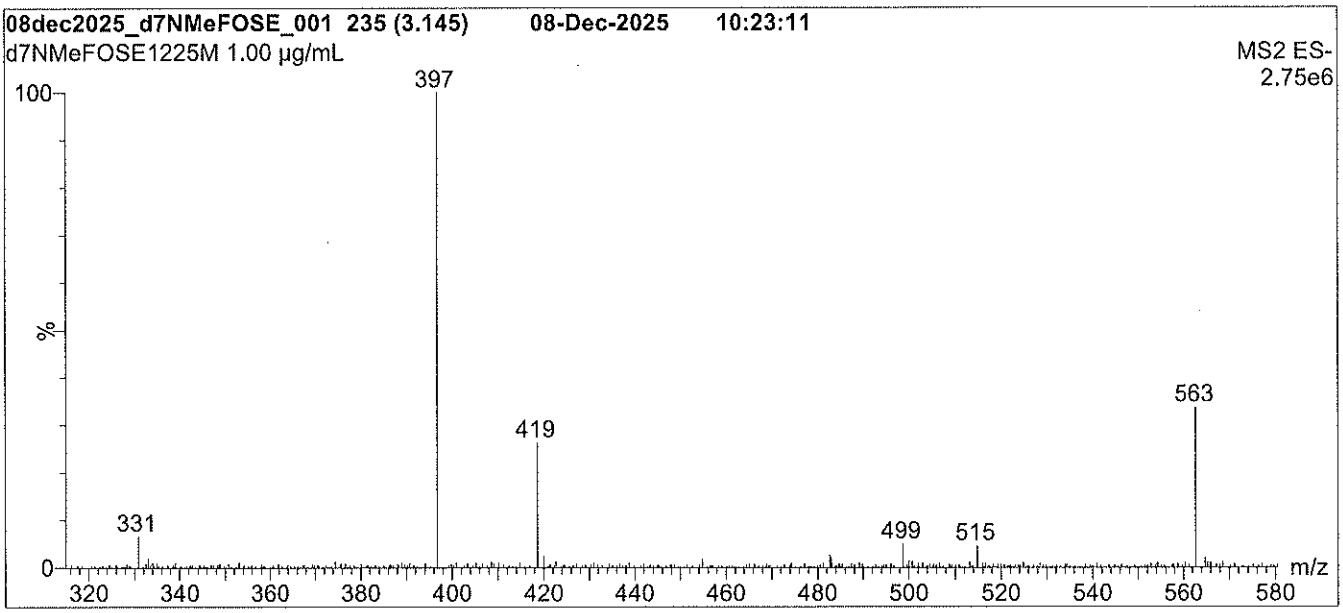
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **d7-N-MeFOSE-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)
Ramp to 90% organic over 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

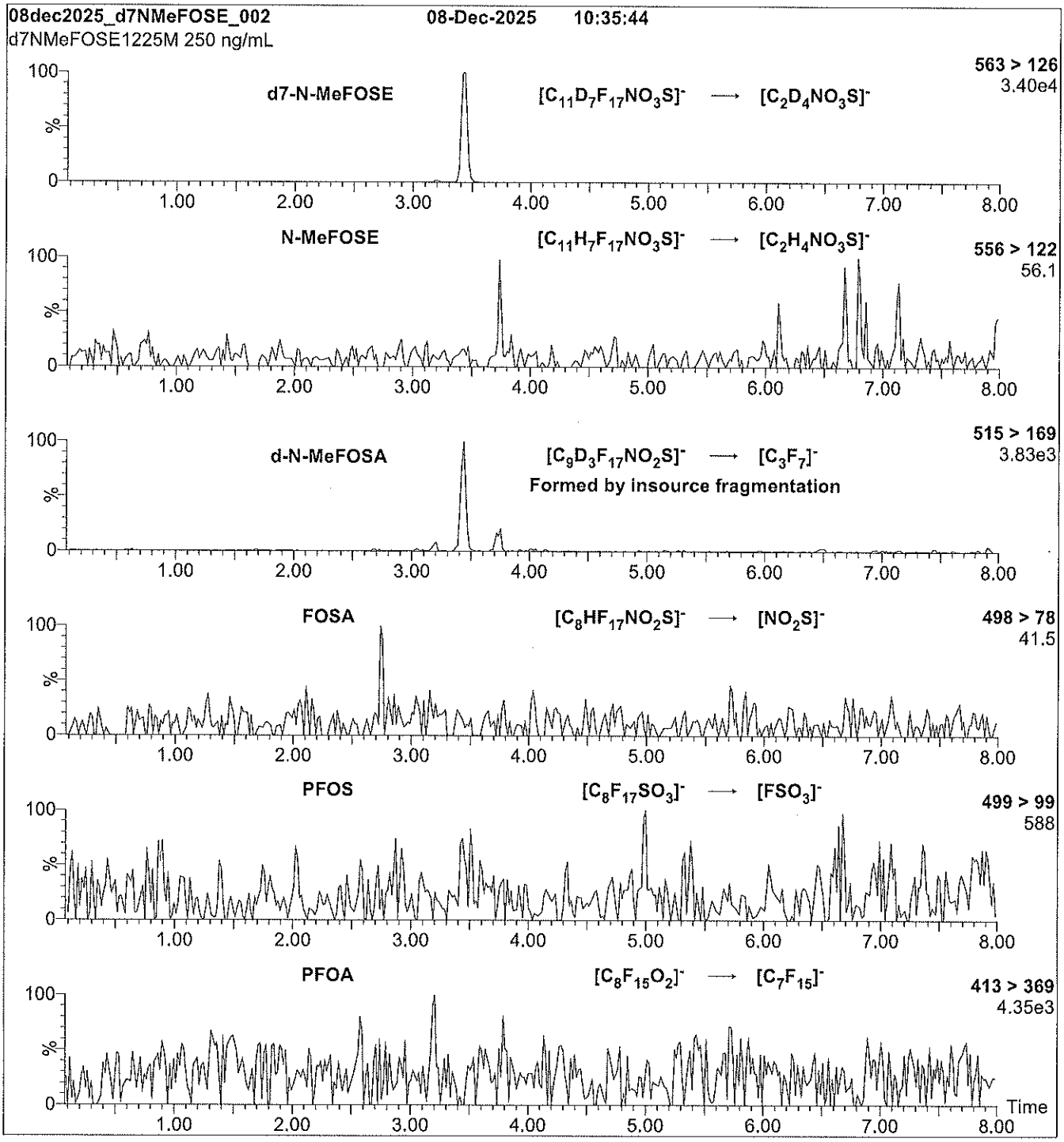
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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 2: **d7-N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d7-N-MeFOSE-M)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 4.07e-3
Collision Energy (eV) = 36 (563 > 126)

Reagent

PFC_ST_05895

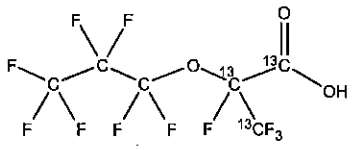
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFC-ST- 5894, 5895, 5896, 5897, 5898
5899, 5900

PRODUCT CODE:	M3HFPO-DA	**LOT NUMBER:**	M3HFPODA0825
COMPOUND:	$^{13}C_3$-Hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX)		
IUPAC NAME:	*rac*-2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		

STRUCTURE:



CAS #: 3030247-97-0

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
LAST TESTED: (mm/dd/yyyy)	08/19/2025		
EXPIRY DATE: (mm/dd/yyyy)	08/19/2029		
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 compound is the $^{13}C_3$-labelled analogue of the major component of the commercial formulation known as GenX.
- M3HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/28/2025 (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(s) 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, SFC/UV/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,...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%) has been assigned to this product.

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:

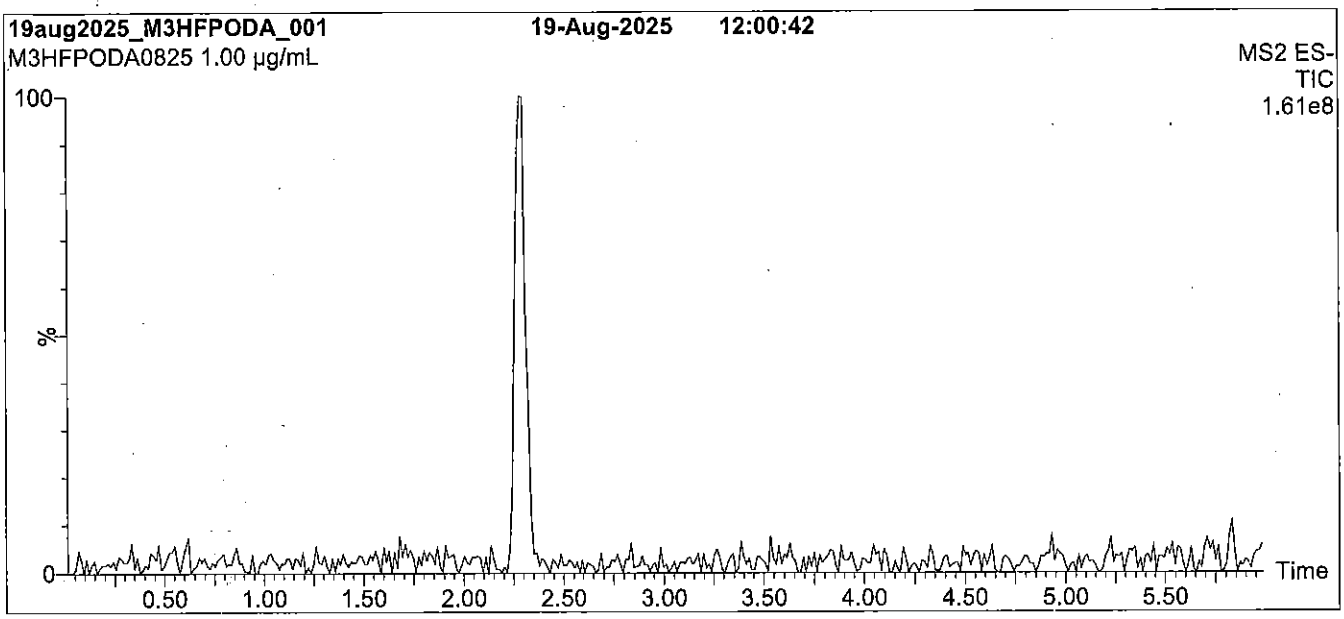
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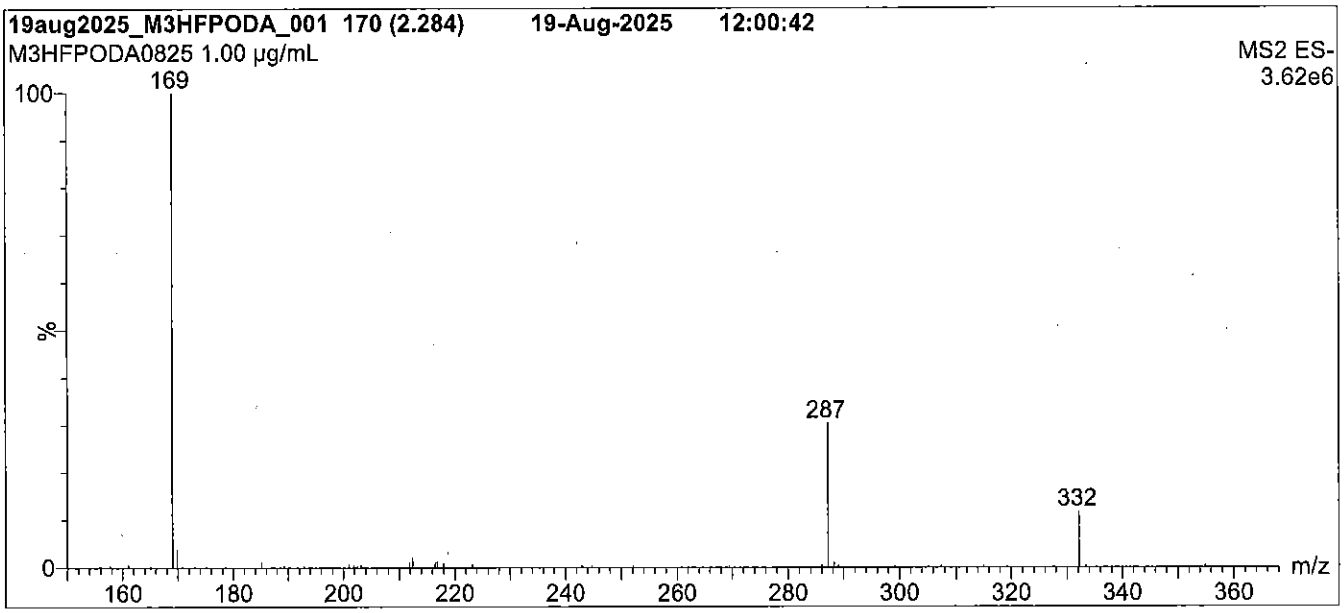
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

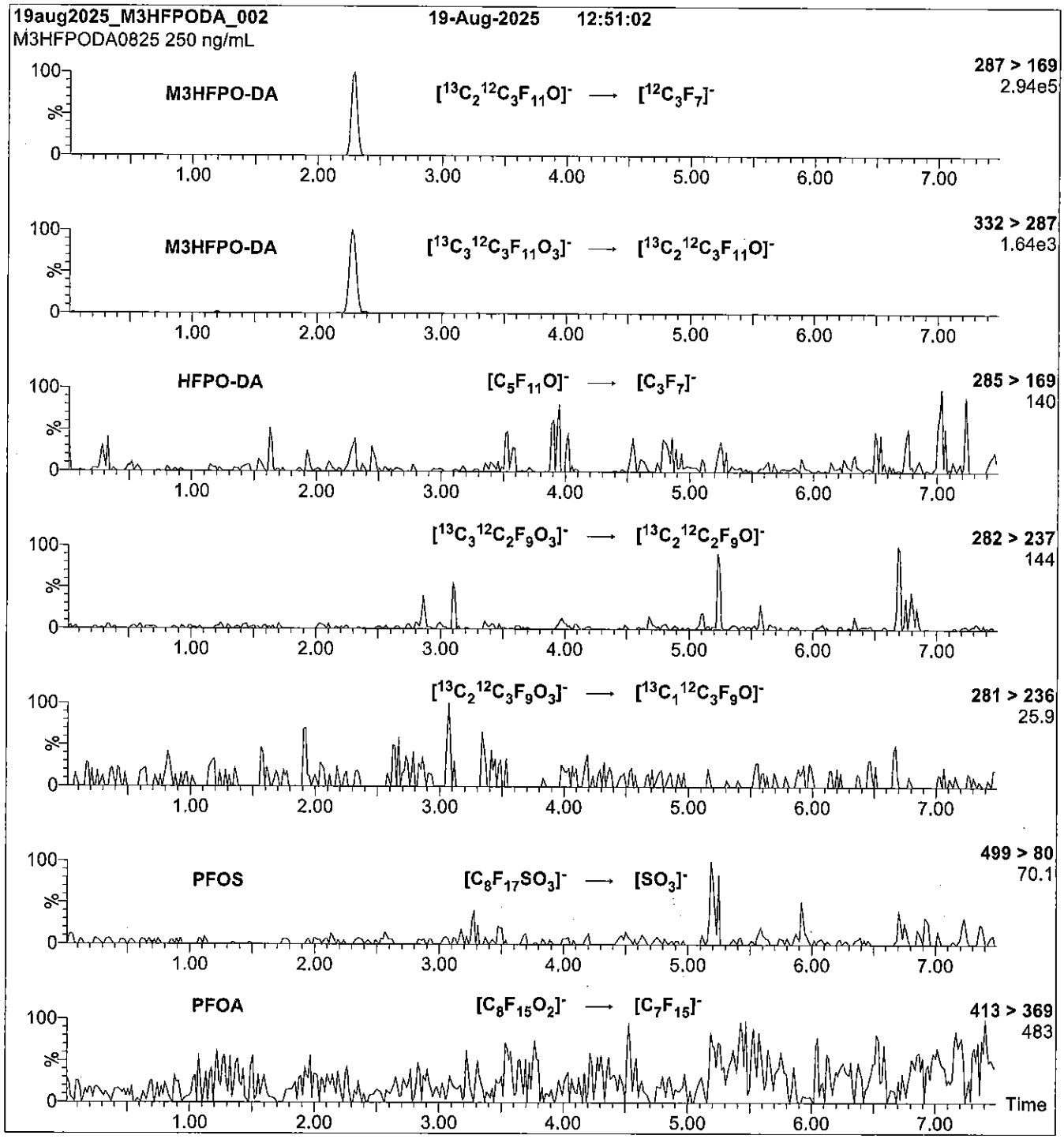
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 350
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:

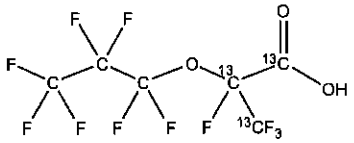
Collision Gas (mbar) = 3.57e-3
Collision Energy (eV) = 8 (287 > 169)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3HFPO-DA	**LOT NUMBER:**	M3HFPODA0825
COMPOUND:	$^{13}C_3$-Hexafluoropropylene oxide dimer acid ($^{13}C_3$-GenX)		
IUPAC NAME:	*rac*-2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid		

STRUCTURE:



CAS #: 3030247-97-0

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
LAST TESTED: (mm/dd/yyyy)	08/19/2025		
EXPIRY DATE: (mm/dd/yyyy)	08/19/2029		
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 compound is the $^{13}C_3$-labelled analogue of the major component of the commercial formulation known as GenX.
- M3HFPO-DA is a mixture of two stereoisomers (a pair of enantiomers) that coelute using the provided conditions.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/28/2025 (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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SYNTHESIS / CHARACTERIZATION:

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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:

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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:

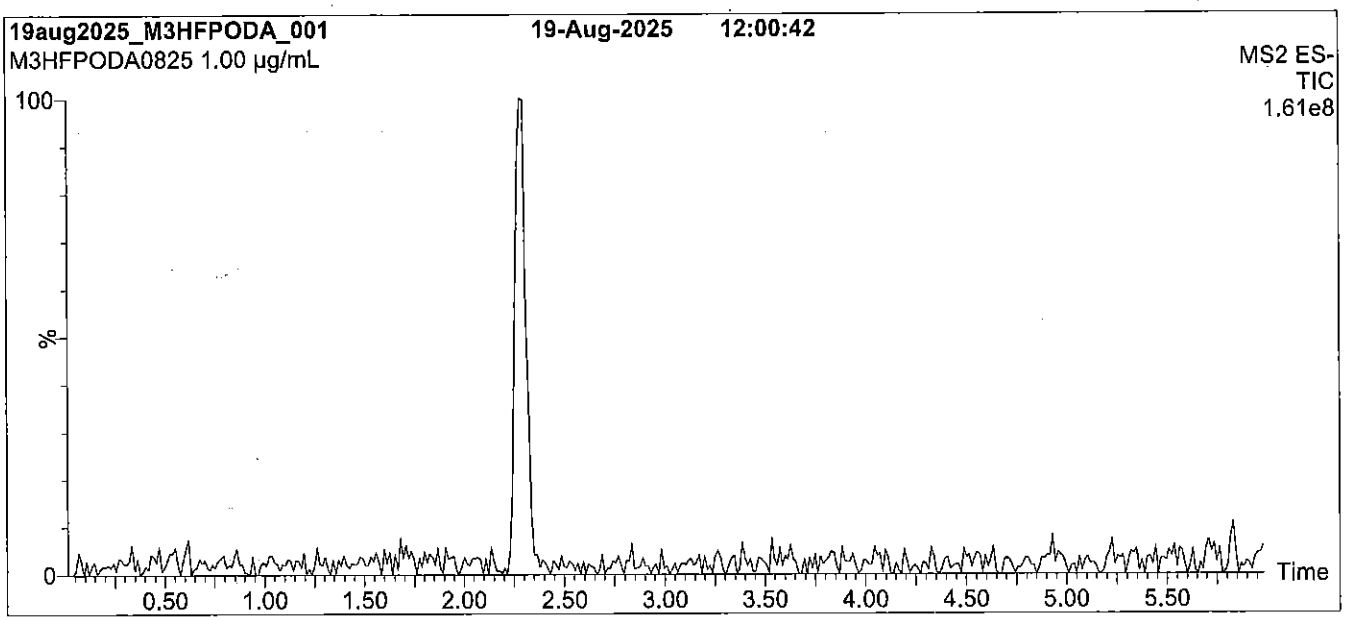
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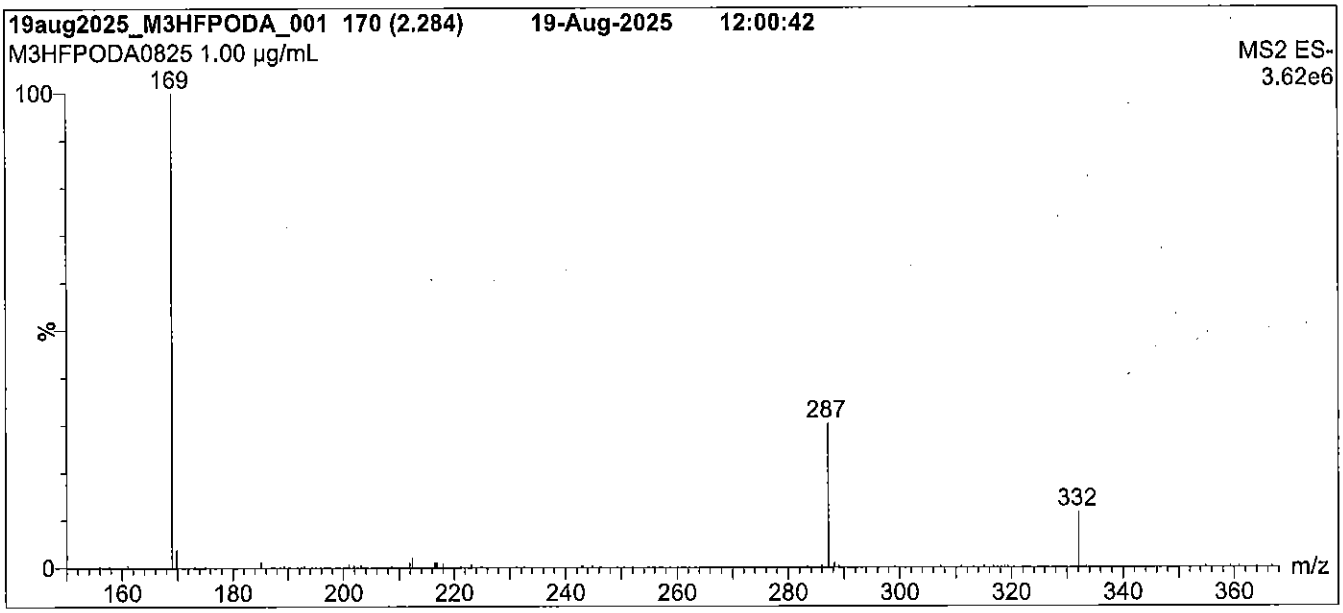
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

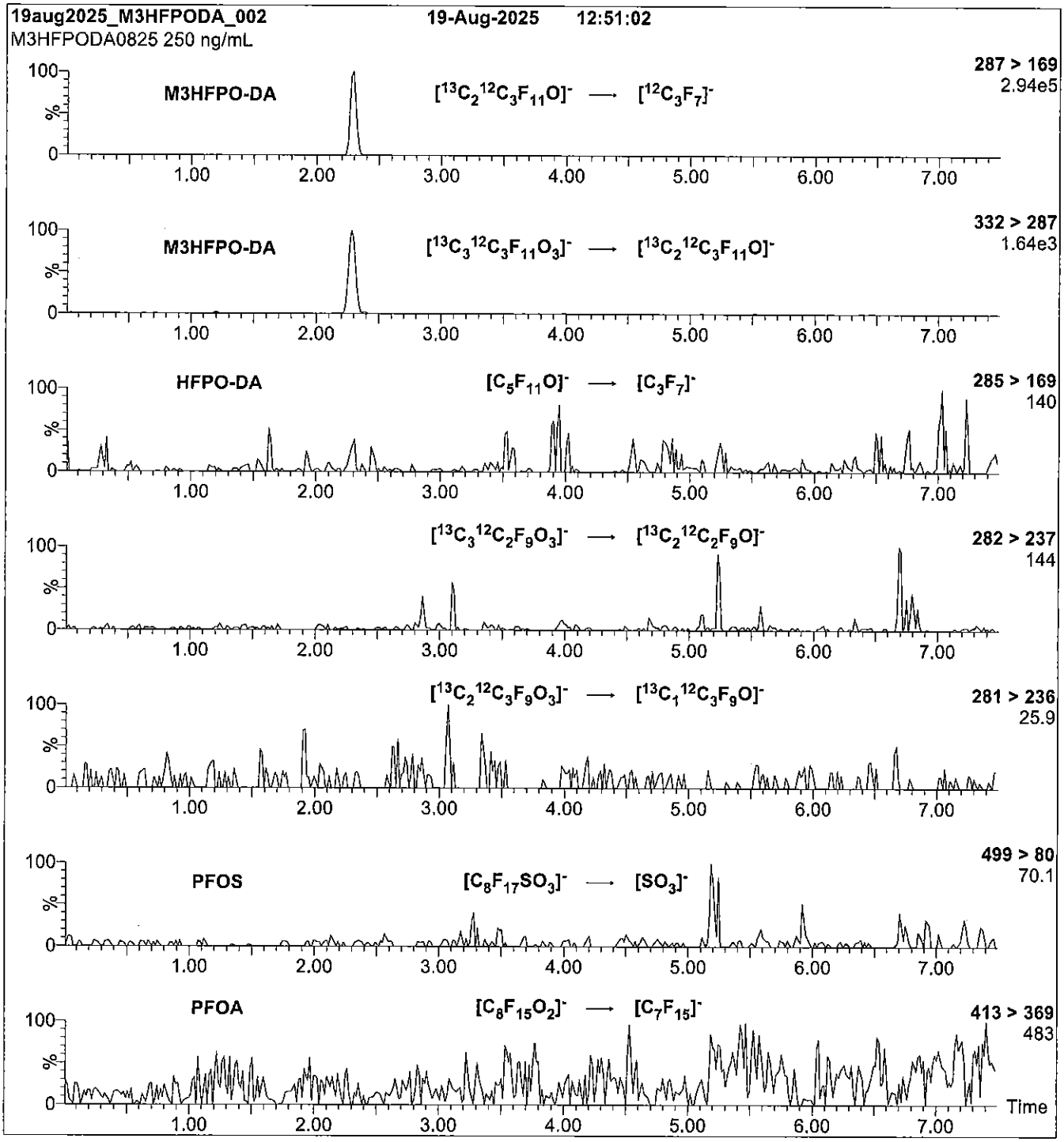
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.75
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 350
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) = 3.57e-3
Collision Energy (eV) = 8 (287 > 169)

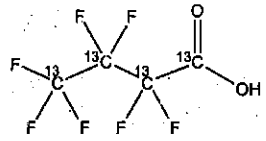
Reagent

PFC_ST_05944

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFBA	**LOT NUMBER:**	MPFBA0725
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
LAST TESTED: (mm/dd/yyyy)	07/28/2025		
EXPIRY DATE: (mm/dd/yyyy)	07/28/2030		
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:** 07/28/2025 (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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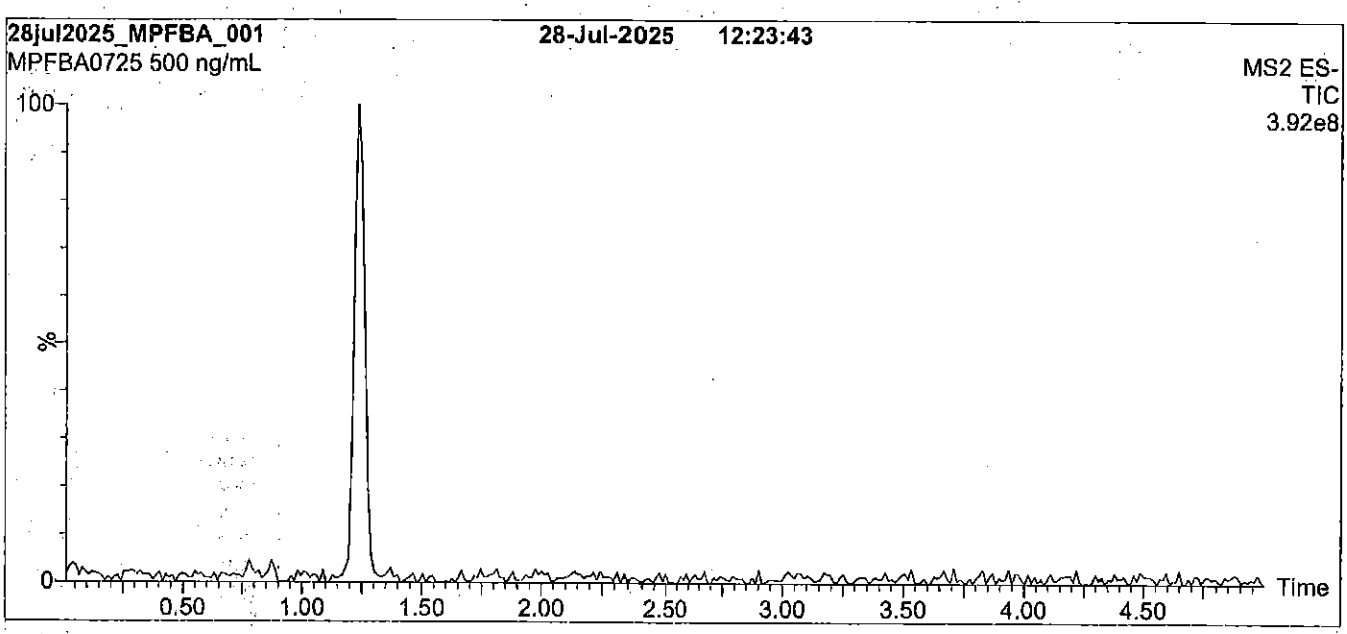
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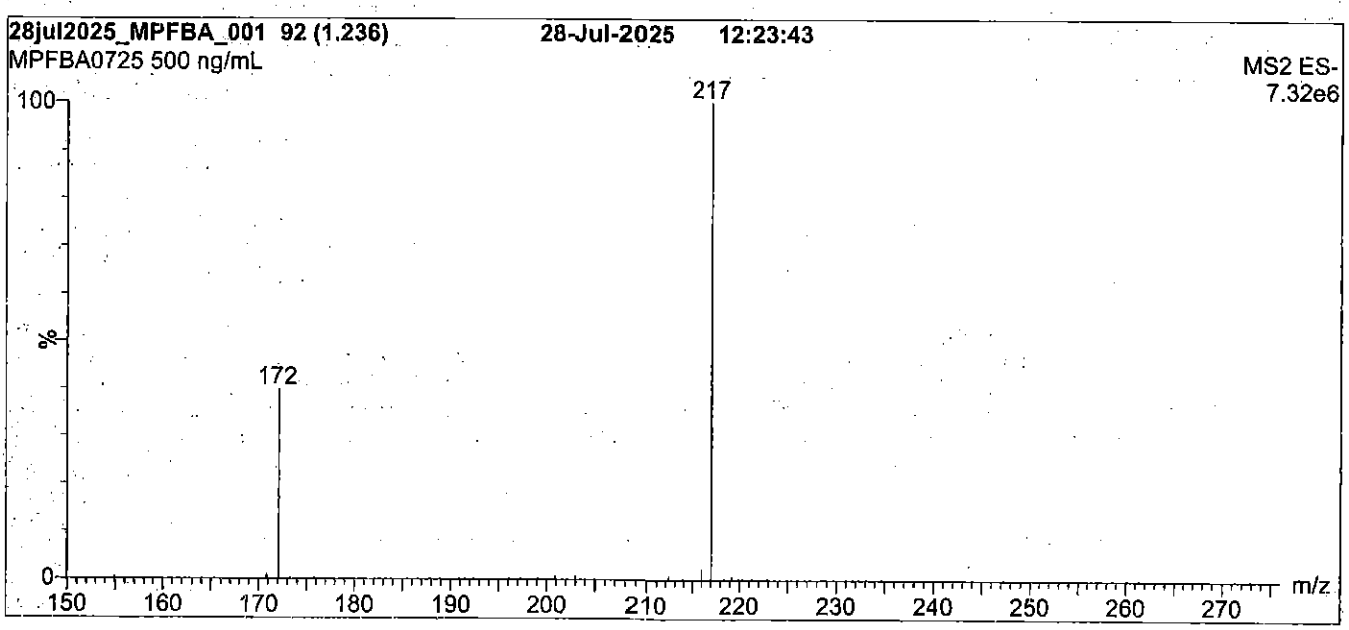
CALA Testing Accreditation No. A1226

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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)
Hold for 1 min, then ramp to 80% organic over 8 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 12 min

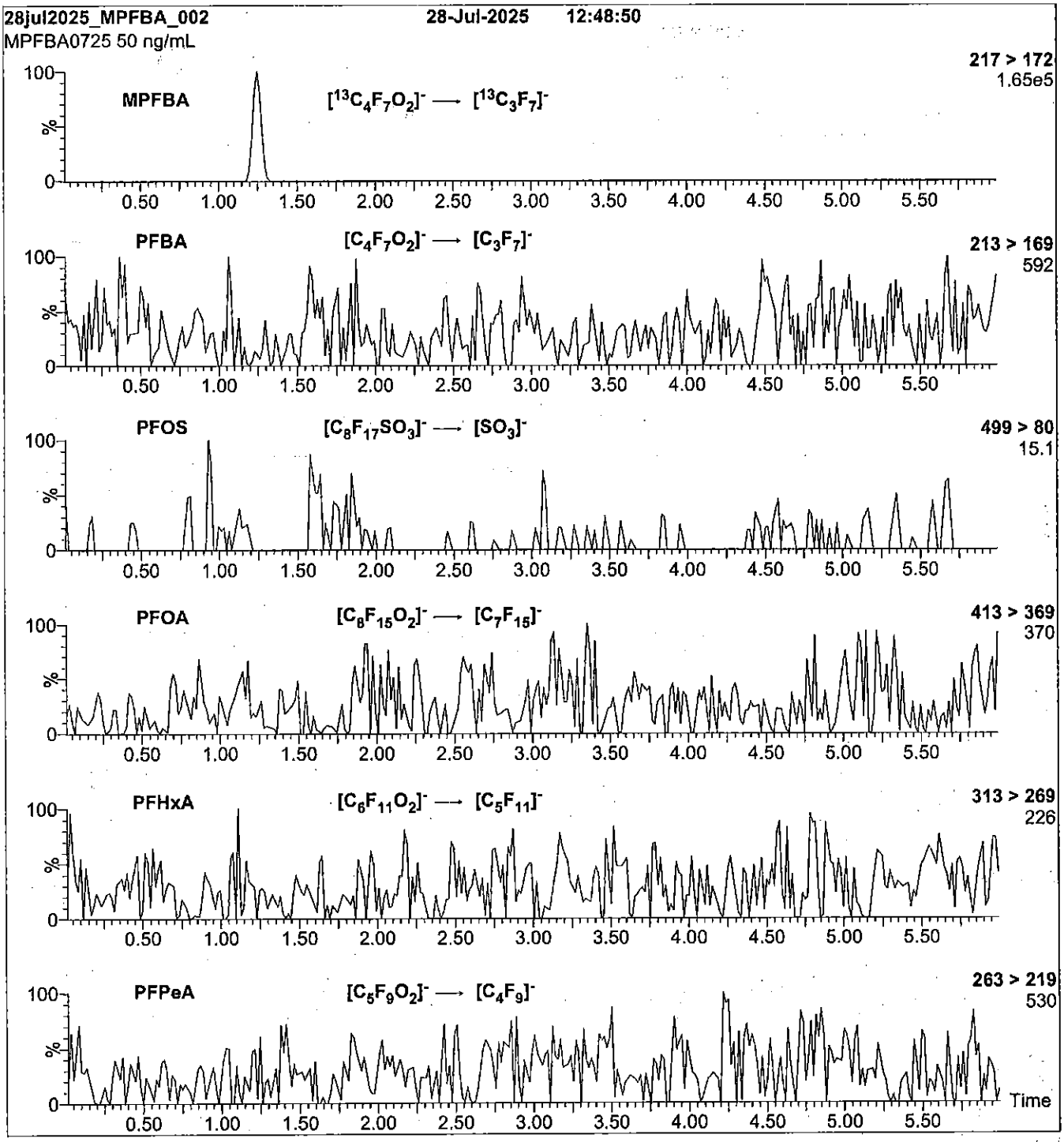
Flow: 300 µL/min

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) = 3.71e-3
Collision Energy (eV) = 8

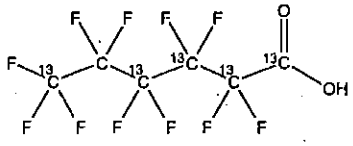
Reagent

PFC_ST_05953

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M5PFHxA	**LOT NUMBER:**	M5PFHxA0925
COMPOUND:	Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid		
STRUCTURE:		**CAS #:**	2328024-54-8



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_1HF_{11}O_2$	**MOLECULAR WEIGHT:**	319.02
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	09/15/2025		
EXPIRY DATE: (mm/dd/yyyy)	09/15/2030		
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:** 09/16/2025 (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(s) 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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

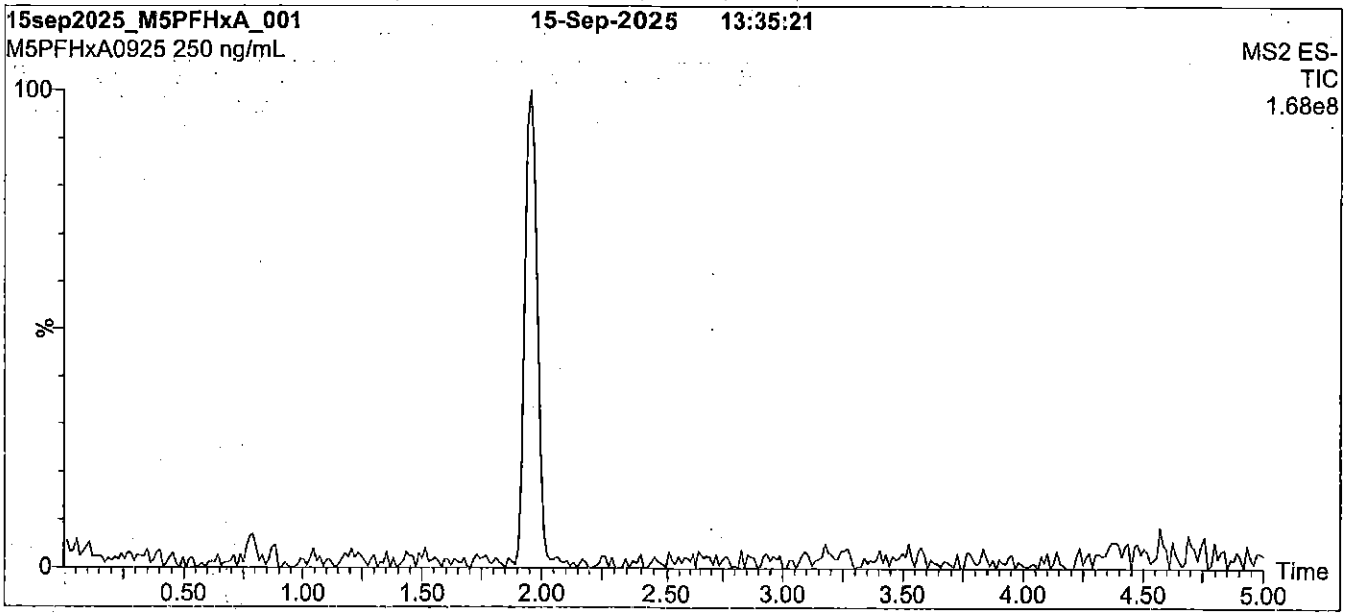
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

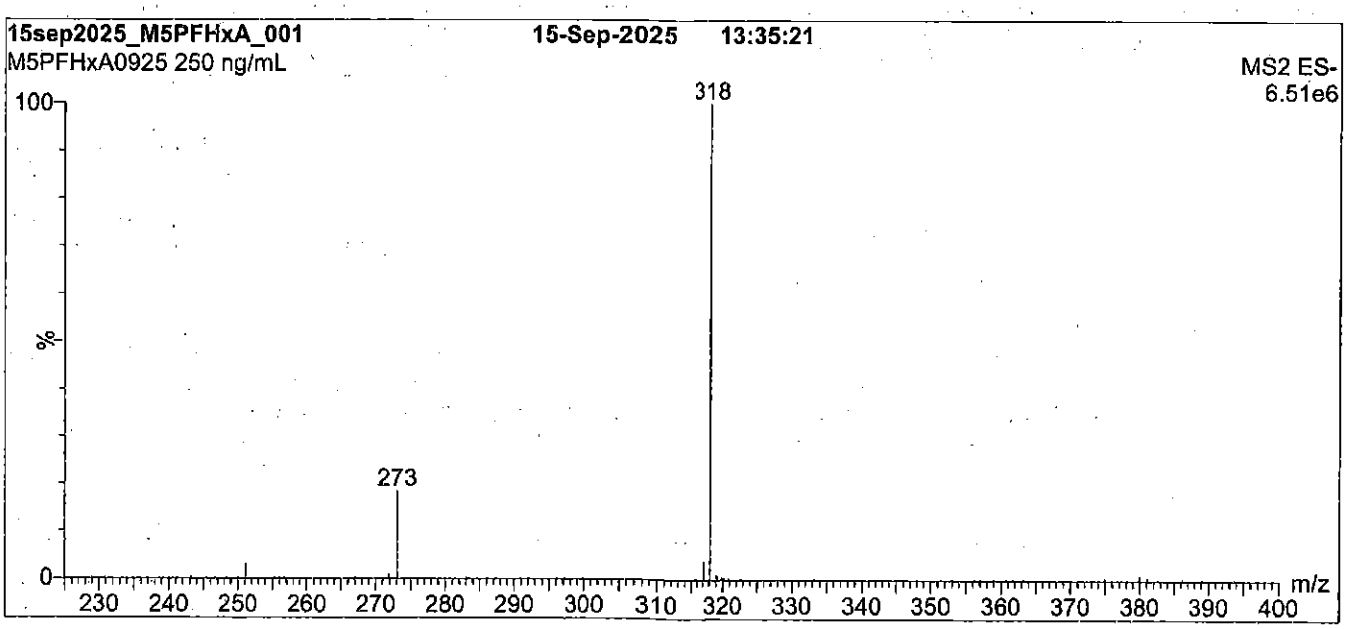
CALA Testing Accreditation No. A1226

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: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

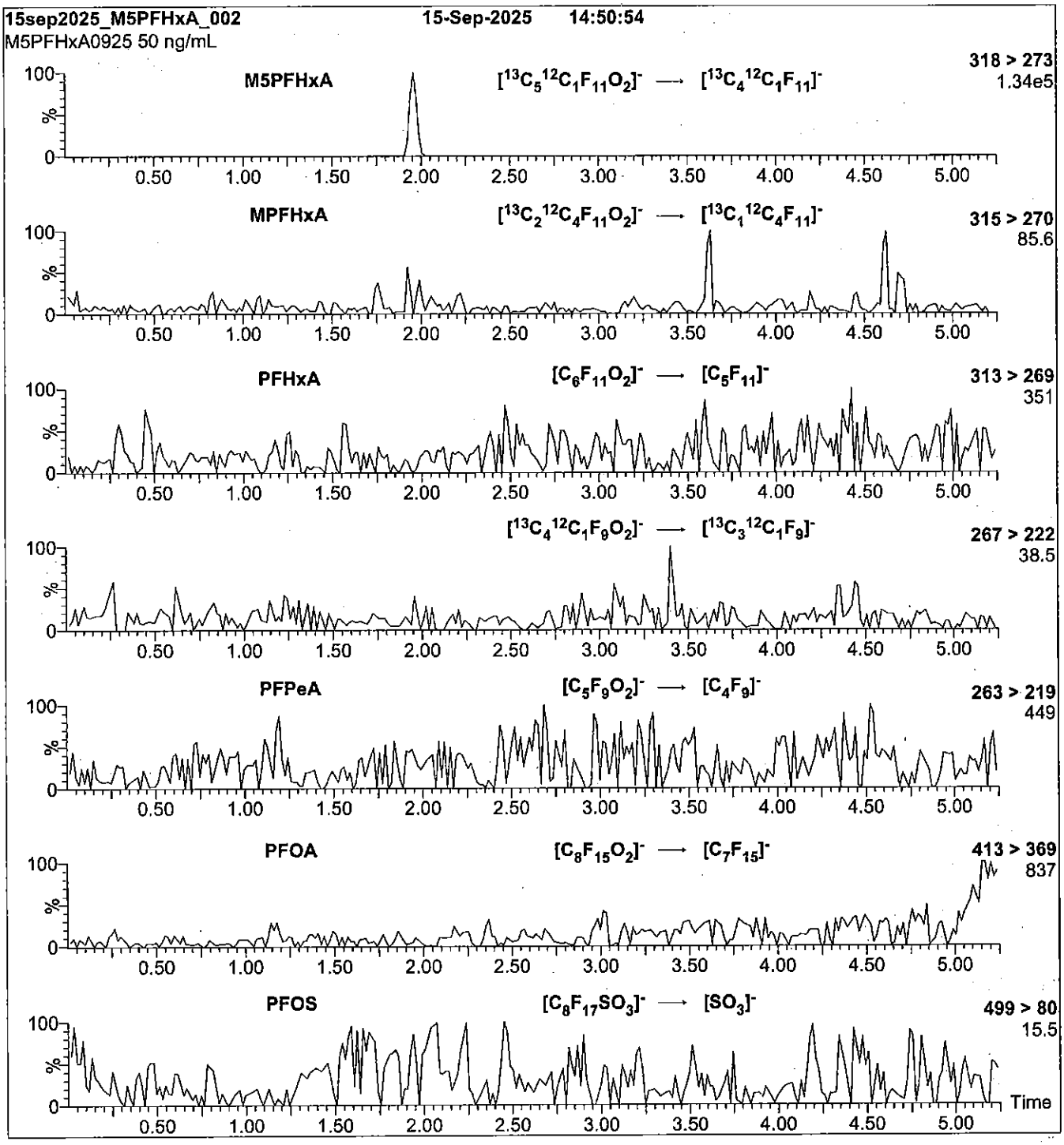
Flow: 300 µL/min

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: **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) = 3.71e-3
Collision Energy (eV) = 8 (318 > 273)

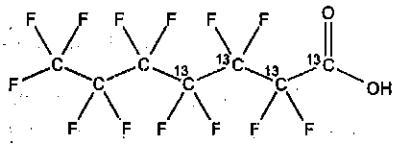
Reagent

PFC_ST_05956

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M4PFHpA	**LOT NUMBER:**	M4PFHpA0725
COMPOUND:	Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid		
STRUCTURE:		**CAS #:**	2328024-55-9



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_3HF_{13}O_2$	**MOLECULAR WEIGHT:**	368.03
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	07/16/2025		
EXPIRY DATE: (mm/dd/yyyy)	07/16/2030		
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:** 07/30/2025 (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(s) 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, SFC/UV/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, and/or SFC/UV/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,...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%) has been assigned to this product.

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:

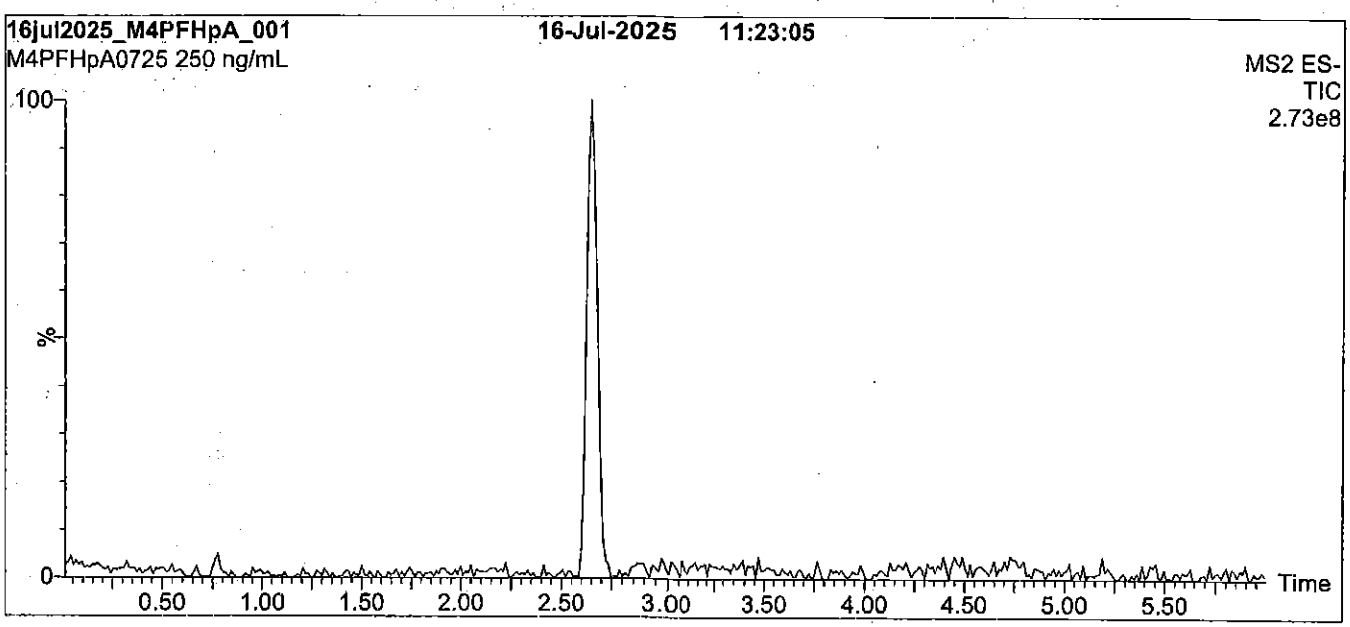
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

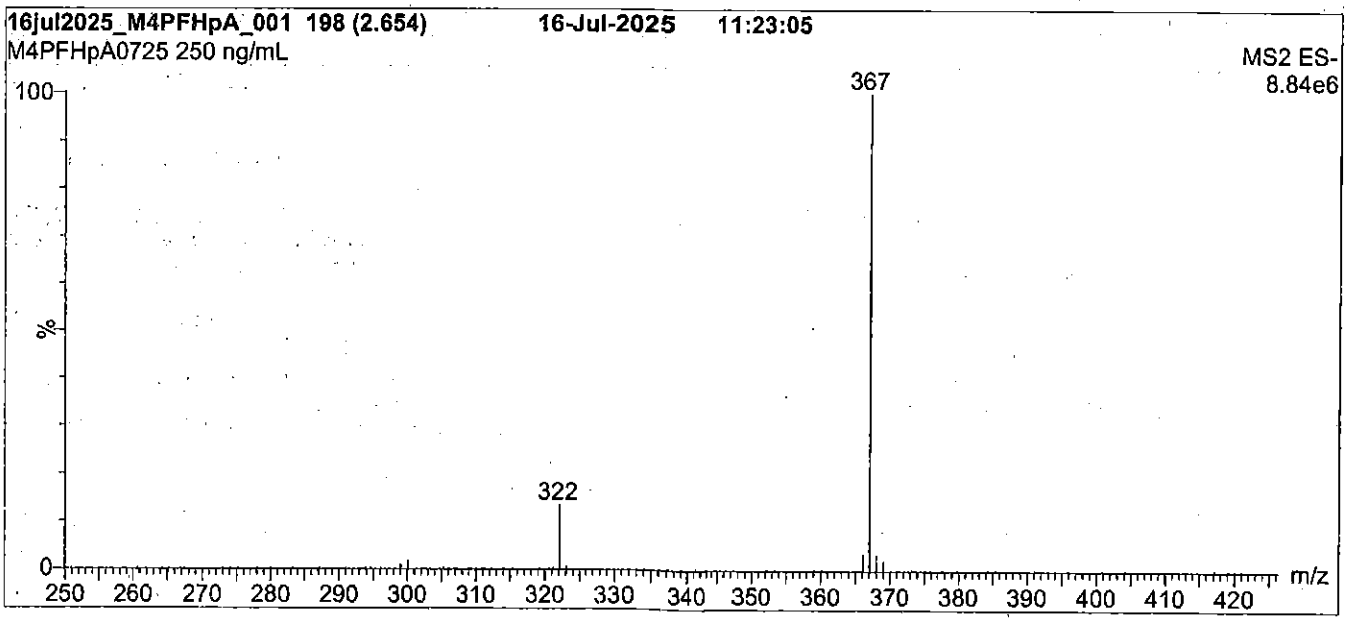
CALA Testing Accreditation No. A1226

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: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

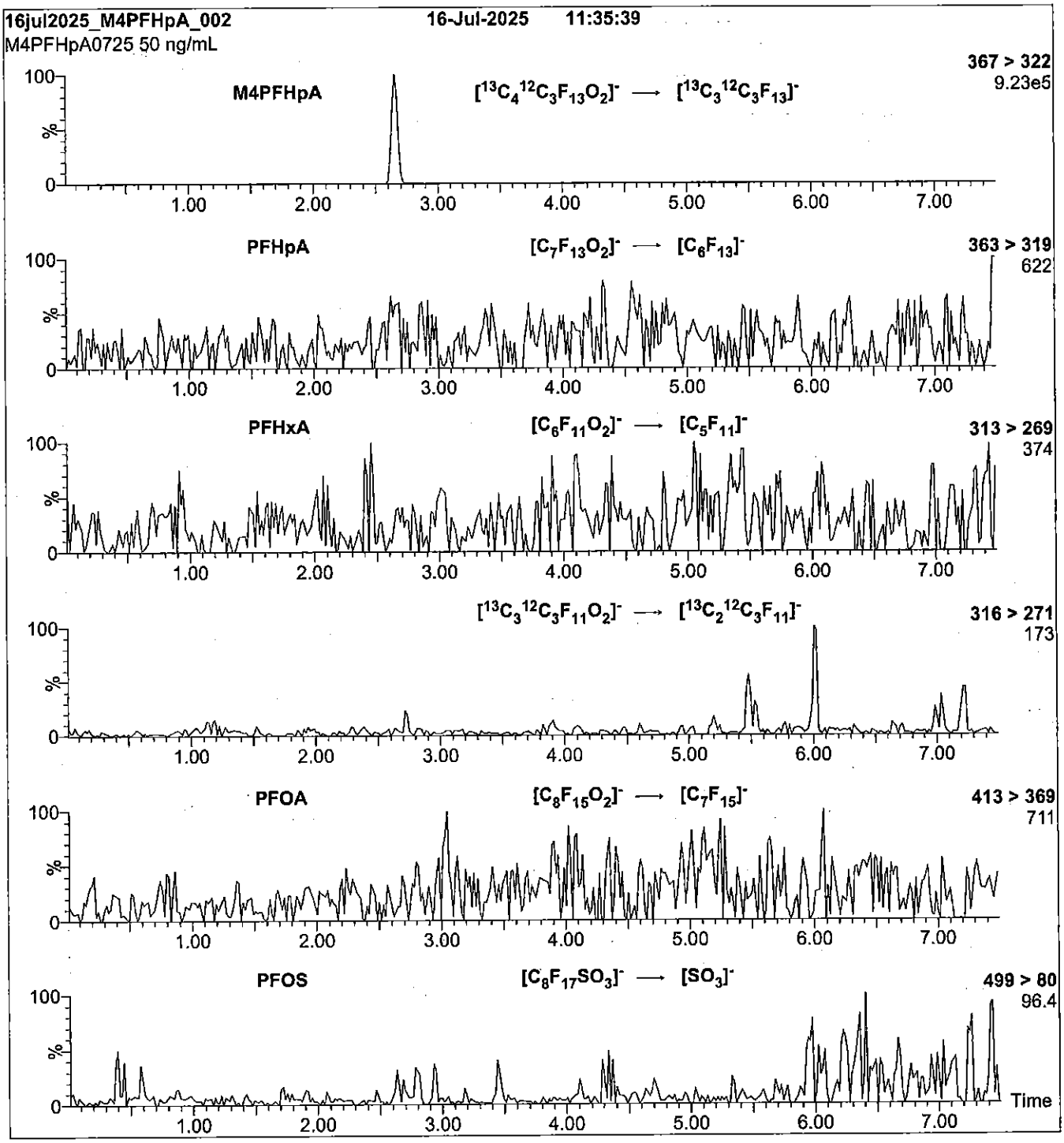
Flow: 300 µL/min

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: **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) = 3.49e-3
Collision Energy (eV) = 8

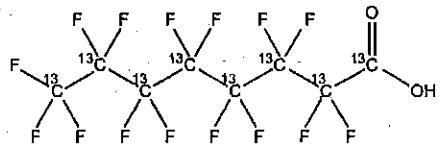
Reagent

PFC_ST_05960

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8PFOA	**LOT NUMBER:**	M8PFOA0625
COMPOUND:	Perfluoro-n-($^{13}C_8$)octanoic acid		
STRUCTURE:		**CAS #:**	1350614-84-4



MOLECULAR FORMULA:	$^{13}C_8HF_{16}O_2$	**MOLECULAR WEIGHT:**	422.01
CONCENTRATION:	50.0 ± 2.5 µg/mL	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	06/30/2025		
EXPIRY DATE: (mm/dd/yyyy)	06/30/2030		
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 ~1.1% of perfluoro-n-($^{13}C_4$)octanoic acid (MPFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/08/2025 (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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SYNTHESIS / CHARACTERIZATION:

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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,...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%) has been assigned to this product.

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:

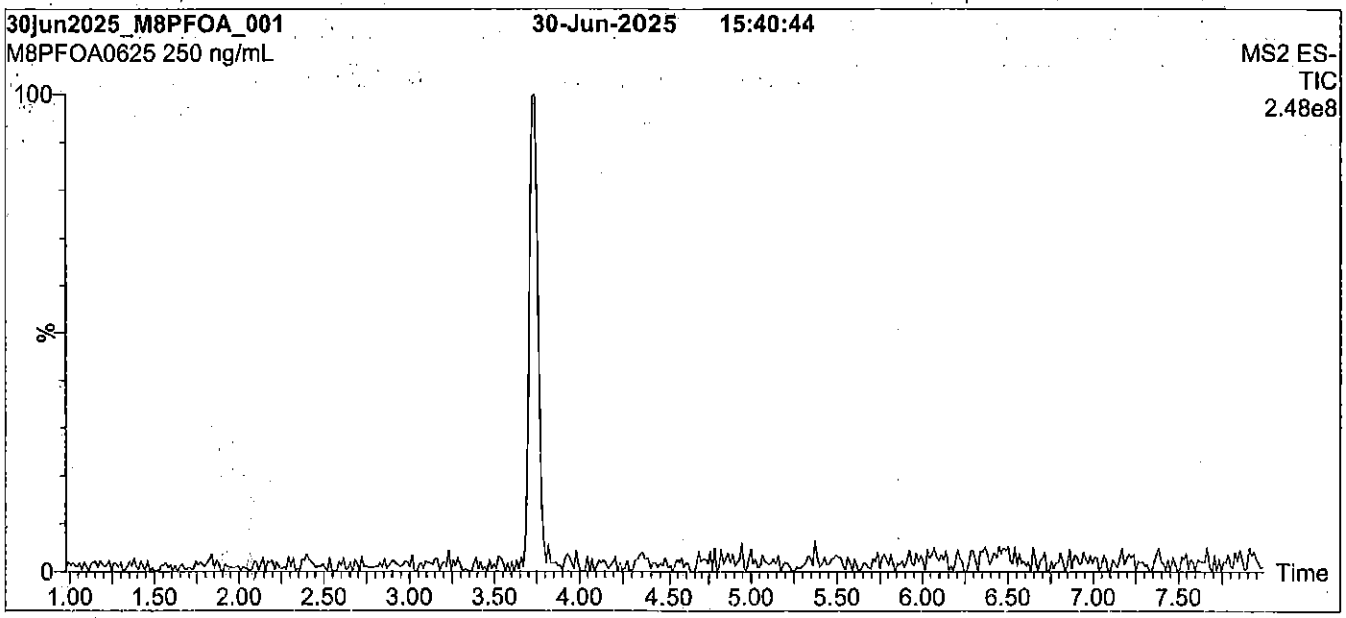
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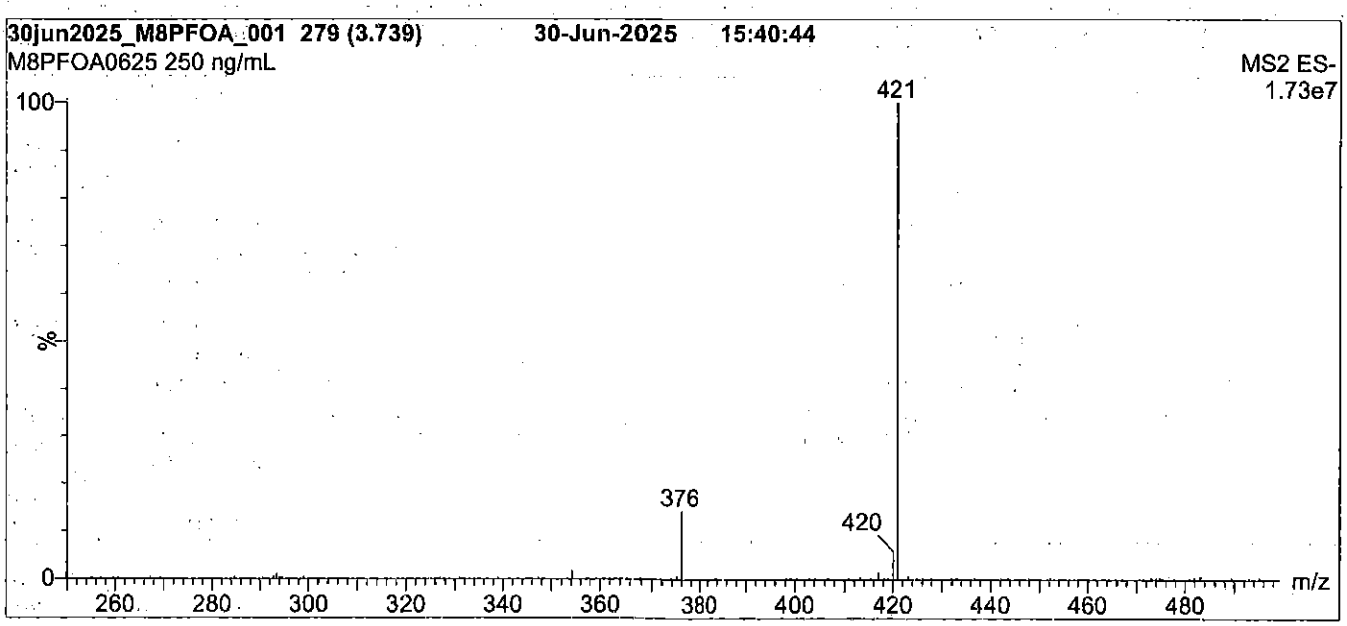
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **M8PFOA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

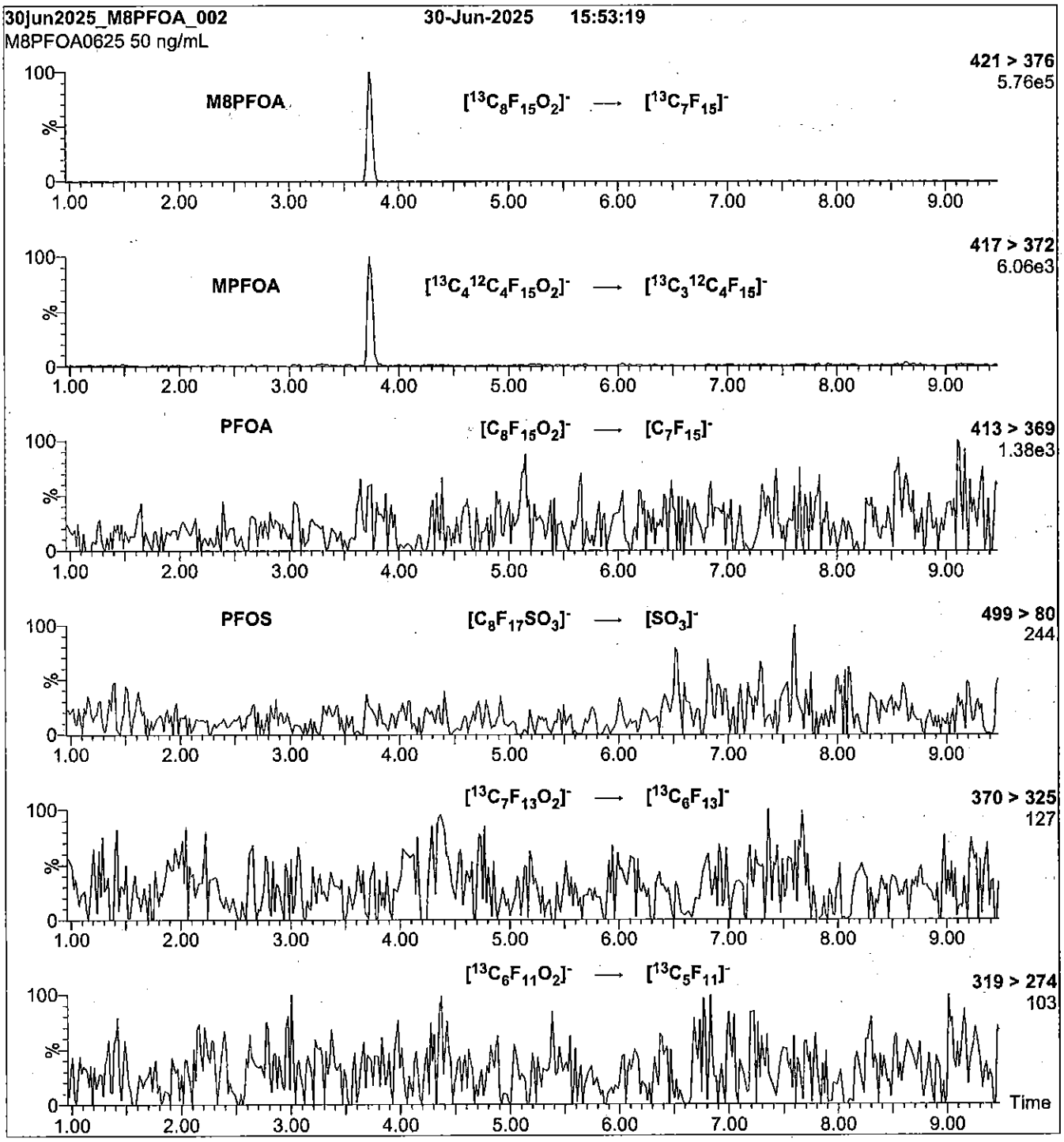
Flow: 300 µL/min

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: **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) = 3.57e-3
Collision Energy (eV) = 8

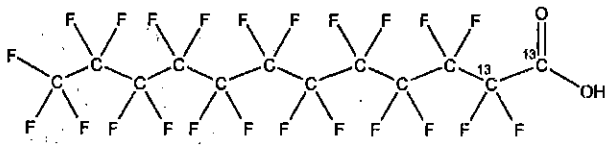
Reagent

PFC_ST_05965

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFDoA	**LOT NUMBER:**	MPFDoA1225
COMPOUND:	Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid		
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
LAST TESTED: (mm/dd/yyyy)	12/16/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/16/2030		
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:** 12/16/2025 (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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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:

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

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%) has been assigned to this product.

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:

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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:

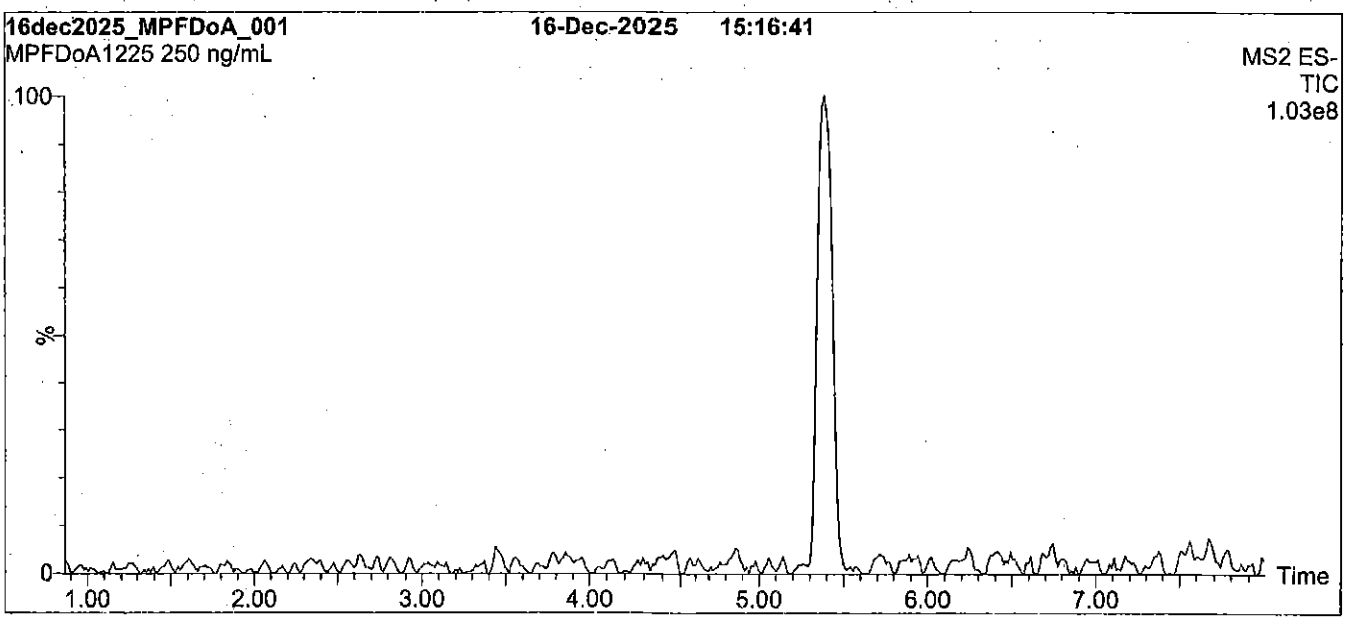
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

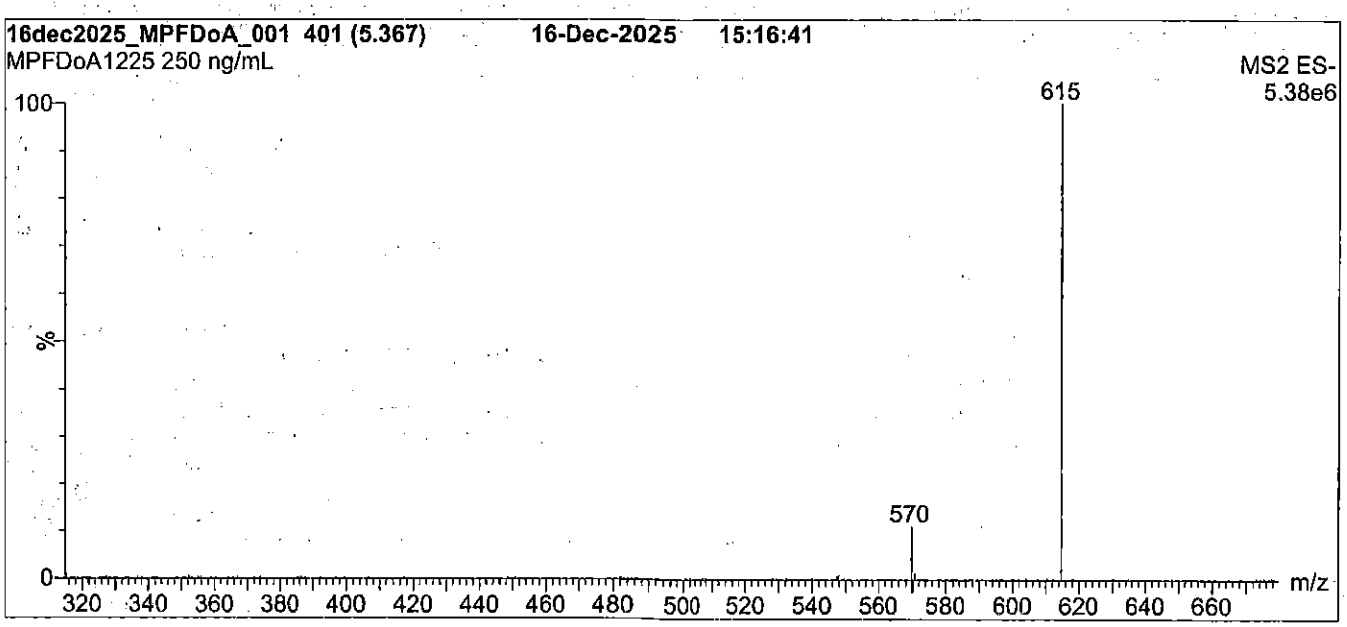
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

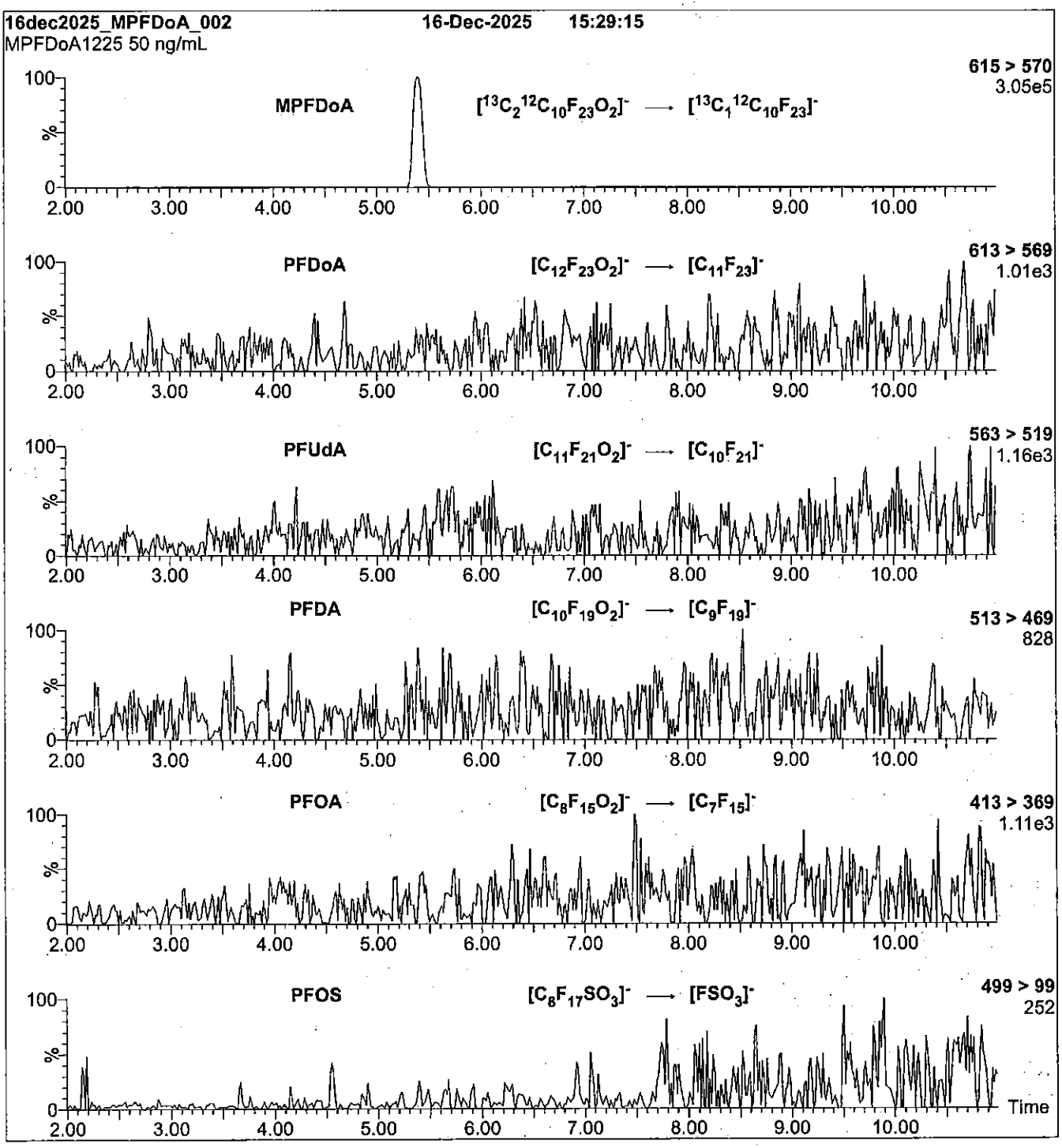
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 3.45e-3
Collision Energy (eV) = 12 (615 > 570)

Reagent

PFC_ST_05968

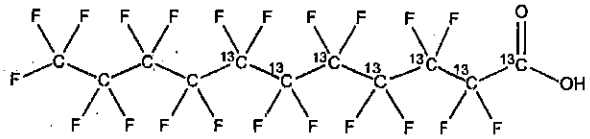
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M7PFUdA **LOT NUMBER:** M7PFUdA0925

COMPOUND: Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid

STRUCTURE: **CAS #:** Not available



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
LAST TESTED: (mm/dd/yyyy)	09/17/2025		
EXPIRY DATE: (mm/dd/yyyy)	09/17/2030		
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:

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B.G. Chittim, General Manager

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

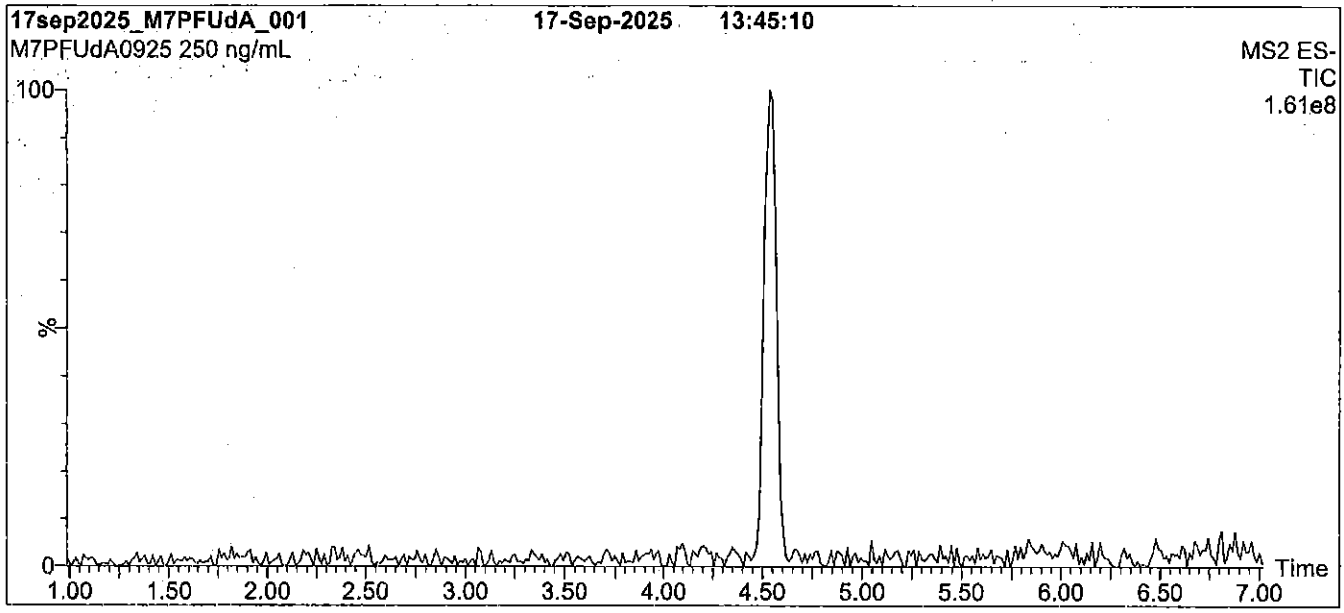
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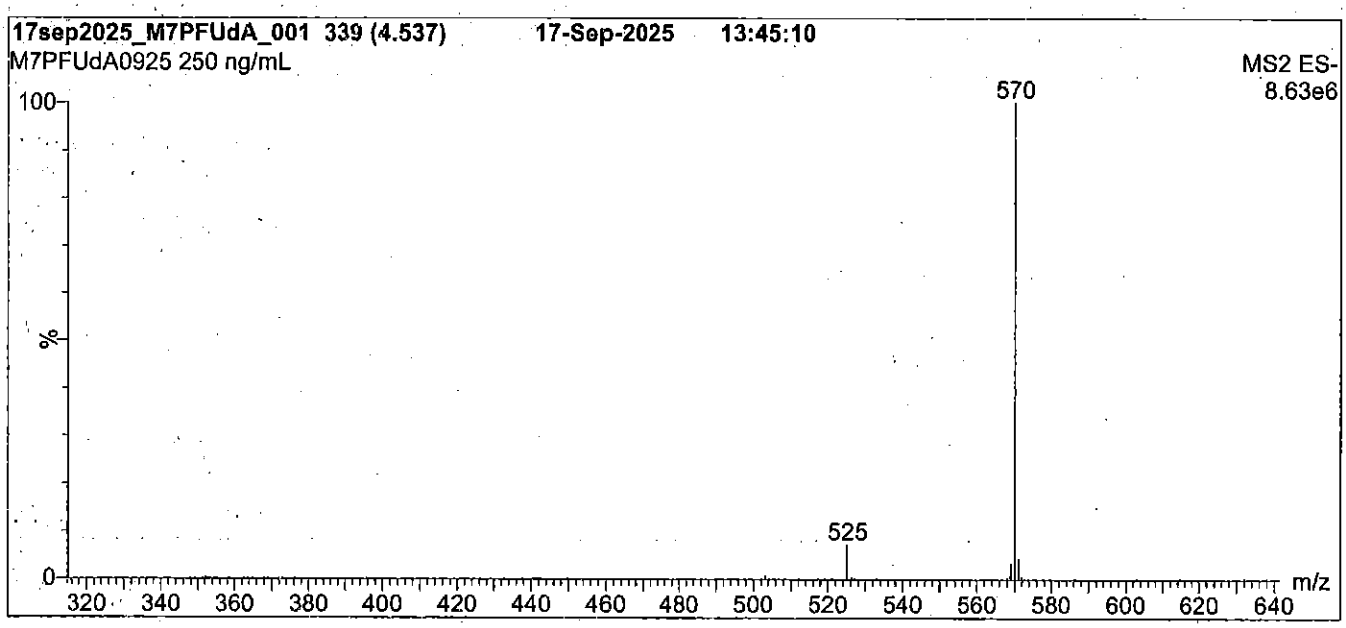
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

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Figure 1: **M7PFUdA; 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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

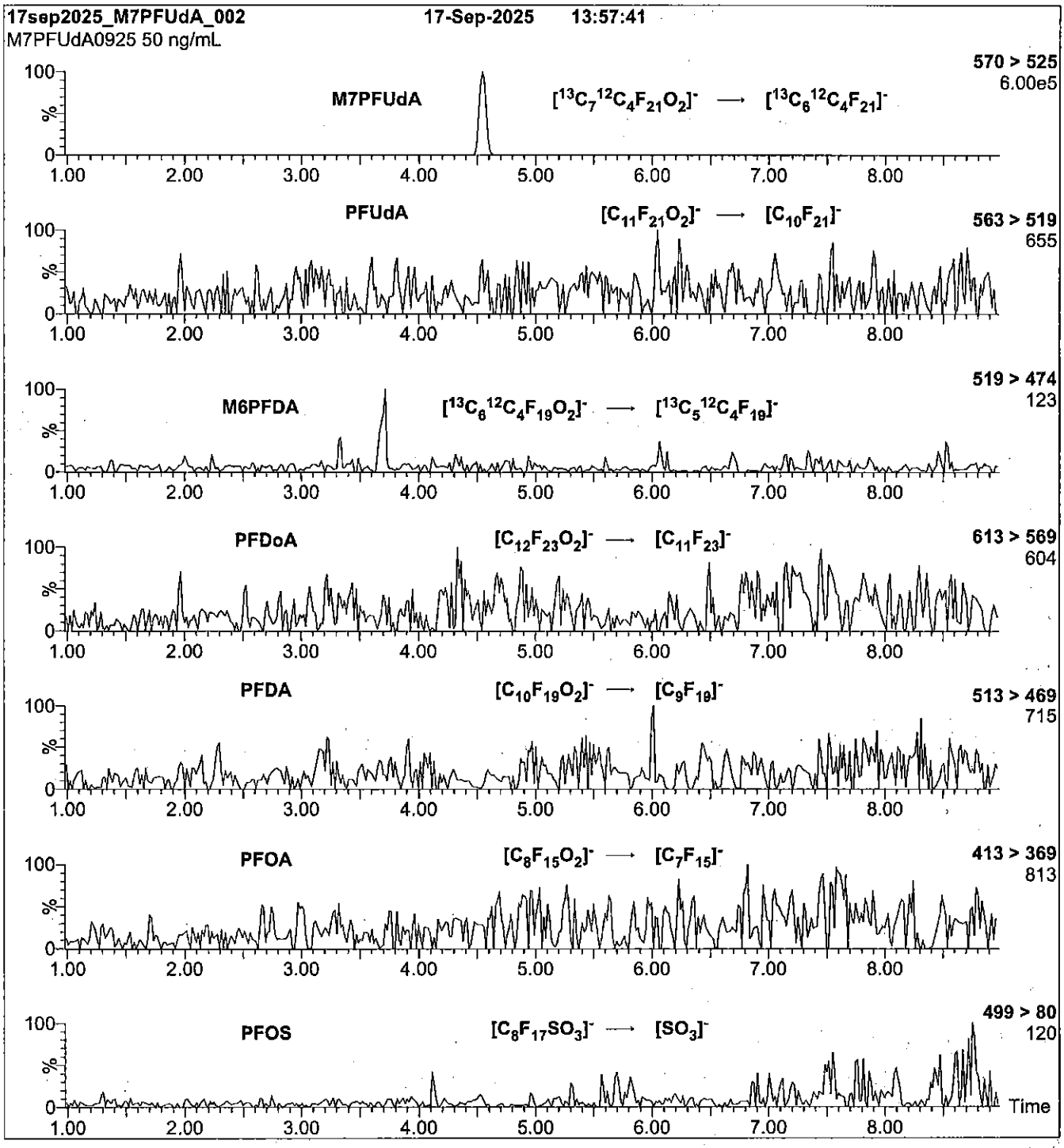
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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: **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) = 3.57e-3
Collision Energy (eV) = 12 (570 > 525)

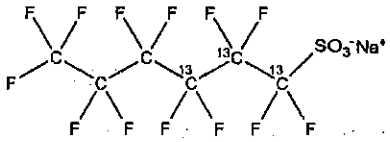
Reagent

PFC_ST_05974

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3PFHxS	**LOT NUMBER:**	M3PFHxS1025
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
LAST TESTED: (mm/dd/yyyy)	10/16/2025		
EXPIRY DATE: (mm/dd/yyyy)	10/16/2030		
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 ~0.6% sodium perfluoro(1,2-$^{13}C_2$)pentanesulfonate ($^{13}C_2$-PFPeS) and ~0.3% perfluoro-n-(1,2,3-$^{13}C_3$)hexanoic acid ($^{13}C_3$-PFHxA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/17/2025 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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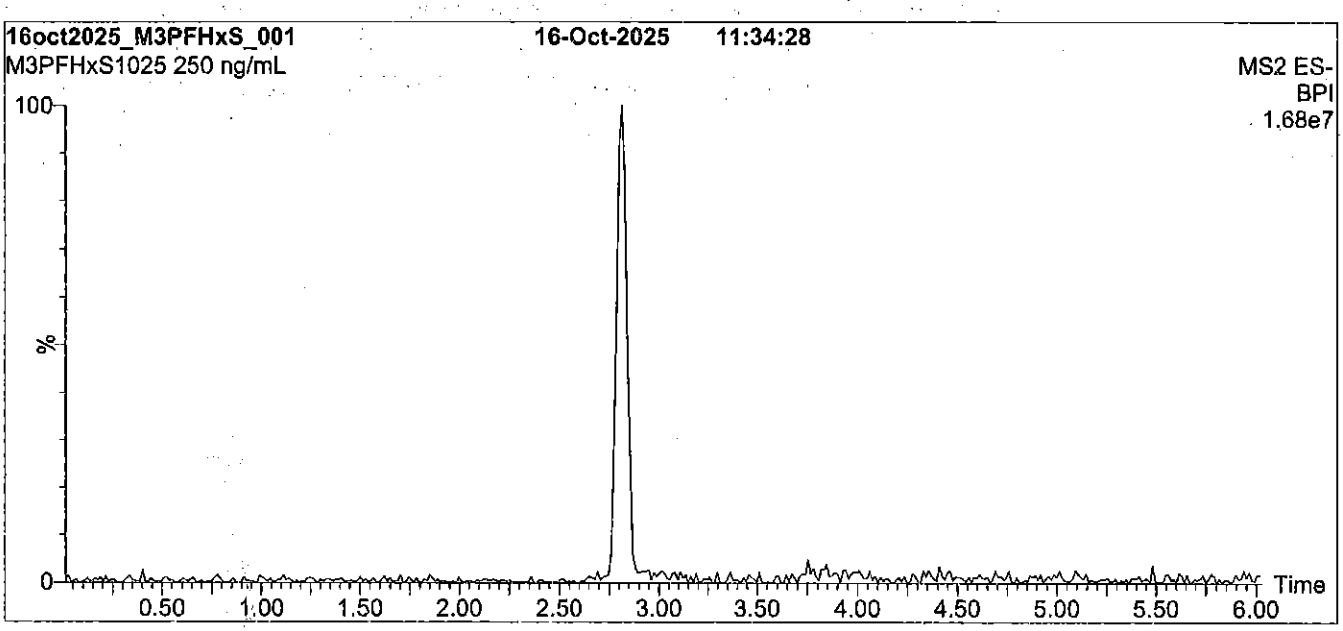
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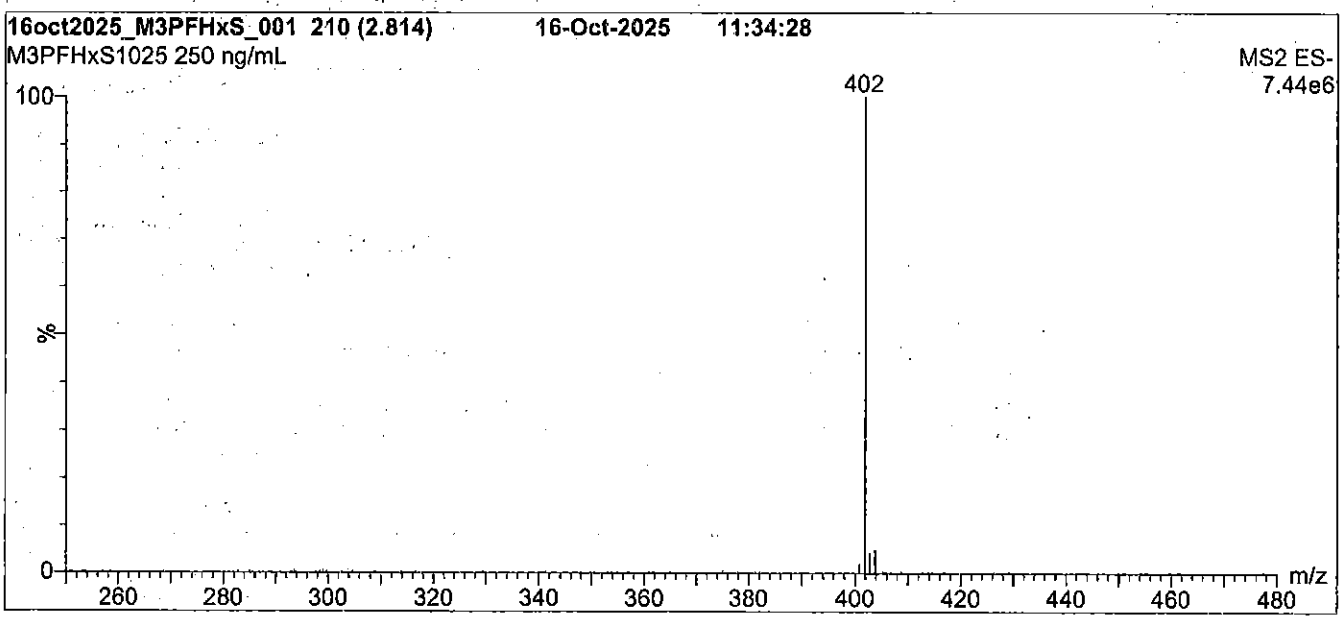
CALA Testing Accreditation No. A1226

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Figure 1: **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 9 min and hold for 1 min
before returning to initial conditions in 0.5 min.
Time: 12 min

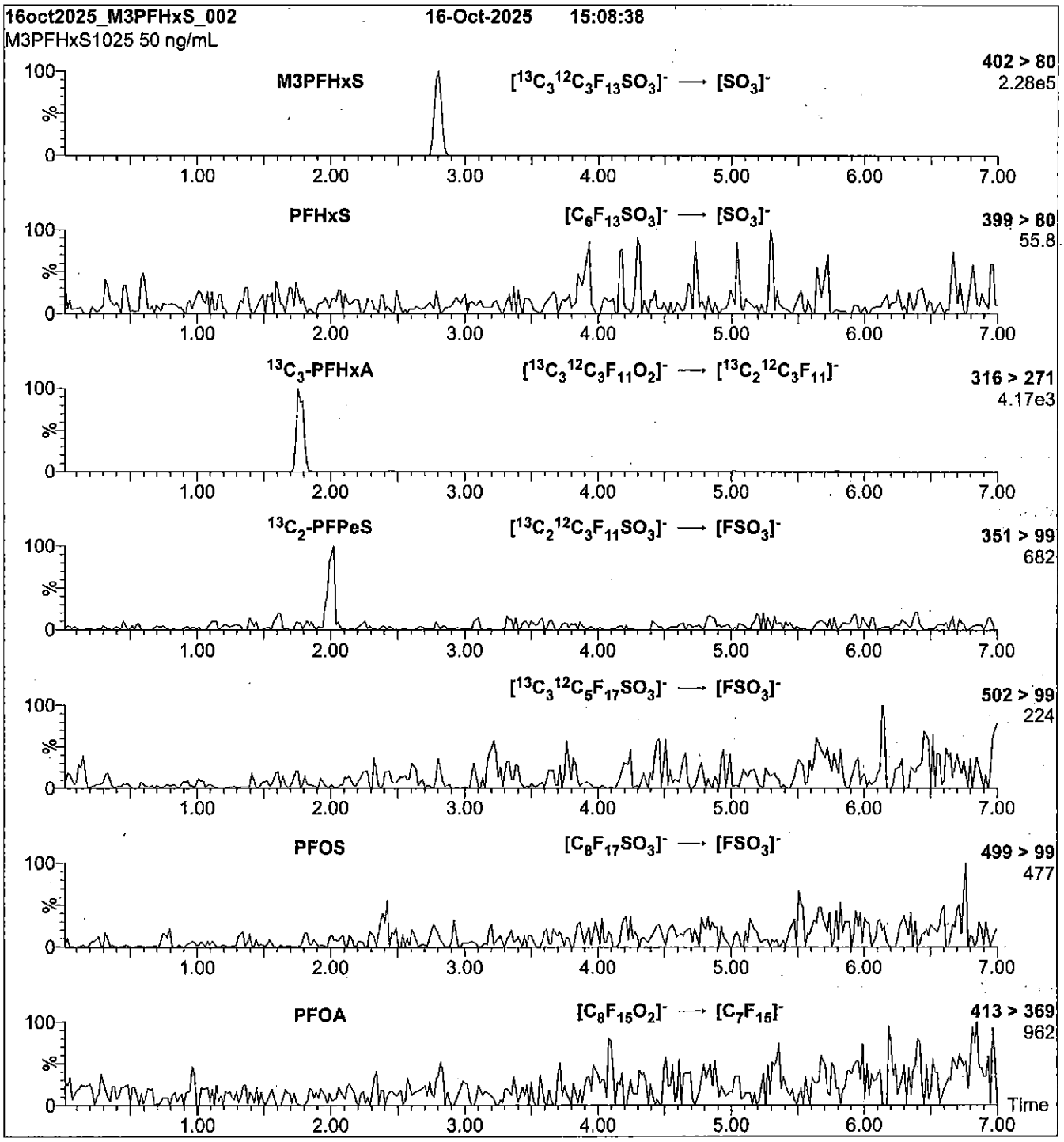
Flow: 300 µL/min

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: **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) = 4.49e-3
Collision Energy (eV) = 42 (402 > 80)

Reagent

PFC_ST_05980

WELLINGTON LABORATORIES

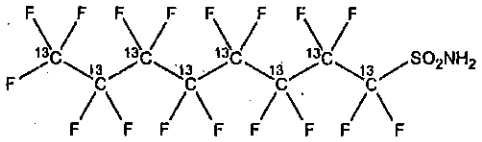
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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

LOT NUMBER: M8FOSA1225I

STRUCTURE:

CAS #: 1365803-60-6



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
LAST TESTED: (mm/dd/yyyy)	12/22/2025		
EXPIRY DATE: (mm/dd/yyyy)	12/22/2030		
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 ~0.7% of perfluoro-1-($^{13}C_4$)octanesulfonamide.

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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%) has been assigned to this product.

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:

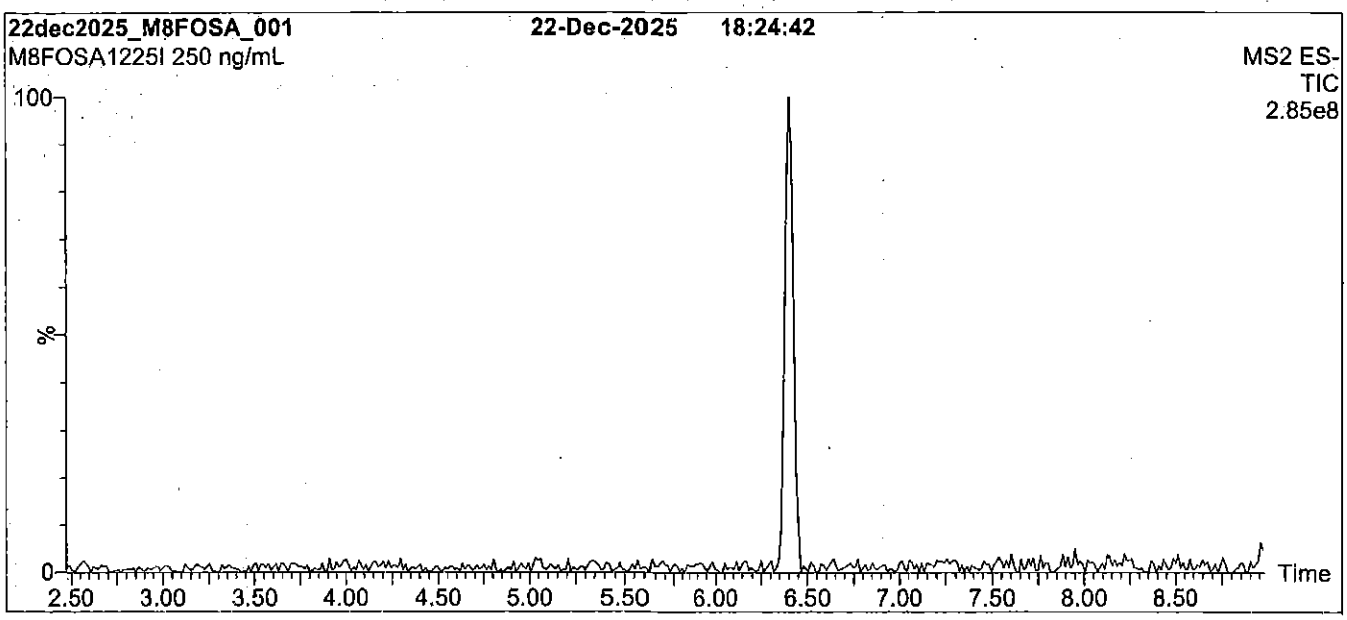
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by Intertek, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by the ANSI National Accreditation Board (ANAB; AR-1523).

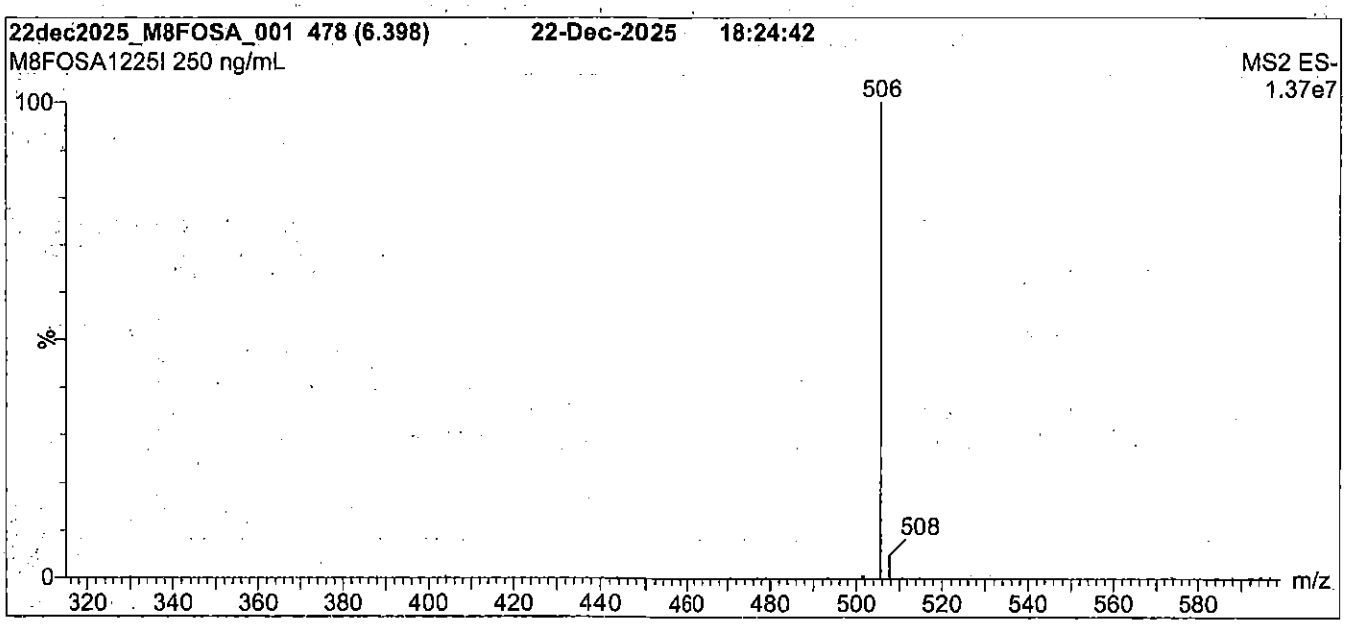
CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **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: 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

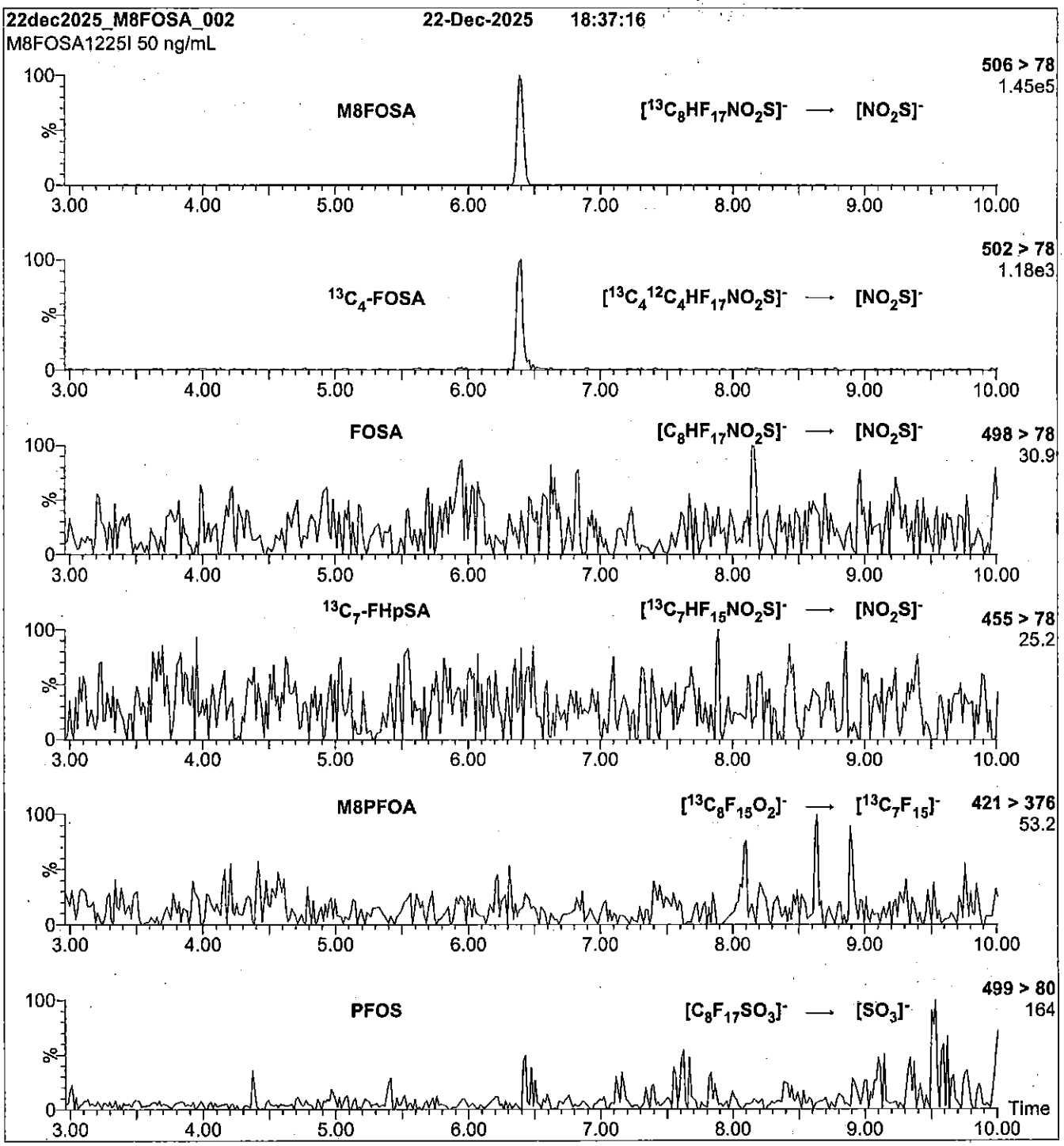
Flow: 300 µL/min

MS Parameters:

Experiment: Full Scan (315 - 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

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) = 3.57e-3
Collision Energy (eV) = 30 (506 > 78)

Reagent

PFC_ST_05981

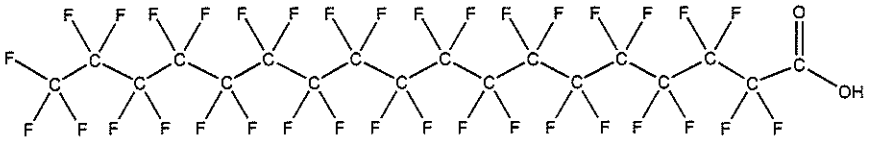
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Exp:02/21/29 Prpd:R7RE Opn:02/17/25
Native PFODA Stock
410-7243169

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE. PFODA
COMPOUND. Perfluoro-n-octadecanoic acid
LOT NUMBER. PFODA0224

STRUCTURE.
CAS #. 16517-11-6



MOLECULAR FORMULA. $C_{18}HF_{35}O_2$
MOLECULAR WEIGHT: 914 14
CONCENTRATION. 50 0 ± 2 5 µg/mL
SOLVENT(S). Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED. (mm/dd/yyyy) 02/21/2024
EXPIRY DATE. (mm/dd/yyyy) 02/21/2029
RECOMMENDED STORAGE. Store ampoule at ambient temperature in a 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
- The solubility of this product in methanol is very sensitive to storage conditions and solvent composition The stated validity period applies to the sealed ampoules stored at ambient temperature

FOR LABORATORY USE ONLY NOT FOR HUMAN OR DRUG USE

Certified By _____ **Date** 02/21/2024 (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.

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, .x_n on which it depends is.

$$u_c(y(x_1\ x_2\ \ldots x_n)) = \sqrt{\sum^{n} u(y\ x)}$$

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:

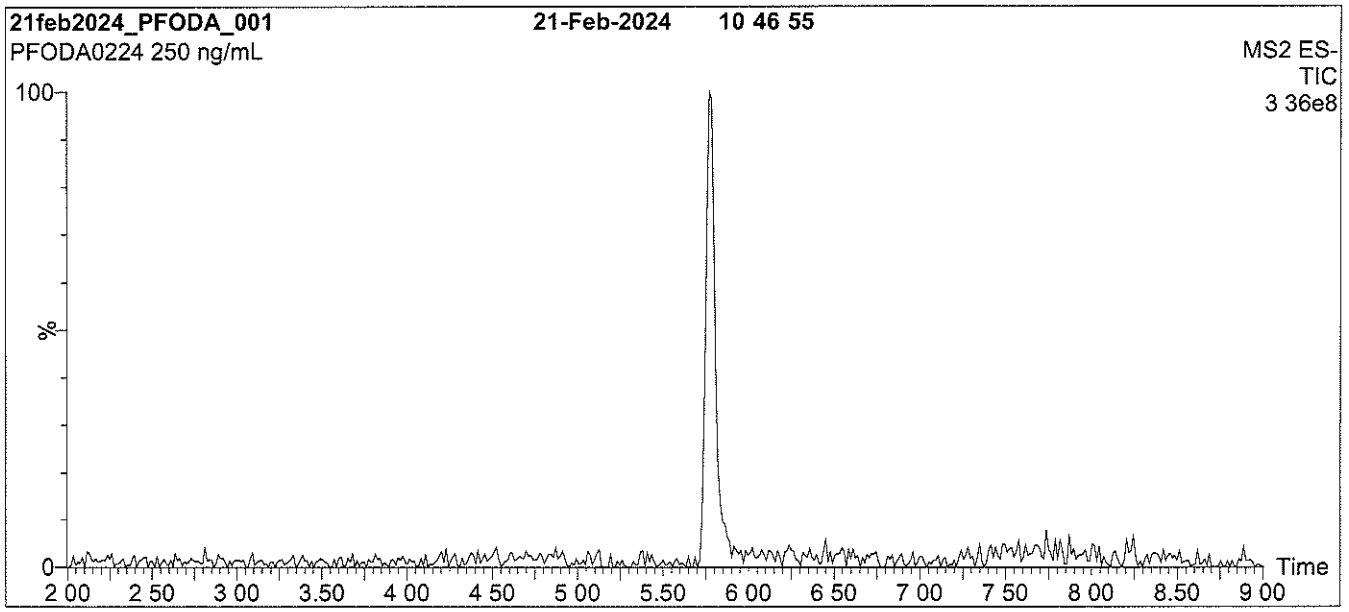
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA, A1226) and ISO 17034 by ANSI National Accreditation Board (ANAB AR-1523).

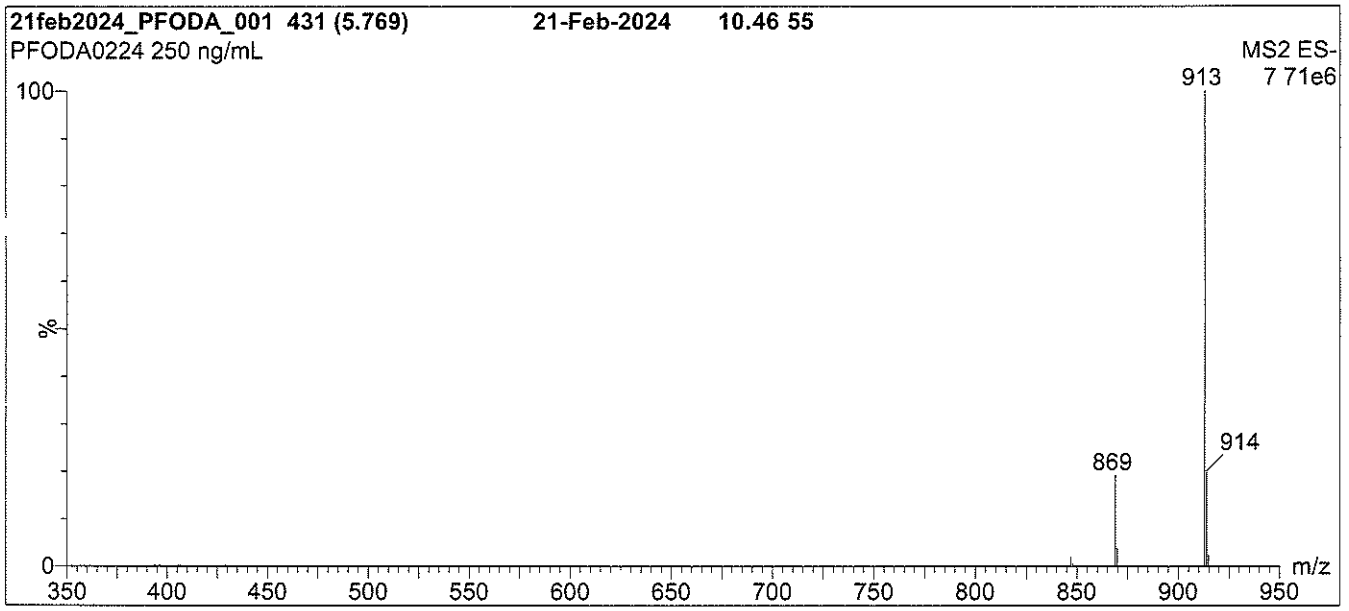
CALA Testing Accreditation No. A1226

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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. **PFODA, 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 (350 - 950 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. **PFODA, LC/MS/MS Data (Selected MRM Transitions)**

Conditions for Figure 2.

Injection	On-column (PFODA)	**MS Parameters.**	
Mobile phase	Same as Figure 1	Collision Gas (mbar) = 4.44e-3	
Flow.	300 µL/min	Collision Energy (eV) = 15	

Form#:27 Issued 2004-11-10
Revision#:9, Revised 2020-12-23
PFODA0224 (4 of 4)
rev0

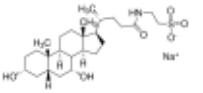
Reagent

PFC_ST_TCDCA_00001

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Sodium taurochenodeoxycholate



Product Number:	**T6260**
Batch Number:	**SLCJ5790**
Brand:	SIGMA
CAS Number:	6009-98-9
MDL Number:	MFCD00036745
Formula:	C26H44NNaO6S
Formula Weight:	521.69 g/mol
Quality Release Date:	14 MAY 2021

Test	Specification	Result
Appearance (Color)	White to Off White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless to Yellow	Almost Colorless
Solubility (Turbidity) 100 mg/mL, H2O	Clear	Clear
Water (by Karl Fischer)	≤ 7 %	1 %
Sodium (Na) anhydrous	3.9 - 4.9 %	4.8 %
1H NMR Spectrum	Conforms to Structure	Conforms
13C NMR Spectrum	Conforms to Structure	Conforms
Purity (TLC)	≥ 95 %	95 %

Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

1633A

Per- and Polyfluoroalkyl Substances by LC/MS/MS, 1633A

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	M242FTS #	13C5PHA #	C3PFBS #	HFPODA #	C4PFHA #	M262FTS #
RXMW-6_P	460-344895-1	61.9	65.6	123	75.6	76.9	67.6	76.5	120
FB_02162026_P	460-344895-2	30.9	37.6 *	35.4 *	43.9	37.2 *	42.6	51.5	46.9
	MB 410-770909/1-A	110	110	112	108	111	110	113	116
	LCS 410-770909/2-A	122	116	121	121	121	112	121	118
	LLCS 410-770909/3-A	122	123	128	123	125	125	130	126
RXMW-6_P MS	460-344895-1 MS	65.5	66.1	117	73.1	77.5	69.9	81.6	110
RXMW-6_P MSD	460-344895-1 MSD	60.2	69.2	111	70.7	66.6	71.4	81.5	111

	QC LIMITS
PFBA = 13C4 PFBA	5-130
PFPeA = 13C5 PFPeA	40-130
M242FTS = 13C2 4:2 FTS	40-200
13C5PHA = 13C5 PFHxA	40-130
C3PFBS = 13C3 PFBS	40-135
HFPODA = 13C3 HFPO-DA	40-130
C4PFHA = 13C4 PFHpA	40-130
M262FTS = 13C2 6:2 FTS	40-200

Column to be used to flag recovery values

FORM II 1633A

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	C8PFOA #	C3PFHS #	C9PFNA #	M282FTS #	d3NMFOS #	C6PFDA #	d5NEFOS #	C8PFOS #
RXMW-6_P	460-344895-1	88.5	82.4	97.1	86.7	96.7	81.8	119	96.0
FB_02162026_P	460-344895-2	45.4	41.4	48.3	52.1	74.9	54.3	105	60.5
	MB 410-770909/1-A	111	99.8	101	95.1	105	87.8	106	95.4
	LCS 410-770909/2-A	122	108	107	104	118	97.4	113	106
	LLCS 410-770909/3-A	124	113	112	110	117	95.2	112	109
RXMW-6_P MS	460-344895-1 MS	93.5	85.6	91.0	80.7	91.4	83.3	109	93.1
RXMW-6_P MSD	460-344895-1 MSD	86.4	81.5	98.7	110	114	102	122	108

	QC LIMITS
C8PFOA = 13C8 PFOA	40-130
C3PFHS = 13C3 PFHxS	40-130
C9PFNA = 13C9 PFNA	40-130
M282FTS = 13C2 8:2 FTS	40-300
d3NMFOS = d3-NMeFOSAA	40-170
C6PFDA = 13C6 PFDA	40-130
d5NEFOS = d5-NEtFOSAA	25-135
C8PFOS = 13C8 PFOS	40-130

Column to be used to flag recovery values

FORM II 1633A

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	13C7PUA #	PFDoA #	PFOSA #	PFTDA #	NMFM #	d3NMFSA #	NEFM #	d5NPFSA #
RXMW-6_P	460-344895-1	85.8	78.4	87.7	67.6	72.1	71.3	69.2	71.7
FB_02162026_P	460-344895-2	70.9	70.6	55.6	71.5	62.9	56.4	73.7	62.3
	MB 410-770909/1-A	87.4	78.7	124	81.8	66.4	87.4	61.2	85.6
	LCS 410-770909/2-A	94.0	86.0	130	80.3	75.8	98.6	71.6	94.5
	LLCS 410-770909/3-A	91.5	81.9	125	75.5	68.1	99.1	62.5	94.8
RXMW-6_P MS	460-344895-1 MS	79.8	74.5	82.2	75.5	74.2	72.0	84.8	74.2
RXMW-6_P MSD	460-344895-1 MSD	104	92.4	101	100	86.3	94.1	77.8	92.8

	QC LIMITS
13C7PUA = 13C7 PFUnA	30-130
PFDoA = 13C2 PFDoA	10-130
PFOSA = 13C8 FOSA	40-130
PFTDA = 13C2 PFTeDA	10-130
NMFM = d7-N-MeFOSE-M	10-130
d3NMFSA = d3-NMePFOSA	10-130
NEFM = d9-N-EtFOSE-M	10-130
d5NPFSA = d5-NEtPFOSA	10-130

Column to be used to flag recovery values

FORM II 1633A

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-50.d

Lab ID: LCS 410-770909/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	80.0	68.72	86	70-140	
Perfluoropentanoic acid (PFPeA)	40.0	36.70	92	65-135	
Perfluorohexanoic acid (PFHxA)	40.0	36.61	92	70-145	
Perfluoroheptanoic acid (PFHpA)	40.0	35.57	89	70-150	
Perfluorooctanoic acid (PFOA)	40.0	36.58	91	70-150	
Perfluorononanoic acid (PFNA)	40.0	36.37	91	70-150	
Perfluorodecanoic acid (PFDA)	40.0	39.51	99	70-140	
Perfluoroundecanoic acid (PFUnA)	40.0	39.40	99	70-145	
Perfluorododecanoic acid (PFDoA)	40.0	36.97	92	70-140	
Perfluorotridecanoic acid (PFTrDA)	40.0	35.41	89	65-140	
Perfluorotetradecanoic acid (PFTeDA)	40.0	31.05	78	60-140	
Perfluorobutanesulfonic acid (PFBS)	35.5	31.63	89	60-145	
Perfluoropentanesulfonic acid (PFPeS)	37.6	36.69	98	65-140	
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.96	88	65-145	
Perfluoroheptanesulfonic acid (PFHpS)	38.2	35.28	92	70-150	
Perfluorooctanesulfonic acid (PFOS)	37.2	35.70	96	55-150	
Perfluorononanesulfonic acid (PFNS)	38.5	31.81	83	65-145	
Perfluorodecanesulfonic acid (PFDS)	38.6	31.02	80	60-145	
Perfluorododecanesulfonic acid (PFDoS)	38.8	22.55	58	50-145	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	72.58	97	70-145	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	74.54	98	65-155	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	70.54	92	60-150	
Perfluorooctanesulfonamide (PFOSA)	40.0	35.09	88	70-145	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-50.d

Lab ID: LCS 410-770909/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	38.83	97	60-150	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.52	96	65-145	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	33.51	84	50-140	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.99	90	70-145	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	190.6	95	70-145	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	198.7	99	70-135	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	28.63	95	70-140	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	35.18	93	65-145	
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	41.05	103	55-140	
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	37.02	93	60-150	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	35.83	90	50-150	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	37.4	33.07	89	70-155	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	37.8	32.79	87	55-160	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	28.32	79	70-140	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	81.85	102	65-130	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	156.2	78	70-135	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	147.5	74	50-145	
13C4 PFBA	80.0	97.82	122	5-130	
13C5 PFPeA	80.0	93.00	116	40-130	
13C5 PFHxA	80.0	96.70	121	40-130	
13C4 PFHpA	80.0	97.03	121	40-130	
13C8 PFOA	80.0	97.90	122	40-130	
13C9 PFNA	80.0	85.59	107	40-130	
13C6 PFDA	80.0	77.93	97.4	40-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-50.d

Lab ID: LCS 410-770909/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C7 PFUnA	80.0	75.21	94.0	30-130	
13C2 PFTeDA	80.0	64.27	80.3	10-130	
13C3 PFBS	74.6	90.18	121	40-135	
13C3 PFHxS	75.8	81.63	108	40-130	
13C8 PFOS	76.6	81.41	106	40-130	
13C8 FOSA	80.0	104.0	130	40-130	
d3-NMeFOSAA	200	236.0	118	40-170	
d5-NEtFOSAA	200	225.2	113	25-135	
13C2 4:2 FTS	188	226.5	121	40-200	
13C2 6:2 FTS	190	225.0	118	40-200	
13C2 8:2 FTS	192	200.0	104	40-300	
13C3 HFPO-DA	80.0	89.57	112	40-130	
d7-N-MeFOSE-M	200	151.6	75.8	10-130	
d9-N-EtFOSE-M	200	143.3	71.6	10-130	
d5-NEtPFOSA	80.0	75.62	94.5	10-130	
d3-NMePFOSA	80.0	78.86	98.6	10-130	
13C2 PFDoA	80.0	68.76	86.0	10-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-51.d

Lab ID: LLCS 410-770909/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	8.00	7.545	94	70-140	
Perfluoropentanoic acid (PFPeA)	4.00	4.148	104	65-135	
Perfluorohexanoic acid (PFHxA)	4.00	4.361	109	70-145	
Perfluoroheptanoic acid (PFHpA)	4.00	3.995	100	70-150	
Perfluorooctanoic acid (PFOA)	4.00	4.242	106	70-150	
Perfluorononanoic acid (PFNA)	4.00	3.747	94	70-150	
Perfluorodecanoic acid (PFDA)	4.00	4.139	103	70-140	
Perfluoroundecanoic acid (PFUnA)	4.00	4.307	108	70-145	
Perfluorododecanoic acid (PFDoA)	4.00	3.891	97	70-140	
Perfluorotridecanoic acid (PFTrDA)	4.00	3.981	100	65-140	
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.391	85	60-140	
Perfluorobutanesulfonic acid (PFBS)	3.55	3.456	97	60-145	
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.140	110	65-140	
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.517	96	65-145	
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.762	99	70-150	
Perfluorooctanesulfonic acid (PFOS)	3.72	3.678	99	55-150	
Perfluorononanesulfonic acid (PFNS)	3.85	3.324	86	65-145	
Perfluorodecanesulfonic acid (PFDS)	3.86	3.078	80	60-145	
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.310	60	50-145	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	7.689	102	70-145	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.178	107	65-155	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.948	117	60-150	
Perfluorooctanesulfonamide (PFOSA)	4.00	3.967	99	70-145	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-51.d

Lab ID: LLCS 410-770909/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	3.993	100	60-150	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.922	98	65-145	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.677	92	50-140	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.384	110	70-145	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.70	109	70-145	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.63	108	70-135	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.296	110	70-140	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.862	102	65-145	
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.404	110	55-140	
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	3.947	99	60-150	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.162	104	50-150	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	3.74	3.660	98	70-155	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	3.78	3.179	84	55-160	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.004	84	70-140	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	10.66	133	65-130	*
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	22.70	113	70-135	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	20.92	105	50-145	
13C4 PFBA	80.0	97.54	122	5-130	
13C5 PFPeA	80.0	98.40	123	40-130	
13C5 PFHxA	80.0	98.77	123	40-130	
13C4 PFHpA	80.0	104.0	130	40-130	
13C8 PFOA	80.0	99.55	124	40-130	
13C9 PFNA	80.0	89.88	112	40-130	
13C6 PFDA	80.0	76.14	95.2	40-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB19QC-51.d

Lab ID: LLCS 410-770909/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LLCS CONCENTRATION (ng/L)	LLCS % REC	QC LIMITS REC	#
13C7 PFUnA	80.0	73.18	91.5	30-130	
13C2 PFTeDA	80.0	60.42	75.5	10-130	
13C3 PFBS	74.6	93.08	125	40-135	
13C3 PFHxS	75.8	85.41	113	40-130	
13C8 PFOS	76.6	83.48	109	40-130	
13C8 FOSA	80.0	100.3	125	40-130	
d3-NMeFOSAA	200	233.8	117	40-170	
d5-NEtFOSAA	200	223.6	112	25-135	
13C2 4:2 FTS	188	239.7	128	40-200	
13C2 6:2 FTS	190	240.8	126	40-200	
13C2 8:2 FTS	192	211.5	110	40-300	
13C3 HFPO-DA	80.0	99.64	125	40-130	
d7-N-MeFOSE-M	200	136.1	68.1	10-130	
d9-N-EtFOSE-M	200	125.0	62.5	10-130	
d5-NEtPFOSA	80.0	75.86	94.8	10-130	
d3-NMePFOSA	80.0	79.26	99.1	10-130	
13C2 PFDoA	80.0	65.52	81.9	10-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-74.d

Lab ID: 460-344895-1 MS Client ID: RXMW-6_P MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	60.2	5.06	62.97	96	70-140	
Perfluoropentanoic acid (PFPeA)	30.1	2.61	31.27	95	65-135	
Perfluorohexanoic acid (PFHxA)	30.1	2.12	33.97	106	70-145	
Perfluoroheptanoic acid (PFHpA)	30.1	1.95	34.89	109	70-150	
Perfluorooctanoic acid (PFOA)	30.1	12.0	42.31	101	70-150	
Perfluorononanoic acid (PFNA)	30.1	3.49	28.23	82	70-150	
Perfluorodecanoic acid (PFDA)	30.1	1.27 J	27.88	88	70-140	
Perfluoroundecanoic acid (PFUnA)	30.1	1.48 U	33.94	113	70-145	
Perfluorododecanoic acid (PFDoA)	30.1	1.48 U	32.25	107	70-140	
Perfluorotridecanoic acid (PFTrDA)	30.1	1.48 U	27.82	92	65-140	
Perfluorotetradecanoic acid (PFTeDA)	30.1	1.48 U	26.45	88	60-140	
Perfluorobutanesulfonic acid (PFBS)	26.7	1.59	24.39	85	60-145	
Perfluoropentanesulfonic acid (PFPeS)	28.3	1.48 U	25.68	91	65-140	
Perfluorohexanesulfonic acid (PFHxS)	27.5	0.93 J	25.78	91	65-145	
Perfluoroheptanesulfonic acid (PFHpS)	28.7	1.48 U	25.98	90	70-150	
Perfluorooctanesulfonic acid (PFOS)	28.0	14.1	39.32	90	55-150	
Perfluorononanesulfonic acid (PFNS)	29.0	1.48 U	23.96	83	65-145	
Perfluorodecanesulfonic acid (PFDS)	29.0	1.48 U	24.30	84	60-145	
Perfluorododecanesulfonic acid (PFDoS)	29.2	1.48 U	21.43	73	50-145	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	56.5	2.97 U	53.75	95	70-145	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	57.3	2.97 U	52.41	91	65-155	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	57.8	2.97 U	56.33	97	60-150	
Perfluorooctanesulfonamide (PFOSA)	30.1	1.48 U	26.36	88	70-145	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-74.d

Lab ID: 460-344895-1 MS Client ID: RXMW-6_P MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
N-methylperfluorooctane sulfonamide (NMeFOSA)	30.1	1.48 U	29.18	97	60-150	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	30.1	1.48 U	27.61	92	65-145	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	30.1	1.48 U	26.30	87	50-140	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	30.1	1.48 U	27.44	91	70-145	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	151	7.41 U	140.0	93	70-145	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	151	7.41 U	137.1	91	70-135	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	22.6	1.48 U	21.66	96	70-140	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	28.5	1.48 U	29.68	104	65-145	
Perfluoro-3-methoxypropanoic acid (PFMPA)	30.1	1.48 U	29.75	99	55-140	
Perfluoro-4-methoxybutanoic acid (PFMBA)	30.1	1.48 U	28.22	94	60-150	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	30.1	1.48 U	26.31	87	50-150	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	28.1	1.48 U	23.79	85	70-155	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	28.4	1.48 U	23.09	81	55-160	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	26.9	1.48 U	23.56	88	70-140	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	60.2	2.97 U	54.54	91	65-130	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	151	7.41 U	152.6	101	70-135	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	151	7.41 U	140.9	94	50-145	
13C4 PFBA	60.2	36.7	39.46	65.5	5-130	
13C5 PFPeA	60.2	38.9	39.77	66.1	40-130	
13C5 PFHxA	60.2	44.9	44.03	73.1	40-130	
13C4 PFHpA	60.2	45.4	49.12	81.6	40-130	
13C8 PFOA	60.2	52.5	56.31	93.5	40-130	
13C9 PFNA	60.2	57.6	54.80	91.0	40-130	
13C6 PFDA	60.2	48.5	50.15	83.3	40-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-74.d

Lab ID: 460-344895-1 MS Client ID: RXMW-6_P MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C7 PFUnA	60.2	50.9	48.04	79.8	30-130	
13C2 PFTeDA	60.2	40.1	45.43	75.5	10-130	
13C3 PFBS	56.1	42.5	43.50	77.5	40-135	
13C3 PFHxS	57.1	46.3	48.86	85.6	40-130	
13C8 PFOS	57.7	54.6	53.67	93.1	40-130	
13C8 FOSA	60.2	52.0	49.52	82.2	40-130	
d3-NMeFOSAA	151	143	137.6	91.4	40-170	
d5-NEtFOSAA	151	176	163.6	109	25-135	
13C2 4:2 FTS	141	172	165.0	117	40-200	
13C2 6:2 FTS	143	170	157.0	110	40-200	
13C2 8:2 FTS	144	123	116.6	80.7	40-300	
13C3 HFPO-DA	60.2	40.1	42.11	69.9	40-130	
d7-N-MeFOSE-M	151	107	111.6	74.2	10-130	
d9-N-EtFOSE-M	151	103	127.7	84.8	10-130	
d5-NEtPFOSA	60.2	42.5	44.66	74.2	10-130	
d3-NMePFOSA	60.2	42.3	43.32	72.0	10-130	
13C2 PFDoA	60.2	46.5	44.84	74.5	10-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-75.d

Lab ID: 460-344895-1 MSD Client ID: RXMW-6_P MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	60.6	62.07	94	1	30	70-140	
Perfluoropentanoic acid (PFPeA)	30.3	29.95	90	4	30	65-135	
Perfluorohexanoic acid (PFHxA)	30.3	35.51	110	4	30	70-145	
Perfluoroheptanoic acid (PFHpA)	30.3	32.72	101	6	30	70-150	
Perfluorooctanoic acid (PFOA)	30.3	41.56	97	2	30	70-150	
Perfluorononanoic acid (PFNA)	30.3	26.00	74	8	30	70-150	
Perfluorodecanoic acid (PFDA)	30.3	33.74	107	19	30	70-140	
Perfluoroundecanoic acid (PFUnA)	30.3	30.48	101	11	30	70-145	
Perfluorododecanoic acid (PFDoA)	30.3	30.73	101	5	30	70-140	
Perfluorotridecanoic acid (PFTrDA)	30.3	24.88	82	11	30	65-140	
Perfluorotetradecanoic acid (PFTeDA)	30.3	24.74	82	7	30	60-140	
Perfluorobutanesulfonic acid (PFBS)	26.9	25.03	87	3	30	60-145	
Perfluoropentanesulfonic acid (PFPeS)	28.5	21.45	75	18	30	65-140	
Perfluorohexanesulfonic acid (PFHxS)	27.7	23.42	81	10	30	65-145	
Perfluoroheptanesulfonic acid (PFHpS)	28.9	25.49	88	2	30	70-150	
Perfluorooctanesulfonic acid (PFOS)	28.2	39.37	90	0	30	55-150	
Perfluorononanesulfonic acid (PFNS)	29.2	25.42	87	6	30	65-145	
Perfluorodecanesulfonic acid (PFDS)	29.2	25.76	88	6	30	60-145	
Perfluorododecanesulfonic acid (PFDoS)	29.4	21.15	72	1	30	50-145	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	56.9	52.62	93	2	30	70-145	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	57.7	51.51	89	2	30	65-155	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	58.2	55.36	95	2	30	60-150	
Perfluorooctanesulfonamide (PFOSA)	30.3	26.43	87	0	30	70-145	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-75.d

Lab ID: 460-344895-1 MSD Client ID: RXMW-6_P MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
N-methylperfluorooctane sulfonamide (NMeFOSA)	30.3	28.57	94	2	30	60-150	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	30.3	27.48	91	0	30	65-145	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	30.3	24.72	82	6	30	50-140	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	30.3	26.34	87	4	30	70-145	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	152	132.8	88	5	30	70-145	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	152	131.7	87	4	30	70-135	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	22.7	21.10	93	3	30	70-140	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	28.7	27.21	95	9	30	65-145	
Perfluoro-3-methoxypropanoic acid (PFMPA)	30.3	28.26	93	5	30	55-140	
Perfluoro-4-methoxybutanoic acid (PFMBA)	30.3	26.37	87	7	30	60-150	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	30.3	29.35	97	11	30	50-150	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	28.3	24.26	86	2	30	70-155	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	28.6	24.41	85	6	30	55-160	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	27.0	24.01	89	2	30	70-140	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	60.6	55.15	91	1	30	65-130	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	152	156.9	104	3	30	70-135	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	152	182.3	120	26	30	50-145	
13C4 PFBA	60.6	36.50	60.2			5-130	
13C5 PFPeA	60.6	41.98	69.2			40-130	
13C5 PFHxA	60.6	42.86	70.7			40-130	
13C4 PFHpA	60.6	49.41	81.5			40-130	
13C8 PFOA	60.6	52.39	86.4			40-130	
13C9 PFNA	60.6	59.85	98.7			40-130	
13C6 PFDA	60.6	61.56	102			40-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM III
PFAS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 26FEB18JO-75.d

Lab ID: 460-344895-1 MSD Client ID: RXMW-6_P MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
13C7 PFUnA	60.6	63.29	104			30-130	
13C2 PFTeDA	60.6	60.86	100			10-130	
13C3 PFBS	56.5	37.67	66.6			40-135	
13C3 PFHxS	57.5	46.83	81.5			40-130	
13C8 PFOS	58.1	62.87	108			40-130	
13C8 FOSA	60.6	61.22	101			40-130	
d3-NMeFOSAA	152	173.2	114			40-170	
d5-NEtFOSAA	152	185.5	122			25-135	
13C2 4:2 FTS	142	158.3	111			40-200	
13C2 6:2 FTS	144	160.4	111			40-200	
13C2 8:2 FTS	146	159.5	110			40-300	
13C3 HFPO-DA	60.6	43.32	71.4			40-130	
d7-N-MeFOSE-M	152	130.8	86.3			10-130	
d9-N-EtFOSE-M	152	117.9	77.8			10-130	
d5-NEtPFOSA	60.6	56.27	92.8			10-130	
d3-NMePFOSA	60.6	57.06	94.1			10-130	
13C2 PFDoA	60.6	56.01	92.4			10-130	

Column to be used to flag recovery and RPD values

FORM III 1633A

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab File ID: 26FEB19QC-49.d Lab Sample ID: MB 410-770909/1-A

Matrix: Water Date Extracted: 02/18/2026 15:35

Instrument ID: 30637 Date Analyzed: 02/19/2026 20:16

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
RXMW-6_P	460-344895-1	26FEB18JO-73.d	02/19/2026 04:32
RXMW-6_P MS	460-344895-1 MS	26FEB18JO-74.d	02/19/2026 04:46
RXMW-6_P MSD	460-344895-1 MSD	26FEB18JO-75.d	02/19/2026 04:59
FB_02162026_P	460-344895-2	26FEB18JO-76.d	02/19/2026 05:13
	LCS 410-770909/2-A	26FEB19QC-50.d	02/19/2026 20:30
	LLCS 410-770909/3-A	26FEB19QC-51.d	02/19/2026 20:43

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Calibration Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/16/2026 21:57

Calibration ID: 81974

		13C3PFBA		PFHxA		PFOA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1531829	4.31	4515013	5.42	6329742	6.27
UPPER LIMIT		3063658	4.71	9030026	5.82	12659484	6.67
LOWER LIMIT		765915	3.91	2257507	5.02	3164871	5.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-769782/9		1520076	4.32	4684401	5.43	6143660	6.28
ICV 410-769782/10		1563437	4.32	4327576	5.43	5846369	6.28
CCVO 410-770716/1		1445382	4.30	4358447	5.41	5998217	6.25
CCV 410-770716/75		1650198	4.32	4792336	5.42	6620736	6.25
CCB 410-770716/76		1510300	4.32	4479404	5.42	6256907	6.27
460-344895-1	RXMW-6_P	1713915	4.33	5083939	5.44	6521806	6.27
460-344895-1 MS	RXMW-6_P MS	1733833	4.32	5413857	5.42	6879319	6.26
460-344895-1 MSD	RXMW-6_P MSD	1756601	4.34	4913040	5.45	6920997	6.28
460-344895-2	FB_02162026_P	1778317	4.34	4192790	5.46	6864362	6.30
CCV 410-770716/77		1580801	4.34	4048269	5.46	6502671	6.29
CCB 410-770716/78		1482725	4.33	4079101	5.44	5912330	6.28

13C3PFBA = 13C3-PFBA
PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Calibration Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/16/2026 21:57

Calibration ID: 81974

		PFHxS		PFNA		PFDA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1500256	6.51	1891749	6.69	2016193	7.10
UPPER LIMIT		3000512	6.91	3783498	7.09	4032386	7.50
LOWER LIMIT		750128	6.11	945875	6.29	1008097	6.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-769782/9		1493947	6.52	1862856	6.70	1892522	7.11
ICV 410-769782/10		1532773	6.52	1949113	6.69	2053002	7.11
CCVO 410-770716/1		1397012	6.49	1832537	6.66	1782772	7.08
CCV 410-770716/75		1594526	6.49	1996734	6.67	1963453	7.08
CCB 410-770716/76		1427007	6.50	1886364	6.67	1785475	7.10
460-344895-1	RXMW-6_P	1653524	6.51	2097437	6.69	2284638	7.09
460-344895-1 MS	RXMW-6_P MS	1692048	6.49	2220965	6.67	2377577	7.08
460-344895-1 MSD	RXMW-6_P MSD	1746735	6.52	2338766	6.70	2291494	7.11
460-344895-2	FB_02162026_P	1655620	6.54	2185911	6.72	2110007	7.12
CCV 410-770716/77		1363075	6.53	2010791	6.71	2058382	7.12
CCB 410-770716/78		1344426	6.53	1904633	6.71	1859252	7.11

PFHxS = 18O2 PFHxS
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Calibration Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/16/2026 21:57

Calibration ID: 81974

		PFOS					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1319165	7.37				
UPPER LIMIT		2638330	7.77				
LOWER LIMIT		659583	6.97				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-769782/9		1373559	7.38				
ICV 410-769782/10		1314652	7.38				
CCVO 410-770716/1		1142896	7.35				
CCV 410-770716/75		1302297	7.35				
CCB 410-770716/76		1168562	7.36				
460-344895-1	RXMW-6_P	1360026	7.36				
460-344895-1 MS	RXMW-6_P MS	1386150	7.34				
460-344895-1 MSD	RXMW-6_P MSD	1387268	7.37				
460-344895-2	FB_02162026_P	1339219	7.38				
CCV 410-770716/77		1243798	7.39				
CCB 410-770716/78		1160069	7.38				

PFOS = 13C4 PFOS

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Calibration Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/04/2026 14:06

Calibration ID: 81518

		13C3PFBA		PFHxA		PFOA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		2292267	4.06	5518734	5.19	6076551	6.02
UPPER LIMIT		4584534	4.46	11037468	5.59	12153102	6.42
LOWER LIMIT		1146134	3.66	2759367	4.79	3038276	5.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-764556/9		2398955	4.07	5187753	5.19	5900372	6.03
ICV 410-764556/10		2338878	4.05	5617518	5.19	6124620	6.01
CCVO 410-771230/1		2320158	4.09	5480574	5.21	5858419	6.02
CCV 410-771230/44		2341714	4.09	5751960	5.21	5811383	6.02
CCB 410-771230/42		2290163	4.07	5538869	5.19	5772764	6.01
MB 410-770909/1-A		2094317	4.07	4938819	5.18	5022057	6.00
LCS 410-770909/2-A		2128250	4.06	5331584	5.18	5177605	5.99
LLCS 410-770909/3-A		2133956	4.05	5035339	5.17	5133260	5.99
CCV 410-771230/45		2235673	4.07	5433276	5.19	5481343	6.01
CCB 410-771230/43		2251645	4.07	5434638	5.19	5777854	6.01

13C3PFBA = 13C3-PFBA
PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Calibration Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/04/2026 14:06

Calibration ID: 81518

		PFHxS		PFNA		PFDA	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1828072	6.24	3364722	6.42	3149578	6.81
UPPER LIMIT		3656144	6.64	6729444	6.82	6299156	7.21
LOWER LIMIT		914036	5.84	1682361	6.02	1574789	6.41
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-764556/9		1831574	6.25	3426725	6.42	3175523	6.82
ICV 410-764556/10		1782663	6.23	3440248	6.40	3153924	6.80
CCVO 410-771230/1		1714828	6.23	3401009	6.41	3087393	6.80
CCV 410-771230/44		1636987	6.23	3381505	6.41	3183611	6.79
CCB 410-771230/42		1714043	6.22	3530605	6.39	3189785	6.78
MB 410-770909/1-A		1499673	6.21	2953954	6.39	2764974	6.77
LCS 410-770909/2-A		1522404	6.21	3057647	6.38	2730393	6.77
LLCS 410-770909/3-A		1490827	6.19	3183682	6.37	2948979	6.75
CCV 410-771230/45		1581773	6.21	3297650	6.39	3054199	6.78
CCB 410-771230/43		1707070	6.22	3626872	6.39	3089354	6.78

PFHxS = 18O2 PFHxS
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Calibration Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 02/04/2026 14:06

Calibration ID: 81518

		PFOS					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1488102	7.07				
UPPER LIMIT		2976204	7.47				
LOWER LIMIT		744051	6.67				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-764556/9		1492595	7.08				
ICV 410-764556/10		1477153	7.06				
CCVO 410-771230/1		1381238	7.05				
CCV 410-771230/44		1345034	7.04				
CCB 410-771230/42		1182023	7.03				
MB 410-770909/1-A		1162939	7.01				
LCS 410-770909/2-A		1182366	7.01				
LLCS 410-770909/3-A		1229842	6.99				
CCV 410-771230/45		1346580	7.03				
CCB 410-771230/43		1144427	7.03				

PFOS = 13C4 PFOS

Area Limit = 50%-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 Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Matrix: Water
Lab File ID: 26FEB18JO-73.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 168.6(mL)
Date Analyzed: 02/19/2026 04:32

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	5.06		2.97	0.82
2706-90-3	Perfluoropentanoic acid (PFPeA)	2.61		1.48	0.44
307-24-4	Perfluorohexanoic acid (PFHxA)	2.12		1.48	0.37
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.95		1.48	0.59
335-67-1	Perfluorooctanoic acid (PFOA)	12.0		1.48	0.67
375-95-1	Perfluorononanoic acid (PFNA)	3.49	I	1.48	0.37
335-76-2	Perfluorodecanoic acid (PFDA)	1.27	J	1.48	0.37
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.48	U	1.48	0.37
307-55-1	Perfluorododecanoic acid (PFDoA)	1.48	U	1.48	0.37
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.48	U	1.48	0.37
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.48	U	1.48	0.37
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.59		1.48	0.37
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.48	U	1.48	0.37
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.93	J	1.48	0.59
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	1.48	U	1.48	0.37
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	14.1		1.48	0.96
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.48	U	1.48	0.37
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.48	U	1.48	0.37
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.48	U	1.48	0.44
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.97	U	2.97	0.74
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.97	U	2.97	0.74
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.97	U	2.97	0.74
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.48	U	1.48	0.37
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.48	U	1.48	0.37
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.48	U	1.48	0.82

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Matrix: Water
Lab File ID: 26FEB18JO-73.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 168.6(mL)
Date Analyzed: 02/19/2026 04:32

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.48	U	1.48	0.37
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.48	U	1.48	0.37
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	7.41	U	7.41	2.97
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	7.41	U	7.41	2.97
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.48	U	1.48	1.04
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.48	U	1.48	0.37
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	1.48	U	1.48	0.37
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	1.48	U	1.48	0.37
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.48	U	1.48	0.37
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	1.48	U	1.48	0.37
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	1.48	U	1.48	0.37
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.48	U	1.48	0.37
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	2.97	U *	2.97	0.74
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.41	U	7.41	2.08
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	7.41	U	7.41	1.85

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P
Lab Sample ID: 460-344895-1

Matrix: Water
Lab File ID: 26FEB18JO-73.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 168.6(mL)
Date Analyzed: 02/19/2026 04:32

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	61.9		5-130
2283397-79-3	13C5 PFPeA	65.6		40-130
2328024-54-8	13C5 PFHxA	75.6		40-130
2328024-55-9	13C4 PFHpA	76.5		40-130
1350614-84-4	13C8 PFOA	88.5		40-130
2283397-80-6	13C9 PFNA	97.1		40-130
2328024-56-0	13C6 PFDA	81.8		40-130
STL02580	13C7 PFUnA	85.8		30-130
STL02116	13C2 PFTeDA	67.6		10-130
2708218-83-9	13C3 PFBS	76.9		40-135
2708218-85-1	13C3 PFHxS	82.4		40-130
2265893-05-6	13C8 PFOS	96.0		40-130
STL01056	13C8 FOSA	87.7		40-130
1400690-70-1	d3-NMeFOSAA	96.7		40-170
1265205-97-7	d5-NEtFOSAA	119		25-135
STL02395	13C2 4:2 FTS	123		40-200
STL02279	13C2 6:2 FTS	120		40-200
STL02280	13C2 8:2 FTS	86.7		40-300
STL02255	13C3 HFPO-DA	67.6		40-130
STL02277	d7-N-MeFOSE-M	72.1		10-130
STL02278	d9-N-EtFOSE-M	69.2		10-130
STL02704	d5-NEtPFOSA	71.7		10-130
STL02705	d3-NMePFOSA	71.3		10-130
960315-52-0	13C2 PFDoA	78.4		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-73.d
Lims ID: 460-344895-A-1-B
Client ID: RXMW-6_P
Sample Type: Client
Inject. Date: 19-Feb-2026 04:32:39 ALS Bottle#: 37 Worklist Smp#: 69
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: 460-344895-A-1-B
Misc. Info.: Plate: 1 Rack: 1 410-0176047-069
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:30:48 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:27:25
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.133	2.133	0.0	1.004	132999	0.4185			263	
D 1 13C3PFPrA										
166.00 > 121.00	2.125	2.133	-0.008	0.490	694900	1.17		58.5	793	
3 PFBA										
212.80 > 168.90	4.325	4.302	0.023	0.998	81607	0.1708			808	
D 4 13C4-PFBA										
216.80 > 171.90	4.332	4.309	0.023	1.000	1043482	1.24		61.9	9109	
* 5 13C3PFBA										
216.00 > 172.00	4.332	4.309	0.023		1713915	2.00			3372	
D 8 13C5 PFPeA										
268.30 > 223.00	4.975	4.959	0.016	0.915	1184088	1.31		65.6	3432	
9 PFPA										
263.00 > 219.00	4.975	4.959	0.016	1.000	59926	0.0881			18.6	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.249	5.235	0.014	0.807	1362313	5.79		123	329	
* 16 13C2 PFHxA										
315.10 > 270.00	5.438	5.424	0.014		5083939	5.00			8587	
D 15 13C5 PFHxA										
318.00 > 273.00	5.438	5.424	0.014	1.000	1674133	1.51		75.6	3753	
17 PFHxA										
313.00 > 269.00	5.438	5.424	0.014	1.000	44622	0.0715	Target=9.36		21.2	
313.00 > 118.90	5.428	5.424	0.004	0.998	4096		10.89(4.68-14.05)		18.5	
D 19 13C3 PFBS										
302.10 > 79.90	5.576	5.561	0.015	0.857	1610924	1.43		76.9	1239	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
20 PFBS										
298.70 > 79.90	5.576	5.561	0.015	1.000	41318	0.0535	Target=3.13		41.1	
298.70 > 98.80	5.576	5.561	0.015	1.000	13967		2.96(1.56-4.69)		88.4	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.623	5.607	0.016	1.034	975038	1.35		67.6	2638	
D 28 13C4 PFHpA										
367.10 > 322.00	5.856	5.851	0.005	1.077	1657515	1.53		76.5	5672	
27 PFHpA										
363.10 > 319.00	5.856	5.851	0.005	1.000	38252	0.0658	Target=1.51		19.6	
363.10 > 169.00	5.856	5.851	0.005	1.000	17032		2.25(0.75-2.26)		71.9	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.063	6.059	0.004	0.932	1123027	5.73		120	2457	
* 34 13C4 PFOA										
417.10 > 372.00	6.273	6.269	0.004		6521806	5.00			4182	
D 35 13C8 PFOA										
421.10 > 376.00	6.273	6.269	0.004	1.000	2213058	1.77		88.5	2776	
36 PFOA										
413.00 > 369.00	6.273	6.269	0.004	1.000	236736	0.4063	Target=1.59		130	
413.00 > 169.00	6.273	6.269	0.004	1.000	110801		2.14(0.80-2.39)		198	
D 38 13C3 PFHxS										
402.10 > 79.90	6.506	6.512	-0.006	1.000	1487562	1.56		82.4	3846	
* 39 18O2 PFHxS										
403.00 > 83.90	6.506	6.512	-0.006		1653524	1.90			4137	
40 PFHxS										
398.70 > 79.90	6.517	6.512	0.005	1.002	18644	0.0313	Target=3.08		31.0	
398.70 > 98.90	6.517	6.512	0.005	1.002	5844		3.19(1.54-4.62)		10.6	
* 42 13C5 PFNA										
468.00 > 423.00	6.689	6.684	0.005		2097437	2.00			6311	
D 41 13C9 PFNA										
472.10 > 427.00	6.689	6.684	0.005	1.000	2036874	1.94		97.1	3782	
43 PFNA										R
463.00 > 419.00	6.679	6.694	-0.015	0.999	109113	0.1178	Target=1.95		151	R
463.00 > 219.00	6.689	6.694	-0.005	1.000	36578		2.98(0.97-2.92)		55.6	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.865	6.868	-0.003	1.055	839425	4.16		86.7	2046	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.031	7.037	-0.006	0.956	1642224	4.84		96.7	1594	
D 52 13C6 PFDA										
519.10 > 474.10	7.091	7.107	-0.015	1.000	1858633	1.64		81.8	3008	
53 PFDA										
512.90 > 469.00	7.100	7.107	-0.006	1.001	22072	0.0427	Target=2.75		61.4	
512.90 > 219.00	7.100	7.107	-0.006	1.001	6793		3.25(1.37-4.12)		34.1	
* 51 13C2 PFDA										
515.10 > 470.10	7.091	7.107	-0.015		2284638	2.00			3998	
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.223	7.219	0.004	0.982	1842575	5.93		119	2616	

Report Date: 19-Feb-2026 12:32:38 Chrom Revision: 2.3 16-Feb-2026 12:47:50
Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-73.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
* 57 13C4 PFOS										
502.80 > 79.90	7.356	7.373	-0.017		1360026	1.92			4604	
D 56 13C8 PFOS										
507.10 > 79.90	7.356	7.373	-0.017	1.000	1451443	1.84		96.0	3408	
58 PFOS										
498.90 > 79.90	7.367	7.373	-0.006	1.001	496997	0.4758	Target=4.39		717	
498.90 > 98.80	7.356	7.373	-0.017	1.000	104390		4.76(2.19-6.58)		240	
D 59 13C7 PFUnA										
570.00 > 525.10	7.502	7.506	-0.004	1.058	2036830	1.72		85.8	3892	
D 81 PFDoA										
615.10 > 570.00	7.907	7.935	-0.028	1.115	1862008	1.57		78.4	4141	
D 65 13C8 FOSA										
506.10 > 77.80	8.177	8.155	0.022	1.112	1477251	1.75		87.7	9483	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.687	8.722	-0.035	1.225	1474686	1.35		67.6	3534	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.975	8.945	0.030	1.220	201046	3.60		72.1	458	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.071	9.057	0.014	1.233	348899	1.43		71.3	3674	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.190	9.176	0.014	1.249	220170	3.46		69.2	549	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.266	9.252	0.014	1.260	427933	1.43		71.7	1986	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 12:32:39 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-73.d

Injection Date: 19-Feb-2026 04:32:39 Instrument ID: 30577

Lims ID: 460-344895-A-1-B Lab Sample ID: 410-344895-1

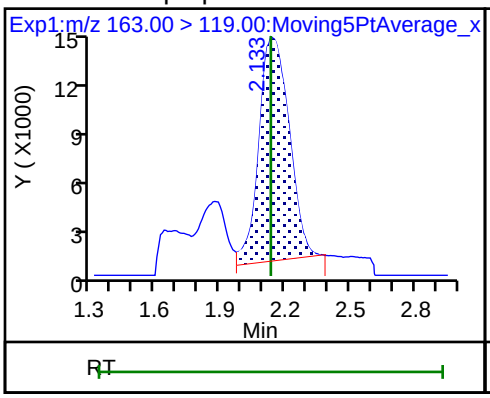
Client ID: RXMW-6_P

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 37 Worklist Smp#: 69

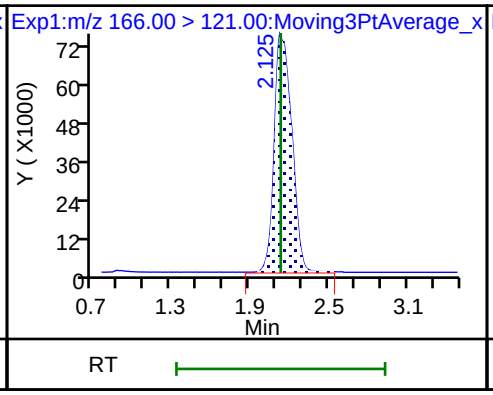
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

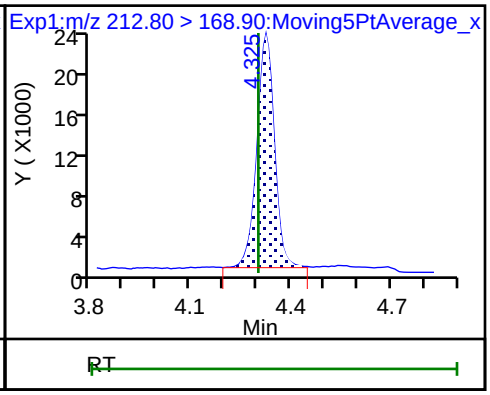
2 Perfluoropropionic acid



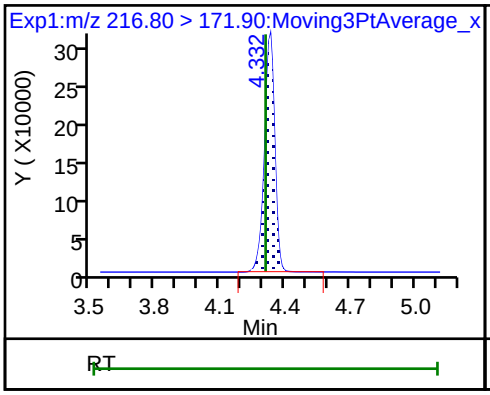
D 1 13C3PFPrA



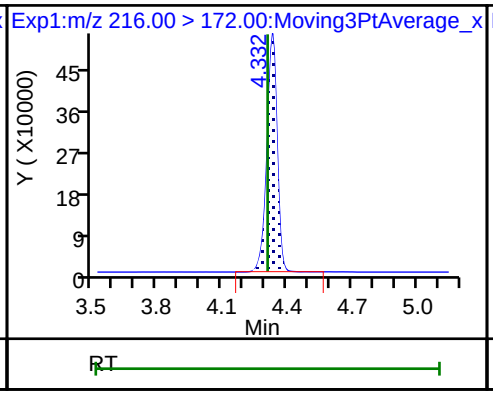
3 PFBA



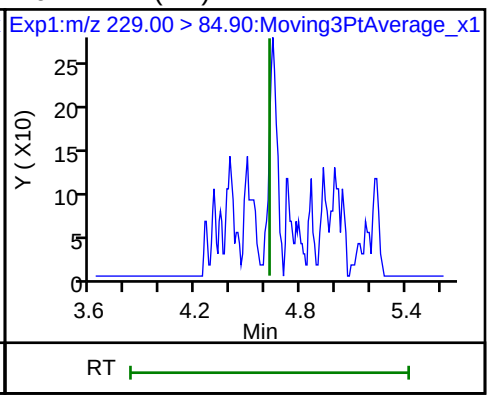
D 4 13C4-PFBA



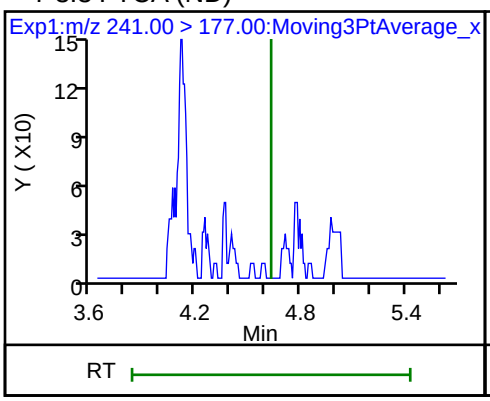
* 5 13C3PFBA



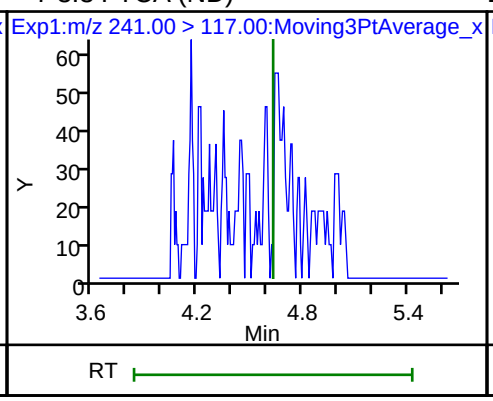
6 PFMPA (ND)



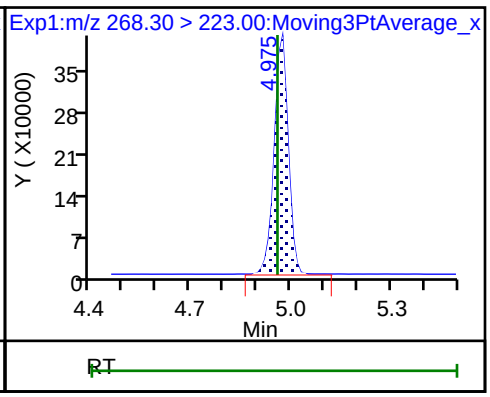
7 3:3 FTCA (ND)



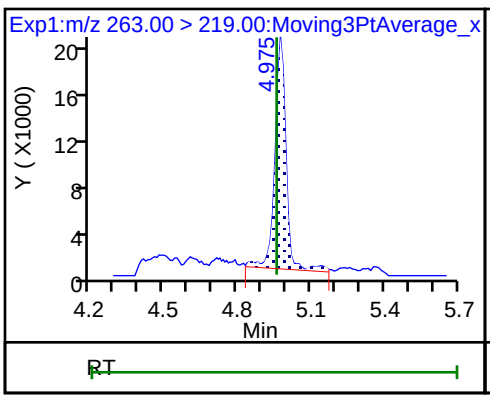
7 3:3 FTCA (ND)



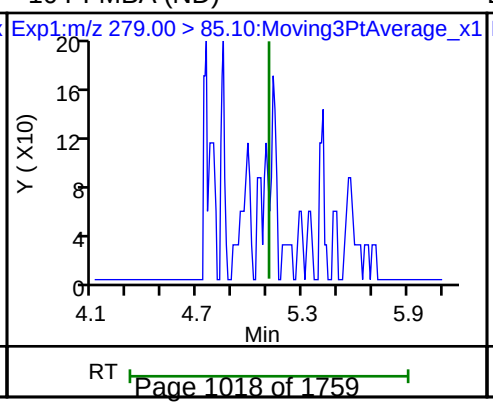
D 8 13C5 PFPeA



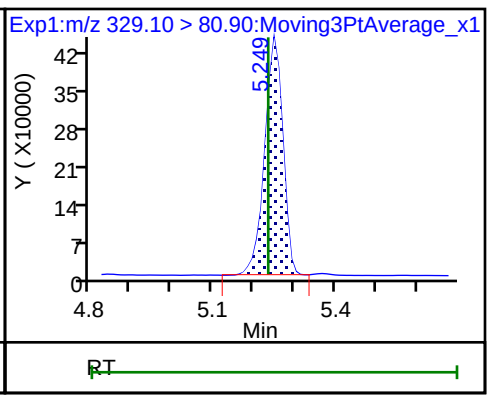
9 PFPA



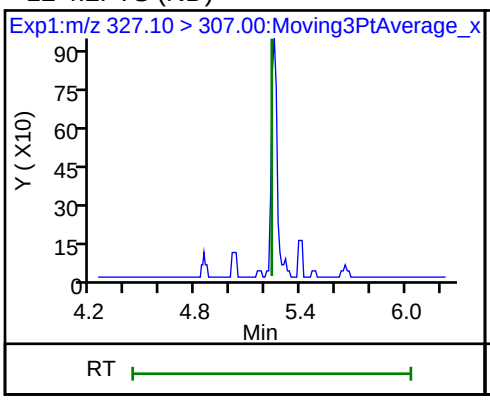
10 PFMBA (ND)



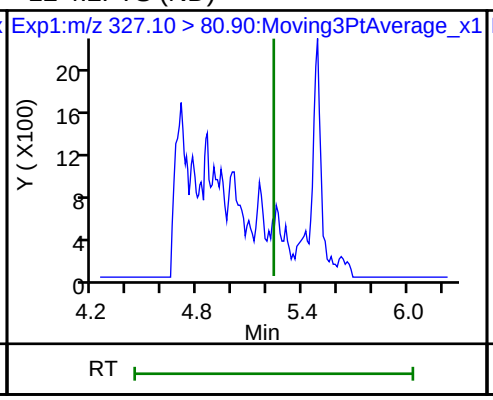
D 11 13C2-4:2FTS



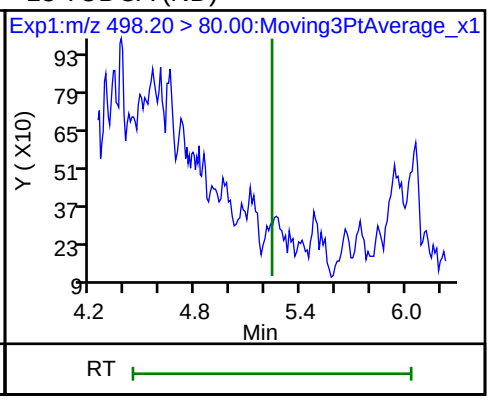
12 4:2FTS (ND)



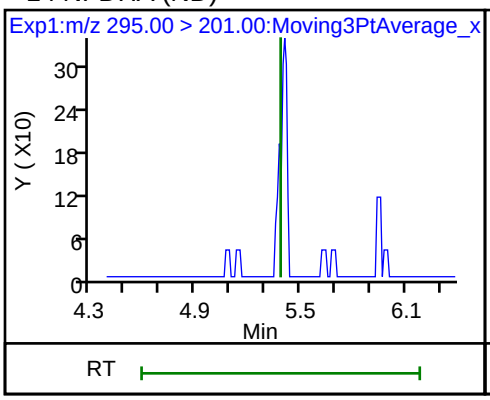
12 4:2FTS (ND)



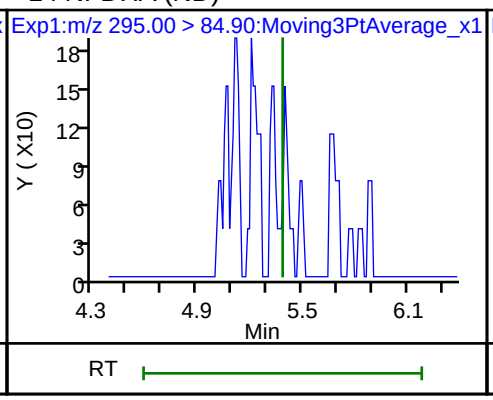
13 TUDCA (ND)



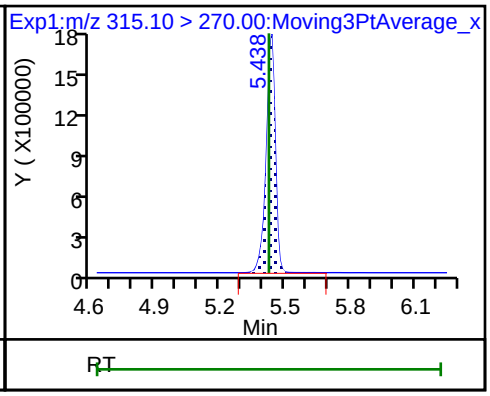
14 NFDHA (ND)



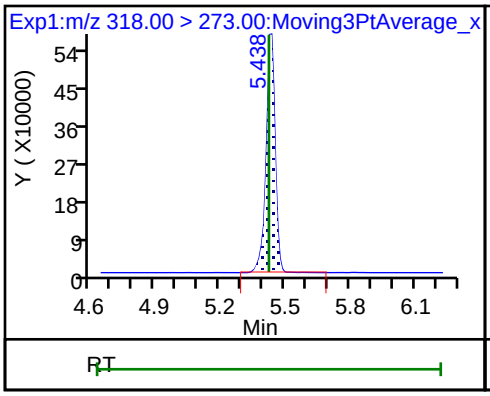
14 NFDHA (ND)



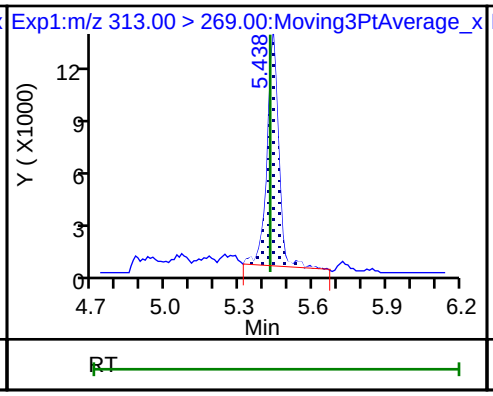
* 16 13C2 PFHxA



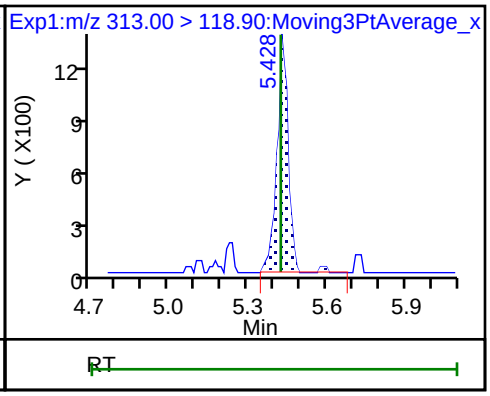
D 15 13C5 PFHxA



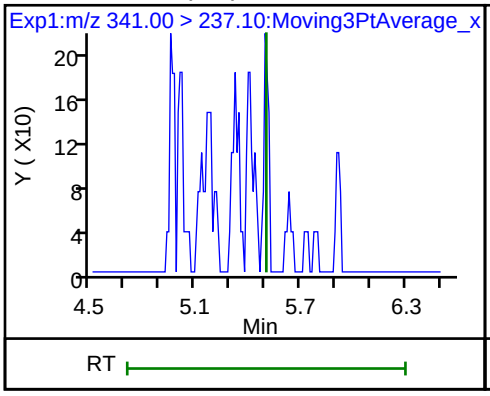
17 PFHxA



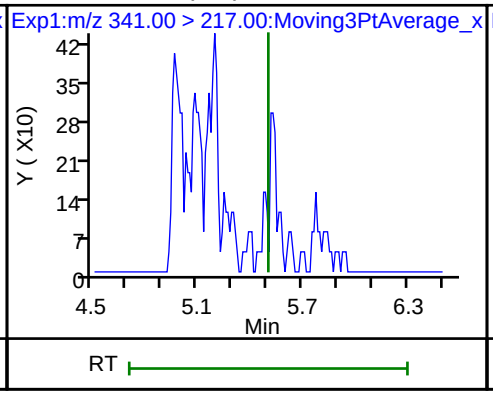
17 PFHxA



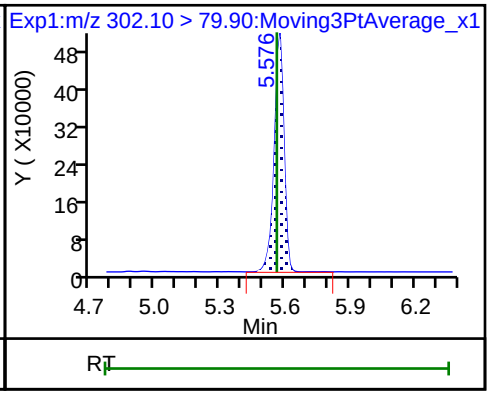
18 5:3 FTCA (ND)



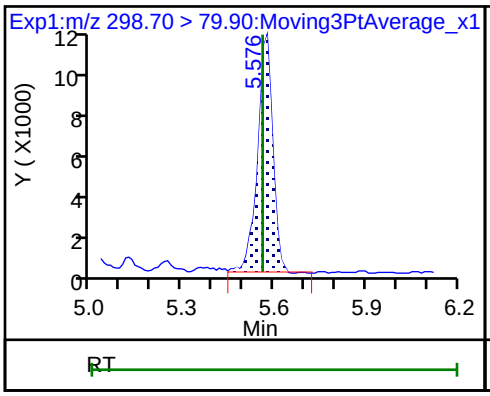
18 5:3 FTCA (ND)



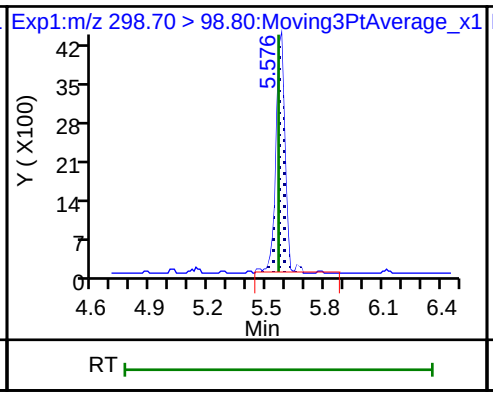
D 19 13C3 PFBS



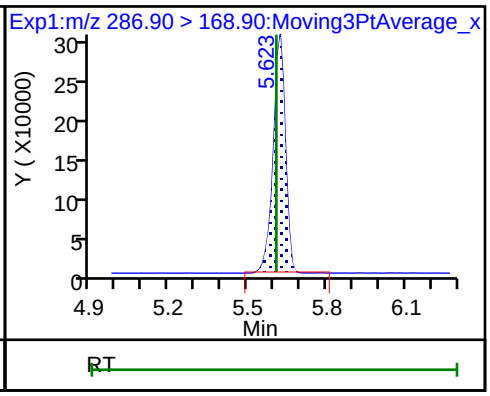
20 PFBS



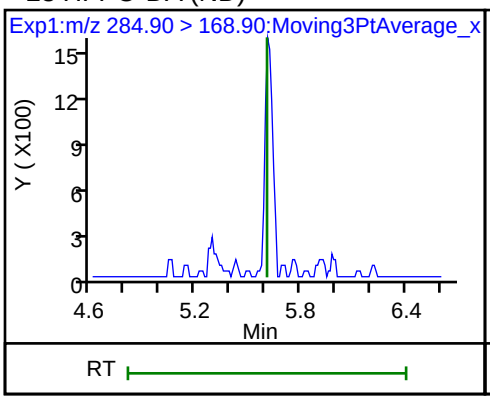
20 PFBS



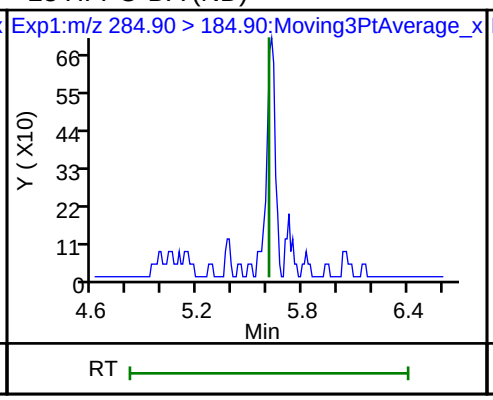
D 22 13C3 HFPO-DA



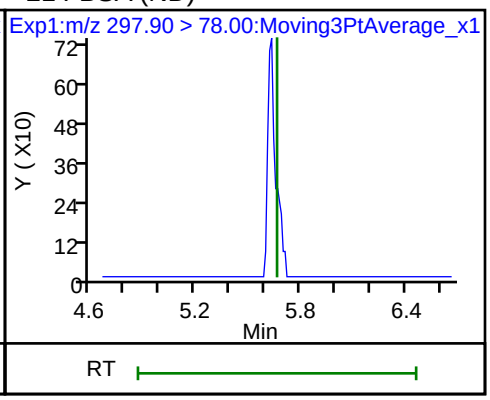
23 HFPO-DA (ND)



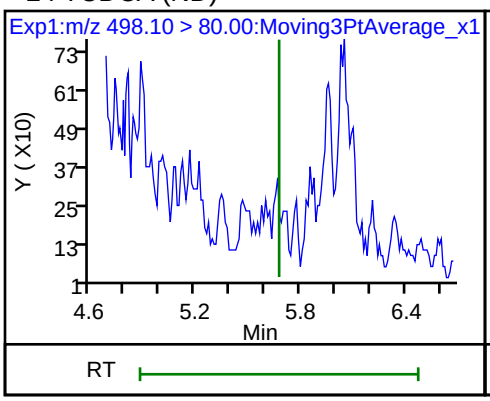
23 HFPO-DA (ND)



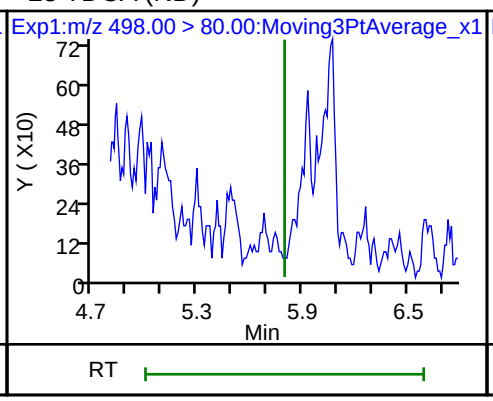
21 FBSA (ND)



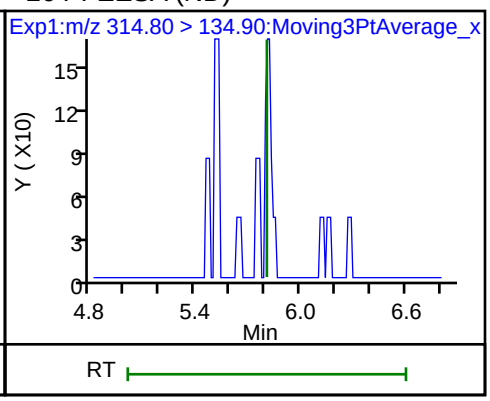
24 TCDCA (ND)



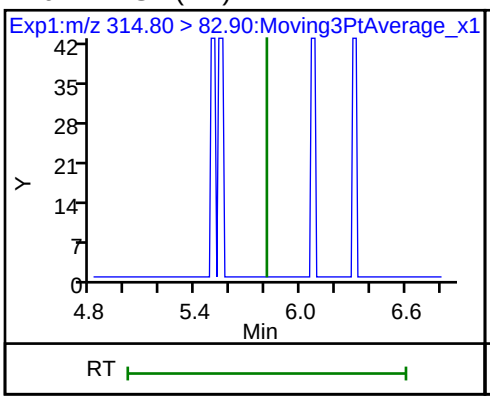
25 TDCA (ND)



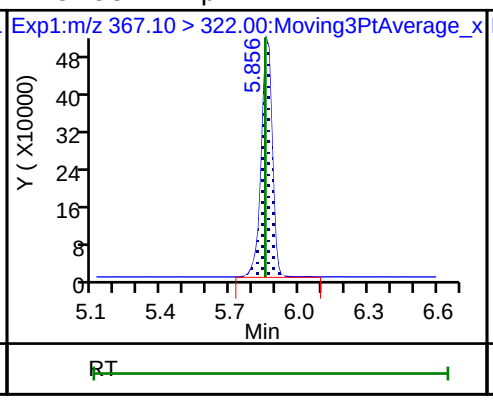
26 PFEESA (ND)



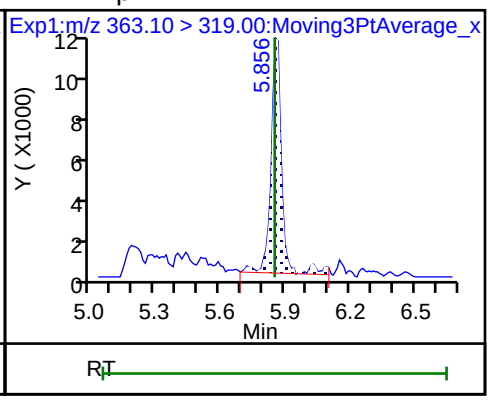
26 PFEESA (ND)



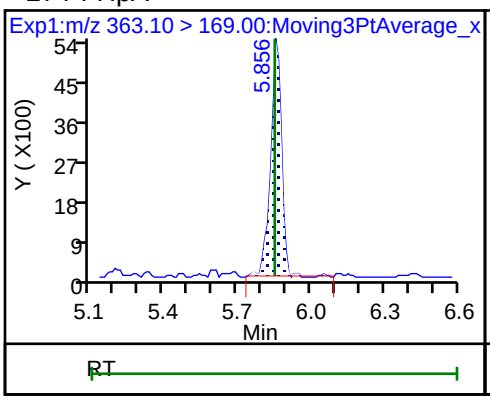
D 28 13C4 PFHpA



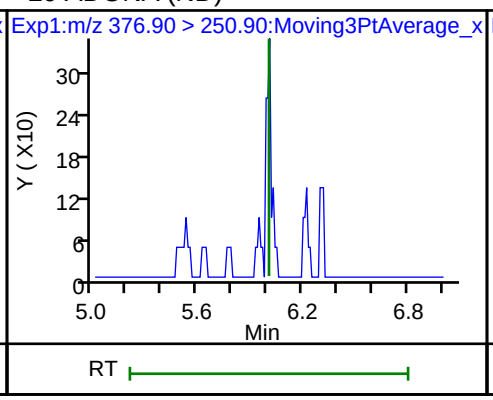
27 PFHpA



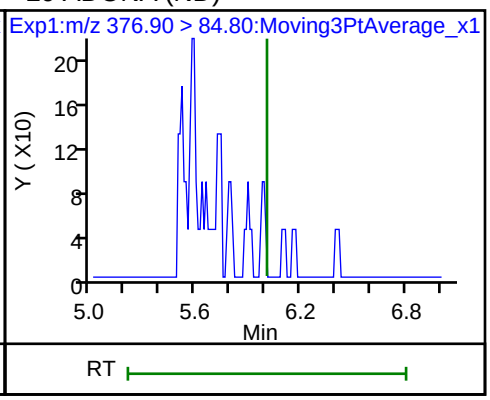
27 PFHpA



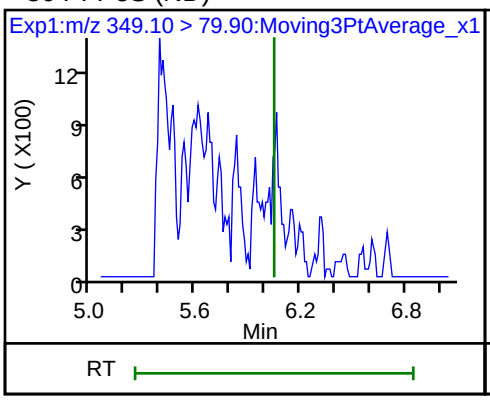
29 ADONA (ND)



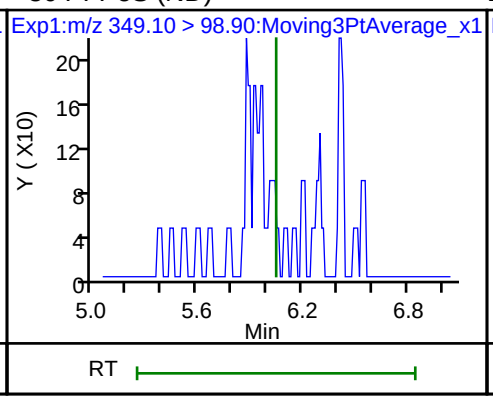
29 ADONA (ND)



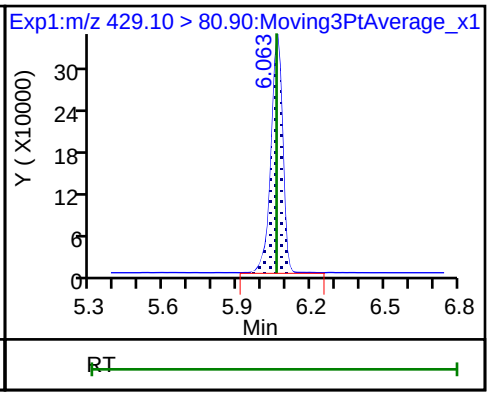
30 PFPeS (ND)



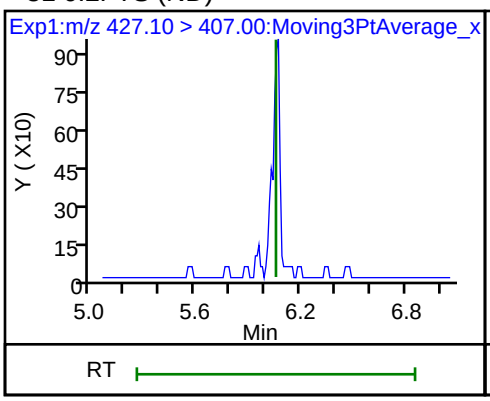
30 PFPeS (ND)



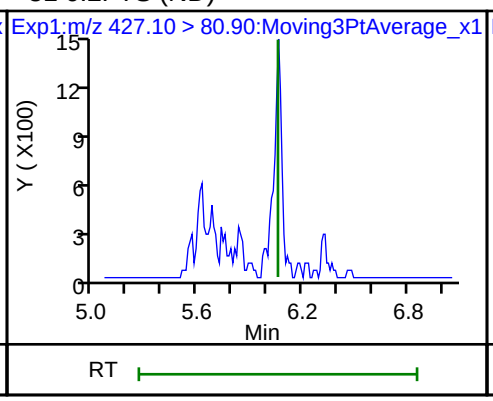
D 32 13C2-6:2FTS



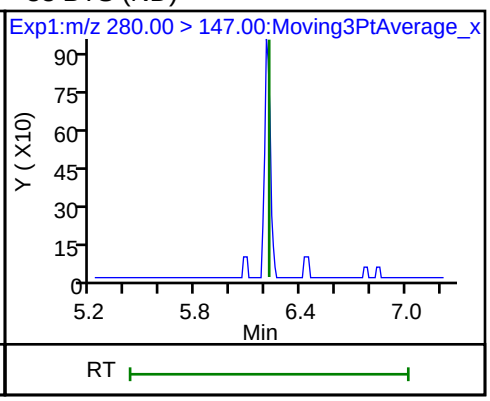
31 6:2FTS (ND)



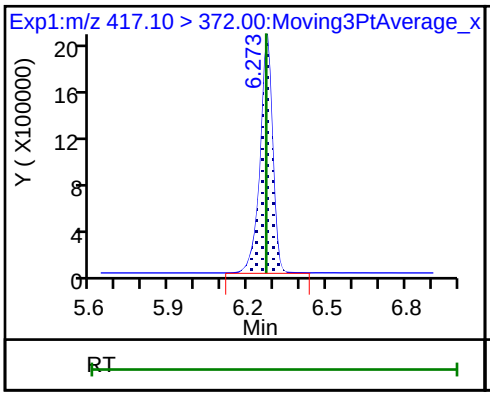
31 6:2FTS (ND)



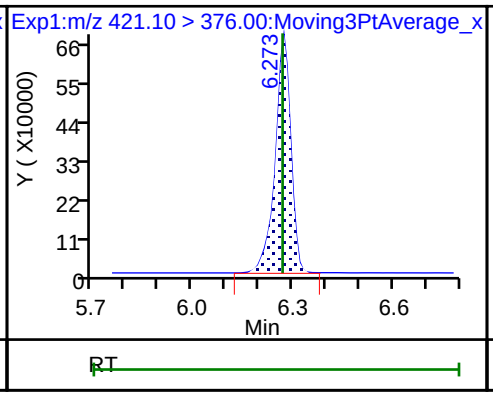
33 BTS (ND)



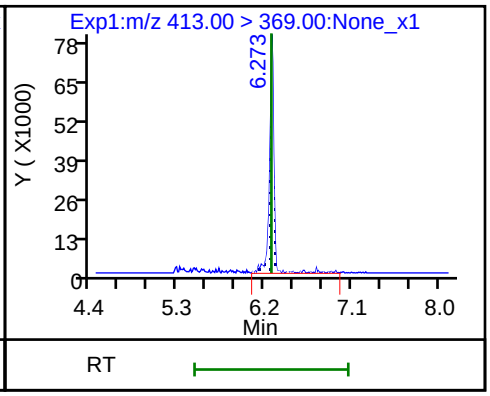
* 34 13C4 PFOA



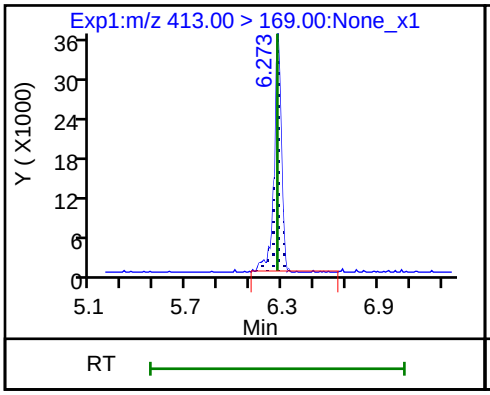
D 35 13C8 PFOA



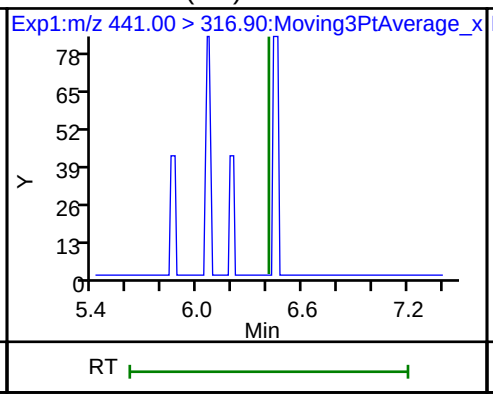
36 PFOA



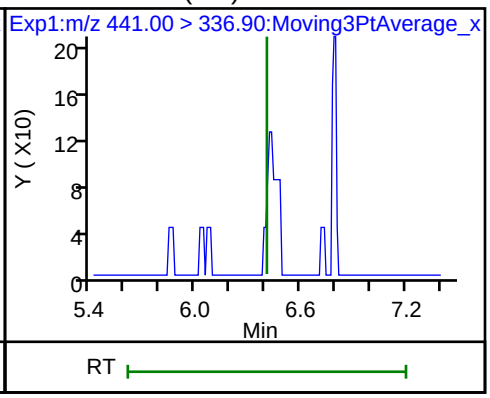
36 PFOA



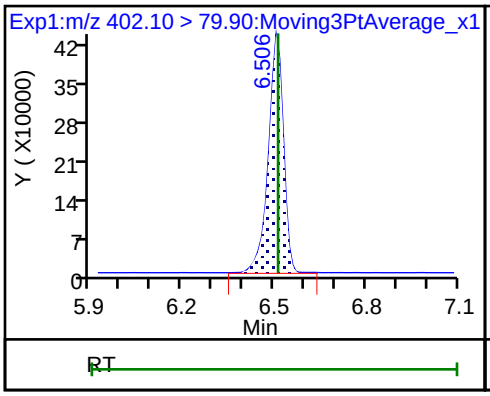
37 7:3 FTCA (ND)



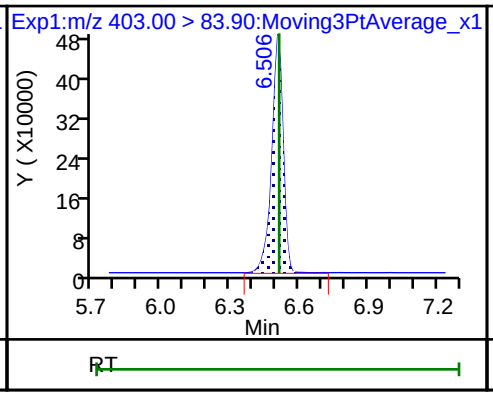
37 7:3 FTCA (ND)



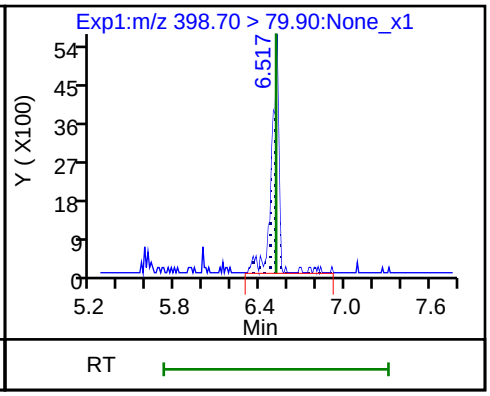
D 38 13C3 PFHxS



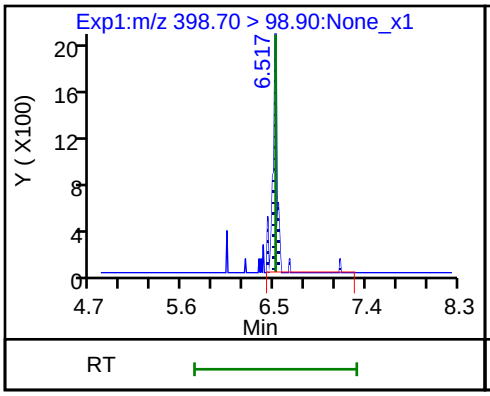
* 39 18O2 PFHxS



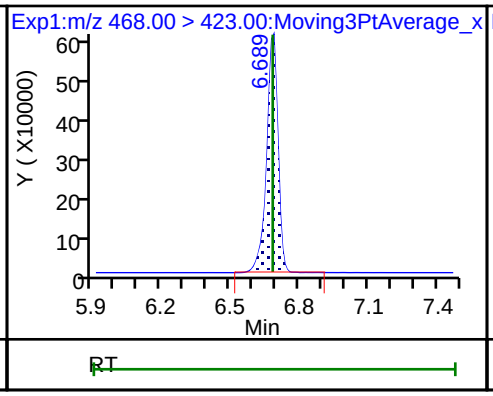
40 PFHxS



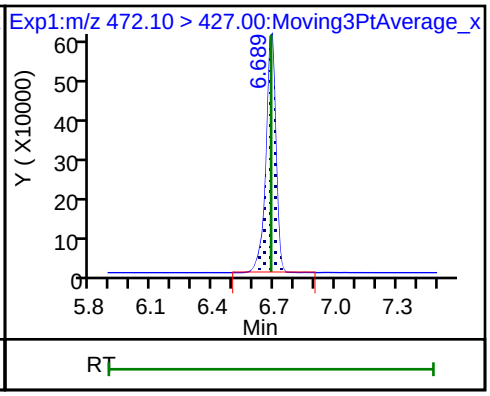
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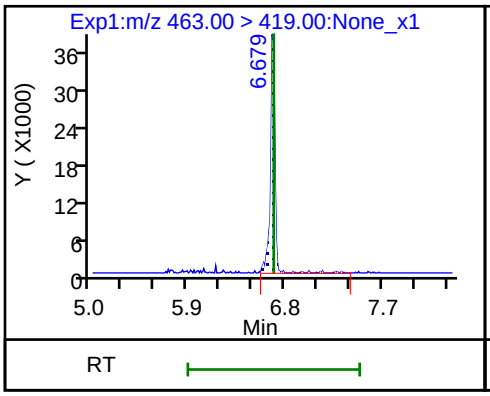
* 42 13C5 PFNA



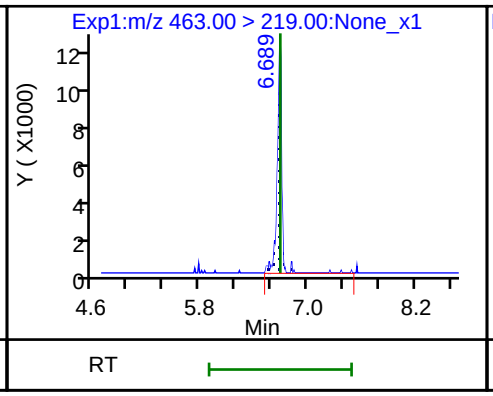
D 41 13C9 PFNA



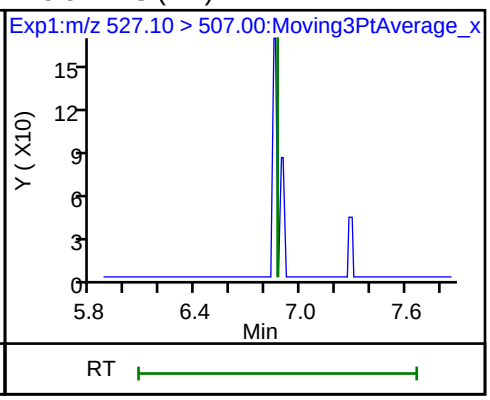
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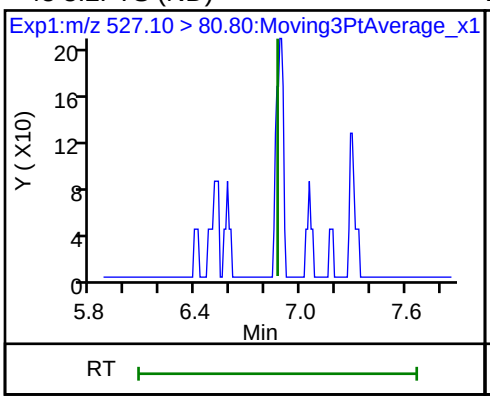
43 PFNA



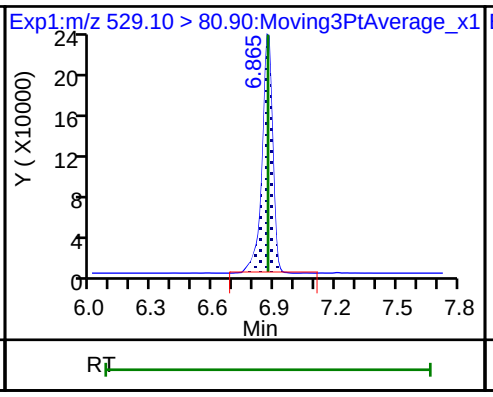
45 8:2FTS (ND)



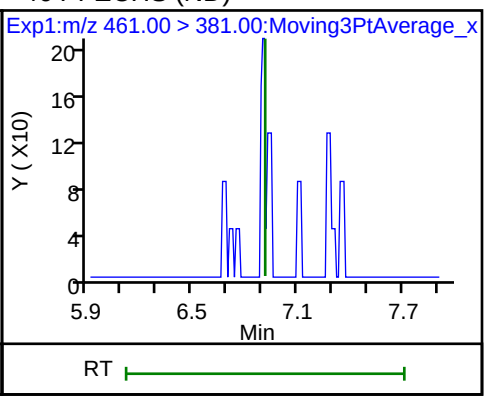
45 8:2FTS (ND)



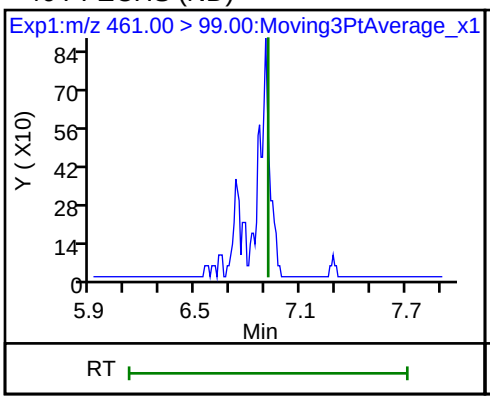
D 44 13C2-8:2FTS



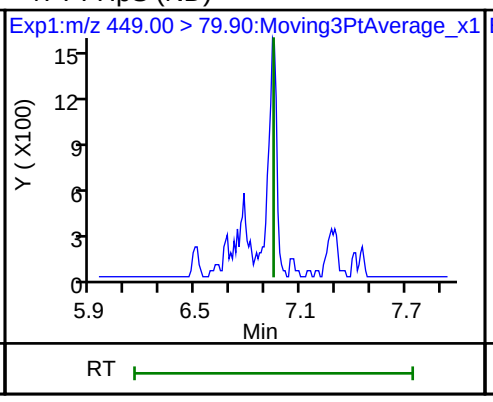
46 PFECHS (ND)



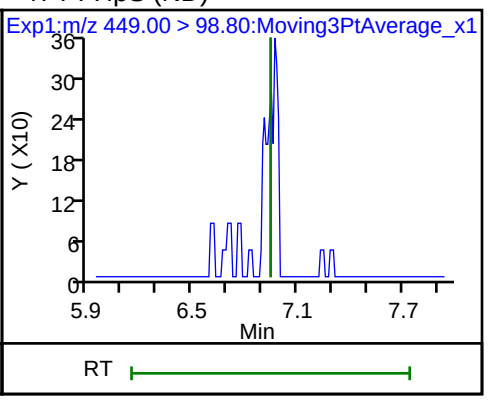
46 PFECHS (ND)



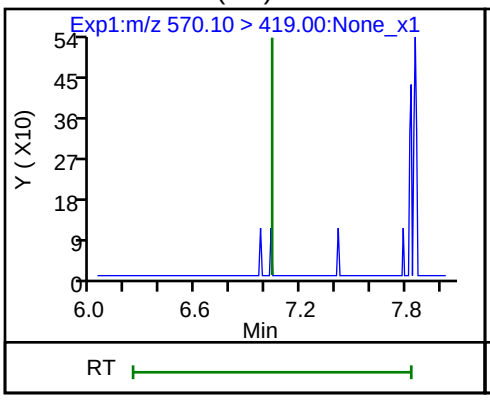
47 PFHpS (ND)



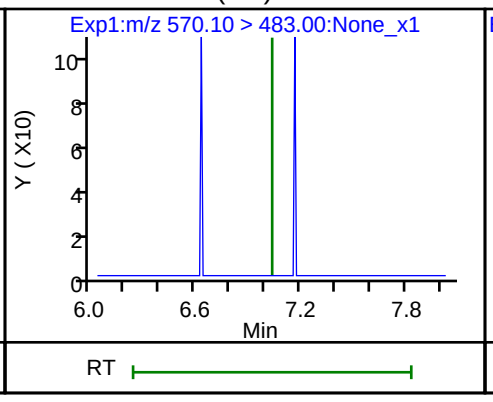
47 PFHpS (ND)



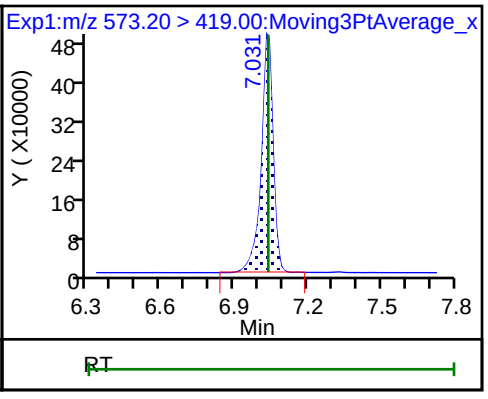
50 NMeFOSAA (ND)



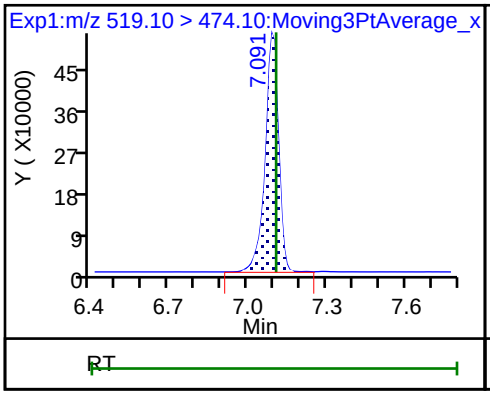
50 NMeFOSAA (ND)



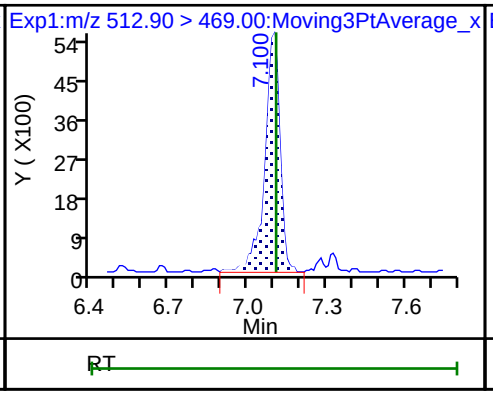
D 49 d3-NMeFOSAA



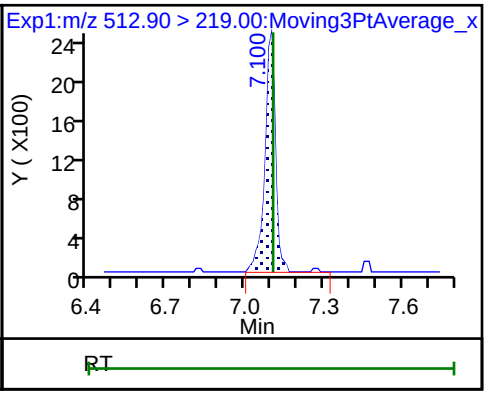
D 52 13C6 PFDA



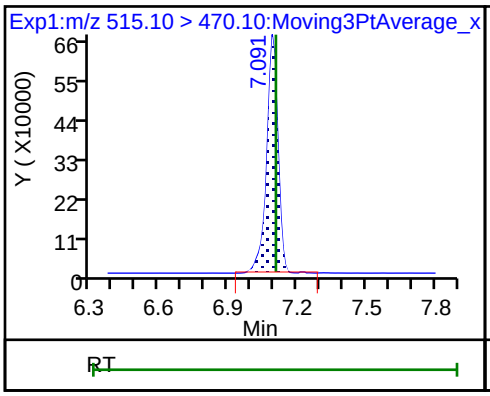
53 PFDA



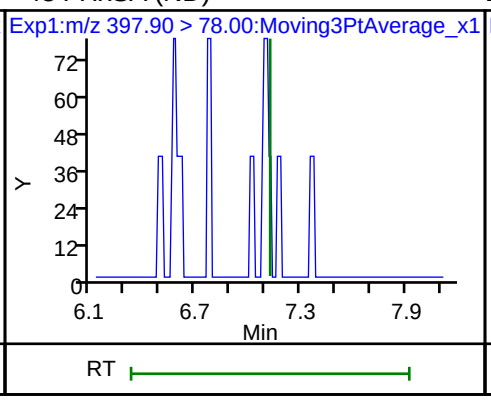
53 PFDA



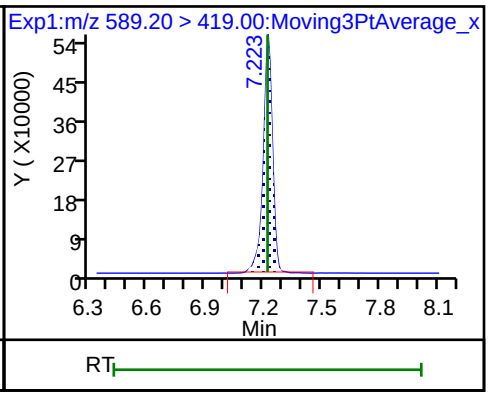
* 51 13C2 PFDA



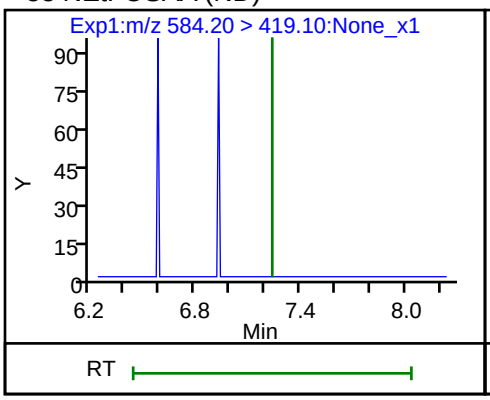
48 FHxSA (ND)



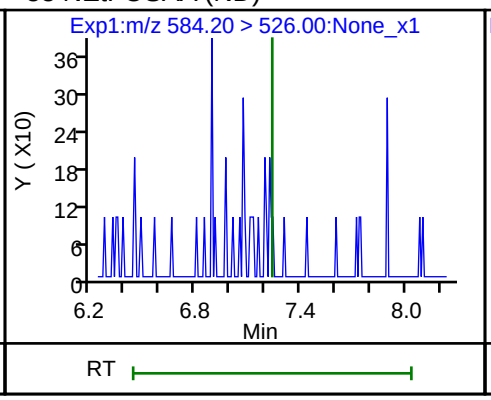
D 54 d5-NEtFOSAA



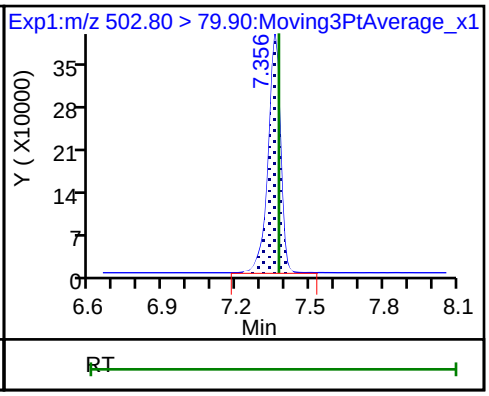
55 NEtFOSAA (ND)



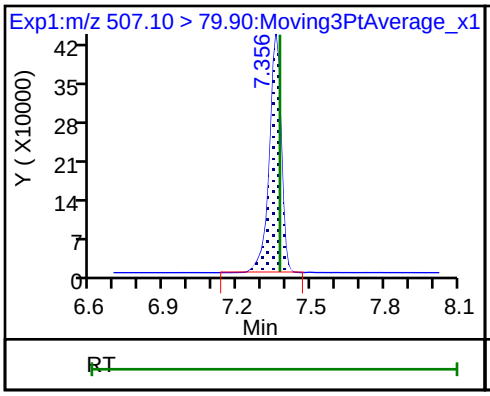
55 NEtFOSAA (ND)



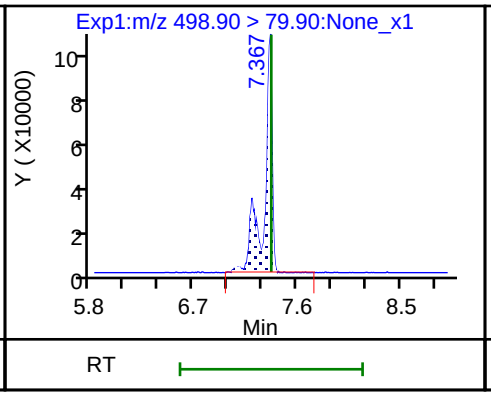
* 57 13C4 PFOS



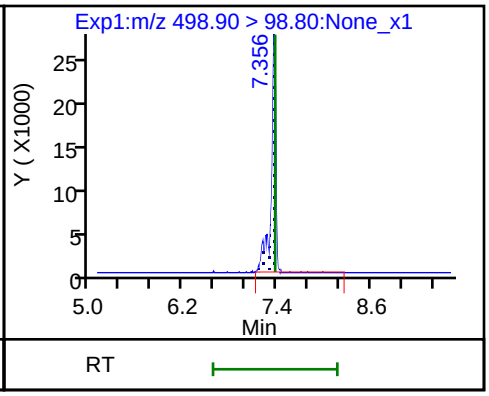
D 56 13C8 PFOS



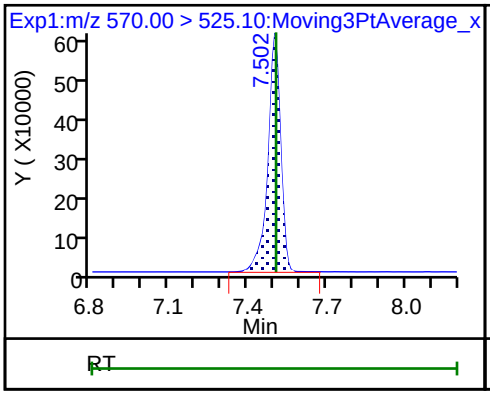
58 PFOS



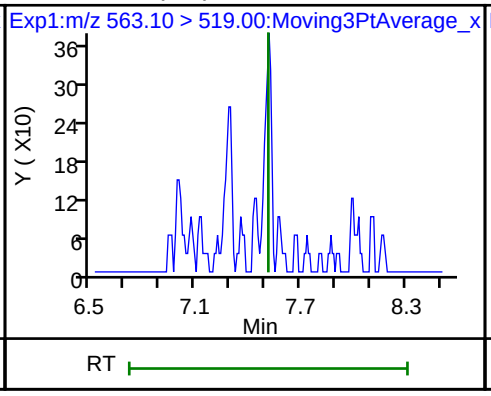
58 PFOS



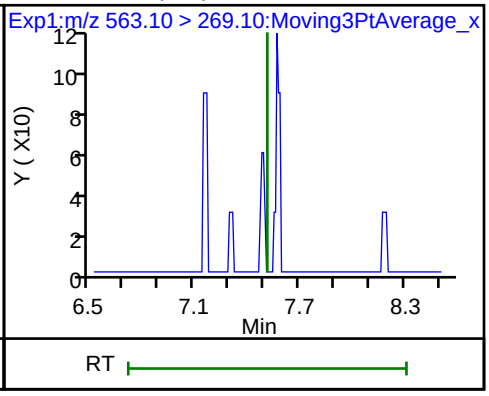
D 59 13C7 PFUnA



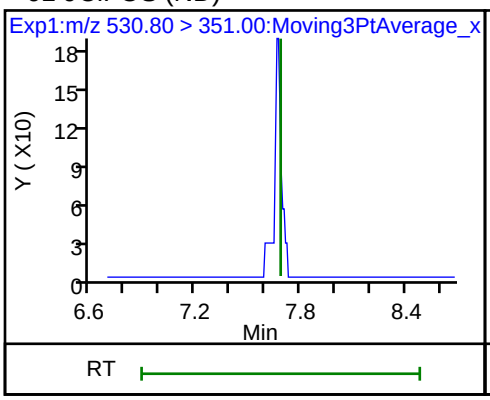
60 PFUnA (ND)



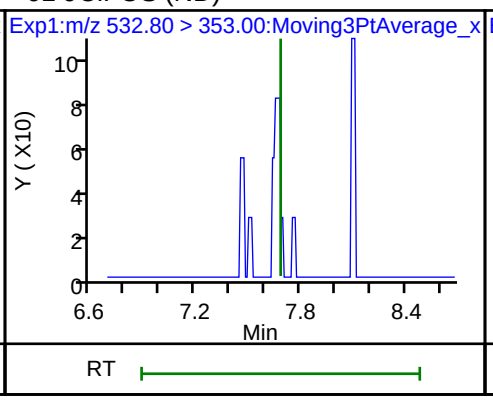
60 PFUnA (ND)



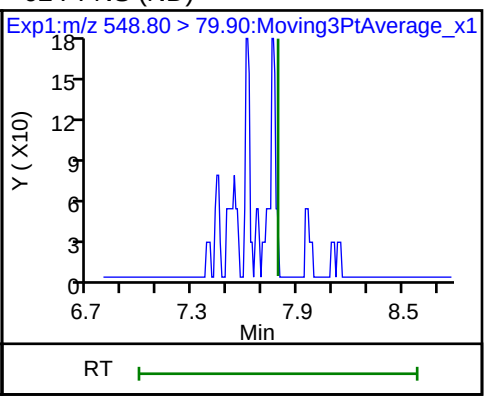
61 9ClFOS (ND)



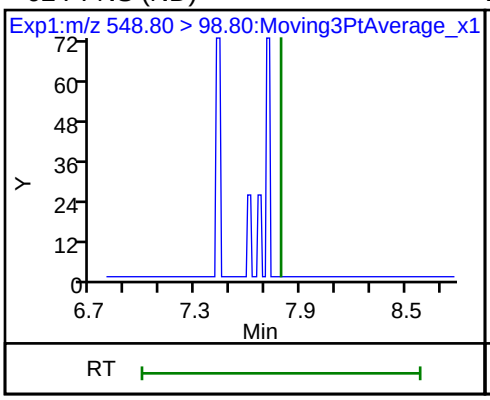
61 9ClFOS (ND)



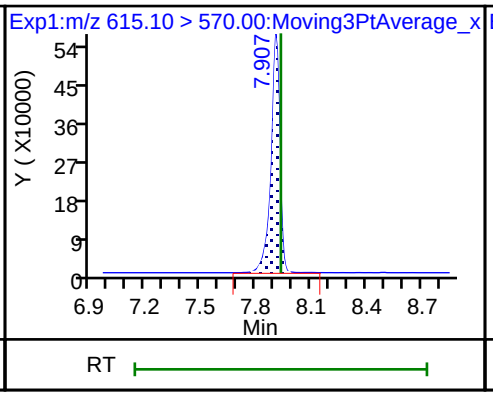
62 PFNS (ND)



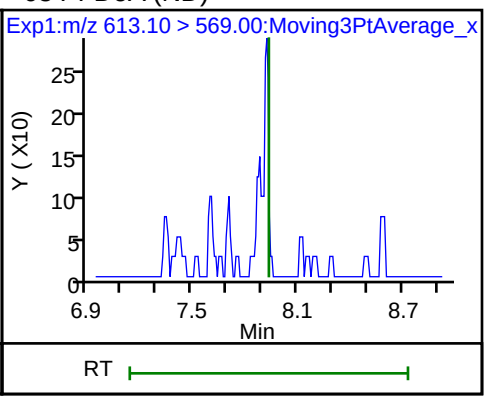
62 PFNS (ND)



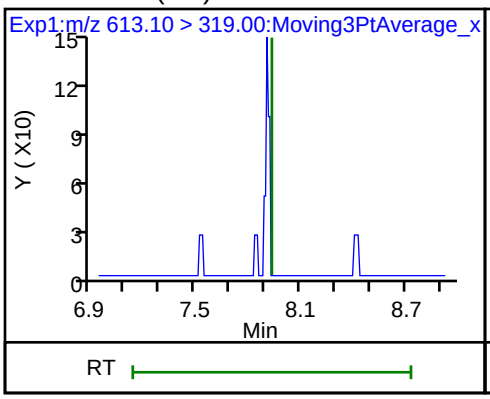
D 81 PFDoA



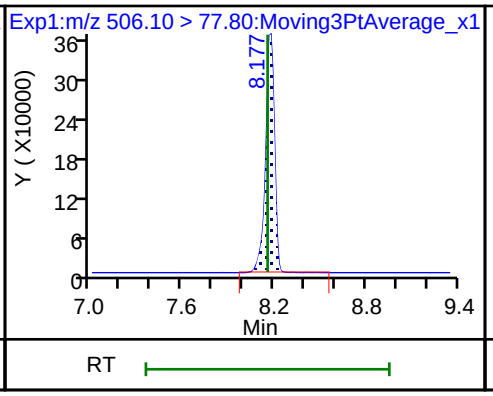
63 PFDoA (ND)



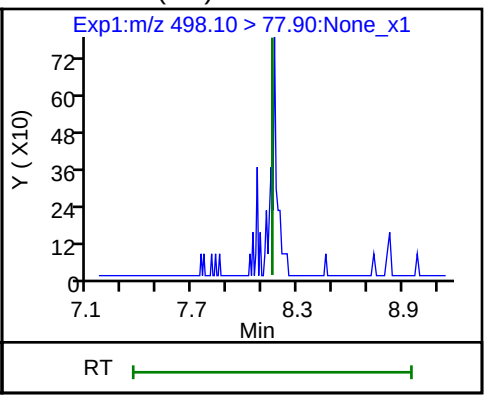
63 PFDoA (ND)



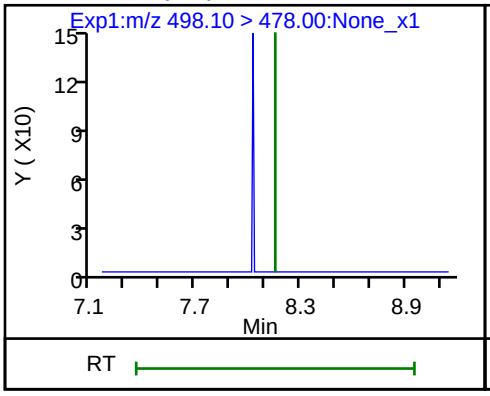
D 65 13C8 FOSA



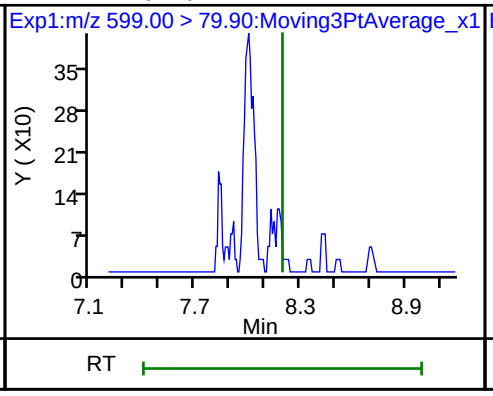
64 PFOSA (ND)



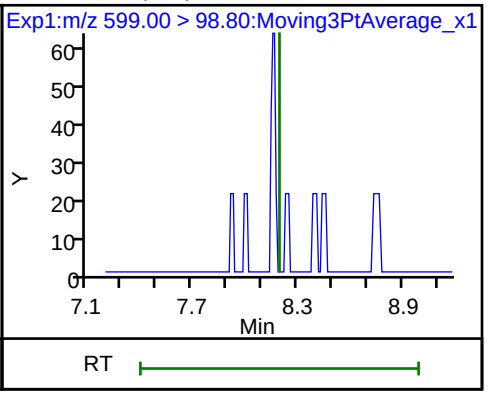
64 PFOSA (ND)



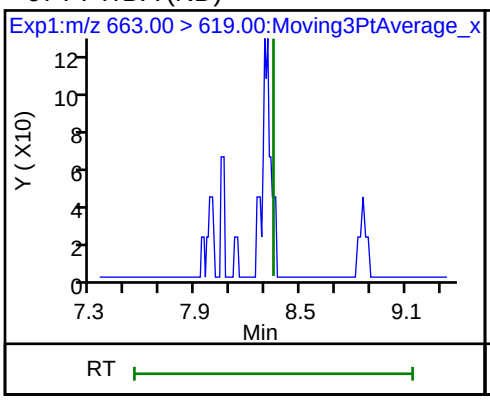
66 PFDS (ND)



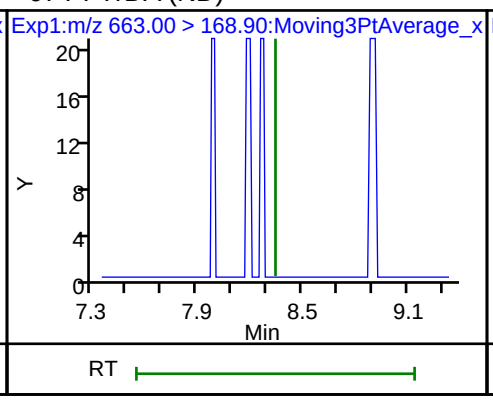
66 PFDS (ND)



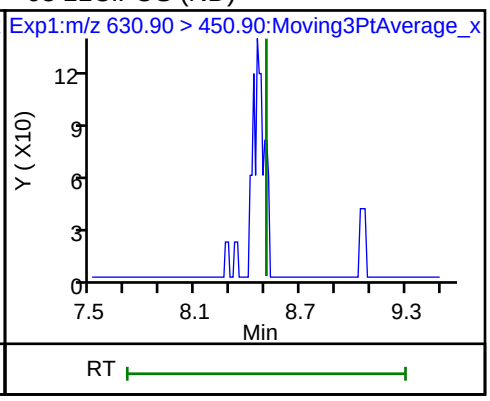
67 PFTrDA (ND)



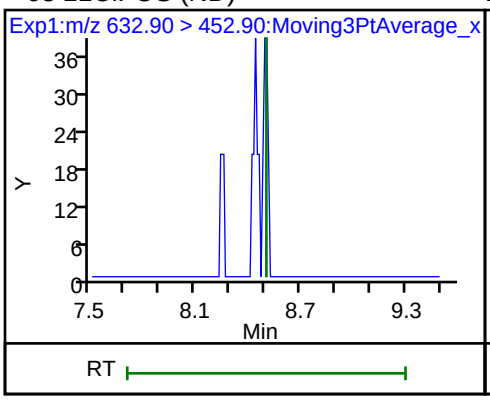
67 PFTrDA (ND)



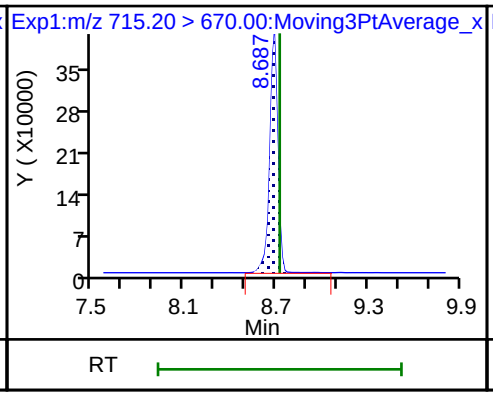
68 11ClFOS (ND)



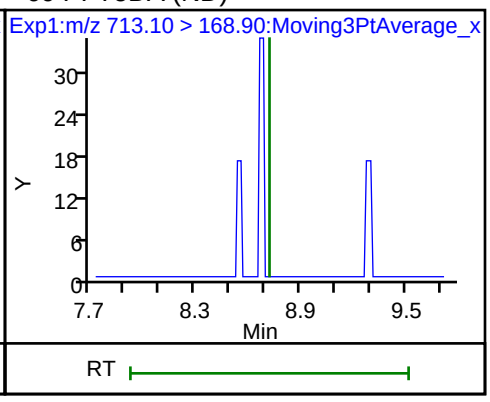
68 11ClFOS (ND)



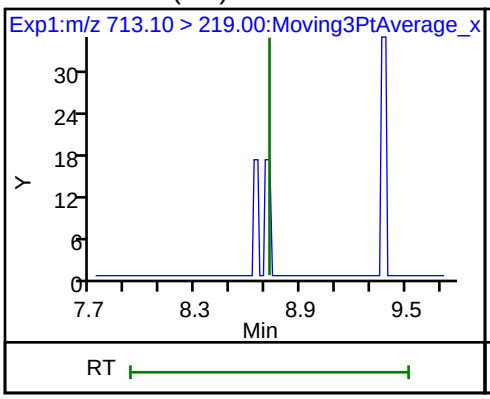
D 70 13C2 PFTeDA



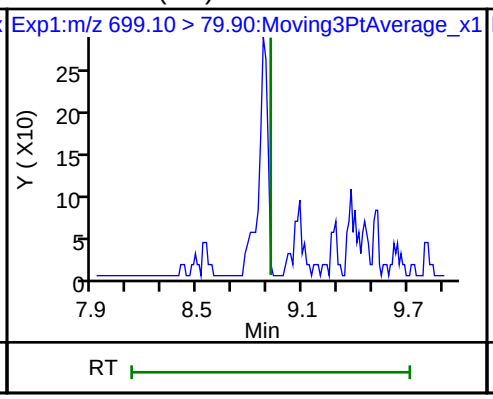
69 PFTeDA (ND)



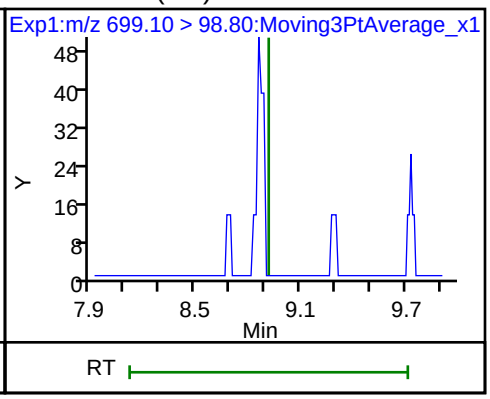
69 PFTeDA (ND)



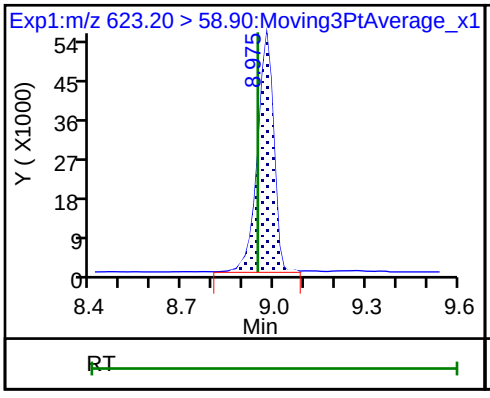
71 PFDoS (ND)



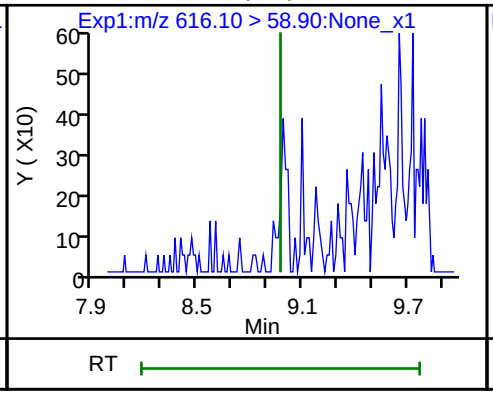
71 PFDoS (ND)



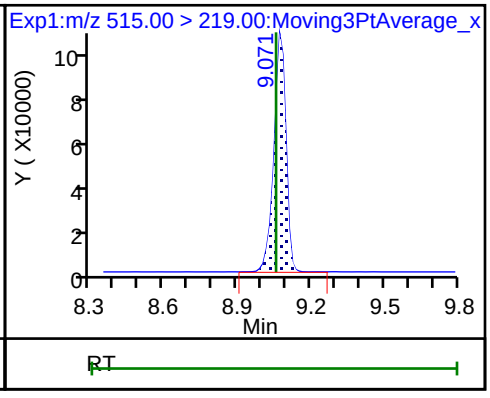
D 72 d7-N-Me-FOSE



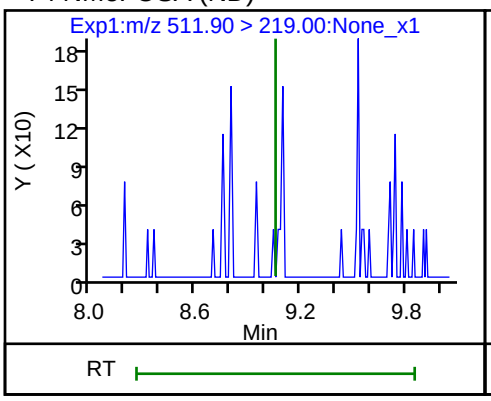
73 N-MeFOSE-M (ND)



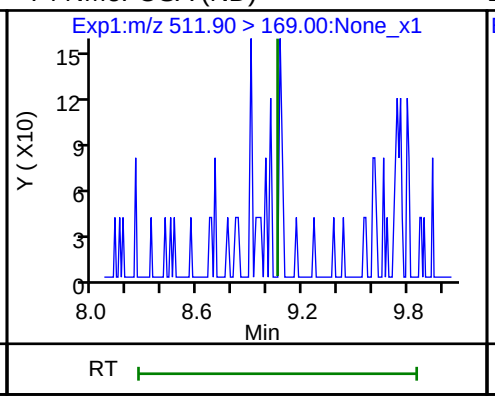
D 75 d3-NMePFOSA



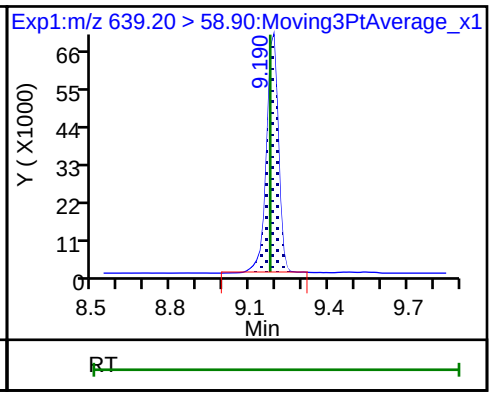
74 NMeFOSA (ND)



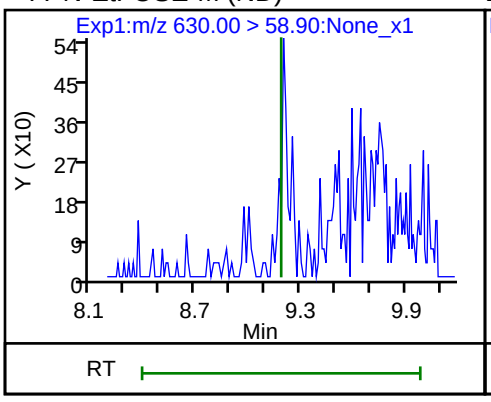
74 NMeFOSA (ND)



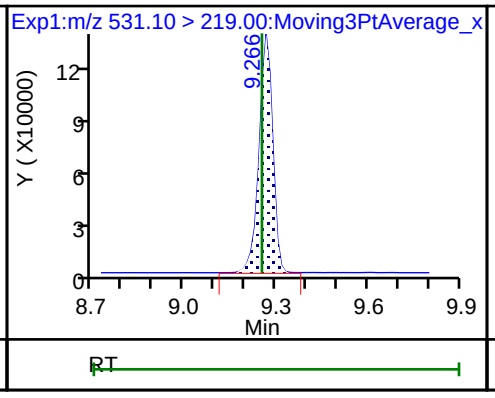
D 76 d9-N-EtFOSE



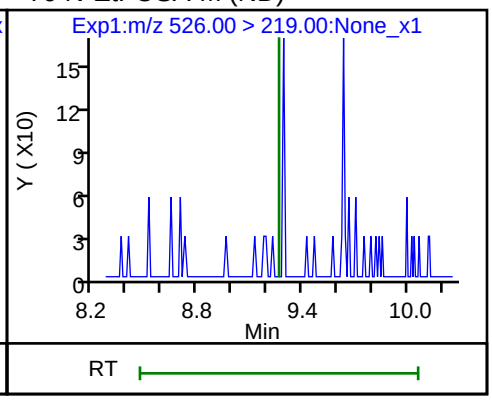
77 N-EtFOSE-M (ND)



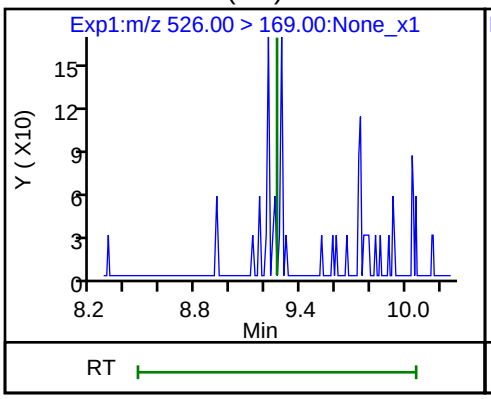
D 78 d5-NEtPFOSA



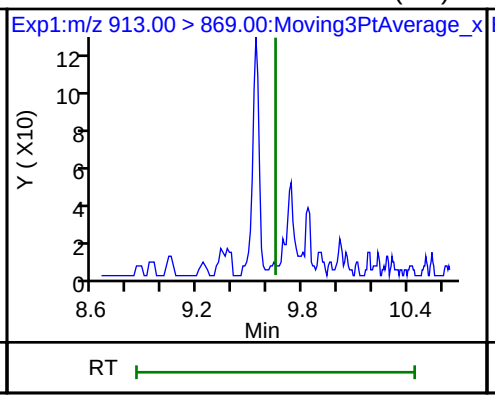
79 N-EtFOSA-M (ND)



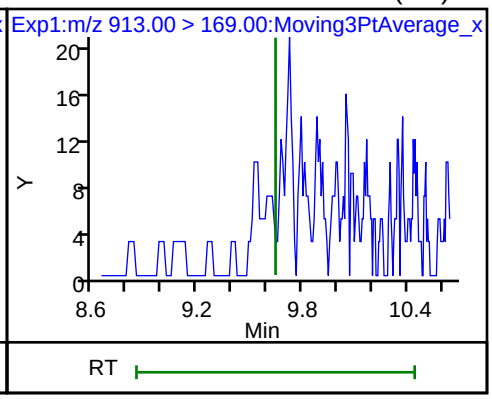
79 N-EtFOSA-M (ND)



80 Perfluorooctadecanoic acid (ND)



80 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

Matrix: Water
Lab File ID: 26FEB18JO-76.d

Analysis Method: 1633A
Date Collected: 02/16/2026 15:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 151.2(mL)
Date Analyzed: 02/19/2026 05:13

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	3.31	U	3.31	0.91
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.65	U	1.65	0.50
307-24-4	Perfluorohexanoic acid (PFHxA)	1.65	U	1.65	0.41
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.65	U	1.65	0.66
335-67-1	Perfluorooctanoic acid (PFOA)	1.65	U	1.65	0.74
375-95-1	Perfluorononanoic acid (PFNA)	1.65	U	1.65	0.41
335-76-2	Perfluorodecanoic acid (PFDA)	1.65	U	1.65	0.41
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.65	U	1.65	0.41
307-55-1	Perfluorododecanoic acid (PFDoA)	1.65	U	1.65	0.41
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	1.65	U	1.65	0.41
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	1.65	U	1.65	0.41
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.65	U	1.65	0.41
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	1.65	U	1.65	0.41
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.65	U	1.65	0.66
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	1.65	U	1.65	0.41
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.65	U	1.65	1.07
68259-12-1	Perfluorononanesulfonic acid (PFNS)	1.65	U	1.65	0.41
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.65	U	1.65	0.41
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	1.65	U	1.65	0.50
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	3.31	U	3.31	0.83
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.31	U	3.31	0.83
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	3.31	U	3.31	0.83
754-91-6	Perfluorooctanesulfonamide (PFOSA)	1.65	U	1.65	0.41
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	1.65	U	1.65	0.41
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	1.65	U	1.65	0.91

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: FB_02162026_P Lab Sample ID: 460-344895-2

Matrix: Water Lab File ID: 26FEB18JO-76.d

Analysis Method: 1633A Date Collected: 02/16/2026 15:00

Extraction Method: 1633A Date Extracted: 02/18/2026 15:35

Sample wt/vol: 151.2(mL) Date Analyzed: 02/19/2026 05:13

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716 Units: ng/L

Preparation Batch No.: 770909 Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.65	U	1.65	0.41
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.65	U	1.65	0.41
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	8.27	U	8.27	3.31
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	8.27	U	8.27	3.31
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.65	U	1.65	1.16
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.65	U	1.65	0.41
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	1.65	U	1.65	0.41
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	1.65	U	1.65	0.41
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.65	U	1.65	0.41
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	1.65	U	1.65	0.41
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	1.65	U	1.65	0.41
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.65	U	1.65	0.41
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.31	U *	3.31	0.83
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	8.27	U	8.27	2.31
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	8.27	U	8.27	2.07

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: FB_02162026_P
Lab Sample ID: 460-344895-2

Matrix: Water
Lab File ID: 26FEB18JO-76.d

Analysis Method: 1633A
Date Collected: 02/16/2026 15:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 151.2(mL)
Date Analyzed: 02/19/2026 05:13

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	30.9		5-130
2283397-79-3	13C5 PFPeA	37.6	*	40-130
2328024-54-8	13C5 PFHxA	43.9		40-130
2328024-55-9	13C4 PFHpA	51.5		40-130
1350614-84-4	13C8 PFOA	45.4		40-130
2283397-80-6	13C9 PFNA	48.3		40-130
2328024-56-0	13C6 PFDA	54.3		40-130
STL02580	13C7 PFUnA	70.9		30-130
STL02116	13C2 PFTeDA	71.5		10-130
2708218-83-9	13C3 PFBS	37.2	*	40-135
2708218-85-1	13C3 PFHxS	41.4		40-130
2265893-05-6	13C8 PFOS	60.5		40-130
STL01056	13C8 FOSA	55.6		40-130
1400690-70-1	d3-NMeFOSAA	74.9		40-170
1265205-97-7	d5-NEtFOSAA	105		25-135
STL02395	13C2 4:2 FTS	35.4	*	40-200
STL02279	13C2 6:2 FTS	46.9		40-200
STL02280	13C2 8:2 FTS	52.1		40-300
STL02255	13C3 HFPO-DA	42.6		40-130
STL02277	d7-N-MeFOSE-M	62.9		10-130
STL02278	d9-N-EtFOSE-M	73.7		10-130
STL02704	d5-NEtPFOSA	62.3		10-130
STL02705	d3-NMePFOSA	56.4		10-130
960315-52-0	13C2 PFDoA	70.6		10-130

Report Date: 19-Feb-2026 12:33:11 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-76.d
Lims ID: 460-344895-A-2-A
Client ID: FB_02162026_P
Sample Type: Client
Inject. Date: 19-Feb-2026 05:13:25 ALS Bottle#: 40 Worklist Smp#: 72
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: 460-344895-A-2-A
Misc. Info.: Plate: 1 Rack: 1 410-0176047-072
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:30:48 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:30:02
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 4 13C4-PFBA										
216.80 > 171.90	4.339	4.309	0.030	1.000	540539	0.6178		30.9	5387	
* 5 13C3PFBA										
216.00 > 172.00	4.339	4.309	0.030		1778317	2.00			3686	
D 8 13C5 PFPeA										
268.30 > 223.00	4.996	4.959	0.037	0.916	559836	0.7526		37.6	3636	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.282	5.235	0.047	0.808	391468	1.66		35.4	2702	
* 16 13C2 PFHxA										
315.10 > 270.00	5.456	5.424	0.032		4192790	5.00			4653	
D 15 13C5 PFHxA										
318.00 > 273.00	5.466	5.424	0.042	1.002	801545	0.8781		43.9	3168	
D 19 13C3 PFBS										
302.10 > 79.90	5.600	5.561	0.039	0.856	779734	0.6926		37.2	3082	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.646	5.607	0.039	1.035	506821	0.8525		42.6	3442	
D 28 13C4 PFHpA										
367.10 > 322.00	5.888	5.851	0.037	1.079	919992	1.03		51.5	3739	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.093	6.059	0.034	0.932	438004	2.23		46.9	2554	
* 34 13C4 PFOA										
417.10 > 372.00	6.301	6.269	0.032		6864362	5.00			5296	
D 35 13C8 PFOA										
421.10 > 376.00	6.301	6.269	0.032	1.000	1193828	0.9075		45.4	2923	
D 38 13C3 PFHxS										
402.10 > 79.90	6.539	6.512	0.027	1.000	748241	0.7849		41.4	2747	
* 39 18O2 PFHxS										
403.00 > 83.90	6.539	6.512	0.027		1655620	1.90			3999	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 42 13C5 PFNA 468.00 > 423.00	6.719	6.684	0.035		2185911	2.00			4214	
D 41 13C9 PFNA 472.10 > 427.00	6.719	6.684	0.035	1.000	1056476	0.9664		48.3	3712	
D 44 13C2-8:2FTS 529.10 > 80.90	6.892	6.868	0.024	1.054	504709	2.50		52.1	1367	
D 49 d3-NMeFOSAA 573.20 > 419.00	7.063	7.037	0.026	0.957	1252982	3.75		74.9	1464	
D 52 13C6 PFDA 519.10 > 474.10	7.122	7.107	0.016	1.000	1139506	1.09		54.3	3935	
* 51 13C2 PFDA 515.10 > 470.10	7.122	7.107	0.016		2110007	2.00			5391	
D 54 d5-NEtFOSAA 589.20 > 419.00	7.253	7.219	0.034	0.983	1604526	5.24		105	3700	
* 57 13C4 PFOS 502.80 > 79.90	7.380	7.373	0.007		1339219	1.92			7188	
D 56 13C8 PFOS 507.10 > 79.90	7.380	7.373	0.007	1.000	900003	1.16		60.5	4205	
D 59 13C7 PFUnA 570.00 > 525.10	7.522	7.506	0.016	1.056	1554876	1.42		70.9	4517	
D 81 PFDoA 615.10 > 570.00	7.934	7.935	-0.001	1.114	1548492	1.41		70.6	3618	
D 65 13C8 FOSA 506.10 > 77.80	8.205	8.155	0.050	1.112	923203	1.11		55.6	3416	
D 70 13C2 PFTeDA 715.20 > 670.00	8.704	8.722	-0.018	1.222	1440921	1.43		71.5	5376	
D 72 d7-N-Me-FOSE 623.20 > 58.90	9.000	8.945	0.055	1.220	172899	3.15		62.9	474	
D 75 d3-NMePFOSA 515.00 > 219.00	9.095	9.057	0.038	1.232	271364	1.13		56.4	2924	
D 76 d9-N-EtFOSE 639.20 > 58.90	9.212	9.176	0.036	1.248	231017	3.68		73.7	702	
D 78 d5-NEtPFOSA 531.10 > 219.00	9.288	9.252	0.036	1.259	365808	1.25		62.3	1899	

QC Flag Legend

Processing Flags

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 12:33:11 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-76.d

Injection Date: 19-Feb-2026 05:13:25 Instrument ID: 30577

Lims ID: 460-344895-A-2-A Lab Sample ID: 410-344895-2

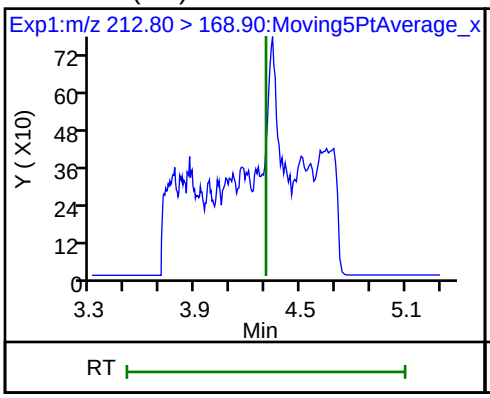
Client ID: FB_02162026_P

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 40 Worklist Smp#: 72

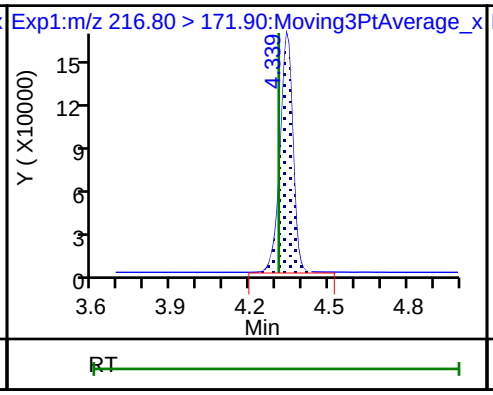
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

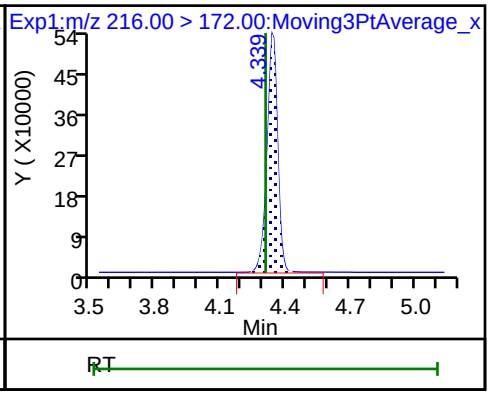
3 PFBA (ND)



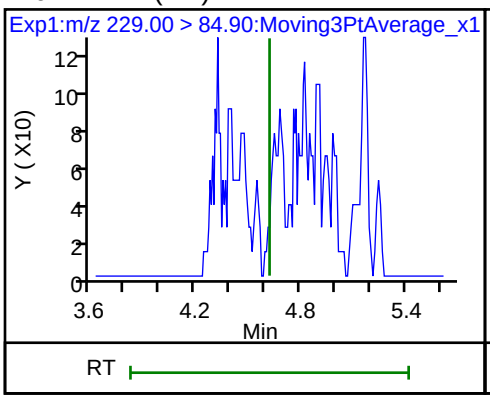
D 4 13C4-PFBA



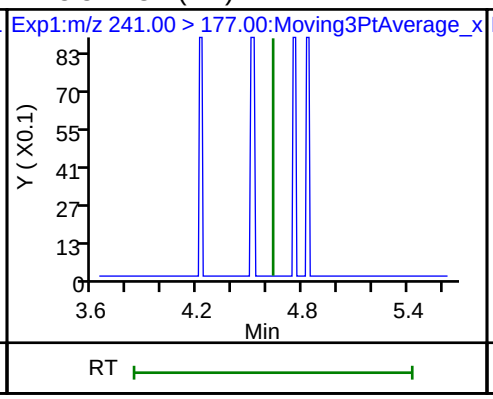
* 5 13C3PFBA



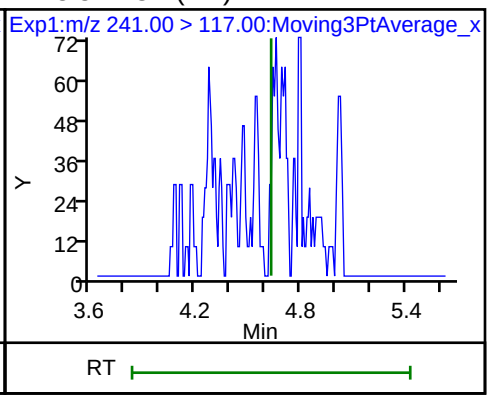
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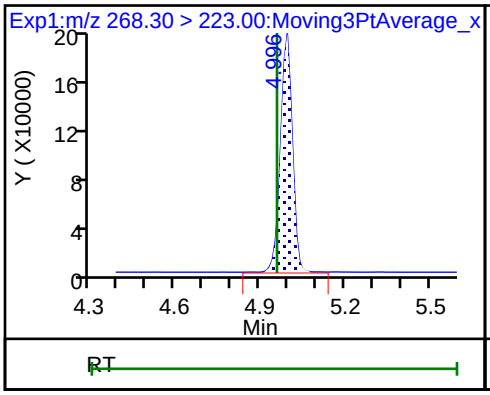
7 3:3 FTCA (ND)



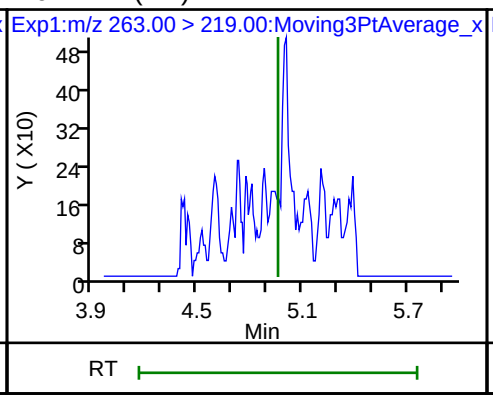
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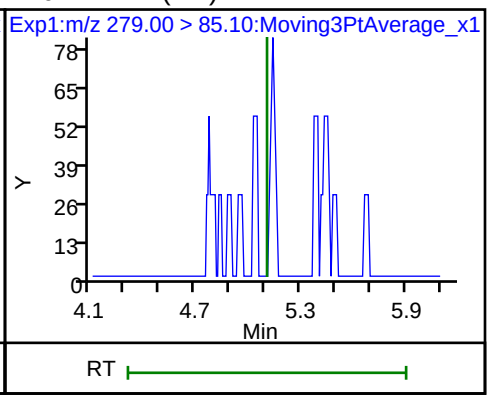
D 8 13C5 PFPeA



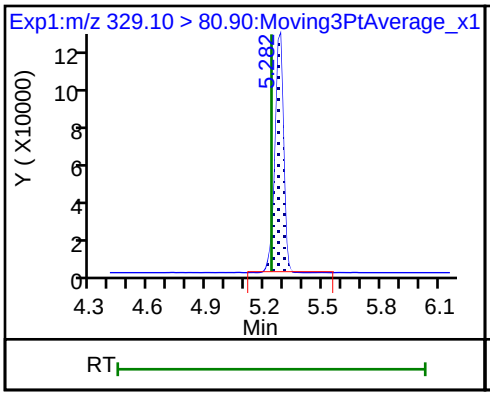
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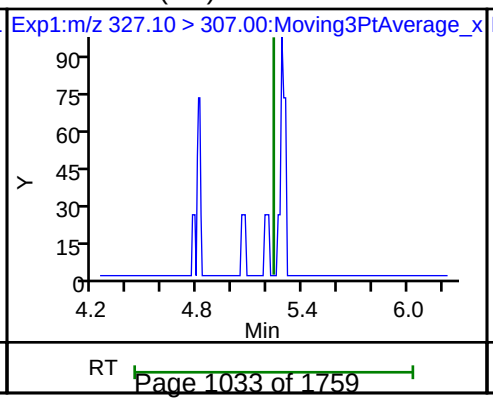
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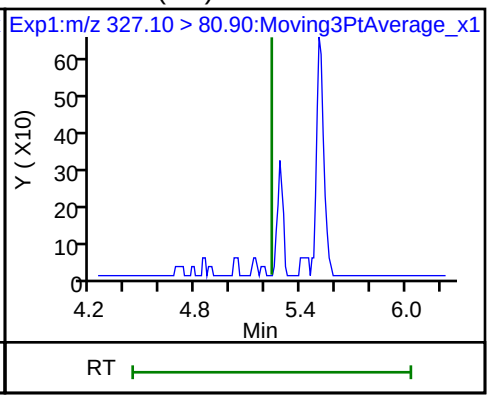
D 11 13C2-4:2FTS



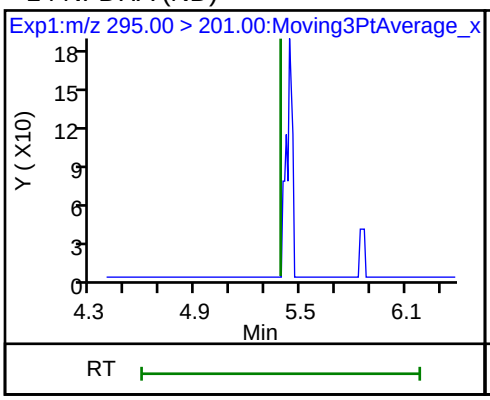
12 4:2FTS (ND)



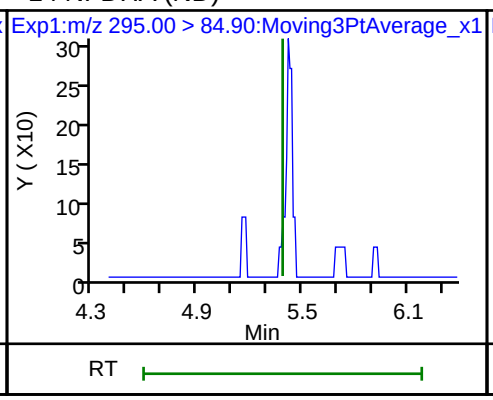
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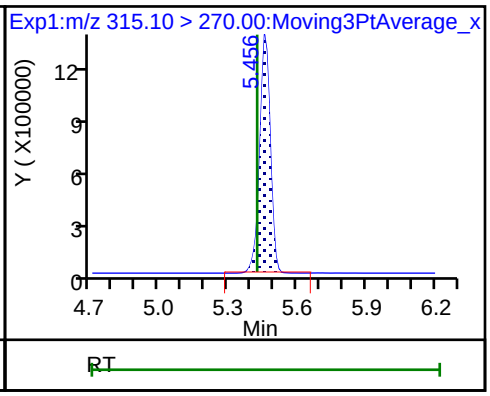
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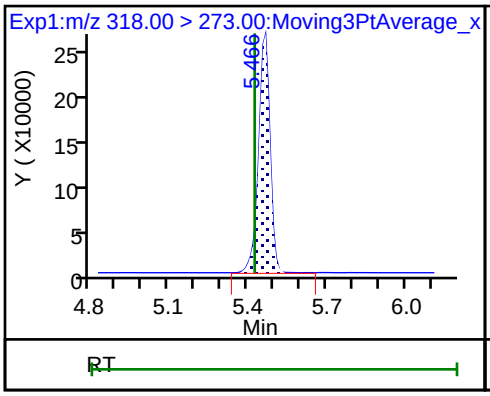
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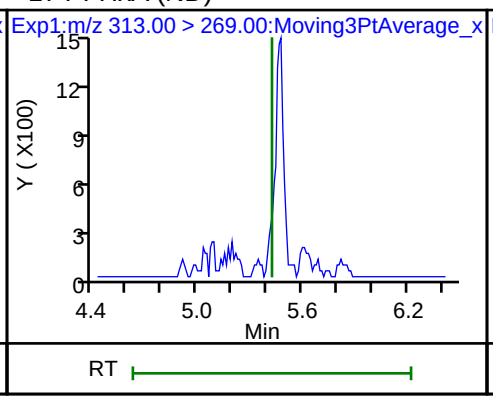
* 16 13C2 PFHxA



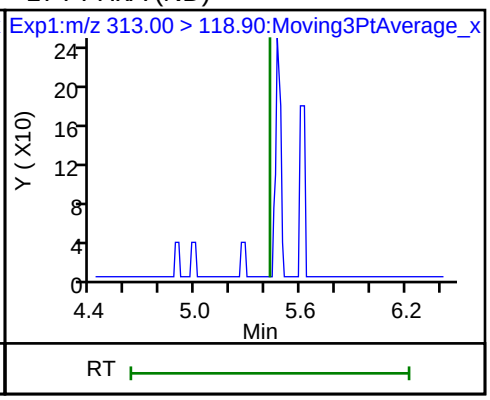
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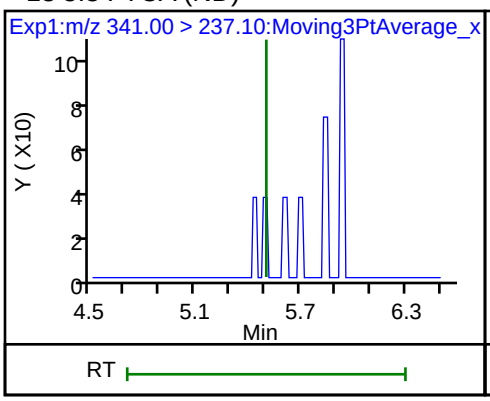
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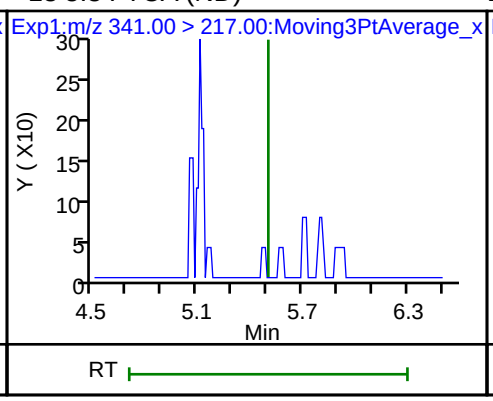
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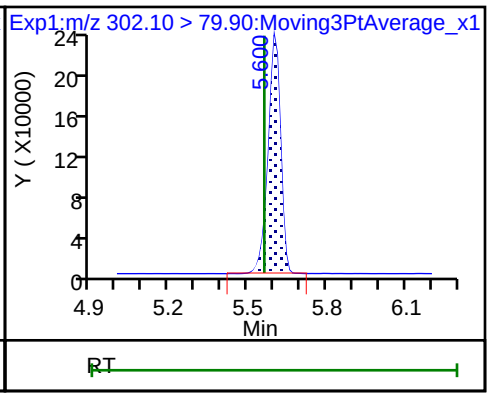
18 5:3 FTCA (ND)



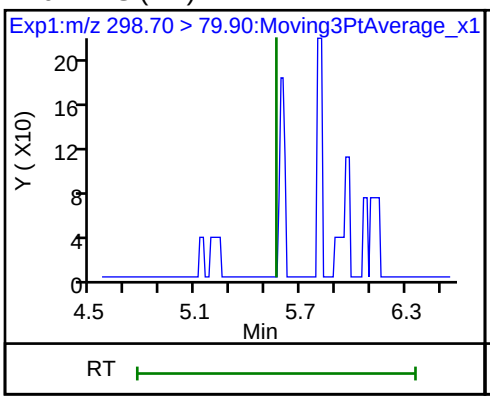
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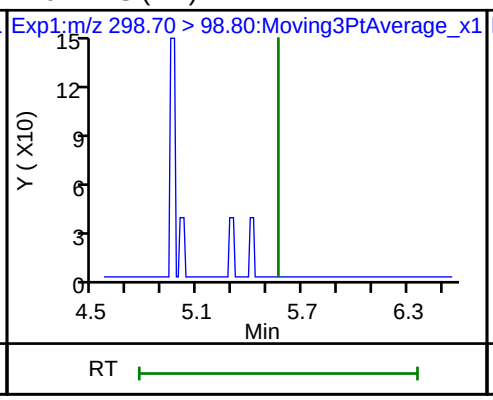
D 19 13C3 PFBS



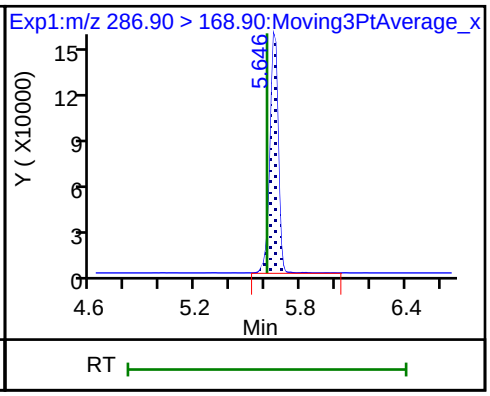
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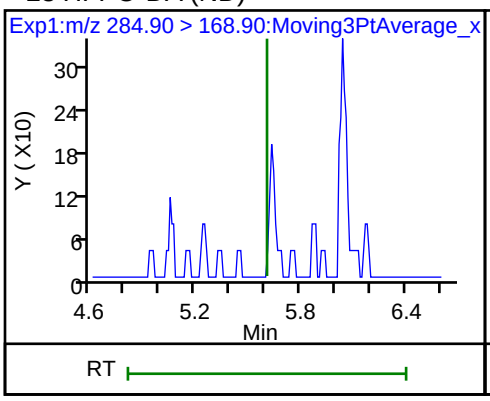
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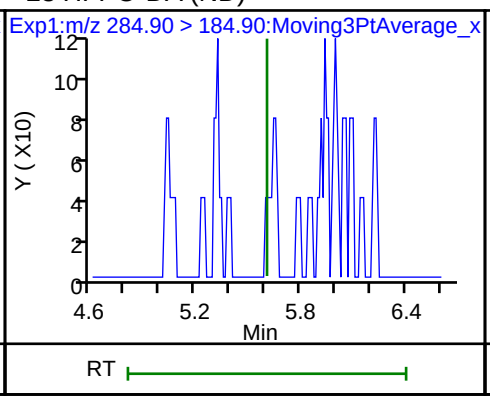
D 22 13C3 HFPO-DA



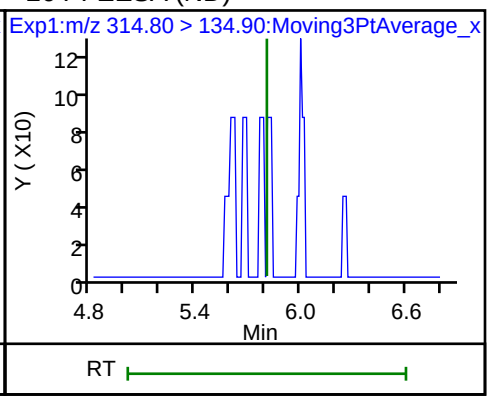
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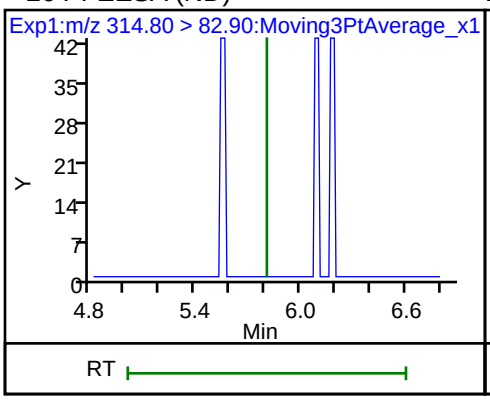
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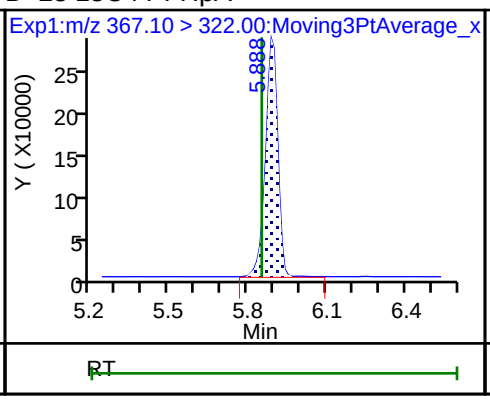
26 PFEESA (ND)



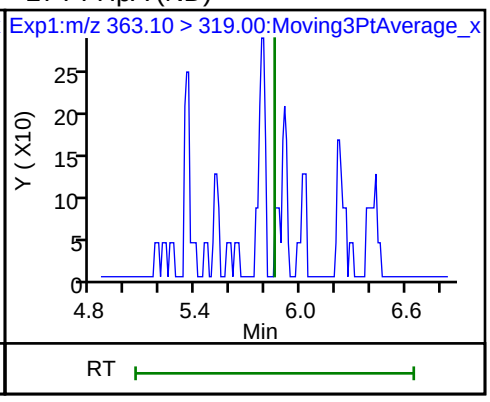
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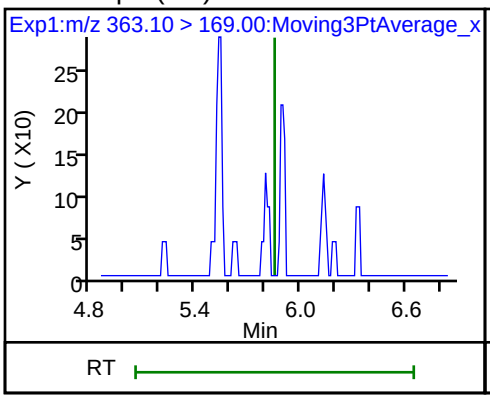
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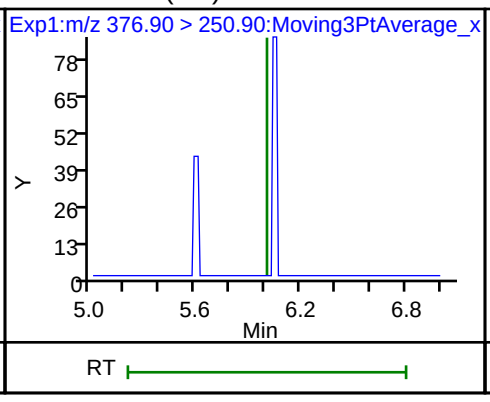
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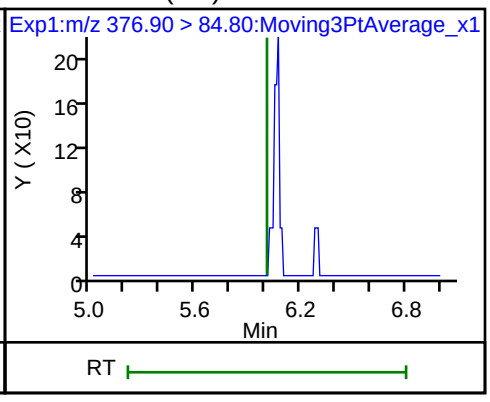
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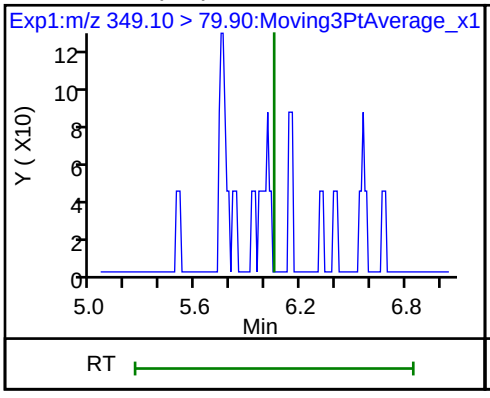
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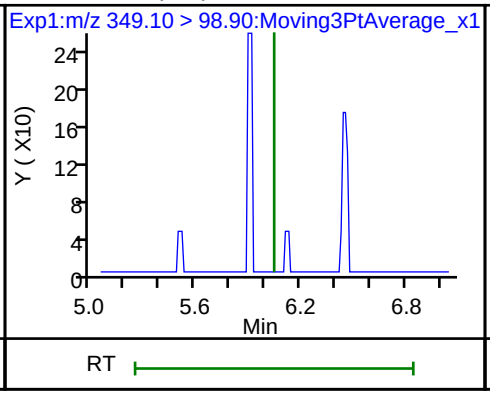
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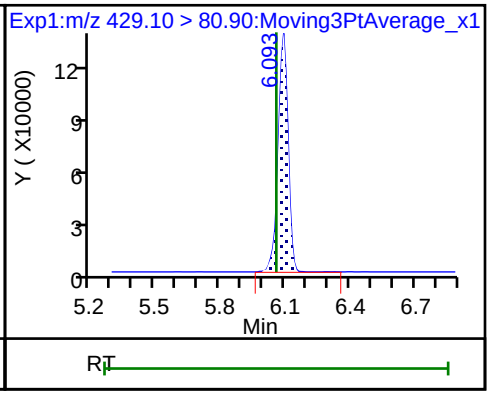
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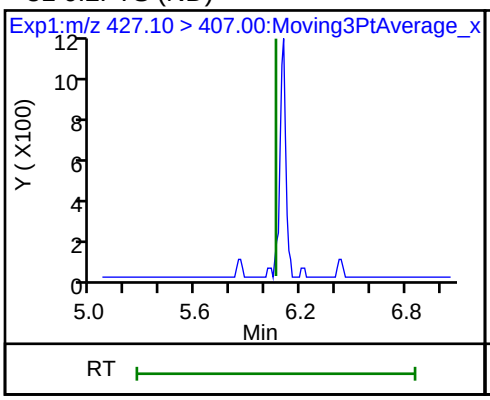
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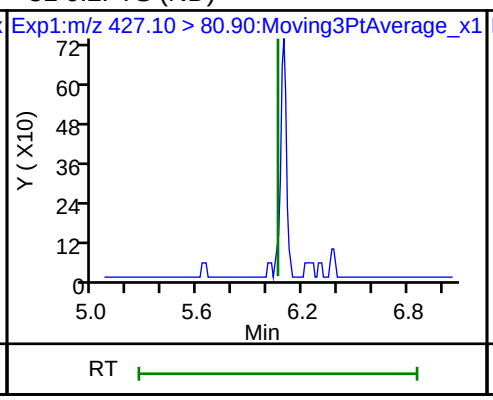
D 32 13C2-6:2FTS



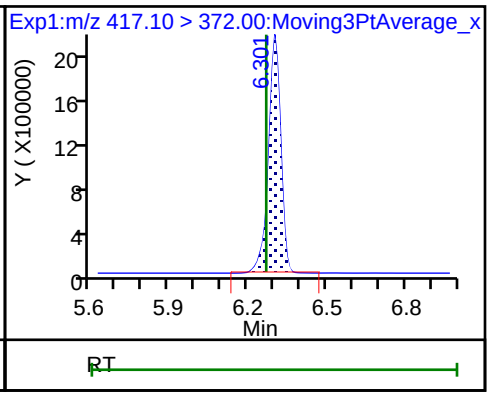
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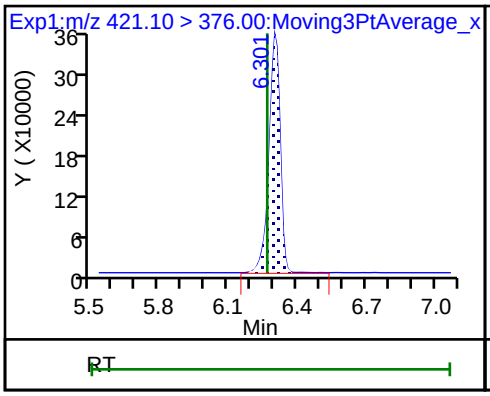
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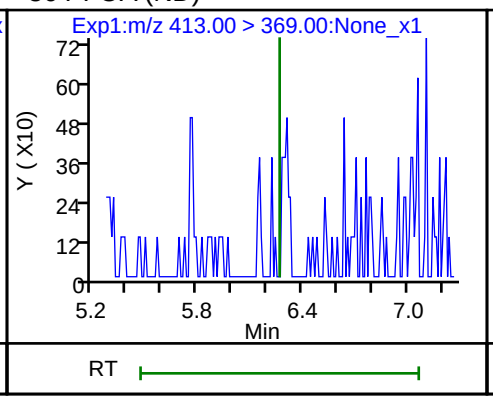
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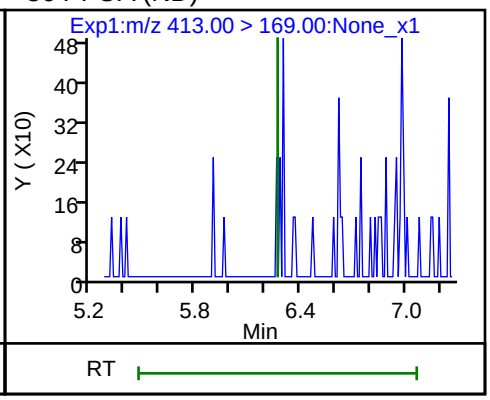
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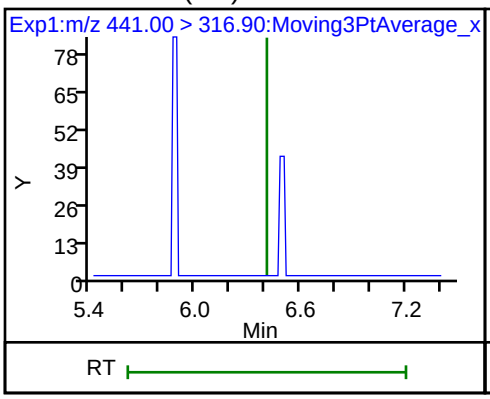
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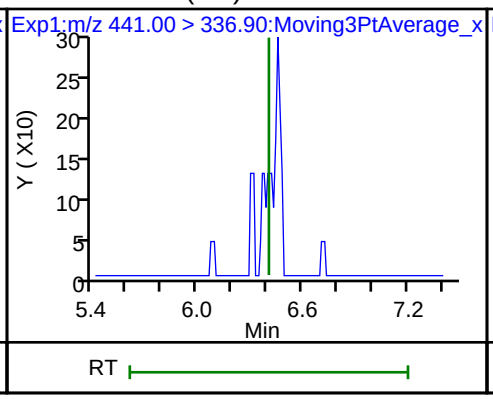
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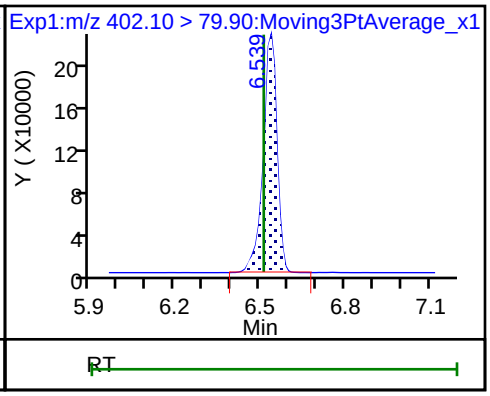
37 7:3 FTCA (ND)



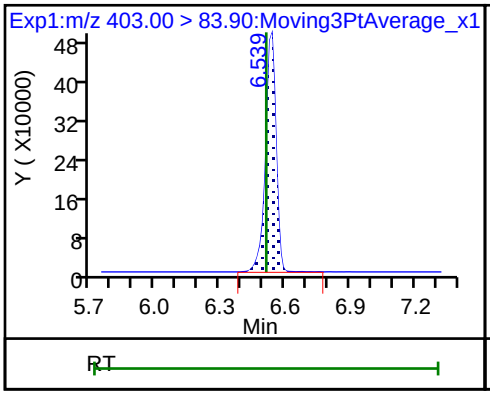
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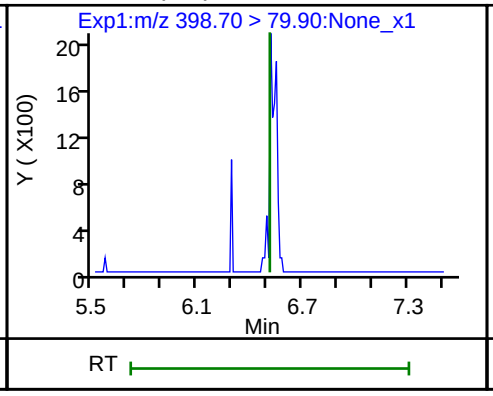
D 38 13C3 PFHxS



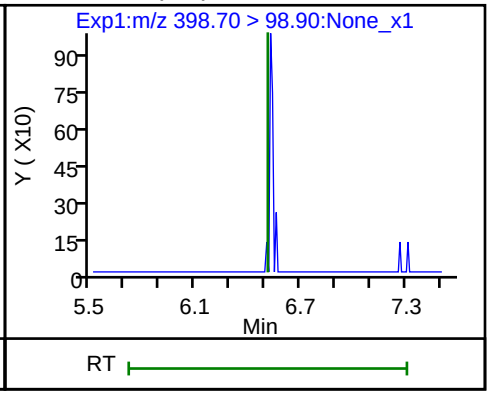
* 39 18O2 PFHxS



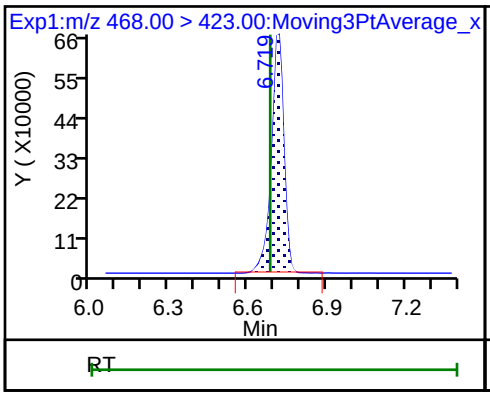
40 PFHxS (ND)



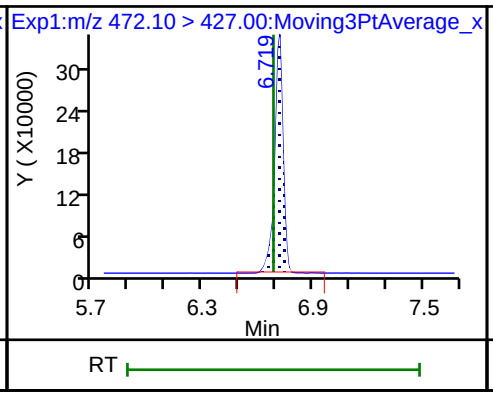
40 PFHxS (ND)



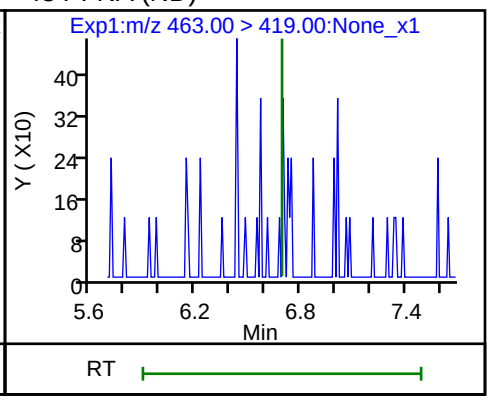
* 42 13C5 PFNA



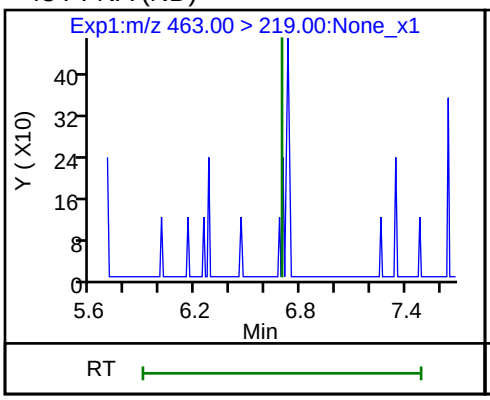
D 41 13C9 PFNA



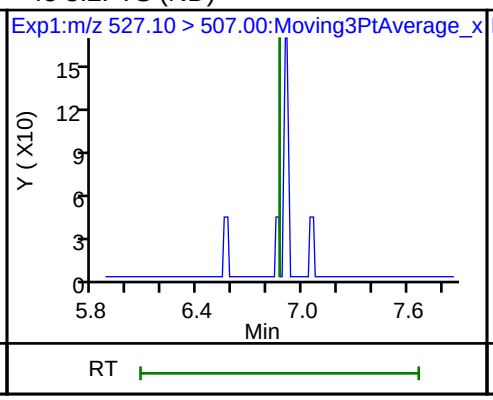
43 PFNA (ND)



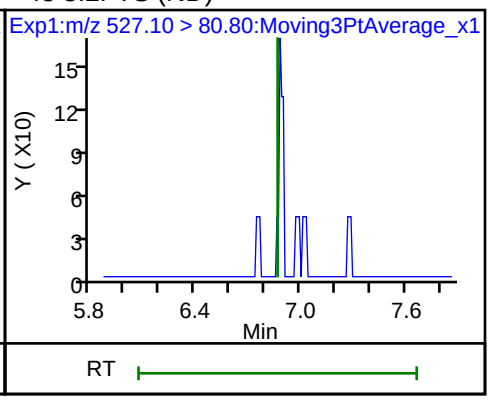
43 PFNA (ND)



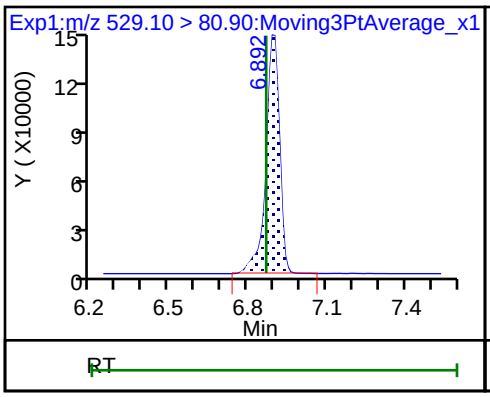
45 8:2FTS (ND)



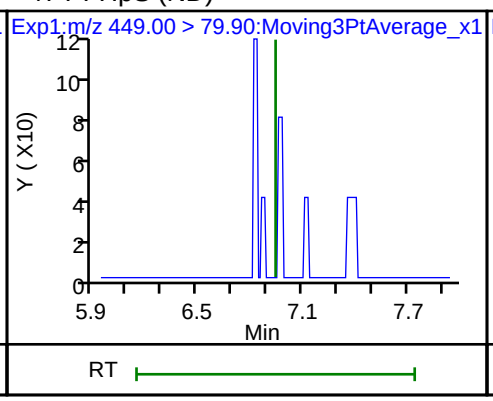
45 8:2FTS (ND)



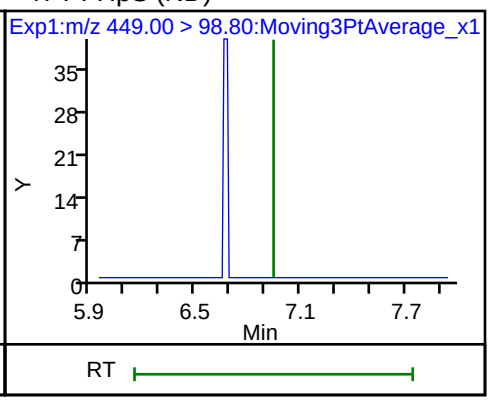
D 44 13C2-8:2FTS



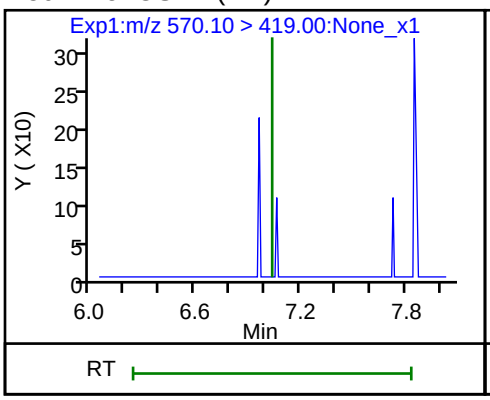
47 PFHpS (ND)



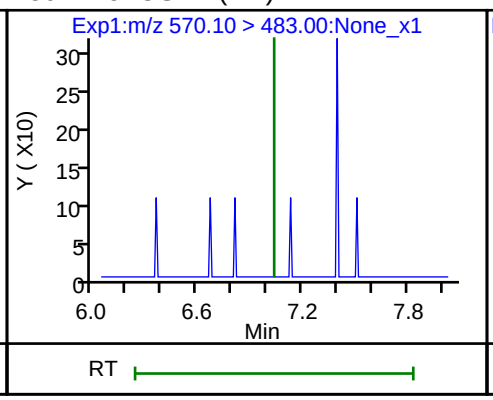
47 PFHpS (ND)



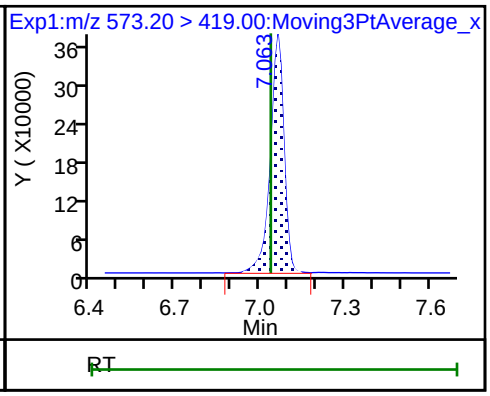
50 NMeFOSAA (ND)



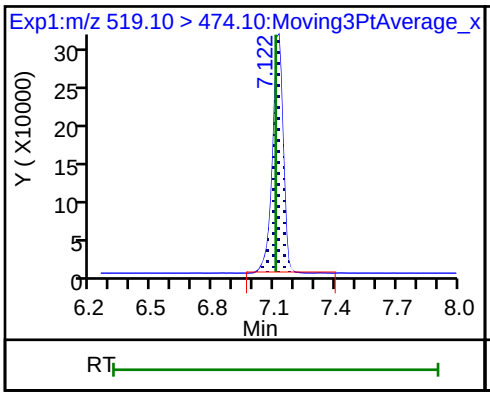
50 NMeFOSAA (ND)



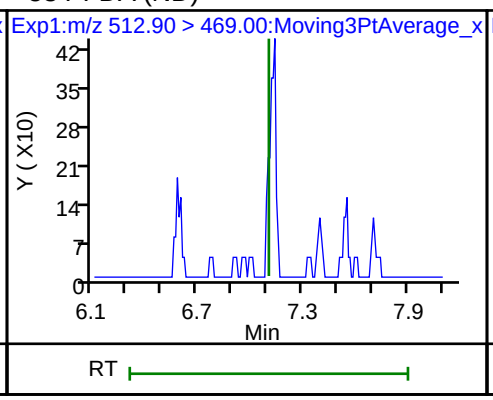
D 49 d3-NMeFOSAA



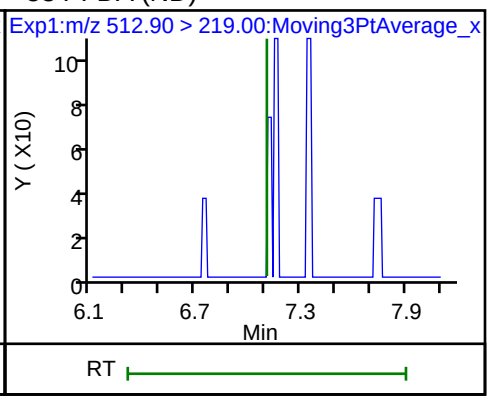
D 52 13C6 PFDA



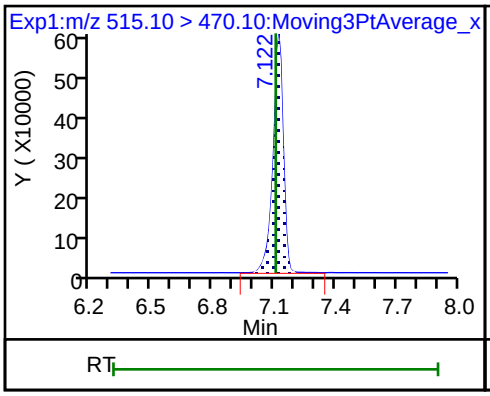
53 PFDA (ND)



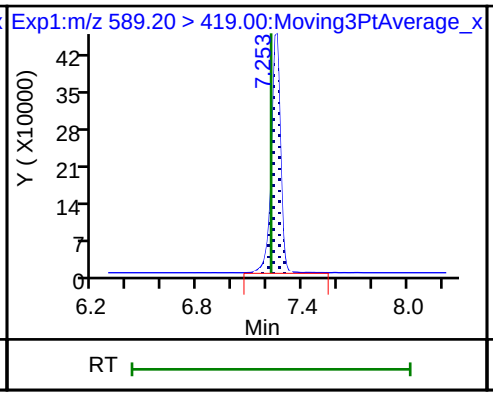
53 PFDA (ND)



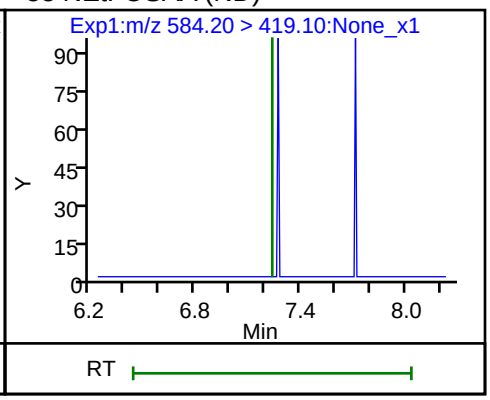
* 51 13C2 PFDA



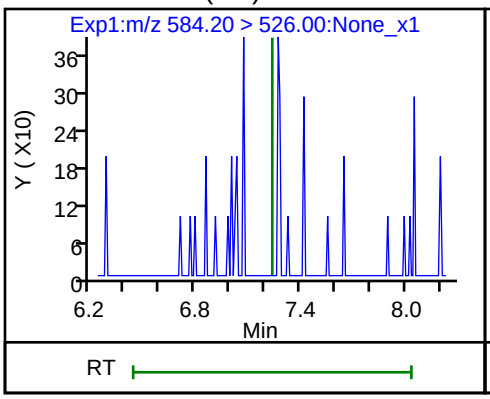
D 54 d5-NEtFOSAA



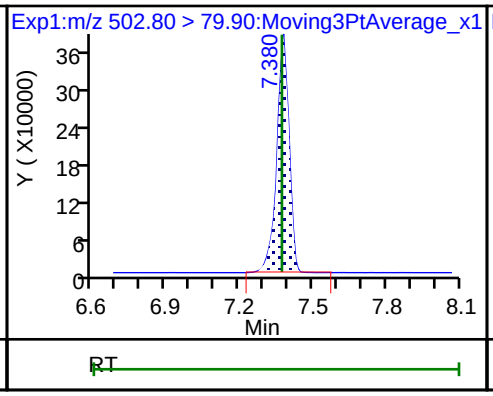
55 NEtFOSAA (ND)



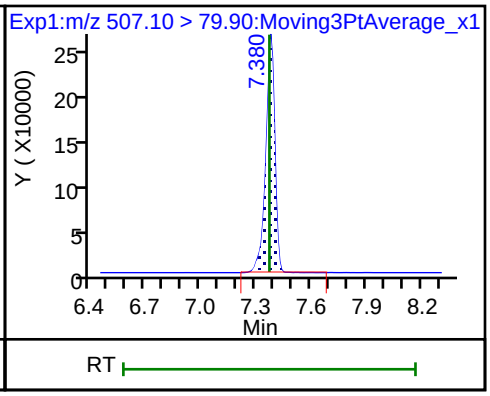
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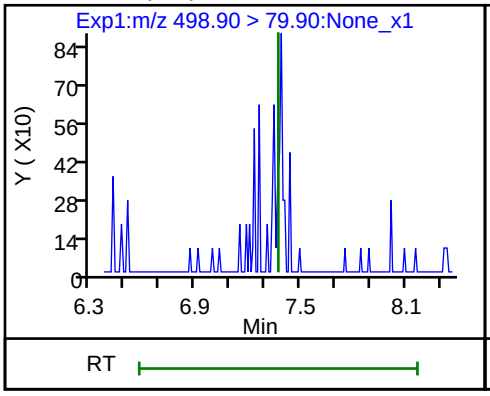
* 57 13C4 PFOS



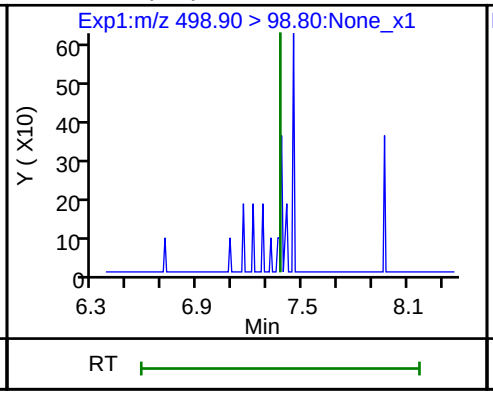
D 56 13C8 PFOS



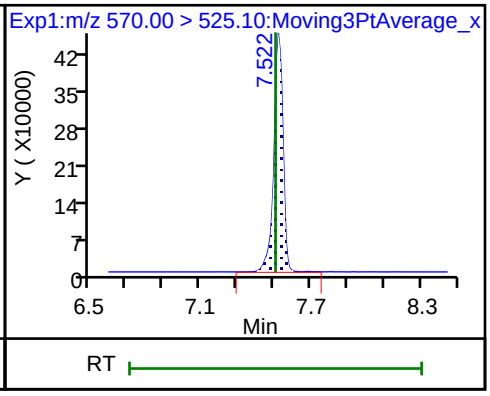
58 PFOS (ND)



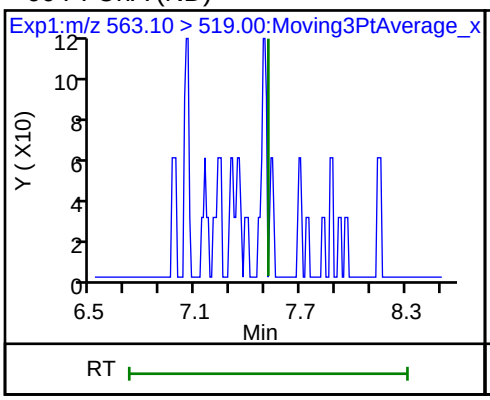
58 PFOS (ND)



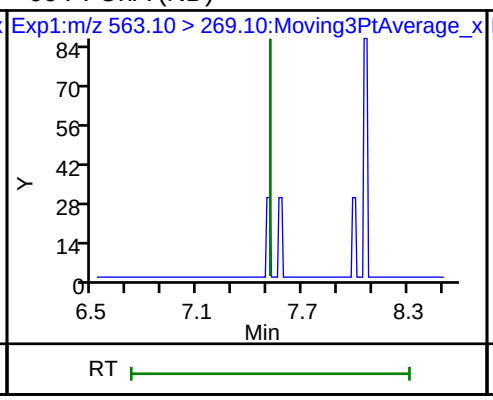
D 59 13C7 PFUnA



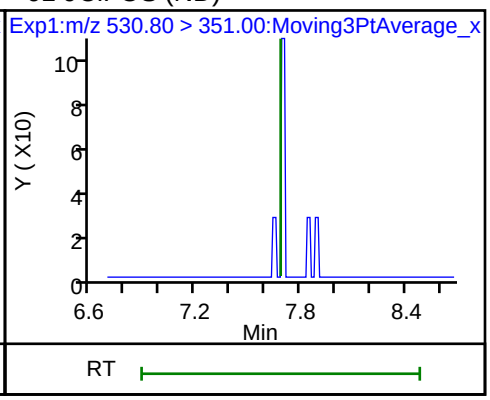
60 PFUnA (ND)



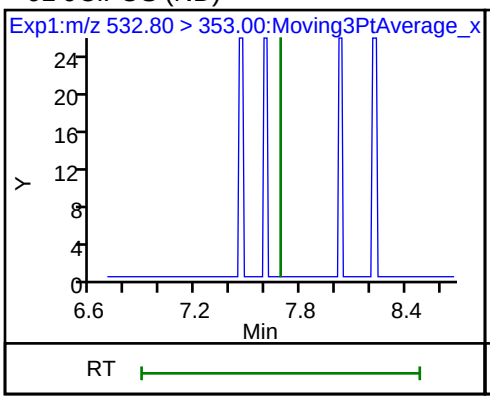
60 PFUnA (ND)



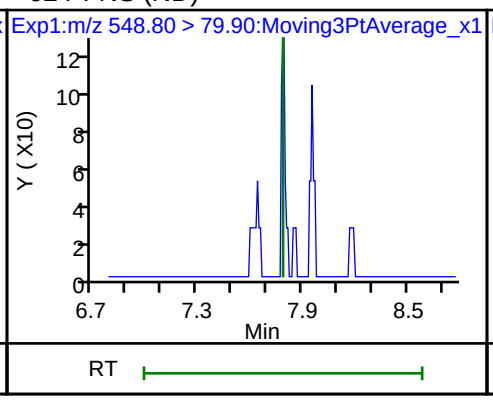
61 9ClFOS (ND)



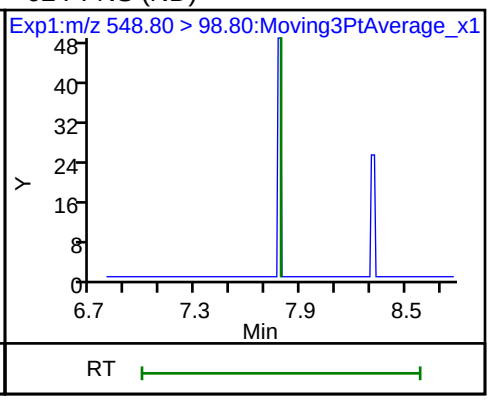
61 9ClFOS (ND)



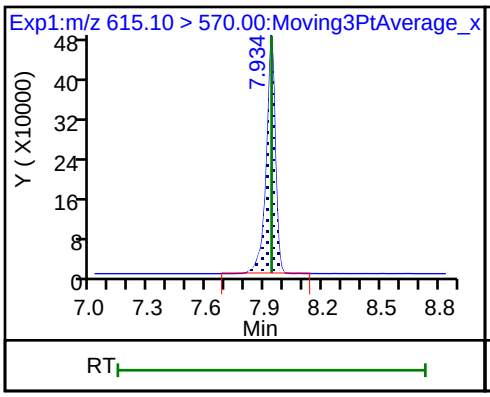
62 PFNS (ND)



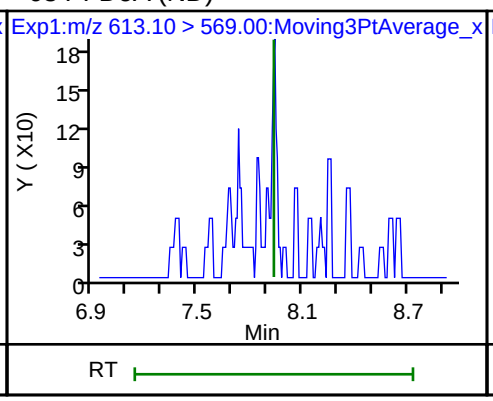
62 PFNS (ND)



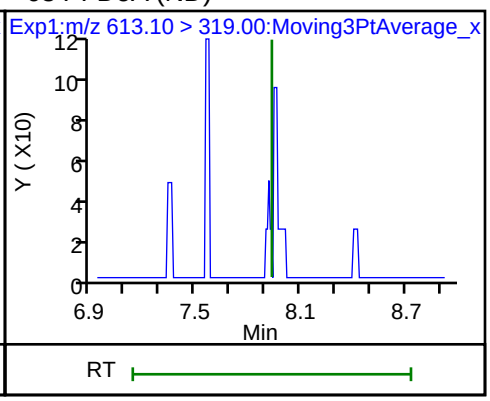
D 81 PFDoA



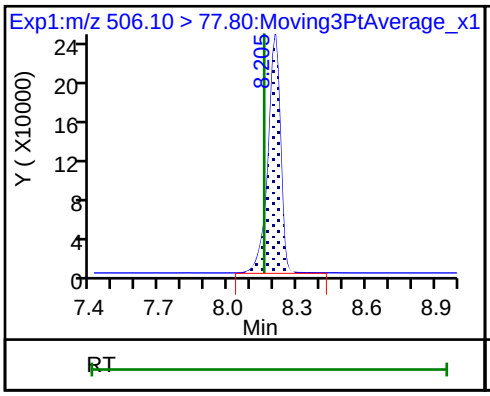
63 PFDoA (ND)



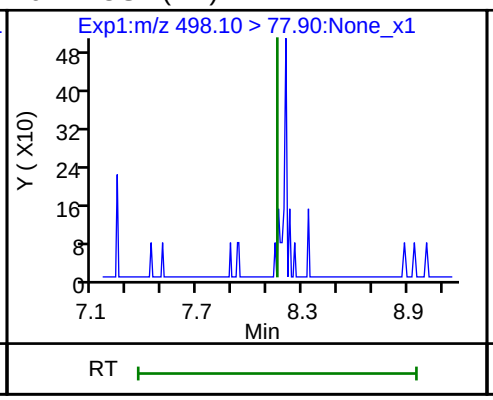
63 PFDoA (ND)



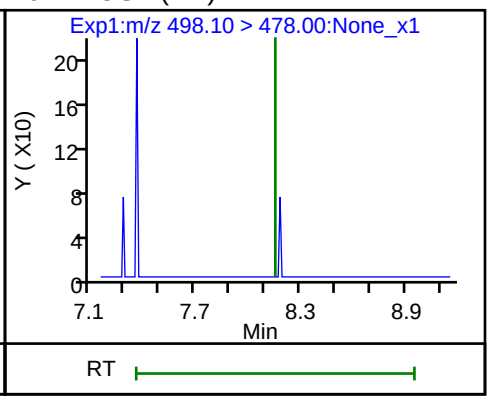
D 65 13C8 FOSA



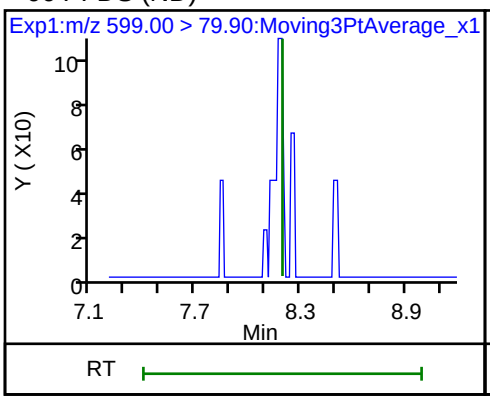
64 PFOSA (ND)



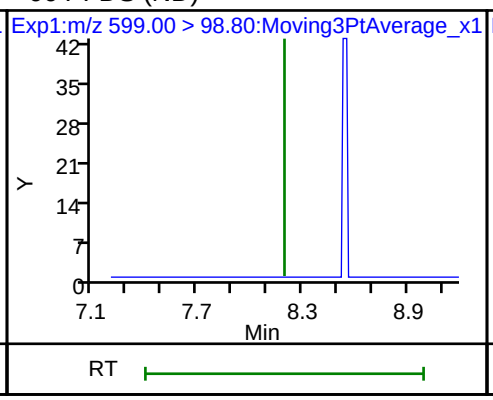
64 PFOSA (ND)



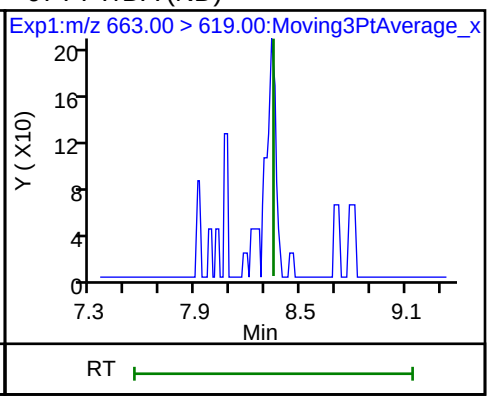
66 PFDS (ND)



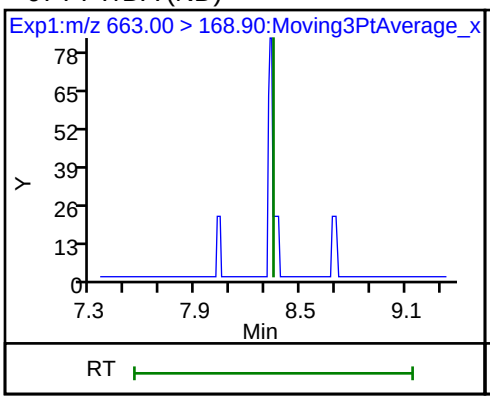
66 PFDS (ND)



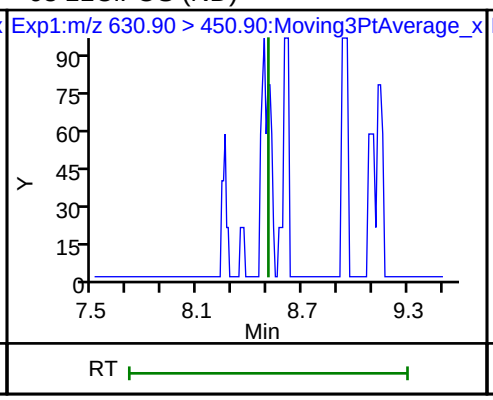
67 PFTrDA (ND)



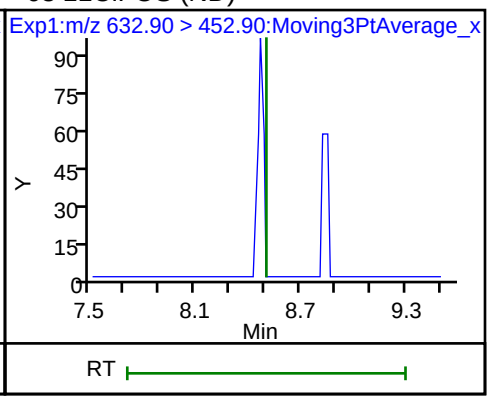
67 PFTrDA (ND)



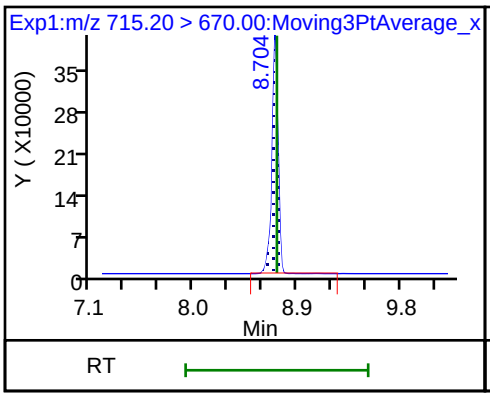
68 11ClFOS (ND)



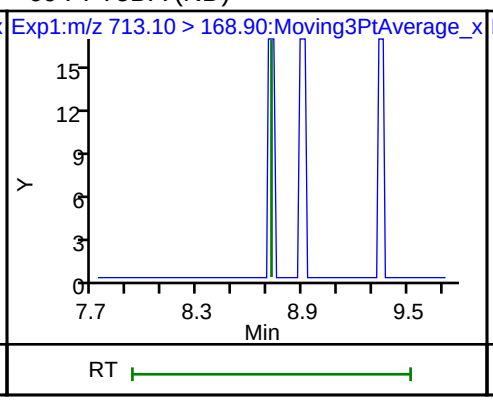
68 11ClFOS (ND)



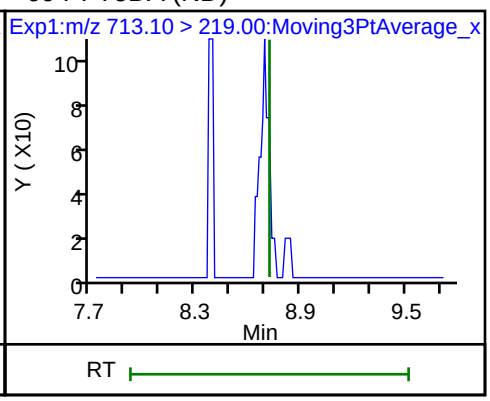
D 70 13C2 PFTeDA



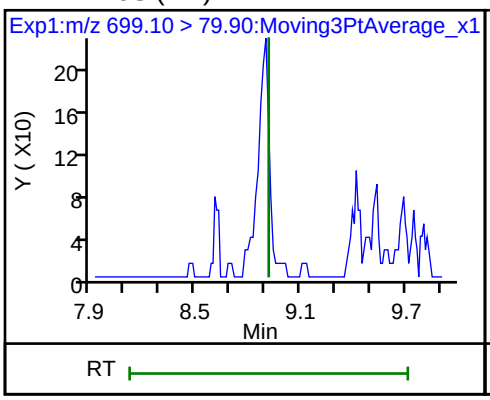
69 PFTeDA (ND)



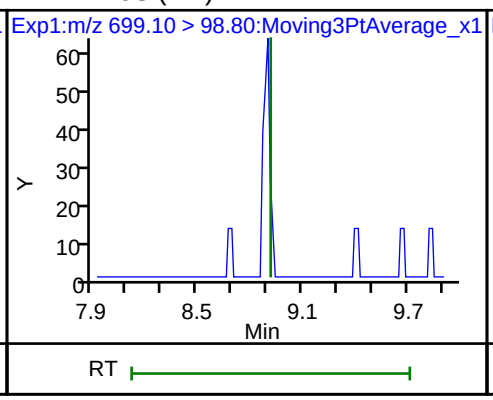
69 PFTeDA (ND)



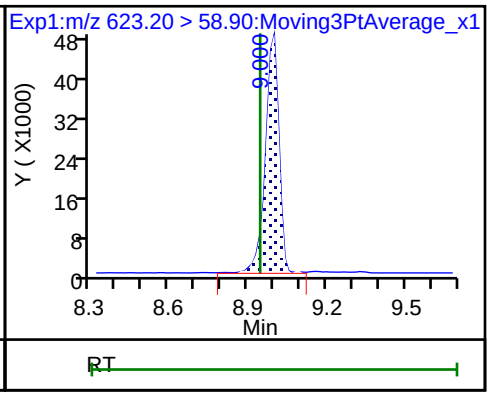
71 PFDoS (ND)



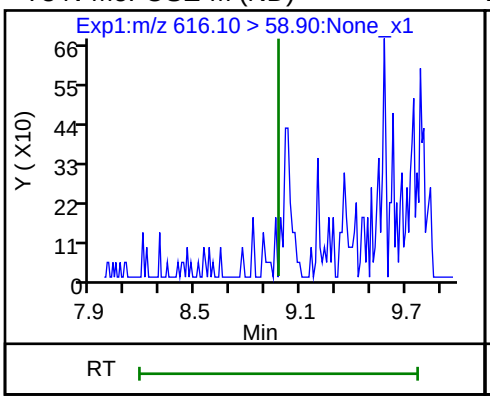
71 PFDoS (ND)



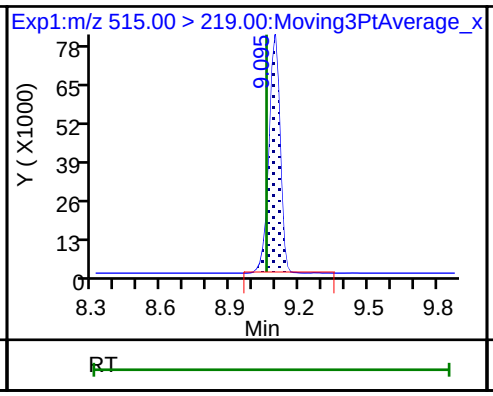
D 72 d7-N-Me-FOSE



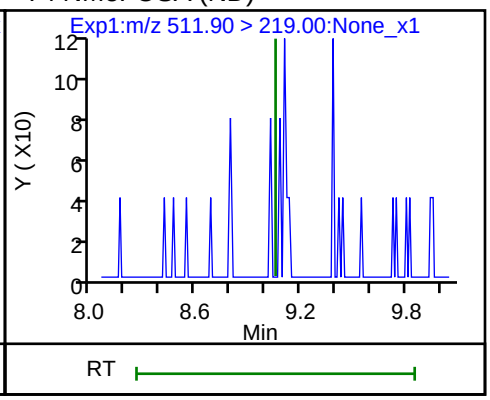
73 N-MeFOSE-M (ND)



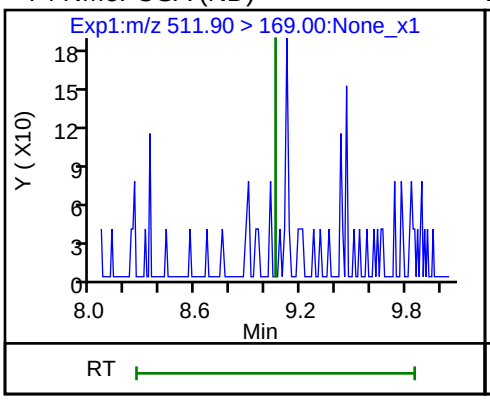
D 75 d3-NMePFOSA



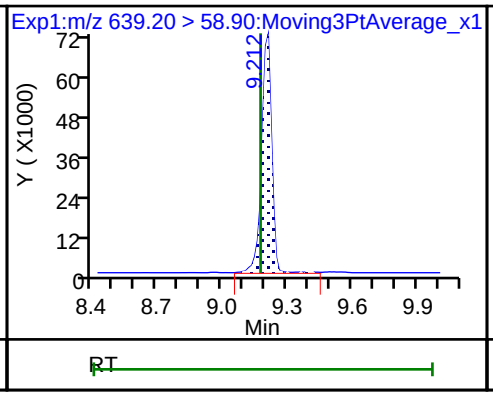
74 NMeFOSA (ND)



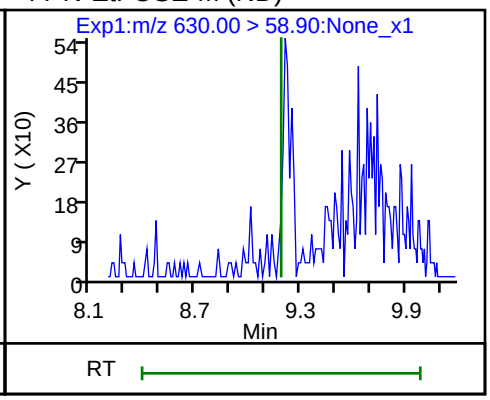
74 NMeFOSA (ND)



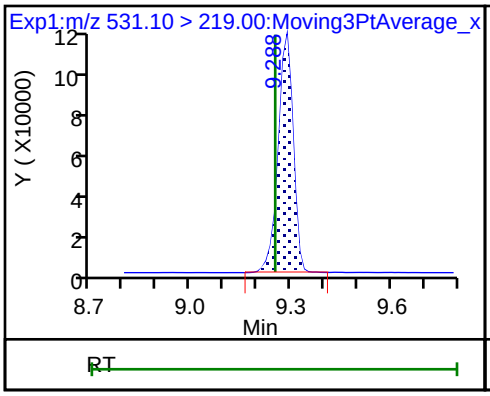
D 76 d9-N-EtFOSE



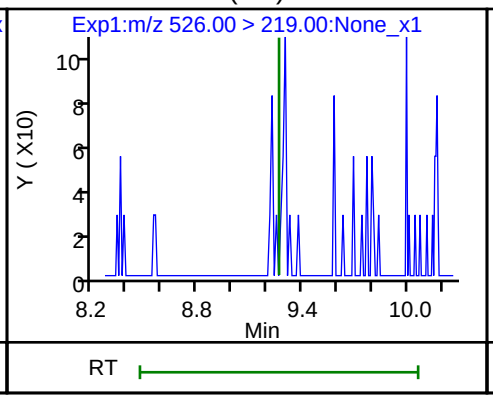
77 N-EtFOSE-M (ND)



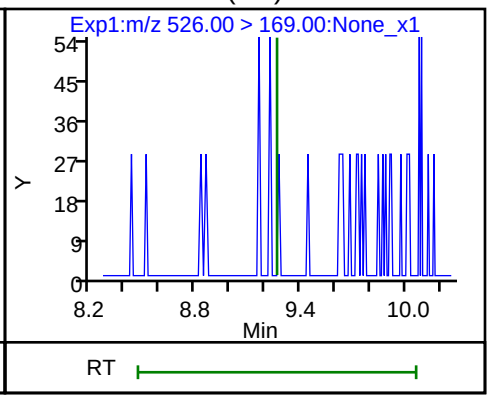
D 78 d5-NEtPFOSA



79 N-EtFOSA-M (ND)



79 N-EtFOSA-M (ND)



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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-769782/1	26FEB16CAL-01.d
Level 2	IC 410-769782/2	26FEB16CAL-02.d
Level 3	IC 410-769782/3	26FEB16CAL-03.d
Level 4	IC 410-769782/4	26FEB16CAL-04.d
Level 5	ICISAV 410-769782/5	26FEB16CAL-05.d
Level 6	IC 410-769782/6	26FEB16CAL-06.d
Level 7	IC 410-769782/7	26FEB16CAL-07.d
Level 8	IC 410-769782/8	26FEB16CAL-08.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 8	LVL 4	LVL 5		B	M1	M2								
Perfluoropropionic acid (PFPrA)	0.9326 0.8913	0.9435 0.9197	0.8849	0.8772	0.9536	AveID		0.9147				3.3		20.0			
Perfluorobutanoic acid (PFBA)	0.9580 0.8950	0.9616 0.9271	0.8917 0.8821	0.8715	0.9400	AveID		0.9159				3.8		20.0			
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.0157 0.9523	1.0928 1.0388	0.9679	0.9155	1.0596	AveID		1.0061				6.3		20.0			
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.0560 0.0514	0.0557 0.0549	0.0423	0.0460	0.0551	AveID		0.0516				10.5		20.0			
Perfluoropentanoic acid (PFPeA)	1.2825 1.1191	1.2361 1.1615	1.0873 1.0427	1.0782	1.1799	AveID		1.1484				7.2		20.0			
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.3337 1.3579	1.4385 1.3437	1.2561	1.2792	1.4213	AveID		1.3472				5.0		20.0			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.9749 1.8798	1.8986 1.8294	1.7130	1.7415	1.8244	AveID		1.8374				4.9		20.0			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.2970 0.2527	0.3288 0.2825	0.2579	0.2383	0.2618	AveID		0.2742				11.3		20.0			
Perfluorohexanoic acid (PFHxA)	0.8534 0.7294	0.7361 0.7716	0.7086 0.7544	0.6545	0.7558	AveID		0.7455				7.6		20.0			
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.0894 0.1054	0.0951 0.1179	0.0790	0.0965	0.1116	AveID		0.0993				13.4		20.0			
Perfluorobutanesulfonic acid (PFBS)	0.9077 0.8084	0.9420 0.8664	0.9466 0.7764	1.0094	0.8893	AveID		0.8933				8.5		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

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 8	LVL 4	LVL 5		B	M1	M2								
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.1666 1.0455	1.1826 1.0780	1.0621 1.0304	0.9327	1.1659	AveID		1.0830				7.9		20.0			
Perfluorobutanesulfonamide (FBSA)	0.6834 0.6866	0.7521 0.8067	0.5764	0.7082	0.7610	AveID		0.7106				10.4		20.0			
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.7233 2.3782	2.4186 2.2098	2.4486	2.2446	2.5418	AveID		2.4236				7.2		20.0			
Perfluoroheptanoic acid (PFHpA)	0.6692 0.6643	0.7466 0.7444	0.6879 0.7142	0.6782	0.7089	AveID		0.7017				4.6		20.0			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.7022 3.4195	3.5938 3.2795	3.5394 3.2565	3.0618	3.6697	AveID		3.4403				6.6		20.0			
Perfluoropentanesulfonic acid (PFPeS)	1.0959 1.1209	1.1790 1.1389	1.1475 1.0740	1.0935	1.2047	AveID		1.1318				4.0		20.0			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.7660 1.8977	2.0017 1.7883	1.7616	1.7033	2.0071	AveID		1.8465				6.6		20.0			
Bis(trifluoromethane)sulfonamide (TFSI)	1.9091 1.7818	1.6976 2.0677	1.8682	1.6234	1.9711	AveID		1.8455				8.4		20.0			
Perfluorooctanoic acid (PFOA)	0.5443 0.5028	0.5464 0.5425	0.5213 0.5478	0.4738	0.5340	AveID		0.5266				5.0		20.0			
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.0502 0.0517	0.0502 0.0575	0.0410	0.0508	0.0535	AveID		0.0507				9.8		20.0			
Perfluorohexanesulfonic acid (PFHxS)	0.9475 0.6999	0.8439 0.7180	0.7160 0.7057	0.6882	0.7629	AveID		0.7603				11.9		20.0			
Perfluorononanoic acid (PFNA)	1.0613 0.8626	0.9913 0.9346	0.8530 0.8652	0.8168	0.8881	AveID		0.9091				9.0		20.0			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.6129 1.4692	1.7814 1.8129	1.6803	1.6029	1.7394	AveID		1.6713				7.2		20.0			
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)	0.2142 0.2257	0.2413 0.2445	0.2198	0.2110	0.2434	AveID		0.2286				6.3		20.0			
Perfluoroheptanesulfonic acid (PFHpS)	1.4173 1.1861	1.2752 1.1970	1.1902 1.2019	1.2261	1.3569	AveID		1.2563				6.9		20.0			
N-methylperfluorooctanesulfonamido acetic acid (NMeFOSAA)	0.8946 1.0162	1.0101 0.9782	0.9570	0.9291	1.0940	AveID		0.9827				6.6		20.0			
Perfluorodecanoic acid (PFDA)	0.5630 0.5850	0.5212 0.6256	0.5107	0.5401	0.5478	AveID		0.5562				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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

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 8	LVL 4	LVL 5		B	M1	M2								
Perfluorohexanesulfonamide (FHxSA)	1.4412 1.2949	1.2869 1.3790	1.0683	1.3945	1.4517	AveID		1.3309				10.0		20.0			
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.9220 0.8548	0.9535 0.8428	0.8714	0.8267	0.9016	AveID		0.8818				5.2		20.0			
Perfluorooctanesulfonic acid (PFOS)	1.5429 1.2624	1.4293 1.3993	1.3029 1.3589	1.3552	1.3811	AveID		1.3790				6.1		20.0			
Perfluoroundecanoic acid (PFUnA)	0.5715 0.5318	0.5640 0.5440	0.5068	0.5220	0.5689	AveID		0.5442				4.6		20.0			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.8307 2.6326	3.0550 2.7975	2.8192	2.7281	3.0409	AveID		2.8434				5.5		20.0			
Perfluorononanesulfonic acid (PFNS)	0.8456 0.7968	0.8572 0.9240	0.8762	0.8313	0.8945	AveID		0.8608				4.9		20.0			
Perfluorododecanoic acid (PFDoA)	0.6442 0.6814	0.6655 0.8029	0.6696	0.6138	0.7468	AveID		0.6892				9.4		20.0			
Perfluorooctanesulfonamide (PFOSA)	1.2167 1.0953	1.1793 1.0964	1.1243	1.0630	1.1800	AveID		1.1364				5.0		20.0			
Perfluorodecanesulfonic acid (PFDS)	1.0552 1.0325	1.0594 1.0907	1.1105	1.0562	1.1480	AveID		1.0789				3.7		20.0			
Perfluorotridecanoic acid (PFTrDA)	0.9535 0.8229	0.8747 0.8610	0.7582	0.7530	0.9264	AveID		0.8500				9.1		20.0			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.7234 1.6925	1.8253 1.7799	1.7870	1.7486	1.9647	AveID		1.7888				5.0		20.0			
Perfluorotetradecanoic acid (PFTeDA)	0.1396 0.1026	0.1271 0.1219	0.0872	0.1162	0.1153	AveID		0.1157				14.7		20.0			
Perfluorododecanesulfonic acid (PFDoS)	1.1009 1.0426	1.0953 1.0585	1.2075	1.0748	1.1814	AveID		1.1087				5.6		20.0			
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.0520 2.6040	2.8946 2.6500	2.3865	2.4322	2.7355	AveID		2.6793				8.9		20.0			
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.8829 0.8591	0.9228 0.9116	0.8554	0.8519	0.9421	AveID		0.8894				4.1		20.0			
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.7822 3.1143	3.2487 3.1585	3.0575	3.1699	3.2005	AveID		3.1045				5.0		20.0			
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.8976 0.8520	0.8900 0.8245	0.7900	0.8541	0.8660	AveID		0.8535				4.4		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

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 8	LVL 4	LVL 5		B	M1	M2								
Perfluoro-n-octadecanoic acid (PFODA)	1.0384 0.8141	0.8269 +++++	0.5401	0.7189	0.8344	L2ID	0.0150	0.7164				17.8		20.0			
13C3-PFPrA	0.6858 0.6973	0.6912 0.7020	0.7399 +++++	0.6792	0.6582	Ave		0.6934				3.6		20.0			
13C4 PFBA	0.9828 0.9806	1.0025 0.9792	0.9982 0.9703	0.9927	0.9658	Ave		0.9840				1.3		20.0			
13C5 PFPeA	0.8647 0.8814	0.8879 0.9406	0.9067 0.8403	0.8999	0.8749	Ave		0.8870				3.4		20.0			
13C2 4:2 FTS	0.2701 0.2484	0.2998 0.2437	0.2833 +++++	0.2737	0.2708	Ave		0.2700				7.2		20.0			
13C5 PFHxA	1.0376 1.1016	1.1102 1.1890	1.0929 1.0168	1.0936	1.0674	Ave		1.0886				4.8		20.0			
13C3 PFBS	1.2864 1.3657	1.2906 1.2652	1.2842 1.3053	1.2075	1.3095	Ave		1.2893				3.4		20.0			
13C3 HFPO-DA	0.6645 0.7209	0.7348 0.8029	0.6556 0.6424	0.7533	0.6977	Ave		0.7090				7.7		20.0			
13C4 PFHpA	1.0544 1.0592	1.1005 1.1951	1.0607 0.9427	1.0336	1.0779	Ave		1.0655				6.6		20.0			
13C2 6:2 FTS	0.2554 0.1986	0.2523 0.1815	0.2572 +++++	0.2300	0.1968	Ave		0.2246				14.2		20.0			
13C8 PFOA	0.9667 0.9913	0.9792 0.9454	0.8939 0.9632	0.9957	0.9306	Ave		0.9583				3.6		20.0			
13C3 PFHxS	1.0886 1.1616	1.1352 1.0824	1.0537 1.0970	1.0684	1.0464	Ave		1.0917				3.6		20.0			
13C9 PFNA	1.0169 1.0003	0.8922 0.9705	1.0115 1.0886	1.0543	0.9677	Ave		1.0003				5.9		20.0			
13C2 8:2 FTS	0.2422 0.2428	0.2590 0.1977	0.2396 +++++	0.2192	0.2184	Ave		0.2313				8.9		20.0			
d3-NMeFOSAA	0.4627 0.4538	0.5046 0.5242	0.4537 +++++	0.4817	0.4683	Ave		0.4784				5.6		20.0			
13C6 PFDA	0.9886 0.9712	1.0409 1.0065	0.9897 1.0167	0.9579	0.9878	Ave		0.9949				2.6		20.0			
d5-NEtFOSAA	0.4425 0.4266	0.4520 0.4697	0.4100 +++++	0.4343	0.4303	Ave		0.4379				4.4		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

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 8	LVL 4	LVL 5		B	M1	M2								
13C8 PFOS	1.0883 1.1175	1.1761 1.1292	1.1189 1.0599	1.1130	1.0871	Ave		1.1113				3.1		20.0			
13C7 PFUnA	1.0575 1.0248	1.0392 1.0037	1.1215 1.0651	0.9969	1.0082	Ave		1.0396				4.0		20.0			
13C2 PFDoA	1.0315 1.0354	1.0744 0.9921	1.1079 1.0460	1.1003	0.9281	Ave		1.0394				5.7		20.0			
13C8 FOSA	1.1875 1.1515	1.2198 1.3220	0.9680 +++++	1.2316	1.2282	Ave		1.1870				9.2		20.0			
13C2 PFTeDA	0.7941 1.0007	0.9250 1.0077	1.0660 1.0281	0.9345	0.8814	Ave		0.9547				9.3		20.0			
d7-N-MeFOSE-M	0.0750 0.0763	0.0814 0.0855	0.0682 +++++	0.0860	0.0778	Ave		0.0786				8.0		20.0			
d3-NMePFOSA	0.3243 0.3578	0.3482 0.3866	0.2956 +++++	0.3557	0.3431	Ave		0.3445				8.3		20.0			
d9-N-EtFOSE-M	0.0968 0.0870	0.0998 0.0980	0.0733 +++++	0.0844	0.0886	Ave		0.0897				10.4		20.0			
d5-NEtPFOSA	0.4109 0.4143	0.4247 0.4750	0.3638 +++++	0.4165	0.4366	Ave		0.4203				7.9		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-769782/1	26FEB16CAL-01.d
Level 2	IC 410-769782/2	26FEB16CAL-02.d
Level 3	IC 410-769782/3	26FEB16CAL-03.d
Level 4	IC 410-769782/4	26FEB16CAL-04.d
Level 5	ICISAV 410-769782/5	26FEB16CAL-05.d
Level 6	IC 410-769782/6	26FEB16CAL-06.d
Level 7	IC 410-769782/7	26FEB16CAL-07.d
Level 8	IC 410-769782/8	26FEB16CAL-08.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perfluoropropionic acid (PFPrA)		AveID	129498 11674387	335247 23366884	1586406	2387767	6090292	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorobutanoic acid (PFBA)		AveID	76254 6593867	198207 13143211	862631 40468938	1386888	3523563	0.100 10.0	0.250 20.0	1.00 100	2.00	5.00
Perfluoro-3-methoxypropanoic acid (PFMPA)		AveID	41510 3663876	112272 7964096	486650	772688	2069004	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
3-Perfluoropropylpropanoic acid (3:3 FTCA)		AveID	4574 395304	11439 841633	42586	77626	214997	0.100 10.0	0.250 20.0	1.00	2.00	5.00
Perfluoropentanoic acid (PFPeA)		AveID	52416 4305543	126992 8904427	546691 31772856	910010	2303775	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
Perfluoro-4-methoxybutanoic acid (PFMBA)		AveID	54508 5224161	147784 10301242	631589	1079617	2775253	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)		AveID	40649 3305106	108058 6429585	456103	753043	1853826	0.0938 9.38	0.235 18.8	0.938	1.88	4.69
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)		AveID	14567 1215152	42243 2737029	156322	244392	623634	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorohexanoic acid (PFHxA)		AveID	41852 3507185	94564 7477144	429479 27817305	671342	1800338	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
3-Perfluoropentylpropanoic acid (5:3 FTCA)		AveID	21934 2534146	61117 5713771	239531	494918	1328836	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorobutanesulfonic acid (PFBS)		AveID	42128 3699583	109244 7482977	540869 24318007	911629	2068130	0.0444 4.44	0.111 8.88	0.444 44.4	0.888	2.22
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)		AveID	27483	75411	289595	494231	1361543	0.0375	0.0938	0.375	0.750	1.88

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			2467529	5290713	24004142			3.75	7.50	50.0		
Perfluorobutanesulfonamide (FBSA)		AveID	35717 3538538	98223 7845857	370854	720273	1992937	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)		AveID	119135 10199920	277152 19101117	1323710	2053539	5400595	0.0446 4.46	0.112 8.92	0.446	0.892	2.23
Perfluoroheptanoic acid (PFHpA)		AveID	33352 3071522	95073 7250614	404621 24415111	657521	1705194	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)		AveID	110013 10179310	289063 20301197	1217271 53823324	2046385	5405289	0.0473 4.73	0.118 9.46	0.473 35.5	0.946	2.37
Perfluoropentanesulfonic acid (PFPeS)		AveID	45561 4618897	127305 8907618	569455 29927421	924942	2369871	0.0470 4.70	0.118 9.40	0.470 47.0	0.940	2.35
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)		AveID	34896 2708074	97306 4749273	432316	628224	1503983	0.0952 9.52	0.238 19.0	0.952	1.90	4.76
Bis(trifluoromethane)sulfonamide (TFSI)		AveID	82661 7646546	190909 16842550	965550	1430085	4038398	0.0490 4.90	0.122 9.79	0.490	0.979	2.45
Perfluorooctanoic acid (PFOA)		AveID	34448 3020469	87316 6376210	351673 26169202	601275	1592243	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
3-Perfluoroheptylpropanoic acid (7:3 FTCA)		AveID	12306 1241997	32266 2785807	124362	260691	637134	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorohexanesulfonic acid (PFHxS)		AveID	38219 2797950	88410 5448269	344722 19078969	564792	1456076	0.0456 4.56	0.114 9.12	0.456 45.6	0.912	2.28
Perfluorononanoic acid (PFNA)		AveID	51444 3917159	112952 8417344	531583 30144518	801423	2047674	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)		AveID	30467 2584967	89622 5290534	387303	568221	1458636	0.0960 9.60	0.240 19.2	0.960	1.92	4.80
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)		AveID	8754 914369	25613 1879988	107212	175461	470591	0.0462 4.62	0.116 9.24	0.462	0.924	2.31
Perfluoroheptanesulfonic acid (PFHpS)		AveID	53350 4447380	123938 8301365	548190 29925955	911681	2417038	0.0477 4.77	0.119 9.54	0.477 47.7	0.954	2.39
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	15008 1621815	44159 3301183	187346	313397	879902	0.0500 5.00	0.125 10.0	0.500	1.00	2.50

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perfluorodecanoic acid (PFDA)		AveID	28533 2621628	69904 5606813	312424	534955	1358958	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorohexanesulfonamide (FHxSA)		AveID	63742 5676365	147828 11473849	563971	1254808	3037932	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		AveID	14792 1282368	37338 2548262	154160	251409	666366	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorooctanesulfonic acid (PFOS)		AveID	56615 4614260	135422 9460152	584970 32982885	982329	2398305	0.0465 4.65	0.116 9.30	0.465 46.5	0.930	2.33
Perfluoroundecanoic acid (PFUnA)		AveID	30984 2515110	75519 4861929	351364	538073	1440527	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O		AveID	104320 9663966	290699 18994662	1271217	1985968	5303204	0.0467 4.67	0.117 9.34	0.467	0.934	2.34
Perfluorononanesulfonic acid (PFNS)		AveID	32097 3012467	84014 6461590	406944	623332	1606700	0.0481 4.81	0.120 9.62	0.481	0.962	2.41
Perfluorododecanoic acid (PFDoA)		AveID	34064 3255368	92120 7093154	458559	698311	1740494	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorooctanesulfonamide (PFOSA)		AveID	52383 4435862	124613 9330930	469585	916844	2489375	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorodecanesulfonic acid (PFDS)		AveID	40136 3912046	104039 7643188	516841	793565	2066419	0.0482 4.82	0.121 9.64	0.482	0.964	2.41
Perfluorotridecanoic acid (PFTrDA)		AveID	44619 3865999	112666 7665989	509392	792216	2104956	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF		AveID	64192 6279418	175539 12214403	814432	1286555	3463024	0.0472 4.72	0.118 9.44	0.472	0.944	2.36
Perfluorotetradecanoic acid (PFTeDA)		AveID	5684 473595	15144 1094262	57475	112277	255233	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorododecanesulfonic acid (PFDoS)		AveID	42135 3974712	108234 7464000	565451	812563	2139724	0.0485 4.85	0.121 9.70	0.485	0.970	2.43
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)		AveID	41467 3494990	102030 7292324	351086	732361	1828764	0.250 25.0	0.625 50.0	2.50	5.00	12.5
N-methylperfluorooctane sulfonamide (NMeFOSA)		AveID	10382 1081040	27833 2268639	109092	212200	555119	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)		AveID	48809	140473	483548	936205	2434763	0.250	0.625	2.50	5.00	12.5

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			4765981	9962740				25.0	50.0			
N-ethylperfluorooctane sulfonamide (NEtFOSA)		AveID	13372 1241603	32743 2521444	124002	249110	649397	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluoro-n-octadecanoic acid (PFODA)		L2ID	42275 3759335	98547 +++++	355894	694650	1846968	0.0500 5.00	0.125 +++++	0.500	1.00	2.50
13C3-PFPrA	13C3PFBA	Ave	1110894 1047881	1137041 1016316	1434224 +++++	1088843	1021889	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
13C4 PFBA	13C3PFBA	Ave	1591986 1473528	1649018 1417593	1934721 917538	1591361	1499361	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C5 PFPeA	PFHxA	Ave	1634812 1538909	1643802 1533298	2011241 1218861	1688006	1562040	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C2 4:2 FTS	PFHxS	Ave	1029130 879102	1138301 878629	1331292 +++++	1081024	1016117	4.69 4.69	4.69 4.69	4.69 +++++	4.69	4.69
13C5 PFHxA	PFHxA	Ave	1961713 1923314	2055444 1938053	2424250 1475003	2051314	1905556	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C3 PFBS	PFHxS	Ave	1948391 1921355	1947362 1812920	2398676 1314971	1895700	1952663	1.86 1.86	1.86 1.86	1.86 1.86	1.86	1.86
13C3 HFPO-DA	PFHxA	Ave	1256458 1258717	1360417 1308739	1454195 931799	1413007	1245633	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C4 PFHpA	PFHxA	Ave	1993486 1849354	2037469 1947996	2352736 1367446	1938922	1924295	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C2 6:2 FTS	PFHxS	Ave	988015 713500	972241 663930	1227072 +++++	922049	749341	4.76 4.76	4.76 4.76	4.76 +++++	4.76	4.76
13C8 PFOA	PFOA	Ave	2531722 2403075	2556684 2350487	2698297 1910849	2538178	2385604	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C3 PFHxS	PFHxS	Ave	1677087 1662256	1742388 1577514	2001917 1124101	1706074	1587137	1.90 1.90	1.90 1.90	1.90 1.90	1.90	1.90
13C9 PFNA	PFNA	Ave	1938864 1816407	1823046 1801307	2492846 1393634	1962435	1844501	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C2 8:2 FTS	PFHxS	Ave	944499 879695	1006222 729572	1152485 +++++	886246	838590	4.80 4.80	4.80 4.80	4.80 +++++	4.80	4.80
d3-NMeFOSAA	PFOS	Ave	1677590 1596011	1748619 1687371	1957715 +++++	1686487	1608593	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
13C6 PFDA	PFDA	Ave	2027277 1792704	2145786 1792462	2447208 1871666	1980918	1984472	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
d5-NEtFOSAA	PFOS	Ave	1604310 1500280	1566322 1511863	1769006 +++++	1520486	1478116	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
13C8 PFOS	PFOS	Ave	1511992 1506071	1561579 1392852	1850000 1000118	1493372	1431022	1.92 1.92	1.92 1.92	1.92 1.92	1.92	1.92
13C7 PFUnA	PFDA	Ave	2168585 1891648	2142266 1787471	2773070 1960917	2061705	2025565	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C2 PFDoA	PFDA	Ave	2115198 1911121	2214759 1766814	2739305 1925634	2275550	1864578	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C8 FOSA	PFOS	Ave	1722143 1619947	1690636 1702127	1670663 +++++	1724977	1687659	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
13C2 PFTeDA	PFDA	Ave	1628455 1847092	1906812 1794753	2635796 1892663	1932604	1770843	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
d7-N-MeFOSE-M	PFOS	Ave	271738 268433	281984 275182	294230 +++++	301112	267413	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
d3-NMePFOSA	PFOS	Ave	470353 503353	482580 497714	510158 +++++	498202	471384	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
d9-N-EtFOSE-M	PFOS	Ave	350865 306075	345914 315423	316304 +++++	295343	304298	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
d5-NEtPFOSA	PFOS	Ave	595885 582881	588659 611650	627830 +++++	583343	599921	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 IsoDil

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-769782/1	26FEB16CAL-01.d
Level 2	IC 410-769782/2	26FEB16CAL-02.d
Level 3	IC 410-769782/3	26FEB16CAL-03.d
Level 4	IC 410-769782/4	26FEB16CAL-04.d
Level 5	ICISAV 410-769782/5	26FEB16CAL-05.d
Level 6	IC 410-769782/6	26FEB16CAL-06.d
Level 7	IC 410-769782/7	26FEB16CAL-07.d
Level 8	IC 410-769782/8	26FEB16CAL-08.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluoropropionic acid (PFPrA)	2.0 0.5	3.2	-3.3	-4.1	4.3	-2.6	30 30	30	30	30	30	30
Perfluorobutanoic acid (PFBA)	4.6 1.2	5.0 -3.7	-2.6	-4.8	2.6	-2.3	30 30	30 30	30	30	30	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.0 3.3	8.6	-3.8	-9.0	5.3	-5.3	30 30	30	30	30	30	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.4 6.4	7.9	-17.9	-10.9	6.7	-0.5	30 30	30	30	30	30	30
Perfluoropentanoic acid (PFPeA)	11.7 1.1	7.6 -9.2	-5.3	-6.1	2.7	-2.6	30 30	30 30	30	30	30	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	-1.0 -0.3	6.8	-6.8	-5.0	5.5	0.8	30 30	30	30	30	30	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.5 -0.4	3.3	-6.8	-5.2	-0.7	2.3	30 30	30	30	30	30	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.3 3.0	19.9	-5.9	-13.1	-4.5	-7.8	30 30	30	30	30	30	30
Perfluorohexanoic acid (PFHxA)	14.5 3.5	-1.3 1.2	-4.9	-12.2	1.4	-2.2	30 30	30 30	30	30	30	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	-9.9 18.8	-4.2	-20.4	-2.8	12.4	6.2	30 30	30	30	30	30	30
Perfluorobutanesulfonic acid (PFBS)	1.6 -3.0	5.5 -13.1	6.0	13.0	-0.4	-9.5	30 30	30 30	30	30	30	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	7.7 -0.5	9.2 -4.9	-1.9	-13.9	7.7	-3.5	30 30	30 30	30	30	30	30
Perfluorobutanesulfonamide (FBSA)	-3.8 13.5	5.8	-18.9	-0.3	7.1	-3.4	30 30	30	30	30	30	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	12.4 -8.8	-0.2	1.0	-7.4	4.9	-1.9	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluoroheptanoic acid (PFHpA)	-4.6 6.1	6.4 1.8	-2.0	-3.3	1.0	-5.3	30 30	30 30	30	30	30	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.6 -4.7	4.5 -5.3	2.9	-11.0	6.7	-0.6	30 30	30 30	30	30	30	30
Perfluoropentanesulfonic acid (PFPeS)	-3.2 0.6	4.2 -5.1	1.4	-3.4	6.4	-1.0	30 30	30 30	30	30	30	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	-4.4 -3.2	8.4	-4.6	-7.8	8.7	2.8	30 30	30	30	30	30	30
Bis(trifluoromethane)sulfonamide (TFSI)	3.4 12.0	-8.0	1.2	-12.0	6.8	-3.5	30 30	30	30	30	30	30
Perfluorooctanoic acid (PFOA)	3.4 3.0	3.8 4.0	-1.0	-10.0	1.4	-4.5	30 30	30 30	30	30	30	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	-1.0 13.4	-0.9	-19.1	0.3	5.5	1.9	30 30	30	30	30	30	30
Perfluorohexanesulfonic acid (PFHxS)	24.6 -5.6	11.0 -7.2	-5.8	-9.5	0.3	-7.9	30 30	30 30	30	30	30	30
Perfluorononanoic acid (PFNA)	16.7 2.8	9.0 -4.8	-6.2	-10.2	-2.3	-5.1	30 30	30 30	30	30	30	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	-3.5 8.5	6.6	0.5	-4.1	4.1	-12.1	30 30	30	30	30	30	30
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)	-6.3 7.0	5.6	-3.8	-7.7	6.5	-1.2	30 30	30	30	30	30	30
Perfluoroheptanesulfonic acid (PFHpS)	12.8 -4.7	1.5 -4.3	-5.3	-2.4	8.0	-5.6	30 30	30 30	30	30	30	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-9.0 -0.5	2.8	-2.6	-5.5	11.3	3.4	30 30	30	30	30	30	30
Perfluorodecanoic acid (PFDA)	1.2 12.5	-6.3	-8.2	-2.9	-1.5	5.2	30 30	30	30	30	30	30
Perfluorohexanesulfonamide (FHxSA)	8.3 3.6	-3.3	-19.7	4.8	9.1	-2.7	30 30	30	30	30	30	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6 -4.4	8.1	-1.2	-6.2	2.2	-3.1	30 30	30	30	30	30	30
Perfluorooctanesulfonic acid (PFOS)	11.9 1.5	3.6 -1.5	-5.5	-1.7	0.2	-8.5	30 30	30 30	30	30	30	30
Perfluoroundecanoic acid (PFUnA)	5.0 0.0	3.7	-6.9	-4.1	4.6	-2.3	30 30	30	30	30	30	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	-0.4 -1.6	7.4	-0.9	-4.1	6.9	-7.4	30 30	30	30	30	30	30
Perfluorononanesulfonic acid (PFNS)	-1.8 7.3	-0.4	1.8	-3.4	3.9	-7.4	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 769782

SDG No.:

Instrument ID: 30577 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/16/2026 20:22 Calibration End Date: 02/16/2026 21:57 Calibration ID: 81974

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluorododecanoic acid (PFDoA)	-6.5 16.5	-3.4	-2.8	-10.9	8.4	-1.1	30 30	30	30	30	30	30
Perfluorooctanesulfonamide (PFOSA)	7.1 -3.5	3.8	-1.1	-6.5	3.8	-3.6	30 30	30	30	30	30	30
Perfluorodecanesulfonic acid (PFDS)	-2.2 1.1	-1.8	2.9	-2.1	6.4	-4.3	30 30	30	30	30	30	30
Perfluorotridecanoic acid (PFTrDA)	12.2 1.3	2.9	-10.8	-11.4	9.0	-3.2	30 30	30	30	30	30	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	-3.7 -0.5	2.0	-0.1	-2.2	9.8	-5.4	30 30	30	30	30	30	30
Perfluorotetradecanoic acid (PFTeDA)	20.7 5.4	9.8	-24.6	0.4	-0.3	-11.4	30 30	30	30	30	30	30
Perfluorododecanesulfonic acid (PFDoS)	-0.7 -4.5	-1.2	8.9	-3.1	6.6	-6.0	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	13.9 -1.1	8.0	-10.9	-9.2	2.1	-2.8	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	-0.7 2.5	3.8	-3.8	-4.2	5.9	-3.4	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	-10.4 1.7	4.6	-1.5	2.1	3.1	0.3	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	5.2 -3.4	4.3	-7.4	0.1	1.5	-0.2	30 30	30	30	30	30	30
Perfluoro-n-octadecanoic acid (PFODA)	3.1 +++++	-1.3	-28.8	-1.8	15.6	13.2	30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-01.d
Lims ID: IC CAL 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-Feb-2026 20:22:05 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 1
Misc. Info.: Plate: 1 Rack: 1 410-0175852-001
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:12 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:37:37
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.142	2.142	0.0	0.996	129498	0.2549		102	522	
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.150	0.0	0.499	1110894	1.98		98.9	2610	
3 PFBA										
212.80 > 168.90	4.302	4.302	0.0	0.998	76254	0.1046		105	1242	
D 4 13C4-PFBA										
216.80 > 171.90	4.309	4.309	0.0	1.000	1591986	2.00		99.9	14913	
* 5 13C3PFBA										
216.00 > 172.00	4.309	4.309	0.0		1619888	2.00			3462	
6 PFMPA										
229.00 > 84.90	4.622	4.622	0.0	0.934	41510	0.0505		101	347	
7 3:3 FTCA										
241.00 > 177.00	4.622	4.622	0.0	0.934	4574	0.1084	Target=1.16	108	122	
241.00 > 117.00	4.632	4.622	0.010	0.936	4189		1.09(0.58-1.73)	108	68.5	
D 8 13C5 PFPeA										
268.30 > 223.00	4.950	4.950	0.0	0.912	1634812	1.95		97.5	5370	
9 PFPA										
263.00 > 219.00	4.961	4.961	0.0	1.002	52416	0.0558		112	151	
10 PFMBA										
279.00 > 85.10	5.109	5.109	0.0	1.032	54508	0.0495		99.0	458	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.237	5.237	0.0	0.804	1029130	4.69		100	4473	
12 4:2FTS										
327.10 > 307.00	5.237	5.237	0.0	1.000	40649	0.1008	Target=1.70	107	557	
327.10 > 80.90	5.237	5.237	0.0	1.000	22331		1.82(0.85-2.54)	107	32.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.377	5.377	0.0	0.991	14567	0.0542	Target=1.61	108	113	
295.00 > 84.90	5.377	5.377	0.0	0.991	8159		1.79(0.80-2.41)	108	76.4	
* 16 13C2 PFHxA										
315.10 > 270.00	5.426	5.426	0.0		4726785	5.00			10789	
D 15 13C5 PFHxA										
318.00 > 273.00	5.426	5.426	0.0	1.000	1961713	1.91		95.3	3584	
17 PFHxA										
313.00 > 269.00	5.426	5.426	0.0	1.000	41852	0.0572	Target=9.95	114	184	
313.00 > 118.90	5.426	5.426	0.0	1.000	3283		12.75(4.98-14.93)	114	32.2	
18 5:3 FTCA										
341.00 > 237.10	5.505	5.505	0.0	1.015	21934	0.2252	Target=0.62	90.1	176	
341.00 > 217.00	5.505	5.505	0.0	1.015	38450		0.57(0.31-0.94)	90.1	224	
D 19 13C3 PFBS										
302.10 > 79.90	5.563	5.563	0.0	0.854	1948391	1.86		99.8	7359	
20 PFBS										
298.70 > 79.90	5.563	5.563	0.0	1.000	42128	0.0451	Target=3.17	102	245	
298.70 > 98.80	5.563	5.563	0.0	1.000	14965		2.82(1.59-4.76)	102	98.6	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.609	5.609	0.0	1.034	1256458	1.87		93.7	5300	
23 HFPO-DA										
284.90 > 168.90	5.609	5.609	0.0	1.000	27483	0.0404	Target=2.55	108	103	
284.90 > 184.90	5.609	5.609	0.0	1.000	11093		2.48(1.27-3.82)	108	59.7	
21 FBSA										
297.90 > 78.00	5.667	5.667	0.0	1.019	35717	0.0481		96.2	178	
26 PFEESA										
314.80 > 134.90	5.808	5.808	0.0	1.070	119135	0.0501	Target=12.76	112	717	
314.80 > 82.90	5.820	5.808	0.012	1.072	8000		14.89(6.38-19.14)	112	46.8	
D 28 13C4 PFHpA										
367.10 > 322.00	5.854	5.854	0.0	1.079	1993486	1.98		99.0	4693	
27 PFHpA										
363.10 > 319.00	5.854	5.854	0.0	1.000	33352	0.0477	Target=1.64	95.4	157	
363.10 > 169.00	5.865	5.854	0.011	1.002	23722		1.41(0.82-2.46)	95.4	110	
29 ADONA										
376.90 > 250.90	6.010	6.010	0.0	1.071	110013	0.0509	Target=2.22	108	520	
376.90 > 84.80	6.010	6.010	0.0	1.071	50542		2.18(1.11-3.33)	108	220	
30 PFPeS										
349.10 > 79.90	6.061	6.061	0.0	0.931	45561	0.0455	Target=3.23	96.8	201	
349.10 > 98.90	6.061	6.061	0.0	0.931	12182		3.74(1.61-4.84)	96.8	54.9	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.061	6.061	0.0	0.931	988015	5.41		114	4122	
31 6:2FTS										
427.10 > 407.00	6.061	6.061	0.0	1.000	34896	0.0910	Target=1.59	95.6	112	
427.10 > 80.90	6.061	6.061	0.0	1.000	23030		1.52(0.79-2.38)	95.6	49.6	
33 BTS										
280.00 > 147.00	6.222	6.222	0.0	0.955	82661	0.0506		103	347	
* 34 13C4 PFOA										
417.10 > 372.00	6.271	6.271	0.0		6547345	5.00			2694	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.271	6.271	0.0	1.000	2531722	2.02		101	5154	
36 PFOA										
413.00 > 369.00	6.271	6.271	0.0	1.000	34448	0.0517	Target=1.52	103	42.7	
413.00 > 169.00	6.271	6.271	0.0	1.000	24298		1.42(0.76-2.27)	103	30.9	
37 7:3 FTCA										
441.00 > 316.90	6.420	6.420	0.0	1.183	12306	0.2474	Target=0.24	99.0	93.0	
441.00 > 336.90	6.420	6.420	0.0	1.183	60266		0.20(0.12-0.36)	99.0	263	
40 PFHxS										
398.70 > 79.90	6.525	6.525	0.0	1.002	38219	0.0568	Target=3.27	125	41.3	
398.70 > 98.90	6.514	6.525	-0.010	1.000	9792		3.90(1.63-4.90)	125	17.3	
D 38 13C3 PFHxS										
402.10 > 79.90	6.514	6.514	0.0	1.000	1677087	1.89		99.7	3589	
* 39 18O2 PFHxS										
403.00 > 83.90	6.514	6.514	0.0		1540597	1.90			2439	
* 42 13C5 PFNA										
468.00 > 423.00	6.696	6.696	0.0		1906715	2.00			2781	
D 41 13C9 PFNA										
472.10 > 427.00	6.696	6.696	0.0	1.000	1938864	2.03		102	3936	
43 PFNA										
463.00 > 419.00	6.696	6.696	0.0	1.000	51444	0.0584	Target=2.14	117	73.2	
463.00 > 219.00	6.686	6.696	-0.010	0.999	21486		2.39(1.07-3.21)	117	37.7	
45 8:2FTS										
527.10 > 507.00	6.879	6.879	0.0	1.000	30467	0.0926	Target=1.87	96.5	75.3	
527.10 > 80.80	6.879	6.879	0.0	1.000	17114		1.78(0.94-2.81)	96.5	89.0	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.879	6.879	0.0	1.056	944499	5.03		105	3947	
46 PFECHS										
461.00 > 381.00	6.916	6.916	0.0	1.062	8754	0.0433	Target=0.17	93.7	66.0	
461.00 > 99.00	6.916	6.916	0.0	1.062	57253		0.15(0.09-0.26)	93.7	344	
47 PFHpS										
449.00 > 79.90	6.957	6.957	0.0	0.942	53350	0.0538	Target=3.71	113	188	
449.00 > 98.80	6.957	6.957	0.0	0.942	12870		4.15(1.86-5.57)	113	45.5	
50 NMeFOSAA										
570.10 > 419.00	7.039	7.039	0.0	0.999	15008	0.0455	Target=1.66	91.0	31.7	
570.10 > 483.00	7.059	7.039	0.020	1.001	10921		1.37(0.83-2.49)	91.0	36.2	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.049	7.049	0.0	0.955	1677590	4.84		96.7	5585	
53 PFDA										
512.90 > 469.00	7.108	7.108	0.0	1.000	28533	0.0506	Target=2.88	101	113	
512.90 > 219.00	7.118	7.108	0.010	1.001	9792		2.91(1.44-4.31)	101	81.3	
* 51 13C2 PFDA										
515.10 > 470.10	7.108	7.108	0.0		2050621	2.00			5957	
D 52 13C6 PFDA										
519.10 > 474.10	7.108	7.108	0.0	1.000	2027277	1.99		99.4	3762	
48 FHxSA										
397.90 > 78.00	7.137	7.137	0.0	1.096	63742	0.0541		108	296	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.230	7.230	0.0	0.979	1604310	5.05		101	3991	
55 NEtFOSAA										
584.20 > 419.10	7.249	7.249	0.0	1.003	14792	0.0523	Target=1.34	105	33.5	
584.20 > 526.00	7.239	7.249	-0.010	1.001	10427		1.42(0.67-2.01)	105	21.9	
* 57 13C4 PFOS										
502.80 > 79.90	7.384	7.384	0.0		1389324	1.92			4485	
D 56 13C8 PFOS										
507.10 > 79.90	7.384	7.384	0.0	1.000	1511992	1.88		97.9	4857	
58 PFOS										
498.90 > 79.90	7.384	7.384	0.0	1.000	56615	0.0520	Target=4.60	112	83.8	
498.90 > 98.80	7.384	7.384	0.0	1.000	12295		4.60(2.30-6.89)	112	37.0	
D 59 13C7 PFUnA										
570.00 > 525.10	7.525	7.525	0.0	1.059	2168585	2.03		102	7019	
60 PFUnA										
563.10 > 519.00	7.525	7.525	0.0	1.000	30984	0.0525	Target=3.77	105	153	
563.10 > 269.10	7.534	7.525	0.009	1.001	9950		3.11(1.88-5.65)	105	99.1	
61 9ClFOS										
530.80 > 351.00	7.704	7.704	0.0	1.043	104320	0.0465	Target=3.08	99.6	1235	
532.80 > 353.00	7.696	7.704	-0.008	1.042	34886		2.99(1.54-4.61)	99.6	299	
62 PFNS										
548.80 > 79.90	7.797	7.797	0.0	1.056	32097	0.0473	Target=3.66	98.2	396	
548.80 > 98.80	7.804	7.797	0.007	1.057	9071		3.54(1.83-5.49)	98.2	80.9	
D 81 PFDoA										
615.10 > 570.00	7.943	7.943	0.0	1.117	2115198	1.98		99.2	5471	
63 PFDoA										
613.10 > 569.00	7.943	7.943	0.0		34064	0.0467	Target=4.34	93.5	215	
613.10 > 319.00	7.936	7.943	-0.007		8976		3.80(2.17-6.51)	93.5	60.5	
D 65 13C8 FOSA										
506.10 > 77.80	8.156	8.156	0.0	1.104	1722143	2.00		100	2709	
64 PFOSA										M
498.10 > 77.90	8.156	8.156	0.0	1.000	52383	0.0535	Target=44.41	107	135	
498.10 > 478.00	8.165	8.156	0.009	1.001	1062		49.32(22.20-66.61)	107	2.0	M
66 PFDS										
599.00 > 79.90	8.208	8.208	0.0	1.112	40136	0.0471	Target=3.83	97.8	254	
599.00 > 98.80	8.208	8.208	0.0	1.112	10077		3.98(1.91-5.74)	97.8	130	
67 PFTrDA										
663.00 > 619.00	8.345	8.345	0.0	0.955	44619	0.0561	Target=5.77	112	366	
663.00 > 168.90	8.345	8.345	0.0	0.955	7964		5.60(2.88-8.65)	112	123	
68 11ClFOS										
630.90 > 450.90	8.526	8.526	0.0	1.155	64192	0.0455	Target=3.07	96.3	673	
632.90 > 452.90	8.526	8.526	0.0	1.155	22324		2.88(1.54-4.61)	96.3	379	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.738	8.738	0.0	1.229	1628455	1.66		83.2	2541	
69 PFTeDA										
713.10 > 168.90	8.753	8.753	0.0	1.002	5684	0.0603	Target=0.94	121	41.7	
713.10 > 219.00	8.738	8.753	-0.015	1.000	5273		1.08(0.47-1.41)	121	59.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.932	8.932	0.0	1.210	42135	0.0482	Target=4.11	99.3	278	
699.10 > 98.80	8.932	8.932	0.0	1.210	11486		3.67(2.06-6.17)	99.3	133	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.960	8.960	0.0	1.213	271738	4.77		95.4	889	
73 N-MeFOSE-M										
616.10 > 58.90	8.974	8.974	0.0	1.002	41467	0.2848		114	58.5	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.057	9.057	0.0	1.227	470353	1.88		94.2	2978	
74 NMeFOSA										
511.90 > 219.00	9.071	9.071	0.0	1.001	10382	0.0496	Target=0.68	99.3	41.6	
511.90 > 169.00	9.057	9.071	-0.014	1.000	16571		0.63(0.34-1.03)	99.3	50.8	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.177	9.177	0.0	1.243	350865	5.39		108	905	
77 N-EtFOSE-M										
630.00 > 58.90	9.189	9.189	0.0	1.001	48809	0.2240		89.6	81.0	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.253	9.253	0.0	1.253	595885	1.96		97.8	2675	
79 N-EtFOSA-M										
526.00 > 219.00	9.266	9.266	0.0	1.001	13372	0.0526	Target=0.87	105	67.4	
526.00 > 169.00	9.266	9.266	0.0	1.001	14617		0.91(0.43-1.30)	105	85.7	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.676	9.676	0.0	1.107	42275	0.0515	Target=16.98	103	1453	
913.00 > 169.00	9.666	9.676	-0.010	1.106	2401		17.61(8.49-25.47)	103	258	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_CAL1_00080 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:15 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-01.d

Injection Date: 16-Feb-2026 20:22:05 Instrument ID: 30577

Lims ID: IC CAL 1

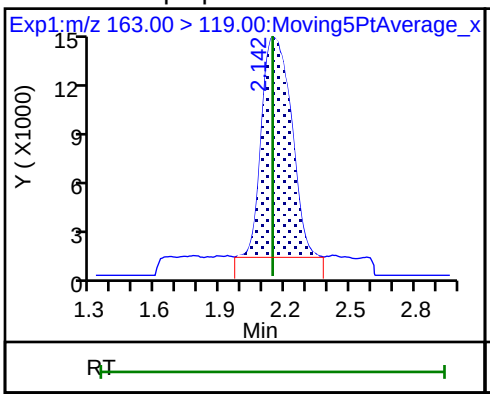
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Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 2 Worklist Smp#: 1

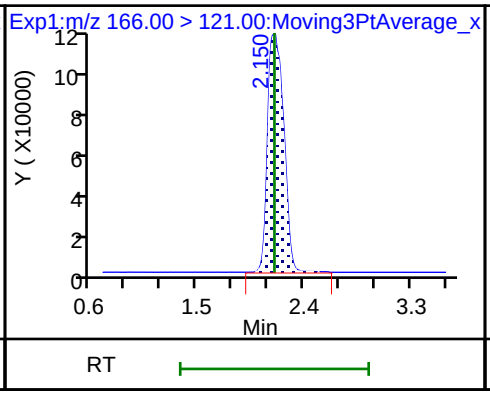
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

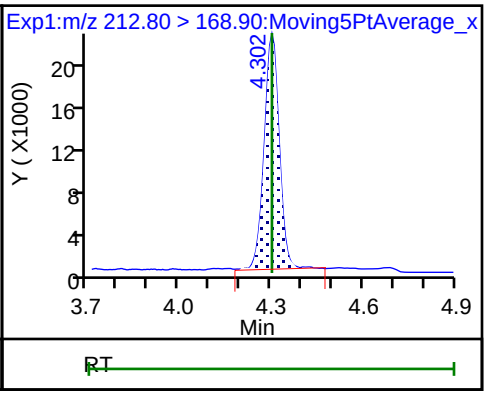
2 Perfluoropropionic acid



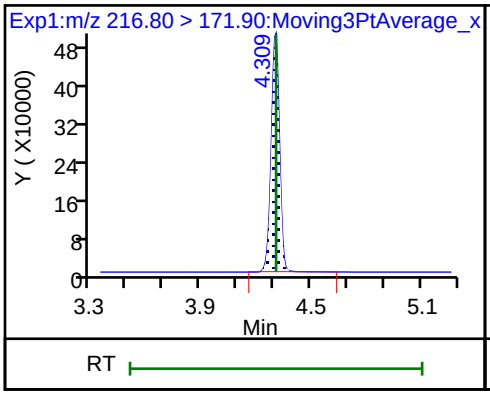
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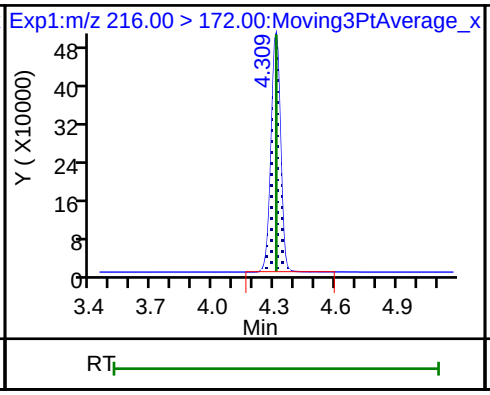
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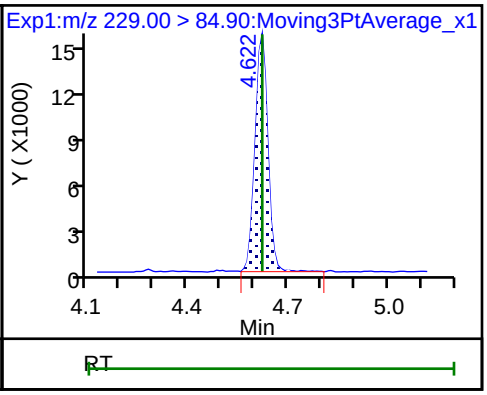
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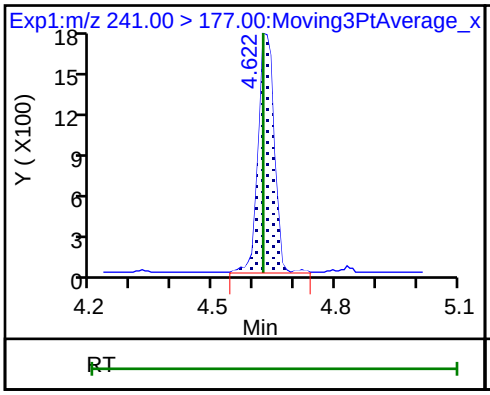
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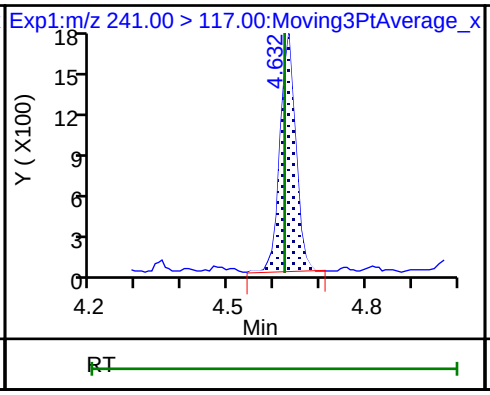
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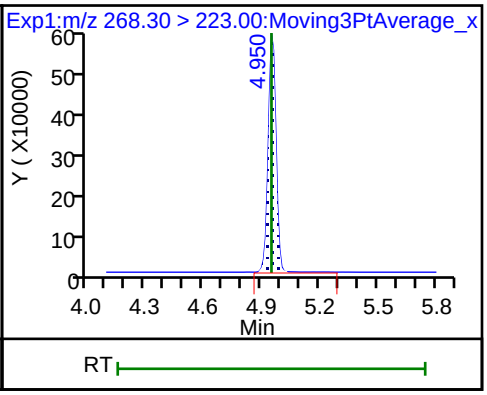
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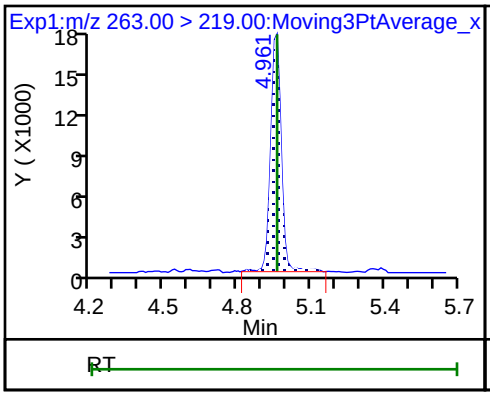
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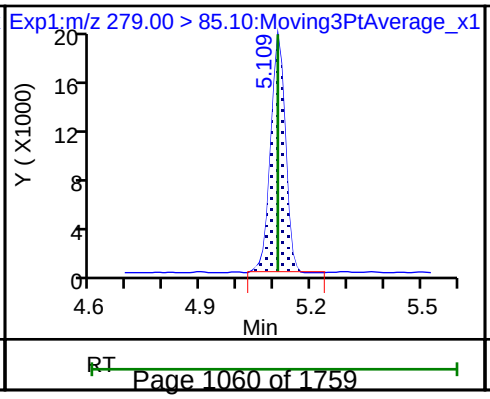
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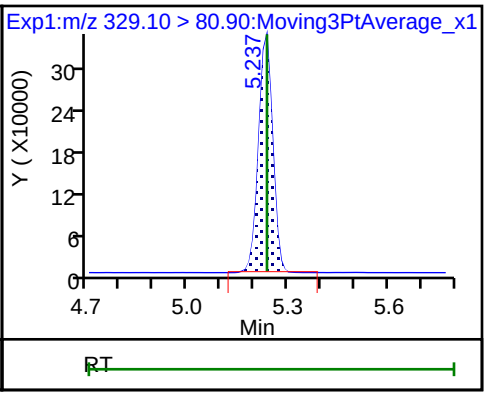
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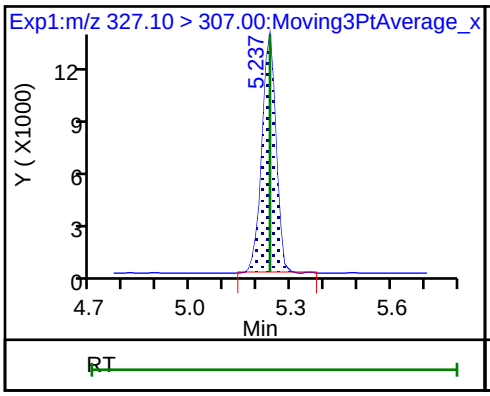
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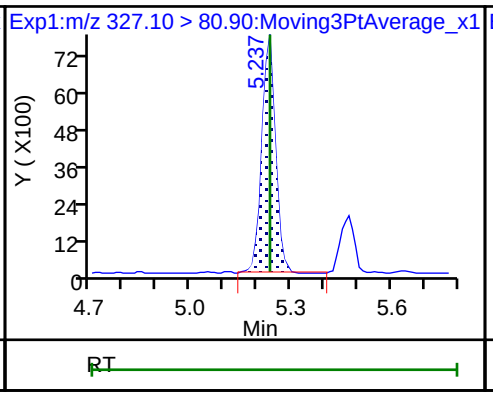
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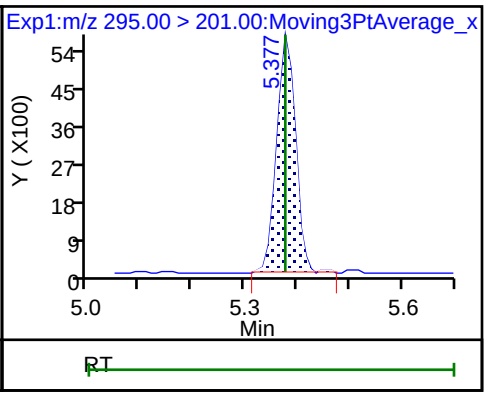
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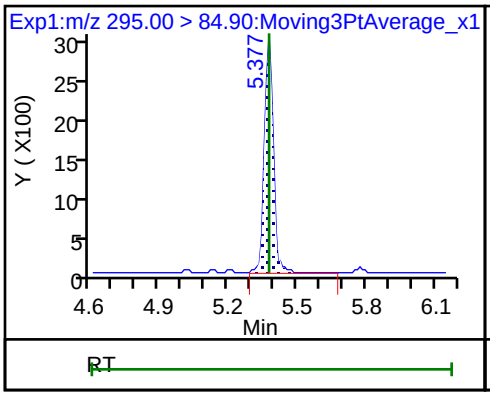
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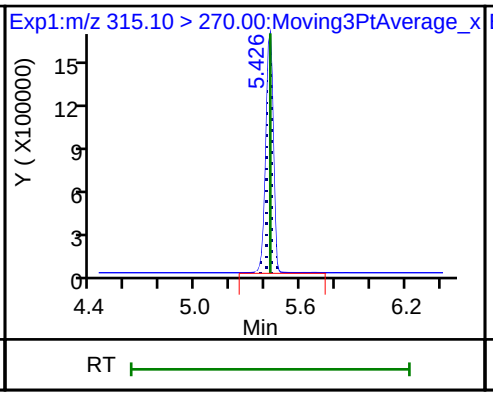
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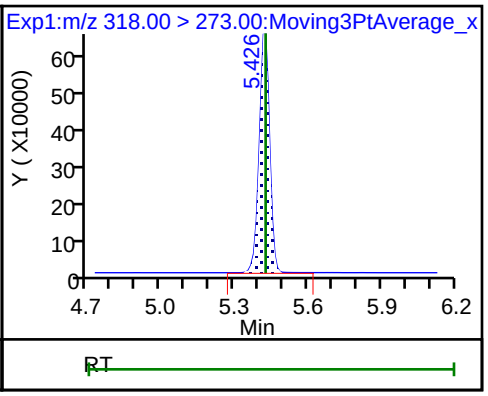
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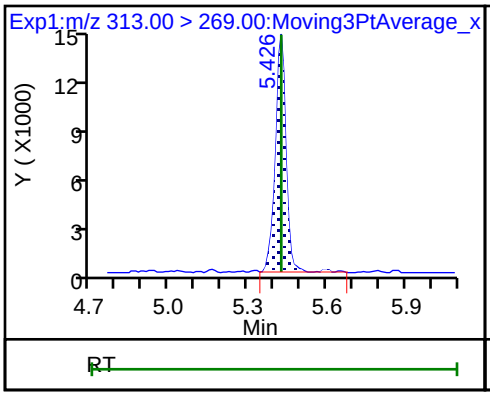
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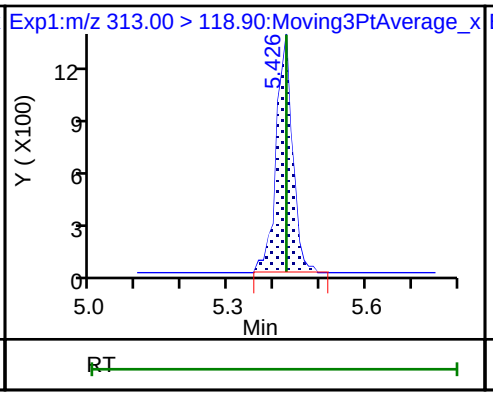
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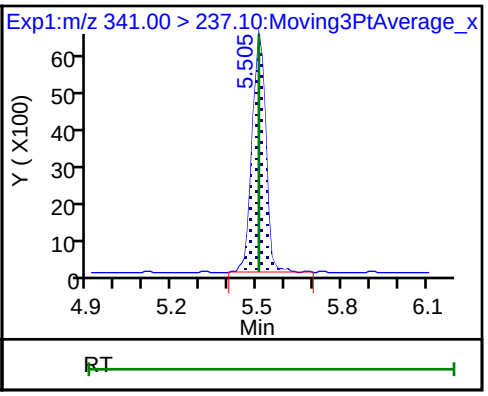
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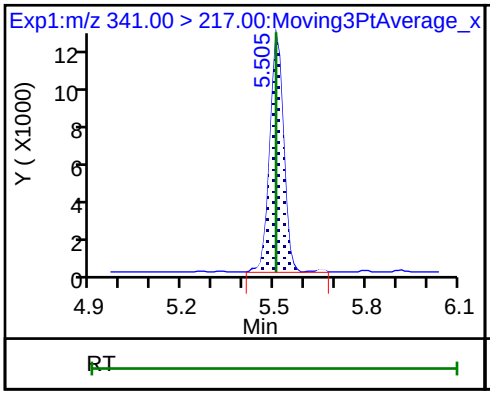
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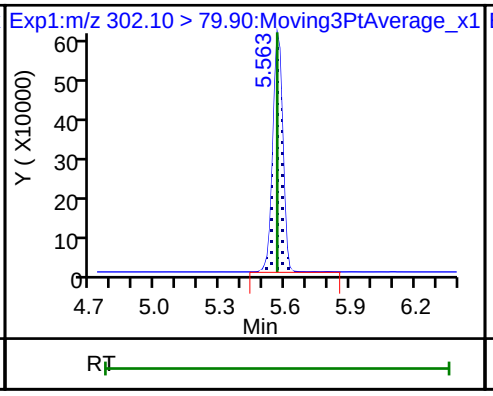
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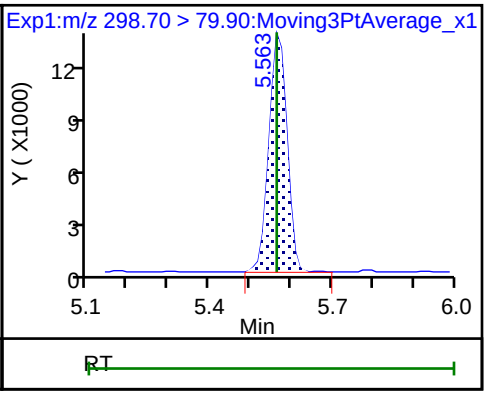
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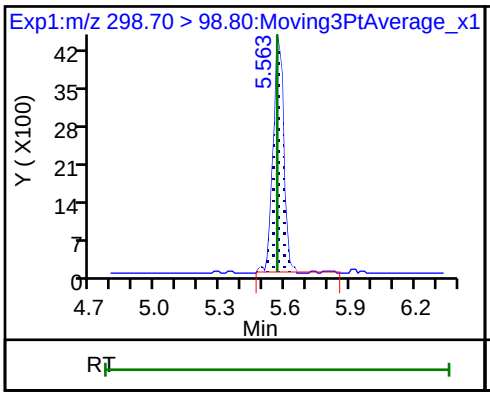
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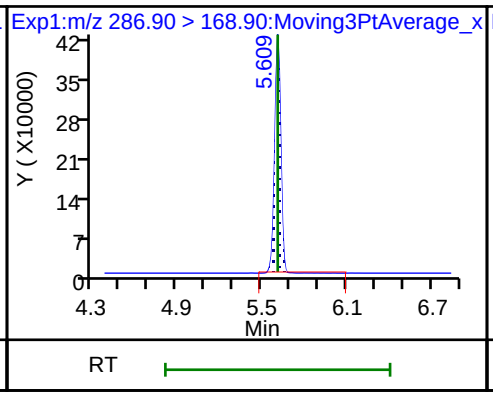
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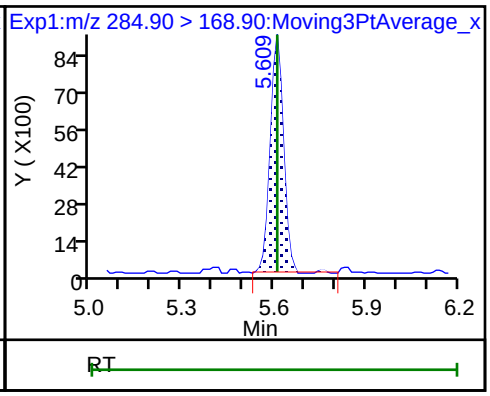
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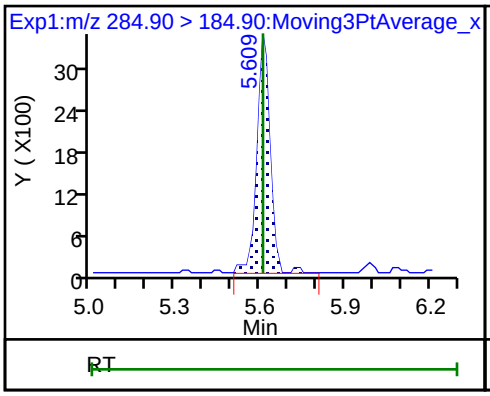
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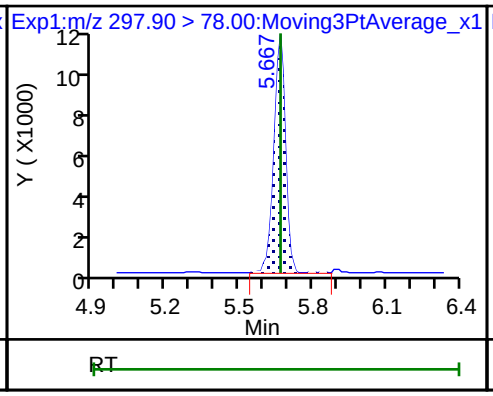
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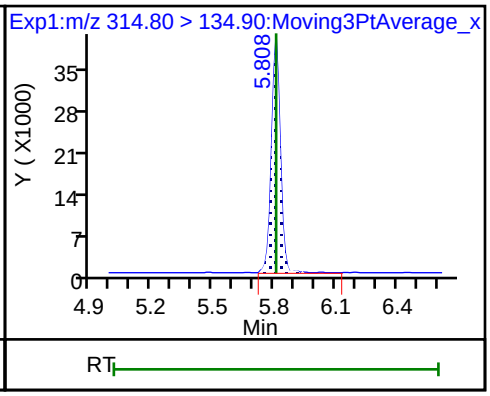
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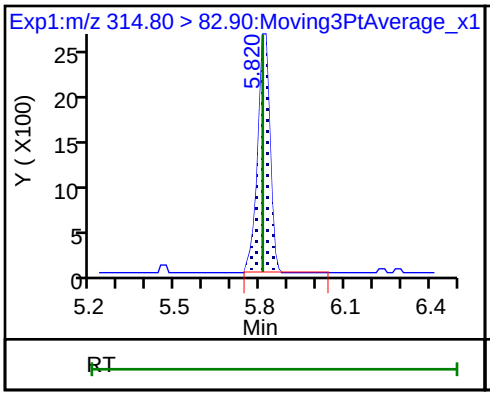
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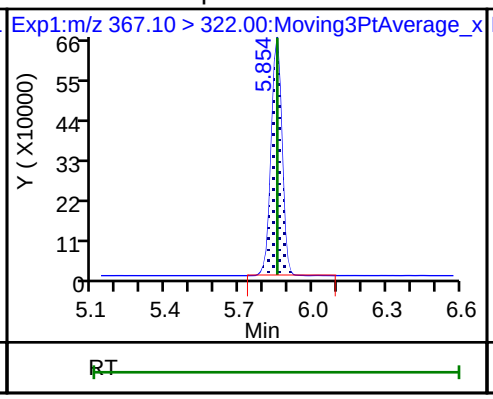
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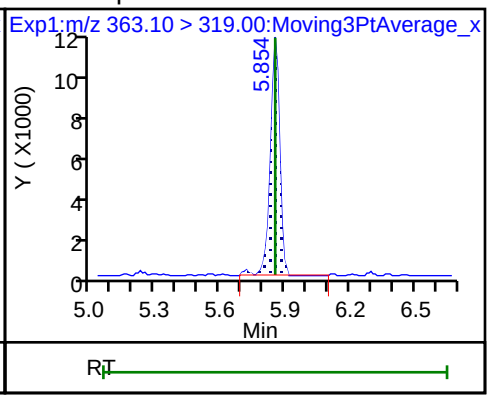
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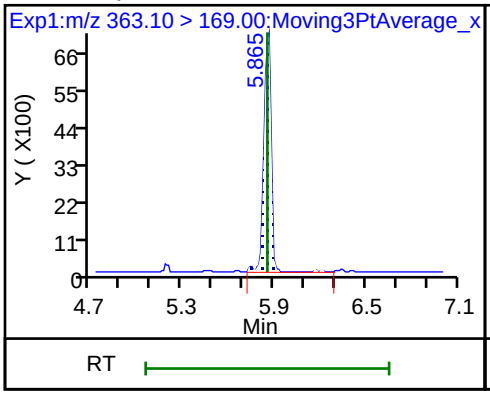
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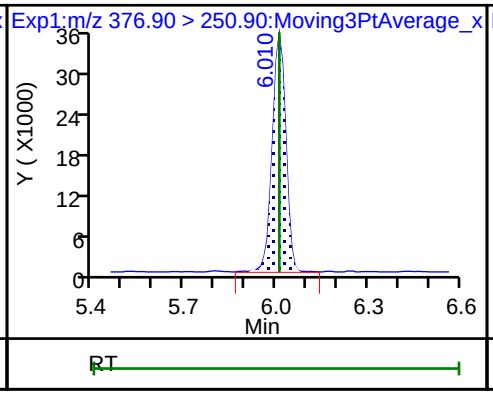
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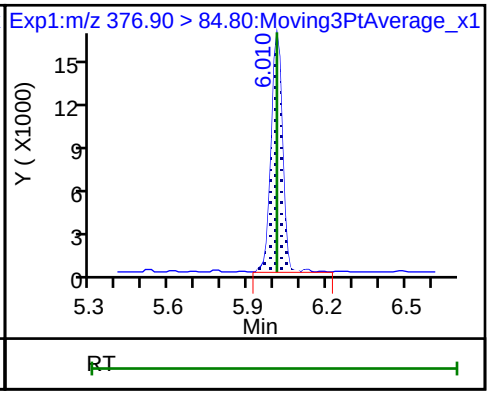
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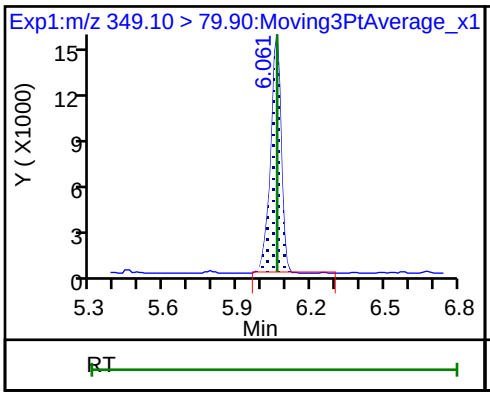
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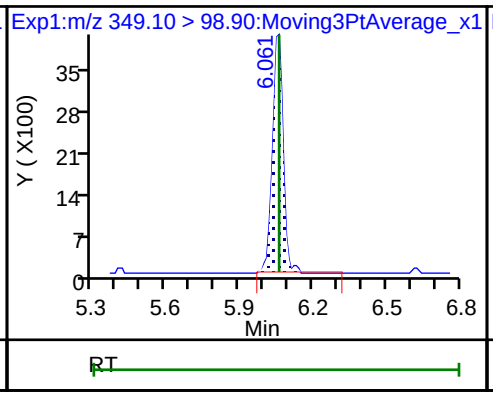
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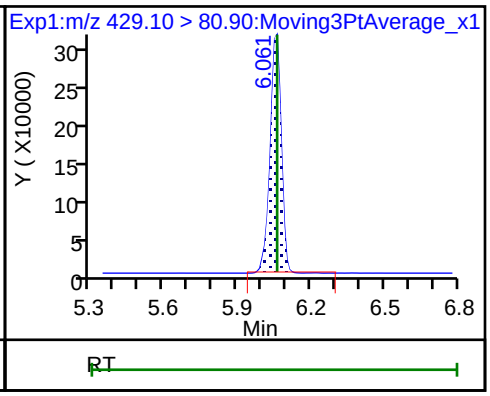
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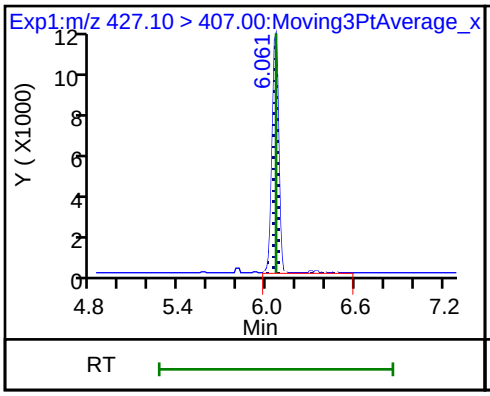
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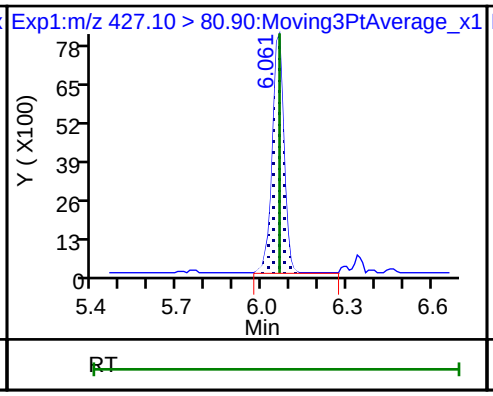
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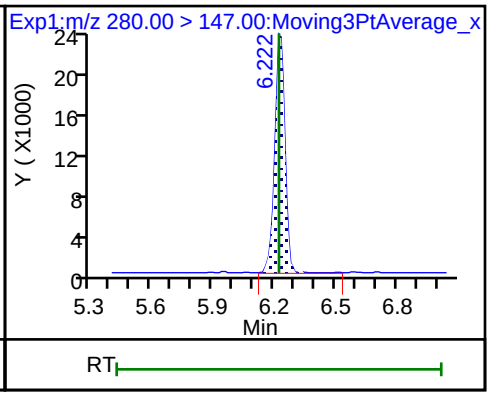
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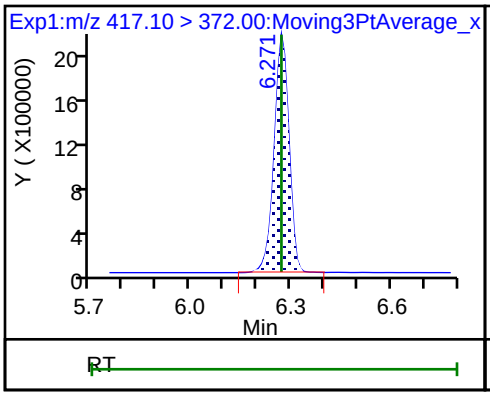
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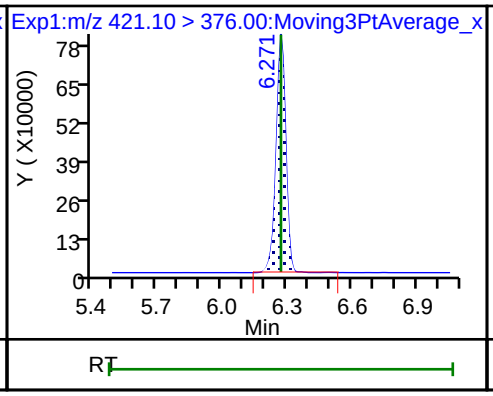
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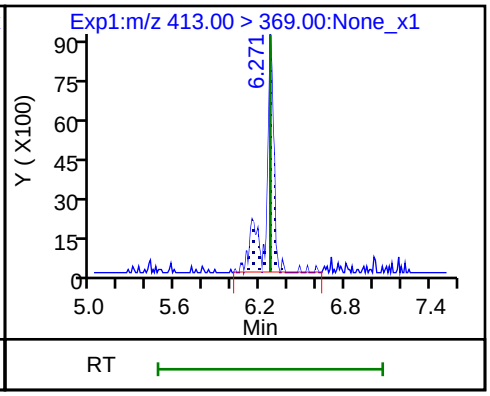
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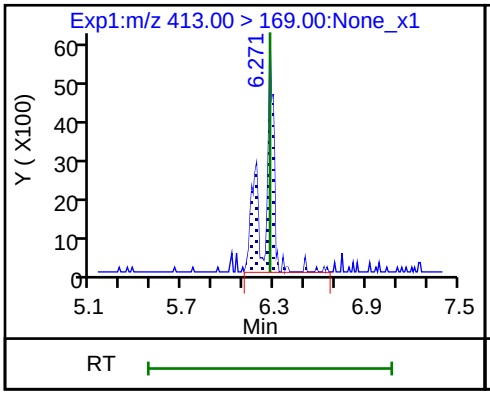
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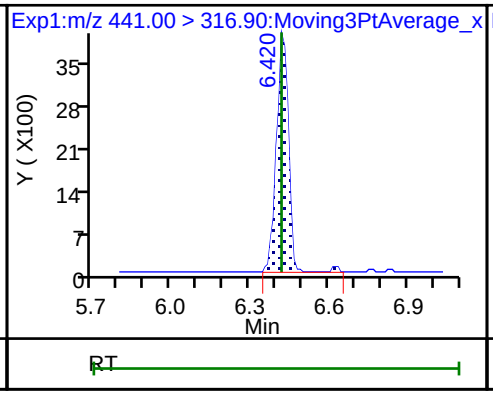
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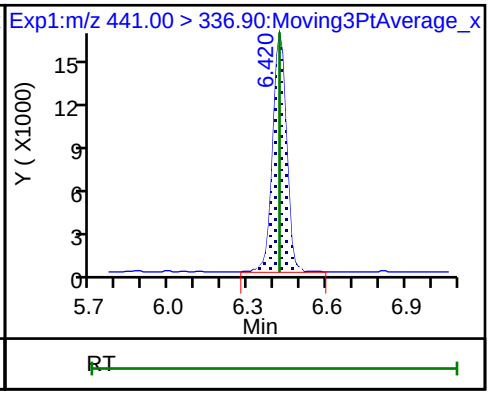
36 PFOA



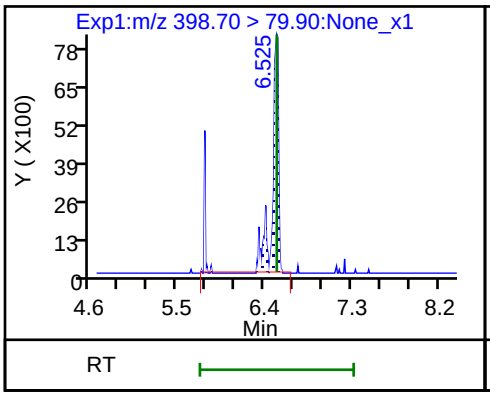
37 7:3 FTCA



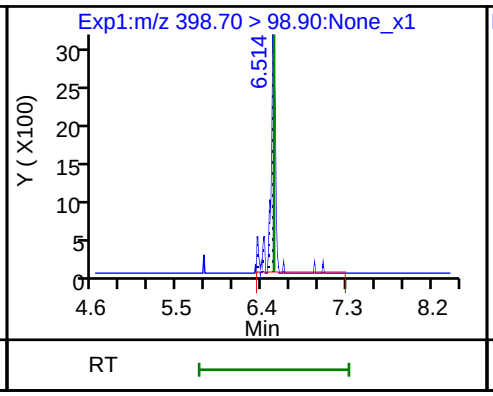
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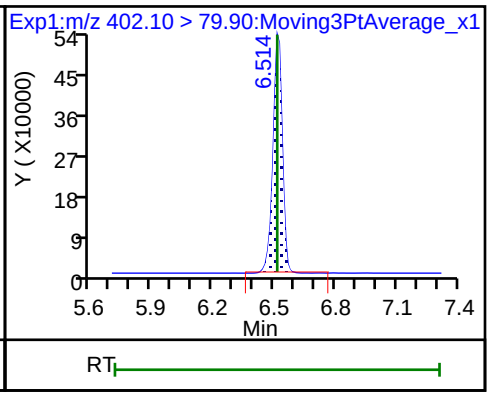
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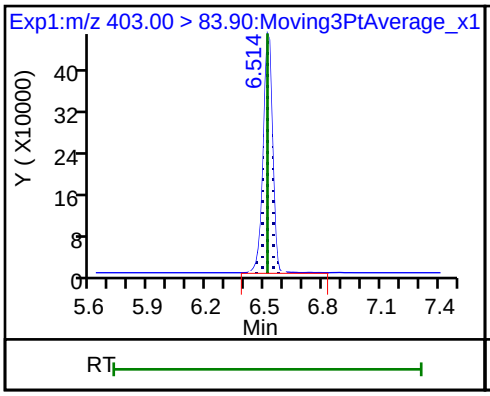
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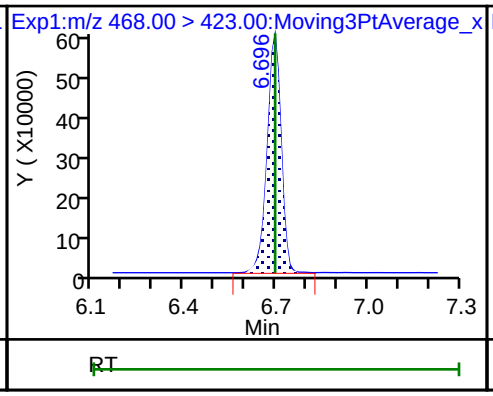
D 38 13C3 PFHxS



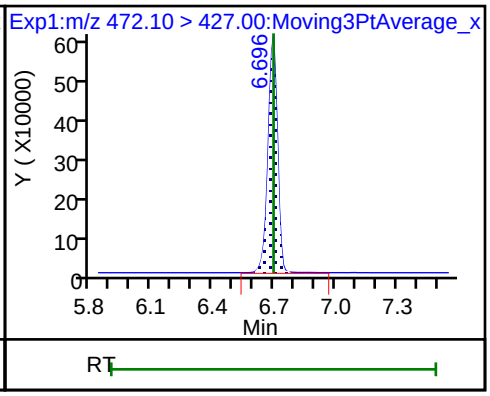
* 39 18O2 PFHxS



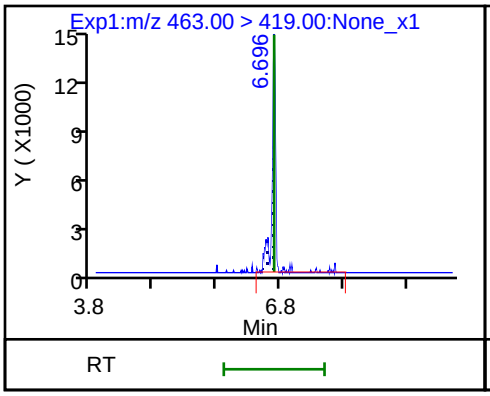
* 42 13C5 PFNA



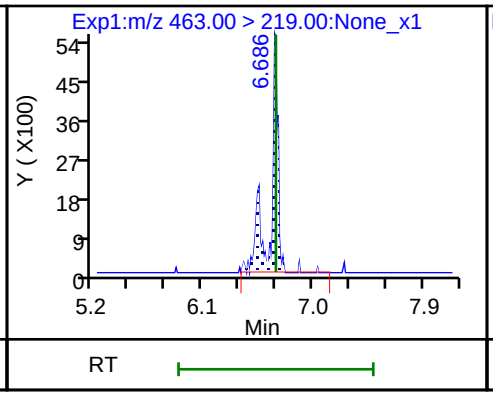
D 41 13C9 PFNA



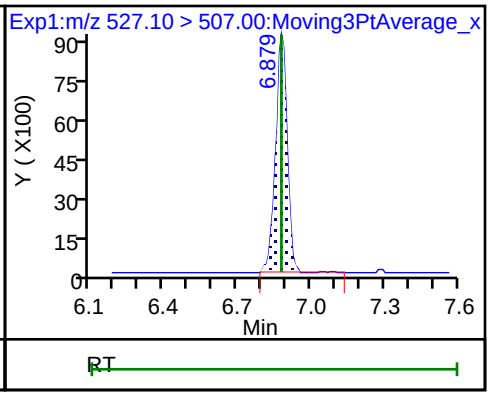
43 PFNA



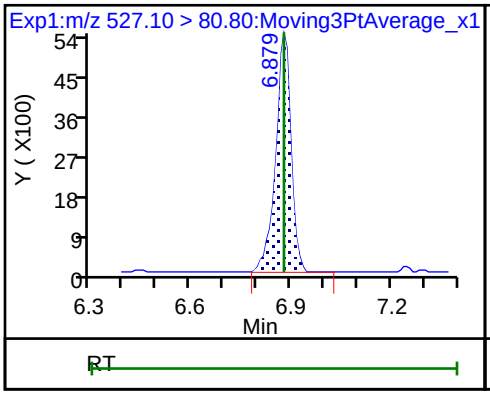
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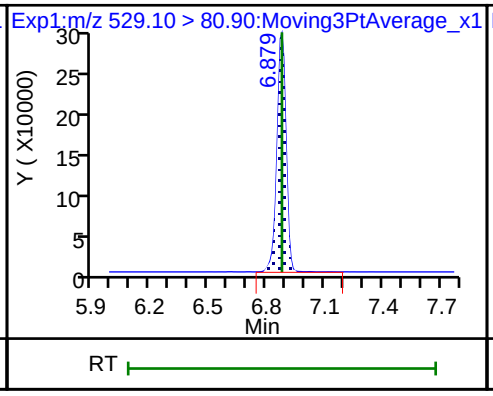
45 8:2FTS



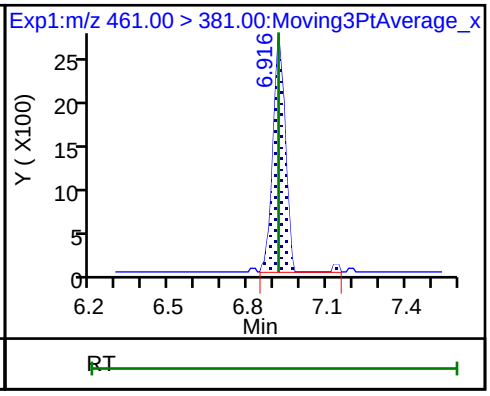
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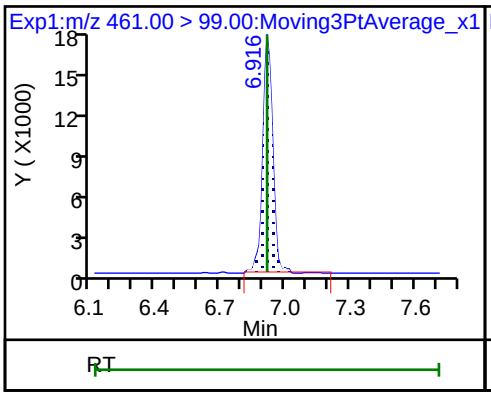
D 44 13C2-8:2FTS



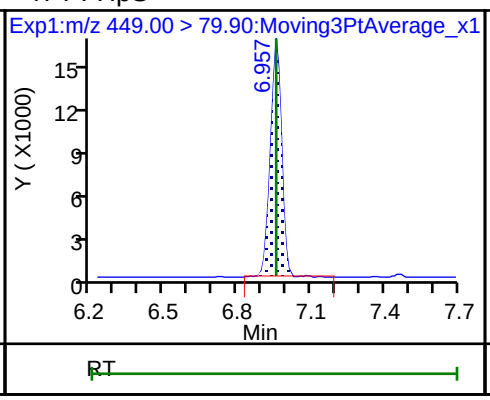
46 PFECHS



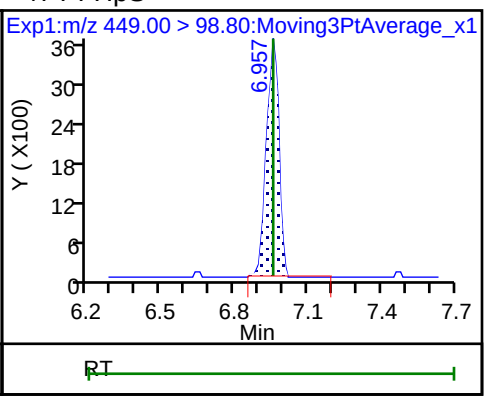
46 PFECHS



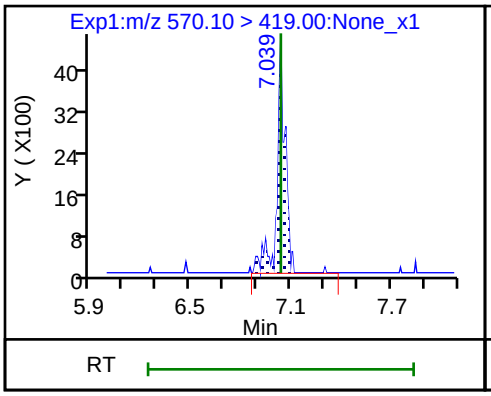
47 PFHpS



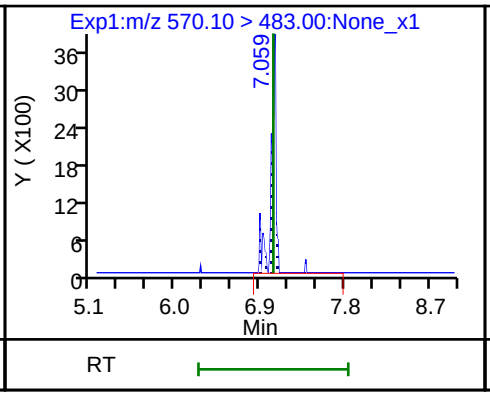
47 PFHpS



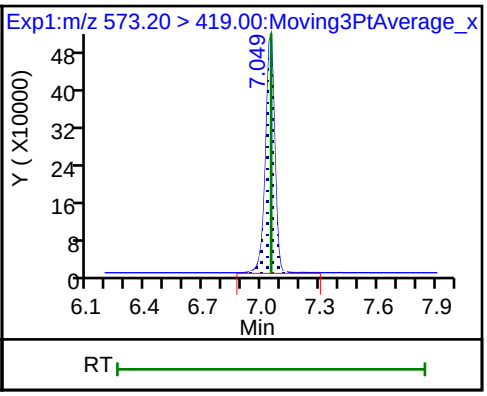
50 NMeFOSAA



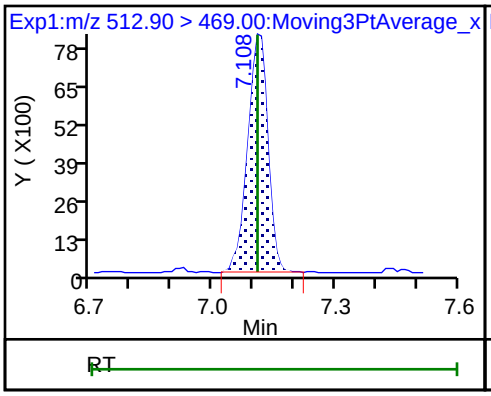
50 NMeFOSAA



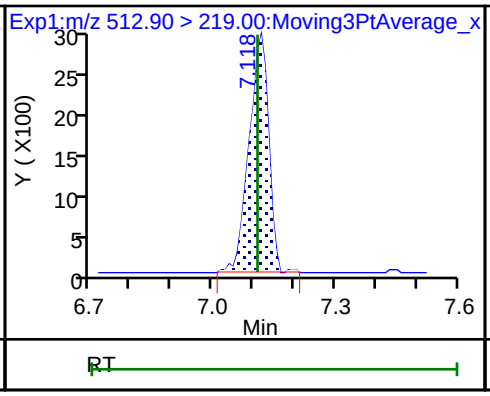
D 49 d3-NMeFOSAA



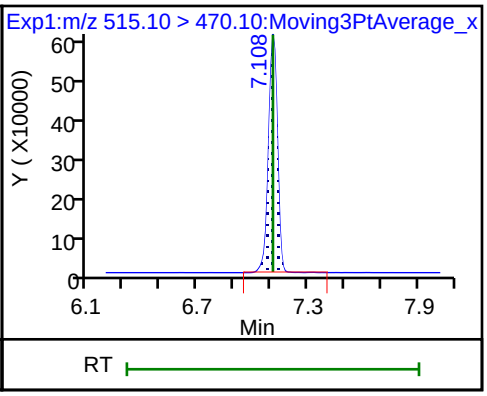
53 PFDA



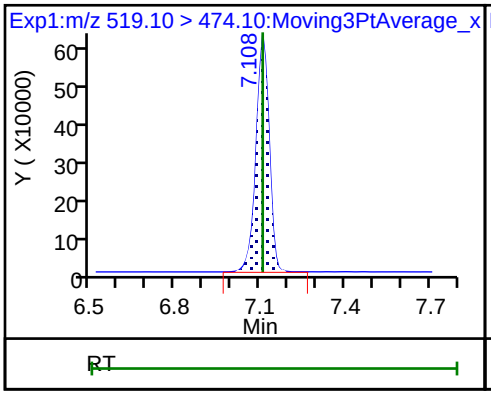
53 PFDA



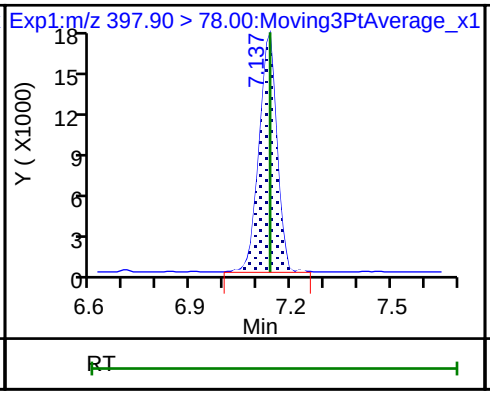
* 51 13C2 PFDA



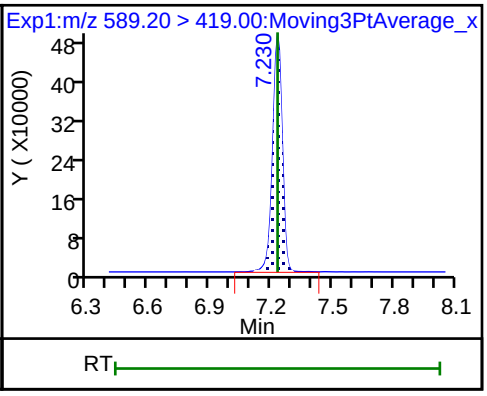
D 52 13C6 PFDA



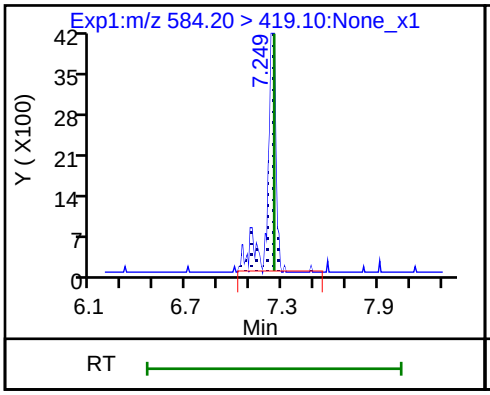
48 FHxSA



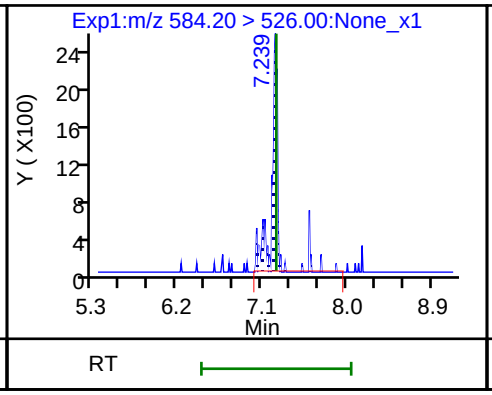
D 54 d5-NEtFOSAA



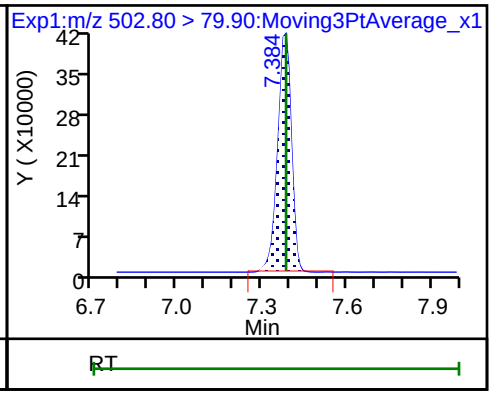
55 NEtFOSAA



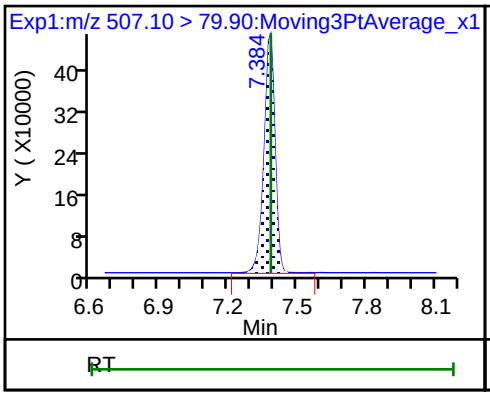
55 NEtFOSAA



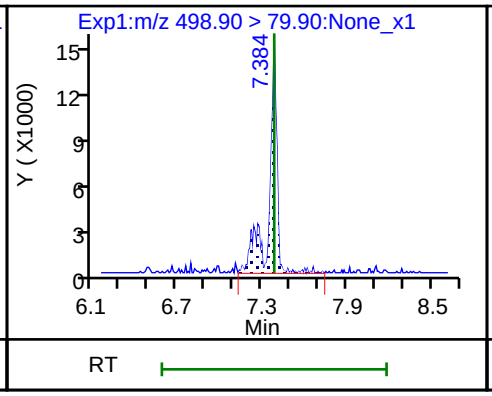
* 57 13C4 PFOS



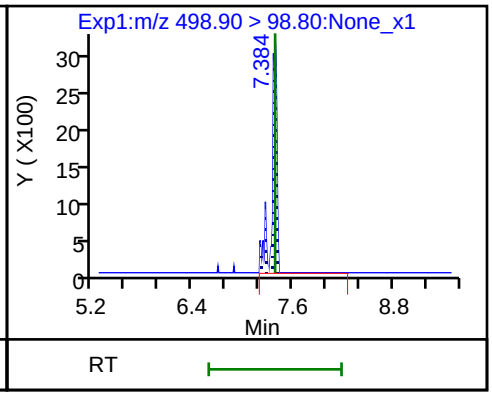
D 56 13C8 PFOS



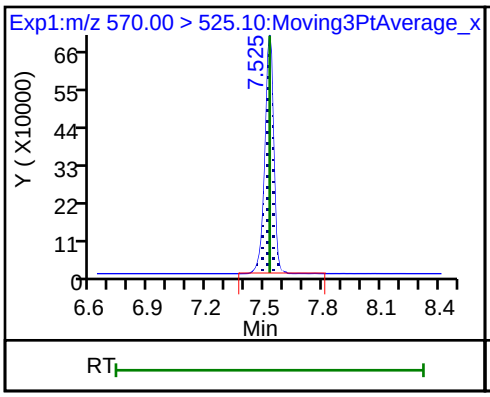
58 PFOS



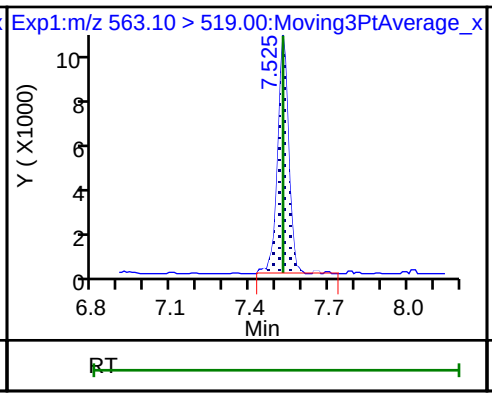
58 PFOS



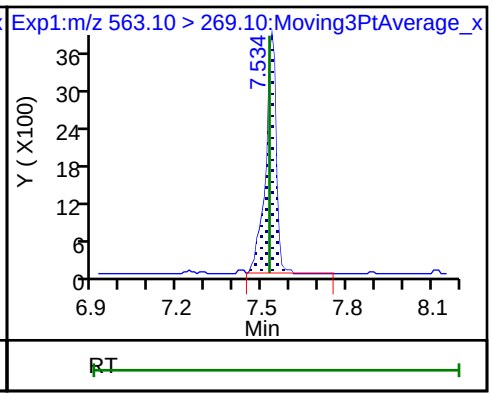
D 59 13C7 PFUnA



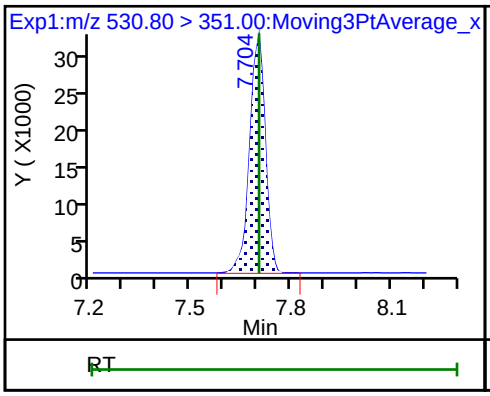
60 PFUnA



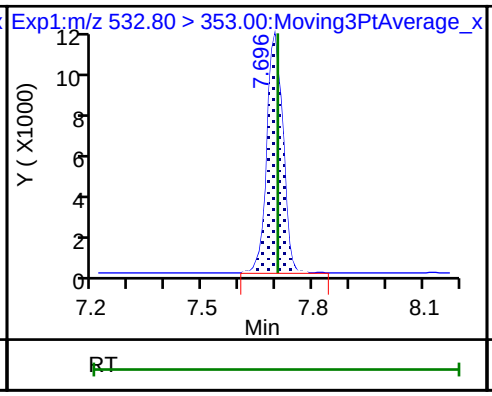
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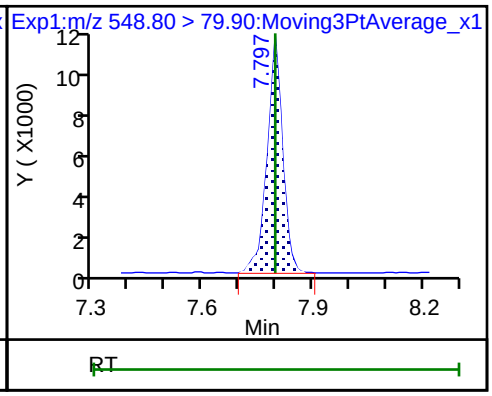
61 9ClFOS



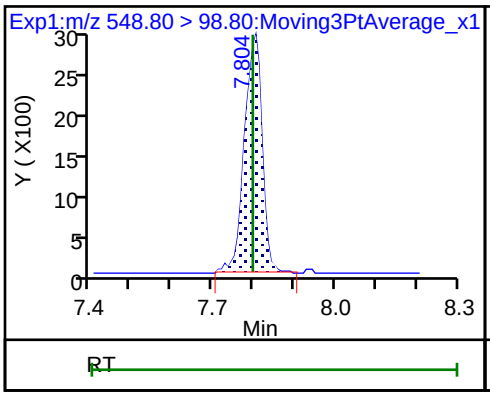
61 9ClFOS



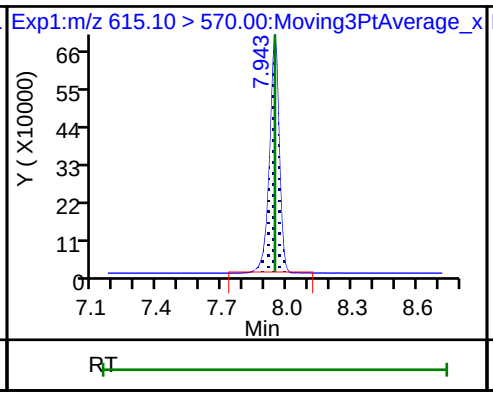
62 PFNS



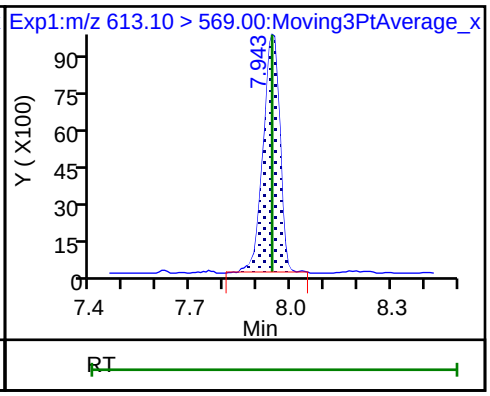
62 PFNS



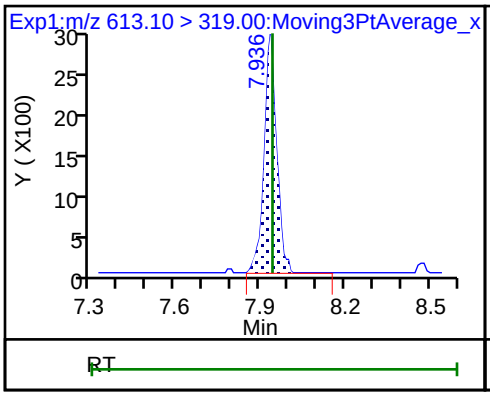
D 81 PFDoA



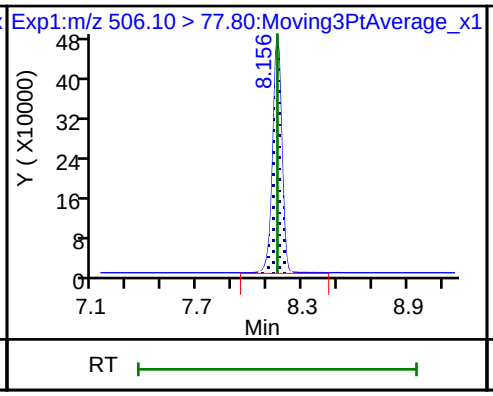
63 PFDoA



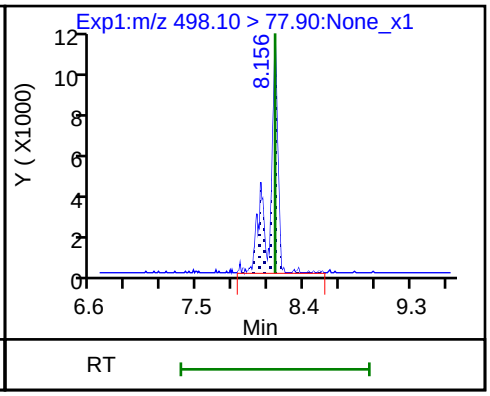
63 PFDoA



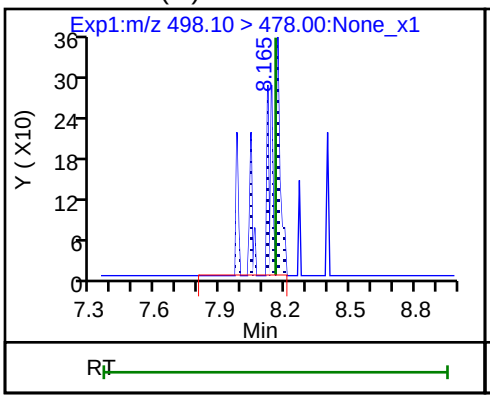
D 65 13C8 FOSA



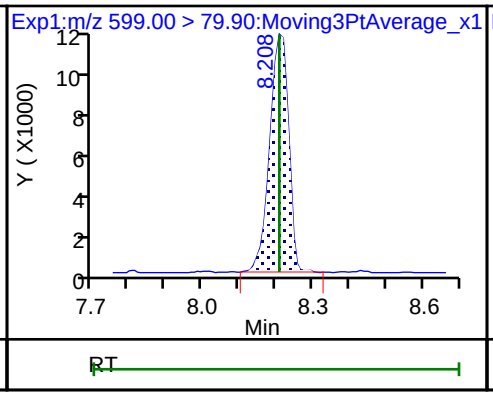
64 PFOSA



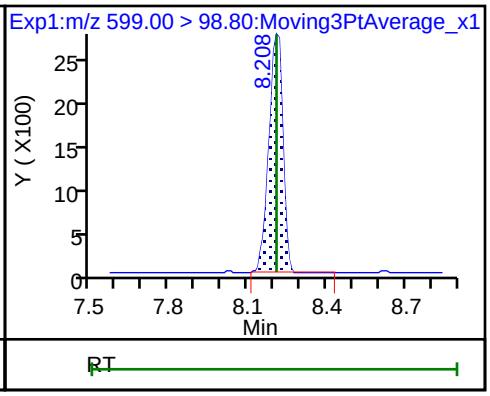
64 PFOSA (M)



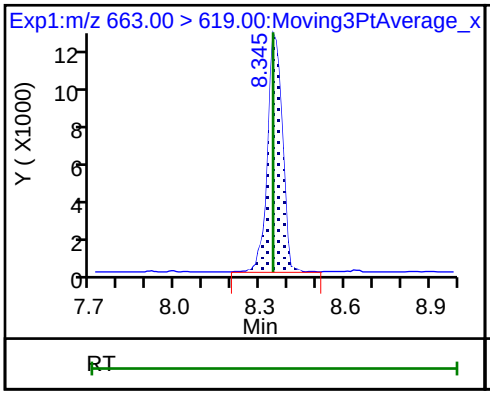
66 PFDS



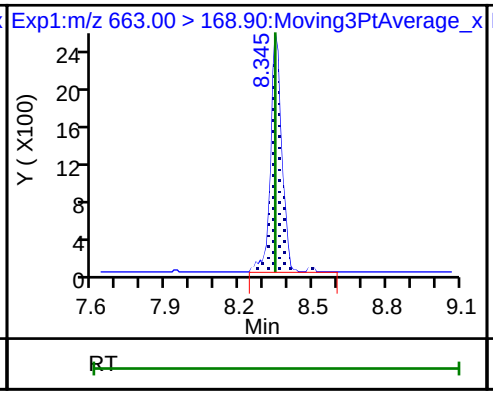
66 PFDS



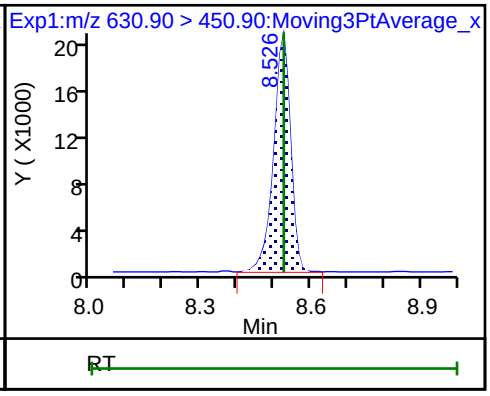
67 PFTrDA



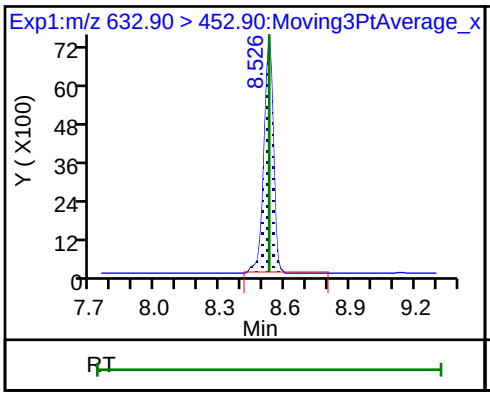
67 PFTrDA



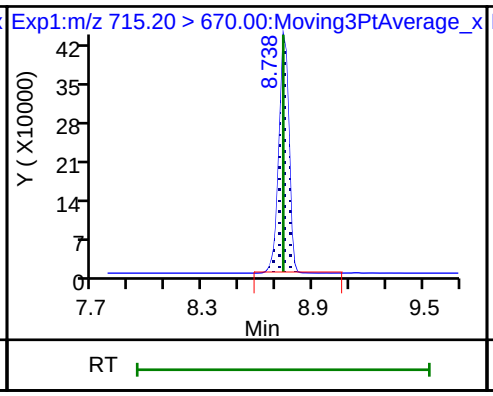
68 11ClFOS



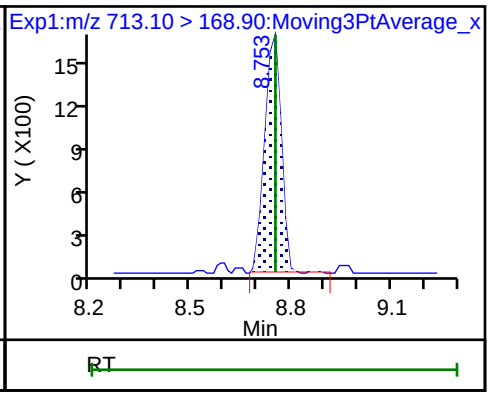
68 11ClFOS



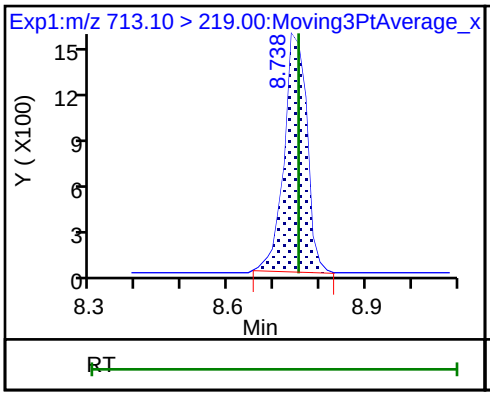
D 70 13C2 PFTeDA



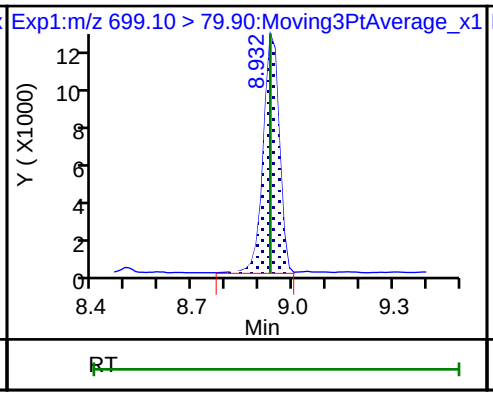
69 PFTeDA



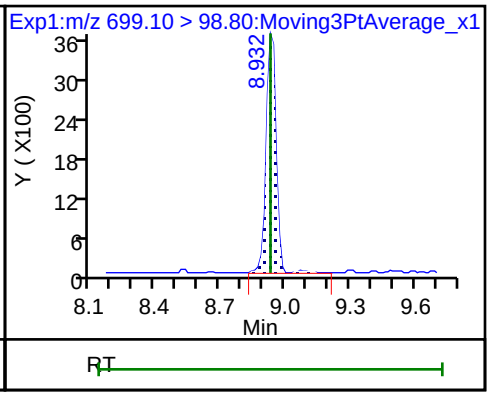
69 PFTeDA



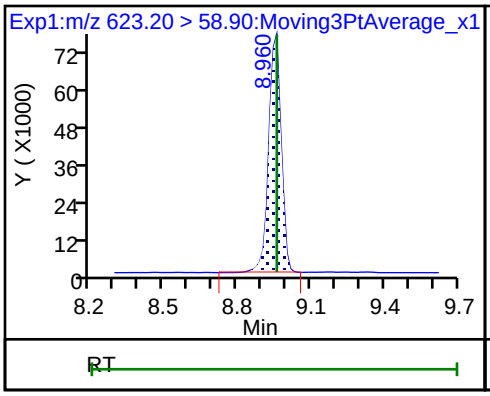
71 PFDoS



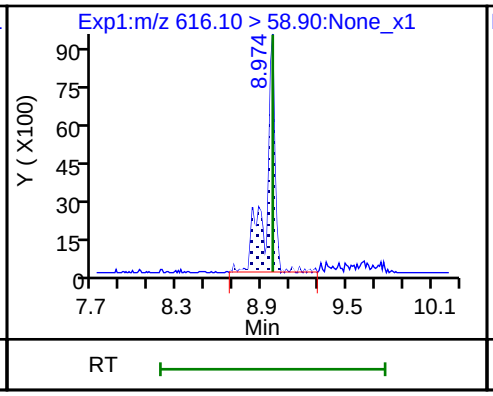
71 PFDoS



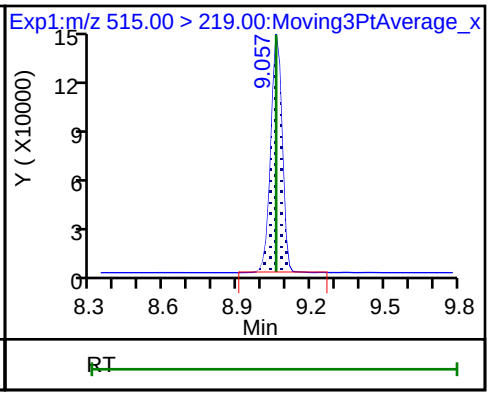
D 72 d7-N-Me-FOSE



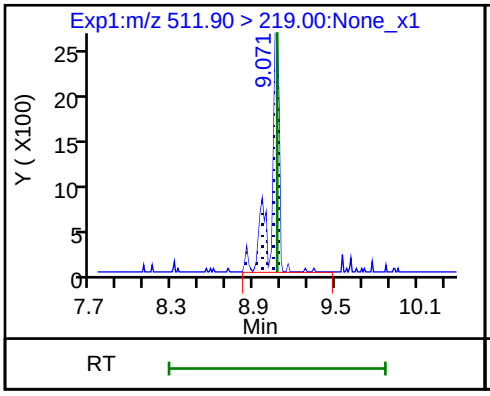
73 N-MeFOSE-M



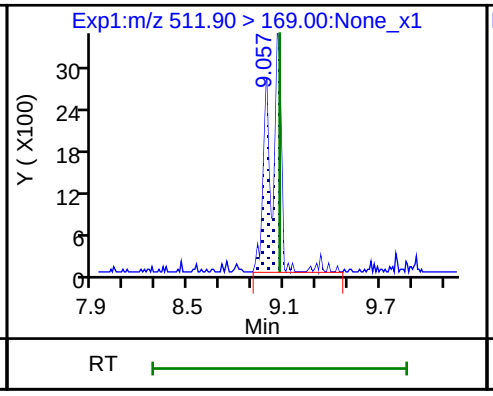
D 75 d3-NMePFOSA



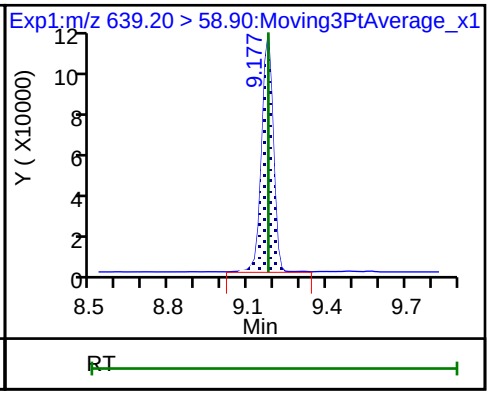
74 NMeFOSA



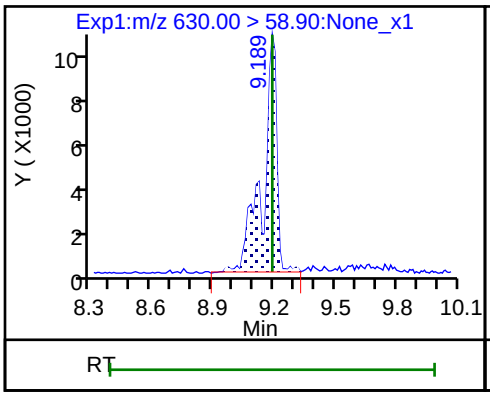
74 NMeFOSA



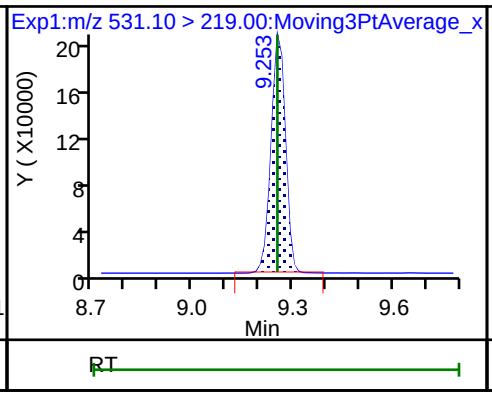
D 76 d9-N-EtFOSE



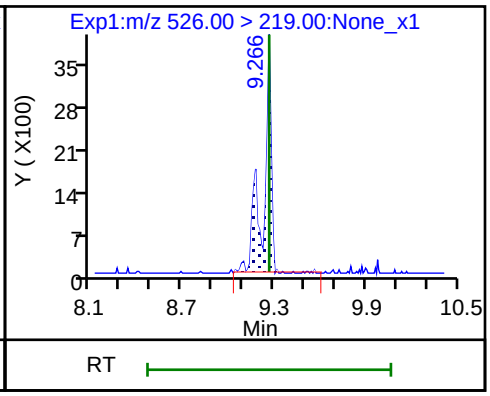
77 N-EtFOSE-M



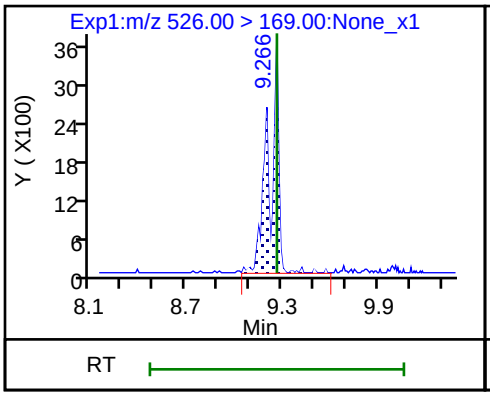
D 78 d5-NEtPFOSA



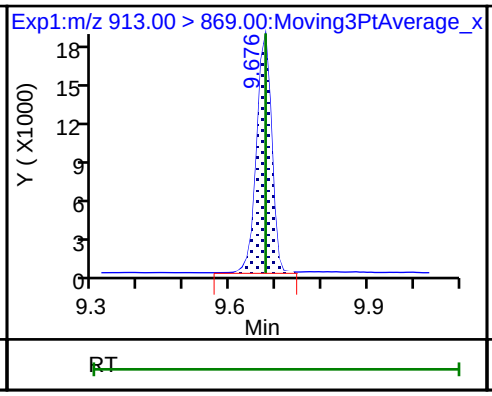
79 N-EtFOSA-M



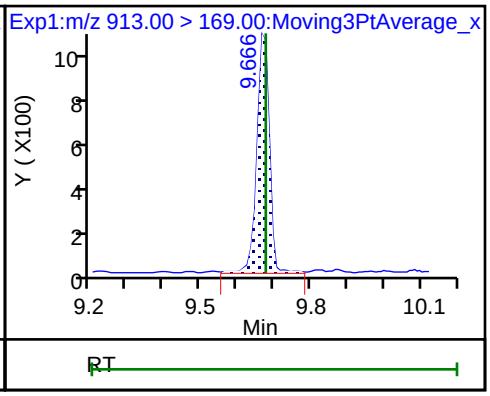
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

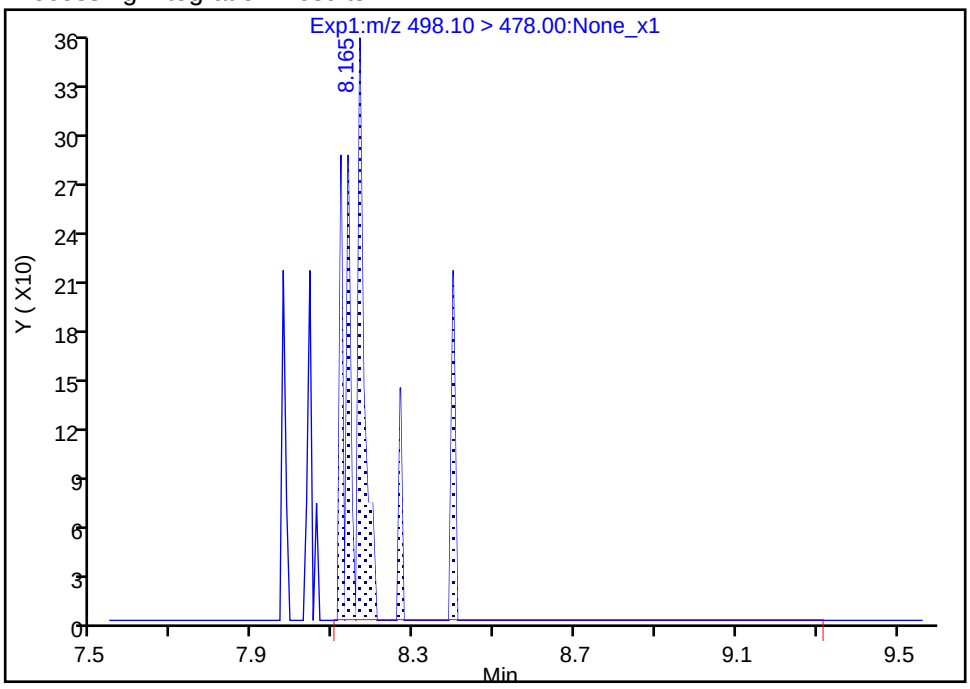
Data File:	\\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-01.d				
Injection Date:	16-Feb-2026 20:22:05	Instrument ID:	30577		
Lims ID:	IC CAL 1				
Client ID:					
Operator ID:	ETUS023_USR_INS00009	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30577-1633-125	Limit Group:	LC - 1633 LVI- ICAL		
Column:		Detector	EXP1		

64 PFOSA, CAS: 754-91-6

Signal: 2

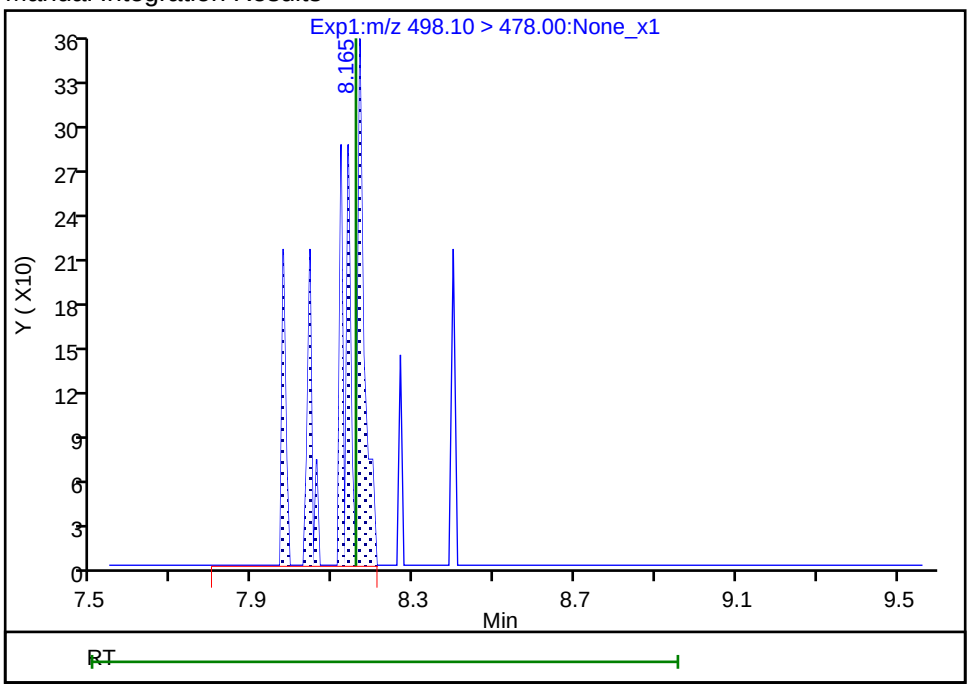
Processing Integration Results

RT: 8.17
Area: 957
Amount: 0.053531
Amount Units: ng/ml



Manual Integration Results

RT: 8.17
Area: 1062
Amount: 0.053531
Amount Units: ng/ml



Reviewer: DX7G, 17-Feb-2026 07:37:21 -05:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-02.d
Lims ID: IC CAL 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Feb-2026 20:35:41 ALS Bottle#: 3 Worklist Smp#: 2
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 2
Misc. Info.: Plate: 1 Rack: 1 410-0175852-002
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:23 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:38:16
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.133	2.142	-0.009	1.008	335247	0.6447		103	1393	
D 1 13C3PFPrA										
166.00 > 121.00	2.116	2.150	-0.034	0.491	1137041	1.99		99.7	2414	
3 PFBA										
212.80 > 168.90	4.302	4.302	0.0	0.998	198207	0.2625		105	2755	
D 4 13C4-PFBA										
216.80 > 171.90	4.310	4.309	0.001	1.000	1649018	2.04		102	8105	
* 5 13C3PFBA										
216.00 > 172.00	4.310	4.309	0.001		1644944	2.00			3437	
6 PFMPA										
229.00 > 84.90	4.623	4.622	0.001	0.933	112272	0.1358		109	875	
7 3:3 FTCA										
241.00 > 177.00	4.623	4.622	0.001	0.933	11439	0.2697	Target=1.16	108	405	
241.00 > 117.00	4.623	4.622	0.001	0.933	9231		1.24(0.58-1.73)	108	150	
D 8 13C5 PFPeA										
268.30 > 223.00	4.953	4.950	0.003	0.914	1643802	2.00		100	4038	
9 PFPA										
263.00 > 219.00	4.953	4.961	-0.008	1.000	126992	0.1345		108	386	
10 PFMBA										
279.00 > 85.10	5.111	5.109	0.002	1.032	147784	0.1335		107	1166	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.228	5.237	-0.009	0.802	1138301	5.21		111	4738	
12 4:2FTS										
327.10 > 307.00	5.228	5.237	-0.009	1.000	108058	0.2423	Target=1.70	103	872	
327.10 > 80.90	5.228	5.237	-0.009	1.000	63294		1.71(0.85-2.54)	103	111	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.367	5.377	-0.010	0.991	42243	0.1499	Target=1.61	120	257	
295.00 > 84.90	5.378	5.377	0.001	0.993	22128		1.91(0.80-2.41)	120	217	
* 16 13C2 PFHxA										
315.10 > 270.00	5.419	5.426	-0.007		4628599	5.00			5227	
D 15 13C5 PFHxA										
318.00 > 273.00	5.419	5.426	-0.007	1.000	2055444	2.04		102	4831	
17 PFHxA										
313.00 > 269.00	5.419	5.426	-0.007	1.000	94564	0.1234	Target=9.95	98.7	434	
313.00 > 118.90	5.409	5.426	-0.017	0.998	8962		10.55(4.98-14.93)	98.7	78.2	
18 5:3 FTCA										
341.00 > 237.10	5.507	5.505	0.002	1.016	61117	0.5989	Target=0.62	95.8	309	
341.00 > 217.00	5.497	5.505	-0.008	1.014	111176		0.55(0.31-0.94)	95.8	650	
D 19 13C3 PFBS										
302.10 > 79.90	5.565	5.563	0.002	0.854	1947362	1.87		100	6792	
20 PFBS										
298.70 > 79.90	5.565	5.563	0.002	1.000	109244	0.1171	Target=3.17	105	536	
298.70 > 98.80	5.565	5.563	0.002	1.000	35186		3.10(1.59-4.76)	105	199	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.599	5.609	-0.010	1.033	1360417	2.07		104	3374	
23 HFPO-DA										
284.90 > 168.90	5.611	5.609	0.002	1.002	75411	0.1024	Target=2.55	109	294	
284.90 > 184.90	5.611	5.609	0.002	1.002	24839		3.04(1.27-3.82)	109	112	
21 FBSA										
297.90 > 78.00	5.657	5.667	-0.010	1.017	98223	0.1323		106	342	
26 PFEESA										
314.80 > 134.90	5.799	5.808	-0.009	1.070	277152	0.1113	Target=12.76	99.8	1612	
314.80 > 82.90	5.799	5.808	-0.009	1.070	21771		12.73(6.38-19.14)	99.8	114	
D 28 13C4 PFHpA										
367.10 > 322.00	5.844	5.854	-0.010	1.078	2037469	2.07		103	5015	
27 PFHpA										
363.10 > 319.00	5.844	5.854	-0.010	1.000	95073	0.1330	Target=1.64	106	429	
363.10 > 169.00	5.844	5.854	-0.010	1.000	53636		1.77(0.82-2.46)	106	318	
29 ADONA										
376.90 > 250.90	6.011	6.010	0.001	1.074	289063	0.1235	Target=2.22	104	1297	
376.90 > 84.80	6.011	6.010	0.001	1.074	123913		2.33(1.11-3.33)	104	519	
31 6:2FTS										
427.10 > 407.00	6.052	6.061	-0.009	1.000	97306	0.2580	Target=1.59	108	732	
427.10 > 80.90	6.052	6.061	-0.009	1.000	58206		1.67(0.79-2.38)	108	185	
30 PFPeS										
349.10 > 79.90	6.052	6.061	-0.009	0.930	127305	0.1224	Target=3.23	104	661	
349.10 > 98.90	6.052	6.061	-0.009	0.930	38041		3.35(1.61-4.84)	104	288	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.052	6.061	-0.009	0.929	972241	5.35		112	4716	
33 BTS										
280.00 > 147.00	6.224	6.222	0.002	0.957	190909	0.1126		92.0	1069	
* 34 13C4 PFOA										
417.10 > 372.00	6.263	6.271	-0.008		6527172	5.00			4109	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.263	6.271	-0.008	1.000	2556684	2.04		102	7853	
36 PFOA										
413.00 > 369.00	6.273	6.271	0.001	1.002	87316	0.1297	Target=1.52	104	87.4	
413.00 > 169.00	6.273	6.271	0.001	1.002	59297		1.47(0.76-2.27)	104	56.8	
37 7:3 FTCA										
441.00 > 316.90	6.411	6.420	-0.009	1.183	32266	0.6192	Target=0.24	99.1	72.3	
441.00 > 336.90	6.411	6.420	-0.009	1.183	142238		0.23(0.12-0.36)	99.1	422	
D 38 13C3 PFHxS										
402.10 > 79.90	6.505	6.514	-0.009	0.998	1742388	1.97		104	4487	
* 39 18O2 PFHxS										
403.00 > 83.90	6.517	6.514	0.003		1534818	1.90			11083	
40 PFHxS										
398.70 > 79.90	6.517	6.525	-0.007	1.002	88410	0.1265	Target=3.27	111	151	
398.70 > 98.90	6.517	6.525	-0.007	1.002	24931		3.55(1.63-4.90)	111	8096	
D 41 13C9 PFNA										
472.10 > 427.00	6.679	6.696	-0.017	0.999	1823046	1.78		89.2	6803	
43 PFNA										
463.00 > 419.00	6.689	6.696	-0.007	1.001	112952	0.1363	Target=2.14	109	195	
463.00 > 219.00	6.689	6.696	-0.007	1.001	51646		2.19(1.07-3.21)	109	86.1	
* 42 13C5 PFNA										
468.00 > 423.00	6.689	6.696	-0.007		2043393	2.00			7652	
45 8:2FTS										
527.10 > 507.00	6.873	6.879	-0.006	1.000	89622	0.2558	Target=1.87	107	716	
527.10 > 80.80	6.873	6.879	-0.006	1.000	46468		1.93(0.94-2.81)	107	322	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.873	6.879	-0.006	1.055	1006222	5.37		112	6000	
46 PFECHS										
461.00 > 381.00	6.909	6.916	-0.007	1.062	25613	0.1219	Target=0.17	106	132	
461.00 > 99.00	6.918	6.916	0.002	1.063	142881		0.18(0.09-0.26)	106	547	
47 PFHpS										
449.00 > 79.90	6.949	6.957	-0.008	0.942	123938	0.1210	Target=3.71	102	474	
449.00 > 98.80	6.949	6.957	-0.008	0.942	36585		3.39(1.86-5.57)	102	216	
50 NMeFOSAA										
570.10 > 419.00	7.031	7.039	-0.008	0.999	44159	0.1285	Target=1.66	103	58.4	
570.10 > 483.00	7.041	7.039	0.002	1.000	27013		1.63(0.83-2.49)	103	30.5	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.041	7.049	-0.008	0.954	1748619	5.27		105	2294	
* 51 13C2 PFDA										
515.10 > 470.10	7.100	7.108	-0.008		2061466	2.00			2970	
D 52 13C6 PFDA										
519.10 > 474.10	7.100	7.108	-0.008	1.000	2145786	2.09		105	3893	
53 PFDA										
512.90 > 469.00	7.100	7.108	-0.008	1.000	69904	0.1171	Target=2.88	93.7	383	
512.90 > 219.00	7.100	7.108	-0.008	1.000	25723		2.72(1.44-4.31)	93.7	228	
48 FHxSA										
397.90 > 78.00	7.119	7.137	-0.018	1.094	147828	0.1209		96.7	946	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.223	7.230	-0.007	0.979	1566322	5.16		103	2690	
55 NEtFOSAA										
584.20 > 419.10	7.232	7.249	-0.017	1.001	37338	0.1352	Target=1.34	108	119	
584.20 > 526.00	7.223	7.249	-0.026	1.000	27206		1.37(0.67-2.01)	108	58.4	
* 57 13C4 PFOS										
502.80 > 79.90	7.377	7.384	-0.007		1327804	1.92			4965	
D 56 13C8 PFOS										
507.10 > 79.90	7.377	7.384	-0.007	1.000	1561579	2.03		106	3714	
58 PFOS										
498.90 > 79.90	7.377	7.384	-0.007	1.000	135422	0.1205	Target=4.60	104	212	
498.90 > 98.80	7.377	7.384	-0.007	1.000	27703		4.89(2.30-6.89)	104	97.8	
D 59 13C7 PFUnA										
570.00 > 525.10	7.519	7.525	-0.006	1.059	2142266	2.00		100.0	3811	
60 PFUnA										
563.10 > 519.00	7.519	7.525	-0.006	1.000	75519	0.1296	Target=3.77	104	387	
563.10 > 269.10	7.519	7.525	-0.006	1.000	17470		4.32(1.88-5.65)	104	136	
61 9ClFOS										
530.80 > 351.00	7.698	7.704	-0.006	1.043	290699	0.1254	Target=3.08	107	1929	
532.80 > 353.00	7.690	7.704	-0.014	1.042	88454		3.29(1.54-4.61)	107	561	
62 PFNS										
548.80 > 79.90	7.791	7.797	-0.006	1.056	84014	0.1198	Target=3.66	99.6	543	
548.80 > 98.80	7.798	7.797	0.001	1.057	23126		3.63(1.83-5.49)	99.6	203	
D 81 PFDoA										
615.10 > 570.00	7.938	7.943	-0.005	1.118	2214759	2.07		103	5591	
63 PFDoA										
613.10 > 569.00	7.938	7.943	-0.005		92120	0.1207	Target=4.34	96.6	530	
613.10 > 319.00	7.938	7.943	-0.005		22797		4.04(2.17-6.51)	96.6	307	
D 65 13C8 FOSA										
506.10 > 77.80	8.149	8.156	-0.007	1.105	1690636	2.06		103	4393	
64 PFOSA										
498.10 > 77.90	8.149	8.156	-0.007	1.000	124613	0.1297	Target=44.41	104	241	
498.10 > 478.00	8.178	8.156	0.022	1.004	2387		52.20(22.20-66.61)	104	8.7	
66 PFDS										
599.00 > 79.90	8.200	8.208	-0.008	1.112	104039	0.1183	Target=3.83	98.2	1094	
599.00 > 98.80	8.200	8.208	-0.008	1.112	24808		4.19(1.91-5.74)	98.2	289	
67 PFTrDA										
663.00 > 619.00	8.347	8.345	0.002	0.955	112666	0.1286	Target=5.77	103	662	
663.00 > 168.90	8.339	8.345	-0.006	0.954	21153		5.33(2.88-8.65)	103	255	
68 11ClFOS										
630.90 > 450.90	8.506	8.526	-0.020	1.153	175539	0.1204	Target=3.07	102	1883	
632.90 > 452.90	8.506	8.526	-0.020	1.153	54289		3.23(1.54-4.61)	102	872	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.739	8.738	0.001	1.231	1906812	1.94		96.9	5938	
69 PFTeDA										
713.10 > 168.90	8.739	8.753	-0.014	1.000	15144	0.1373	Target=0.94	110	256	
713.10 > 219.00	8.739	8.753	-0.014	1.000	14117		1.07(0.47-1.41)	110	160	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.919	8.932	-0.013	1.209	108234	0.1198	Target=4.11	98.8	809	
699.10 > 98.80	8.919	8.932	-0.013	1.209	25153		4.30(2.06-6.17)	98.8	381	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.947	8.960	-0.013	1.213	281984	5.18		104	1050	
73 N-MeFOSE-M										
616.10 > 58.90	8.961	8.974	-0.013	1.002	102030	0.6752		108	177	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.058	9.057	0.001	1.228	482580	2.02		101	2218	
74 NMeFOSA										
511.90 > 219.00	9.058	9.071	-0.013	1.000	27833	0.1297	Target=0.68	104	179	
511.90 > 169.00	9.058	9.071	-0.013	1.000	41793		0.67(0.34-1.03)	104	155	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.165	9.177	-0.012	1.242	345914	5.56		111	1173	
77 N-EtFOSE-M										
630.00 > 58.90	9.178	9.189	-0.011	1.001	140473	0.6540		105	346	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.241	9.253	-0.012	1.253	588659	2.02		101	3187	
79 N-EtFOSA-M										
526.00 > 219.00	9.254	9.266	-0.012	1.001	32743	0.1303	Target=0.87	104	215	
526.00 > 169.00	9.254	9.266	-0.012	1.001	38449		0.85(0.43-1.30)	104	175	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.647	9.676	-0.030	1.104	98547	0.1233	Target=16.98	98.7	3513	
913.00 > 169.00	9.647	9.676	-0.030	1.104	5446		18.10(8.49-25.47)	98.7	472	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL2_00036 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:26 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-02.d

Injection Date: 16-Feb-2026 20:35:41 Instrument ID: 30577

Lims ID: IC CAL 2

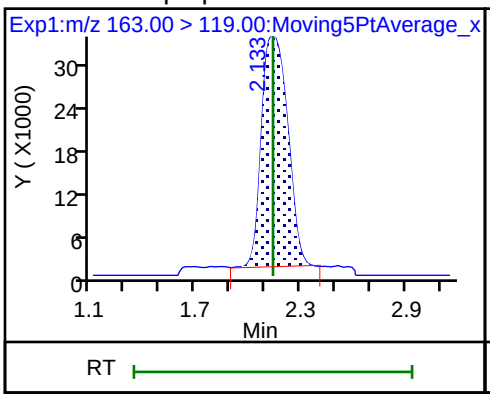
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Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 3 Worklist Smp#: 2

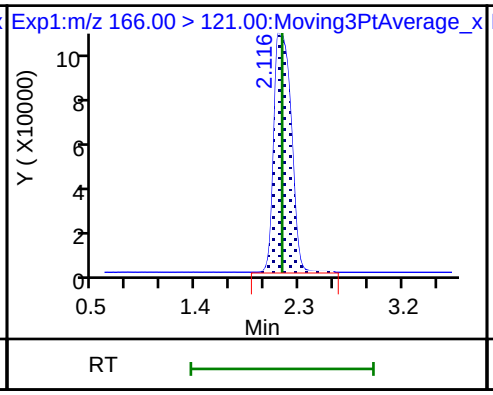
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

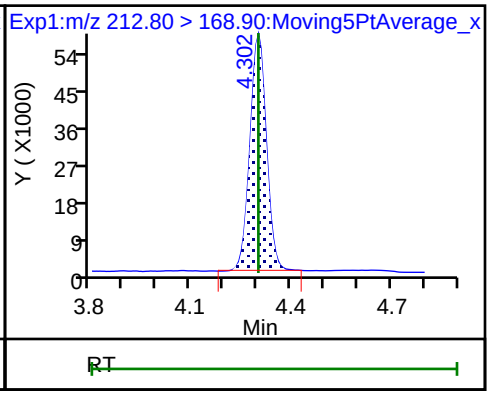
2 Perfluoropropionic acid



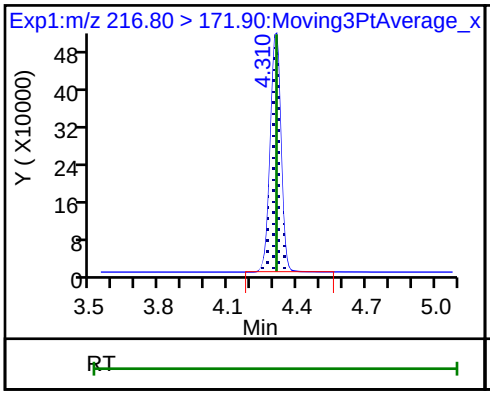
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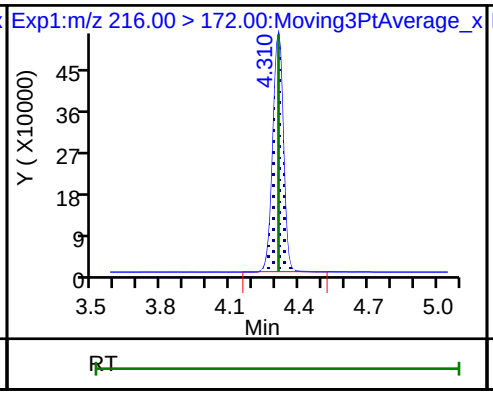
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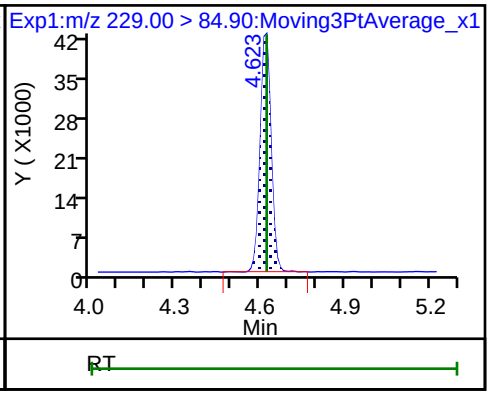
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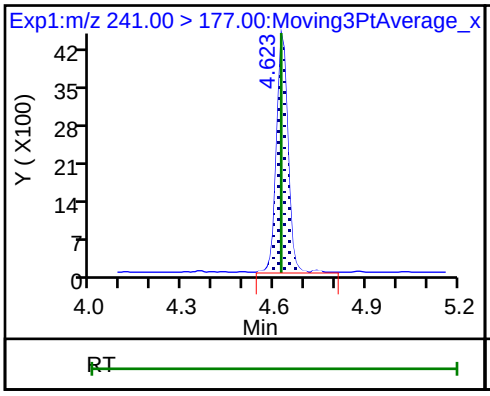
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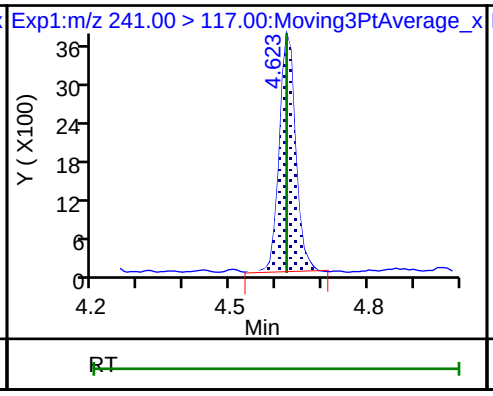
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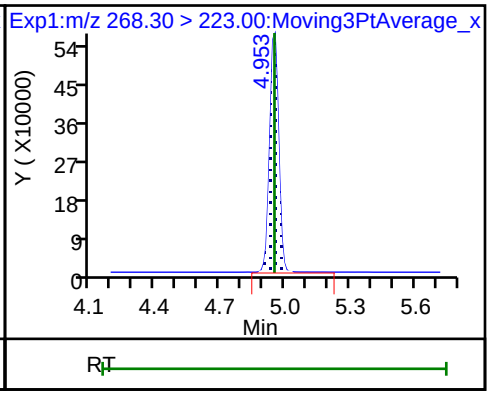
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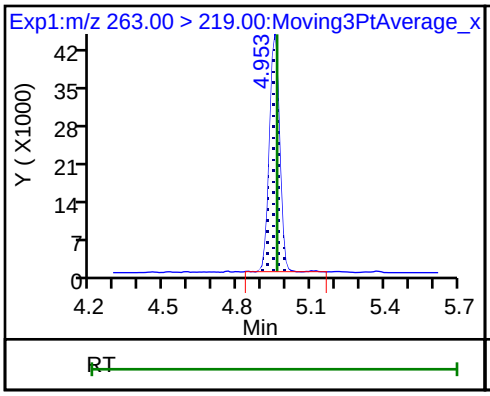
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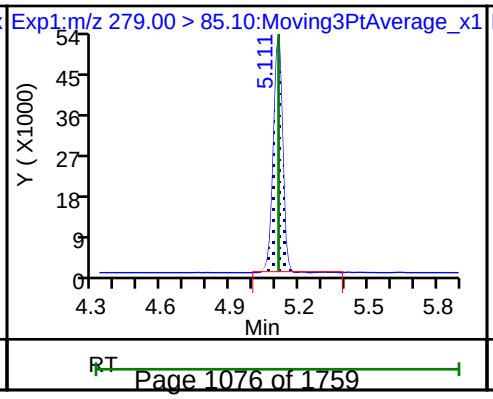
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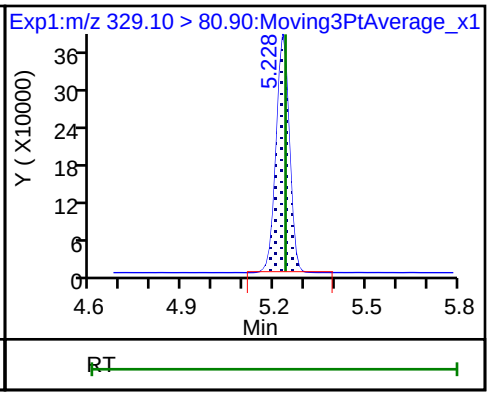
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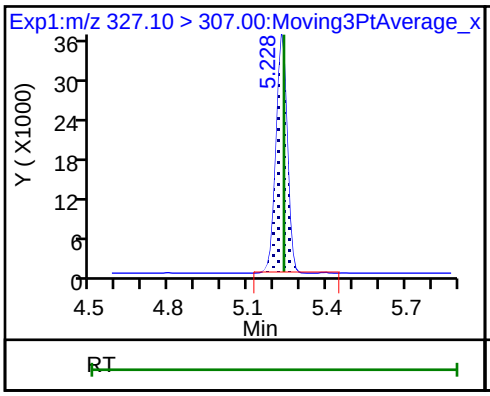
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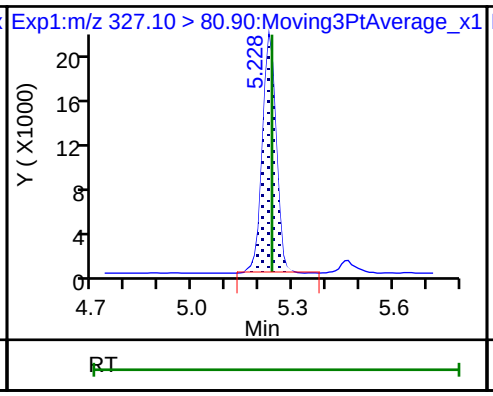
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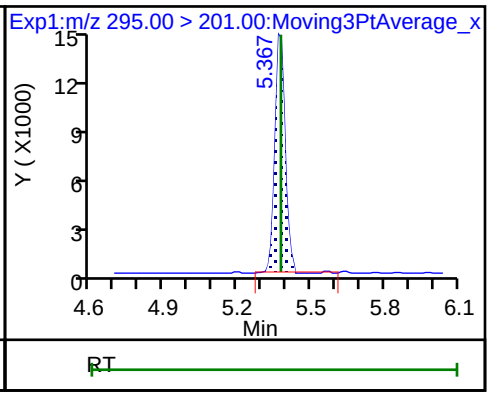
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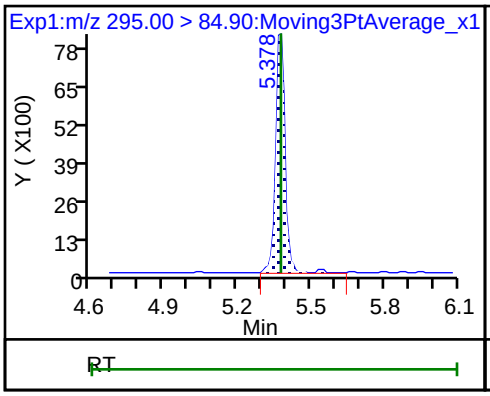
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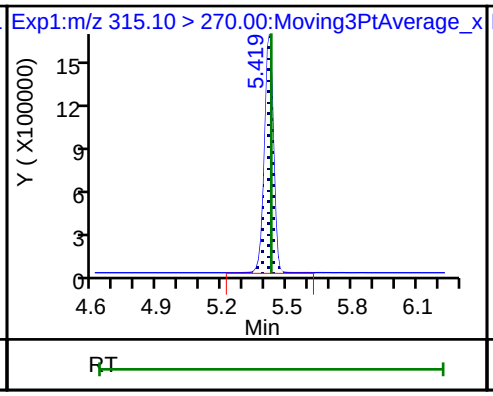
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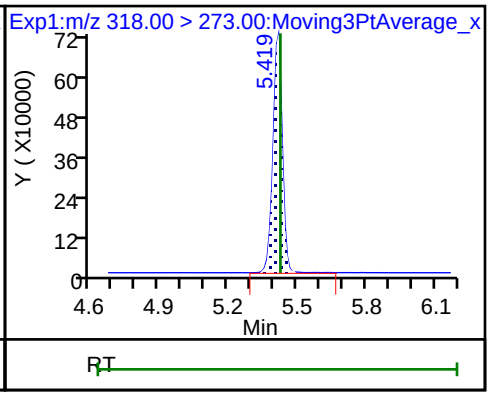
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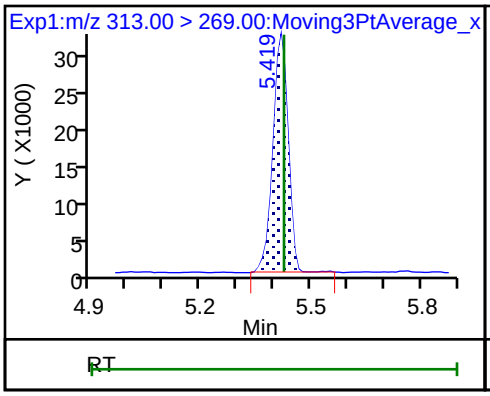
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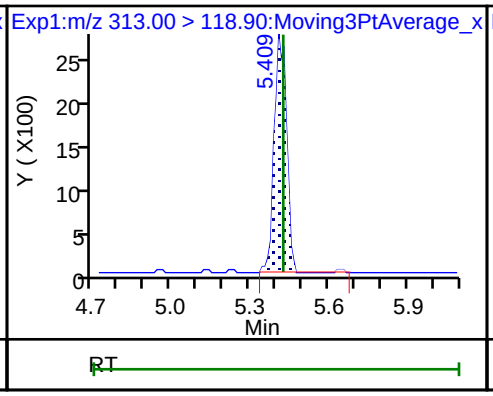
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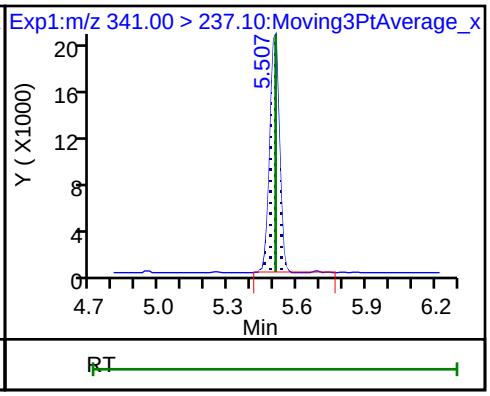
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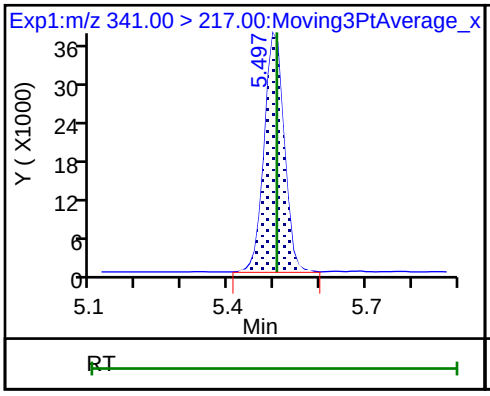
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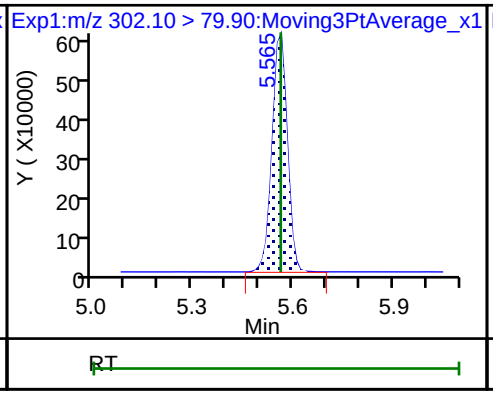
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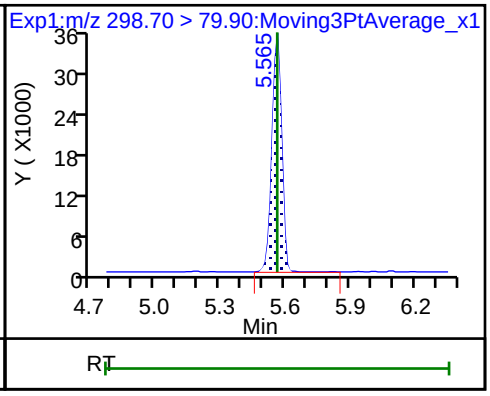
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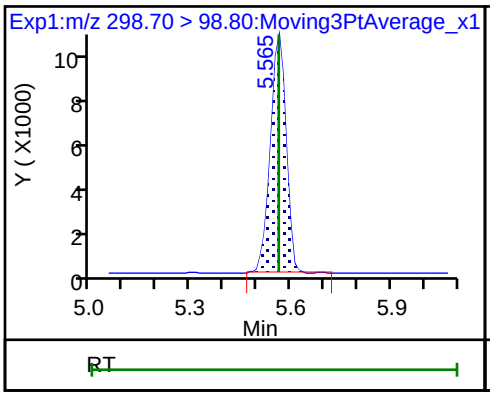
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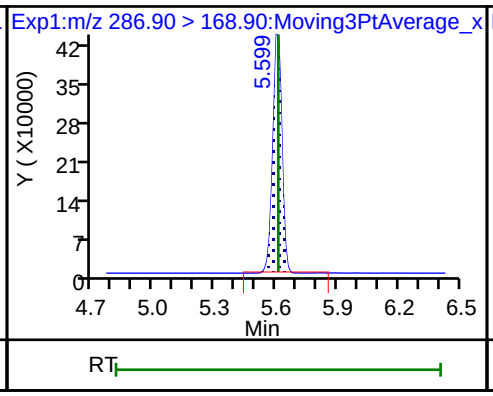
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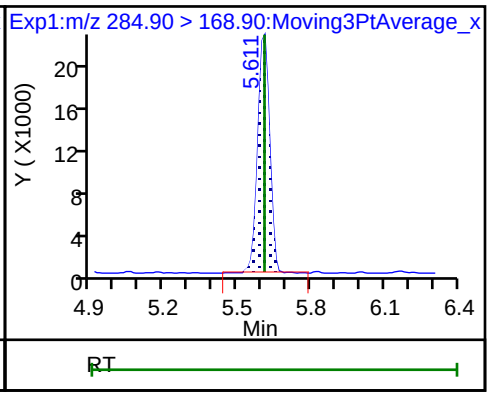
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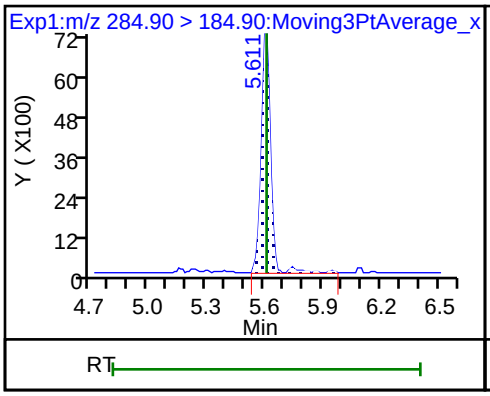
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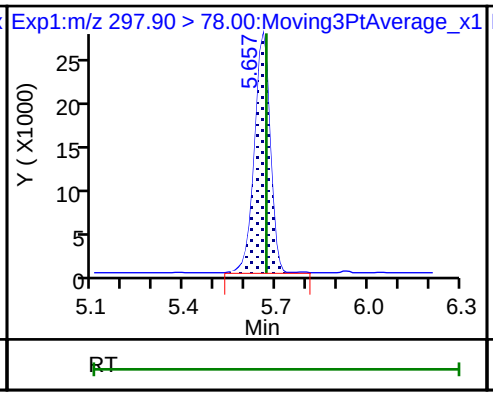
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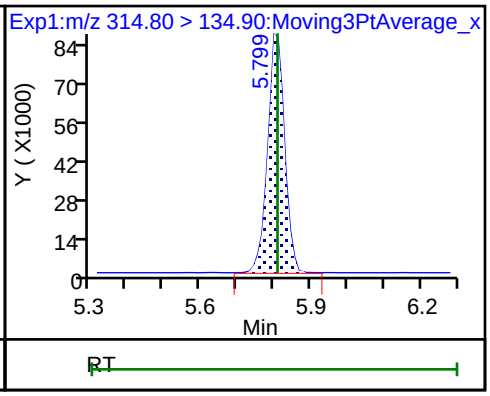
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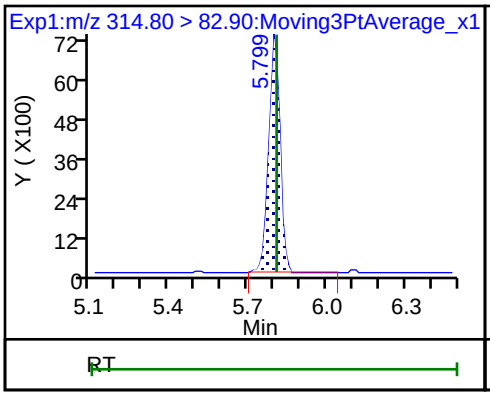
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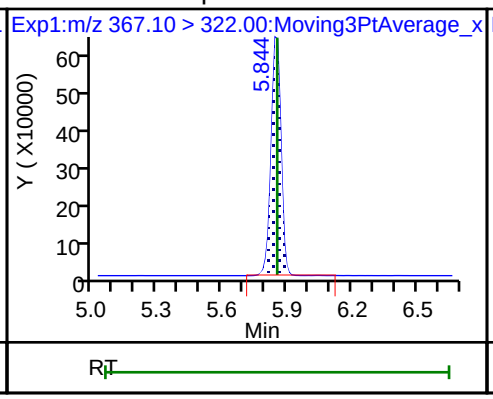
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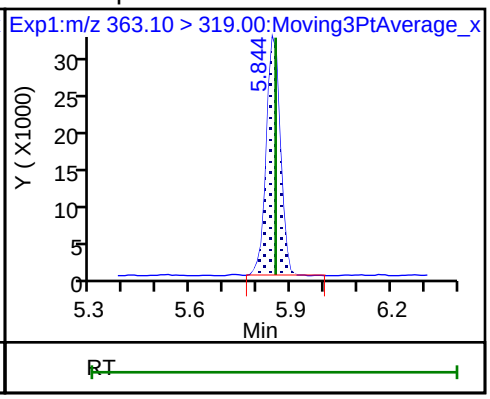
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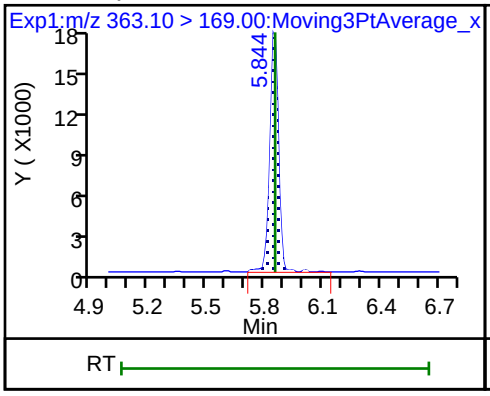
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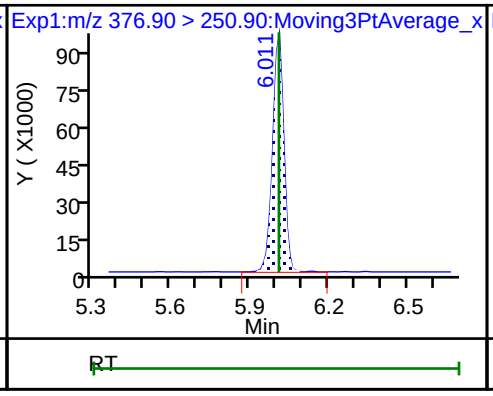
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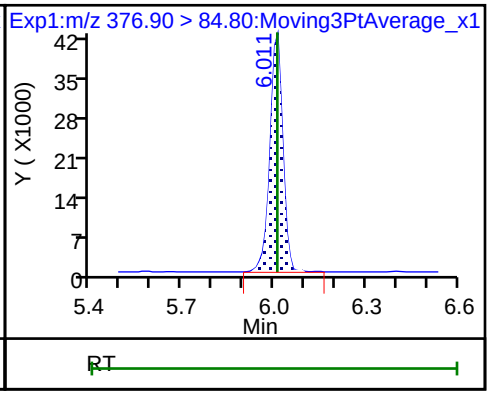
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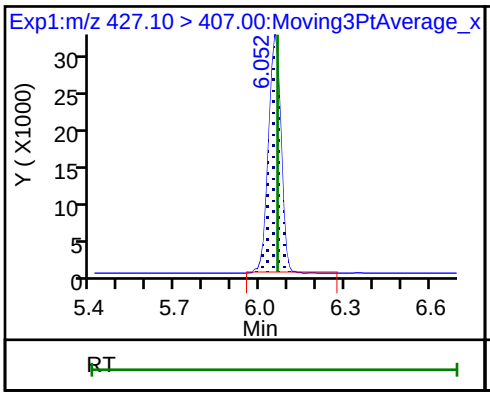
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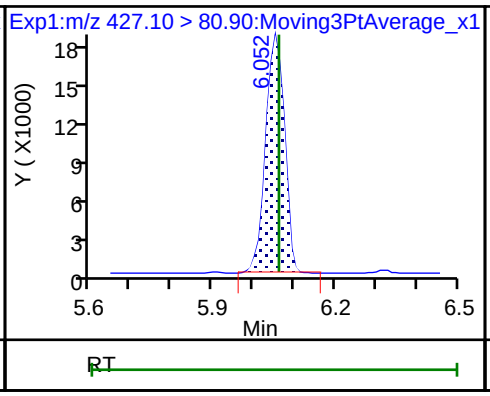
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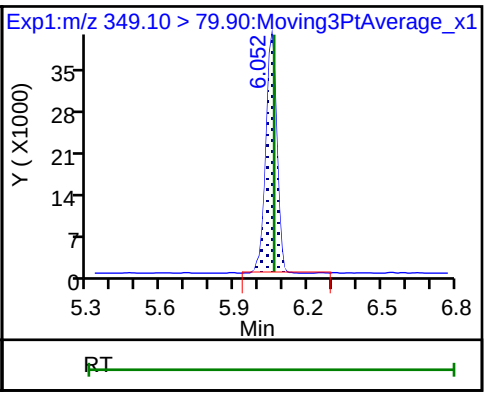
31 6:2FTS



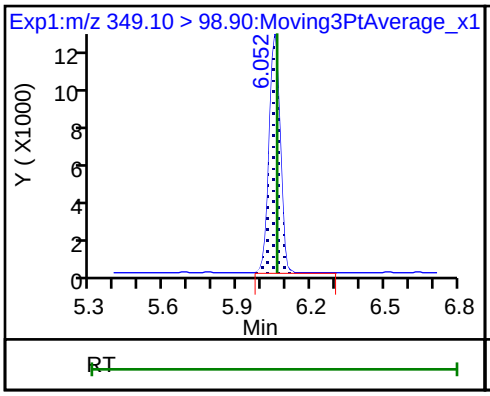
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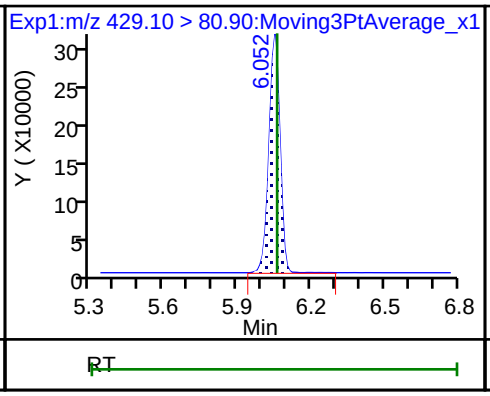
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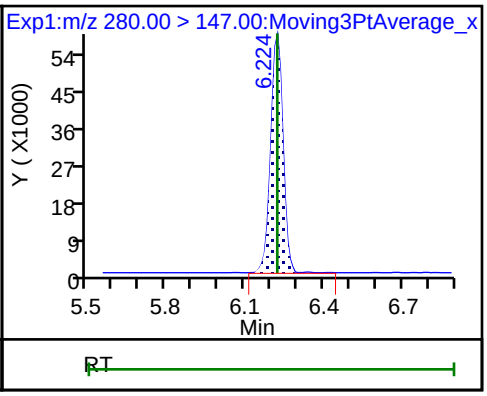
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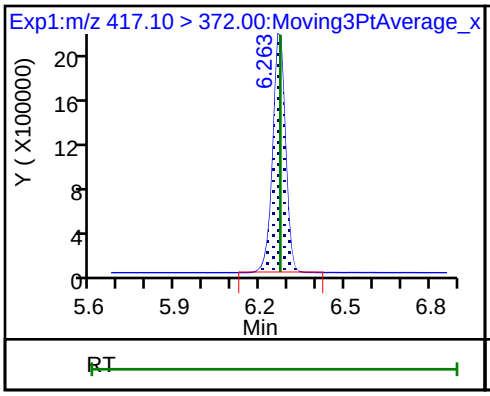
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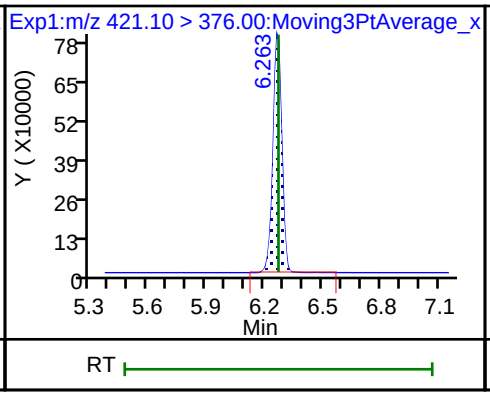
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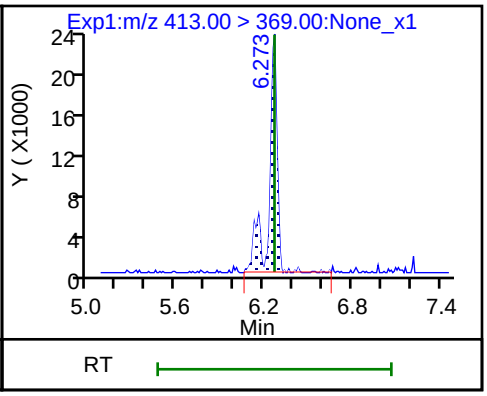
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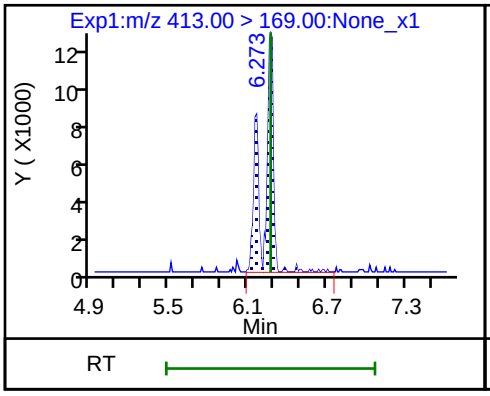
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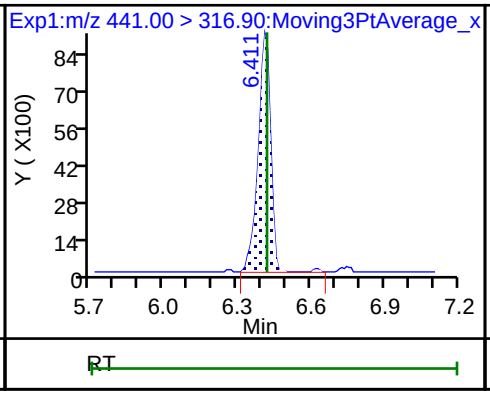
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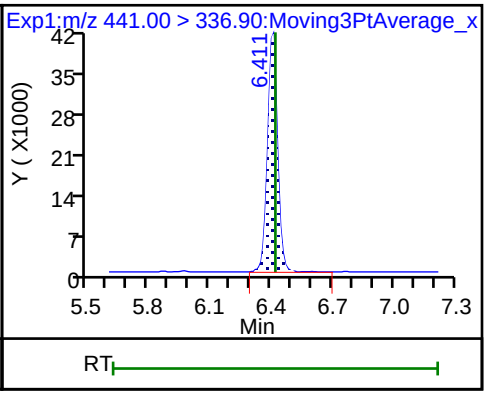
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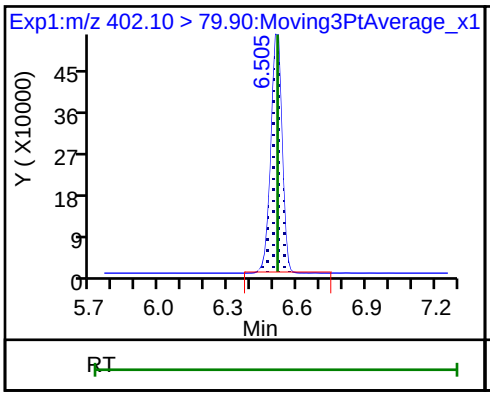
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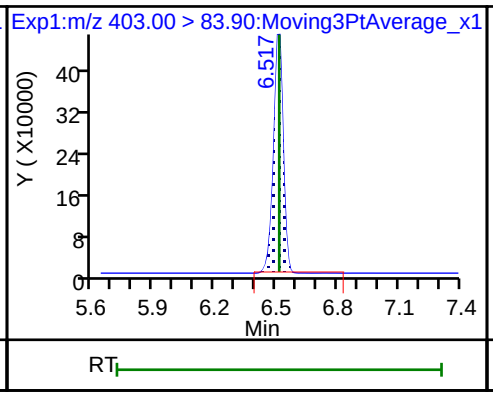
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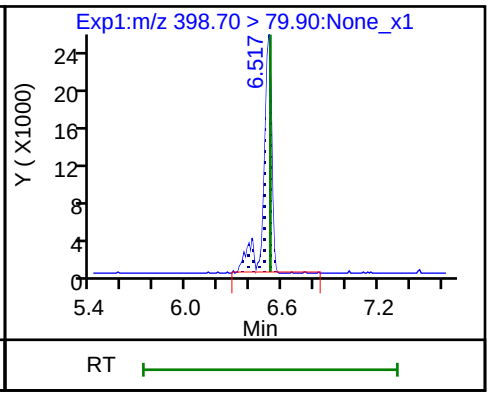
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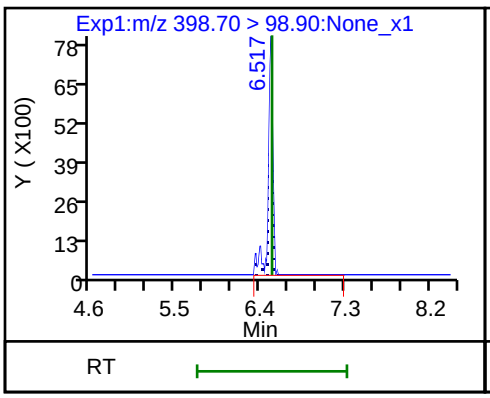
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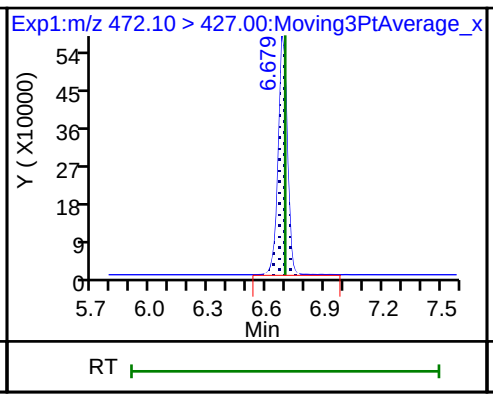
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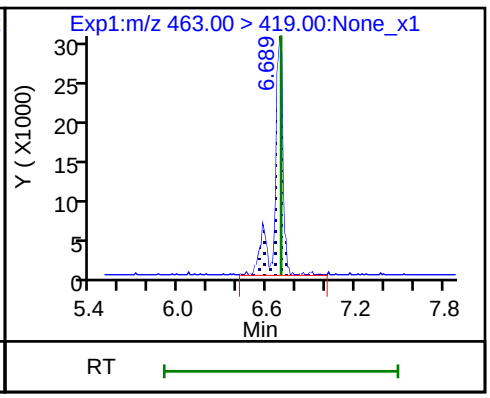
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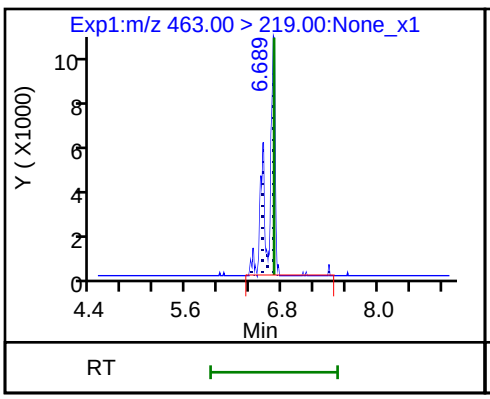
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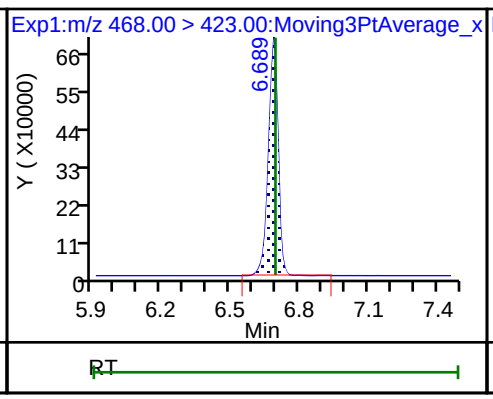
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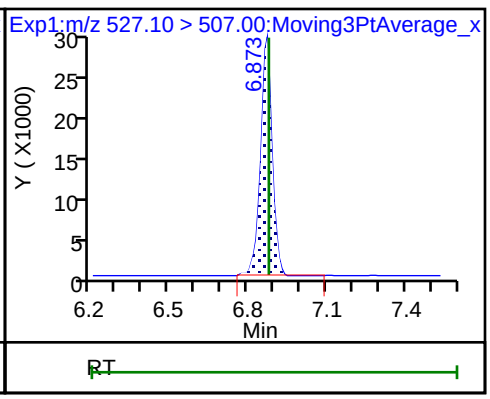
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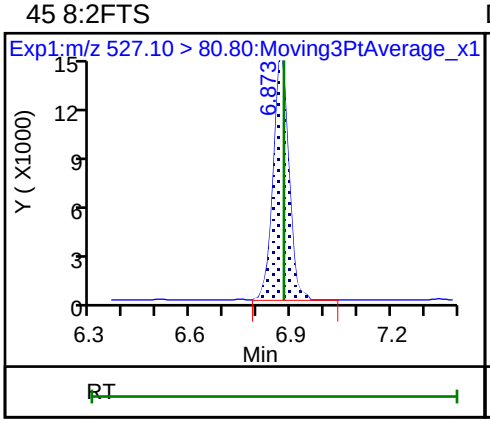
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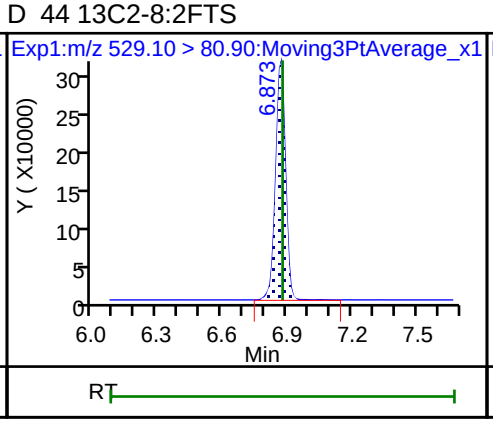
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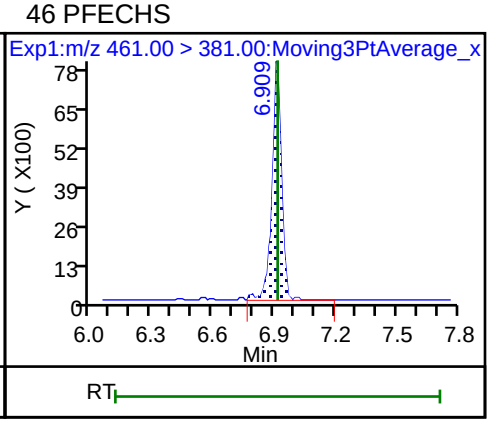
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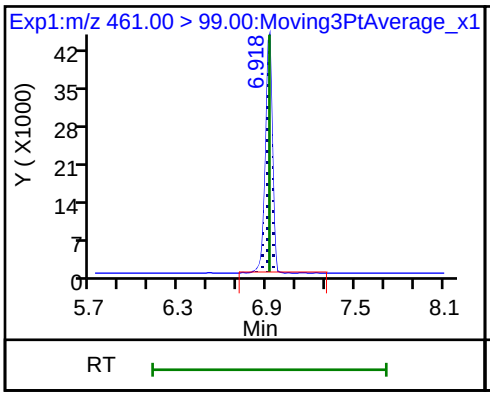
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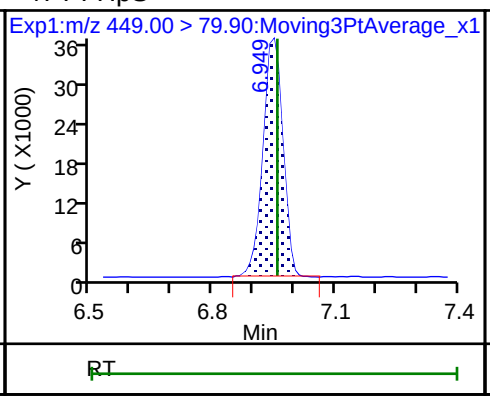
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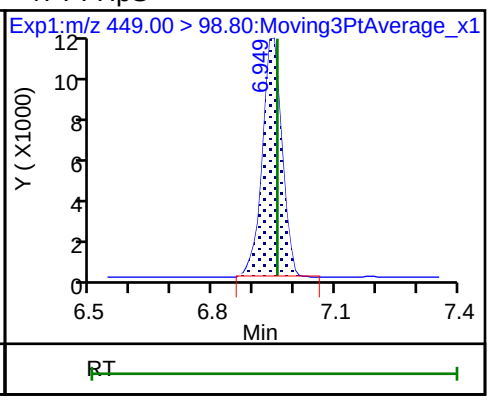
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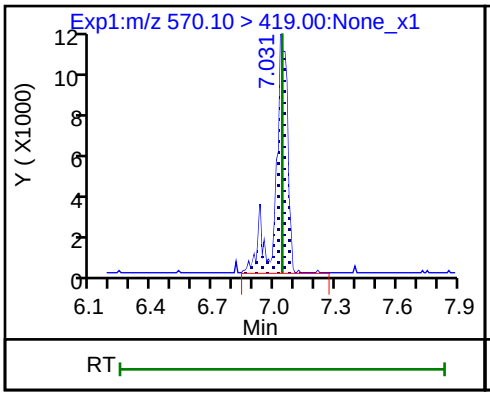
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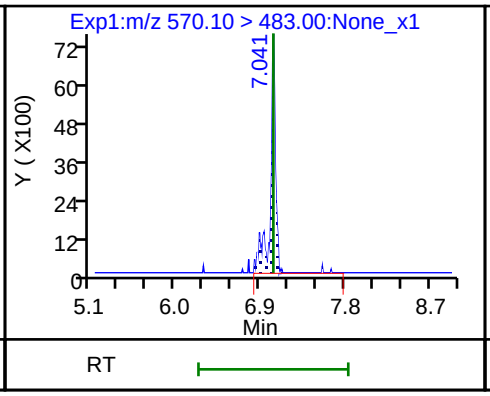
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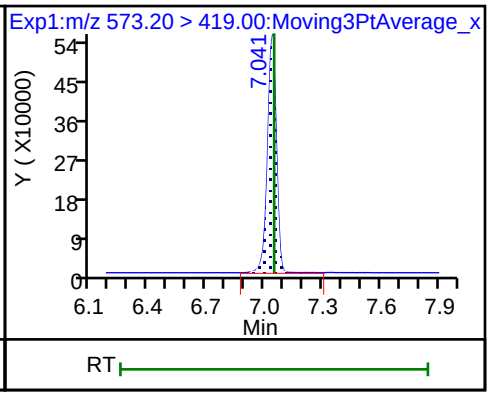
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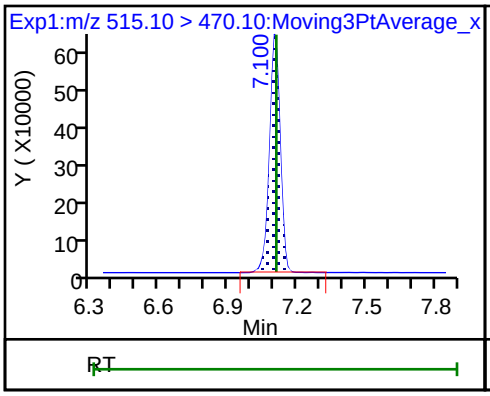
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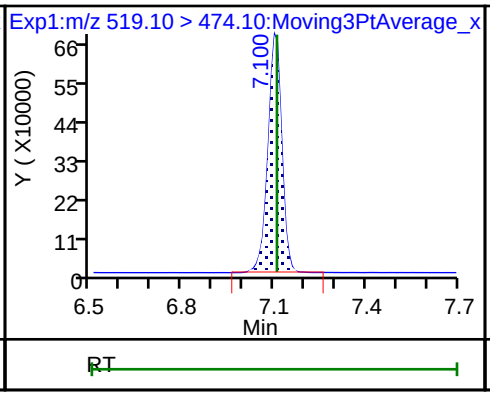
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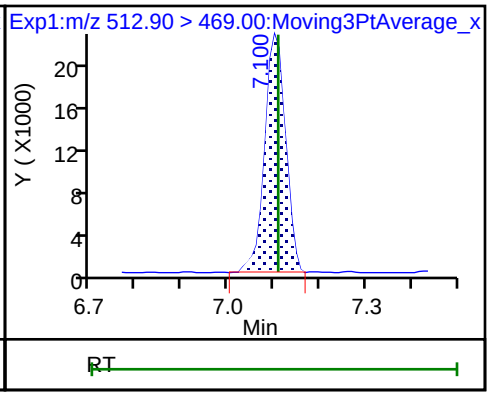
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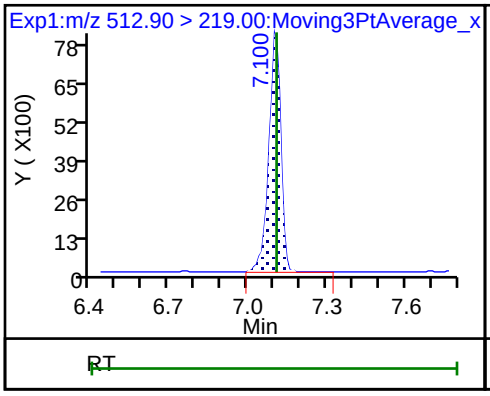
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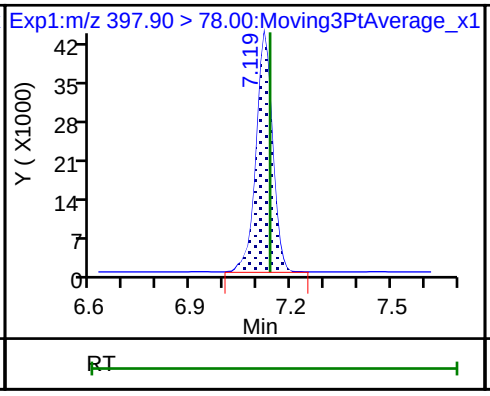
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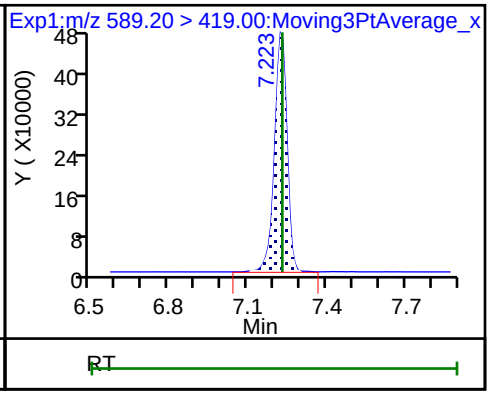
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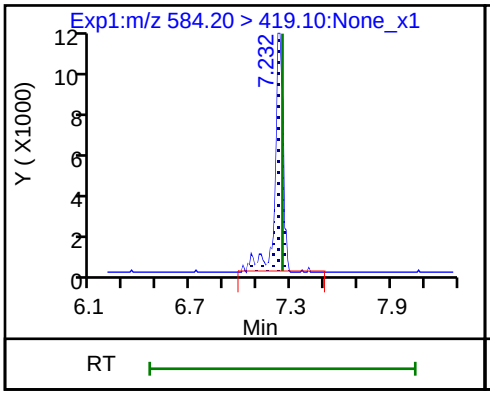
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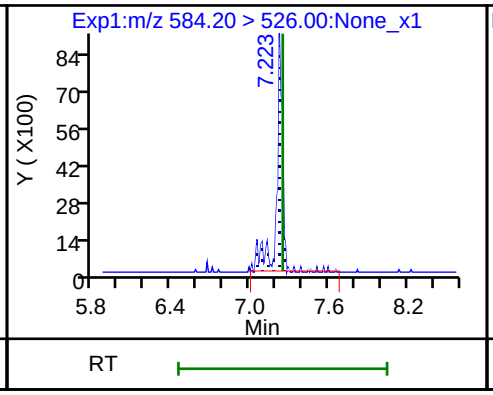
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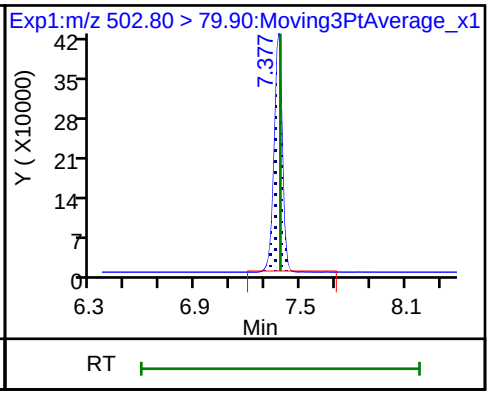
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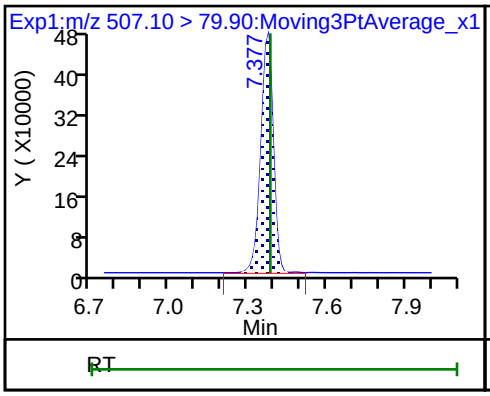
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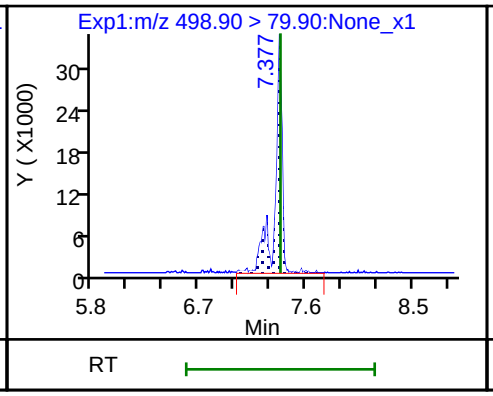
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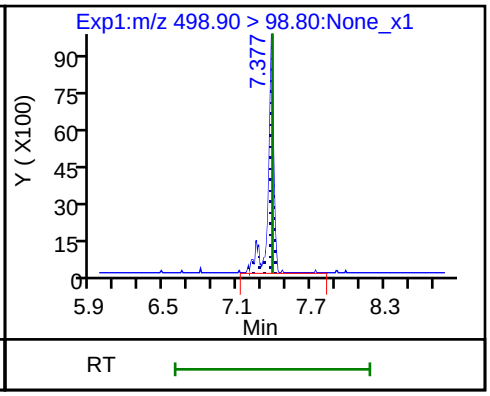
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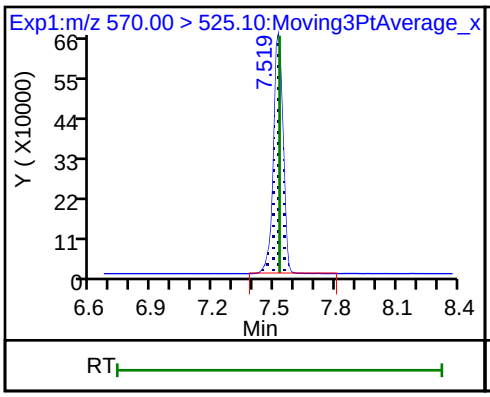
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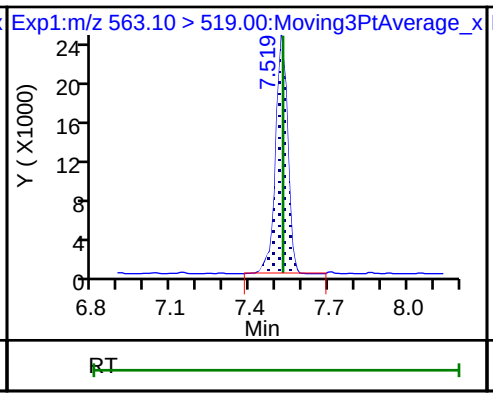
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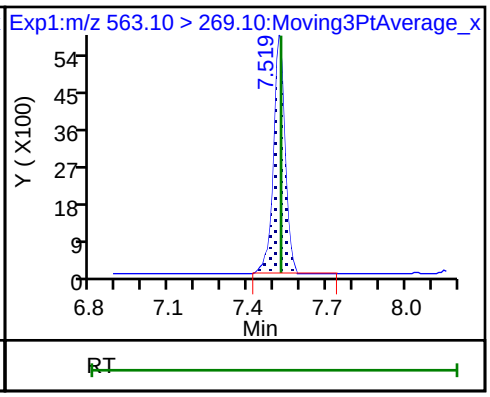
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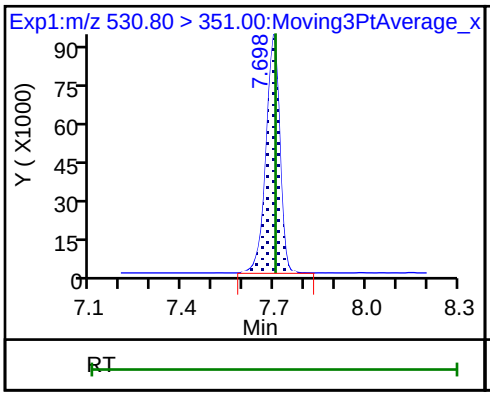
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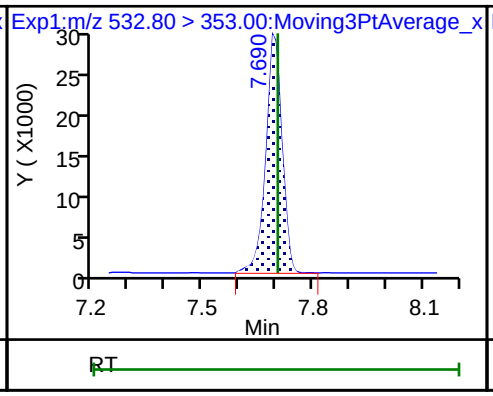
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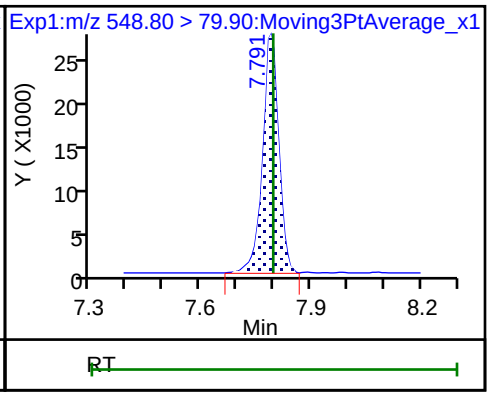
61 9ClFOS



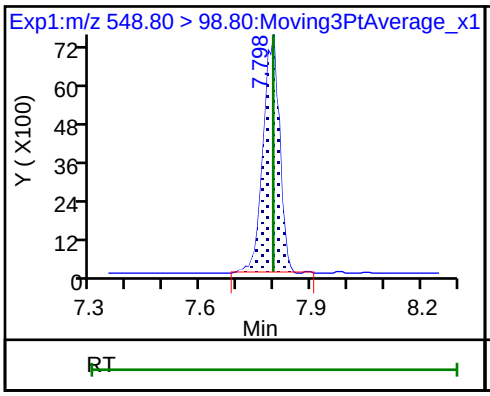
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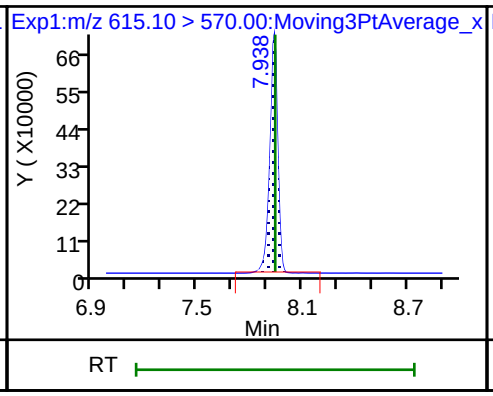
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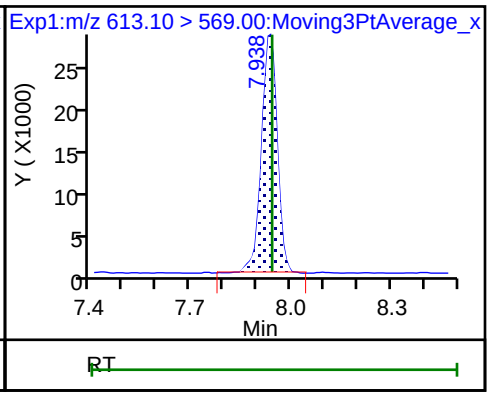
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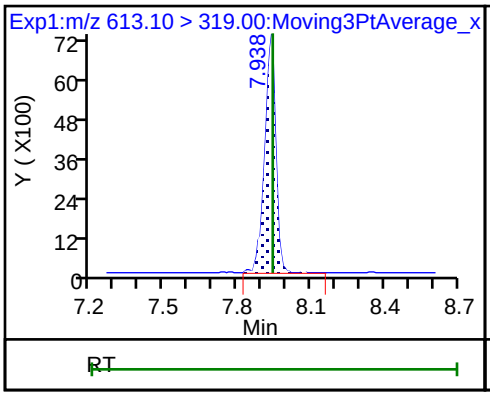
D 81 PFDoA



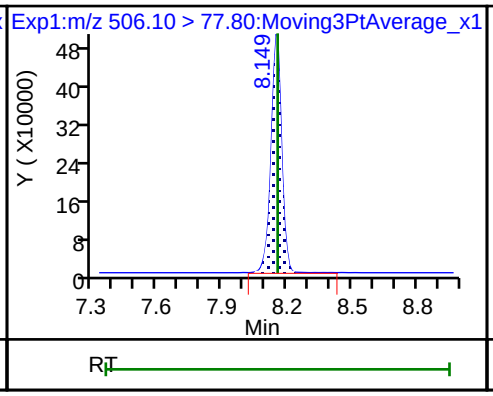
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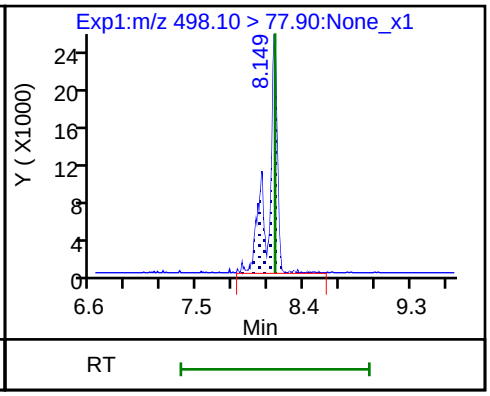
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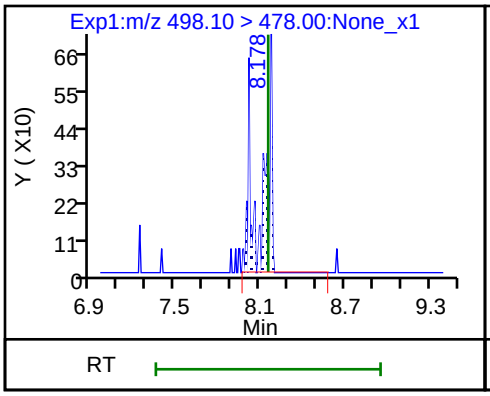
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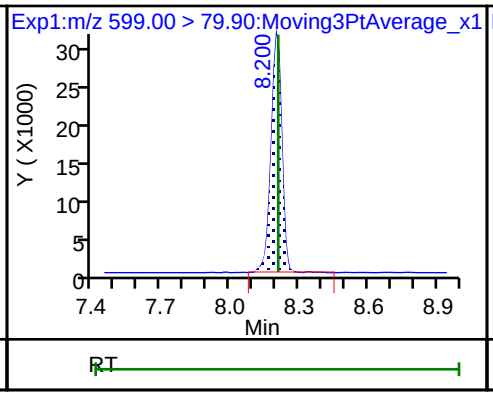
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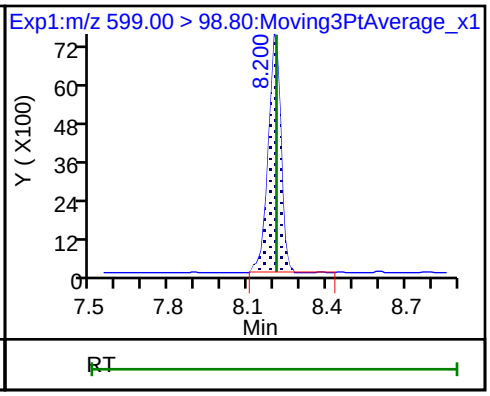
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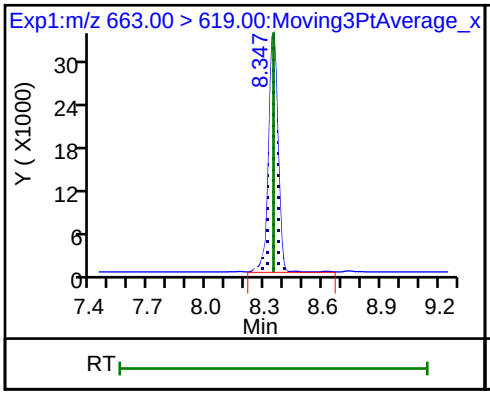
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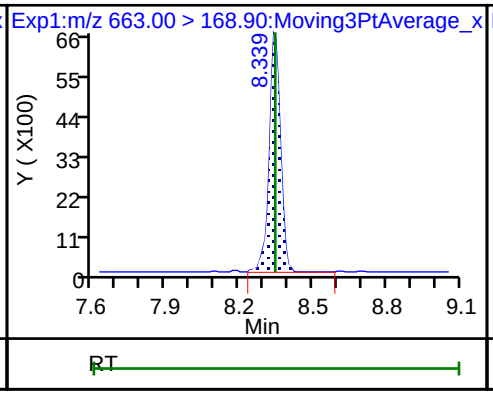
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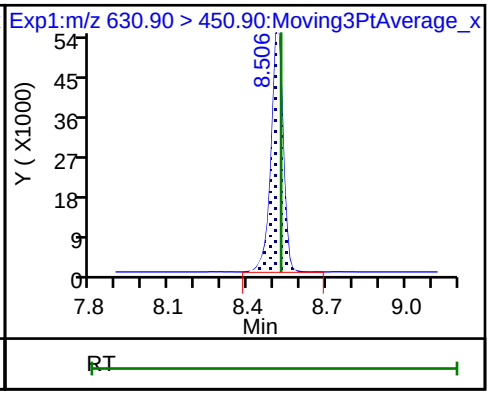
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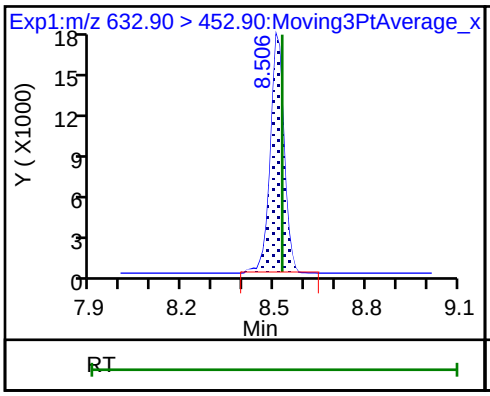
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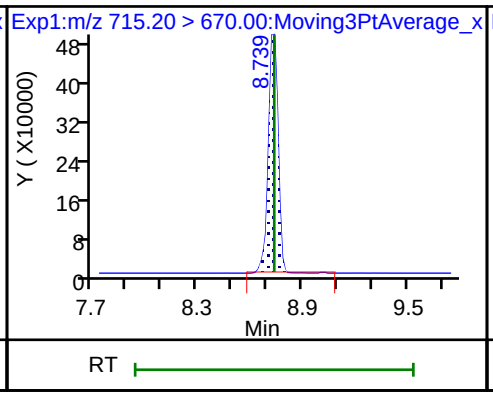
68 11ClFOS



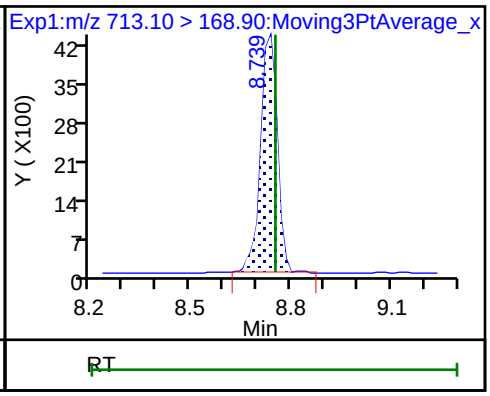
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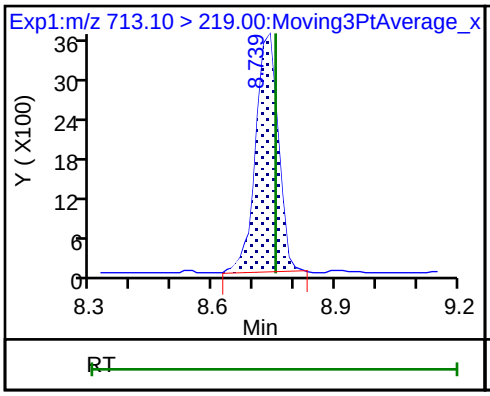
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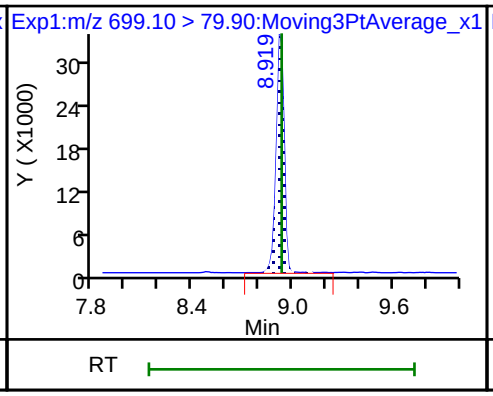
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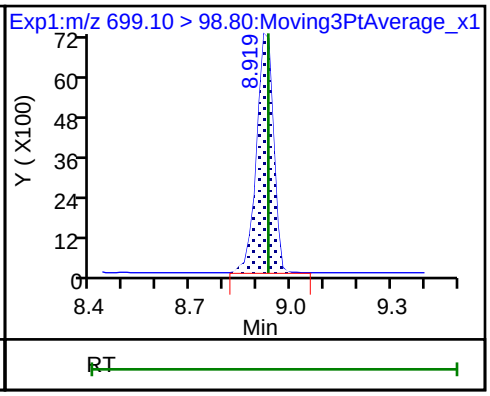
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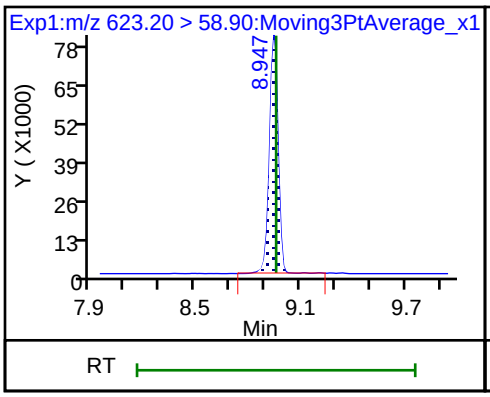
71 PFDoS



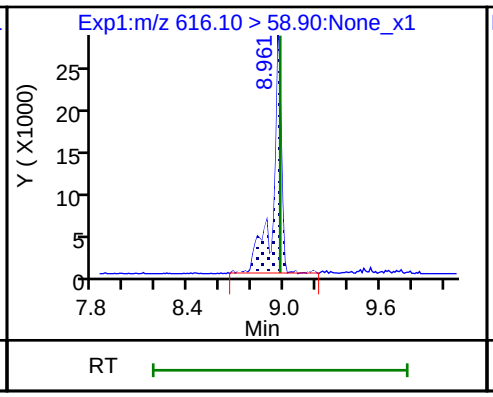
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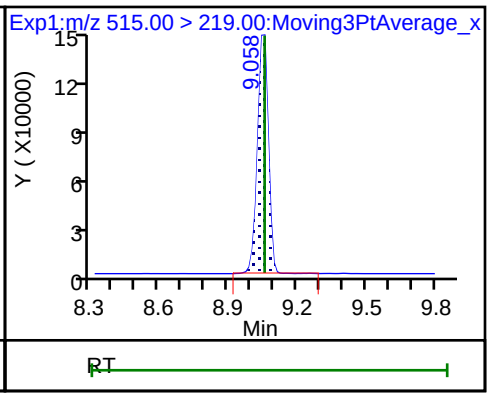
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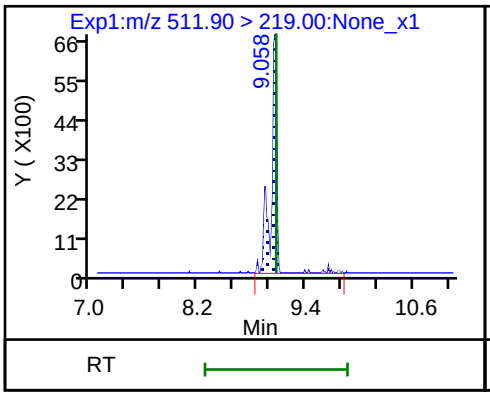
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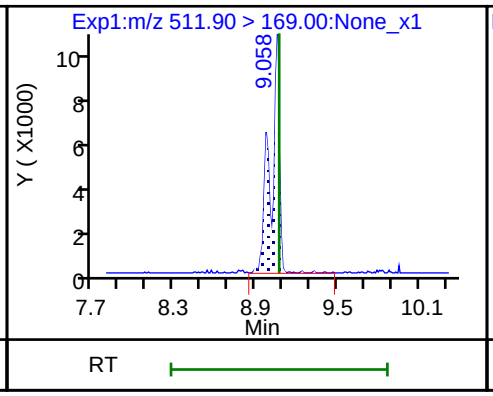
D 75 d3-NMePFOSA



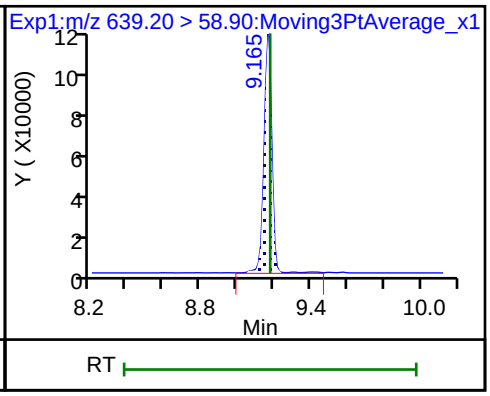
74 NMeFOSA



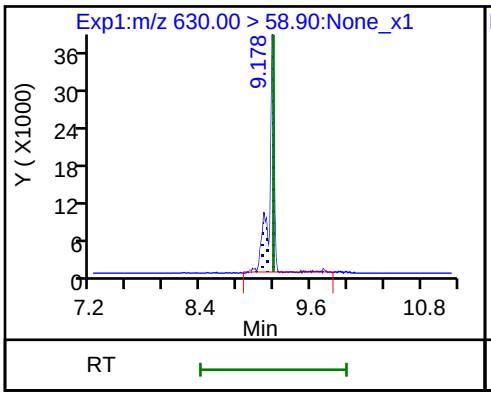
74 NMeFOSA



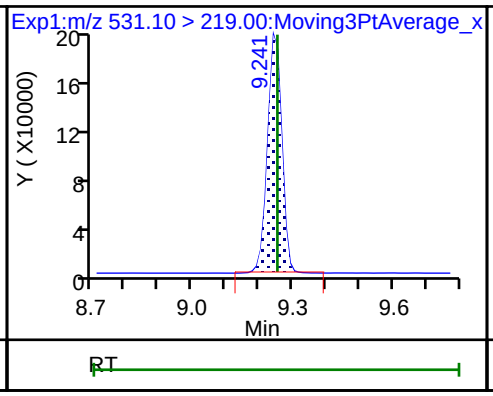
D 76 d9-N-EtFOSE



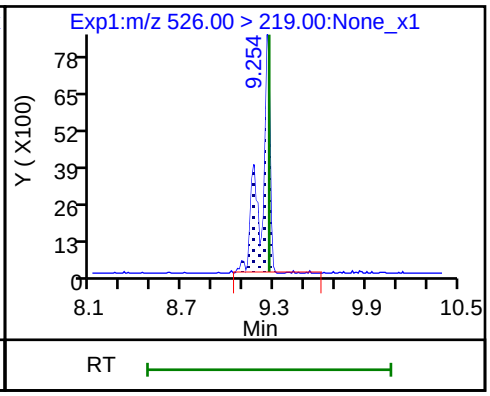
77 N-EtFOSE-M



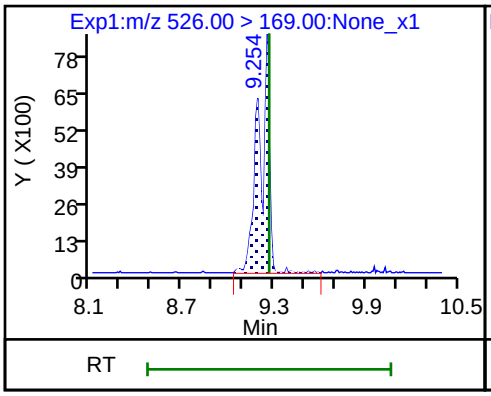
D 78 d5-NEtPFOSA



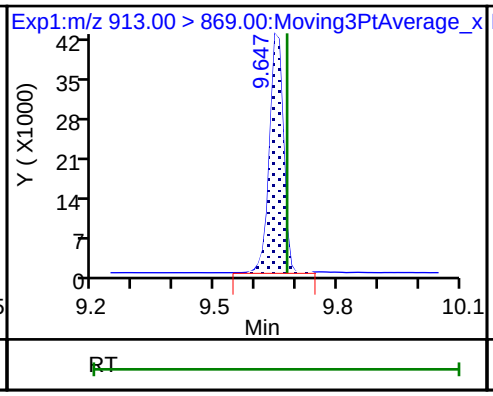
79 N-EtFOSA-M



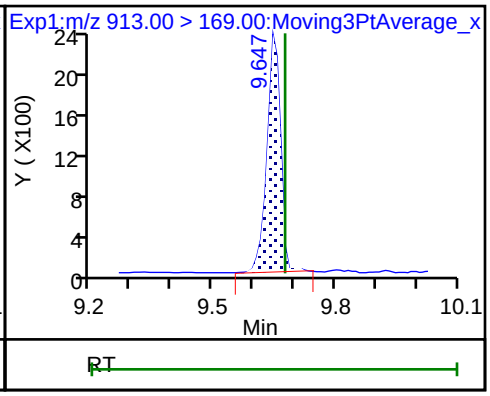
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-03.d
Lims ID: IC CAL 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Feb-2026 20:49:16 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 3
Misc. Info.: Plate: 1 Rack: 1 410-0175852-003
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:02 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 08:21:02
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.184	2.133	0.051	0.996	1586406	2.42		96.7	7449	
D 1 13C3PFPrA										
166.00 > 121.00	2.192	2.133	0.059	0.507	1434224	2.13		107	3009	
3 PFBA										
212.80 > 168.90	4.316	4.302	0.014	0.998	862631	0.9736		97.4	11468	
D 4 13C4-PFBA										
216.80 > 171.90	4.323	4.309	0.014	1.000	1934721	2.03		101	56991	
* 5 13C3PFBA										
216.00 > 172.00	4.323	4.309	0.014		1938277	2.00			4308	
6 PFMPA										
229.00 > 84.90	4.630	4.622	0.008	0.933	486650	0.4810		96.2	2738	
7 3:3 FTCA										
241.00 > 177.00	4.639	4.631	0.008	0.934	42586	0.8205	Target=1.16	82.1	850	
241.00 > 117.00	4.639	4.631	0.008	0.934	36518		1.17(0.58-1.73)	82.1	412	
D 8 13C5 PFPeA										
268.30 > 223.00	4.965	4.959	0.006	0.915	2011241	2.04		102	9554	
9 PFPA										
263.00 > 219.00	4.965	4.959	0.006	1.000	546691	0.4734		94.7	1715	
10 PFMBA										
279.00 > 85.10	5.122	5.107	0.015	1.032	631589	0.4662		93.2	3832	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.239	5.235	0.004	0.803	1331292	4.92		105	6993	
12 4:2FTS										
327.10 > 307.00	5.239	5.235	0.004	1.000	456103	0.8745	Target=1.70	93.2	3288	
327.10 > 80.90	5.239	5.235	0.004	1.000	281705		1.62(0.85-2.54)	93.2	282	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.390	5.386	0.004	0.993	156322	0.4704	Target=1.61	94.1	870	
295.00 > 84.90	5.390	5.386	0.004	0.993	117872		1.33(0.80-2.41)	94.1	952	
* 16 13C2 PFHxA										
315.10 > 270.00	5.428	5.424	0.004		5545430	5.00			9903	
D 15 13C5 PFHxA										
318.00 > 273.00	5.428	5.424	0.004	1.000	2424250	2.01		100	23710	
17 PFHxA										
313.00 > 269.00	5.428	5.424	0.004	1.000	429479	0.4753	Target=9.95	95.1	1774	
313.00 > 118.90	5.437	5.424	0.013	1.002	51029		8.42(4.98-14.93)	95.1	339	
18 5:3 FTCA										
341.00 > 237.10	5.519	5.503	0.016	1.017	239531	1.99	Target=0.62	79.6	955	
341.00 > 217.00	5.519	5.503	0.016	1.017	383850		0.62(0.31-0.94)	79.6	1355	
D 19 13C3 PFBS										
302.10 > 79.90	5.576	5.561	0.015	0.854	2398676	1.86		99.6	6747	
20 PFBS										
298.70 > 79.90	5.576	5.561	0.015	1.000	540869	0.4705	Target=3.17	106	2650	
298.70 > 98.80	5.576	5.561	0.015	1.000	153936		3.51(1.59-4.76)	106	776	
23 HFPO-DA										
284.90 > 168.90	5.623	5.607	0.015	1.000	289595	0.3678	Target=2.55	98.1	1264	
284.90 > 184.90	5.623	5.607	0.015	1.000	116576		2.48(1.27-3.82)	98.1	544	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.623	5.607	0.015	1.036	1454195	1.85		92.5	5075	
21 FBSA										
297.90 > 78.00	5.669	5.665	0.004	1.017	370854	0.4055		81.1	1381	
26 PFEESA										
314.80 > 134.90	5.821	5.807	0.014	1.072	1323710	0.4506	Target=12.76	101	6589	
314.80 > 82.90	5.821	5.807	0.014	1.072	96010		13.79(6.38-19.14)	101	560	
D 28 13C4 PFHpA										
367.10 > 322.00	5.867	5.851	0.016	1.081	2352736	1.99		99.5	4991	
27 PFHpA										
363.10 > 319.00	5.867	5.851	0.016	1.000	404621	0.4902	Target=1.64	98.0	1511	
363.10 > 169.00	5.867	5.851	0.016	1.000	247703		1.63(0.82-2.46)	98.0	996	
29 ADONA										
376.90 > 250.90	6.022	6.007	0.015	1.071	1217271	0.4866	Target=2.22	103	3942	
376.90 > 84.80	6.022	6.007	0.015	1.071	545392		2.23(1.11-3.33)	103	2729	
30 PFPeS										
349.10 > 79.90	6.063	6.049	0.014	0.929	569455	0.4765	Target=3.23	101	916	
349.10 > 98.90	6.063	6.049	0.014	0.929	182908		3.11(1.61-4.84)	101	875	
31 6:2FTS										
427.10 > 407.00	6.063	6.059	0.004	1.000	432316	0.9082	Target=1.59	95.4	2715	
427.10 > 80.90	6.063	6.059	0.004	1.000	278661		1.55(0.79-2.38)	95.4	712	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.063	6.059	0.004	0.929	1227072	5.45		115	4385	
33 BTS										
280.00 > 147.00	6.234	6.220	0.014	0.955	965550	0.4955		101	3455	
* 34 13C4 PFOA										
417.10 > 372.00	6.282	6.269	0.013		7546543	5.00			3958	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.282	6.269	0.013	1.000	2698297	1.87		93.3	3215	
36 PFOA										
413.00 > 369.00	6.282	6.269	0.013	1.000	351673	0.4950	Target=1.52	99.0	396	
413.00 > 169.00	6.292	6.269	0.023	1.002	238206		1.48(0.76-2.27)	99.0	245	
37 7:3 FTCA										
441.00 > 316.90	6.422	6.407	0.015	1.183	124362	2.02	Target=0.24	80.9	496	
441.00 > 336.90	6.422	6.407	0.015	1.183	500662		0.25(0.12-0.36)	80.9	1495	
* 39 18O2 PFHxS										
403.00 > 83.90	6.528	6.512	0.016		1899973	1.90			5428	
40 PFHxS										
398.70 > 79.90	6.528	6.512	0.016	1.000	344722	0.4294	Target=3.27	94.2	642	
398.70 > 98.90	6.528	6.512	0.016	1.000	112334		3.07(1.63-4.90)	94.2	160	
D 38 13C3 PFHxS										
402.10 > 79.90	6.528	6.512	0.016	1.000	2001917	1.83		96.5	5333	
D 41 13C9 PFNA										
472.10 > 427.00	6.699	6.684	0.015	1.000	2492846	2.02		101	6033	
* 42 13C5 PFNA										
468.00 > 423.00	6.699	6.684	0.015		2464448	2.00			3426	
43 PFNA										
463.00 > 419.00	6.699	6.694	0.005	1.000	531583	0.4691	Target=2.14	93.8	899	
463.00 > 219.00	6.709	6.694	0.015	1.001	242294		2.19(1.07-3.21)	93.8	200	
45 8:2FTS										
527.10 > 507.00	6.881	6.868	0.013	1.000	387303	0.9652	Target=1.87	101	2002	
527.10 > 80.80	6.881	6.868	0.013	1.000	205381		1.89(0.94-2.81)	101	1140	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.881	6.868	0.013	1.054	1152485	4.97		104	1881	
46 PFECHS										
461.00 > 381.00	6.918	6.914	0.004	1.060	107212	0.4442	Target=0.17	96.2	712	
461.00 > 99.00	6.918	6.914	0.004	1.060	603331		0.18(0.09-0.26)	96.2	2813	
47 PFHpS										
449.00 > 79.90	6.960	6.945	0.015	0.943	548190	0.4519	Target=3.71	94.7	2821	
449.00 > 98.80	6.960	6.945	0.015	0.943	153943		3.56(1.86-5.57)	94.7	868	
50 NMeFOSAA										
570.10 > 419.00	7.041	7.037	0.004	0.999	187346	0.4869	Target=1.66	97.4	460	
570.10 > 483.00	7.061	7.037	0.024	1.001	107786		1.74(0.83-2.49)	97.4	223	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.051	7.037	0.014	0.956	1957715	4.74		94.8	3504	
* 51 13C2 PFDA										
515.10 > 470.10	7.110	7.107	0.004		2472586	2.00			5538	
D 52 13C6 PFDA										
519.10 > 474.10	7.110	7.107	0.004	1.000	2447208	1.99		99.5	7803	
53 PFDA										
512.90 > 469.00	7.119	7.107	0.013	1.001	312424	0.4591	Target=2.88	91.8	1392	
512.90 > 219.00	7.119	7.107	0.013	1.001	116445		2.68(1.44-4.31)	91.8	546	
48 FHxSA										
397.90 > 78.00	7.129	7.126	0.003	1.092	563971	0.4013		80.3	1532	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.232	7.219	0.013	0.980	1769006	4.68		93.6	6183	
55 NEtFOSAA										
584.20 > 419.10	7.241	7.238	0.003	1.001	154160	0.4941	Target=1.34	98.8	393	
584.20 > 526.00	7.232	7.238	-0.006	1.000	106453		1.45(0.67-2.01)	98.8	214	
* 57 13C4 PFOS										
502.80 > 79.90	7.377	7.373	0.004		1653350	1.92			5271	
D 56 13C8 PFOS										
507.10 > 79.90	7.377	7.373	0.004	1.000	1850000	1.93		101	4521	
58 PFOS										
498.90 > 79.90	7.387	7.373	0.014	1.001	584970	0.4393	Target=4.60	94.5	725	
498.90 > 98.80	7.387	7.373	0.014	1.001	124728		4.69(2.30-6.89)	94.5	397	
D 59 13C7 PFUnA										
570.00 > 525.10	7.519	7.506	0.013	1.058	2773070	2.16		108	4126	
60 PFUnA										
563.10 > 519.00	7.528	7.515	0.013	1.001	351364	0.4657	Target=3.77	93.1	1209	
563.10 > 269.10	7.528	7.515	0.013	1.001	91745		3.83(1.88-5.65)	93.1	502	
61 9ClFOS										
530.80 > 351.00	7.698	7.686	0.012	1.043	1271217	0.4630	Target=3.08	99.1	5402	
532.80 > 353.00	7.698	7.686	0.012	1.043	410988		3.09(1.54-4.61)	99.1	4445	
62 PFNS										
548.80 > 79.90	7.791	7.788	0.003	1.056	406944	0.4896	Target=3.66	102	3018	
548.80 > 98.80	7.791	7.788	0.003	1.056	109541		3.71(1.83-5.49)	102	1400	
D 81 PFDoA										
615.10 > 570.00	7.938	7.935	0.003	1.117	2739305	2.13		107	5772	
63 PFDoA										
613.10 > 569.00	7.938	7.935	0.003		458559	0.4858	Target=4.34	97.2	2934	
613.10 > 319.00	7.938	7.935	0.003		98956		4.63(2.17-6.51)	97.2	1023	
D 65 13C8 FOSA										
506.10 > 77.80	8.159	8.155	0.004	1.106	1670663	1.63		81.6	7130	
64 PFOSA										
498.10 > 77.90	8.149	8.155	-0.006	0.999	469585	0.4947	Target=44.41	98.9	864	
498.10 > 478.00	8.149	8.155	-0.006	0.999	11258		41.71(22.20-66.61)	98.9	36.8	
66 PFDS										
599.00 > 79.90	8.200	8.196	0.004	1.112	516841	0.4961	Target=3.83	103	3277	
599.00 > 98.80	8.200	8.196	0.004	1.112	135742		3.81(1.91-5.74)	103	1554	
67 PFTrDA										
663.00 > 619.00	8.339	8.345	-0.006	0.956	509392	0.4460	Target=5.77	89.2	2642	
663.00 > 168.90	8.339	8.345	-0.006	0.956	87315		5.83(2.88-8.65)	89.2	1092	
68 11ClFOS										
630.90 > 450.90	8.506	8.504	0.002	1.153	814432	0.4715	Target=3.07	99.9	8083	
632.90 > 452.90	8.506	8.504	0.002	1.153	265266		3.07(1.54-4.61)	99.9	1227	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.724	8.722	0.002	1.227	2635796	2.23		112	8490	
69 PFTeDA										
713.10 > 168.90	8.724	8.722	0.002	1.000	57475	0.3769	Target=0.94	75.4	602	
713.10 > 219.00	8.724	8.722	0.002	1.000	75869		0.76(0.47-1.41)	75.4	538	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.919	8.917	0.002	1.209	565451	0.5282	Target=4.11	109	1880	
699.10 > 98.80	8.919	8.917	0.002	1.209	137615		4.11(2.06-6.17)	109	1838	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.947	8.945	0.002	1.213	294230	4.34		86.8	740	
73 N-MeFOSE-M										
616.10 > 58.90	8.961	8.974	-0.013	1.002	351086	2.23		89.1	537	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.045	9.057	-0.012	1.226	510158	1.72		85.8	3310	
74 NMeFOSA										
511.90 > 219.00	9.058	9.057	0.001	1.001	109092	0.4809	Target=0.68	96.2	382	
511.90 > 169.00	9.058	9.057	0.001	1.001	157260		0.69(0.34-1.03)	96.2	593	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.165	9.176	-0.011	1.242	316304	4.09		81.7	789	
77 N-EtFOSE-M										
630.00 > 58.90	9.178	9.189	-0.011	1.001	483548	2.46		98.5	2070	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.254	9.252	0.002	1.254	627830	1.73		86.6	3287	
79 N-EtFOSA-M										
526.00 > 219.00	9.254	9.265	-0.011	1.000	124002	0.4628	Target=0.87	92.6	715	
526.00 > 169.00	9.254	9.265	-0.011	1.000	151366		0.82(0.43-1.30)	92.6	635	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.657	9.645	0.012	1.107	355894	0.3560	Target=16.98	71.2	12770	
913.00 > 169.00	9.657	9.645	0.012	1.107	21582		16.49(8.49-25.47)	71.2	1839	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL3_00036 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:05 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-03.d

Injection Date: 16-Feb-2026 20:49:16 Instrument ID: 30577

Lims ID: IC CAL 3

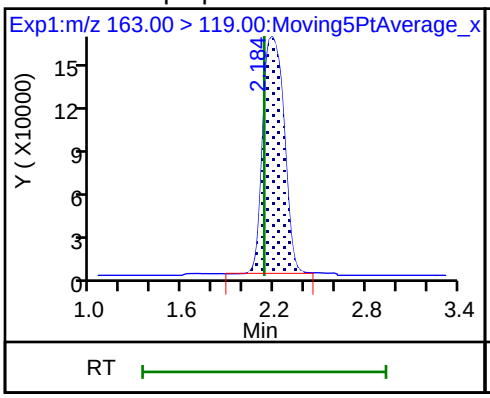
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 4 Worklist Smp#: 3

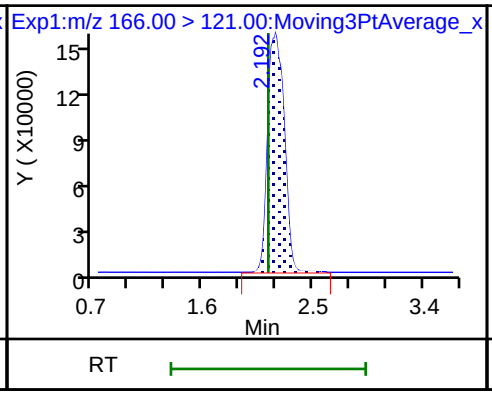
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

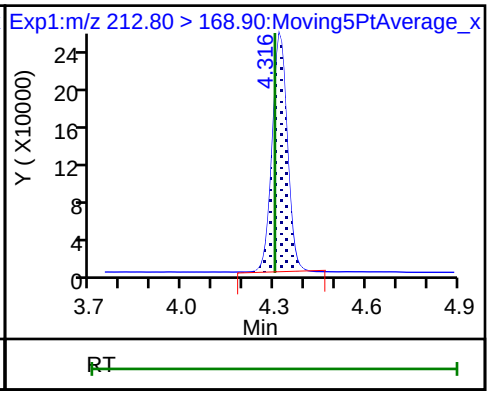
2 Perfluoropropionic acid



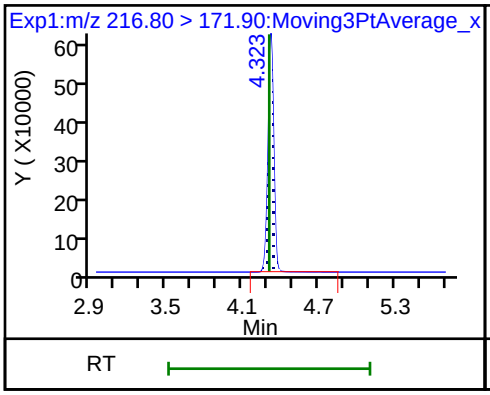
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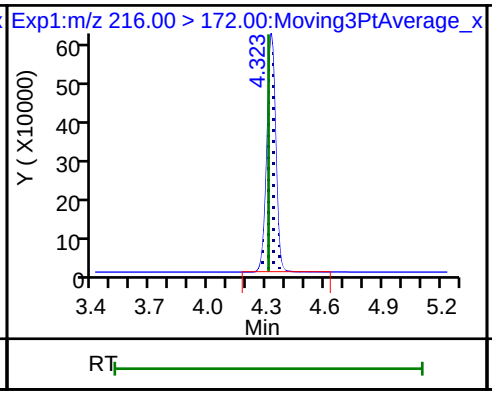
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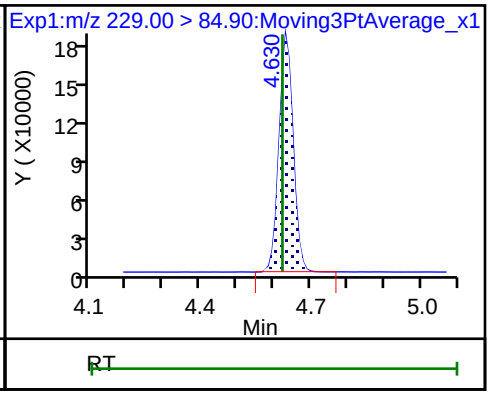
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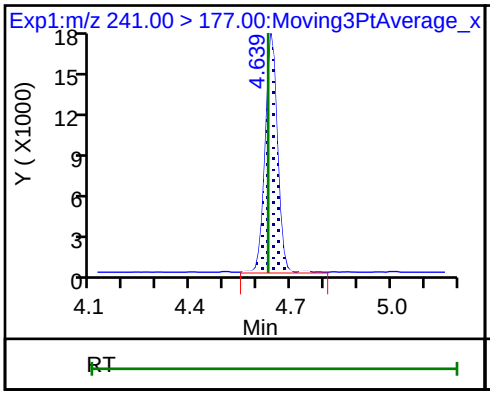
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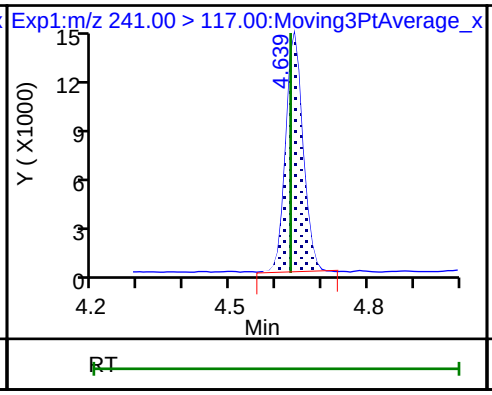
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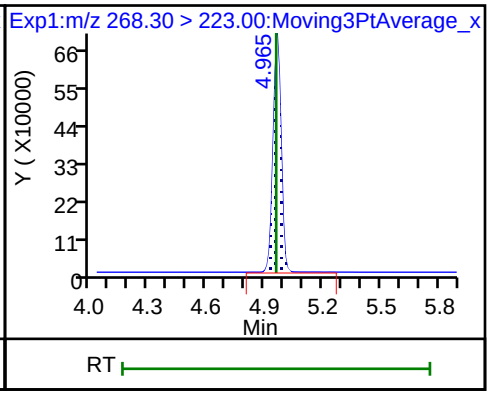
7 3:3 FTCA



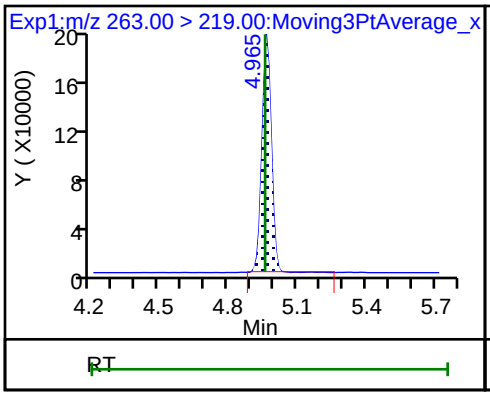
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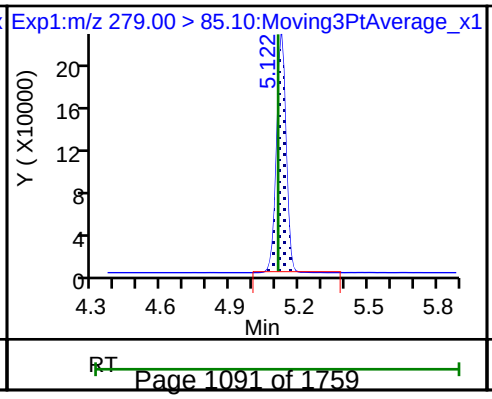
D 8 13C5 PFPeA



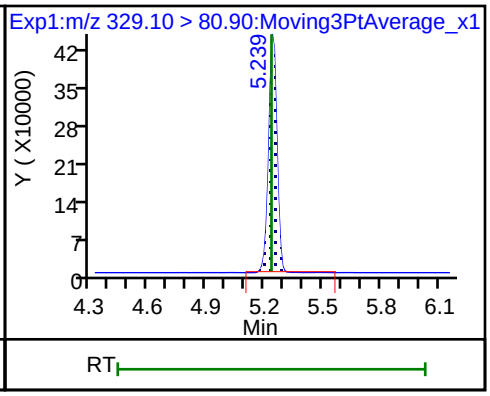
9 PFPA



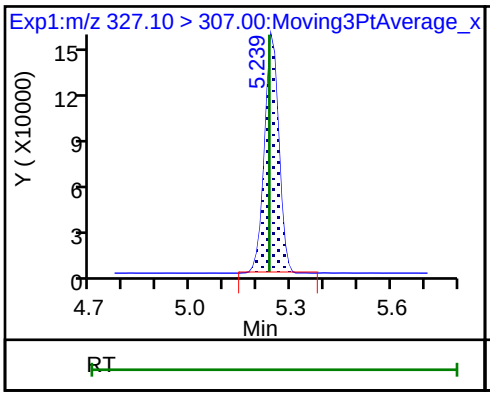
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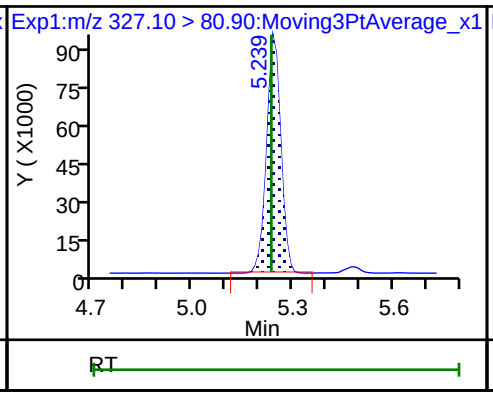
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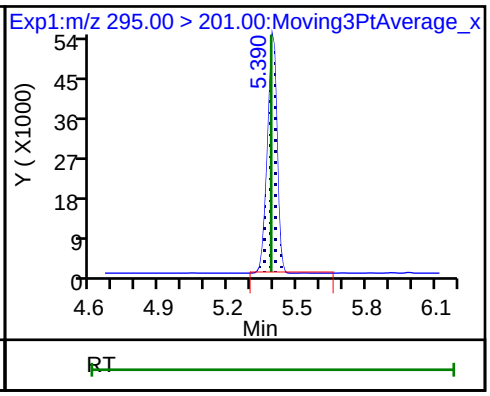
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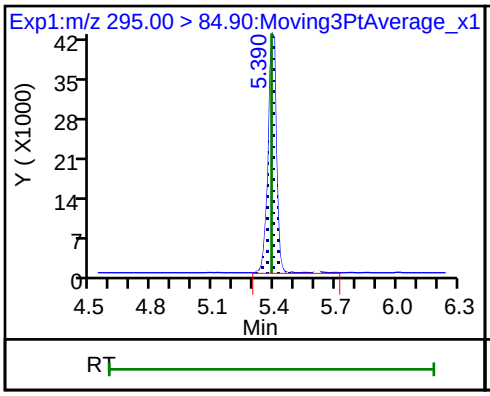
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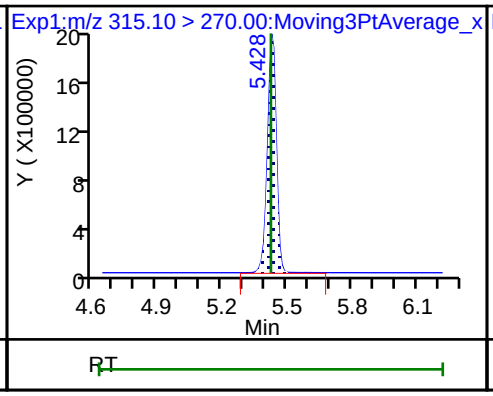
14 NFDHA



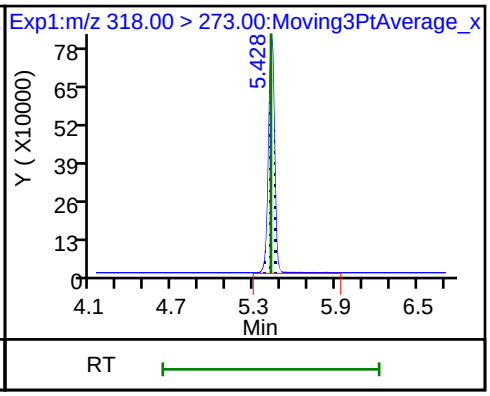
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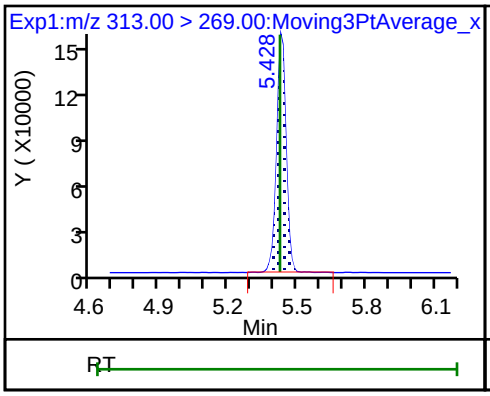
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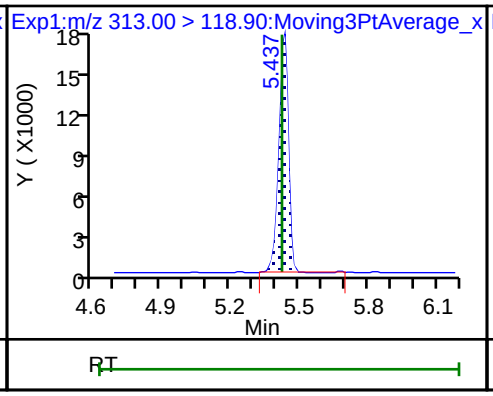
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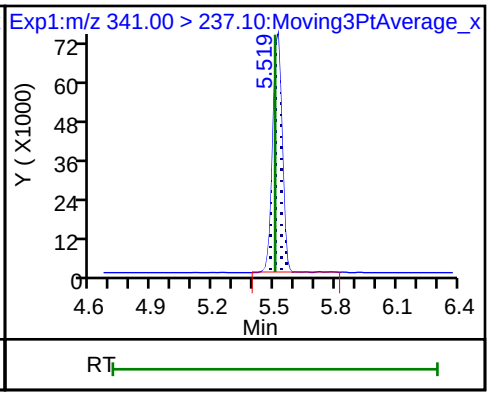
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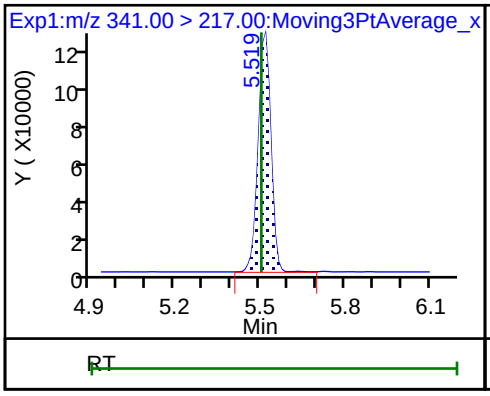
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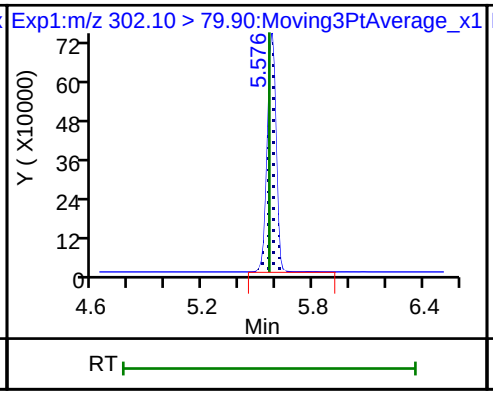
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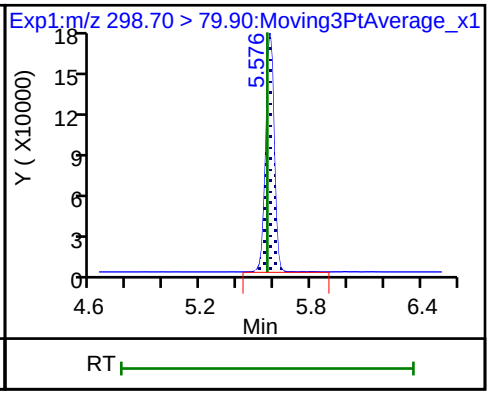
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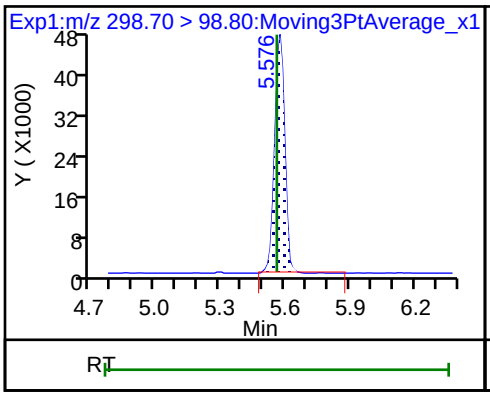
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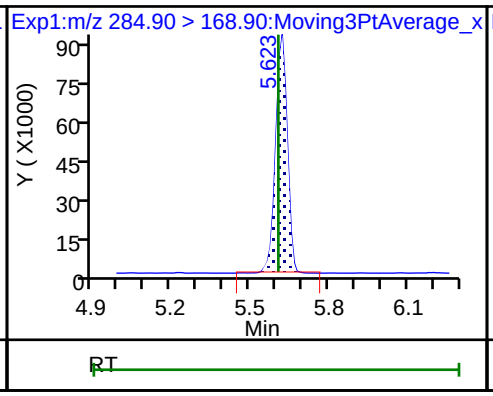
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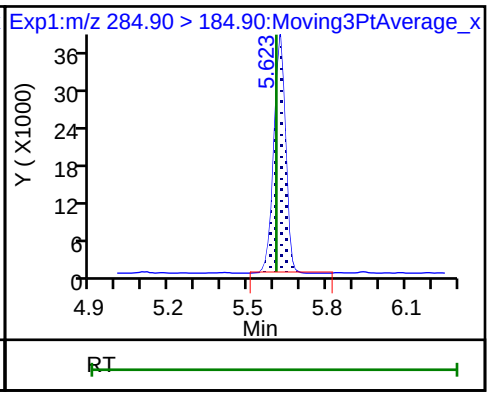
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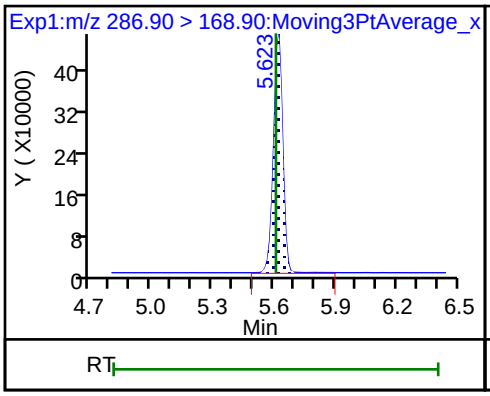
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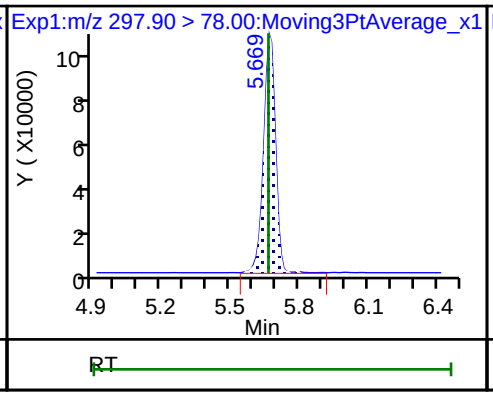
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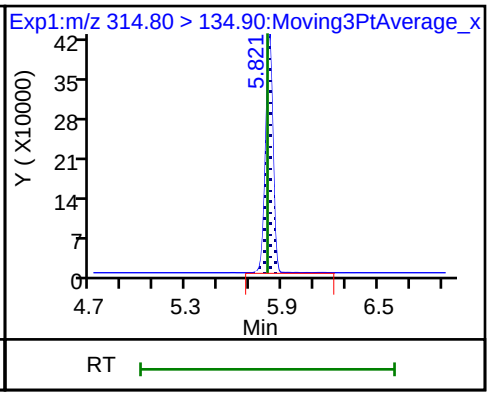
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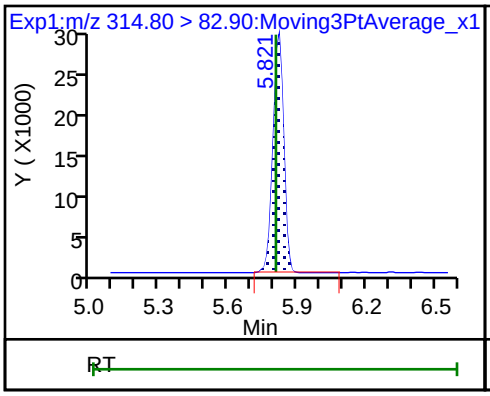
21 FBSA



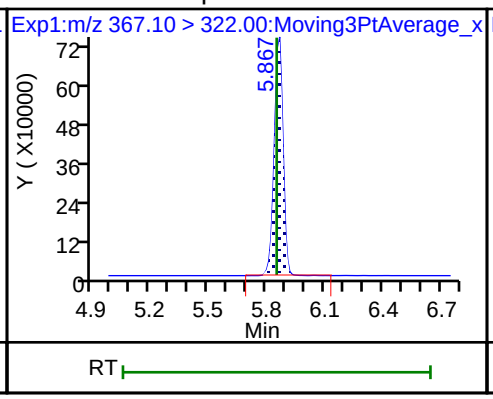
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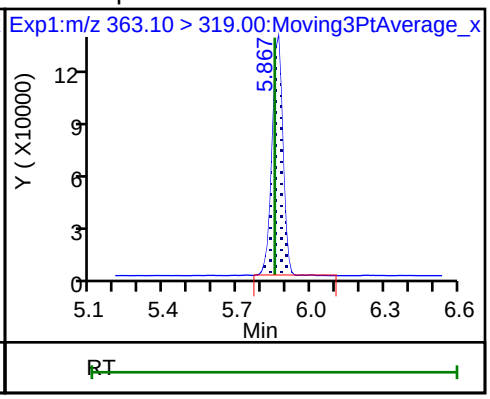
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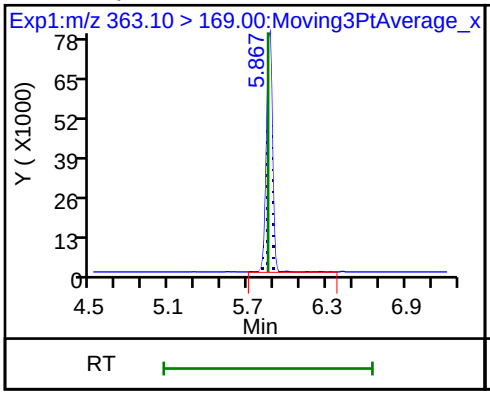
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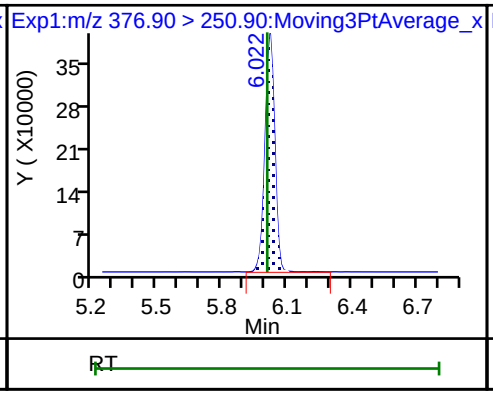
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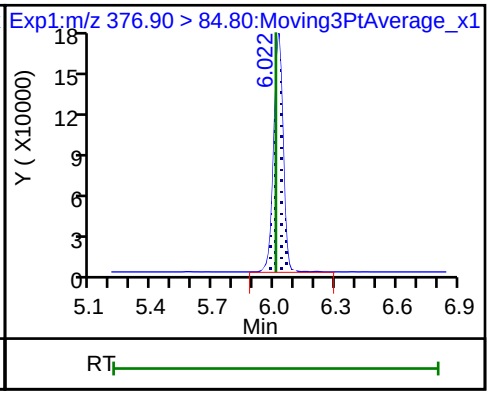
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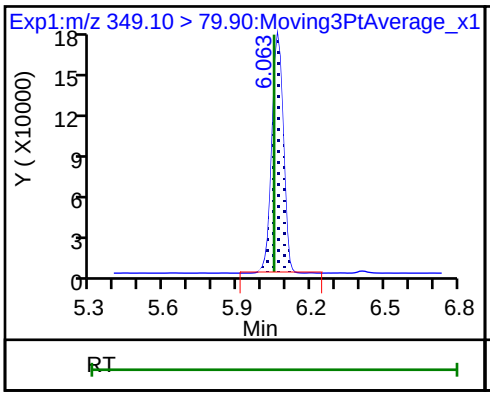
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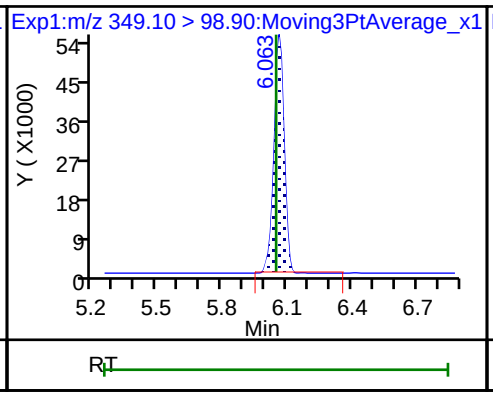
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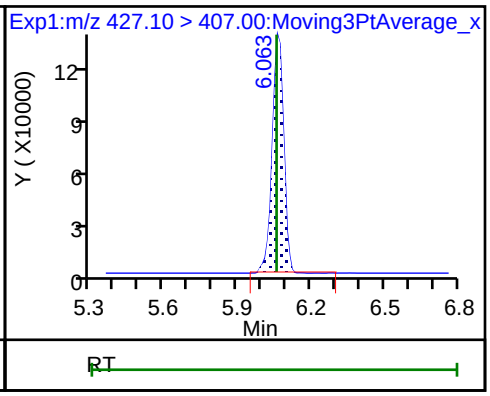
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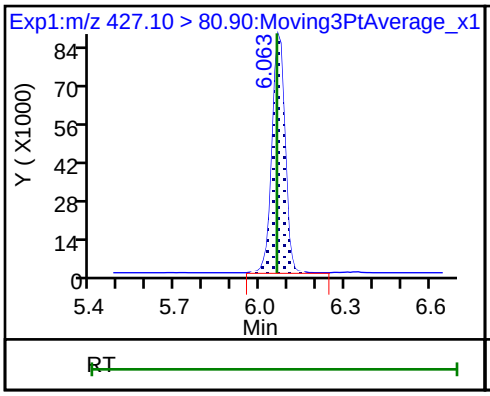
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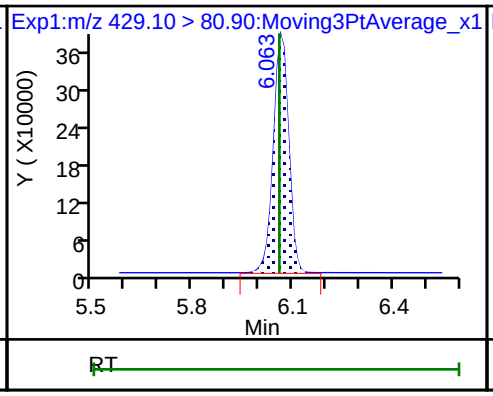
31 6:2FTS



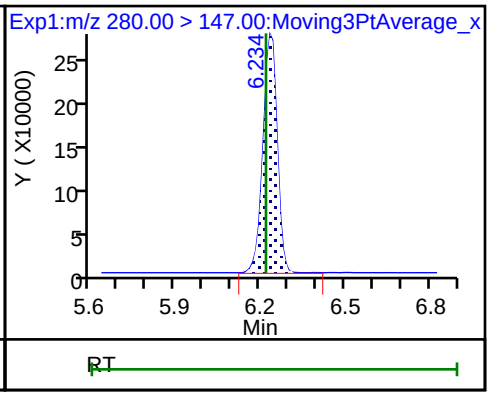
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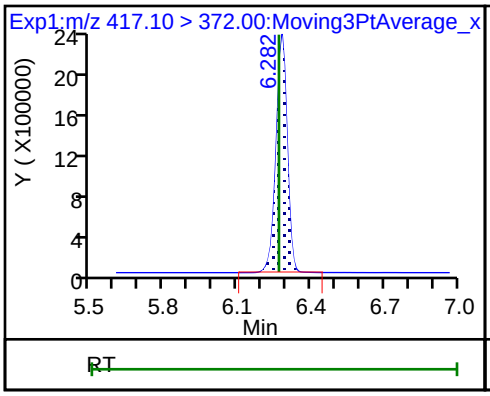
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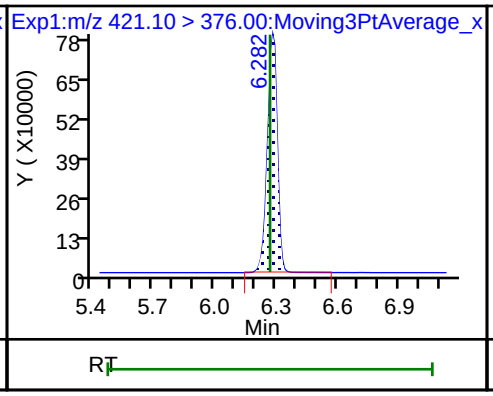
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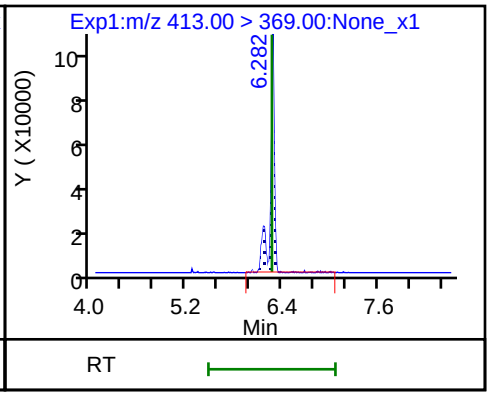
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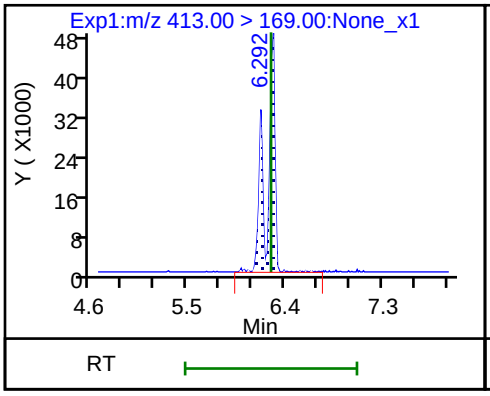
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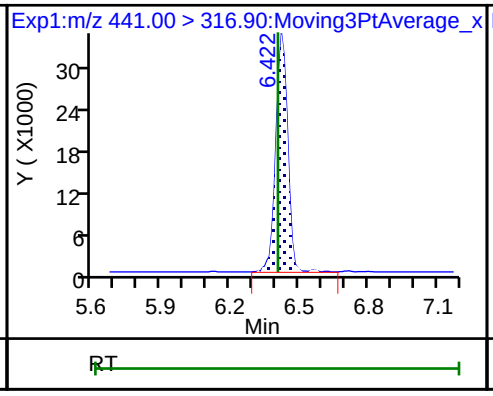
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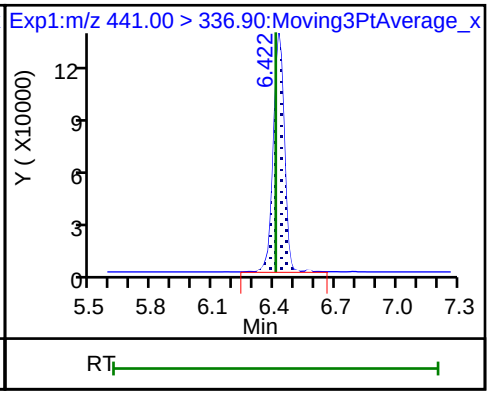
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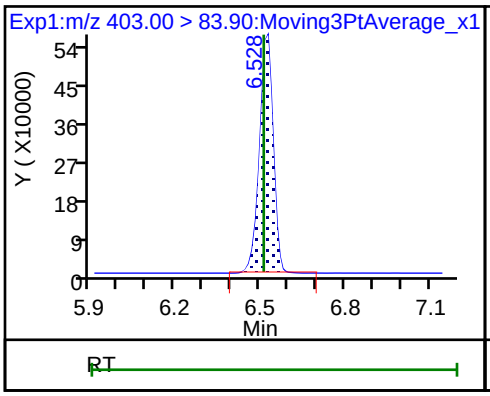
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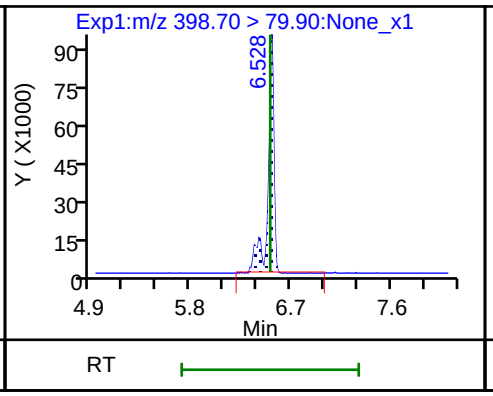
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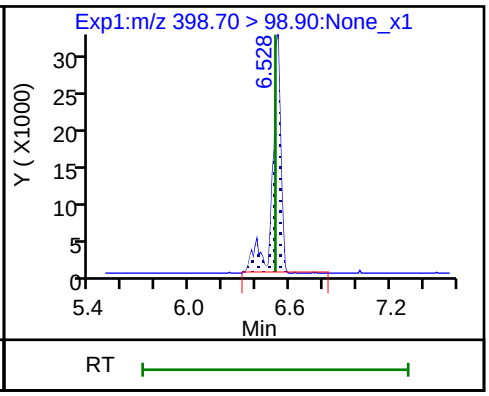
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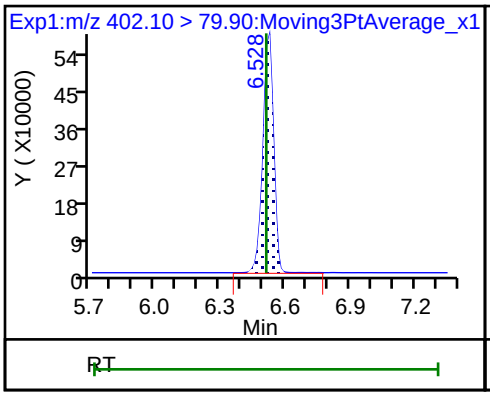
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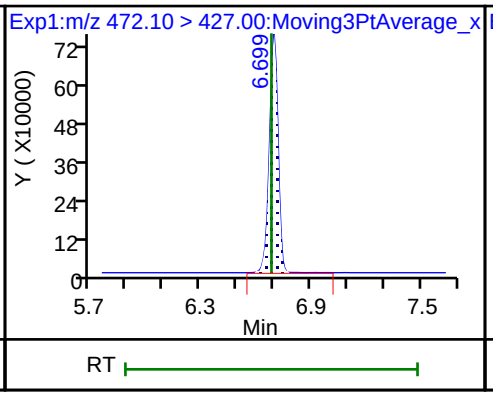
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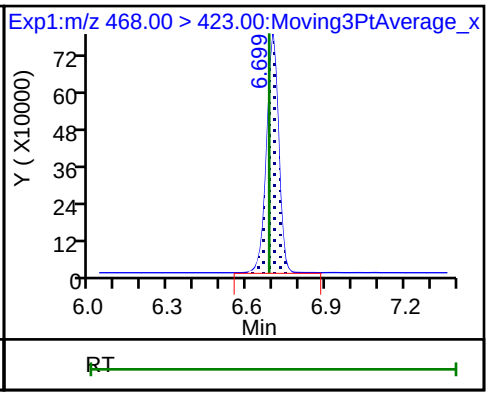
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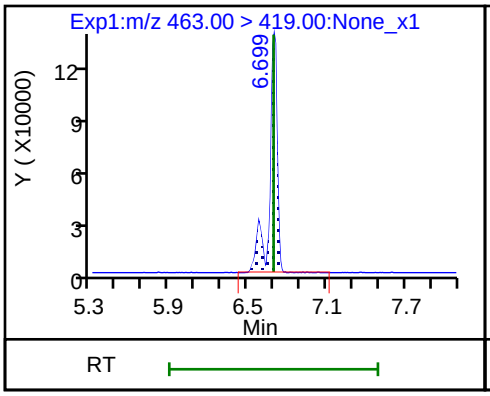
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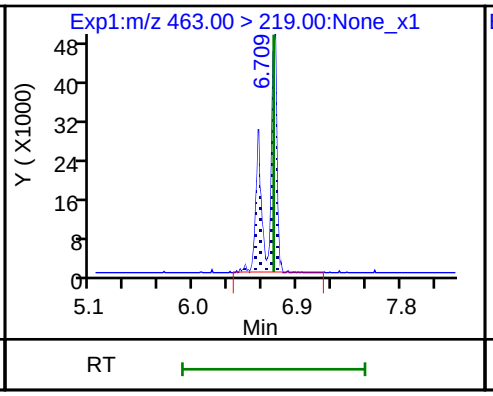
* 42 13C5 PFNA



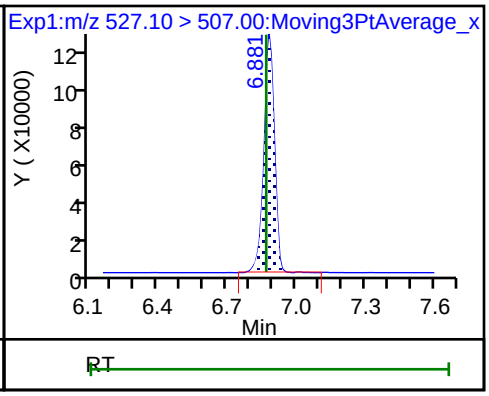
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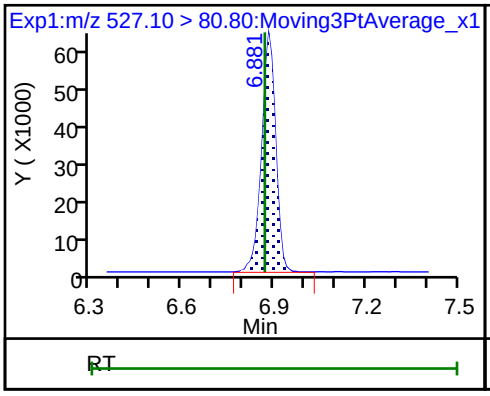
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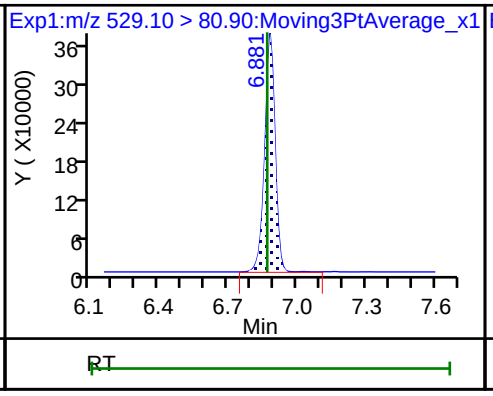
45 8:2FTS



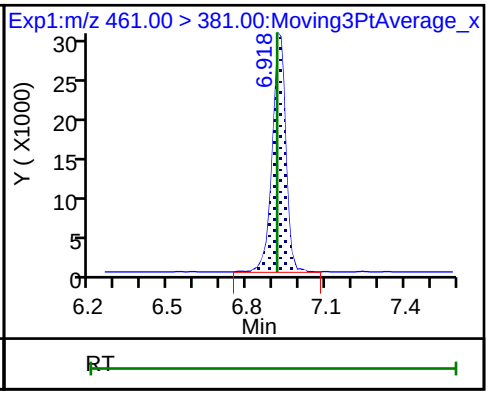
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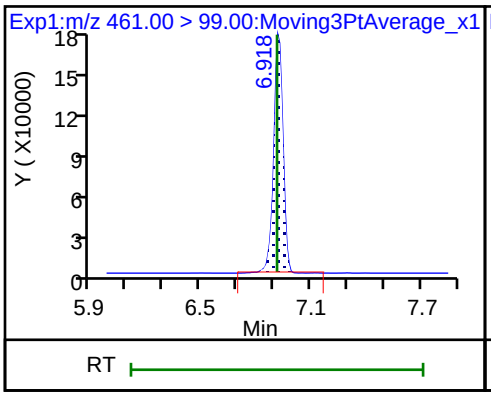
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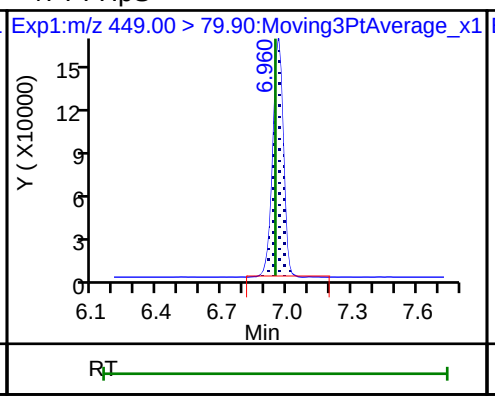
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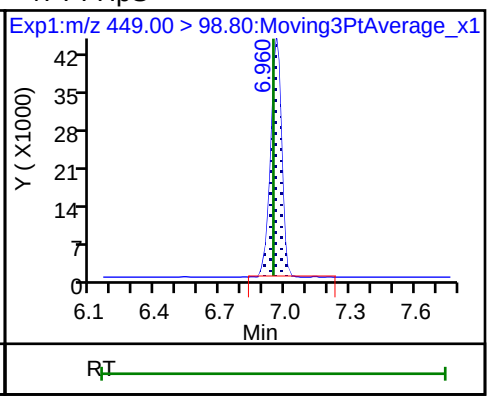
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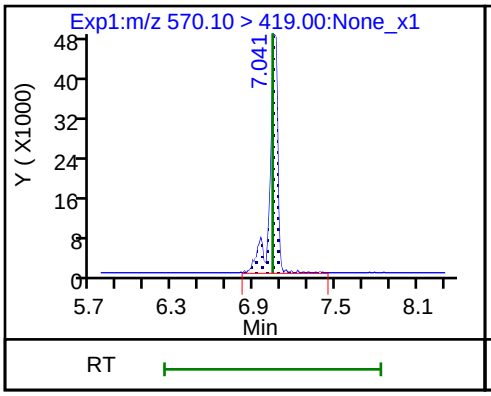
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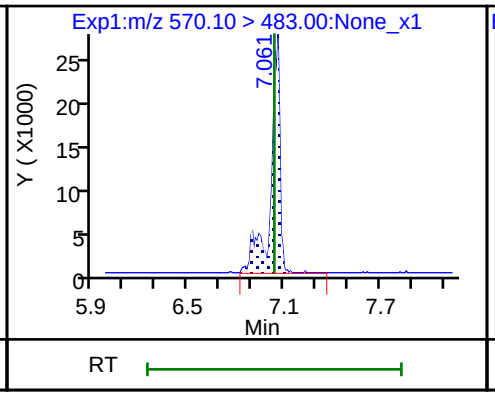
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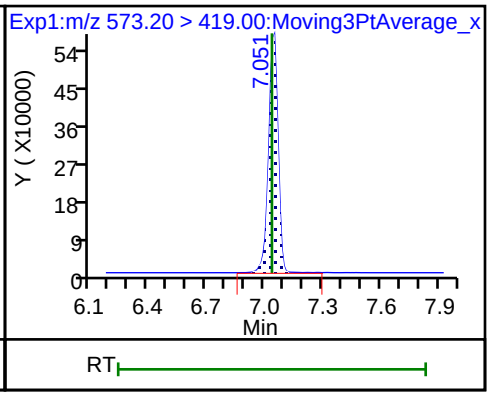
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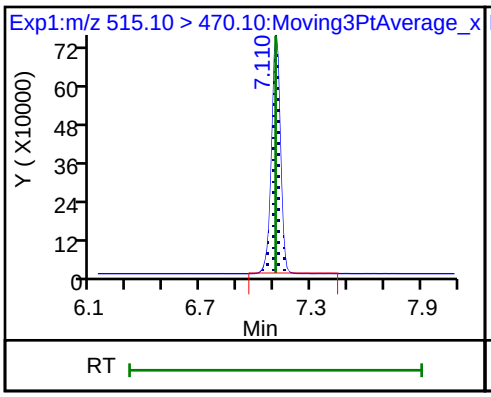
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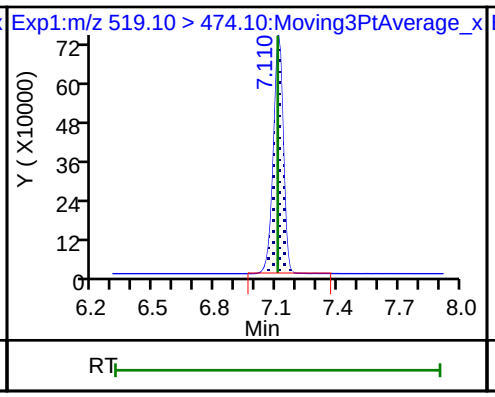
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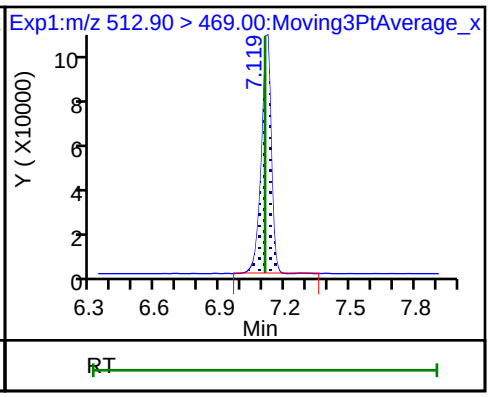
* 51 13C2 PFDA



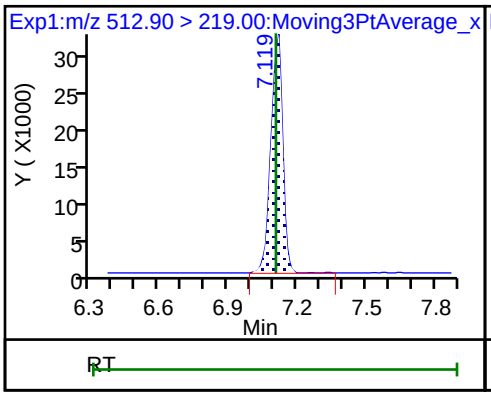
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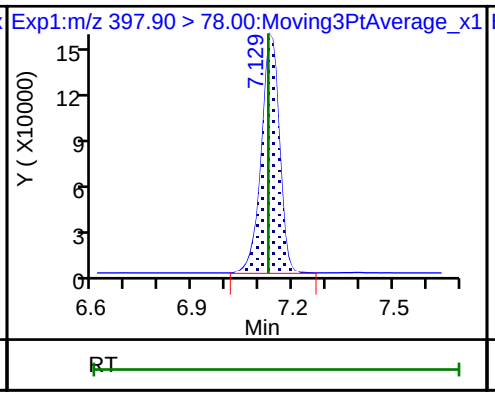
53 PFDA



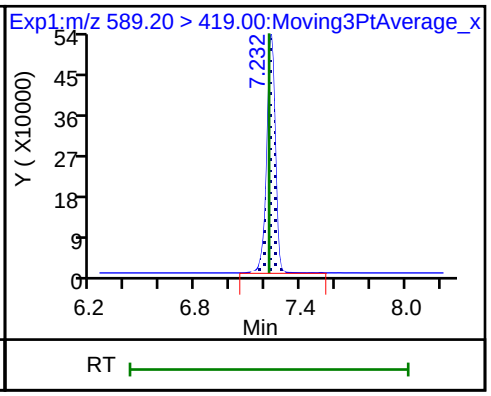
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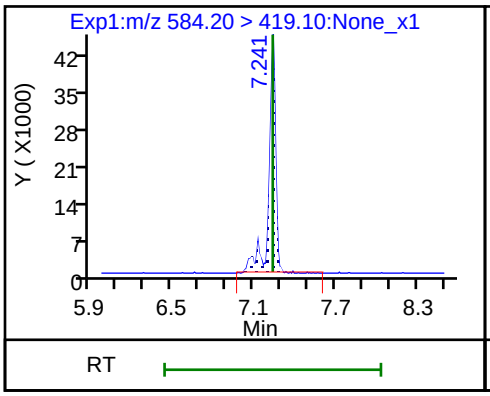
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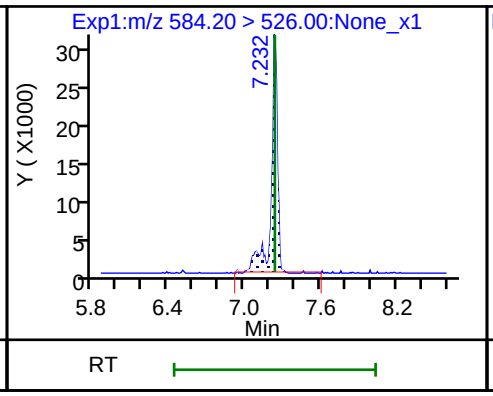
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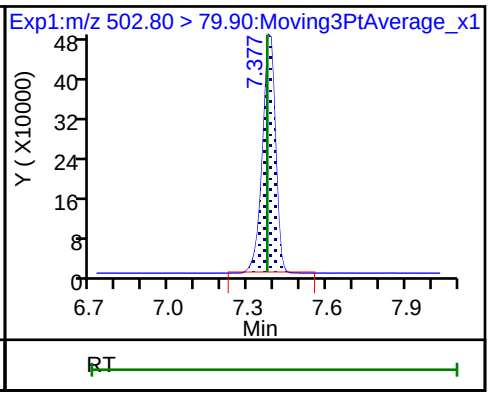
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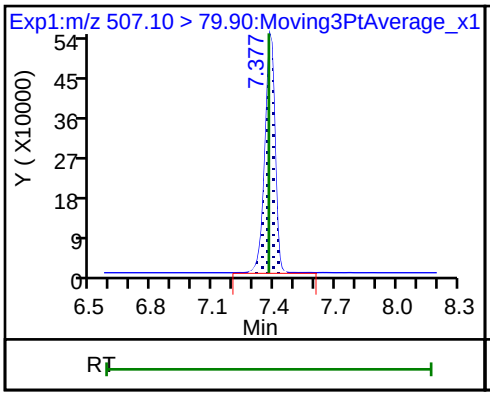
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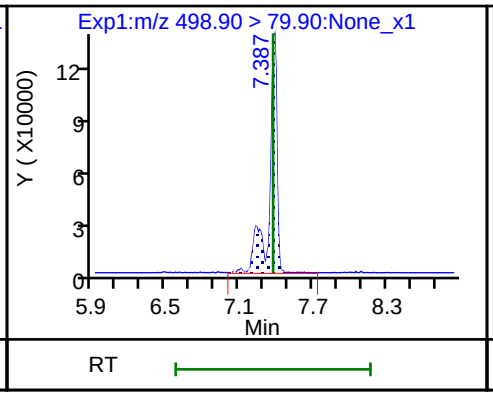
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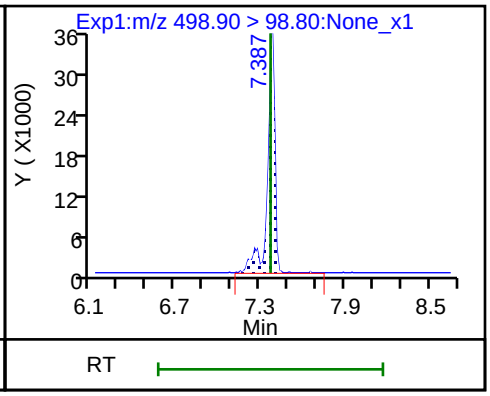
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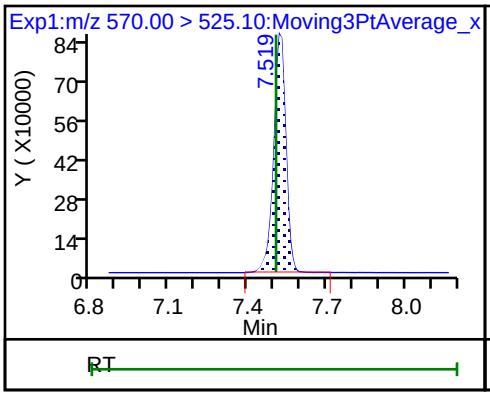
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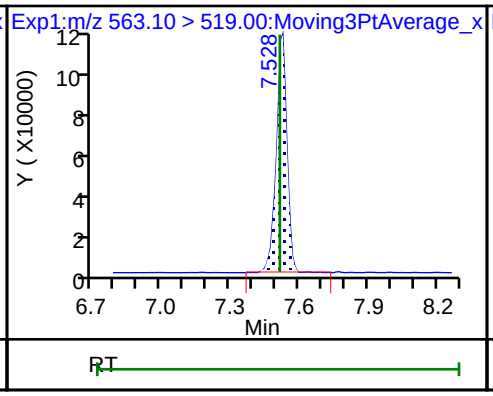
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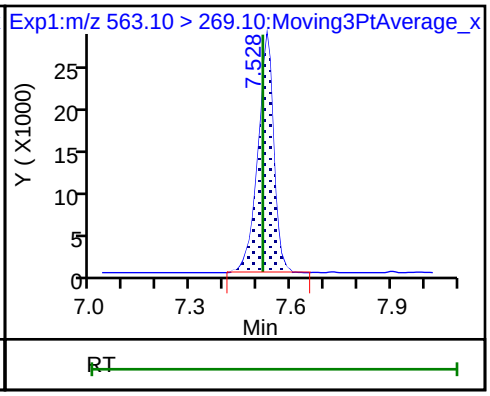
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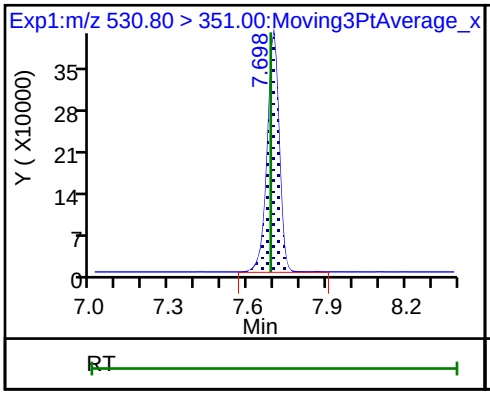
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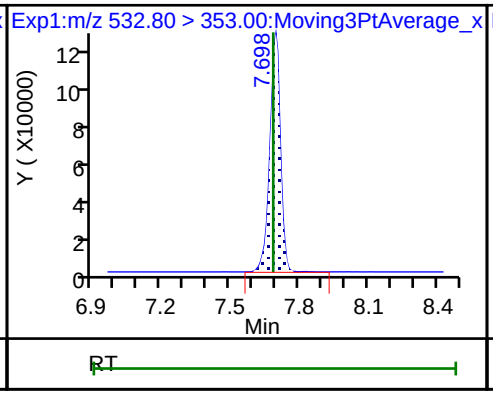
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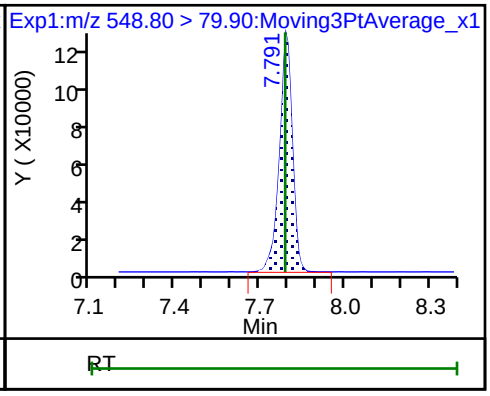
61 9ClFOS



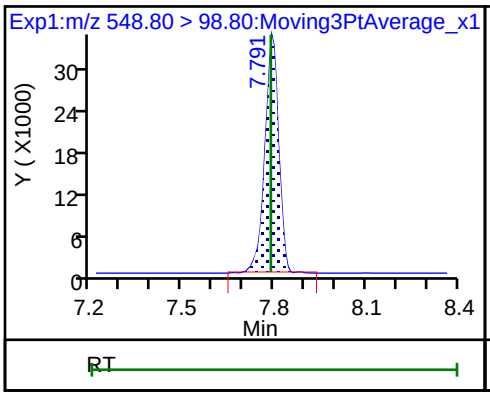
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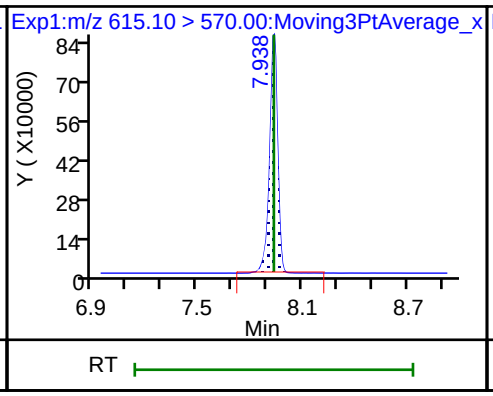
62 PFNS



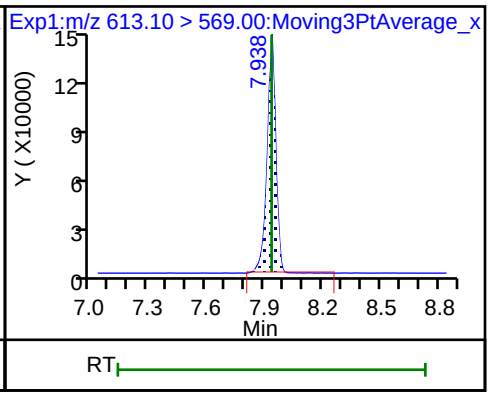
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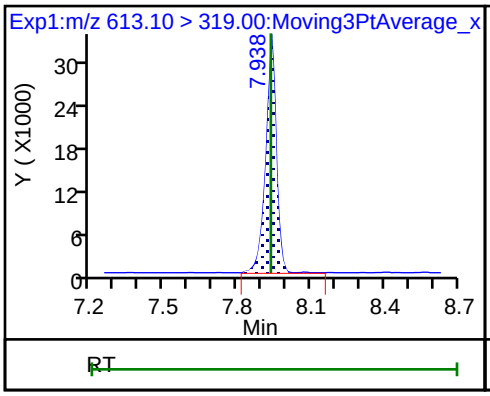
D 81 PFDoA



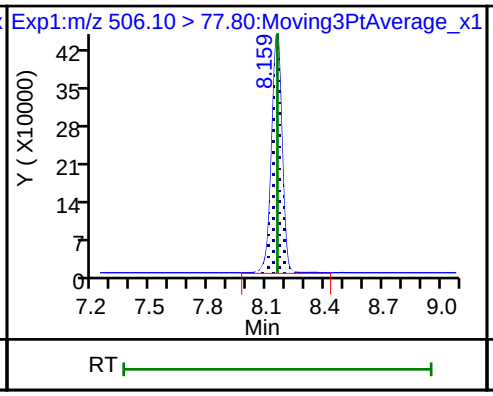
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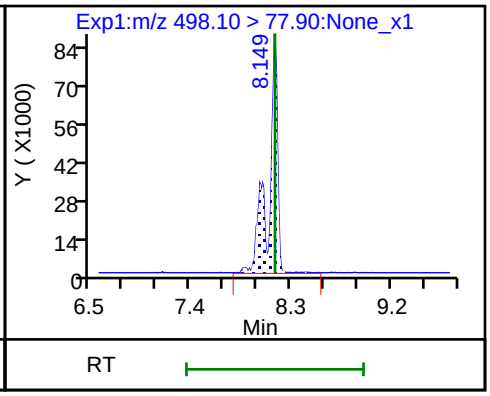
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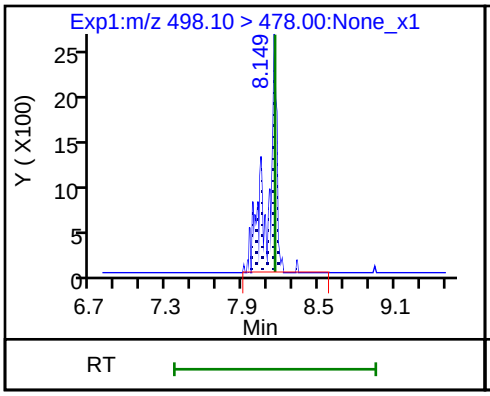
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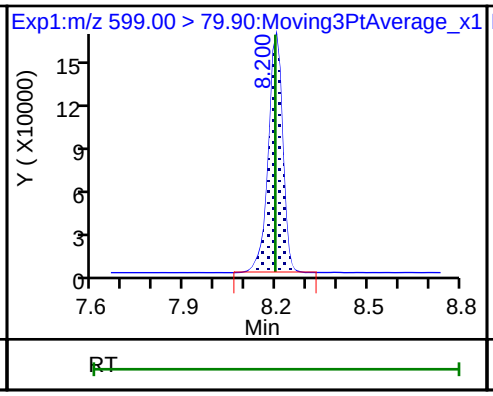
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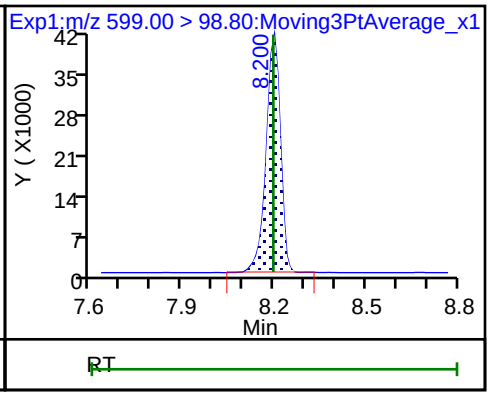
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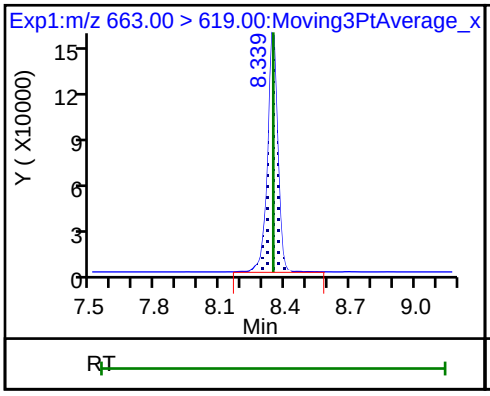
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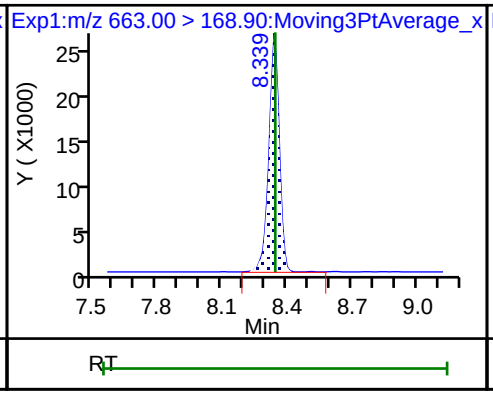
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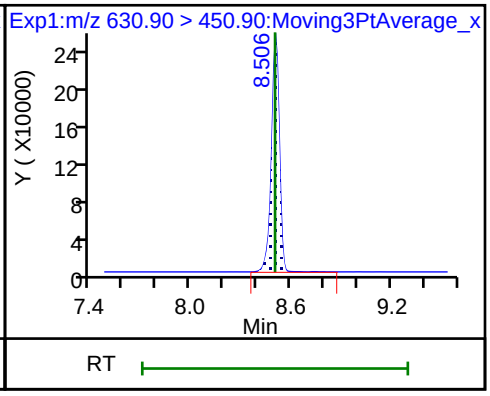
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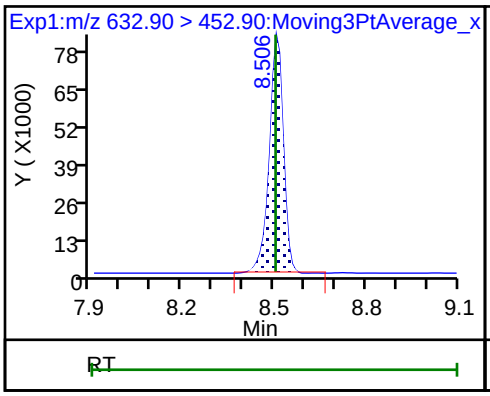
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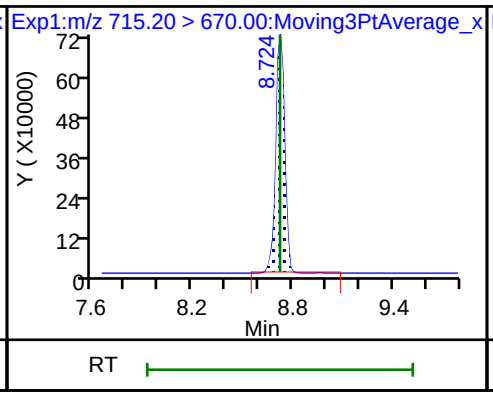
68 11ClFOS



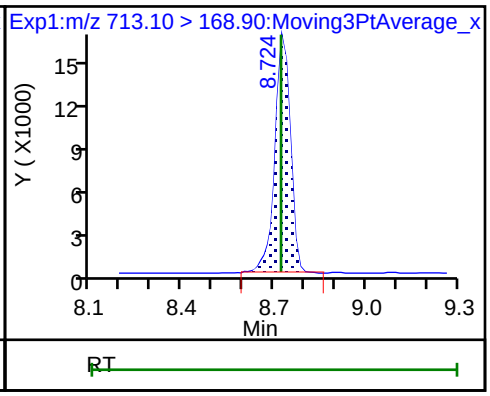
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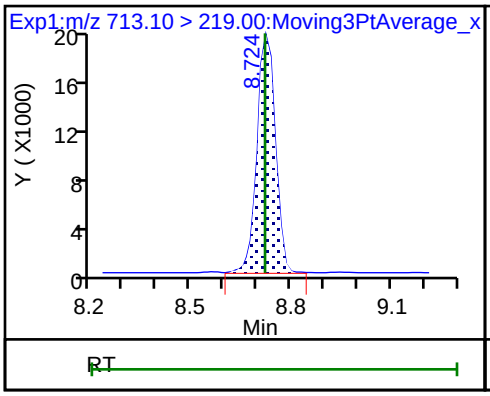
D 70 13C2 PFTeDA



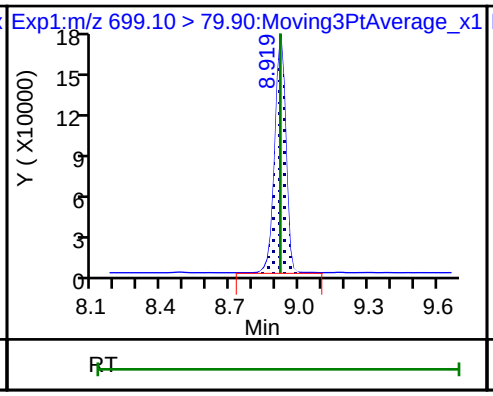
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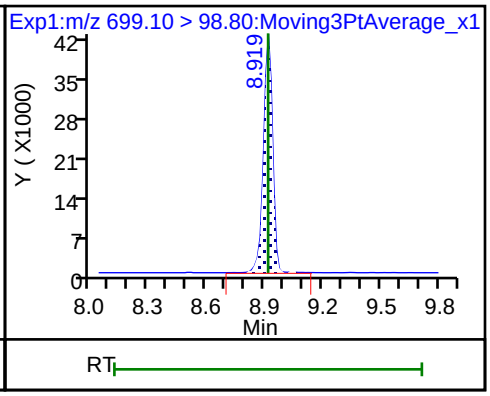
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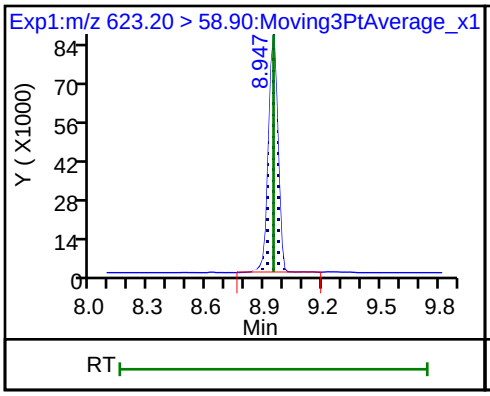
71 PFDoS



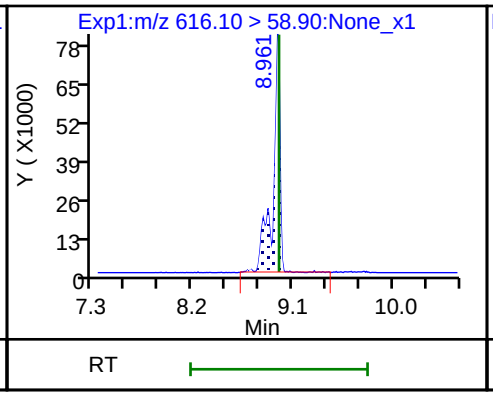
71 PFDoS



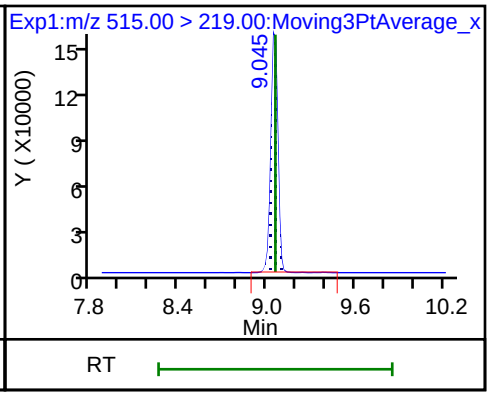
D 72 d7-N-Me-FOSE



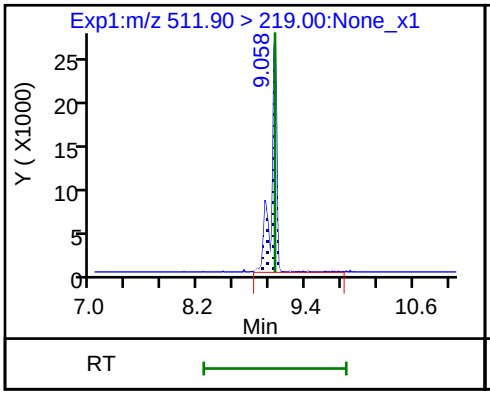
73 N-MeFOSE-M



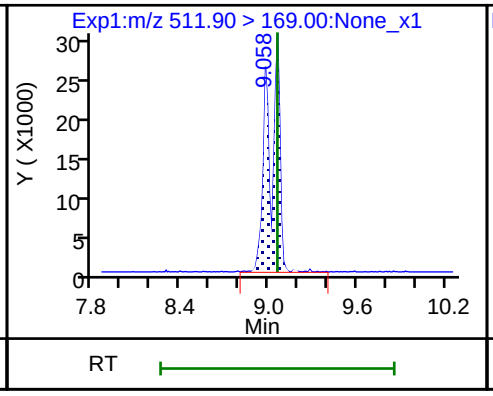
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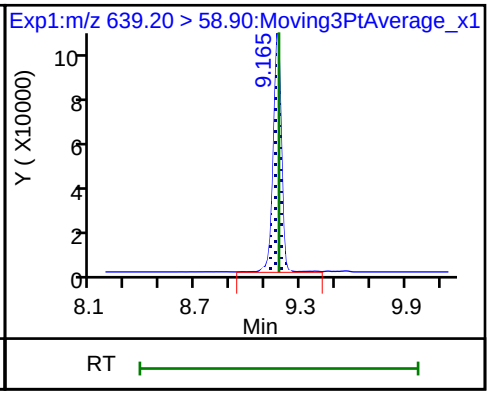
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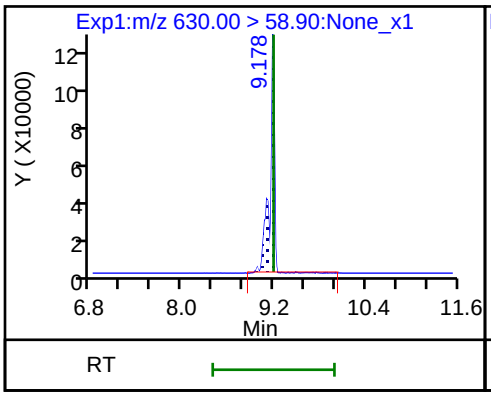
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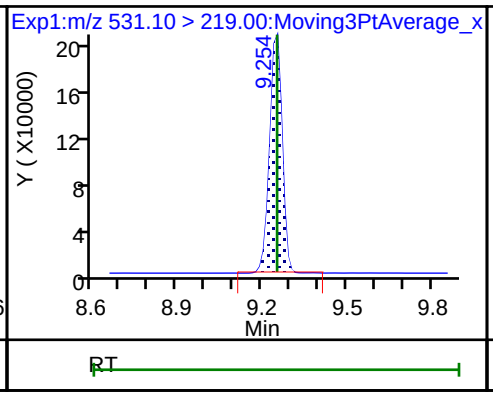
D 76 d9-N-EtFOSE



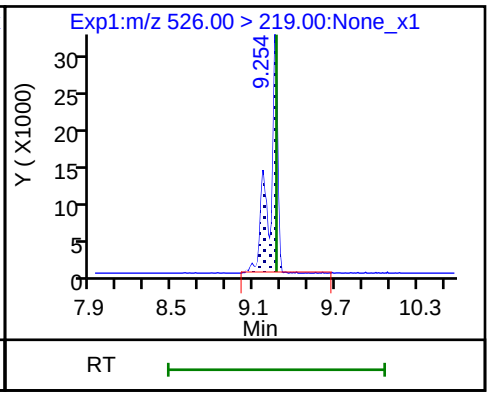
77 N-EtFOSE-M



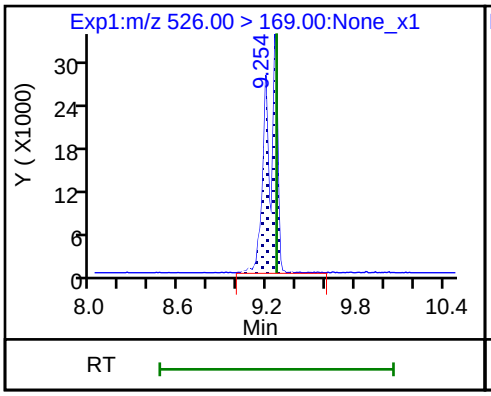
D 78 d5-NEtPFOSA



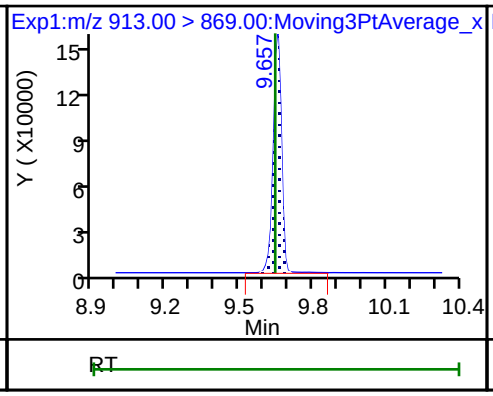
79 N-EtFOSA-M



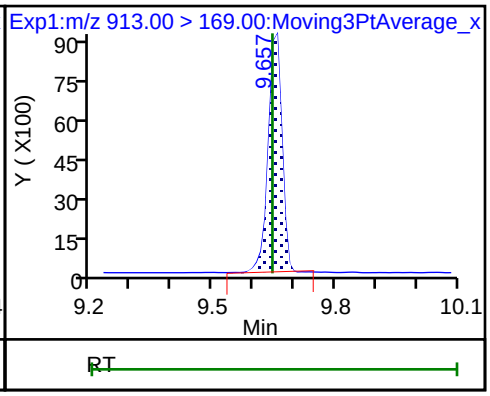
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-04.d
Lims ID: IC CAL 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Feb-2026 21:02:52 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 4
Misc. Info.: Plate: 1 Rack: 1 410-0175852-004
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:33 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:39:12
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.125	2.142	-0.017	1.004	2387767	4.80		95.9	8818	
D 1 13C3PFPrA										
166.00 > 121.00	2.116	2.150	-0.034	0.494	1088843	1.96		98.0	1863	
3 PFBA										
212.80 > 168.90	4.278	4.302	-0.024	0.998	1386888	1.90		95.2	16743	
D 4 13C4-PFBA										
216.80 > 171.90	4.286	4.309	-0.023	1.000	1591361	2.02		101	11787	
* 5 13C3PFBA										
216.00 > 172.00	4.286	4.309	-0.023		1603017	2.00			3613	
6 PFMPA										
229.00 > 84.90	4.603	4.622	-0.019	0.931	772688	0.9100		91.0	3044	
7 3:3 FTCA										
241.00 > 177.00	4.612	4.622	-0.010	0.933	77626	1.78	Target=1.16	89.1	1939	
241.00 > 117.00	4.612	4.622	-0.010	0.933	67623		1.15(0.58-1.73)	89.1	763	
D 8 13C5 PFPeA										
268.30 > 223.00	4.943	4.950	-0.007	0.915	1688006	2.03		101	7188	
9 PFPA										
263.00 > 219.00	4.943	4.961	-0.018	1.000	910010	0.9389		93.9	2054	
10 PFMBA										
279.00 > 85.10	5.092	5.109	-0.017	1.030	1079617	0.9495		95.0	4659	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.218	5.237	-0.019	0.803	1081024	4.75		101	3908	
12 4:2FTS										
327.10 > 307.00	5.218	5.237	-0.019	1.000	753043	1.78	Target=1.70	94.8	3498	
327.10 > 80.90	5.218	5.237	-0.019	1.000	450562		1.67(0.85-2.54)	94.8	726	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.368	5.377	-0.009	0.994	244392	0.8692	Target=1.61	86.9	1279	
295.00 > 84.90	5.368	5.377	-0.009	0.994	154638		1.58(0.80-2.41)	86.9	1146	
* 16 13C2 PFHxA										
315.10 > 270.00	5.400	5.426	-0.026		4689557	5.00			6272	
D 15 13C5 PFHxA										
318.00 > 273.00	5.400	5.426	-0.026	1.000	2051314	2.01		100	4294	
17 PFHxA										
313.00 > 269.00	5.410	5.426	-0.016	1.002	671342	0.8780	Target=9.95	87.8	2050	
313.00 > 118.90	5.410	5.426	-0.016	1.002	70244		9.56(4.98-14.93)	87.8	569	
18 5:3 FTCA										
341.00 > 237.10	5.487	5.505	-0.018	1.016	494918	4.86	Target=0.62	97.2	1204	
341.00 > 217.00	5.487	5.505	-0.018	1.016	823459		0.60(0.31-0.94)	97.2	4120	
D 19 13C3 PFBS										
302.10 > 79.90	5.554	5.563	-0.009	0.855	1895700	1.75		93.7	6350	
20 PFBS										
298.70 > 79.90	5.554	5.563	-0.009	1.000	911629	1.00	Target=3.17	113	3385	
298.70 > 98.80	5.554	5.563	-0.009	1.000	260002		3.51(1.59-4.76)	113	1470	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.588	5.609	-0.021	1.035	1413007	2.12		106	4336	
23 HFPO-DA										
284.90 > 168.90	5.600	5.609	-0.009	1.002	494231	0.6459	Target=2.55	86.1	2623	
284.90 > 184.90	5.588	5.609	-0.021	1.000	214597		2.30(1.27-3.82)	86.1	1563	
21 FBSA										
297.90 > 78.00	5.646	5.667	-0.021	1.017	720273	1.00		99.7	3056	
26 PFEESA										
314.80 > 134.90	5.789	5.808	-0.019	1.072	2053539	0.8261	Target=12.76	92.6	6201	
314.80 > 82.90	5.789	5.808	-0.019	1.072	168452		12.19(6.38-19.14)	92.6	424	
D 28 13C4 PFHpA										
367.10 > 322.00	5.833	5.854	-0.021	1.080	1938922	1.94		97.0	4283	
27 PFHpA										
363.10 > 319.00	5.833	5.854	-0.021	1.000	657521	0.9665	Target=1.64	96.7	3214	
363.10 > 169.00	5.833	5.854	-0.021	1.000	403090		1.63(0.82-2.46)	96.7	1735	
29 ADONA										
376.90 > 250.90	5.991	6.010	-0.019	1.072	2046385	0.8419	Target=2.22	89.0	3372	
376.90 > 84.80	5.991	6.010	-0.019	1.072	905397		2.26(1.11-3.33)	89.0	4473	
30 PFPeS										
349.10 > 79.90	6.033	6.061	-0.028	0.929	924942	0.9082	Target=3.23	96.6	4096	
349.10 > 98.90	6.033	6.061	-0.028	0.929	291913		3.17(1.61-4.84)	96.6	1289	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.033	6.061	-0.028	0.929	922049	4.88		102	5976	
31 6:2FTS										
427.10 > 407.00	6.033	6.061	-0.028	1.000	628224	1.76	Target=1.59	92.2	2411	
427.10 > 80.90	6.033	6.061	-0.028	1.000	407045		1.54(0.79-2.38)	92.2	1505	
33 BTS										
280.00 > 147.00	6.205	6.222	-0.017	0.955	1430085	0.8611		88.0	2901	
* 34 13C4 PFOA										
417.10 > 372.00	6.254	6.271	-0.017		6372876	5.00			4594	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.254	6.271	-0.017	1.000	2538178	2.08		104	3461	
36 PFOA										
413.00 > 369.00	6.254	6.271	-0.017	1.000	601275	0.8997	Target=1.52	90.0	740	
413.00 > 169.00	6.264	6.271	-0.007	1.002	399352		1.51(0.76-2.27)	90.0	443	
37 7:3 FTCA										
441.00 > 316.90	6.391	6.420	-0.030	1.183	260691	5.01	Target=0.24	100	600	
441.00 > 336.90	6.391	6.420	-0.030	1.183	985968		0.26(0.12-0.36)	100	3028	
D 38 13C3 PFHxS										
402.10 > 79.90	6.495	6.514	-0.019	1.000	1706074	1.86		97.9	4369	
* 39 18O2 PFHxS										
403.00 > 83.90	6.495	6.514	-0.019		1596842	1.90			7713	
40 PFHxS										
398.70 > 79.90	6.495	6.525	-0.029	1.000	564792	0.8256	Target=3.27	90.5	1011	
398.70 > 98.90	6.506	6.525	-0.018	1.002	186091		3.04(1.63-4.90)	90.5	149	
* 42 13C5 PFNA										
468.00 > 423.00	6.670	6.696	-0.026		1861363	2.00			4351	
D 41 13C9 PFNA										
472.10 > 427.00	6.670	6.696	-0.026	1.000	1962435	2.11		105	2624	
43 PFNA										
463.00 > 419.00	6.670	6.696	-0.026	1.000	801423	0.8984	Target=2.14	89.8	993	
463.00 > 219.00	6.680	6.696	-0.016	1.001	388105		2.06(1.07-3.21)	89.8	408	
45 8:2FTS										
527.10 > 507.00	6.857	6.879	-0.022	1.000	568221	1.84	Target=1.87	95.9	1797	
527.10 > 80.80	6.857	6.879	-0.022	1.000	309311		1.84(0.94-2.81)	95.9	1335	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.857	6.879	-0.022	1.056	886246	4.55		94.8	1830	
46 PFECHS										
461.00 > 381.00	6.892	6.916	-0.024	1.061	175461	0.8531	Target=0.17	92.3	1293	
461.00 > 99.00	6.902	6.916	-0.014	1.063	1027790		0.17(0.09-0.26)	92.3	4344	
47 PFHpS										
449.00 > 79.90	6.932	6.957	-0.025	0.943	911681	0.9310	Target=3.71	97.6	2885	
449.00 > 98.80	6.932	6.957	-0.025	0.943	243889		3.74(1.86-5.57)	97.6	1826	
50 NMeFOSAA										
570.10 > 419.00	7.026	7.039	-0.013	1.000	313397	0.9455	Target=1.66	94.5	504	
570.10 > 483.00	7.026	7.039	-0.013	1.000	200928		1.56(0.83-2.49)	94.5	364	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.026	7.049	-0.023	0.956	1686487	5.03		101	3732	
D 52 13C6 PFDA										
519.10 > 474.10	7.086	7.108	-0.022	1.000	1980918	1.93		96.3	5543	
53 PFDA										
512.90 > 469.00	7.086	7.108	-0.022	1.000	534955	0.9711	Target=2.88	97.1	1950	
512.90 > 219.00	7.086	7.108	-0.022	1.000	187283		2.86(1.44-4.31)	97.1	1253	
* 51 13C2 PFDA										
515.10 > 470.10	7.086	7.108	-0.022		2068051	2.00			3850	
48 FHxSA										
397.90 > 78.00	7.115	7.137	-0.022	1.096	1254808	1.05		105	2106	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.200	7.230	-0.030	0.979	1520486	4.96		99.2	2438	
55 NEtFOSAA										
584.20 > 419.10	7.209	7.249	-0.040	1.001	251409	0.9375	Target=1.34	93.8	533	
584.20 > 526.00	7.209	7.249	-0.040	1.001	201499		1.25(0.67-2.01)	93.8	266	
* 57 13C4 PFOS										
502.80 > 79.90	7.351	7.384	-0.033		1341722	1.92			5240	
D 56 13C8 PFOS										
507.10 > 79.90	7.351	7.384	-0.033	1.000	1493372	1.92		100	3730	
58 PFOS										
498.90 > 79.90	7.362	7.384	-0.022	1.001	982329	0.9140	Target=4.60	98.3	1825	
498.90 > 98.80	7.362	7.384	-0.022	1.001	218552		4.49(2.30-6.89)	98.3	658	
D 59 13C7 PFUnA										
570.00 > 525.10	7.497	7.525	-0.028	1.058	2061705	1.92		95.9	4548	
60 PFUnA										
563.10 > 519.00	7.506	7.525	-0.019	1.001	538073	0.9592	Target=3.77	95.9	2497	
563.10 > 269.10	7.497	7.525	-0.028	1.000	143295		3.76(1.88-5.65)	95.9	661	
61 9ClFOS										
530.80 > 351.00	7.669	7.704	-0.035	1.043	1985968	0.8961	Target=3.08	95.9	2999	
532.80 > 353.00	7.669	7.704	-0.035	1.043	645972		3.07(1.54-4.61)	95.9	2784	
62 PFNS										
548.80 > 79.90	7.765	7.797	-0.032	1.056	623332	0.9291	Target=3.66	96.6	2685	
548.80 > 98.80	7.765	7.797	-0.032	1.056	174929		3.56(1.83-5.49)	96.6	1008	
D 81 PFDoA										
615.10 > 570.00	7.911	7.943	-0.032	1.117	2275550	2.12		106	6395	
63 PFDoA										
613.10 > 569.00	7.911	7.943	-0.032		698311	0.8906	Target=4.34	89.1	3228	
613.10 > 319.00	7.911	7.943	-0.032		153933		4.54(2.17-6.51)	89.1	985	
D 65 13C8 FOSA										
506.10 > 77.80	8.126	8.156	-0.030	1.105	1724977	2.08		104	18074	
64 PFOSA										
498.10 > 77.90	8.126	8.156	-0.030	1.000	916844	0.9354	Target=44.41	93.5	1838	
498.10 > 478.00	8.135	8.156	-0.021	1.001	21486		42.67(22.20-66.61)	93.5	73.5	
66 PFDS										
599.00 > 79.90	8.173	8.208	-0.035	1.112	793565	0.9437	Target=3.83	97.9	2966	
599.00 > 98.80	8.173	8.208	-0.035	1.112	220174		3.60(1.91-5.74)	97.9	1890	
67 PFTrDA										
663.00 > 619.00	8.308	8.345	-0.037	0.956	792216	0.8860	Target=5.77	88.6	2021	
663.00 > 168.90	8.308	8.345	-0.037	0.956	144493		5.48(2.88-8.65)	88.6	1661	
68 11ClFOS										
630.90 > 450.90	8.480	8.526	-0.046	1.154	1286555	0.9228	Target=3.07	97.8	7578	
632.90 > 452.90	8.480	8.526	-0.046	1.154	408300		3.15(1.54-4.61)	97.8	2456	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.694	8.738	-0.044	1.227	1932604	1.96		97.9	5494	
69 PFTeDA										
713.10 > 168.90	8.704	8.753	-0.049	1.001	112277	1.00	Target=0.94	100	1930	
713.10 > 219.00	8.704	8.753	-0.049	1.001	117096		0.96(0.47-1.41)	100	861	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.901	8.932	-0.031	1.211	812563	0.9403	Target=4.11	96.9	3454	
699.10 > 98.80	8.901	8.932	-0.031	1.211	189984		4.28(2.06-6.17)	96.9	2721	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.929	8.960	-0.031	1.215	301112	5.47		109	827	
73 N-MeFOSE-M										
616.10 > 58.90	8.943	8.974	-0.031	1.002	732361	4.54		90.8	2724	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.041	9.057	-0.016	1.230	498202	2.07		103	3124	
74 NMeFOSA										
511.90 > 219.00	9.041	9.071	-0.030	1.000	212200	0.9578	Target=0.68	95.8	757	
511.90 > 169.00	9.041	9.071	-0.030	1.000	303444		0.70(0.34-1.03)	95.8	865	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.149	9.177	-0.028	1.245	295343	4.70		94.0	696	
77 N-EtFOSE-M										
630.00 > 58.90	9.161	9.189	-0.028	1.001	936205	5.11		102	1781	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.238	9.253	-0.015	1.257	583343	1.98		99.1	2678	
79 N-EtFOSA-M										
526.00 > 219.00	9.238	9.266	-0.028	1.000	249110	1.00	Target=0.87	100	1331	
526.00 > 169.00	9.238	9.266	-0.028	1.000	276881		0.90(0.43-1.30)	100	1029	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.633	9.676	-0.043	1.108	694650	0.9824	Target=16.98	98.2	24979	
913.00 > 169.00	9.633	9.676	-0.043	1.108	42099		16.50(8.49-25.47)	98.2	3005	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL4_00083 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:36 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-04.d

Injection Date: 16-Feb-2026 21:02:52 Instrument ID: 30577

Lims ID: IC CAL 4

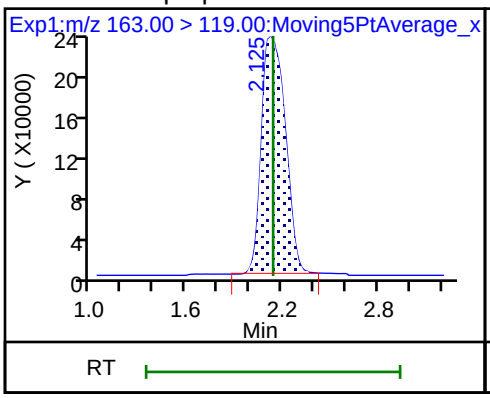
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 5 Worklist Smp#: 4

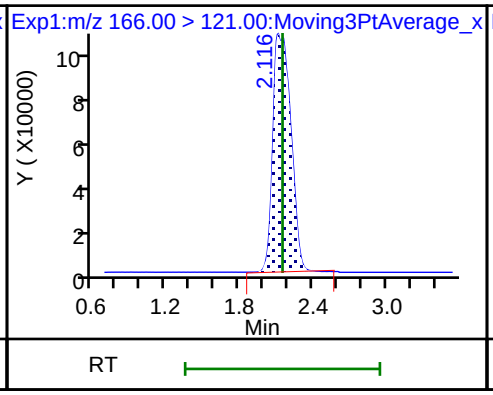
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

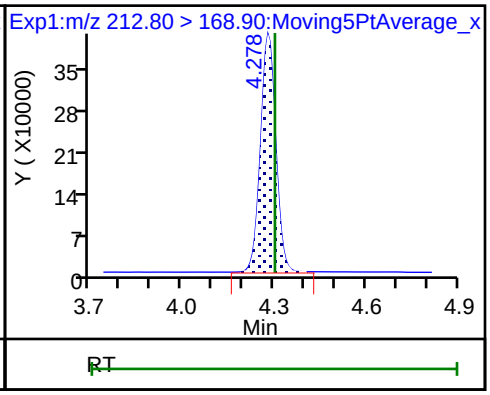
2 Perfluoropropionic acid



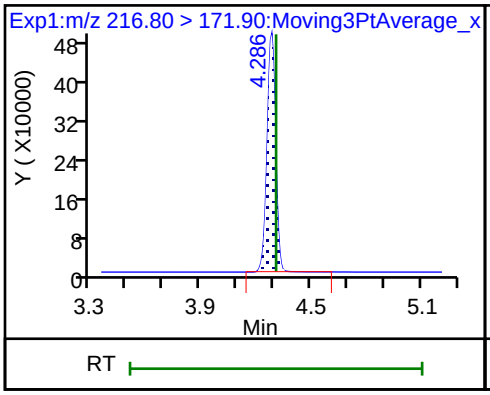
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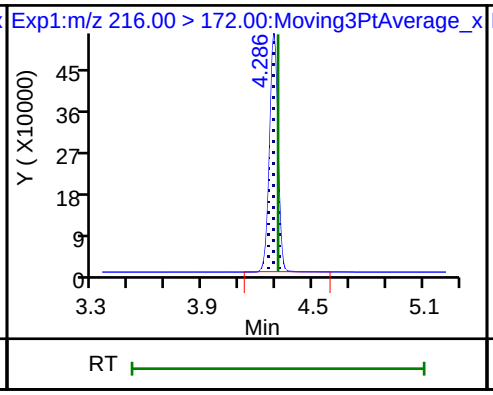
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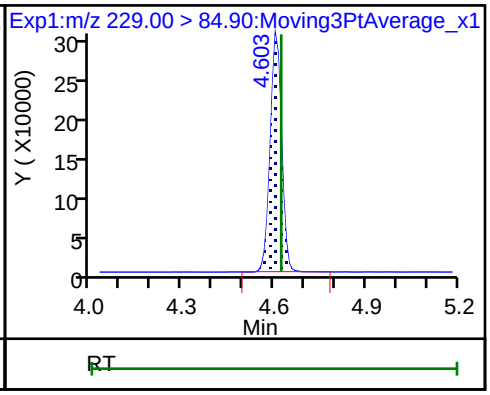
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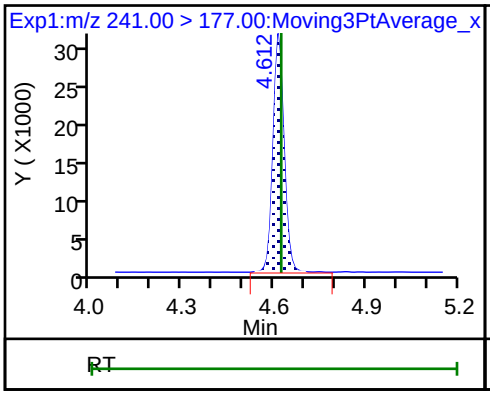
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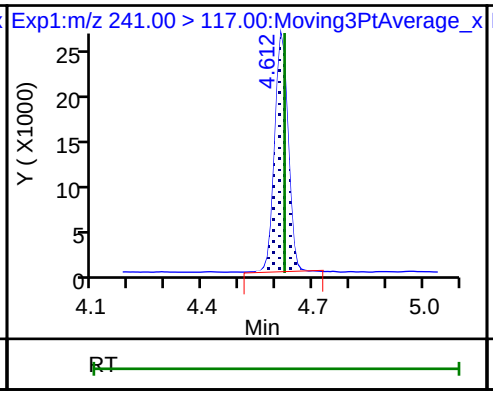
6 PFMPA



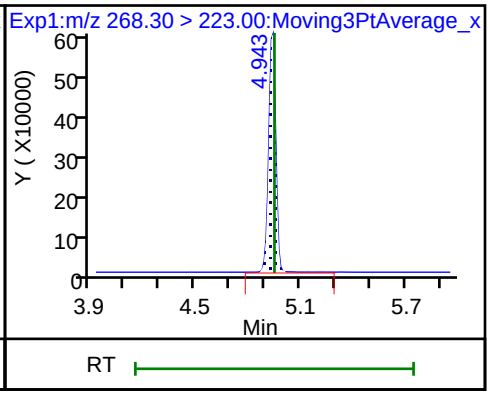
7 3:3 FTCA



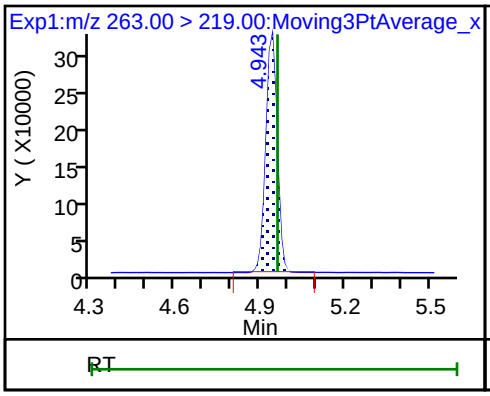
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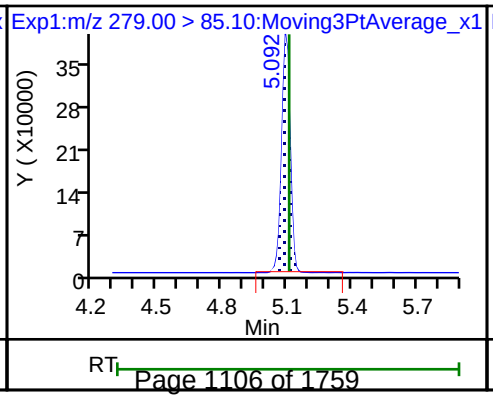
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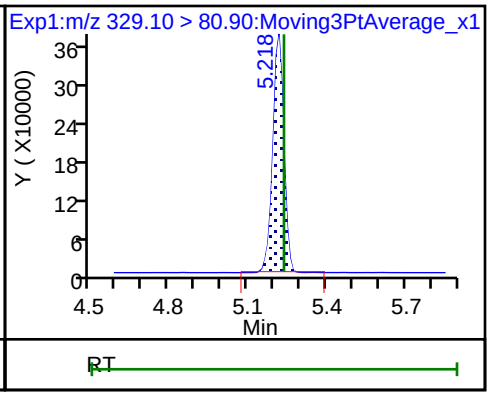
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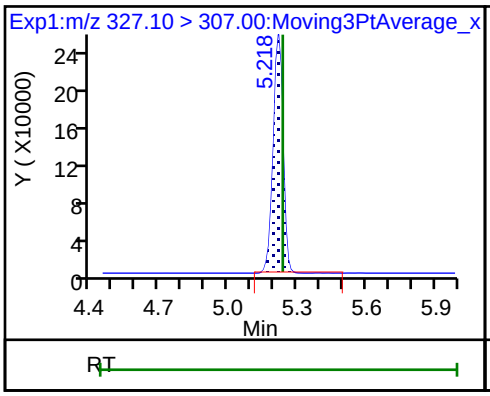
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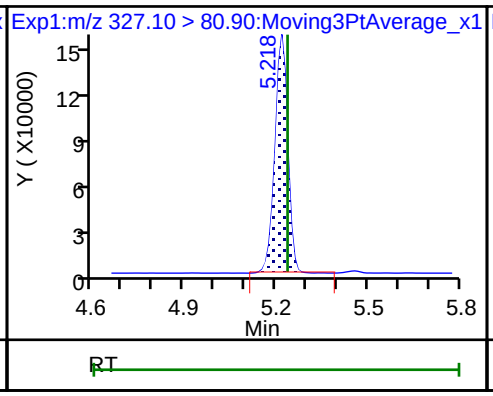
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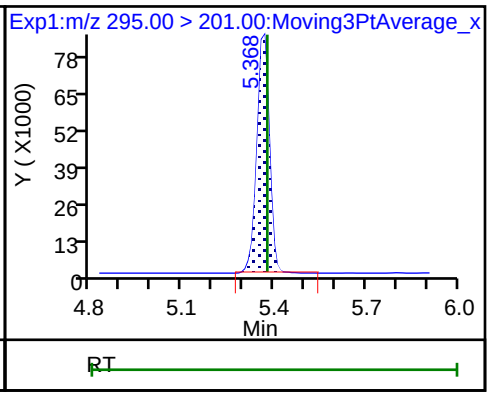
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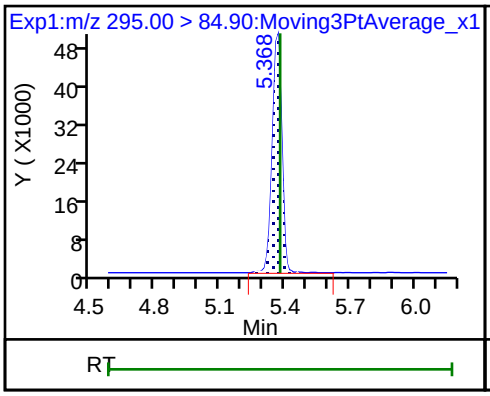
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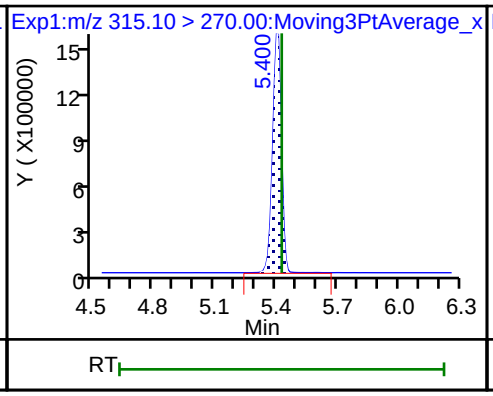
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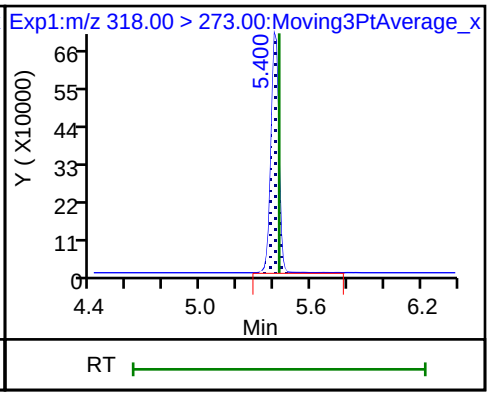
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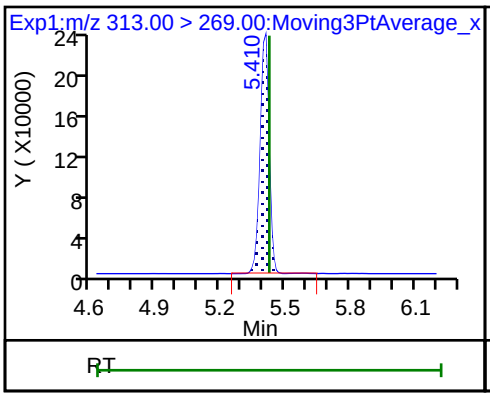
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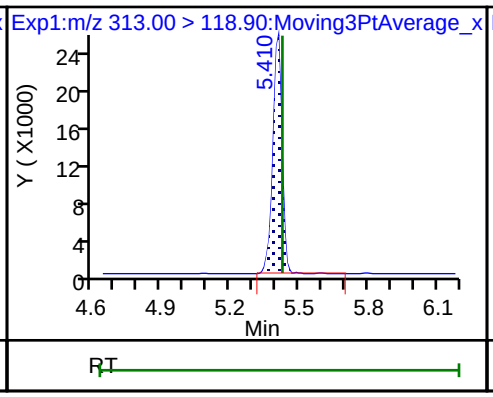
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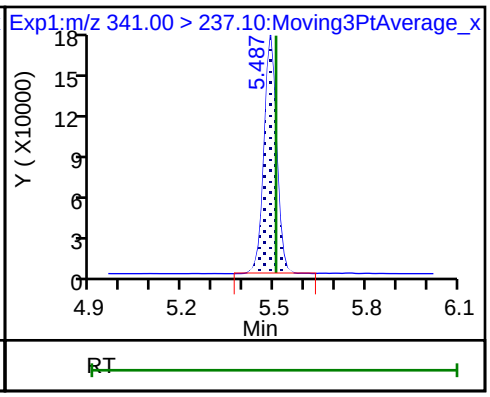
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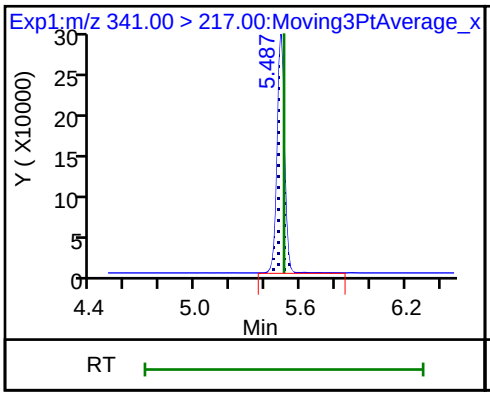
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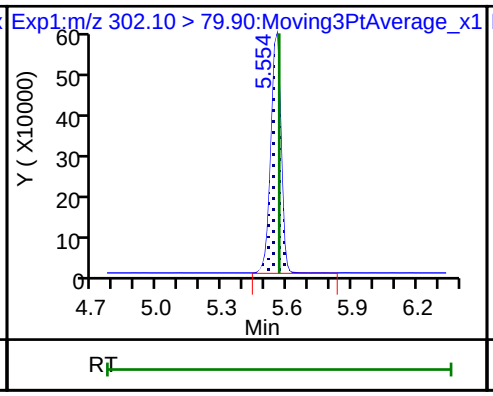
18 5:3 FTCA



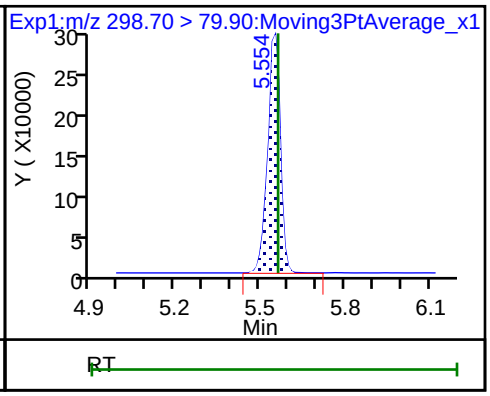
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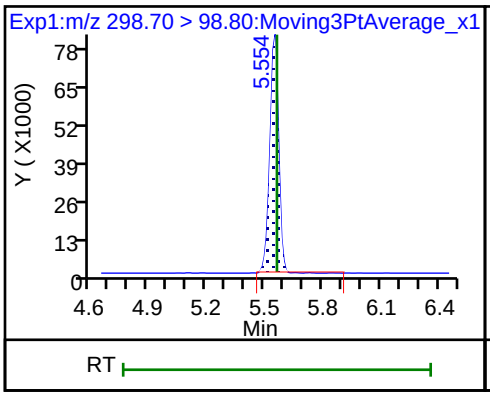
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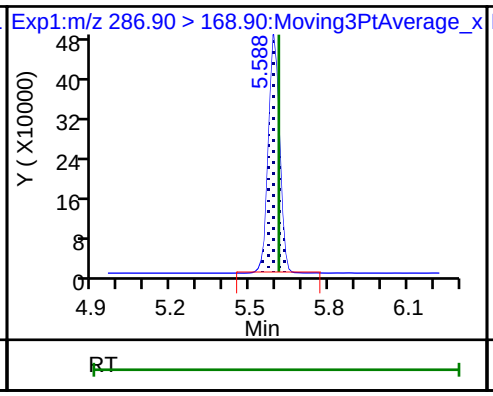
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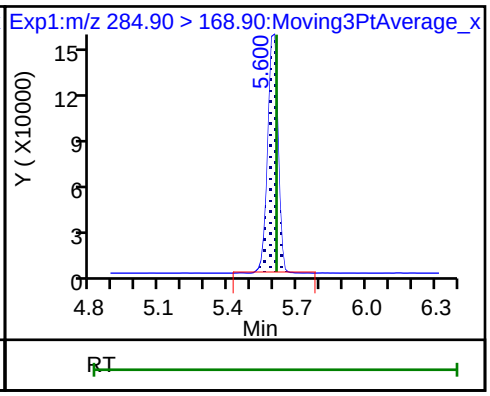
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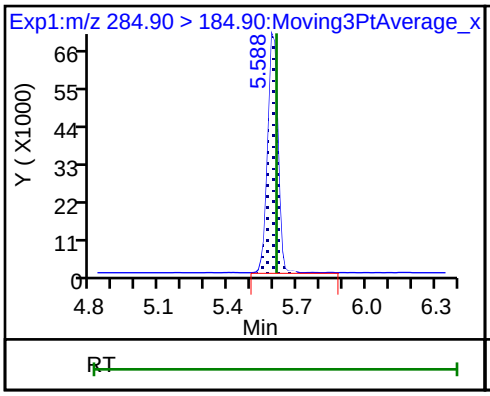
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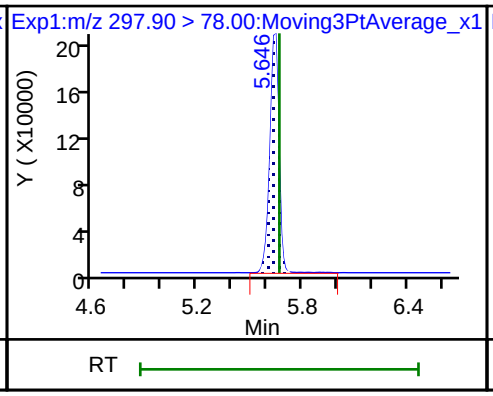
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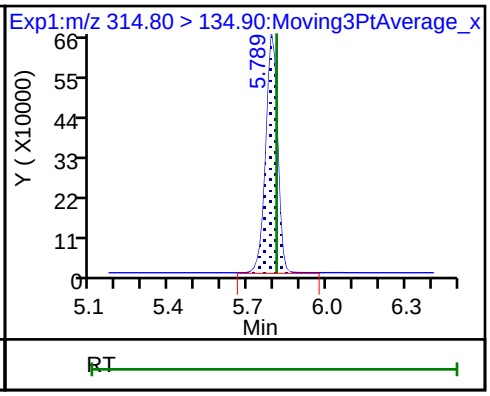
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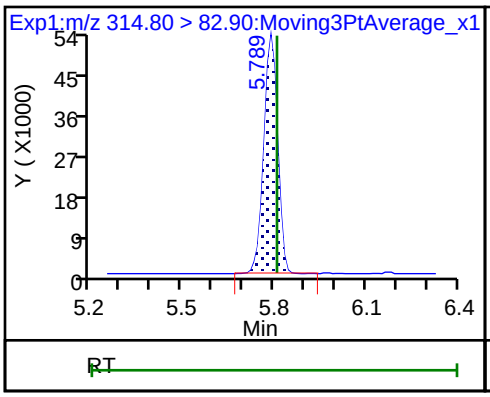
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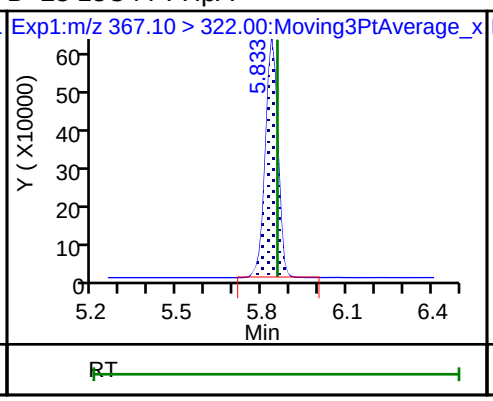
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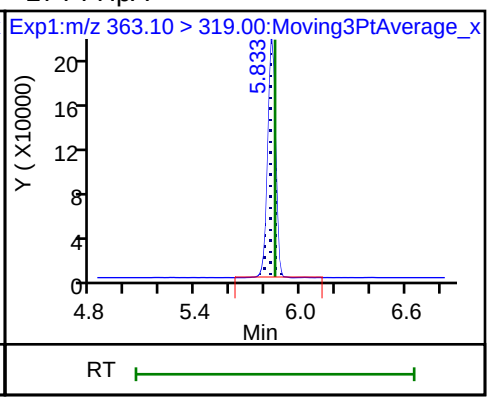
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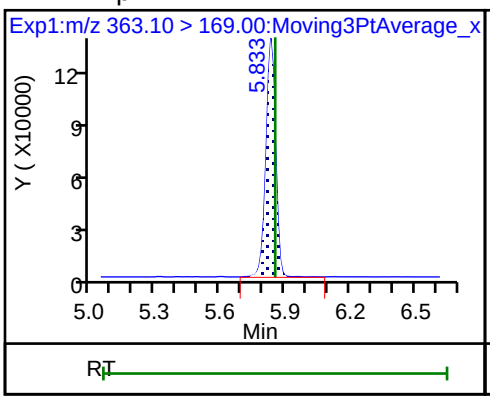
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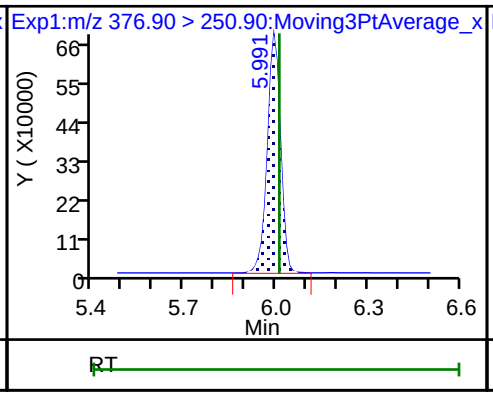
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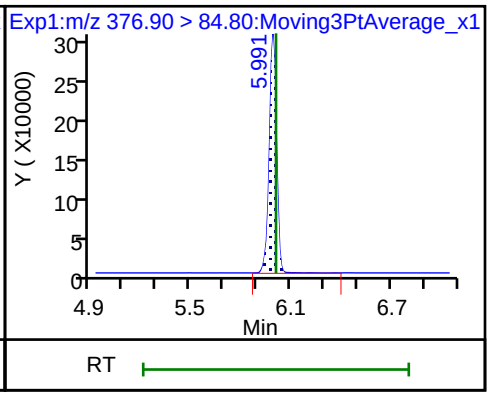
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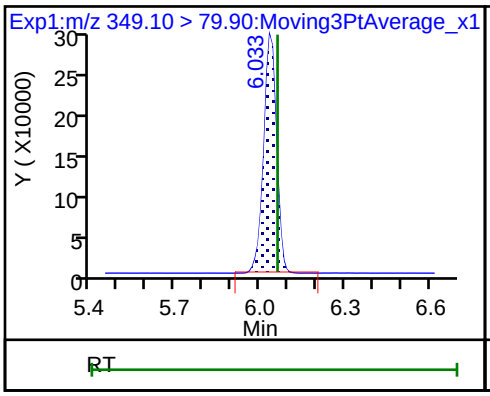
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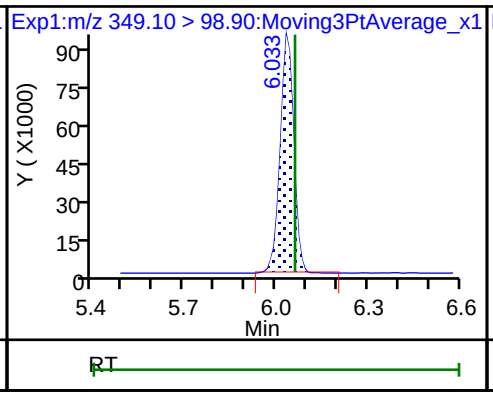
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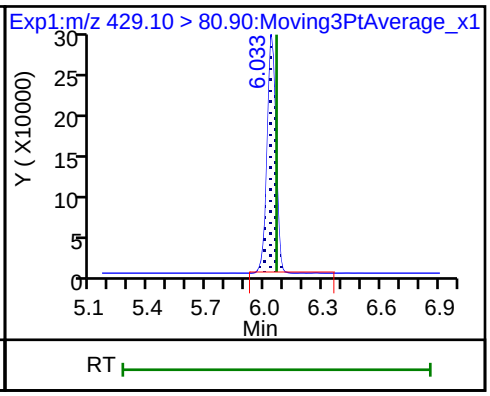
30 PFPeS



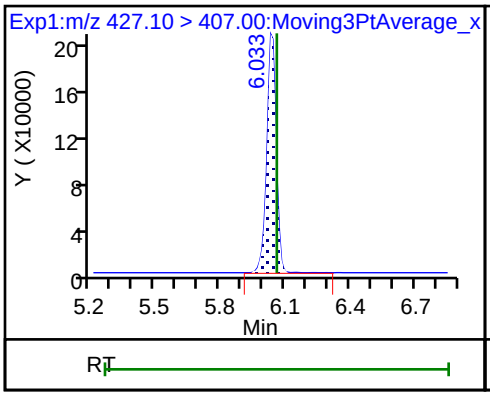
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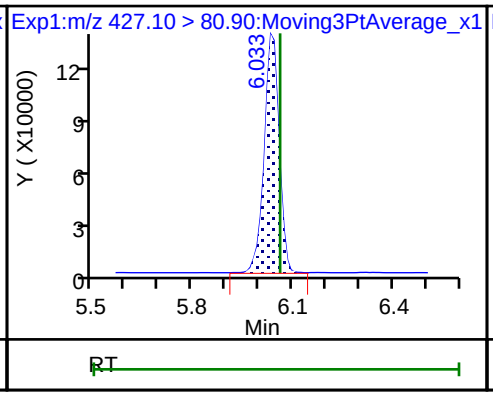
D 32 13C2-6:2FTS



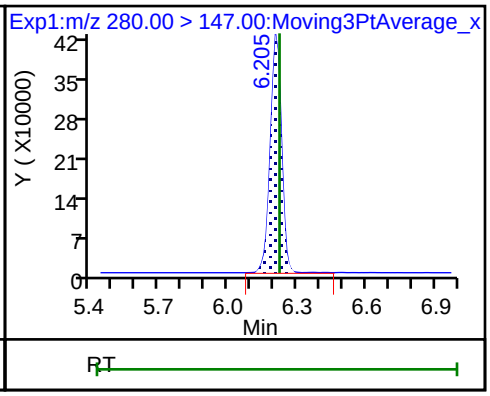
31 6:2FTS



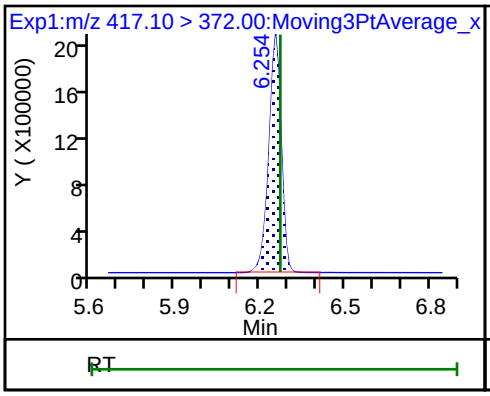
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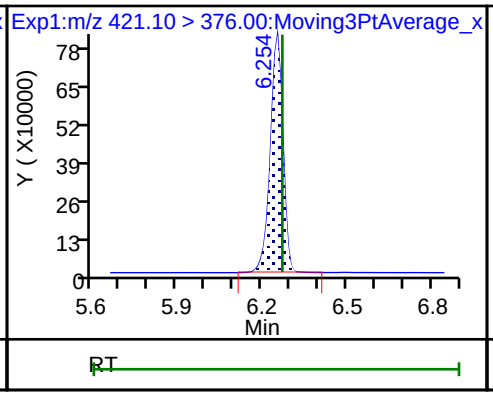
33 BTS



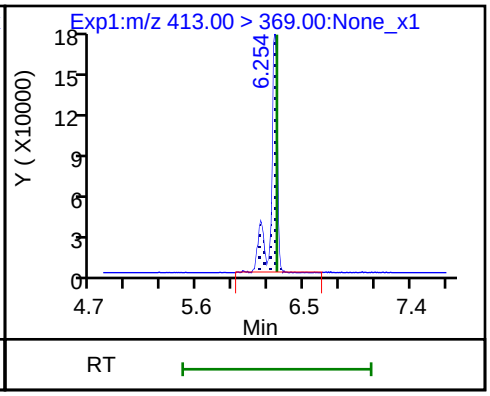
* 34 13C4 PFOA



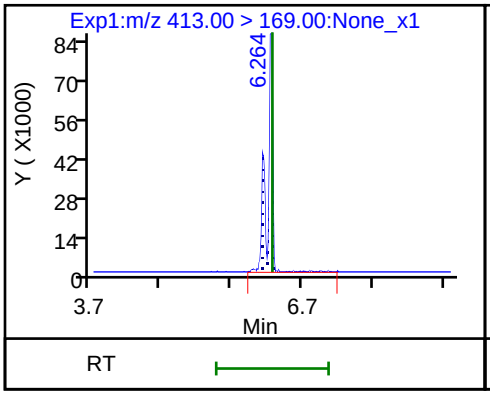
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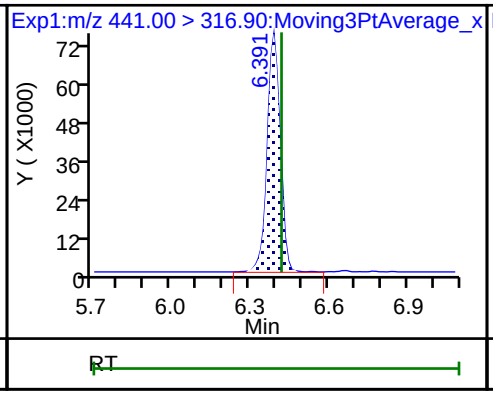
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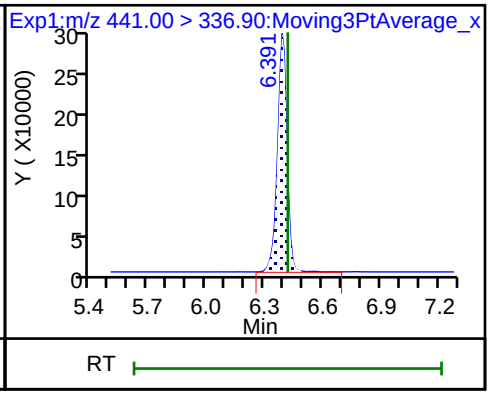
36 PFOA



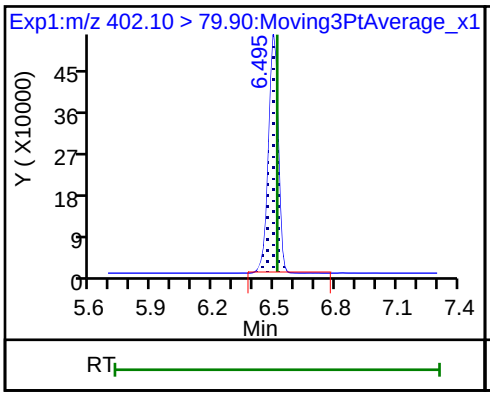
37 7:3 FTCA



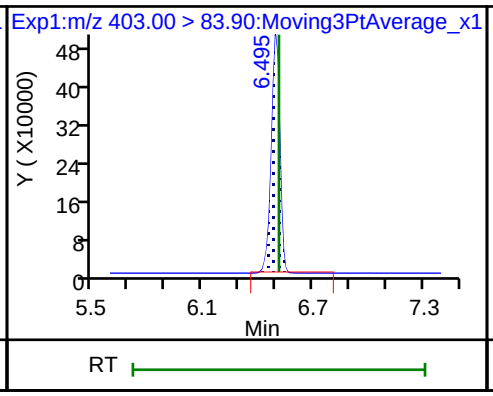
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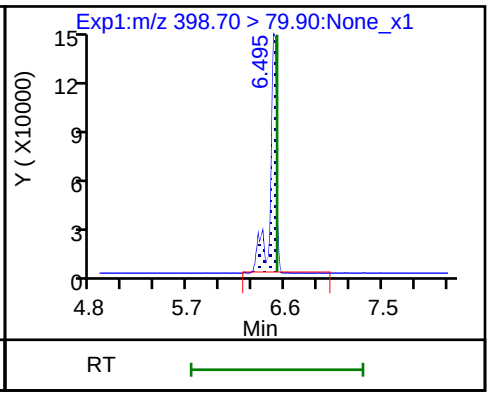
D 38 13C3 PFHxS



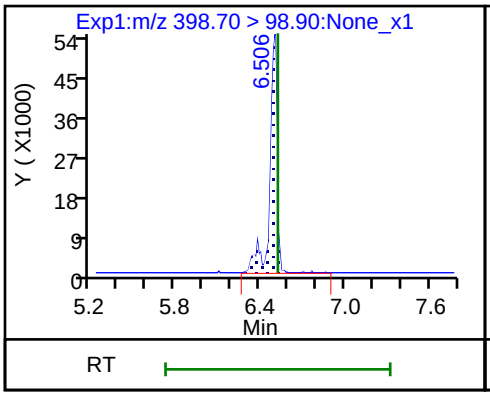
* 39 18O2 PFHxS



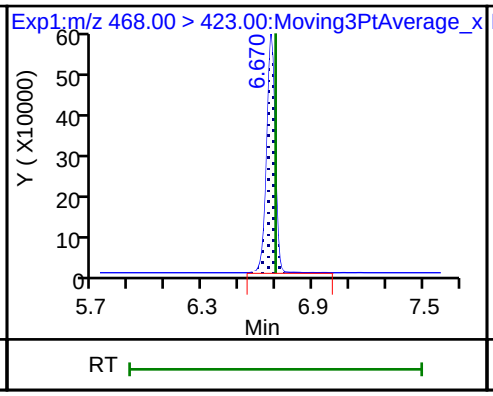
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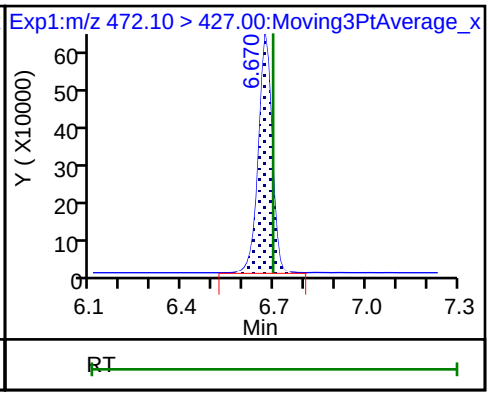
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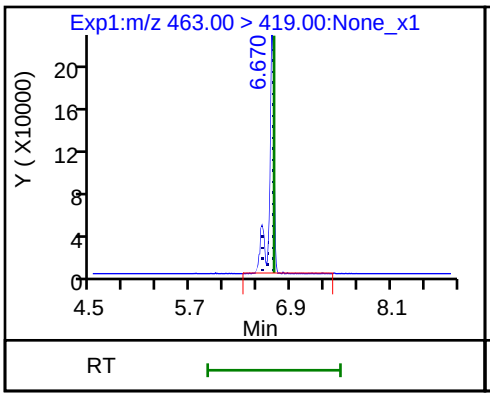
* 42 13C5 PFNA



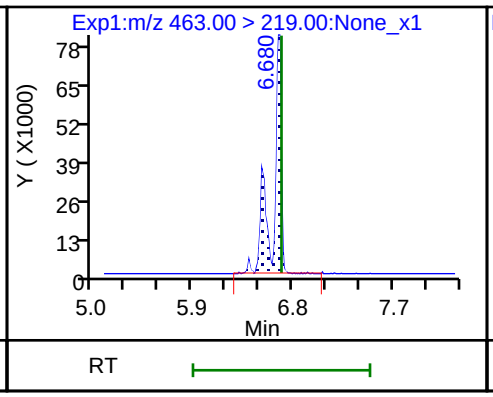
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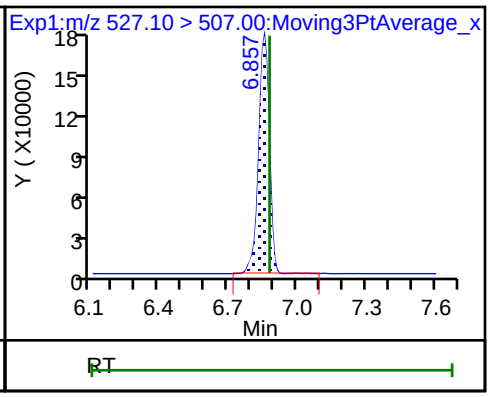
43 PFNA



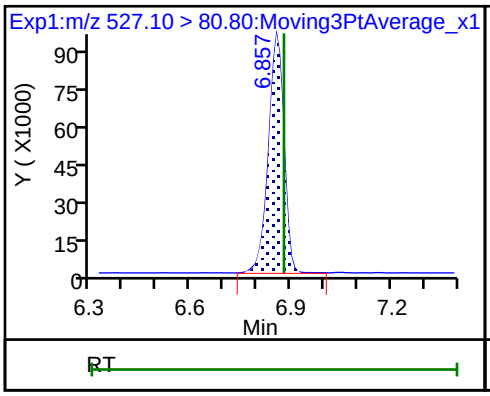
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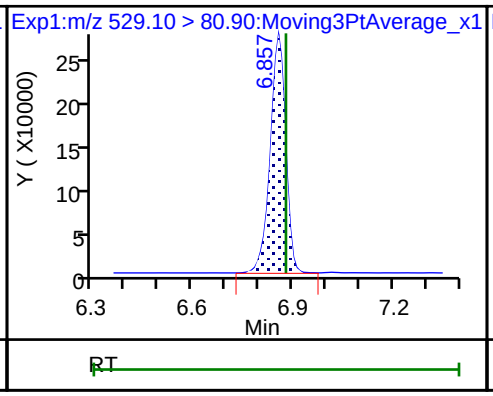
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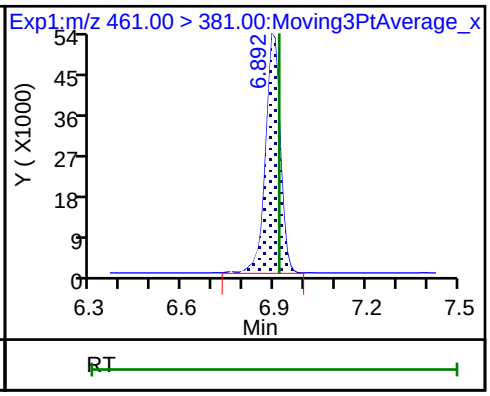
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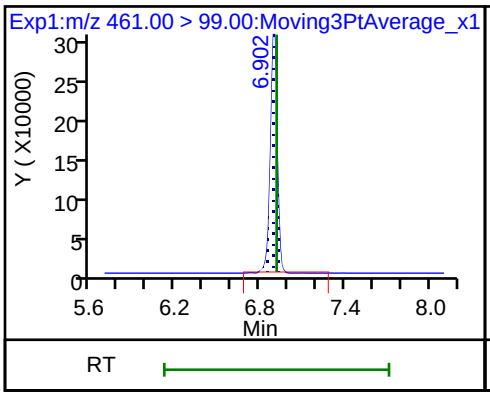
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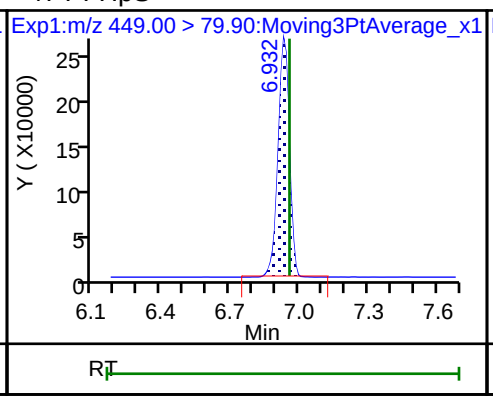
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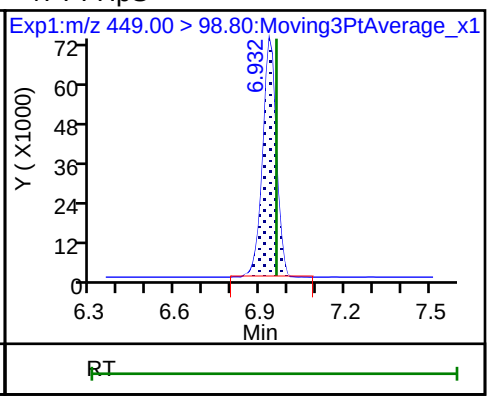
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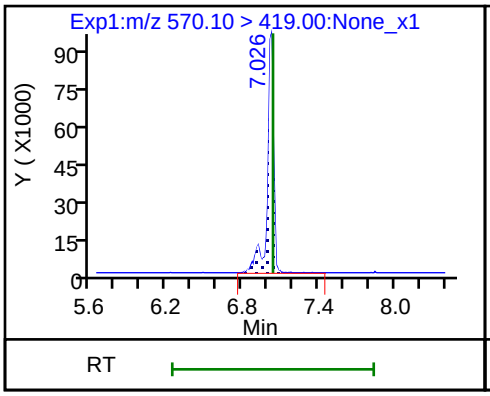
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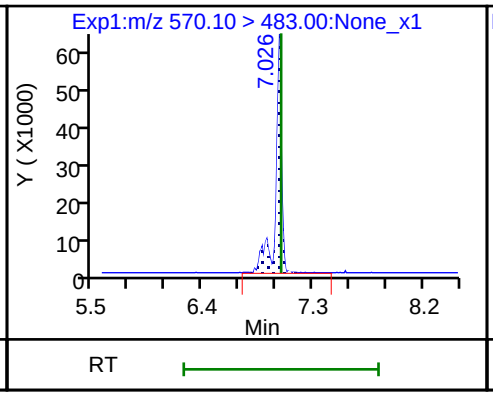
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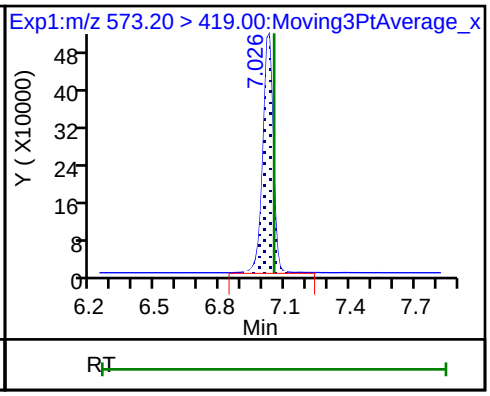
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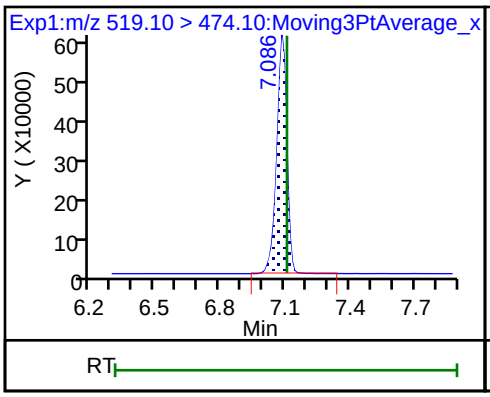
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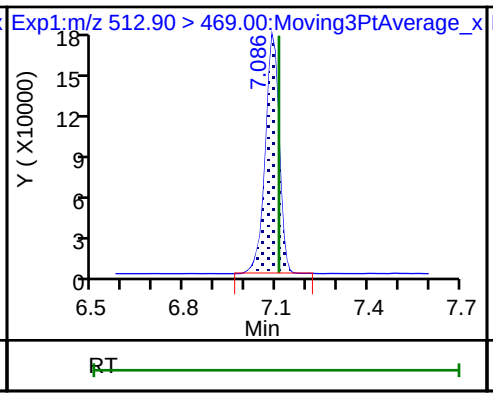
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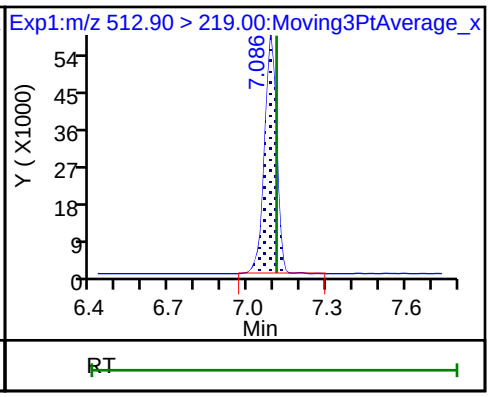
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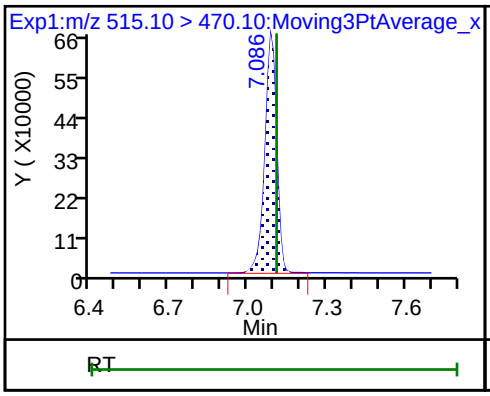
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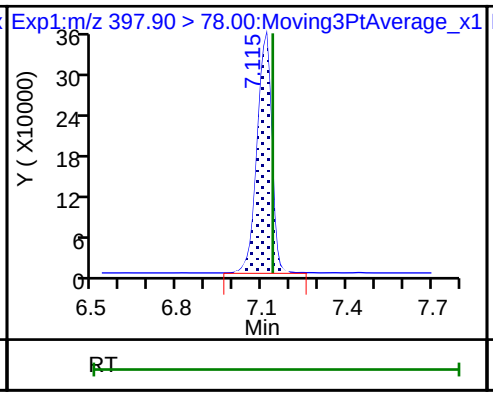
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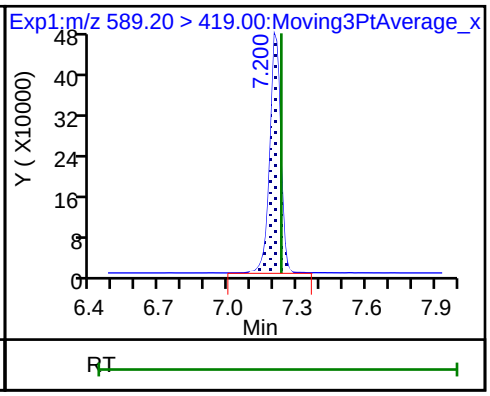
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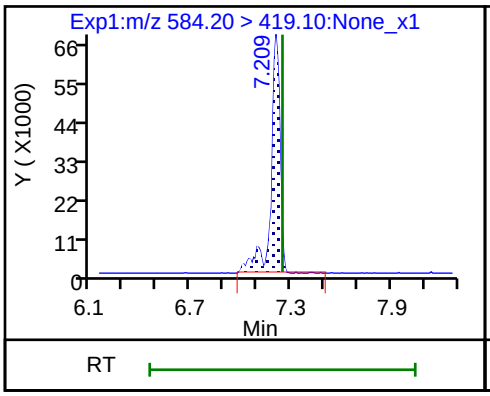
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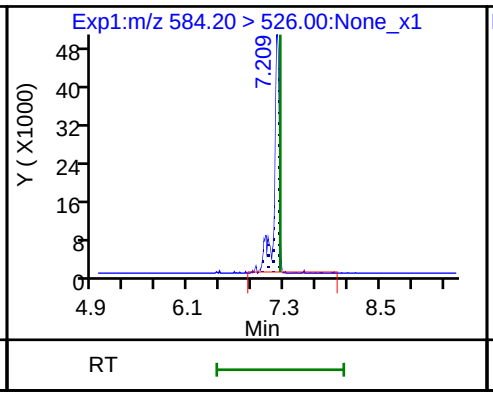
D 54 d5-NEtFOSAA



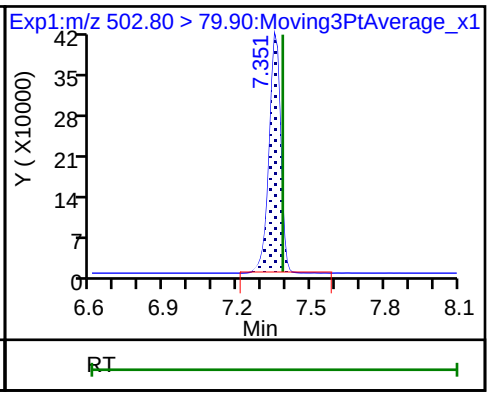
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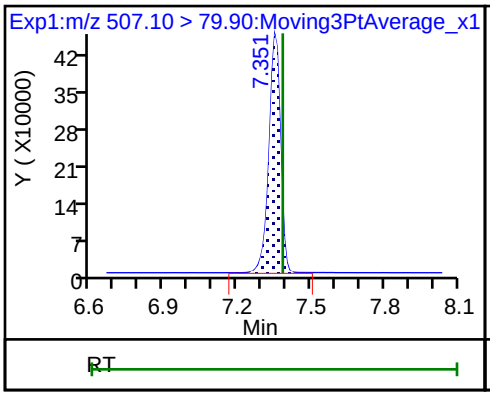
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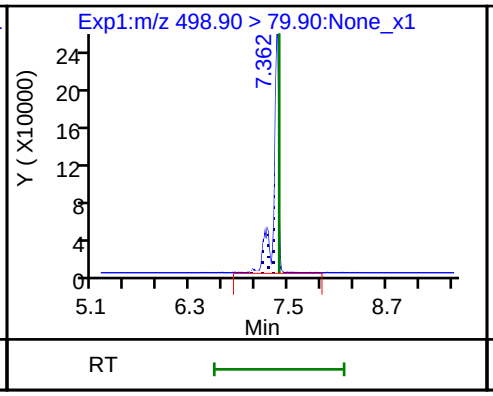
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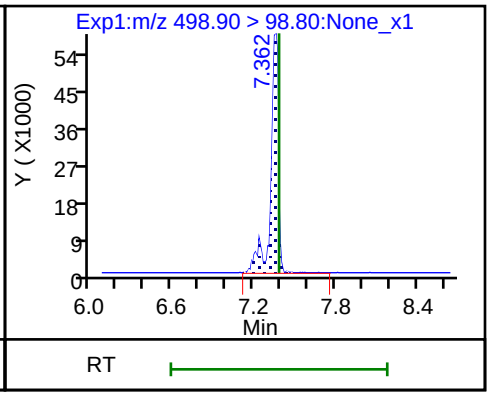
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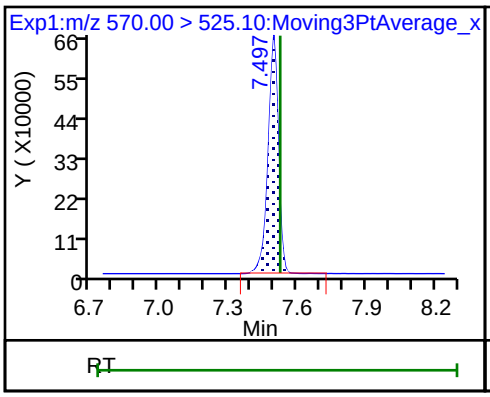
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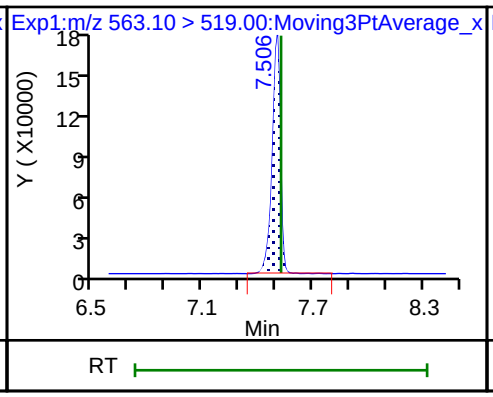
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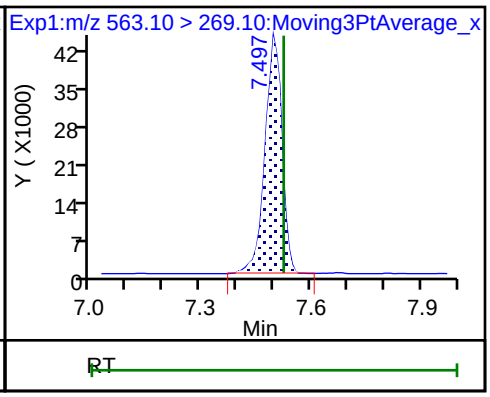
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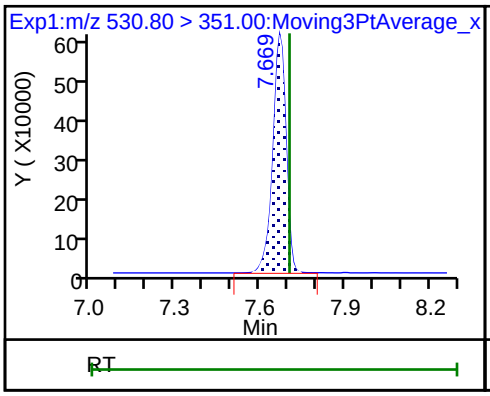
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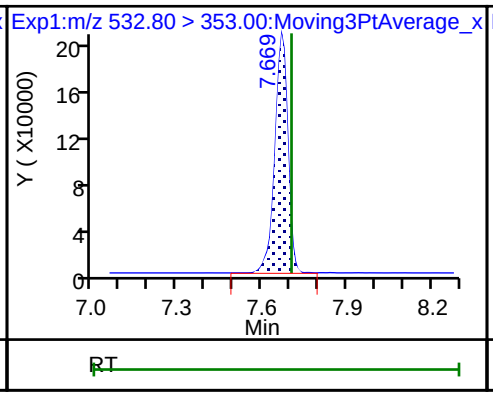
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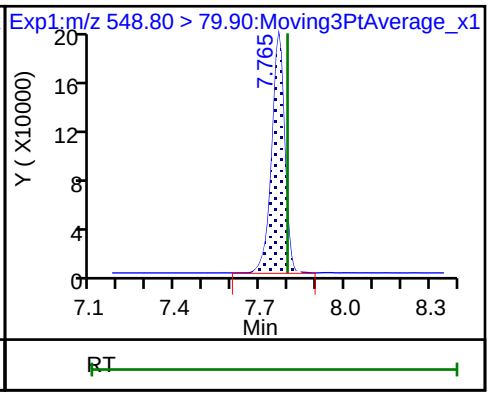
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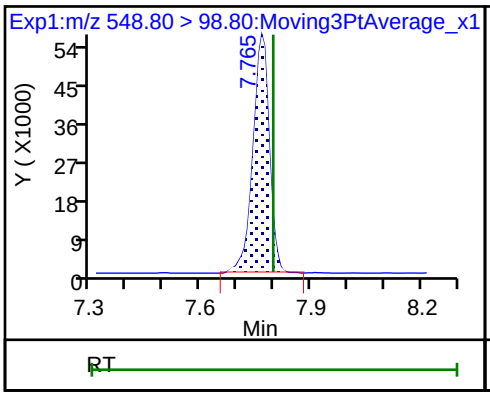
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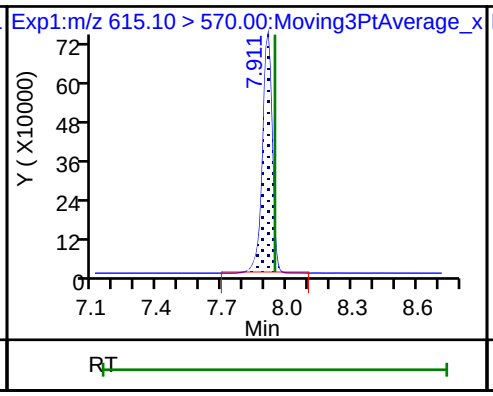
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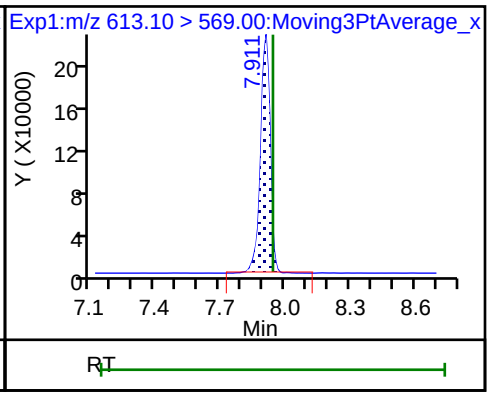
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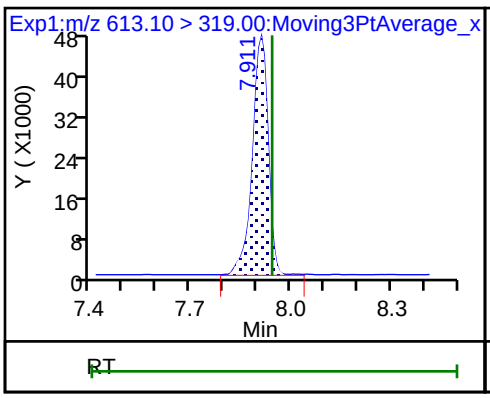
D 81 PFDoA



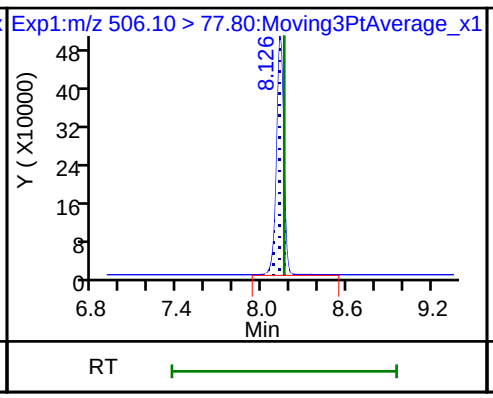
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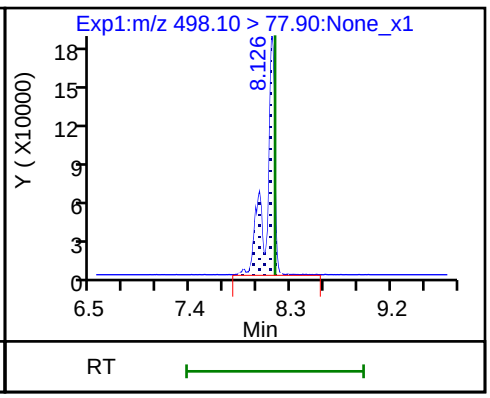
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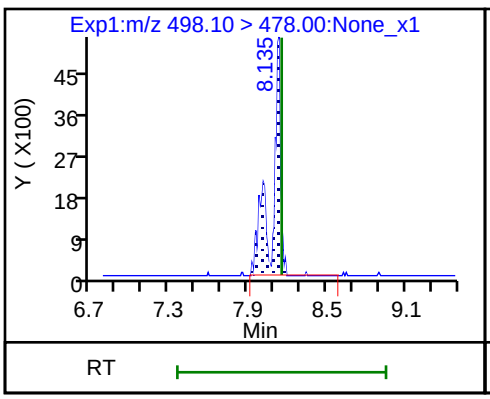
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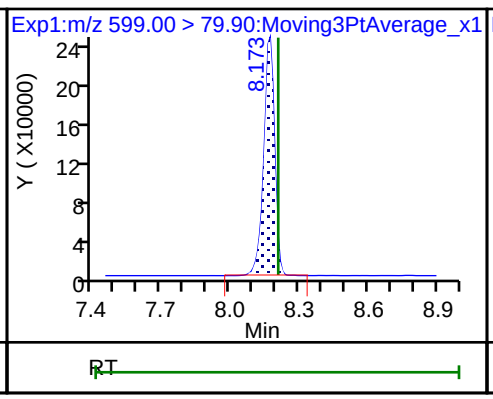
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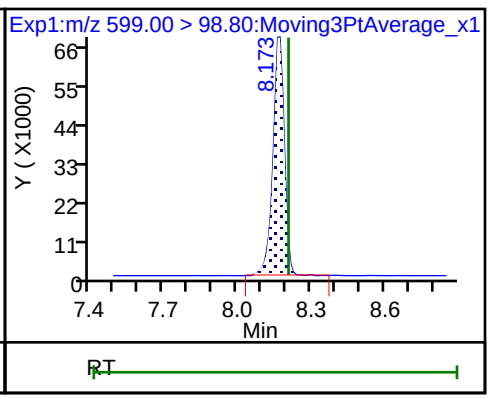
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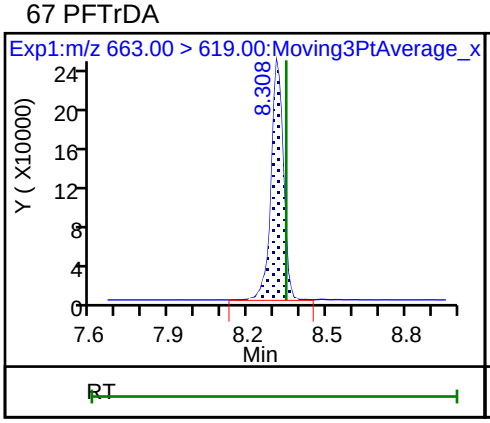
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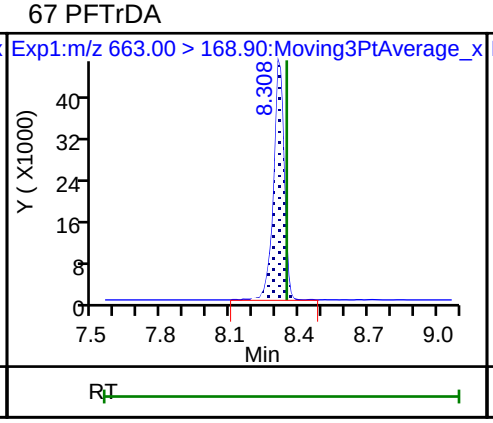
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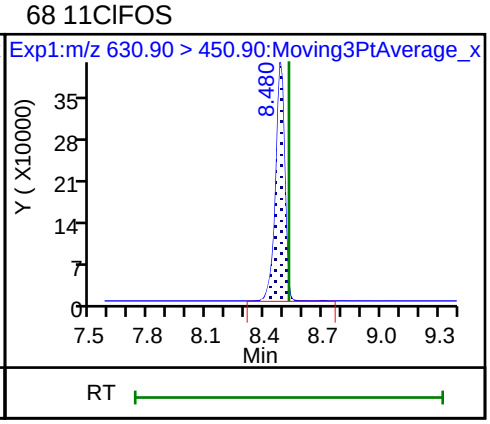
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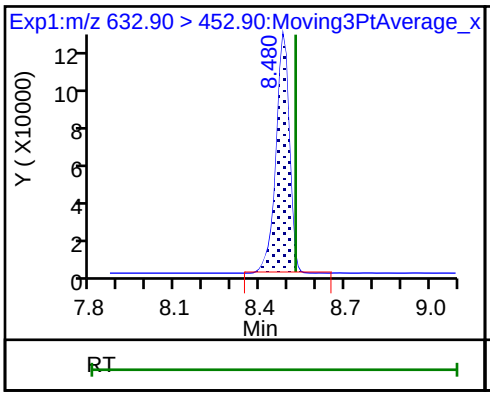
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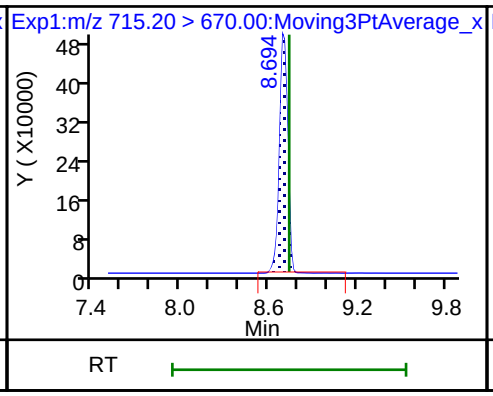
68 11ClFOS



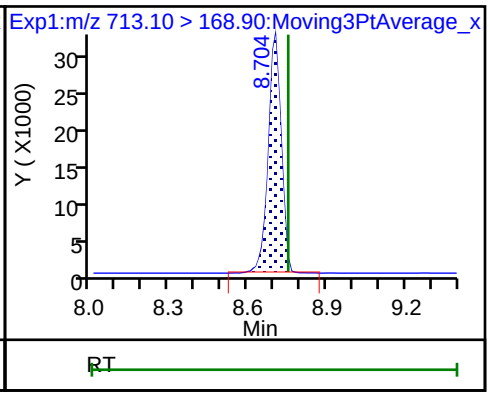
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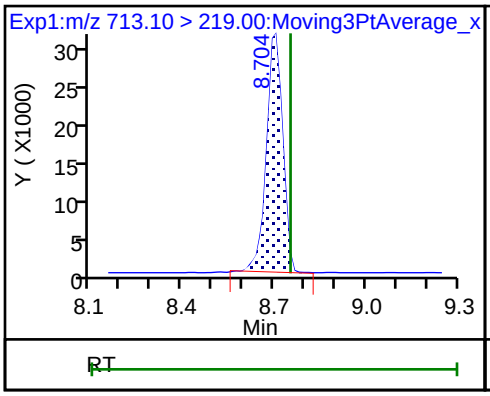
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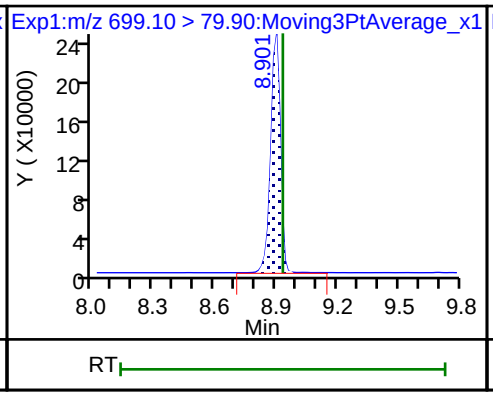
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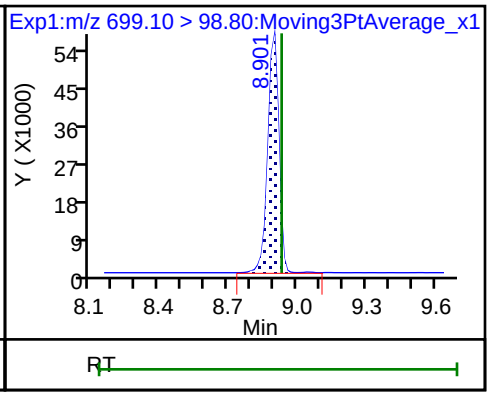
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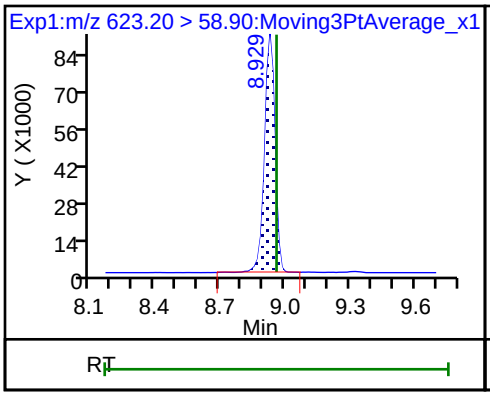
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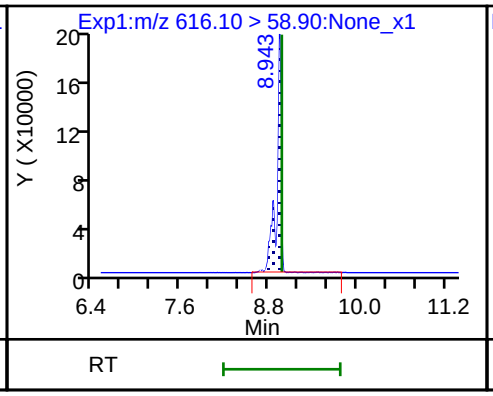
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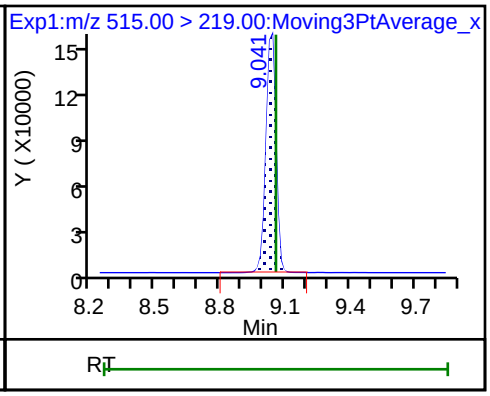
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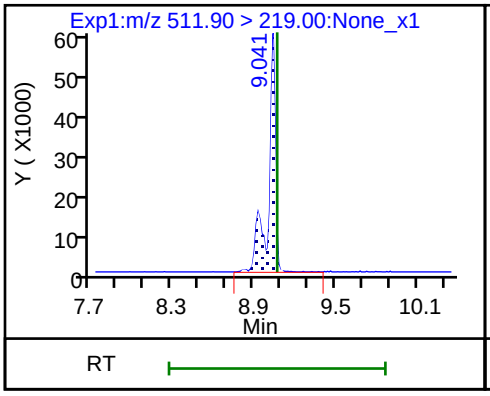
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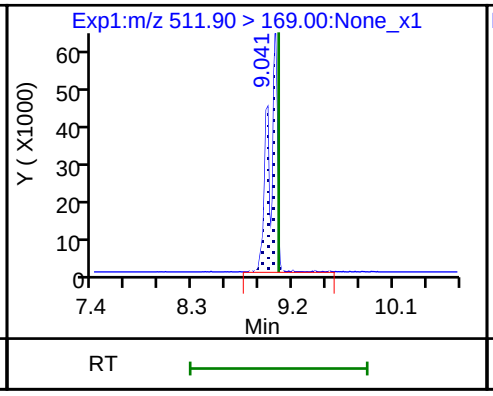
D 75 d3-NMePFOSA



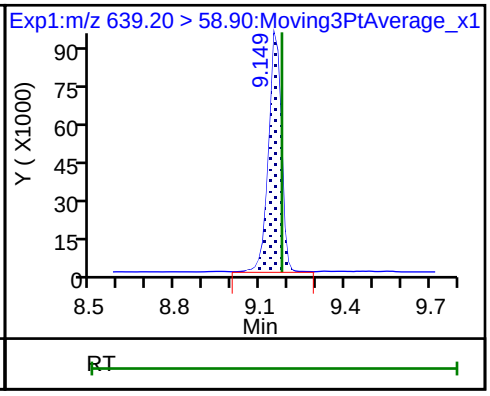
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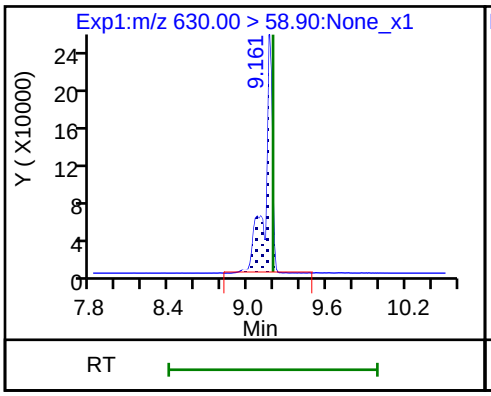
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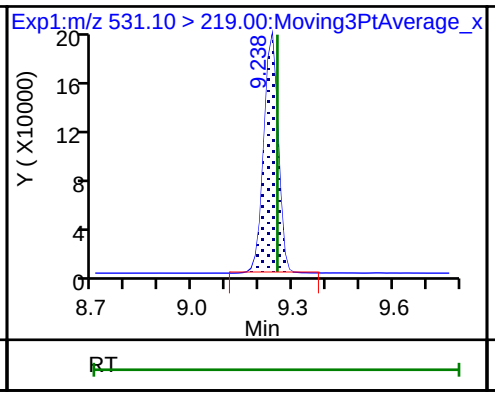
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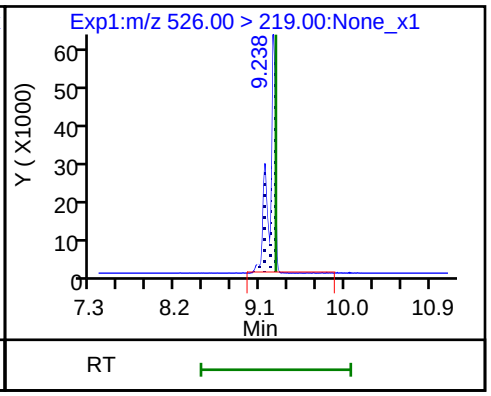
77 N-EtFOSE-M



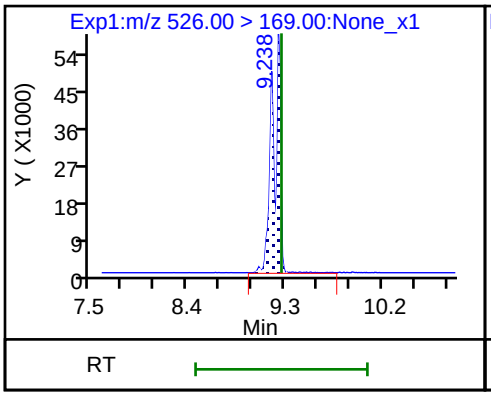
D 78 d5-NEtPFOSA



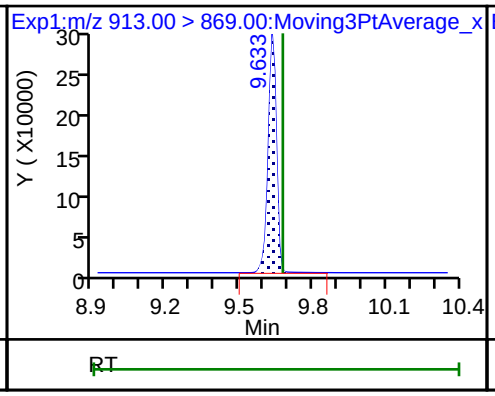
79 N-EtFOSA-M



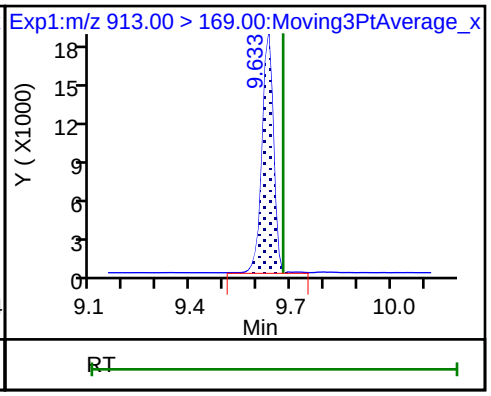
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-05.d
Lims ID: ICISAV CAL 5
Client ID:
Sample Type: ICISAV Calib Level: 5
Inject. Date: 16-Feb-2026 21:16:27 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: ICISAV CAL 5
Misc. Info.: Plate: 1 Rack: 1 410-0175852-005
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:44 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:36:35
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.133	2.133	0.0	1.000	6090292	13.0		104	26900	
D 1 13C3PFPrA										
166.00 > 121.00	2.133	2.133	0.0	0.495	1021889	1.90		94.9	1867	
3 PFBA										
212.80 > 168.90	4.302	4.302	0.0	0.998	3523563	5.13		103	38267	
D 4 13C4-PFBA										
216.80 > 171.90	4.309	4.309	0.0	1.000	1499361	1.96		98.1	19407	
* 5 13C3PFBA										
216.00 > 172.00	4.309	4.309	0.0		1552522	2.00			3415	
6 PFMPA										
229.00 > 84.90	4.622	4.622	0.0	0.932	2069004	2.63		105	4662	
7 3:3 FTCA										
241.00 > 177.00	4.631	4.631	0.0	0.934	214997	5.33	Target=1.16	107	1185	
241.00 > 117.00	4.631	4.631	0.0	0.934	187009		1.15(0.58-1.73)	107	1398	
D 8 13C5 PFPeA										
268.30 > 223.00	4.959	4.959	0.0	0.914	1562040	1.97		98.6	6036	
9 PFPA										
263.00 > 219.00	4.959	4.959	0.0	1.000	2303775	2.57		103	4449	
10 PFMBA										
279.00 > 85.10	5.107	5.107	0.0	1.030	2775253	2.64		106	6273	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.235	5.235	0.0	0.804	1016117	4.71		100	4786	
12 4:2FTS										
327.10 > 307.00	5.235	5.235	0.0	1.000	1853826	4.66	Target=1.70	99.3	6288	
327.10 > 80.90	5.235	5.235	0.0	1.000	1107204		1.67(0.85-2.54)	99.3	1177	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.386	5.386	0.0	0.993	623634	2.39	Target=1.61	95.5	2504	
295.00 > 84.90	5.375	5.386	-0.011	0.991	436321		1.43(0.80-2.41)	95.5	2506	
* 16 13C2 PFHxA										
315.10 > 270.00	5.424	5.424	0.0		4463257	5.00			8933	
D 15 13C5 PFHxA										
318.00 > 273.00	5.424	5.424	0.0	1.000	1905556	1.96		98.0	4291	
17 PFHxA										
313.00 > 269.00	5.424	5.424	0.0	1.000	1800338	2.53	Target=9.95	101	3491	
313.00 > 118.90	5.424	5.424	0.0	1.000	192247		9.36(4.98-14.93)	101	1250	
18 5:3 FTCA										
341.00 > 237.10	5.503	5.503	0.0	1.015	1328836	14.0	Target=0.62	112	1190	
341.00 > 217.00	5.503	5.503	0.0	1.015	2065396		0.64(0.31-0.94)	112	4229	
D 19 13C3 PFBS										
302.10 > 79.90	5.561	5.561	0.0	0.854	1952663	1.89		102	8890	
20 PFBS										
298.70 > 79.90	5.561	5.561	0.0	1.000	2068130	2.21	Target=3.17	99.6	3590	
298.70 > 98.80	5.561	5.561	0.0	1.000	661113		3.13(1.59-4.76)	99.6	3703	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.607	5.607	0.0	1.034	1245633	1.97		98.4	4719	
23 HFPO-DA										
284.90 > 168.90	5.607	5.607	0.0	1.000	1361543	2.02	Target=2.55	108	4585	
284.90 > 184.90	5.607	5.607	0.0	1.000	547602		2.49(1.27-3.82)	108	3781	
21 FBSA										
297.90 > 78.00	5.665	5.665	0.0	1.019	1992937	2.68		107	2740	
26 PFEESA										
314.80 > 134.90	5.807	5.807	0.0	1.070	5400595	2.34	Target=12.76	105	8718	
314.80 > 82.90	5.807	5.807	0.0	1.070	456919		11.82(6.38-19.14)	105	1839	
D 28 13C4 PFHpA										
367.10 > 322.00	5.851	5.851	0.0	1.079	1924295	2.02		101	4656	
27 PFHpA										
363.10 > 319.00	5.851	5.851	0.0	1.000	1705194	2.53	Target=1.64	101	4826	
363.10 > 169.00	5.851	5.851	0.0	1.000	1130790		1.51(0.82-2.46)	101	9406	
29 ADONA										
376.90 > 250.90	6.007	6.007	0.0	1.071	5405289	2.52	Target=2.22	107	6288	
376.90 > 84.80	6.007	6.007	0.0	1.071	2434760		2.22(1.11-3.33)	107	3063	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.059	6.059	0.0	0.930	749341	4.17		87.6	2496	
31 6:2FTS										
427.10 > 407.00	6.059	6.059	0.0	1.000	1503983	5.17	Target=1.59	109	3431	
427.10 > 80.90	6.059	6.059	0.0	1.000	961575		1.56(0.79-2.38)	109	3540	
30 PFPeS										
349.10 > 79.90	6.049	6.049	0.0	0.929	2369871	2.50	Target=3.23	106	6010	
349.10 > 98.90	6.049	6.049	0.0	0.929	723444		3.28(1.61-4.84)	106	3029	
33 BTS										
280.00 > 147.00	6.220	6.220	0.0	0.955	4038398	2.61		107	5097	
* 34 13C4 PFOA										
417.10 > 372.00	6.269	6.269	0.0		6408994	5.00			5873	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.269	6.269	0.0	1.000	2385604	1.94		97.1	4829	
36 PFOA										
413.00 > 369.00	6.269	6.269	0.0	1.000	1592243	2.53	Target=1.52	101	2141	
413.00 > 169.00	6.278	6.269	0.009	1.002	999566		1.59(0.76-2.27)	101	991	
37 7:3 FTCA										
441.00 > 316.90	6.407	6.407	0.0	1.181	637134	13.2	Target=0.24	106	1546	
441.00 > 336.90	6.407	6.407	0.0	1.181	2666899		0.24(0.12-0.36)	106	2990	
D 38 13C3 PFHxS										
402.10 > 79.90	6.512	6.512	0.0	1.000	1587137	1.82		95.9	3817	
* 39 18O2 PFHxS										
403.00 > 83.90	6.512	6.512	0.0		1516696	1.90			2868	
40 PFHxS										
398.70 > 79.90	6.512	6.512	0.0	1.000	1456076	2.29	Target=3.27	100	1873	
398.70 > 98.90	6.512	6.512	0.0	1.000	472902		3.08(1.63-4.90)	100	1111	
43 PFNA										
463.00 > 419.00	6.694	6.694	0.0	1.001	2047674	2.44	Target=2.14	97.7	2228	
463.00 > 219.00	6.684	6.694	-0.010	1.000	1051007		1.95(1.07-3.21)	97.7	1205	
* 42 13C5 PFNA										
468.00 > 423.00	6.684	6.684	0.0		1905993	2.00			5741	
D 41 13C9 PFNA										
472.10 > 427.00	6.684	6.684	0.0	1.000	1844501	1.93		96.7	4537	
45 8:2FTS										
527.10 > 507.00	6.868	6.868	0.0	1.000	1458636	5.00	Target=1.87	104	2115	
527.10 > 80.80	6.868	6.868	0.0	1.000	783787		1.86(0.94-2.81)	104	1281	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.868	6.868	0.0	1.055	838590	4.53		94.4	2290	
46 PFECHS										
461.00 > 381.00	6.914	6.914	0.0	1.062	470591	2.46	Target=0.17	106	1459	
461.00 > 99.00	6.914	6.914	0.0	1.062	2629816		0.18(0.09-0.26)	106	18564	
47 PFHpS										
449.00 > 79.90	6.945	6.945	0.0	0.942	2417038	2.58	Target=3.71	108	5950	
449.00 > 98.80	6.945	6.945	0.0	0.942	670953		3.60(1.86-5.57)	108	3377	
50 NMeFOSAA										
570.10 > 419.00	7.037	7.037	0.0	1.000	879902	2.78	Target=1.66	111	1425	
570.10 > 483.00	7.047	7.037	0.010	1.001	487814		1.80(0.83-2.49)	111	577	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.037	7.037	0.0	0.954	1608593	4.89		97.9	2589	
53 PFDA										
512.90 > 469.00	7.107	7.107	0.0	1.000	1358958	2.46	Target=2.88	98.5	2815	
512.90 > 219.00	7.107	7.107	0.0	1.000	494777		2.75(1.44-4.31)	98.5	1302	
* 51 13C2 PFDA										
515.10 > 470.10	7.107	7.107	0.0		2009075	2.00			4190	
D 52 13C6 PFDA										
519.10 > 474.10	7.107	7.107	0.0	1.000	1984472	1.99		99.3	2270	
48 FHxSA										
397.90 > 78.00	7.126	7.126	0.0	1.094	3037932	2.73		109	4194	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.219	7.219	0.0	0.979	1478116	4.91		98.3	3170	
55 NEtFOSAA										
584.20 > 419.10	7.238	7.238	0.0	1.003	666366	2.56	Target=1.34	102	1474	
584.20 > 526.00	7.238	7.238	0.0	1.003	528779		1.26(0.67-2.01)	102	942	
* 57 13C4 PFOS										
502.80 > 79.90	7.373	7.373	0.0		1316365	1.92			2915	
D 56 13C8 PFOS										
507.10 > 79.90	7.373	7.373	0.0	1.000	1431022	1.87		97.8	3629	
58 PFOS										
498.90 > 79.90	7.373	7.373	0.0	1.000	2398305	2.33	Target=4.60	100	3089	
498.90 > 98.80	7.373	7.373	0.0	1.000	546377		4.39(2.30-6.89)	100	1639	
D 59 13C7 PFUnA										
570.00 > 525.10	7.506	7.506	0.0	1.056	2025565	1.94		97.0	4166	
60 PFUnA										
563.10 > 519.00	7.515	7.515	0.0	1.001	1440527	2.61	Target=3.77	105	3300	
563.10 > 269.10	7.515	7.515	0.0	1.001	383612		3.76(1.88-5.65)	105	2352	
61 9ClFOS										
530.80 > 351.00	7.686	7.686	0.0	1.043	5303204	2.50	Target=3.08	107	3427	
532.80 > 353.00	7.686	7.686	0.0	1.043	1733031		3.06(1.54-4.61)	107	5007	
62 PFNS										
548.80 > 79.90	7.788	7.788	0.0	1.056	1606700	2.50	Target=3.66	104	4847	
548.80 > 98.80	7.781	7.788	-0.007	1.055	438270		3.67(1.83-5.49)	104	2577	
D 81 PFDoA										
615.10 > 570.00	7.935	7.935	0.0	1.117	1864578	1.79		89.3	4007	
63 PFDoA										
613.10 > 569.00	7.935	7.935	0.0		1740494	2.71	Target=4.34	108	3929	
613.10 > 319.00	7.928	7.935	-0.007		368355		4.73(2.17-6.51)	108	1813	
D 65 13C8 FOSA										
506.10 > 77.80	8.155	8.155	0.0	1.106	1687659	2.07		103	3814	
64 PFOSA										
498.10 > 77.90	8.155	8.155	0.0	1.000	2489375	2.60	Target=44.41	104	4112	
498.10 > 478.00	8.146	8.155	-0.009	0.999	59629		41.75(22.20-66.61)	104	94.3	
66 PFDS										
599.00 > 79.90	8.196	8.196	0.0	1.112	2066419	2.56	Target=3.83	106	7489	
599.00 > 98.80	8.196	8.196	0.0	1.112	560424		3.69(1.91-5.74)	106	2246	
67 PFTrDA										
663.00 > 619.00	8.345	8.345	0.0	0.957	2104956	2.72	Target=5.77	109	3942	
663.00 > 168.90	8.345	8.345	0.0	0.957	361056		5.83(2.88-8.65)	109	1765	
68 11ClFOS										
630.90 > 450.90	8.504	8.504	0.0	1.153	3463024	2.59	Target=3.07	110	8231	
632.90 > 452.90	8.504	8.504	0.0	1.153	1080057		3.21(1.54-4.61)	110	3693	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.722	8.722	0.0	1.227	1770843	1.85		92.3	2770	
69 PFTeDA										
713.10 > 168.90	8.722	8.722	0.0	1.000	255233	2.49	Target=0.94	99.7	1881	
713.10 > 219.00	8.722	8.722	0.0	1.000	307848		0.83(0.47-1.41)	99.7	1039	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.917	8.917	0.0	1.210	2139724	2.58	Target=4.11	107	5020	
699.10 > 98.80	8.917	8.917	0.0	1.210	509484		4.20(2.06-6.17)	107	3249	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.945	8.945	0.0	1.213	267413	4.95		99.0	827	
73 N-MeFOSE-M										
616.10 > 58.90	8.974	8.974	0.0	1.003	1828764	12.8		102	2536	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.057	9.057	0.0	1.228	471384	1.99		99.6	5359	
74 NMeFOSA										
511.90 > 219.00	9.057	9.057	0.0	1.000	555119	2.65	Target=0.68	106	1847	
511.90 > 169.00	9.057	9.057	0.0	1.000	811261		0.68(0.34-1.03)	106	2100	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.176	9.176	0.0	1.245	304298	4.94		98.8	658	
77 N-EtFOSE-M										
630.00 > 58.90	9.189	9.189	0.0	1.001	2434763	12.9		103	5174	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.252	9.252	0.0	1.255	599921	2.08		104	2741	
79 N-EtFOSA-M										
526.00 > 219.00	9.265	9.265	0.0	1.001	649397	2.54	Target=0.87	101	2387	
526.00 > 169.00	9.265	9.265	0.0	1.001	760308		0.85(0.43-1.30)	101	2113	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.645	9.645	0.0	1.106	1846968	2.89	Target=16.98	116	44816	
913.00 > 169.00	9.645	9.645	0.0	1.106	111528		16.56(8.49-25.47)	116	5192	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL5_00038 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:45 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-05.d

Injection Date: 16-Feb-2026 21:16:27 Instrument ID: 30577

Lims ID: ICISAV CAL 5

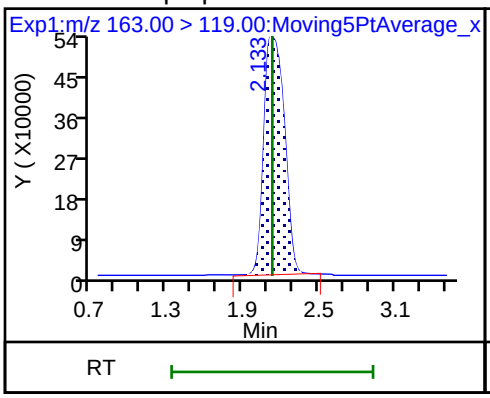
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 6 Worklist Smp#: 5

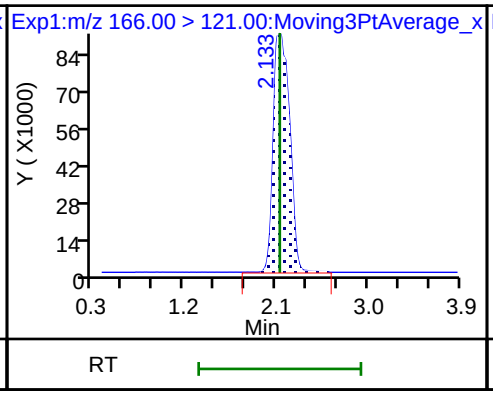
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

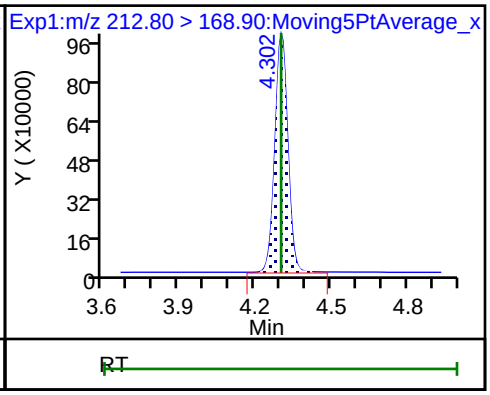
2 Perfluoropropionic acid



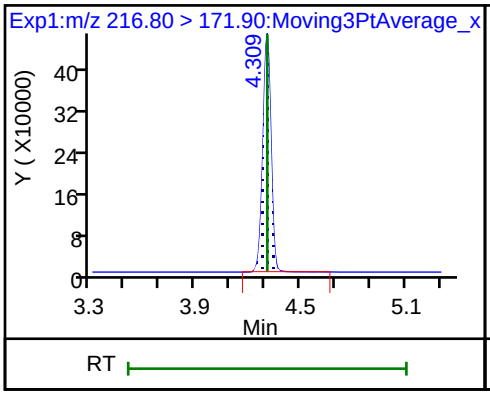
D 1 13C3PFPrA



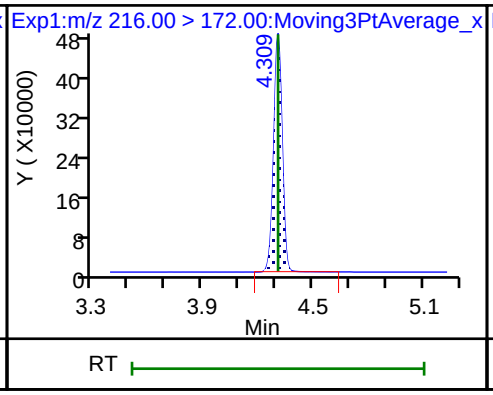
3 PFBA



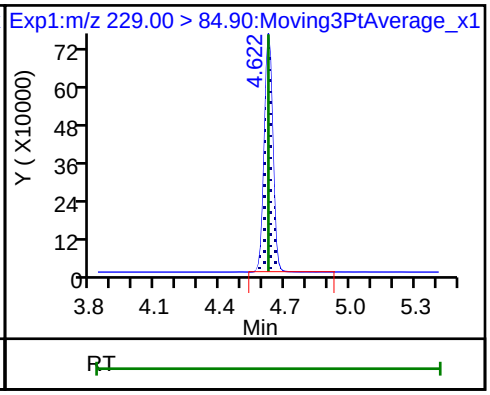
D 4 13C4-PFBA



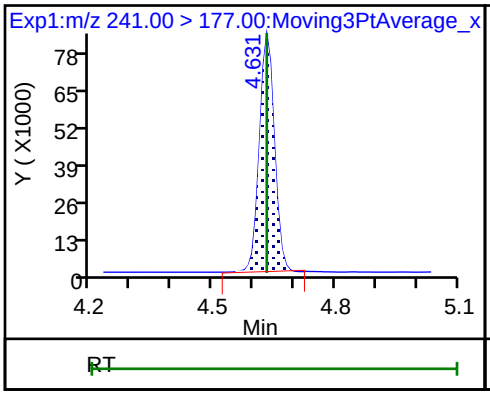
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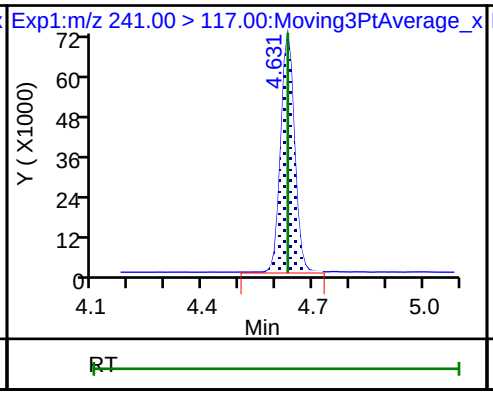
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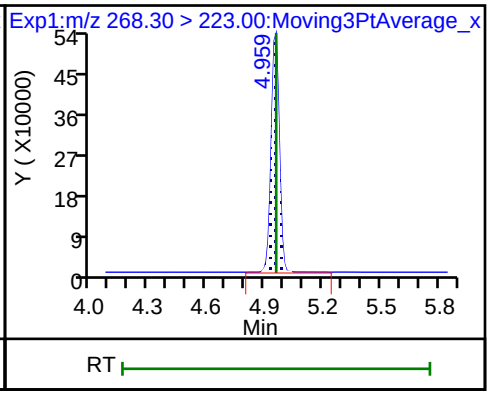
7 3:3 FTCA



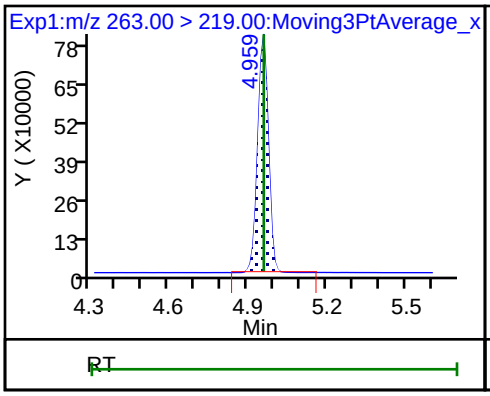
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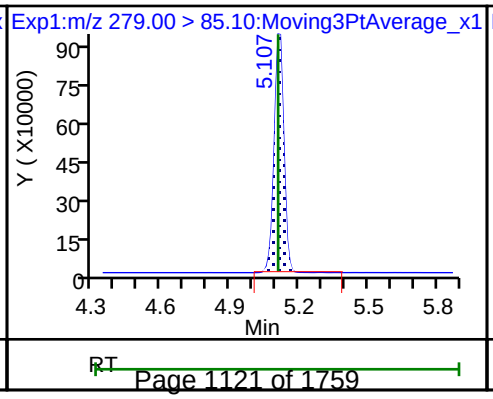
D 8 13C5 PFPeA



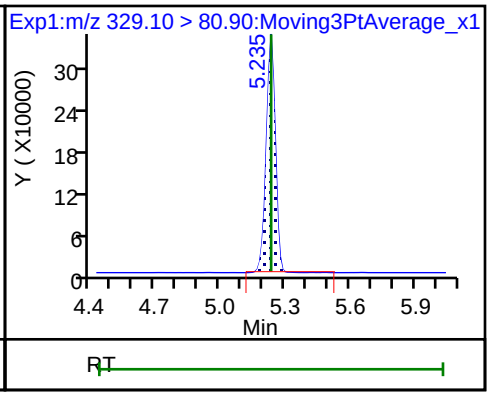
9 PFPA



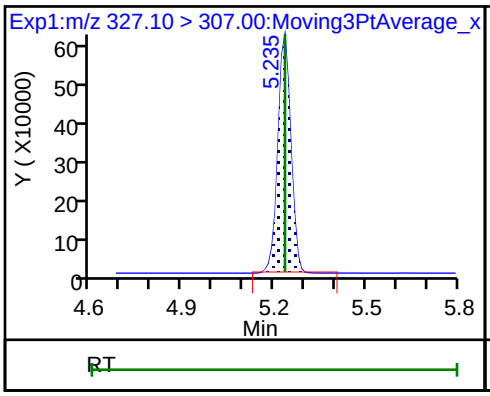
10 PFMBA



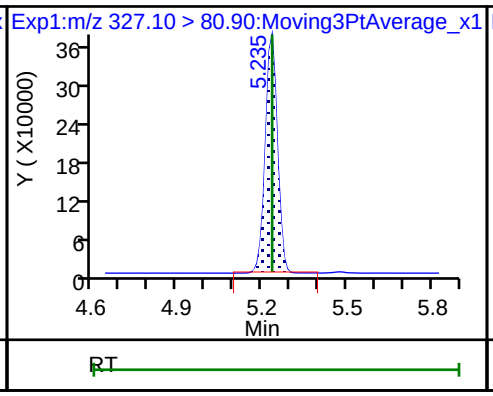
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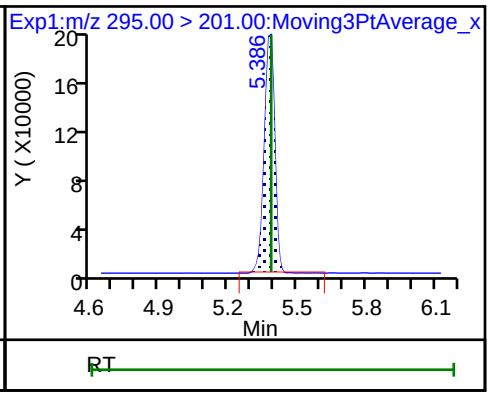
12 4:2FTS



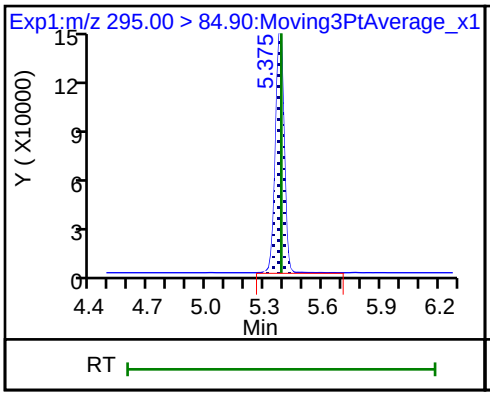
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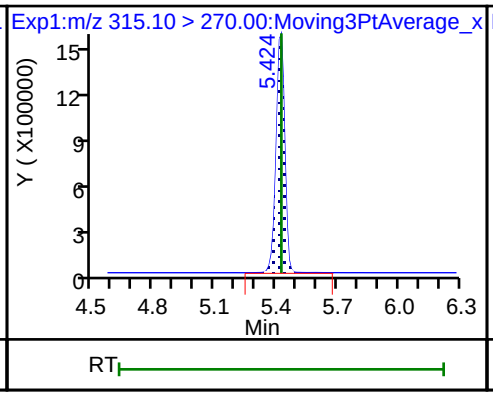
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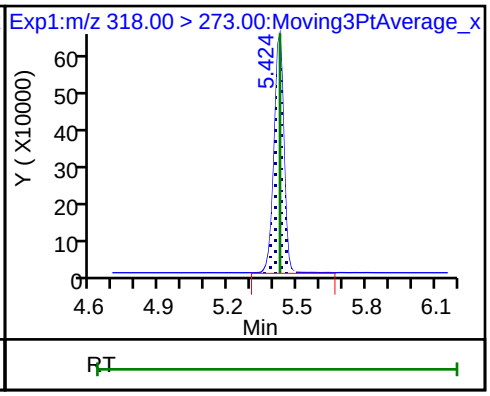
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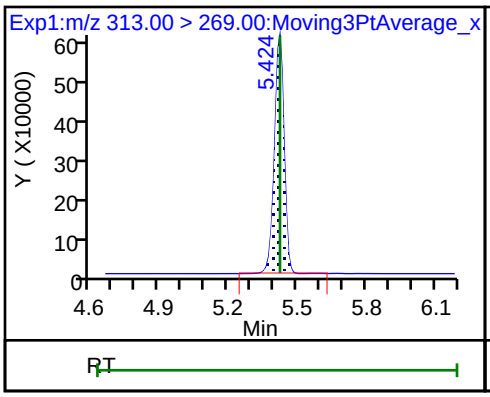
* 16 13C2 PFHxA



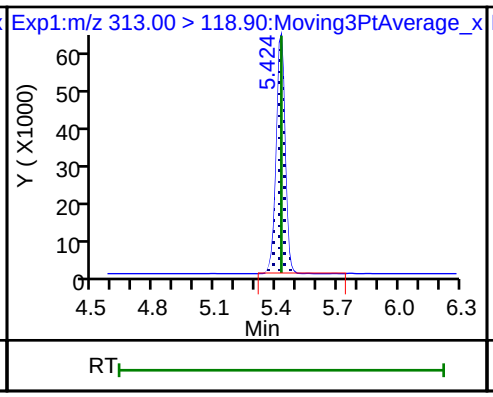
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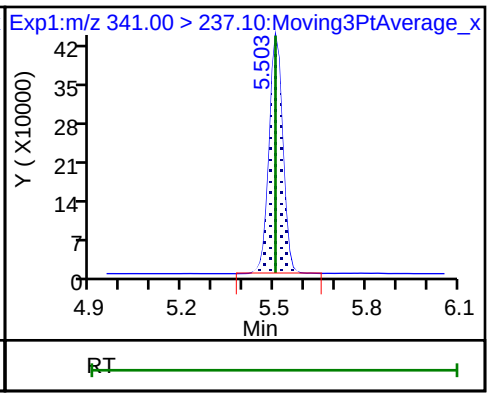
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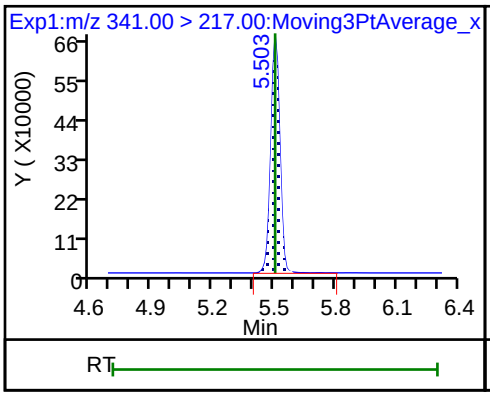
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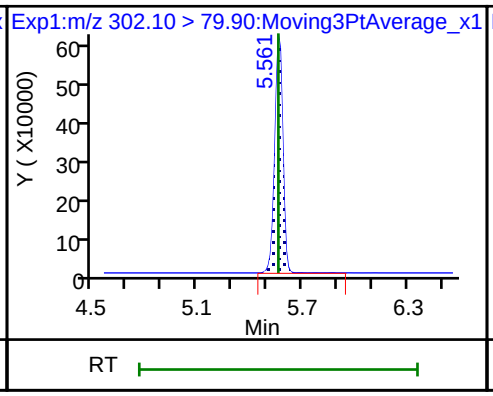
18 5:3 FTCA



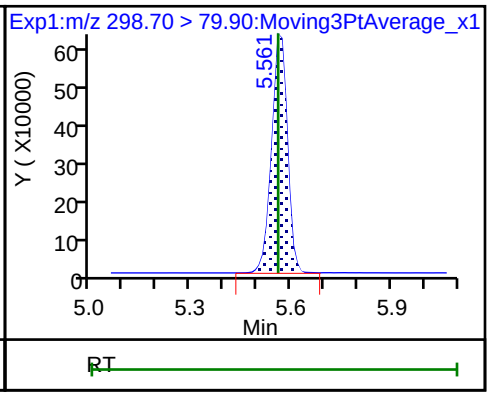
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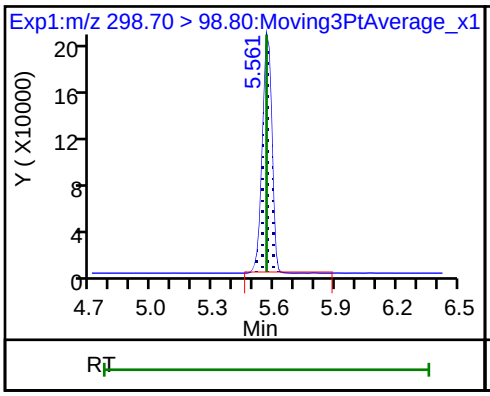
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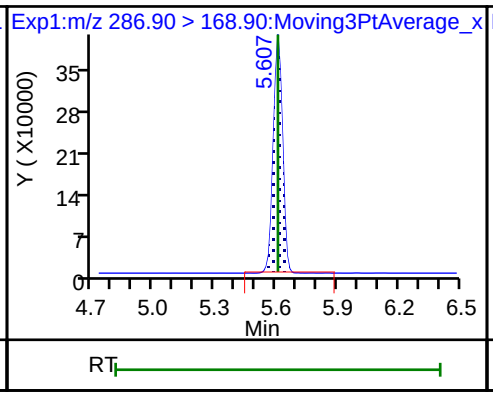
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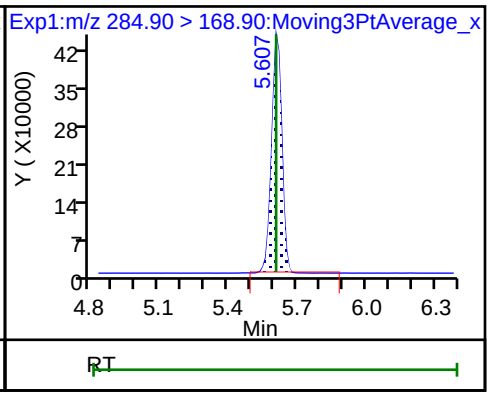
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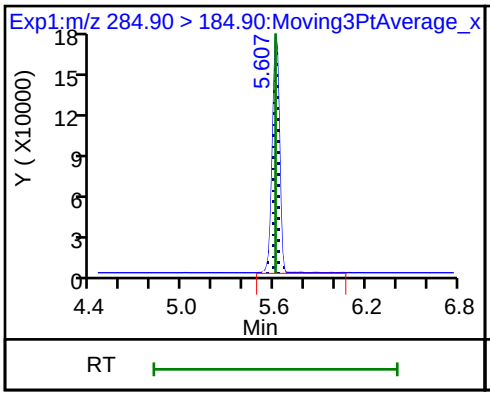
D 22 13C3 HFPO-DA



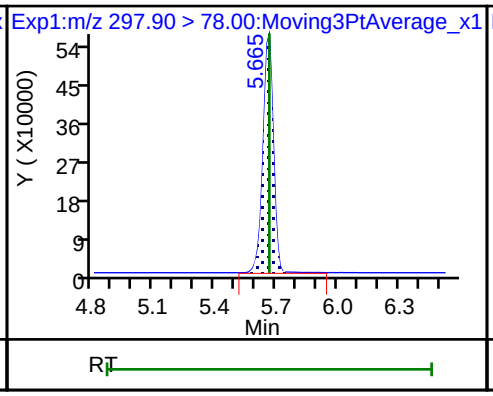
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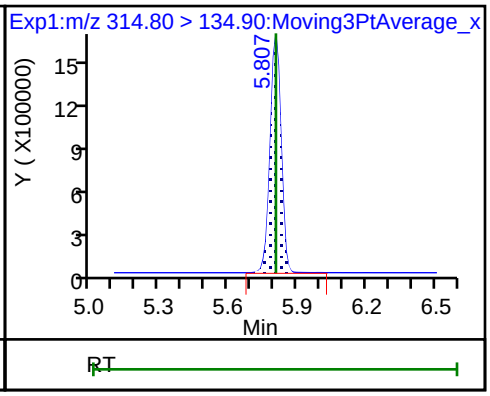
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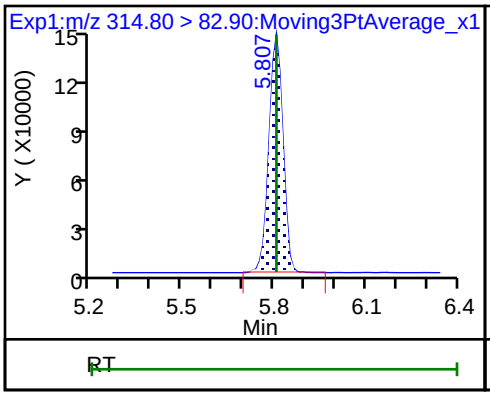
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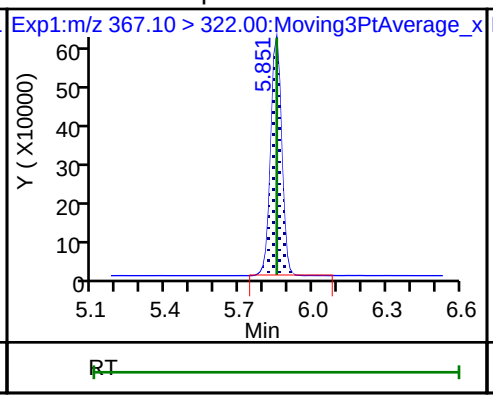
26 PFEESA



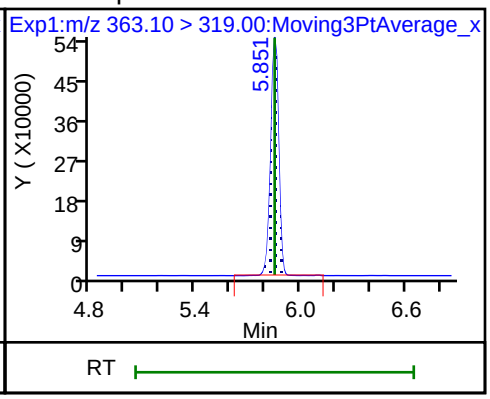
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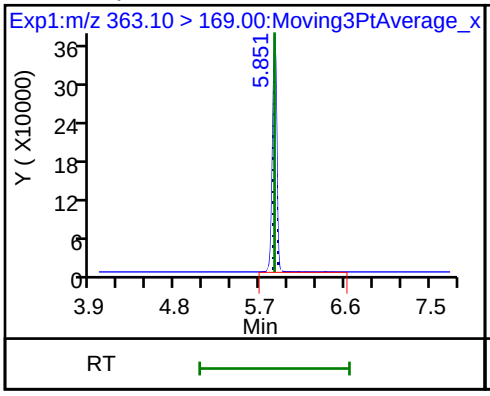
D 28 13C4 PFHpA



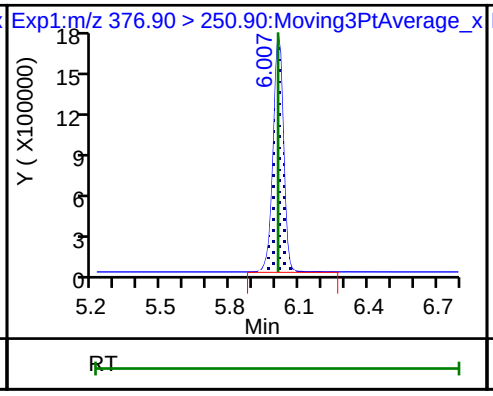
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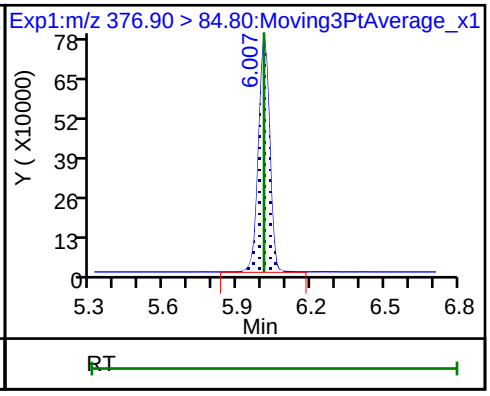
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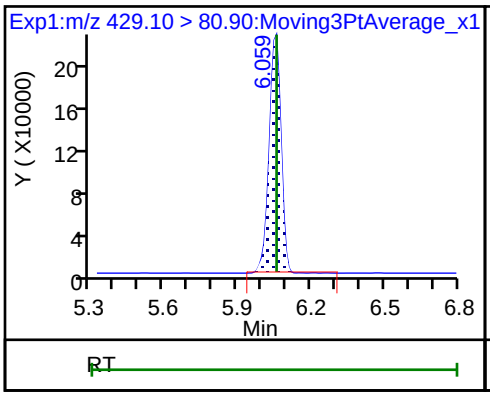
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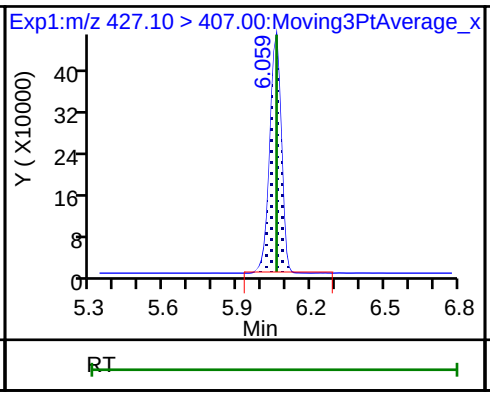
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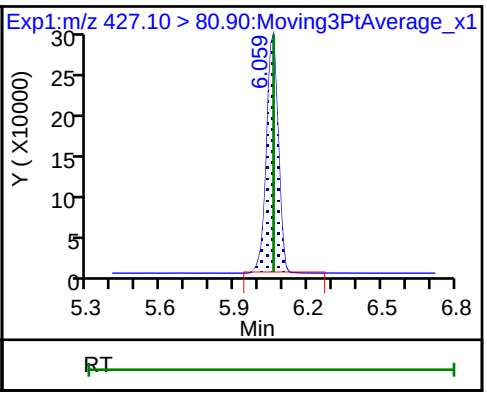
D 32 13C2-6:2FTS



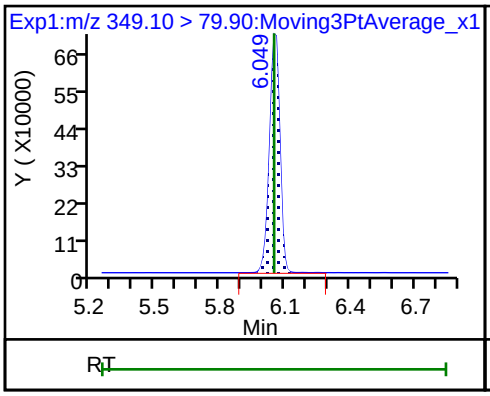
31 6:2FTS



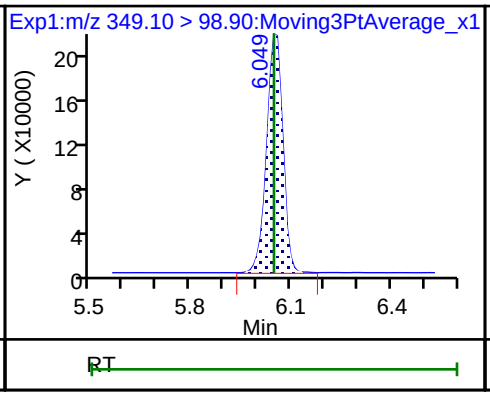
31 6:2FTS



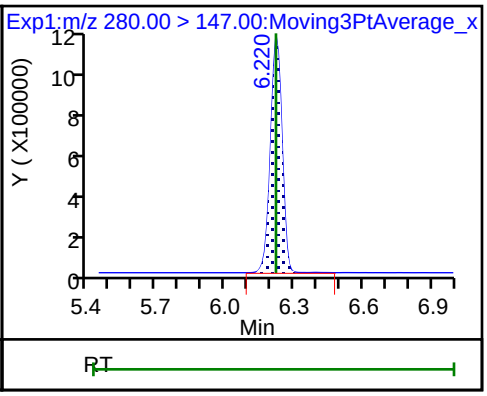
30 PFPeS



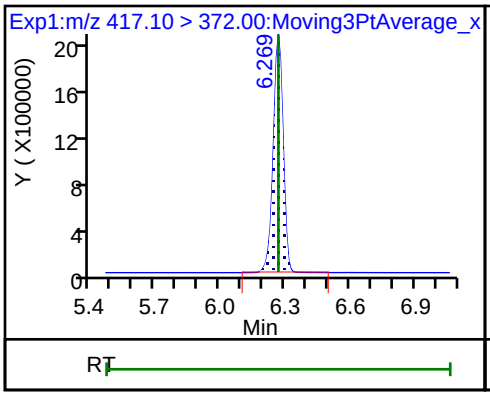
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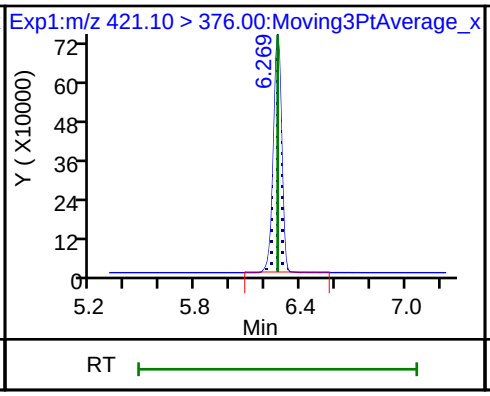
33 BTS



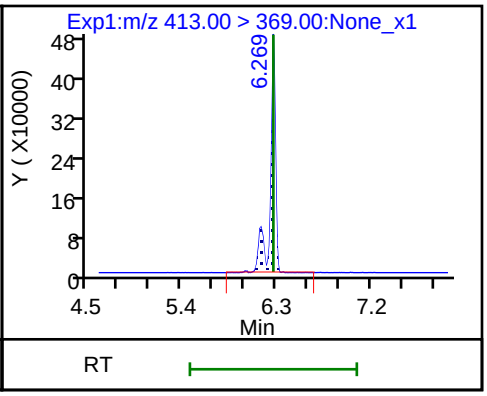
* 34 13C4 PFOA



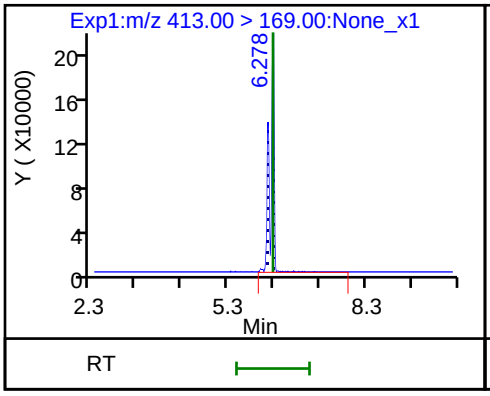
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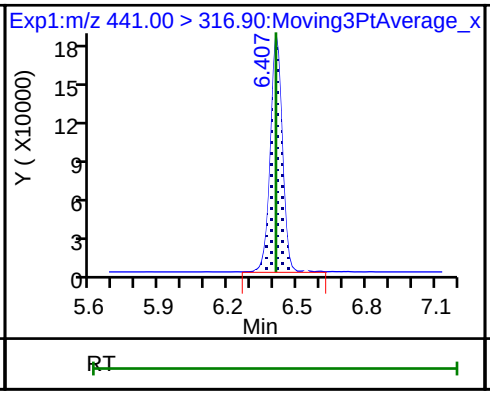
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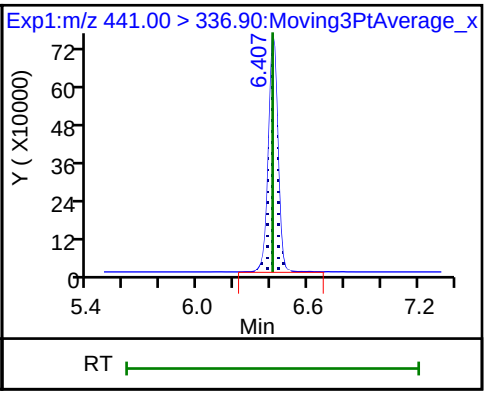
36 PFOA



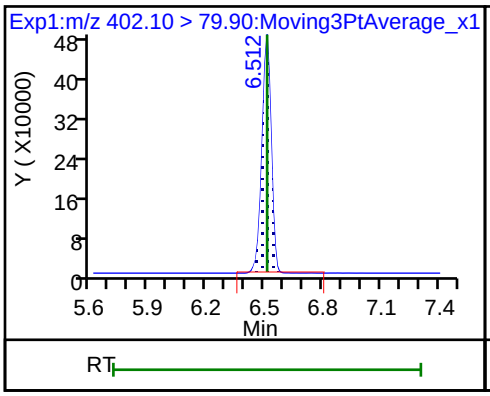
37 7:3 FTCA



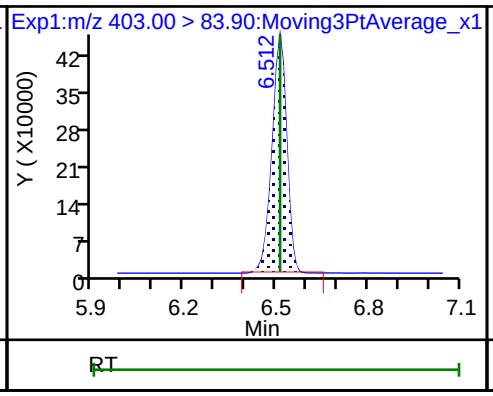
37 7:3 FTCA



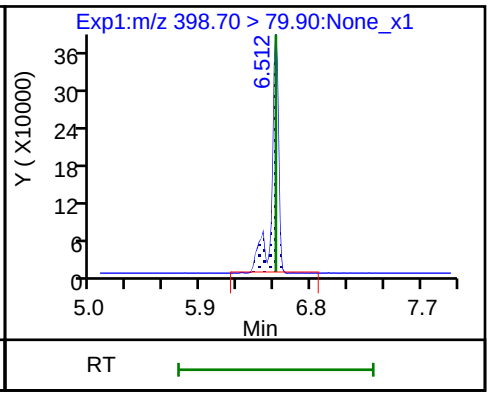
D 38 13C3 PFHxS



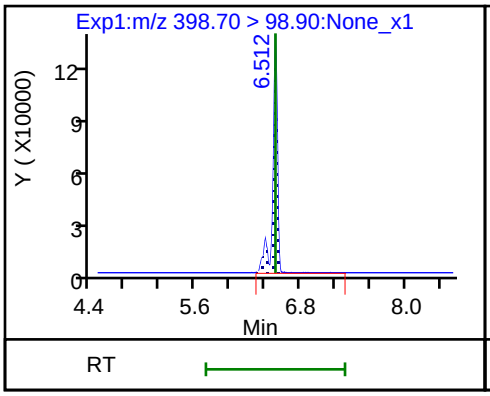
* 39 18O2 PFHxS



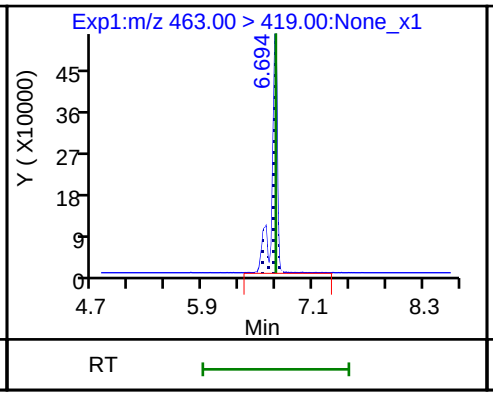
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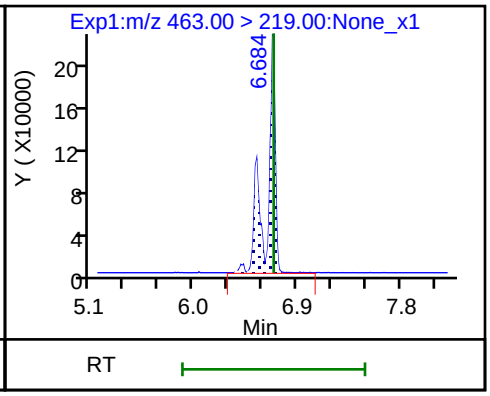
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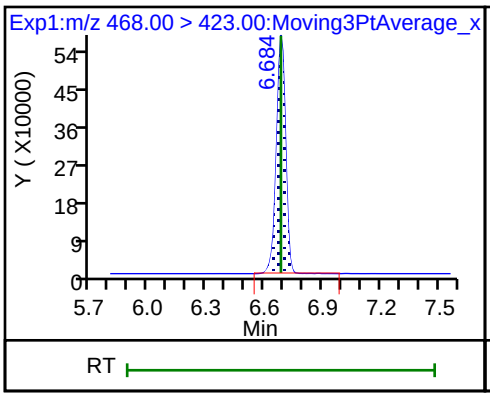
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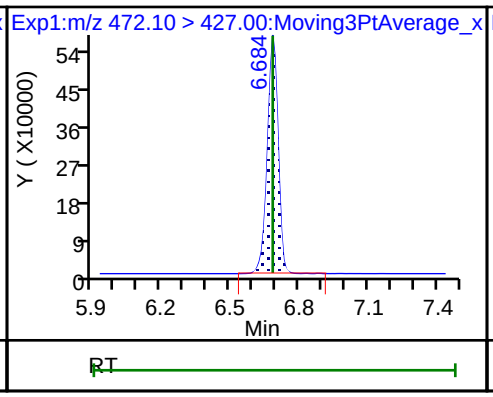
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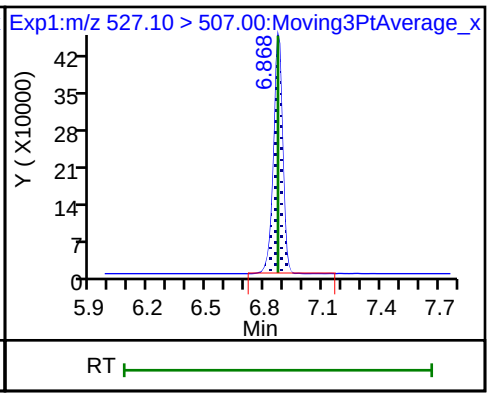
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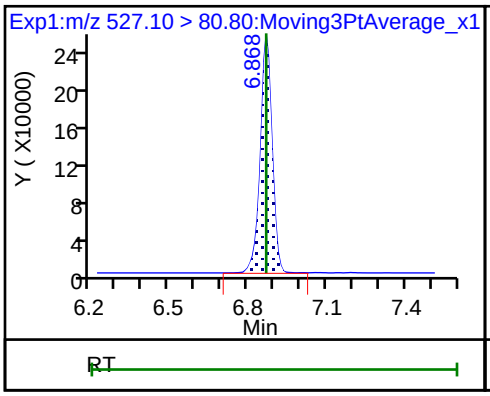
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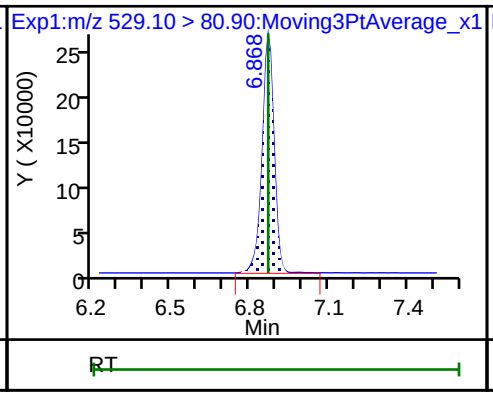
45 8:2FTS



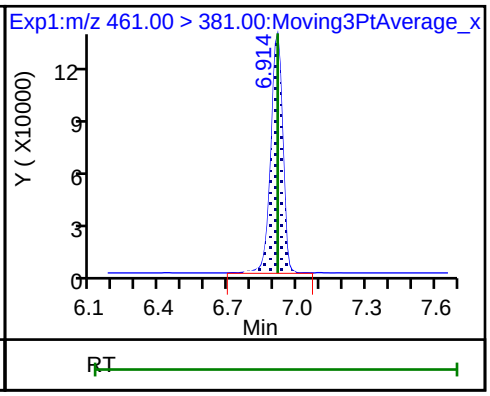
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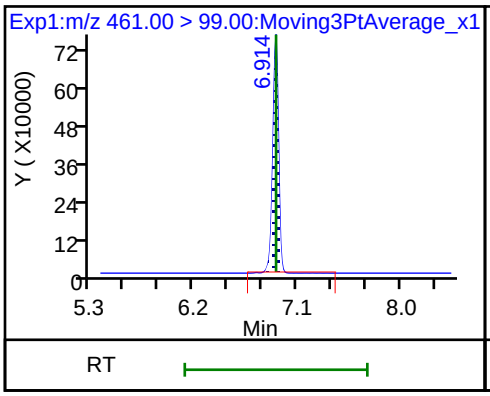
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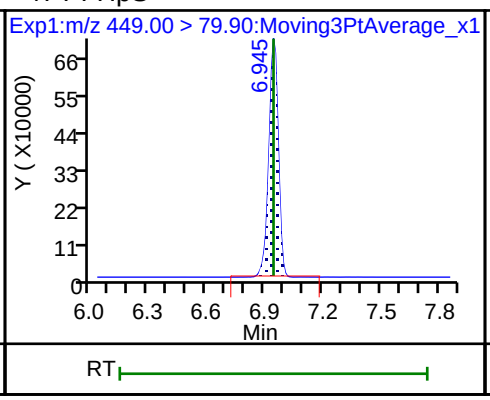
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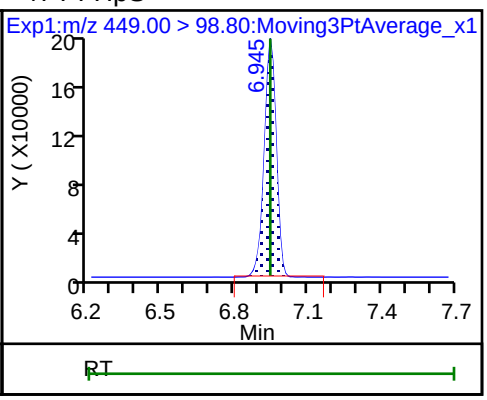
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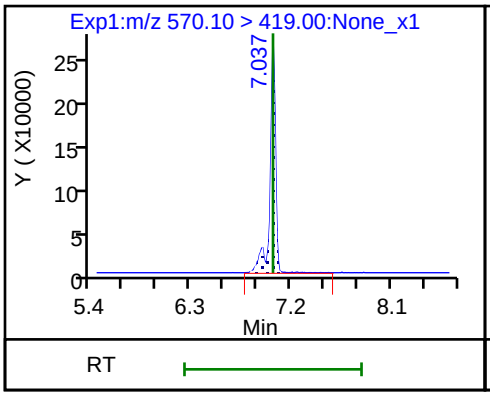
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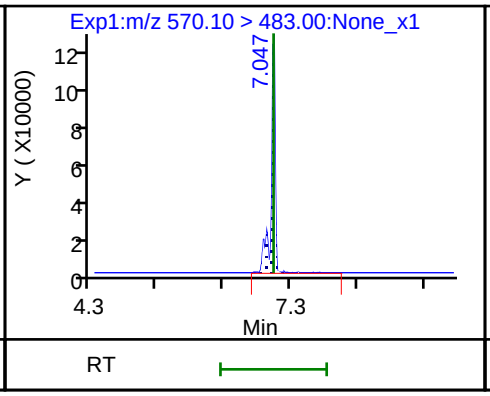
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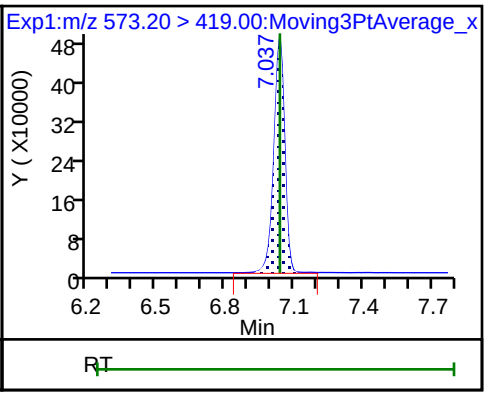
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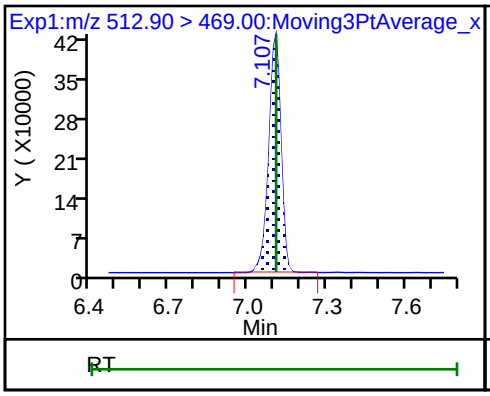
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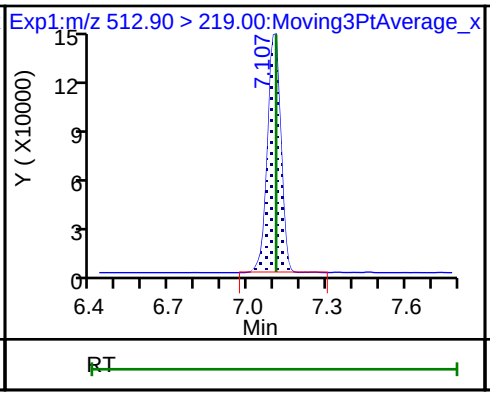
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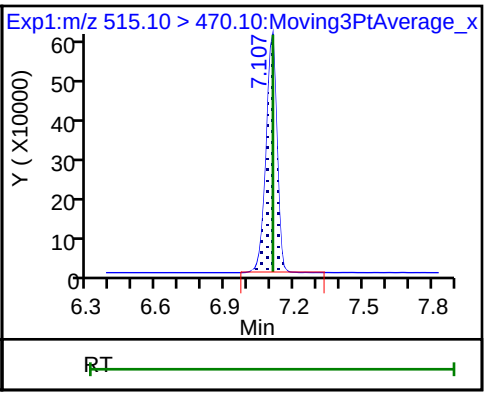
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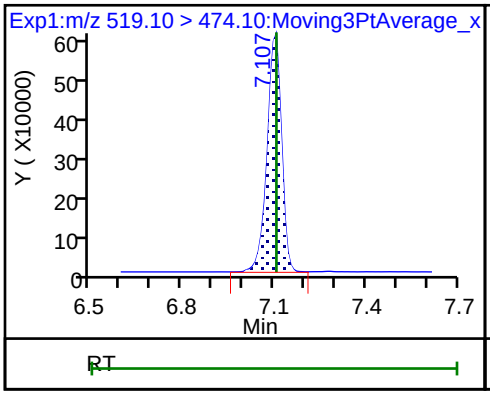
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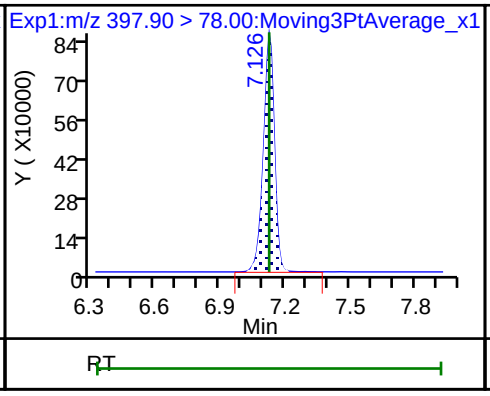
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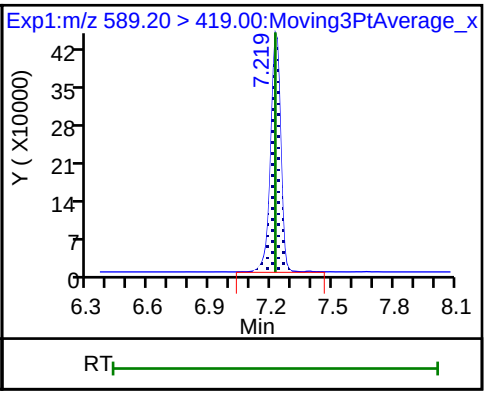
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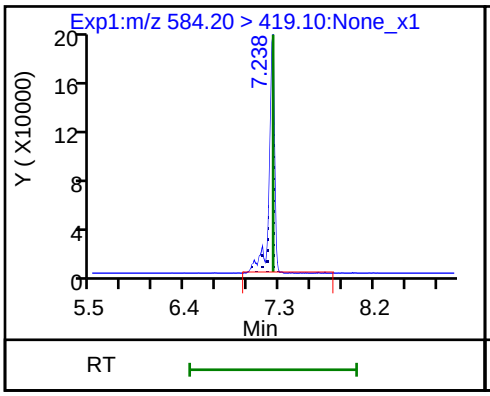
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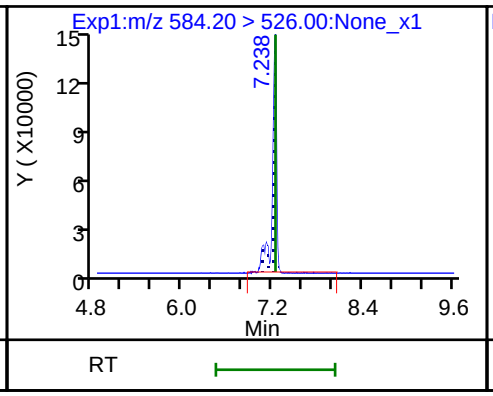
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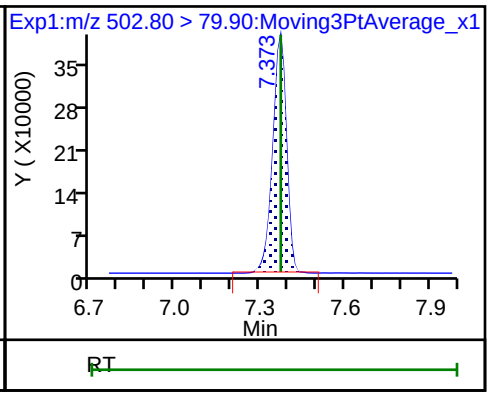
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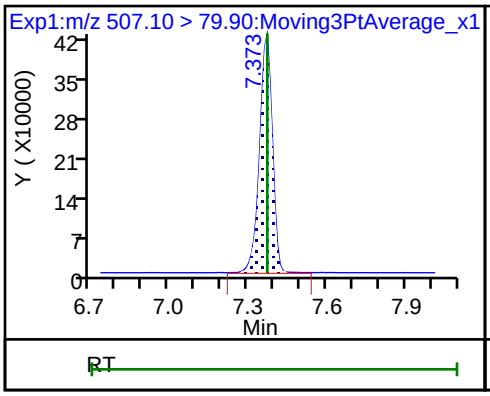
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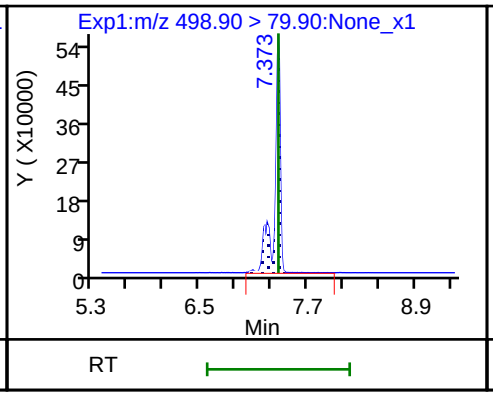
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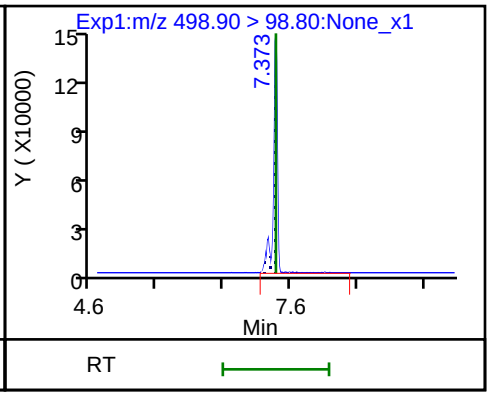
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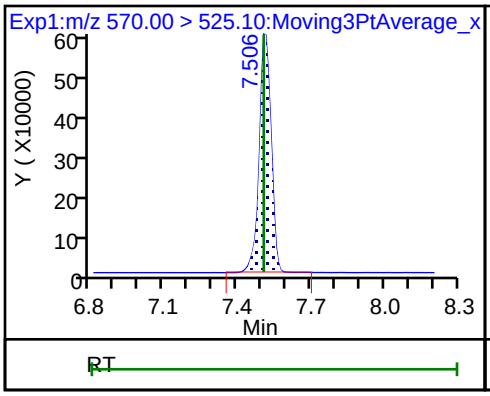
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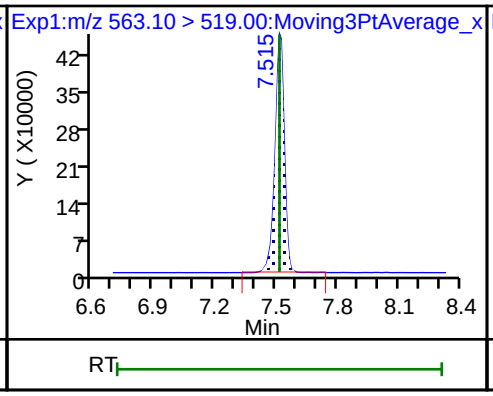
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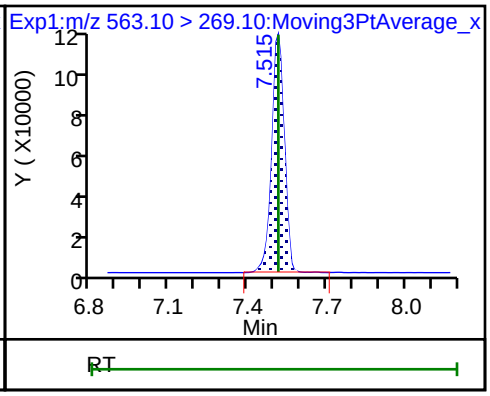
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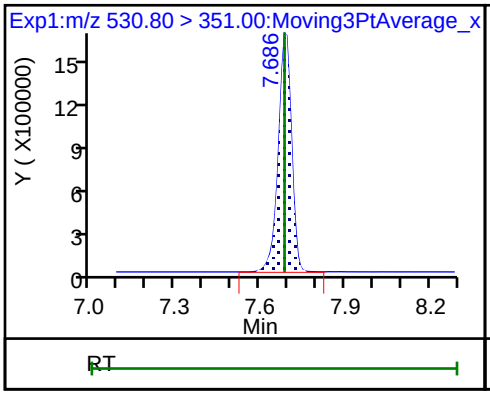
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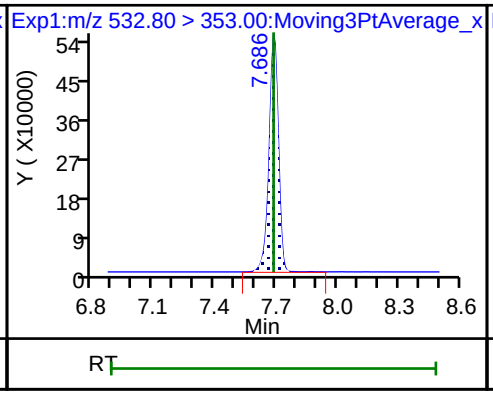
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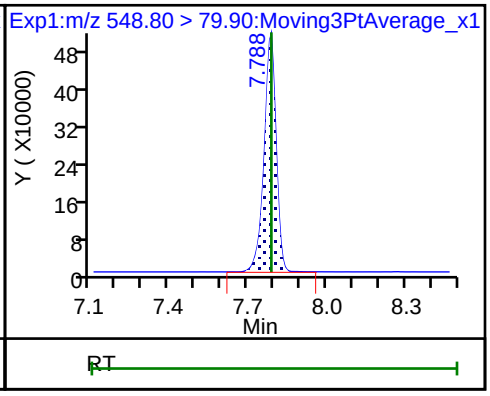
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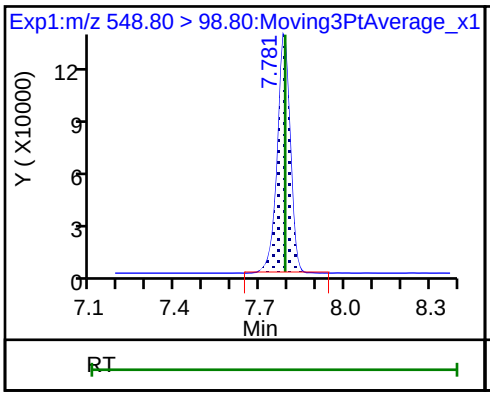
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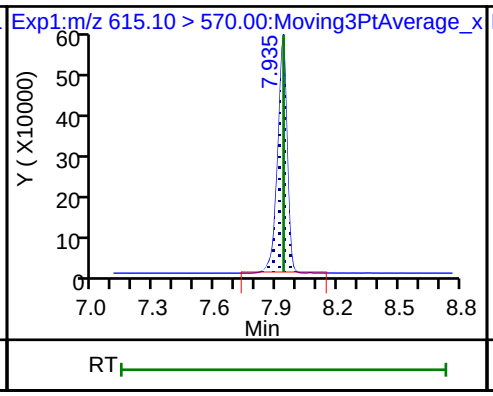
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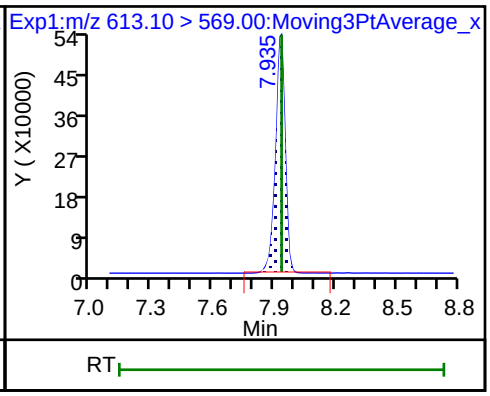
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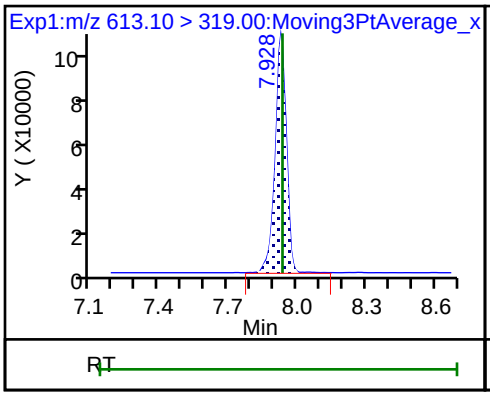
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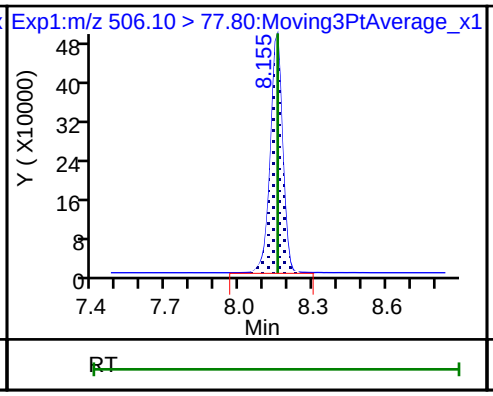
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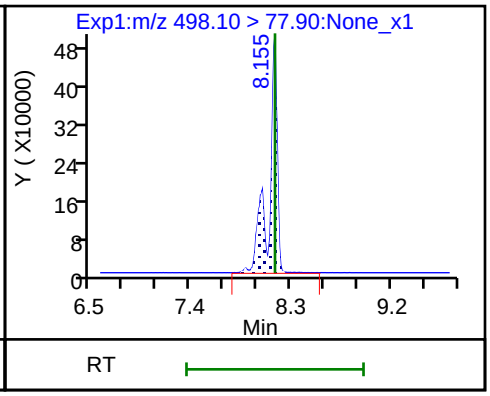
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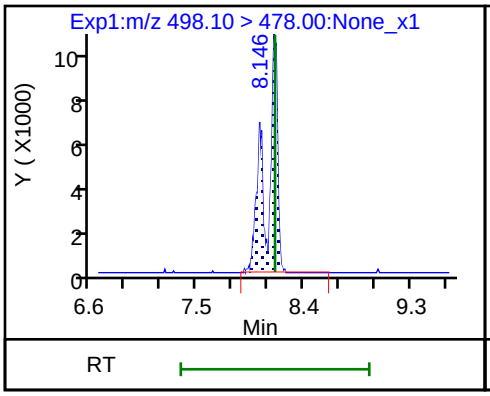
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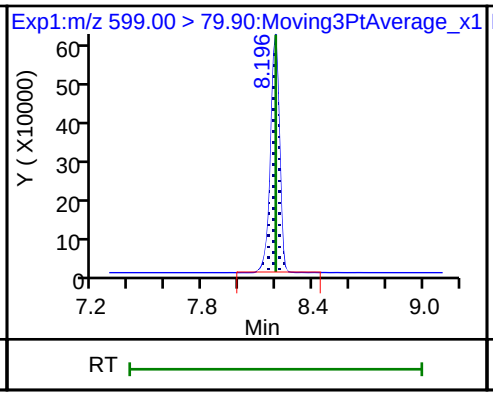
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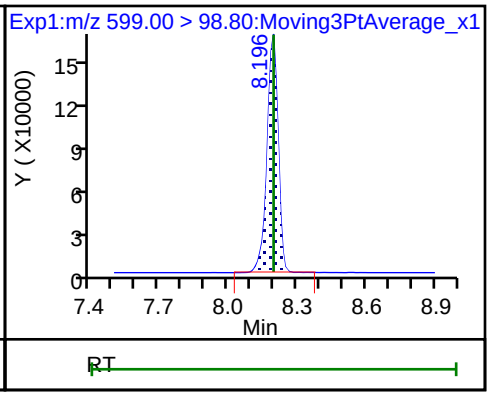
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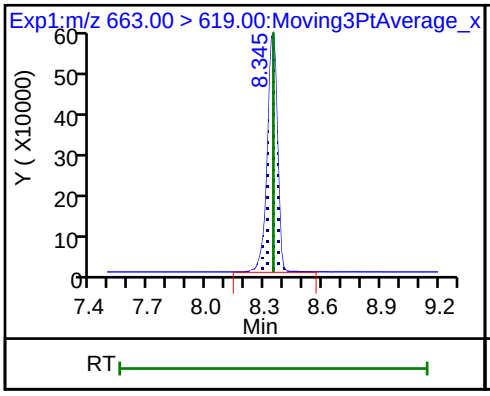
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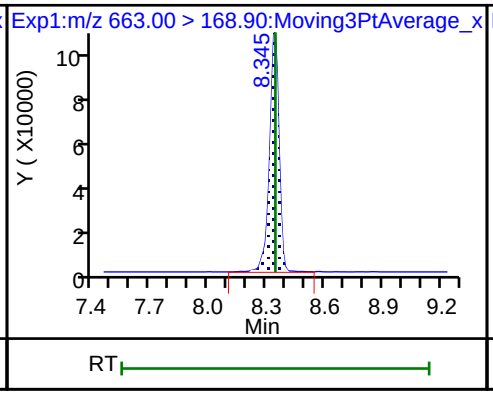
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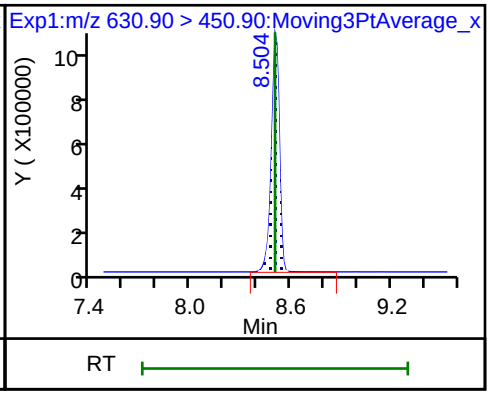
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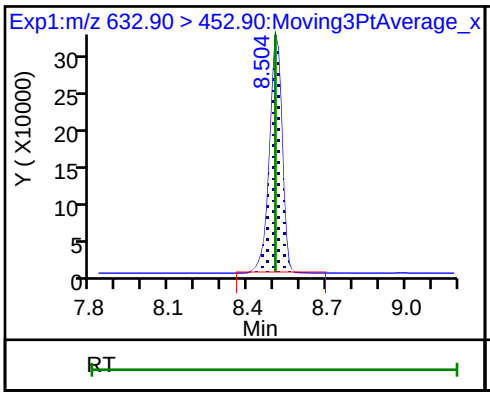
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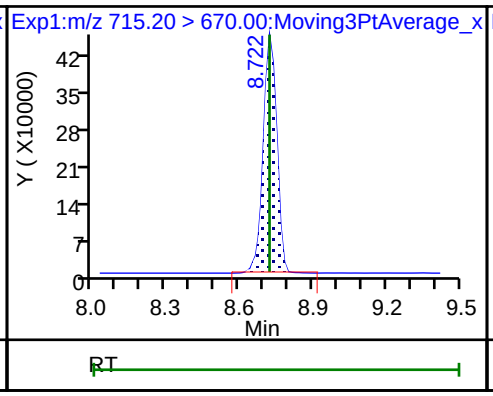
68 11ClFOS



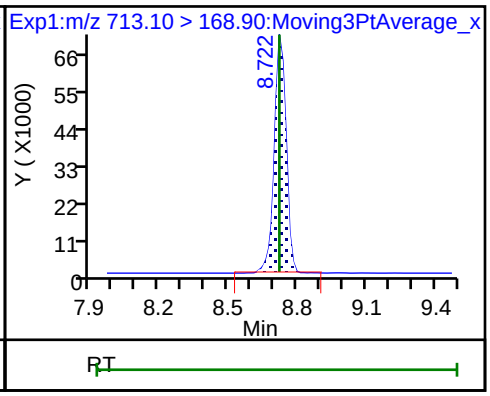
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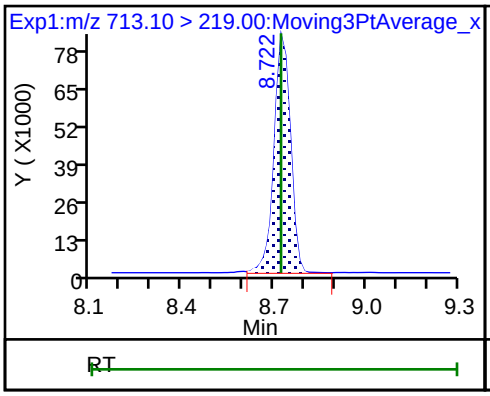
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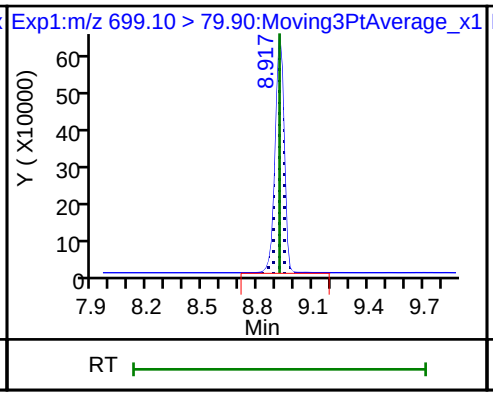
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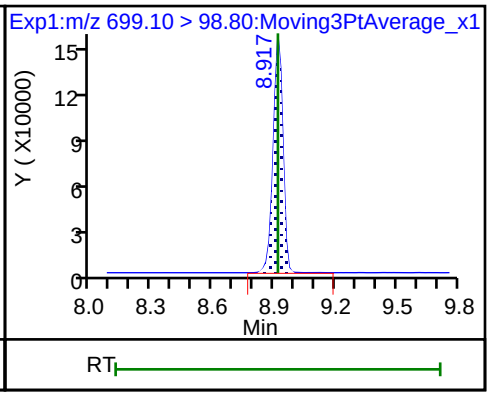
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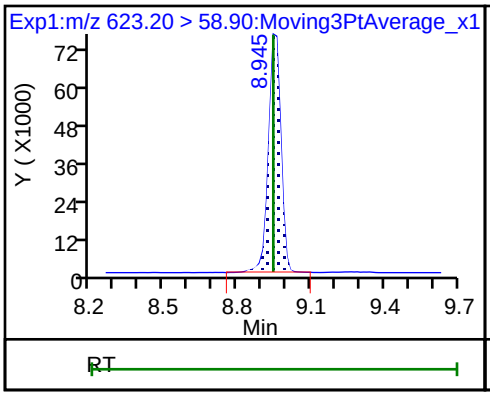
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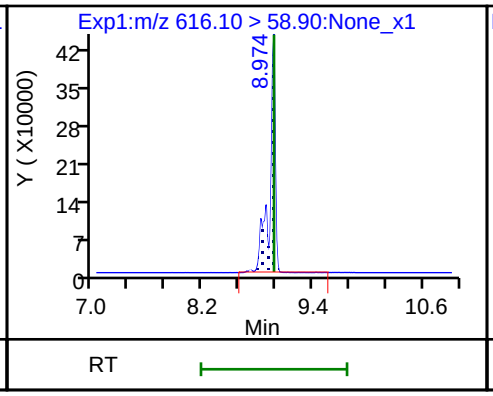
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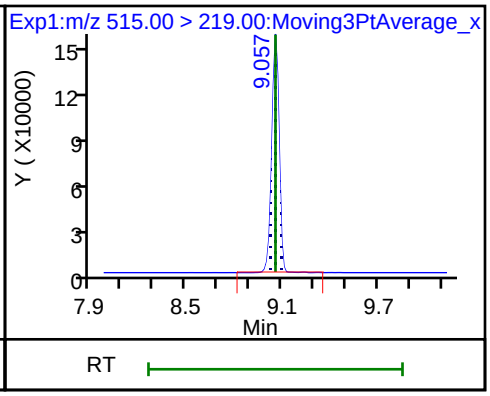
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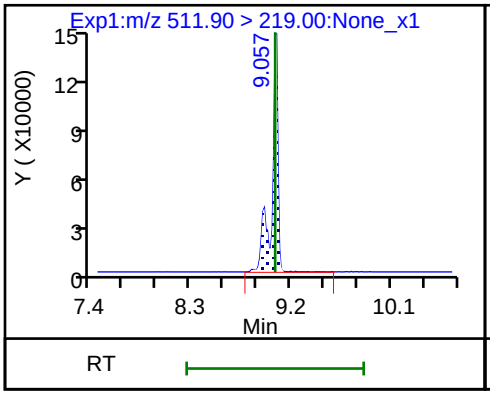
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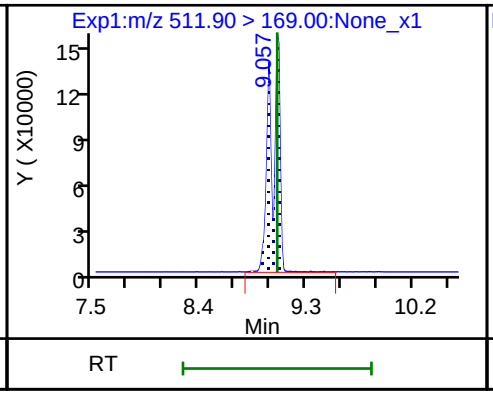
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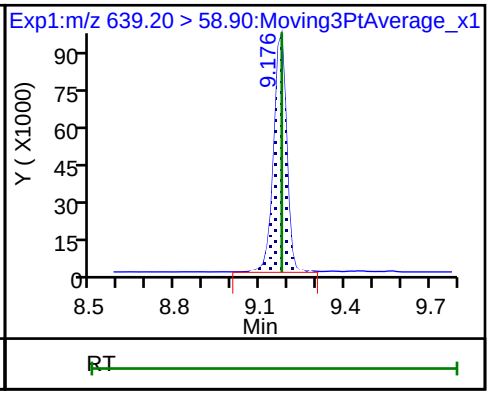
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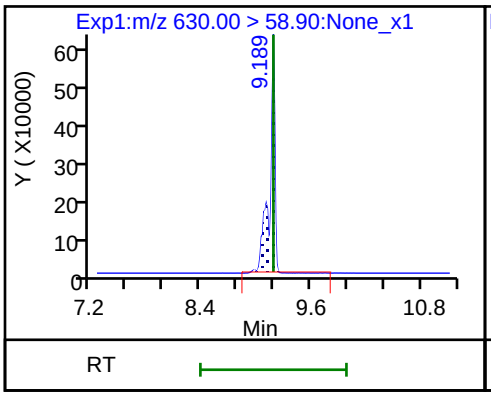
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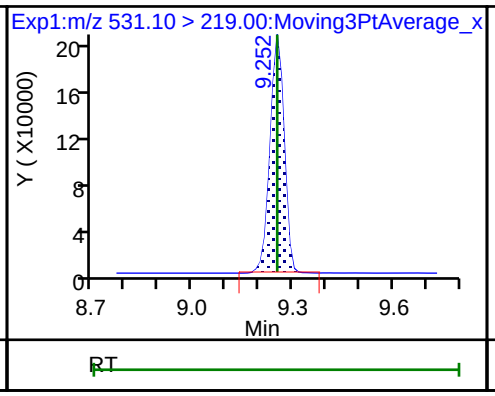
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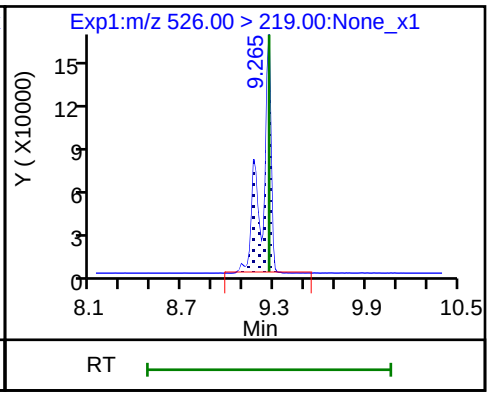
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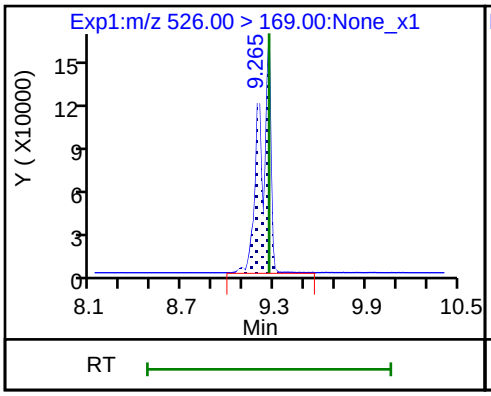
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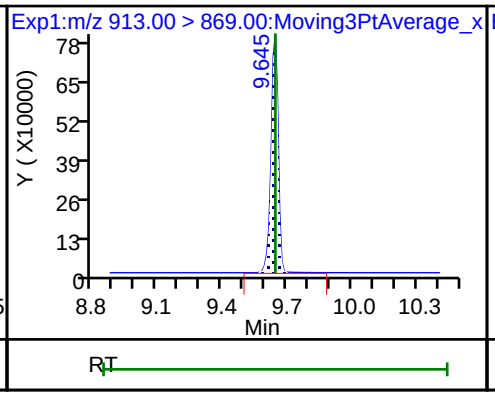
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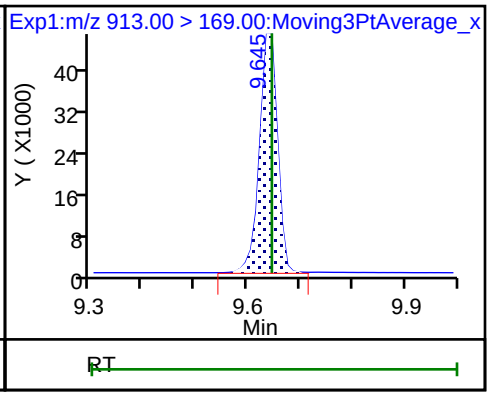
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

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Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 16-Feb-2026 21:30:02 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 6
Misc. Info.: Plate: 1 Rack: 1 410-0175852-006
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:21:54 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:41:43
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.158	2.133	0.025	1.000	11674387	24.4		97.4	43845	
D 1 13C3PFPrA										
166.00 > 121.00	2.158	2.133	0.025	0.501	1047881	2.01		101	2055	
3 PFBA										
212.80 > 168.90	4.301	4.302	-0.001	0.998	6593867	9.77		97.7	56413	
D 4 13C4-PFBA										
216.80 > 171.90	4.308	4.309	-0.001	1.000	1473528	1.99		99.7	8030	
* 5 13C3PFBA										
216.00 > 172.00	4.308	4.309	-0.001		1502676	2.00			3298	
6 PFMPA										
229.00 > 84.90	4.621	4.622	-0.001	0.933	3663876	4.73		94.7	4718	
7 3:3 FTCA										
241.00 > 177.00	4.630	4.631	-0.001	0.935	395304	9.95	Target=1.16	99.5	1391	
241.00 > 117.00	4.630	4.631	-0.001	0.935	351547		1.12(0.58-1.73)	99.5	1873	
D 8 13C5 PFPeA										
268.30 > 223.00	4.954	4.959	-0.005	0.914	1538909	1.99		99.4	6746	
9 PFPA										
263.00 > 219.00	4.954	4.959	-0.005	1.000	4305543	4.87		97.4	6739	
10 PFMBA										
279.00 > 85.10	5.102	5.107	-0.005	1.030	5224161	5.04		101	6855	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.228	5.235	-0.007	0.804	879102	4.31		92.0	3183	
12 4:2FTS										
327.10 > 307.00	5.228	5.235	-0.007	1.000	3305106	9.60	Target=1.70	102	7309	
327.10 > 80.90	5.228	5.235	-0.007	1.000	1874418		1.76(0.85-2.54)	102	1973	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.368	5.386	-0.018	0.991	1215152	4.61	Target=1.61	92.2	4319	
295.00 > 84.90	5.368	5.386	-0.018	0.991	744252		1.63(0.80-2.41)	92.2	3847	
* 16 13C2 PFHxA										
315.10 > 270.00	5.419	5.424	-0.005		4364937	5.00			6311	
D 15 13C5 PFHxA										
318.00 > 273.00	5.419	5.424	-0.005	1.000	1923314	2.02		101	3754	
17 PFHxA										
313.00 > 269.00	5.419	5.424	-0.005	1.000	3507185	4.89	Target=9.95	97.8	7261	
313.00 > 118.90	5.419	5.424	-0.005	1.000	377695		9.29(4.98-14.93)	97.8	2476	
18 5:3 FTCA										
341.00 > 237.10	5.497	5.503	-0.006	1.014	2534146	26.5	Target=0.62	106	4295	
341.00 > 217.00	5.497	5.503	-0.006	1.014	3829241		0.66(0.31-0.94)	106	1617	
D 19 13C3 PFBS										
302.10 > 79.90	5.553	5.561	-0.008	0.854	1921355	1.97		106	6081	
20 PFBS										
298.70 > 79.90	5.553	5.561	-0.008	1.000	3699583	4.02	Target=3.17	90.5	7578	
298.70 > 98.80	5.553	5.561	-0.008	1.000	1203075		3.08(1.59-4.76)	90.5	3933	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.600	5.607	-0.007	1.033	1258717	2.03		102	2253	
23 HFPO-DA										
284.90 > 168.90	5.600	5.607	-0.007	1.000	2467529	3.62	Target=2.55	96.5	5168	
284.90 > 184.90	5.600	5.607	-0.007	1.000	988870		2.50(1.27-3.82)	96.5	2656	
21 FBSA										
297.90 > 78.00	5.657	5.665	-0.008	1.019	3538538	4.83		96.6	1922	
26 PFEESA										
314.80 > 134.90	5.799	5.807	-0.008	1.070	10199920	4.38	Target=12.76	98.1	9639	
314.80 > 82.90	5.799	5.807	-0.008	1.070	834926		12.22(6.38-19.14)	98.1	2909	
D 28 13C4 PFHpA										
367.10 > 322.00	5.844	5.851	-0.007	1.079	1849354	1.99		99.4	4212	
27 PFHpA										
363.10 > 319.00	5.844	5.851	-0.007	1.000	3071522	4.73	Target=1.64	94.7	5111	
363.10 > 169.00	5.844	5.851	-0.007	1.000	1897017		1.62(0.82-2.46)	94.7	3288	
29 ADONA										
376.90 > 250.90	6.001	6.007	-0.006	1.072	10179310	4.70	Target=2.22	99.4	11050	
376.90 > 84.80	6.001	6.007	-0.006	1.072	4767858		2.13(1.11-3.33)	99.4	5767	
30 PFPeS										
349.10 > 79.90	6.042	6.049	-0.007	0.929	4618897	4.65	Target=3.23	99.0	7844	
349.10 > 98.90	6.042	6.049	-0.007	0.929	1488553		3.10(1.61-4.84)	99.0	3720	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.042	6.059	-0.017	0.929	713500	4.21		88.4	3310	
31 6:2FTS										
427.10 > 407.00	6.042	6.059	-0.017	1.000	2708074	9.78	Target=1.59	103	19197	
427.10 > 80.90	6.042	6.059	-0.017	1.000	1678378		1.61(0.79-2.38)	103	3771	
33 BTS										
280.00 > 147.00	6.214	6.220	-0.006	0.955	7646546	4.73		96.5	4243	
* 34 13C4 PFOA										
417.10 > 372.00	6.263	6.269	-0.006		6060262	5.00			3575	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.263	6.269	-0.006	1.000	2403075	2.07		103	5390	
36 PFOA										
413.00 > 369.00	6.263	6.269	-0.006	1.000	3020469	4.77	Target=1.52	95.5	2786	
413.00 > 169.00	6.263	6.269	-0.006	1.000	2007744		1.50(0.76-2.27)	95.5	2431	
37 7:3 FTCA										
441.00 > 316.90	6.400	6.407	-0.007	1.181	1241997	25.5	Target=0.24	102	2533	
441.00 > 336.90	6.400	6.407	-0.007	1.181	4971522		0.25(0.12-0.36)	102	5481	
* 39 18O2 PFHxS										
403.00 > 83.90	6.506	6.512	-0.006		1430968	1.90			4476	
40 PFHxS										
398.70 > 79.90	6.506	6.512	-0.006	1.000	2797950	4.20	Target=3.27	92.1	4340	
398.70 > 98.90	6.506	6.512	-0.006	1.000	877041		3.19(1.63-4.90)	92.1	2101	
D 38 13C3 PFHxS										
402.10 > 79.90	6.506	6.512	-0.006	1.000	1662256	2.02		106	5413	
* 42 13C5 PFNA										
468.00 > 423.00	6.679	6.684	-0.005		1815850	2.00			5097	
D 41 13C9 PFNA										
472.10 > 427.00	6.679	6.684	-0.005	1.000	1816407	2.00		100	3905	
43 PFNA										
463.00 > 419.00	6.679	6.694	-0.015	1.000	3917159	4.74	Target=2.14	94.9	4586	
463.00 > 219.00	6.679	6.694	-0.015	1.000	1907061		2.05(1.07-3.21)	94.9	3682	
45 8:2FTS										
527.10 > 507.00	6.865	6.868	-0.003	1.001	2584967	8.44	Target=1.87	87.9	2410	
527.10 > 80.80	6.865	6.868	-0.003	1.001	1439464		1.80(0.94-2.81)	87.9	3026	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.856	6.868	-0.012	1.054	879695	5.04		105	3368	
46 PFECHS										
461.00 > 381.00	6.911	6.914	-0.003	1.062	914369	4.56	Target=0.17	98.8	2384	
461.00 > 99.00	6.911	6.914	-0.003	1.062	5228012		0.17(0.09-0.26)	98.8	2598	
47 PFHpS										
449.00 > 79.90	6.942	6.945	-0.003	0.942	4447380	4.50	Target=3.71	94.4	10087	
449.00 > 98.80	6.942	6.945	-0.003	0.942	1232972		3.61(1.86-5.57)	94.4	6543	
50 NMeFOSAA										
570.10 > 419.00	7.034	7.037	-0.003	1.000	1621815	5.17	Target=1.66	103	2534	
570.10 > 483.00	7.034	7.037	-0.003	1.000	933046		1.74(0.83-2.49)	103	1207	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.034	7.037	-0.003	0.954	1596011	4.74		94.9	3145	
* 51 13C2 PFDA										
515.10 > 470.10	7.093	7.107	-0.013		1845788	2.00			5651	
D 52 13C6 PFDA										
519.10 > 474.10	7.093	7.107	-0.013	1.000	1792704	1.95		97.6	3108	
53 PFDA										
512.90 > 469.00	7.093	7.107	-0.013	1.000	2621628	5.26	Target=2.88	105	4779	
512.90 > 219.00	7.093	7.107	-0.013	1.000	877410		2.99(1.44-4.31)	105	3401	
48 FHxSA										
397.90 > 78.00	7.122	7.126	-0.004	1.095	5676365	4.86		97.3	4910	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.216	7.219	-0.003	0.979	1500280	4.87		97.4	2847	
55 NEtFOSAA										
584.20 > 419.10	7.216	7.238	-0.022	1.000	1282368	4.85	Target=1.34	96.9	2339	
584.20 > 526.00	7.225	7.238	-0.013	1.001	965411		1.33(0.67-2.01)	96.9	1732	
* 57 13C4 PFOS										
502.80 > 79.90	7.370	7.373	-0.003		1347693	1.92			3980	
D 56 13C8 PFOS										
507.10 > 79.90	7.370	7.373	-0.003	1.000	1506071	1.93		101	5310	
58 PFOS										
498.90 > 79.90	7.370	7.373	-0.003	1.000	4614260	4.26	Target=4.60	91.5	6198	
498.90 > 98.80	7.370	7.373	-0.003	1.000	1039539		4.44(2.30-6.89)	91.5	1622	
D 59 13C7 PFUnA										
570.00 > 525.10	7.513	7.506	0.007	1.059	1891648	1.97		98.6	6620	
60 PFUnA										
563.10 > 519.00	7.513	7.515	-0.002	1.000	2515110	4.89	Target=3.77	97.7	4661	
563.10 > 269.10	7.513	7.515	-0.002	1.000	671271		3.75(1.88-5.65)	97.7	3288	
61 9ClFOS										
530.80 > 351.00	7.684	7.686	-0.002	1.043	9663966	4.32	Target=3.08	92.6	7015	
532.80 > 353.00	7.684	7.686	-0.002	1.043	3218831		3.00(1.54-4.61)	92.6	4843	
62 PFNS										
548.80 > 79.90	7.779	7.788	-0.009	1.056	3012467	4.45	Target=3.66	92.6	9758	
548.80 > 98.80	7.779	7.788	-0.009	1.056	810456		3.72(1.83-5.49)	92.6	3068	
D 81 PFDoA										
615.10 > 570.00	7.926	7.935	-0.009	1.117	1911121	1.99		99.6	3334	
63 PFDoA										
613.10 > 569.00	7.926	7.935	-0.009		3255368	4.94	Target=4.34	98.9	4800	
613.10 > 319.00	7.926	7.935	-0.009		803459		4.05(2.17-6.51)	98.9	5522	
D 65 13C8 FOSA										
506.10 > 77.80	8.143	8.155	-0.012	1.105	1619947	1.94		97.0	3867	
64 PFOSA										
498.10 > 77.90	8.143	8.155	-0.012	1.000	4435862	4.82	Target=44.41	96.4	5353	
498.10 > 478.00	8.152	8.155	-0.003	1.001	106476		41.66(22.20-66.61)	96.4	279	
66 PFDS										
599.00 > 79.90	8.183	8.196	-0.013	1.110	3912046	4.61	Target=3.83	95.7	8448	
599.00 > 98.80	8.183	8.196	-0.013	1.110	1051052		3.72(1.91-5.74)	95.7	5796	
67 PFTrDA										
663.00 > 619.00	8.326	8.345	-0.019	0.955	3865999	4.84	Target=5.77	96.8	7945	
663.00 > 168.90	8.326	8.345	-0.019	0.955	602691		6.41(2.88-8.65)	96.8	2573	
68 11ClFOS										
630.90 > 450.90	8.502	8.504	-0.002	1.154	6279418	4.47	Target=3.07	94.6	6885	
632.90 > 452.90	8.491	8.504	-0.013	1.152	2061153		3.05(1.54-4.61)	94.6	8364	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.720	8.722	-0.002	1.229	1847092	2.10		105	3797	
69 PFTeDA										
713.10 > 168.90	8.720	8.722	-0.002	1.000	473595	4.43	Target=0.94	88.6	2812	
713.10 > 219.00	8.720	8.722	-0.002	1.000	559128		0.85(0.47-1.41)	88.6	1101	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.915	8.917	-0.002	1.210	3974712	4.56	Target=4.11	94.0	5453	
699.10 > 98.80	8.901	8.917	-0.016	1.208	956794		4.15(2.06-6.17)	94.0	3708	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.943	8.945	-0.002	1.214	268433	4.86		97.1	789	
73 N-MeFOSE-M										
616.10 > 58.90	8.957	8.974	-0.017	1.002	3494990	24.3		97.2	3500	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.041	9.057	-0.016	1.227	503353	2.08		104	5358	
74 NMeFOSA										
511.90 > 219.00	9.055	9.057	-0.002	1.001	1081040	4.83	Target=0.68	96.6	2883	
511.90 > 169.00	9.055	9.057	-0.002	1.001	1527855		0.71(0.34-1.03)	96.6	2264	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.162	9.176	-0.014	1.243	306075	4.85		97.0	715	
77 N-EtFOSE-M										
630.00 > 58.90	9.174	9.189	-0.015	1.001	4765981	25.1		100	15675	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.238	9.252	-0.014	1.253	582881	1.97		98.6	2326	
79 N-EtFOSA-M										
526.00 > 219.00	9.250	9.265	-0.015	1.001	1241603	4.99	Target=0.87	99.8	3181	
526.00 > 169.00	9.250	9.265	-0.015	1.001	1437710		0.86(0.43-1.30)	99.8	3078	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.633	9.645	-0.012	1.105	3759335	5.66	Target=16.98	113	71688	
913.00 > 169.00	9.633	9.645	-0.012	1.105	226382		16.61(8.49-25.47)	113	10129	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL6_00037 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:21:56 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-06.d

Injection Date: 16-Feb-2026 21:30:02 Instrument ID: 30577

Lims ID: IC CAL 6

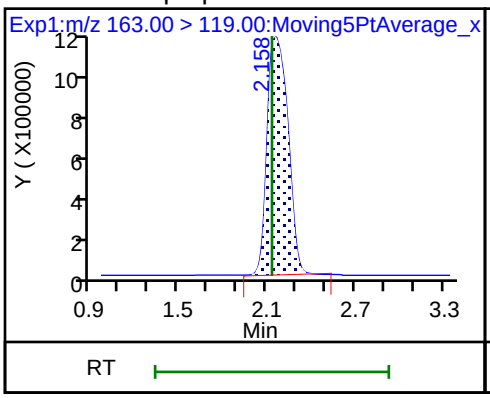
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 7 Worklist Smp#: 6

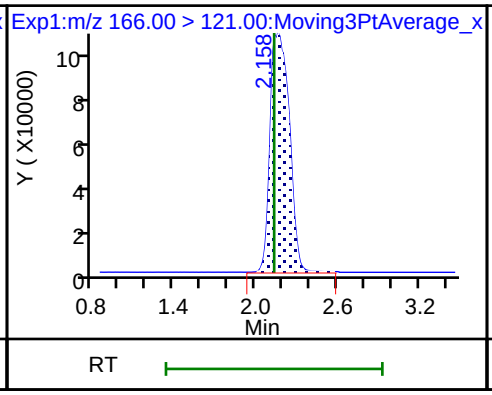
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

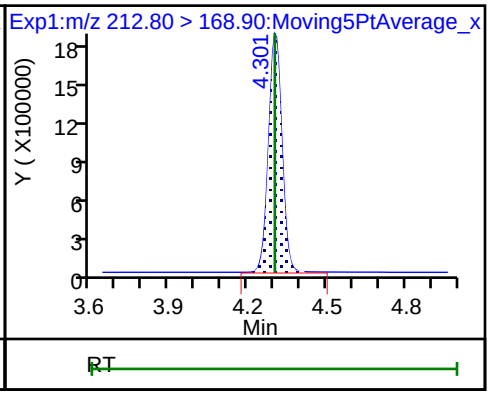
2 Perfluoropropionic acid



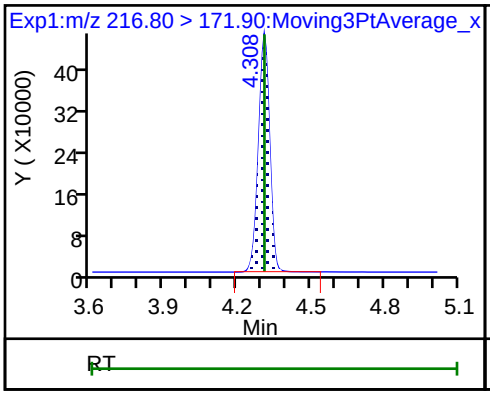
D 1 13C3PFPrA



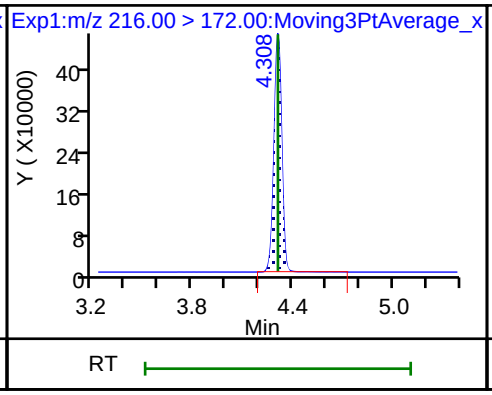
3 PFBA



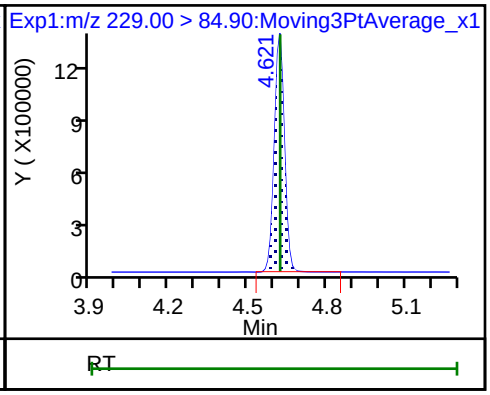
D 4 13C4-PFBA



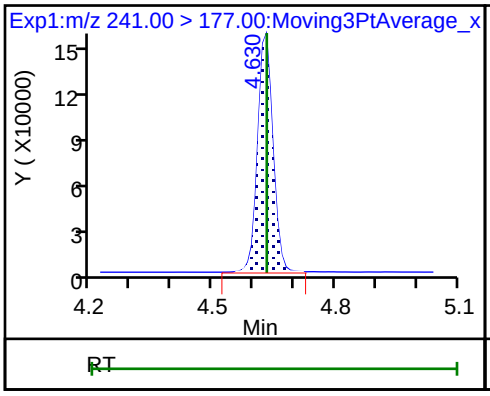
* 5 13C3PFBA



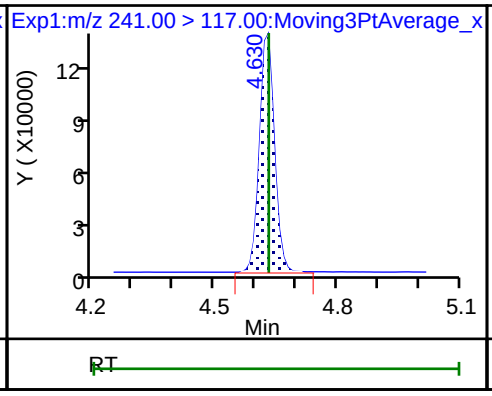
6 PFMPA



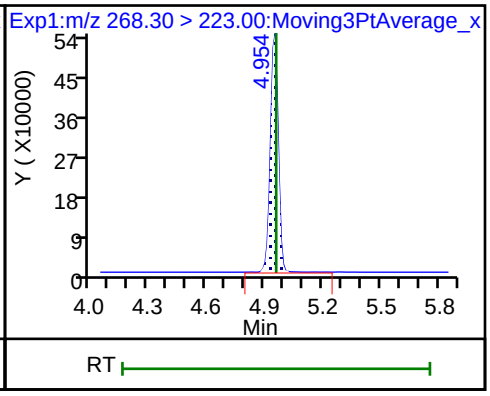
7 3:3 FTCA



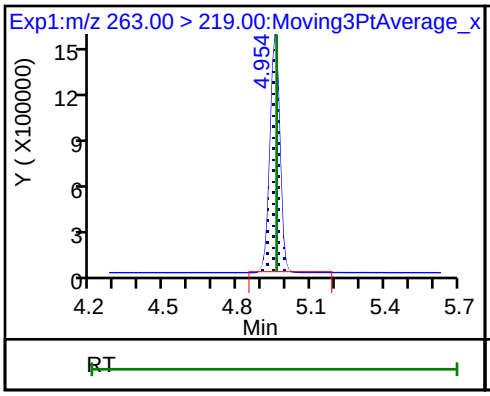
7 3:3 FTCA



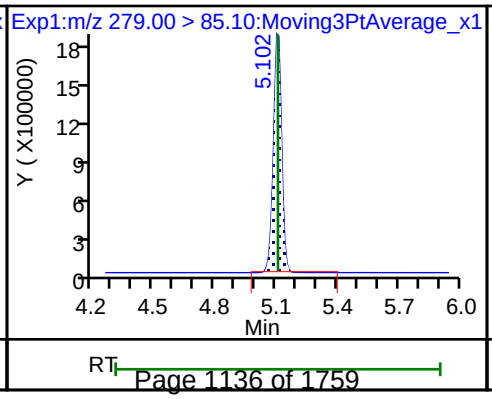
D 8 13C5 PFPeA



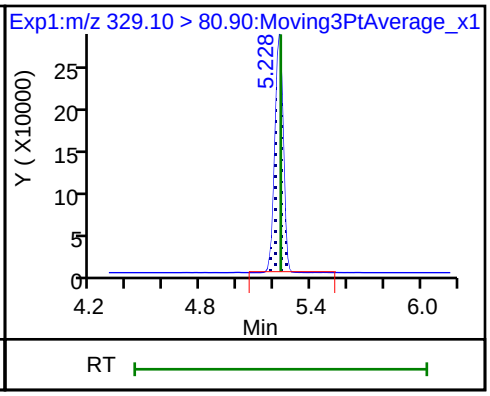
9 PFPA



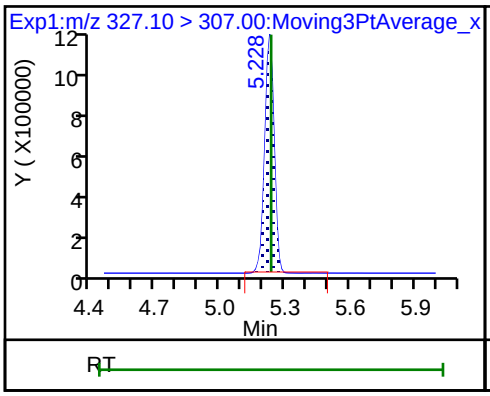
10 PFMBA



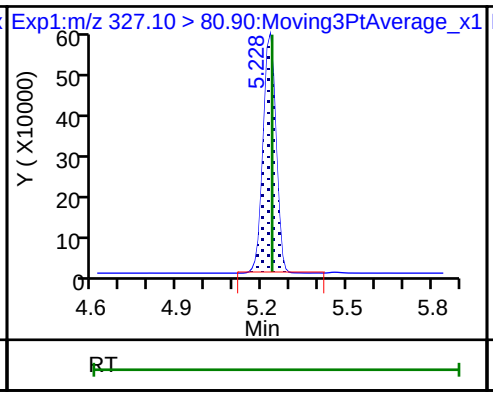
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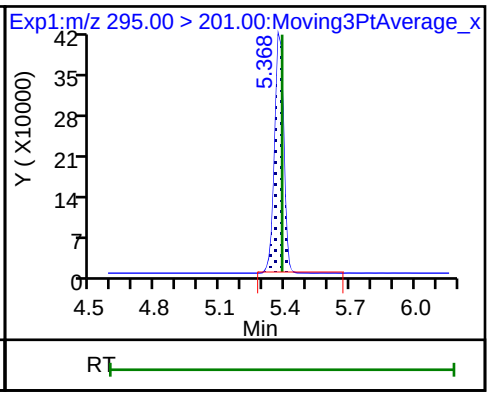
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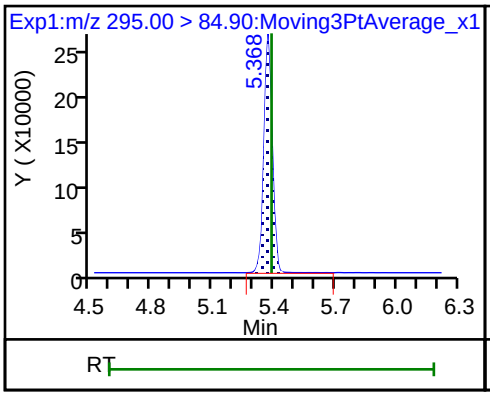
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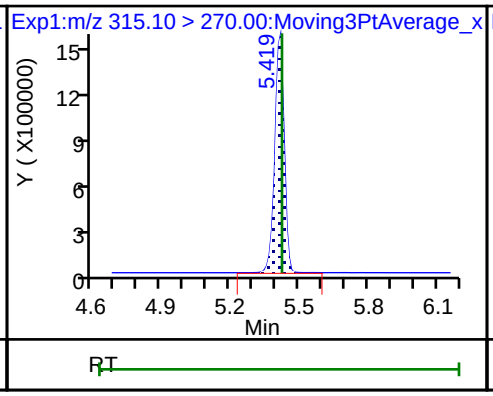
14 NFDHA



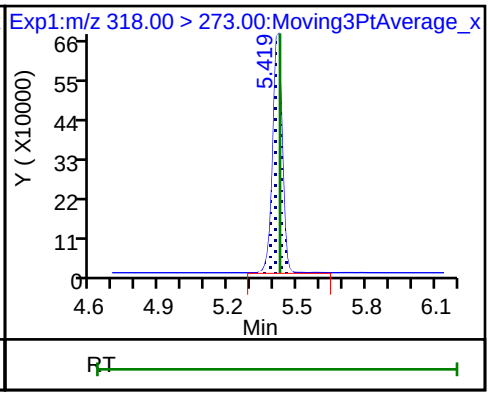
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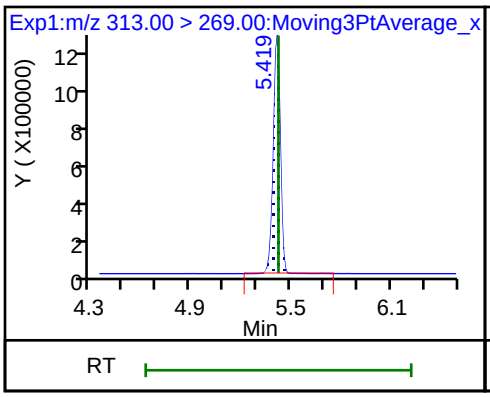
* 16 13C2 PFHxA



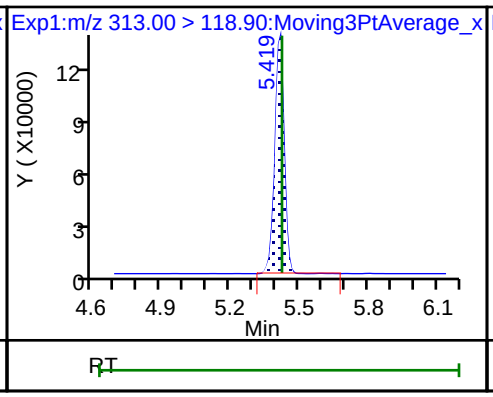
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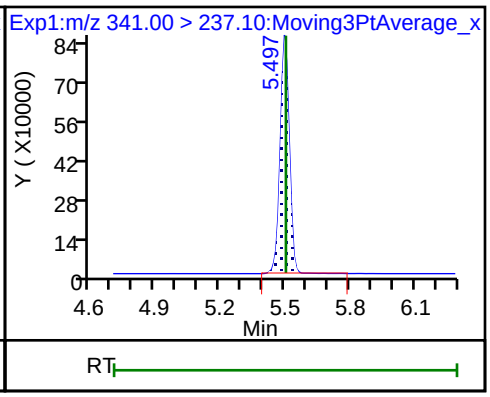
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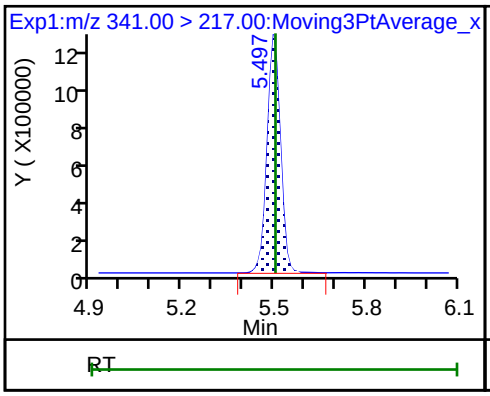
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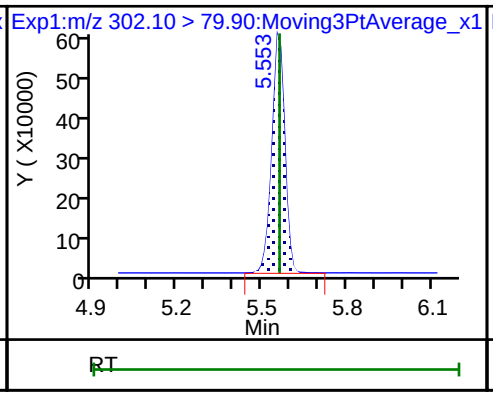
18 5:3 FTCA



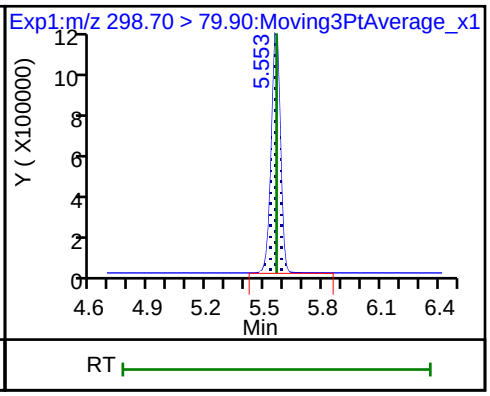
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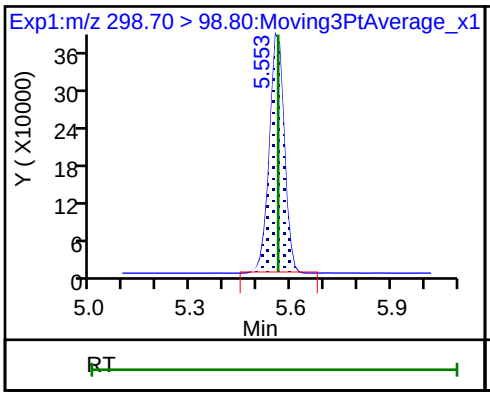
D 19 13C3 PFBS



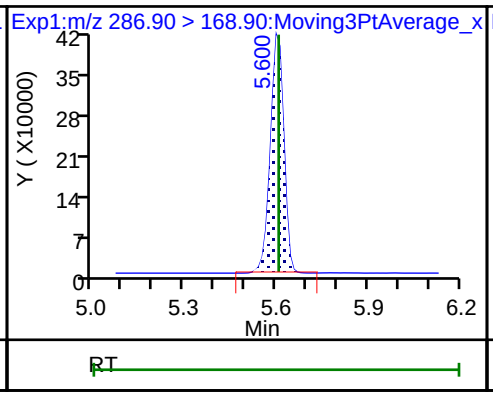
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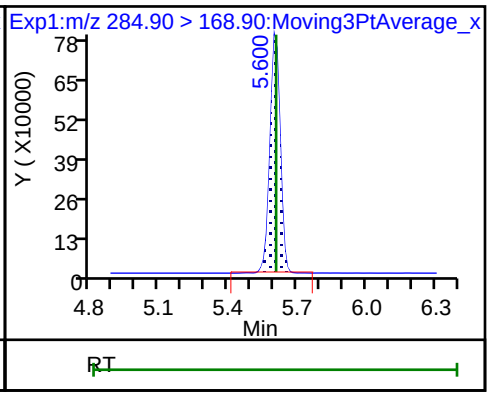
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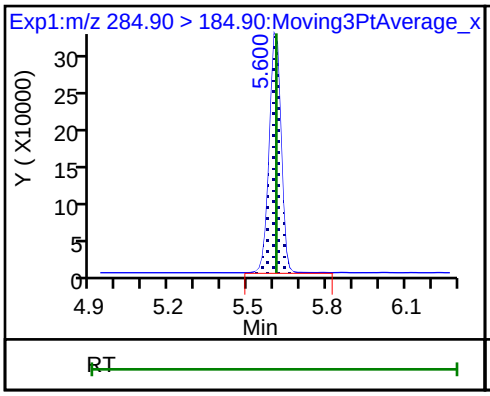
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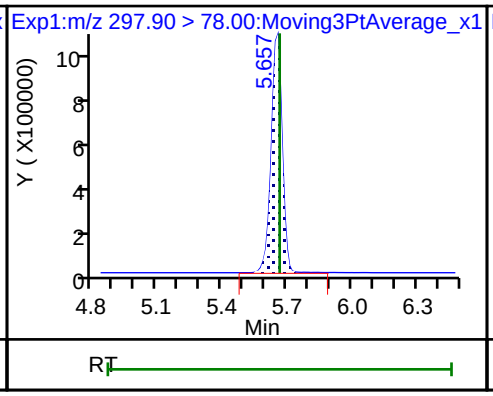
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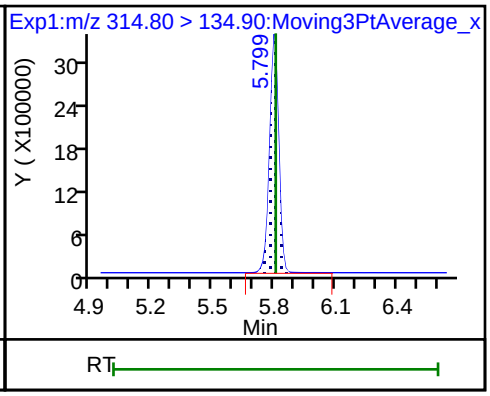
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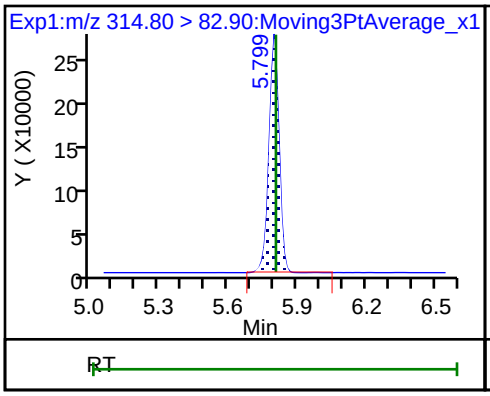
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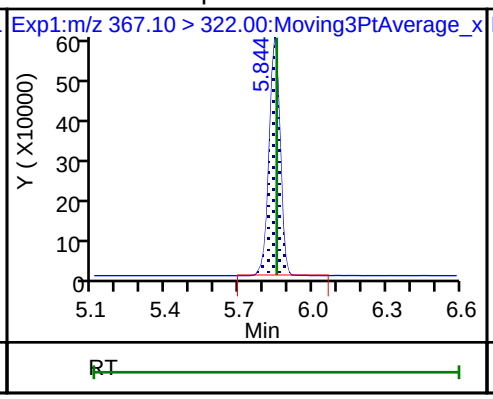
26 PFEESA



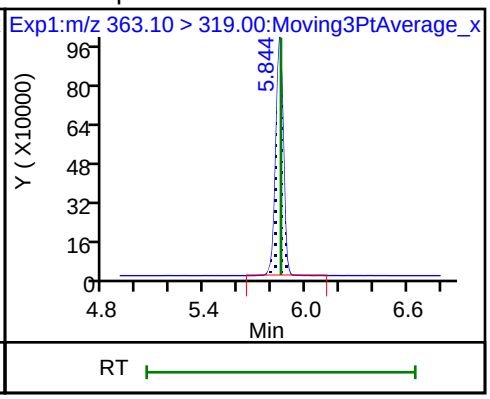
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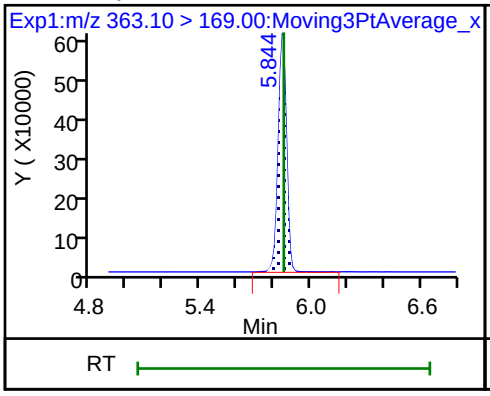
D 28 13C4 PFHpA



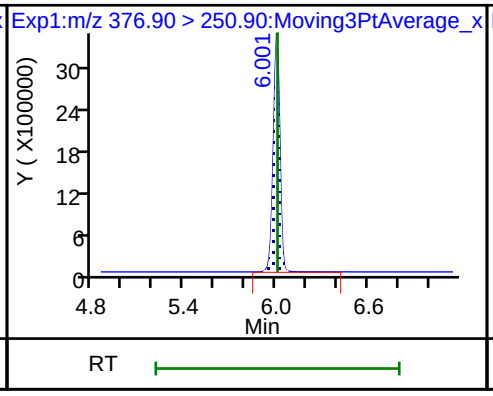
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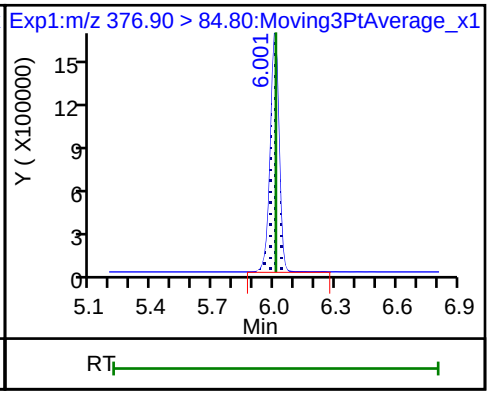
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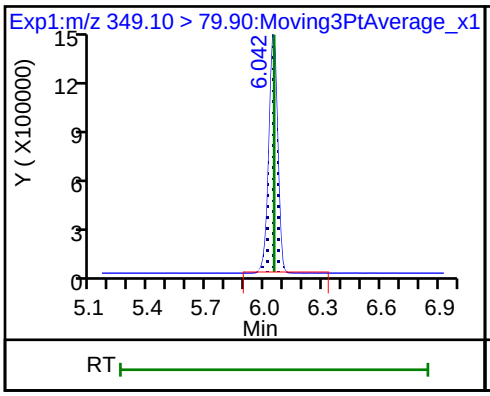
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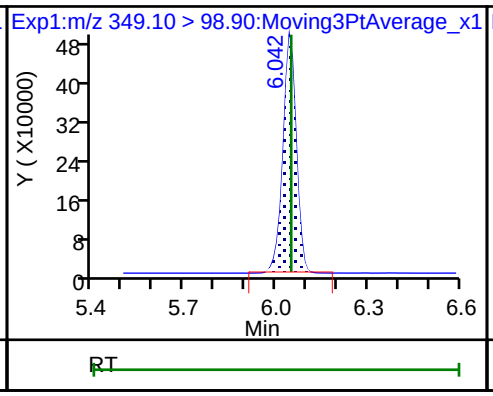
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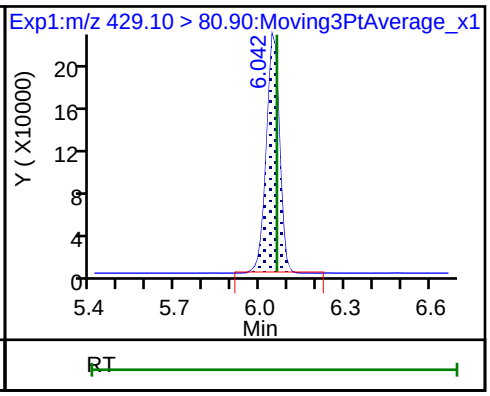
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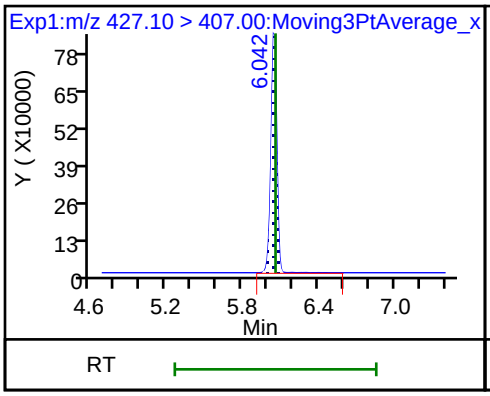
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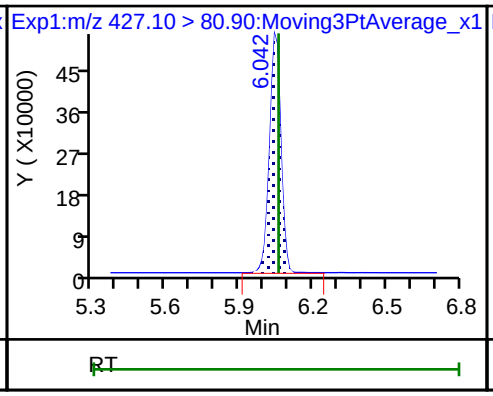
D 32 13C2-6:2FTS



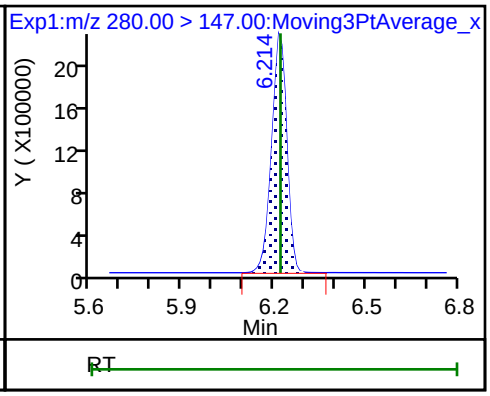
31 6:2FTS



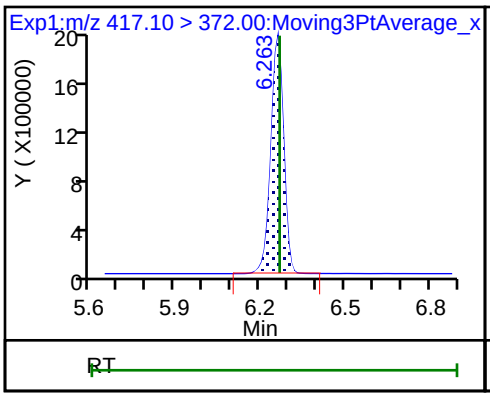
31 6:2FTS



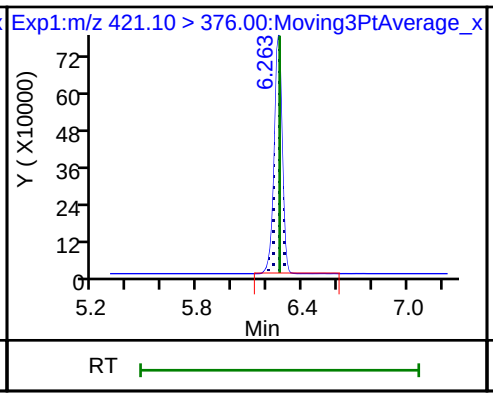
33 BTS



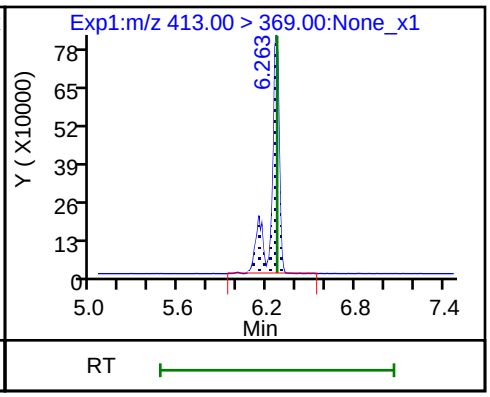
* 34 13C4 PFOA



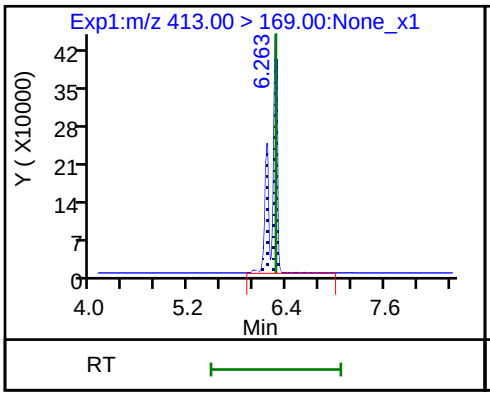
D 35 13C8 PFOA



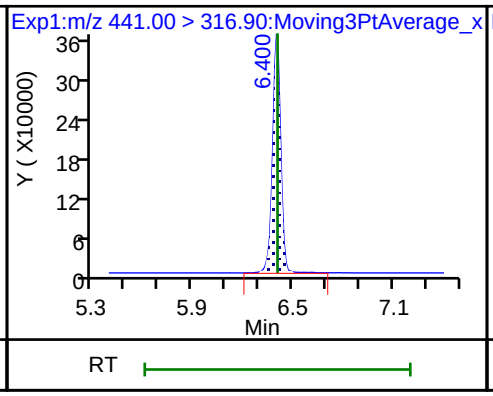
36 PFOA



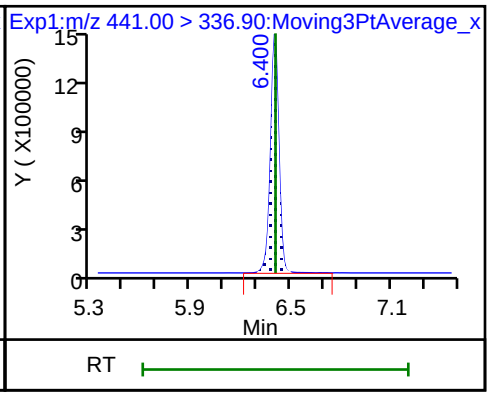
36 PFOA



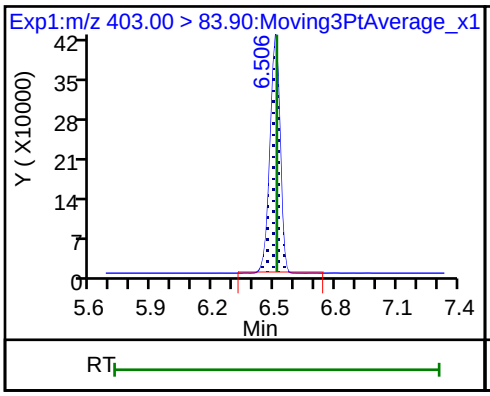
37 7:3 FTCA



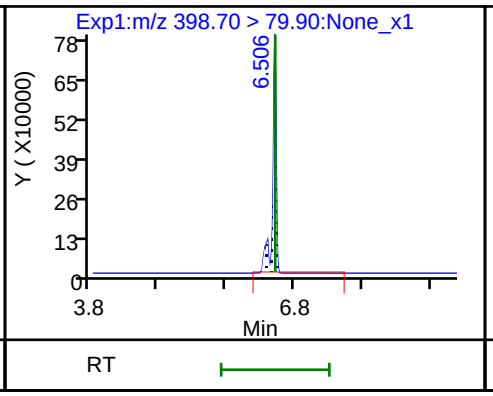
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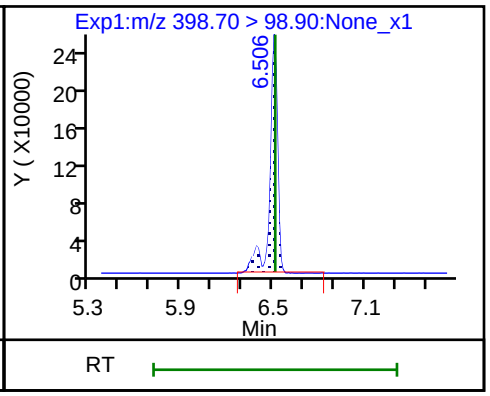
* 39 18O2 PFHxS



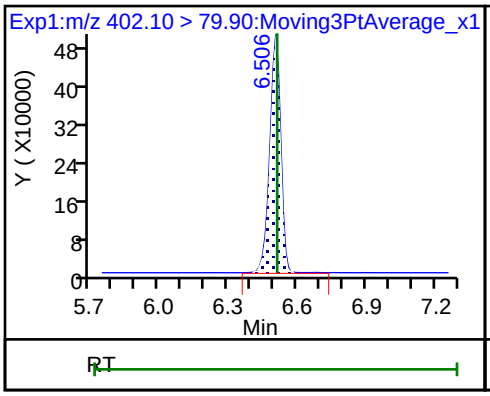
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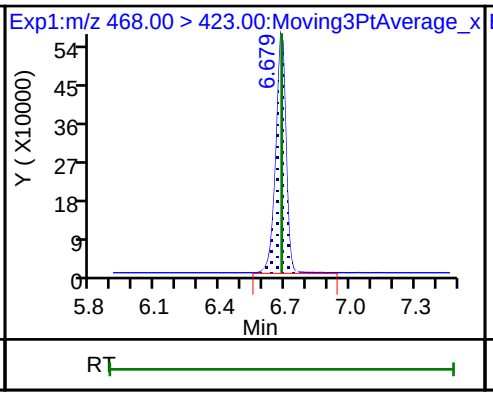
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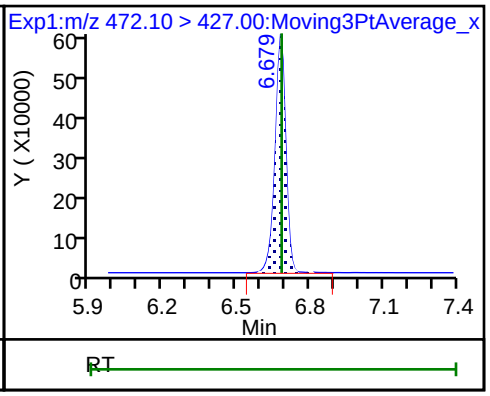
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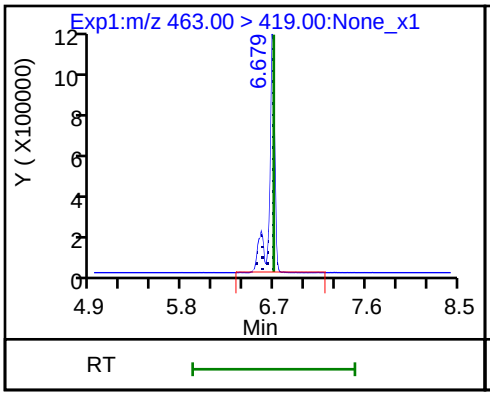
* 42 13C5 PFNA



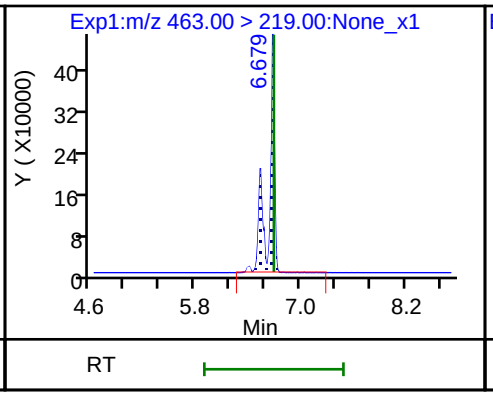
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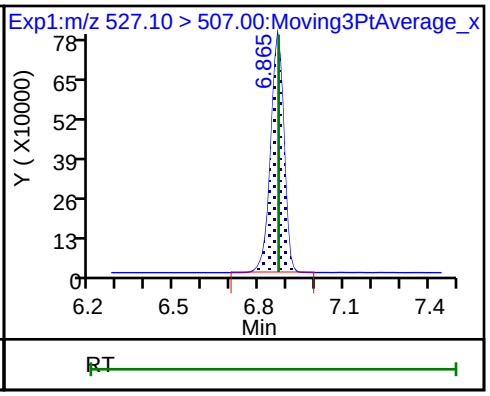
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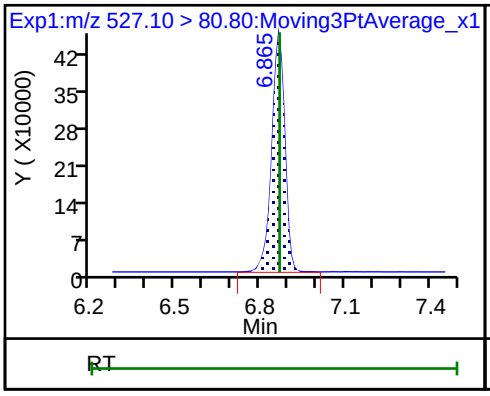
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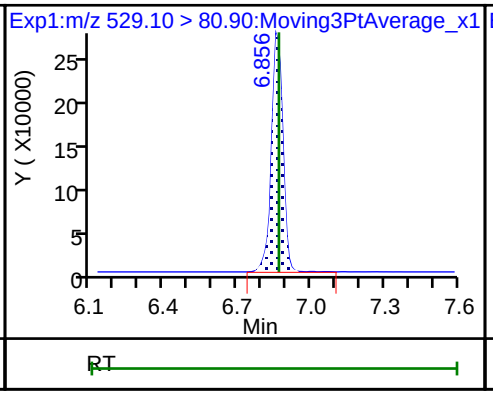
45 8:2FTS



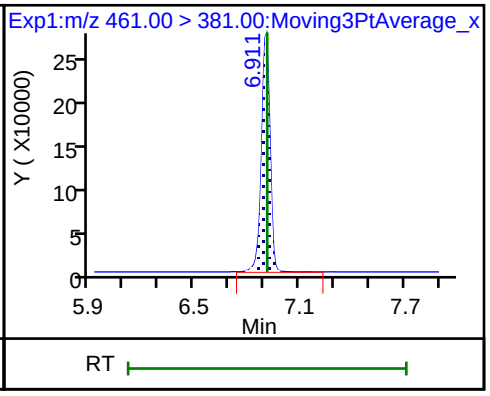
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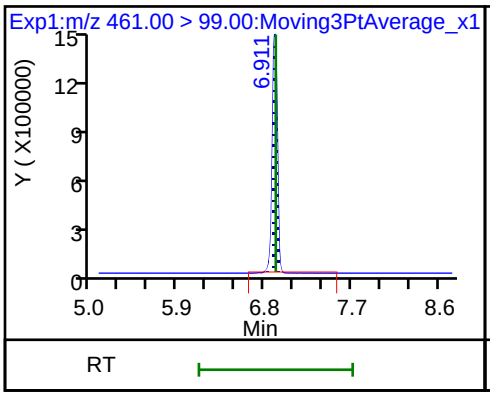
D 44 13C2-8:2FTS



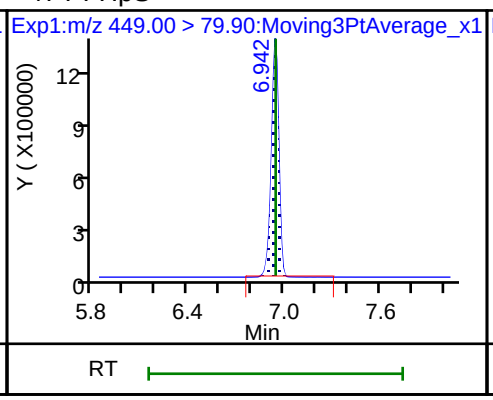
46 PFECHS



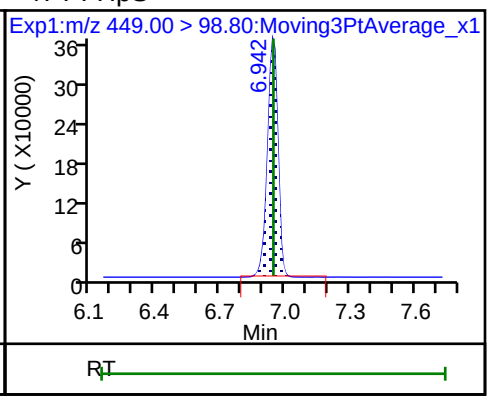
46 PFECHS



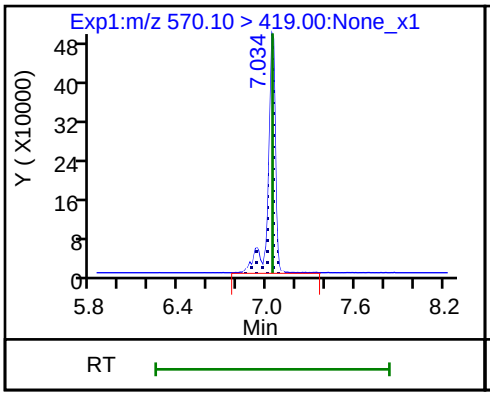
47 PFHpS



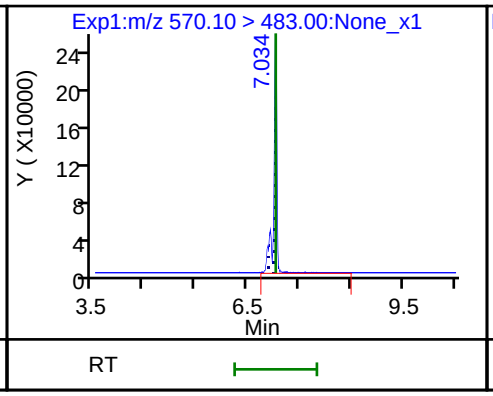
47 PFHpS



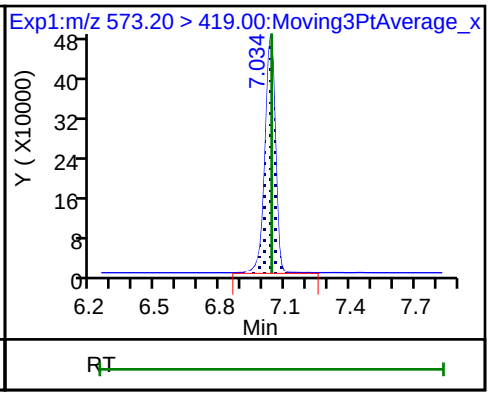
50 NMeFOSAA



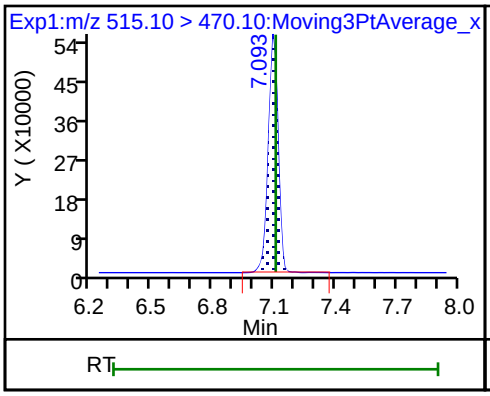
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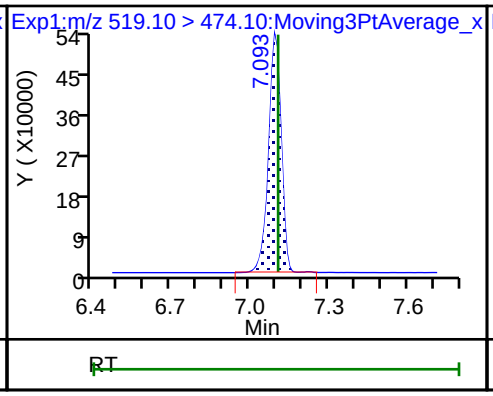
D 49 d3-NMeFOSAA



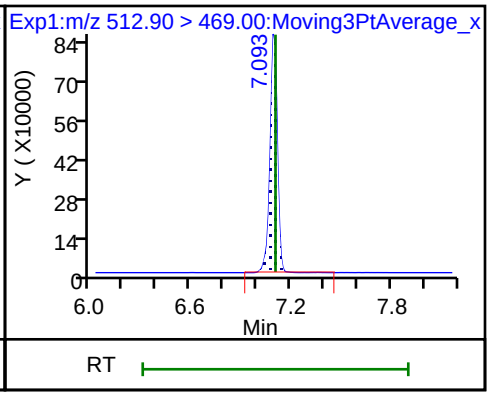
* 51 13C2 PFDA



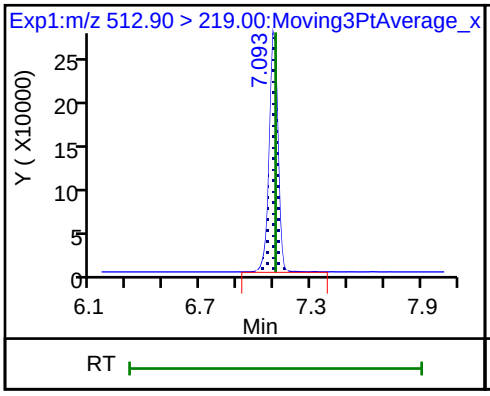
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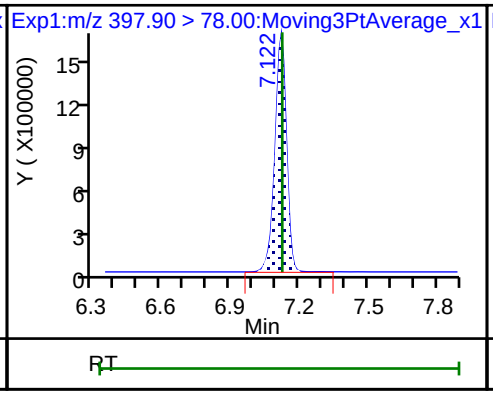
53 PFDA



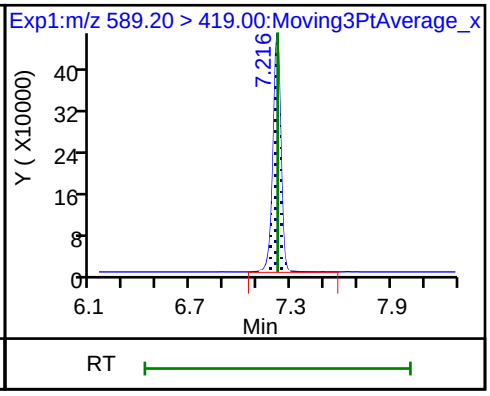
53 PFDA



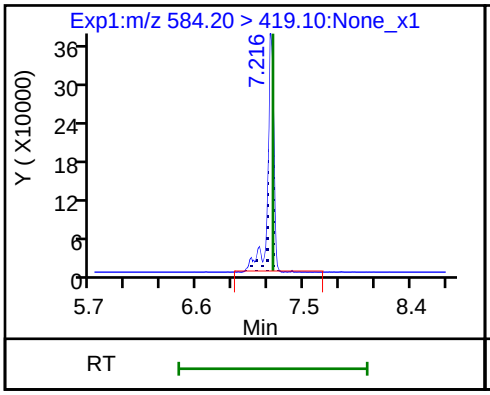
48 FHxSA



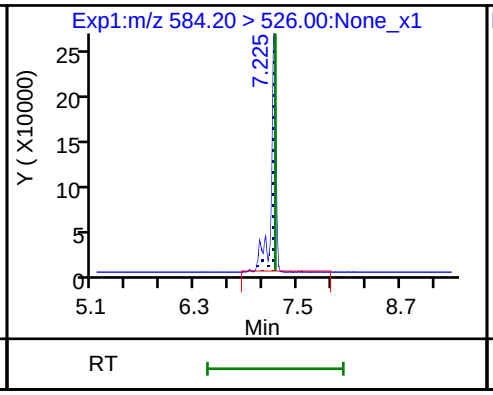
D 54 d5-NEtFOSAA



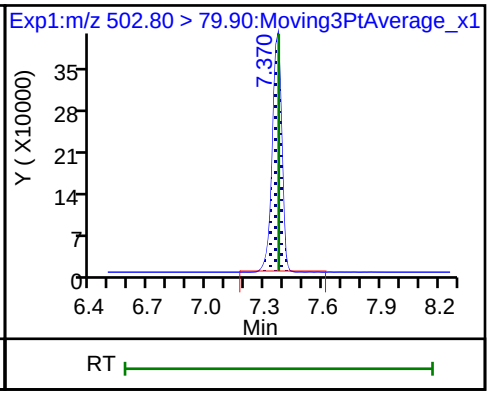
55 NEtFOSAA



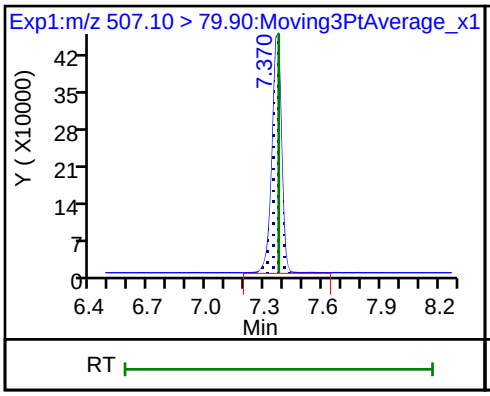
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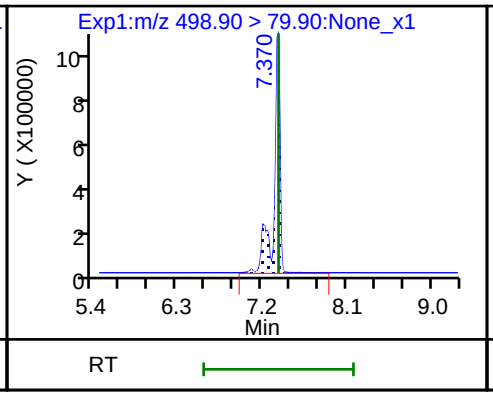
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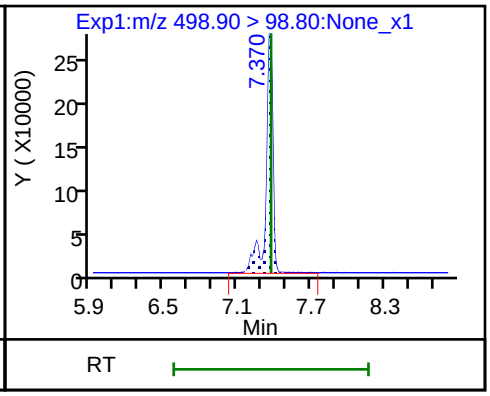
D 56 13C8 PFOS



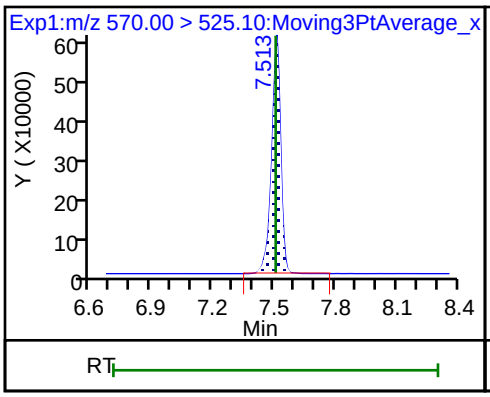
58 PFOS



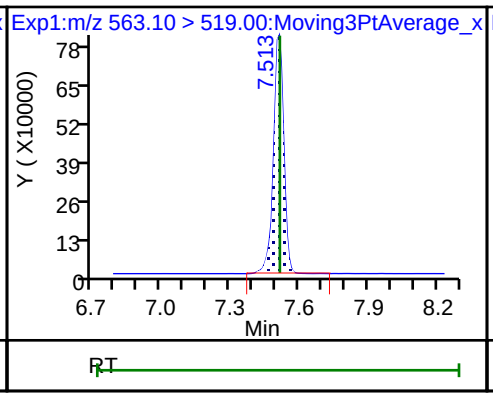
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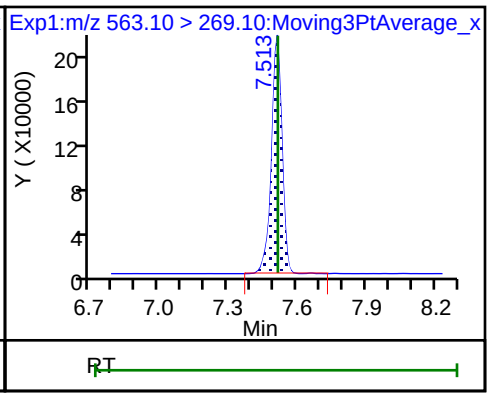
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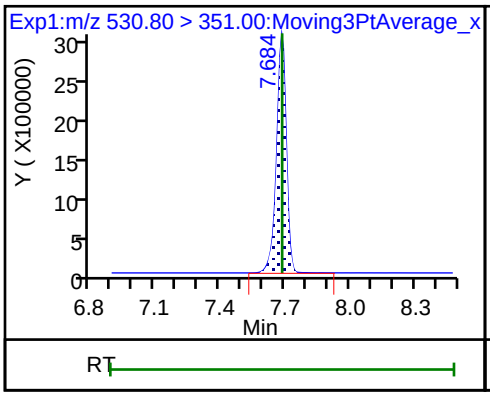
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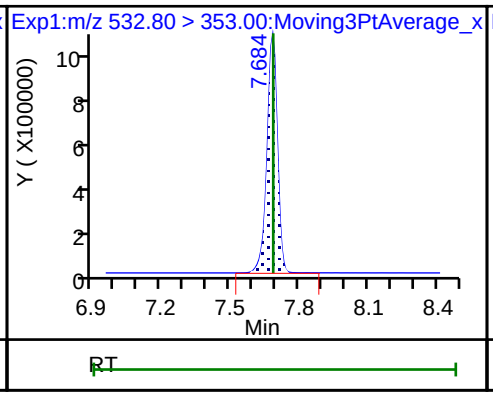
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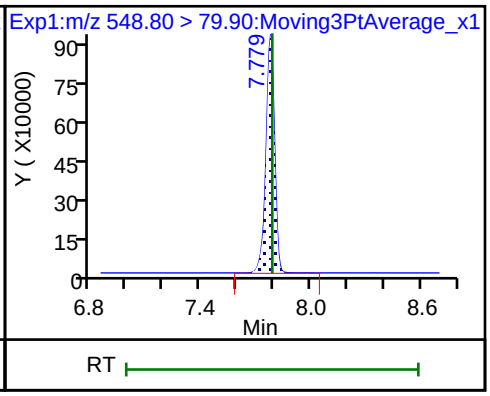
61 9ClFOS



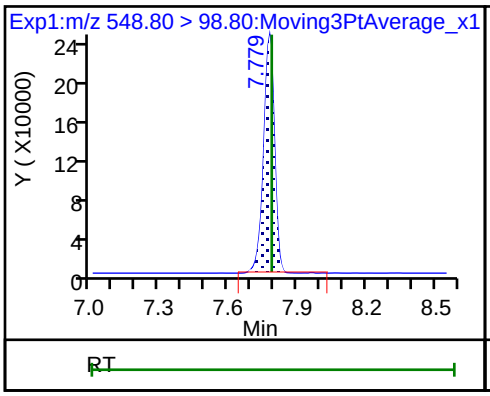
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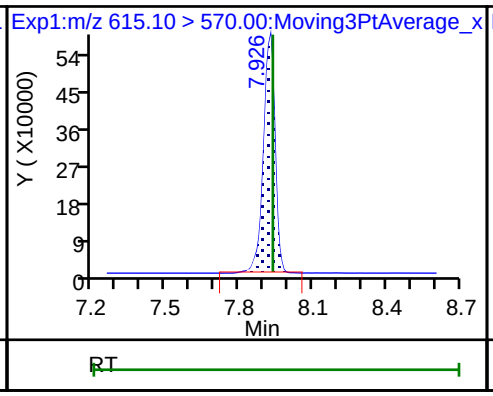
62 PFNS



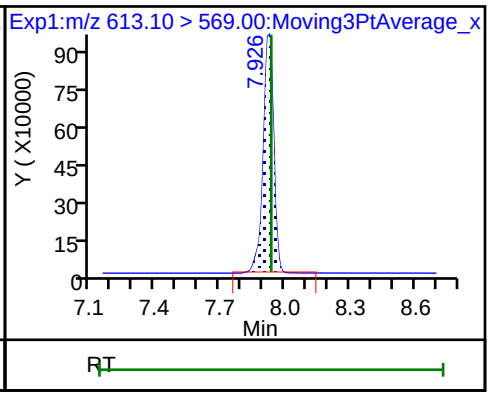
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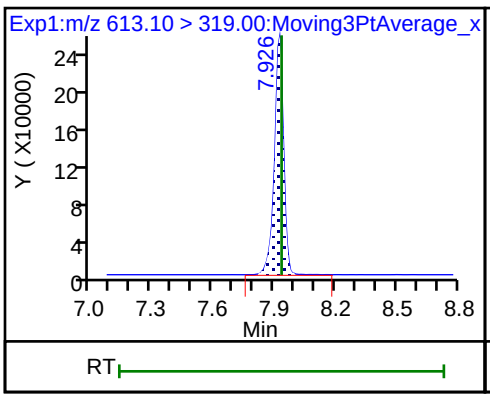
D 81 PFDoA



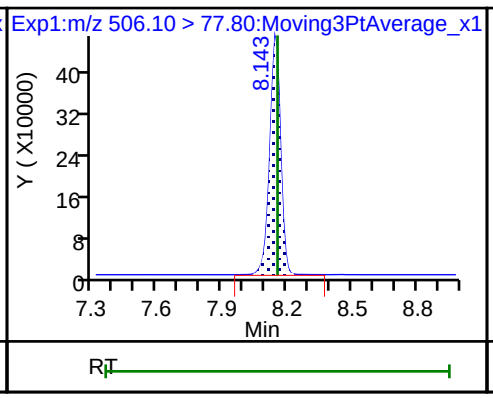
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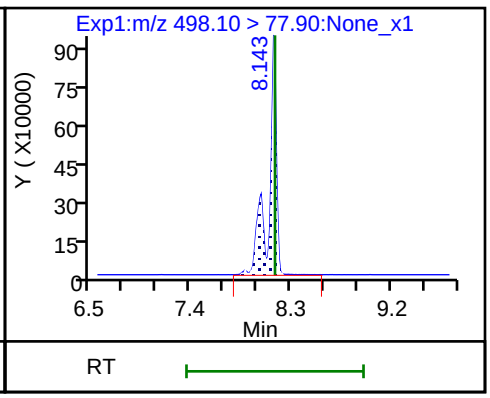
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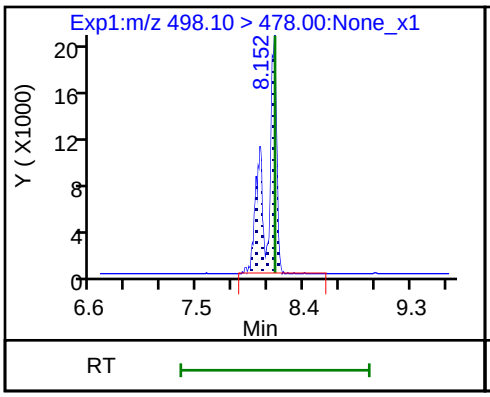
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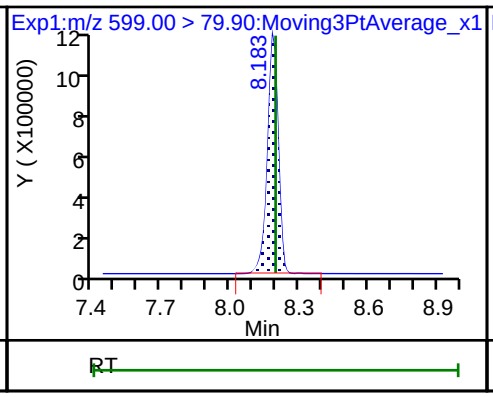
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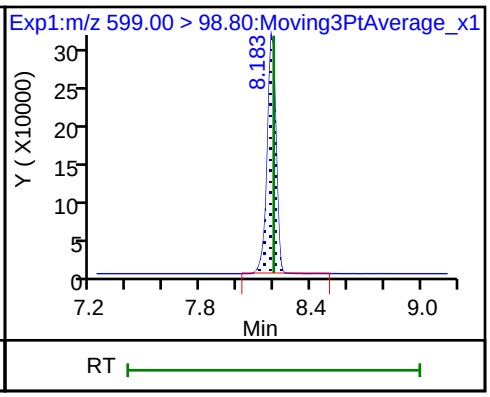
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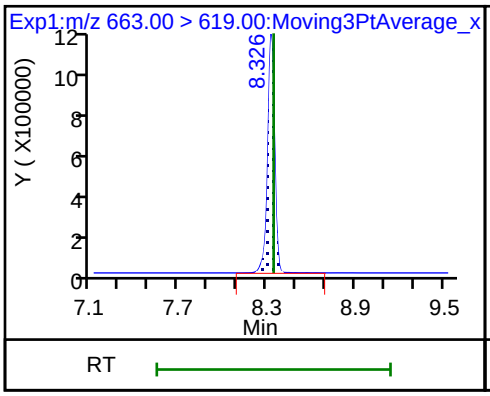
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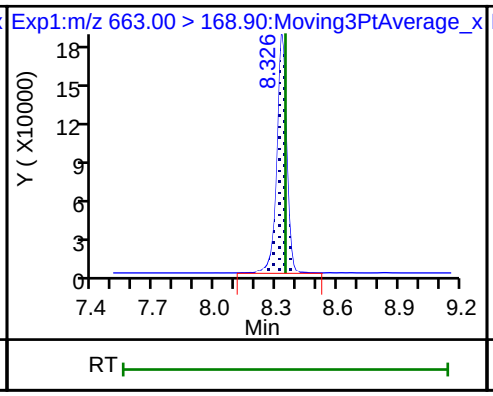
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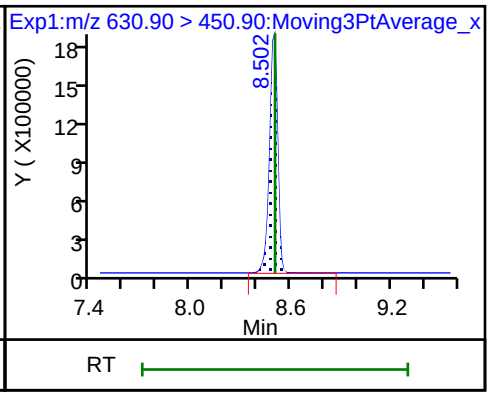
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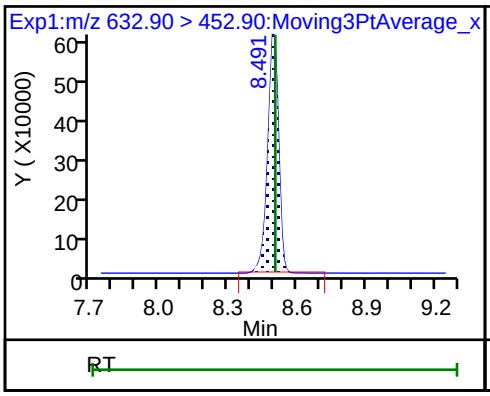
67 PFTrDA



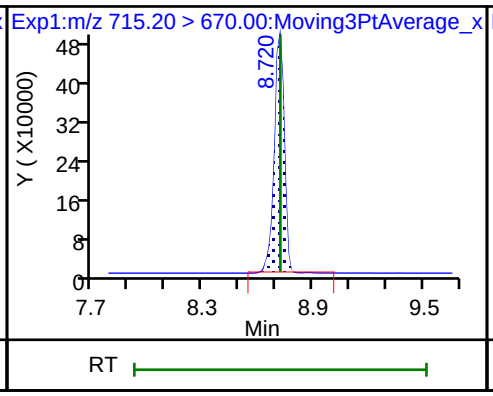
68 11ClFOS



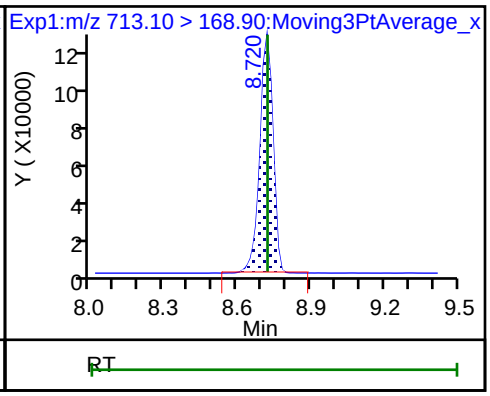
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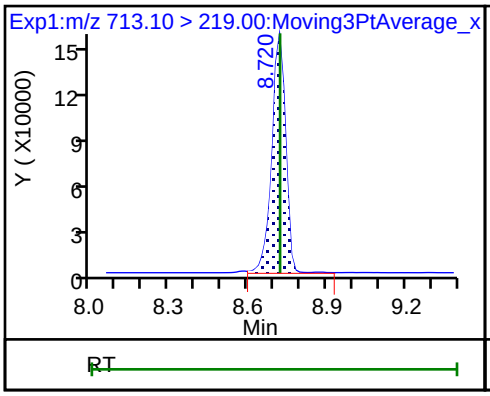
D 70 13C2 PFTeDA



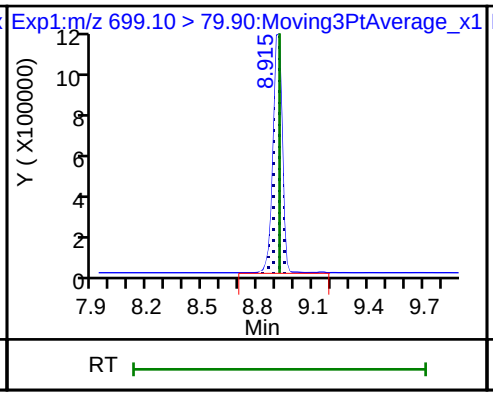
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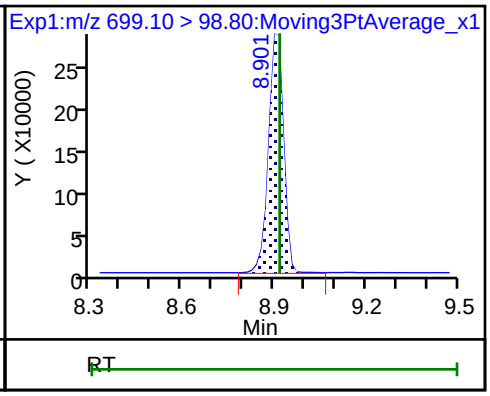
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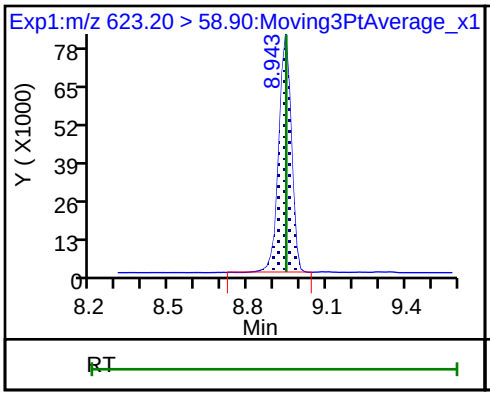
71 PFDoS



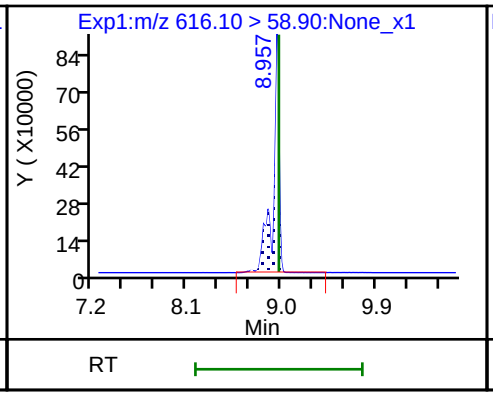
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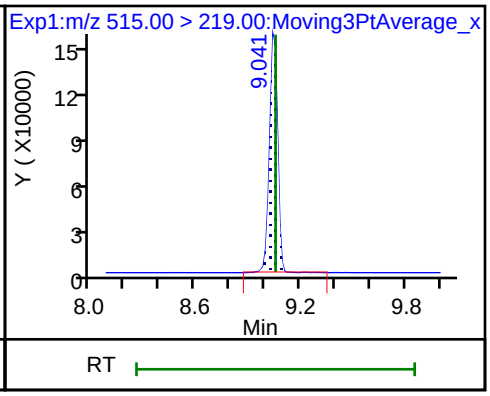
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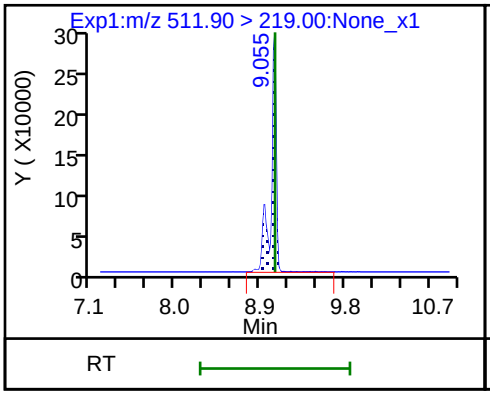
73 N-MeFOSE-M



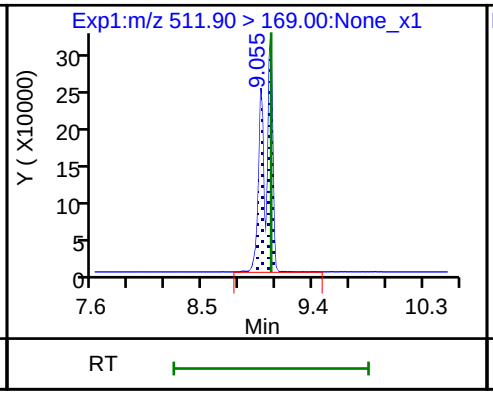
D 75 d3-NMePFOSA



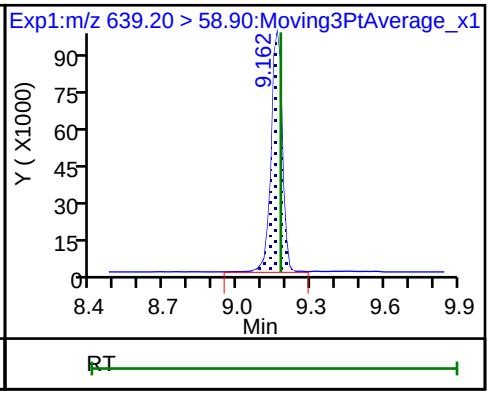
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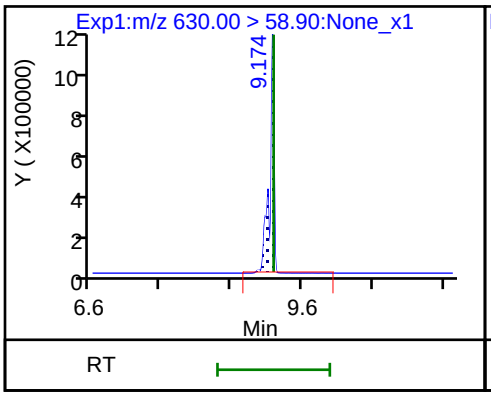
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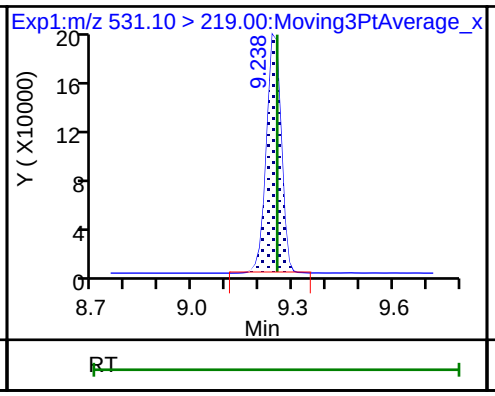
D 76 d9-N-EtFOSE



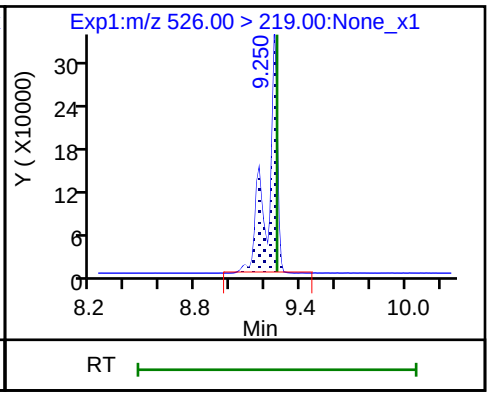
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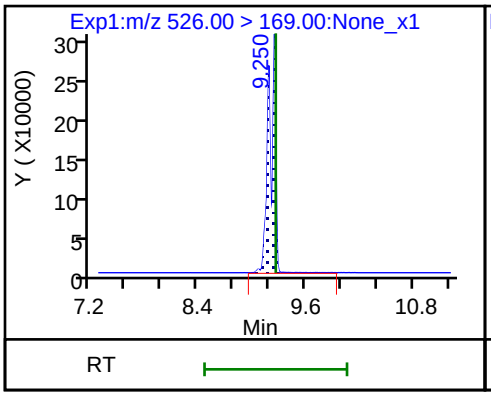
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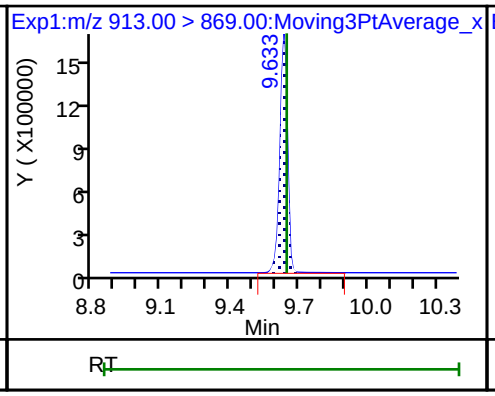
79 N-EtFOSA-M



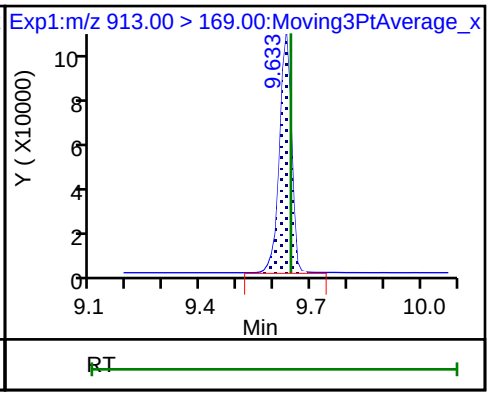
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-07.d
Lims ID: IC CAL 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Feb-2026 21:43:37 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 7
Misc. Info.: Plate: 1 Rack: 1 410-0175852-007
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:22:05 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:43:00
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.116	2.133	-0.017	1.000	23366884	50.3		101	169264	
D 1 13C3PFPrA										
166.00 > 121.00	2.116	2.133	-0.017	0.491	1016316	2.02		101	1735	
3 PFBA										
212.80 > 168.90	4.302	4.302	0.0	0.998	13143211	20.2		101	86248	
D 4 13C4-PFBA										
216.80 > 171.90	4.309	4.309	0.0	1.000	1417593	1.99		99.5	9786	
* 5 13C3PFBA										
216.00 > 172.00	4.309	4.309	0.0		1447678	2.00			3130	
6 PFMPA										
229.00 > 84.90	4.622	4.622	0.0	0.932	7964096	10.3		103	5153	
7 3:3 FTCA										
241.00 > 177.00	4.631	4.631	0.0	0.934	841633	21.3	Target=1.16	106	3450	
241.00 > 117.00	4.631	4.631	0.0	0.934	717856		1.17(0.58-1.73)	106	2345	
D 8 13C5 PFPeA										
268.30 > 223.00	4.959	4.959	0.0	0.914	1533298	2.12		106	3816	
9 PFPA										
263.00 > 219.00	4.959	4.959	0.0	1.000	8904427	10.1		101	6425	
10 PFMBA										
279.00 > 85.10	5.108	5.107	0.001	1.030	10301242	9.97		99.7	7555	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.235	5.235	0.0	0.804	878629	4.23		90.3	4346	
12 4:2FTS										
327.10 > 307.00	5.235	5.235	0.0	1.000	6429585	18.7	Target=1.70	99.6	8123	
327.10 > 80.90	5.235	5.235	0.0	1.000	3990805		1.61(0.85-2.54)	99.6	2843	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.375	5.386	-0.011	0.993	2737029	10.3	Target=1.61	103	5513	
295.00 > 84.90	5.375	5.386	-0.011	0.993	1741901		1.57(0.80-2.41)	103	6437	
* 16 13C2 PFHxA										
315.10 > 270.00	5.425	5.424	0.001		4075103	5.00			12464	
D 15 13C5 PFHxA										
318.00 > 273.00	5.415	5.424	-0.009	0.998	1938053	2.18		109	4356	
17 PFHxA										
313.00 > 269.00	5.425	5.424	0.001	1.002	7477144	10.4	Target=9.95	104	8412	
313.00 > 118.90	5.425	5.424	0.001	1.002	753527		9.92(4.98-14.93)	104	2540	
18 5:3 FTCA										
341.00 > 237.10	5.504	5.503	0.001	1.016	5713771	59.4	Target=0.62	119	6789	
341.00 > 217.00	5.504	5.503	0.001	1.016	7944756		0.72(0.31-0.94)	119	2437	
D 19 13C3 PFBS										
302.10 > 79.90	5.562	5.561	0.001	0.854	1812920	1.83		98.1	6819	
20 PFBS										
298.70 > 79.90	5.562	5.561	0.001	1.000	7482977	8.61	Target=3.17	97.0	8647	
298.70 > 98.80	5.562	5.561	0.001	1.000	2408647		3.11(1.59-4.76)	97.0	7941	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.608	5.607	0.001	1.034	1308739	2.26		113	4600	
23 HFPO-DA										
284.90 > 168.90	5.608	5.607	0.001	1.000	5290713	7.47	Target=2.55	99.5	5830	
284.90 > 184.90	5.608	5.607	0.001	1.000	2078511		2.55(1.27-3.82)	99.5	9430	
21 FBSA										
297.90 > 78.00	5.666	5.665	0.001	1.019	7845857	11.4		114	2243	
26 PFEESA										
314.80 > 134.90	5.807	5.807	0.0	1.072	19101117	8.13	Target=12.76	91.2	9489	
314.80 > 82.90	5.807	5.807	0.0	1.072	1632004		11.70(6.38-19.14)	91.2	4994	
D 28 13C4 PFHpA										
367.10 > 322.00	5.852	5.851	0.001	1.079	1947996	2.24		112	5292	
27 PFHpA										
363.10 > 319.00	5.852	5.851	0.001	1.000	7250614	10.6	Target=1.64	106	6765	
363.10 > 169.00	5.852	5.851	0.001	1.000	4070831		1.78(0.82-2.46)	106	5377	
29 ADONA										
376.90 > 250.90	6.008	6.007	0.001	1.071	20301197	9.02	Target=2.22	95.3	6812	
376.90 > 84.80	6.008	6.007	0.001	1.071	8950463		2.27(1.11-3.33)	95.3	7006	
30 PFPeS										
349.10 > 79.90	6.049	6.049	0.0	0.929	8907618	9.46	Target=3.23	101	8783	
349.10 > 98.90	6.059	6.049	0.010	0.930	3013442		2.96(1.61-4.84)	101	5706	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.059	6.059	0.0	0.930	663930	3.85		80.8	3049	
31 6:2FTS										
427.10 > 407.00	6.059	6.059	0.0	1.000	4749273	18.4	Target=1.59	96.8	11002	
427.10 > 80.90	6.059	6.059	0.0	1.000	2898917		1.64(0.79-2.38)	96.8	4124	
33 BTS										
280.00 > 147.00	6.221	6.220	0.001	0.955	16842550	11.0		112	6004	
* 34 13C4 PFOA										
417.10 > 372.00	6.270	6.269	0.001		6215358	5.00			6336	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.270	6.269	0.001	1.000	2350487	1.97		98.7	4945	
36 PFOA										
413.00 > 369.00	6.270	6.269	0.001	1.000	6376210	10.3	Target=1.52	103	1567	
413.00 > 169.00	6.270	6.269	0.001	1.000	4107256		1.55(0.76-2.27)	103	6619	
37 7:3 FTCA										
441.00 > 316.90	6.408	6.407	0.001	1.183	2785807	56.7	Target=0.24	113	2634	
441.00 > 336.90	6.408	6.407	0.001	1.183	10313925		0.27(0.12-0.36)	113	4686	
D 38 13C3 PFHxS										
402.10 > 79.90	6.512	6.512	0.0	1.000	1577514	1.88		99.1	3756	
* 39 18O2 PFHxS										
403.00 > 83.90	6.512	6.512	0.0		1457454	1.90			3478	
40 PFHxS										
398.70 > 79.90	6.512	6.512	0.0	1.000	5448269	8.61	Target=3.27	94.4	5573	
398.70 > 98.90	6.512	6.512	0.0	1.000	1685587		3.23(1.63-4.90)	94.4	1664	
* 42 13C5 PFNA										
468.00 > 423.00	6.694	6.684	0.010		1856044	2.00			2049	
D 41 13C9 PFNA										
472.10 > 427.00	6.694	6.684	0.010	1.000	1801307	1.94		97.0	3483	
43 PFNA										
463.00 > 419.00	6.684	6.694	-0.010	0.999	8417344	10.3	Target=2.14	103	13616	
463.00 > 219.00	6.684	6.694	-0.010	0.999	3927633		2.14(1.07-3.21)	103	2814	
45 8:2FTS										
527.10 > 507.00	6.869	6.868	0.001	1.000	5290534	20.8	Target=1.87	108	3928	
527.10 > 80.80	6.869	6.868	0.001	1.000	2638615		2.01(0.94-2.81)	108	2046	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.869	6.868	0.001	1.055	729572	4.10		85.5	3448	
46 PFECHS										
461.00 > 381.00	6.915	6.914	0.001	1.062	1879988	9.89	Target=0.17	107	6073	
461.00 > 99.00	6.915	6.914	0.001	1.062	10099835		0.19(0.09-0.26)	107	71035	
47 PFHpS										
449.00 > 79.90	6.956	6.945	0.011	0.943	8301365	9.09	Target=3.71	95.3	6960	
449.00 > 98.80	6.956	6.945	0.011	0.943	2209370		3.76(1.86-5.57)	95.3	5799	
50 NMeFOSAA										
570.10 > 419.00	7.048	7.037	0.011	1.001	3301183	9.95	Target=1.66	99.5	6628	
570.10 > 483.00	7.048	7.037	0.011	1.001	1875613		1.76(0.83-2.49)	99.5	4944	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.037	7.037	0.0	0.954	1687371	5.48		110	2430	
D 52 13C6 PFDA										
519.10 > 474.10	7.107	7.107	0.001	1.000	1792462	2.02		101	4593	
53 PFDA										
512.90 > 469.00	7.107	7.107	0.001	1.000	5606813	11.2	Target=2.88	112	5697	
512.90 > 219.00	7.107	7.107	0.001	1.000	1741388		3.22(1.44-4.31)	112	4013	
* 51 13C2 PFDA										
515.10 > 470.10	7.107	7.107	0.001		1780963	2.00			3658	
48 FHxSA										
397.90 > 78.00	7.126	7.126	0.0	1.094	11473849	10.4		104	73813	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.220	7.219	0.001	0.979	1511863	5.36		107	2970	
55 NEtFOSAA										
584.20 > 419.10	7.229	7.238	-0.009	1.001	2548262	9.56	Target=1.34	95.6	3994	
584.20 > 526.00	7.229	7.238	-0.009	1.001	1945951		1.31(0.67-2.01)	95.6	2576	
* 57 13C4 PFOS										
502.80 > 79.90	7.373	7.373	0.0		1233498	1.92			2979	
D 56 13C8 PFOS										
507.10 > 79.90	7.373	7.373	0.0	1.000	1392852	1.95		102	2229	
58 PFOS										
498.90 > 79.90	7.373	7.373	0.0	1.000	9460152	9.44	Target=4.60	101	15676	
498.90 > 98.80	7.373	7.373	0.0	1.000	2047098		4.62(2.30-6.89)	101	1813	
D 59 13C7 PFUnA										
570.00 > 525.10	7.516	7.506	0.010	1.057	1787471	1.93		96.5	3358	
60 PFUnA										
563.10 > 519.00	7.524	7.515	0.009	1.001	4861929	10.0	Target=3.77	100.0	3726	
563.10 > 269.10	7.516	7.515	0.001	1.000	1265733		3.84(1.88-5.65)	100.0	2923	
61 9ClFOS										
530.80 > 351.00	7.686	7.686	0.0	1.043	18994662	9.19	Target=3.08	98.4	2695	
532.80 > 353.00	7.686	7.686	0.0	1.043	6285672		3.02(1.54-4.61)	98.4	4705	
62 PFNS										
548.80 > 79.90	7.789	7.788	0.001	1.056	6461590	10.3	Target=3.66	107	7476	
548.80 > 98.80	7.789	7.788	0.001	1.056	1702353		3.80(1.83-5.49)	107	2622	
D 81 PFDoA										
615.10 > 570.00	7.928	7.935	-0.007	1.115	1766814	1.91		95.4	5473	
63 PFDoA										
613.10 > 569.00	7.928	7.935	-0.007		7093154	11.7	Target=4.34	117	3415	
613.10 > 319.00	7.928	7.935	-0.007		1542825		4.60(2.17-6.51)	117	8056	
D 65 13C8 FOSA										
506.10 > 77.80	8.154	8.155	-0.001	1.106	1702127	2.23		111	3912	
64 PFOSA										
498.10 > 77.90	8.154	8.155	-0.001	1.000	9330930	9.65	Target=44.41	96.5	12054	
498.10 > 478.00	8.154	8.155	-0.001	1.000	224663		41.53(22.20-66.61)	96.5	500	
66 PFDS										
599.00 > 79.90	8.195	8.196	-0.001	1.111	7643188	9.74	Target=3.83	101	12548	
599.00 > 98.80	8.195	8.196	-0.001	1.111	2021891		3.78(1.91-5.74)	101	9171	
67 PFTrDA										
663.00 > 619.00	8.343	8.345	-0.002	0.957	7665989	10.1	Target=5.77	101	3667	
663.00 > 168.90	8.343	8.345	-0.002	0.957	1307768		5.86(2.88-8.65)	101	3879	
68 11ClFOS										
630.90 > 450.90	8.502	8.504	-0.002	1.153	12214403	9.39	Target=3.07	99.5	2536	
632.90 > 452.90	8.502	8.504	-0.002	1.153	4162778		2.93(1.54-4.61)	99.5	3036	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.719	8.722	-0.003	1.227	1794753	2.11		106	5711	
69 PFTeDA										
713.10 > 168.90	8.735	8.722	0.013	1.002	1094262	10.5	Target=0.94	105	2035	
713.10 > 219.00	8.719	8.722	-0.003	1.000	1058211		1.03(0.47-1.41)	105	1043	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.915	8.917	-0.002	1.209	7464000	9.26	Target=4.11	95.5	5846	
699.10 > 98.80	8.915	8.917	-0.002	1.209	1831043		4.08(2.06-6.17)	95.5	5680	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.957	8.945	0.012	1.215	275182	5.44		109	629	
73 N-MeFOSE-M										
616.10 > 58.90	8.971	8.974	-0.003	1.002	7292324	49.5		98.9	5246	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.054	9.057	-0.003	1.228	497714	2.24		112	3848	
74 NMeFOSA										
511.90 > 219.00	9.068	9.057	0.011	1.001	2268639	10.2	Target=0.68	102	3606	
511.90 > 169.00	9.068	9.057	0.011	1.001	3195747		0.71(0.34-1.03)	102	2844	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.174	9.176	-0.002	1.244	315423	5.46		109	727	
77 N-EtFOSE-M										
630.00 > 58.90	9.187	9.189	-0.002	1.001	9962740	50.9		102	31618	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.250	9.252	-0.002	1.255	611650	2.26		113	3090	
79 N-EtFOSA-M										
526.00 > 219.00	9.263	9.265	-0.002	1.001	2521444	9.66	Target=0.87	96.6	4006	
526.00 > 169.00	9.263	9.265	-0.002	1.001	2899641		0.87(0.43-1.30)	96.6	4934	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.643	9.645	-0.002	1.106	7863629	12.2	Target=16.98	122	128293	
913.00 > 169.00	9.633	9.645	-0.012	1.105	480560		16.36(8.49-25.47)	122	18553	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL7_00039 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:22:08 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-07.d

Injection Date: 16-Feb-2026 21:43:37 Instrument ID: 30577

Lims ID: IC CAL 7

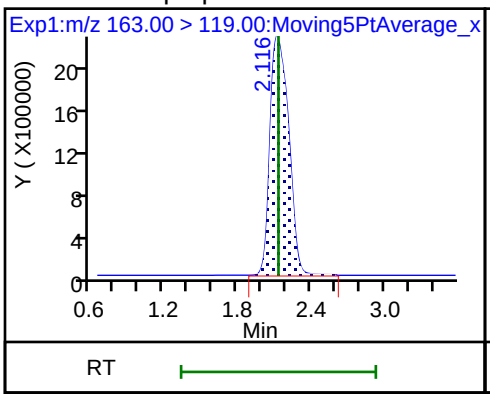
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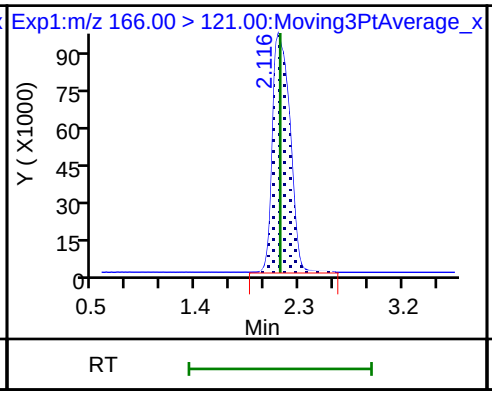
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

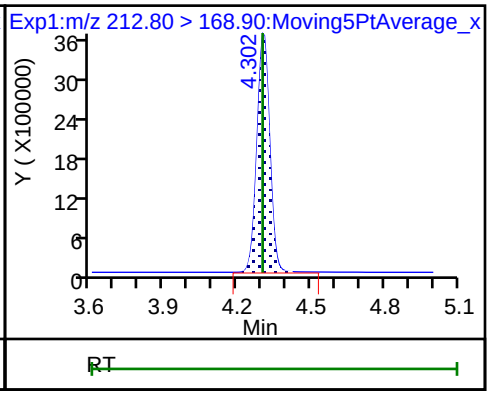
2 Perfluoropropionic acid



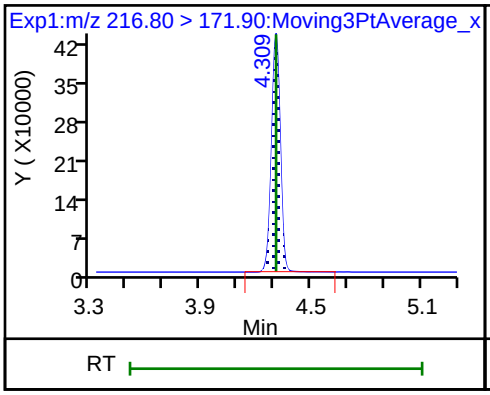
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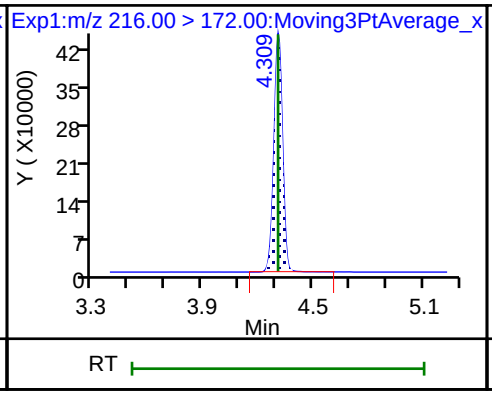
3 PFBA



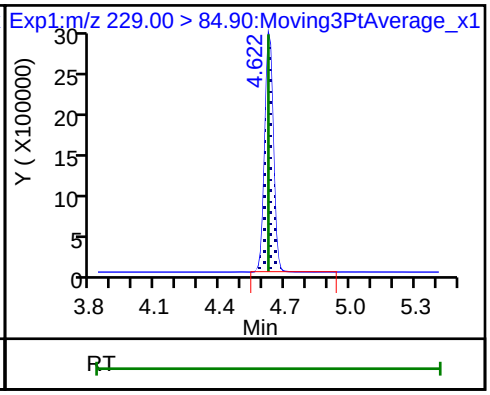
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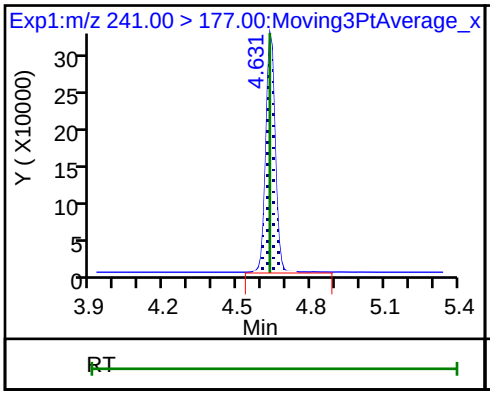
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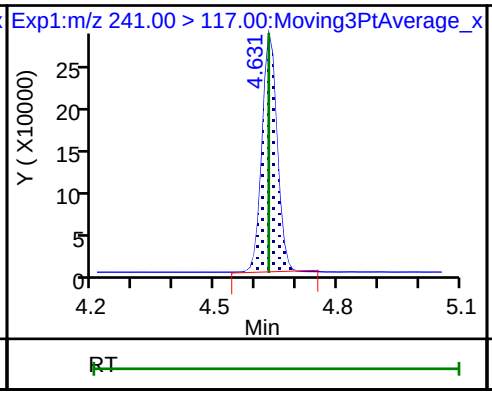
6 PFMPA



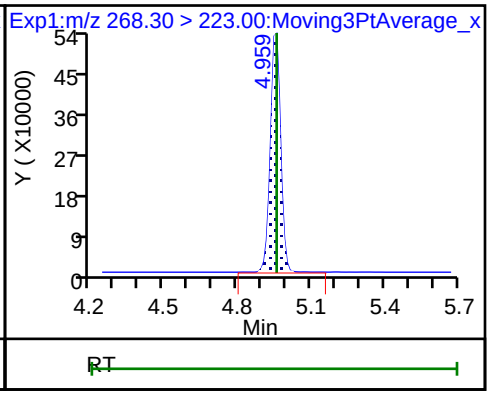
7 3:3 FTCA



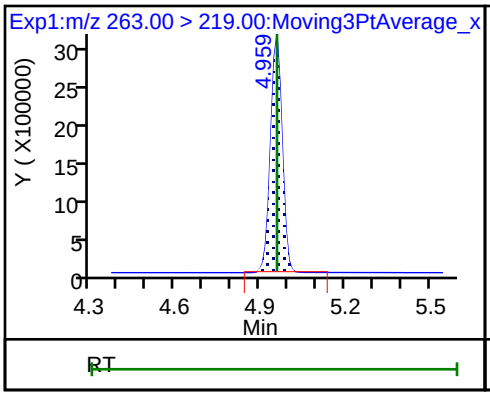
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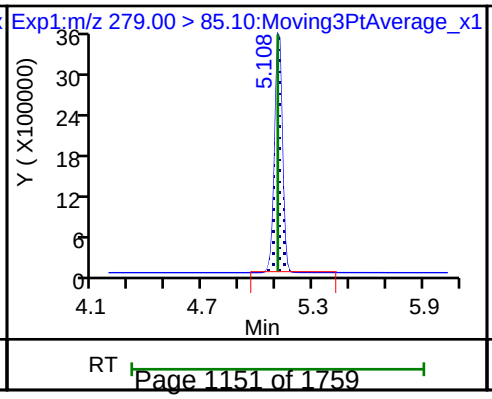
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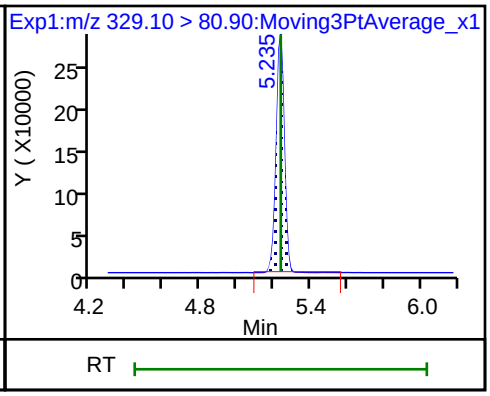
9 PFPA



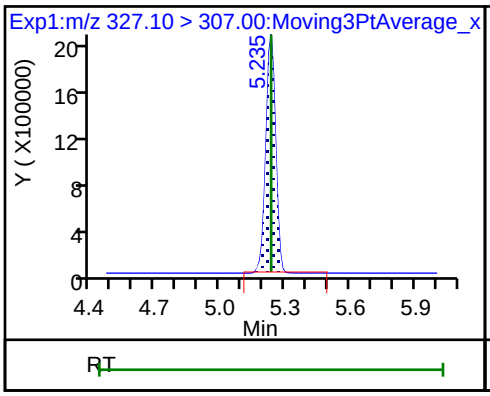
10 PFMBA



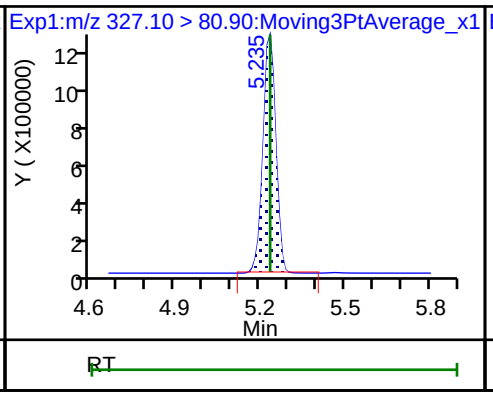
D 11 13C2-4:2FTS



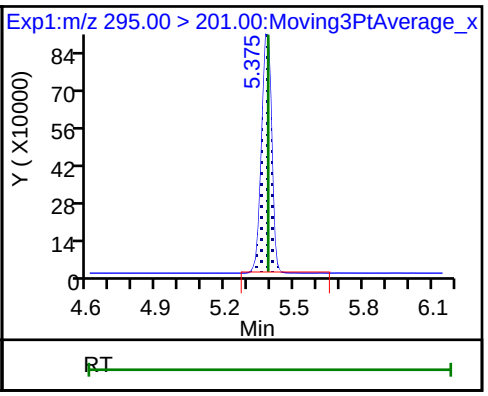
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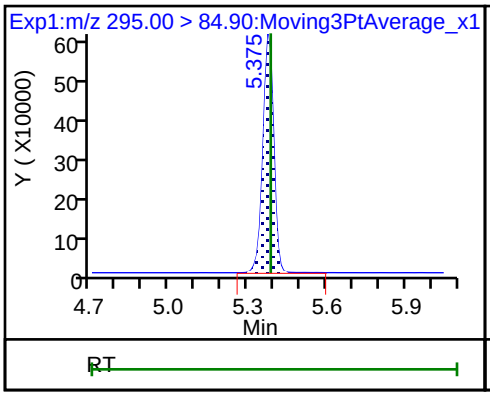
12 4:2FTS



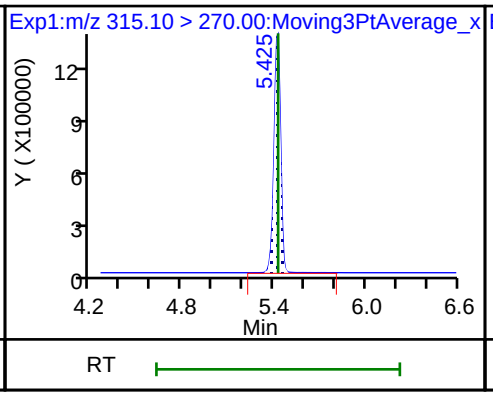
14 NFDHA



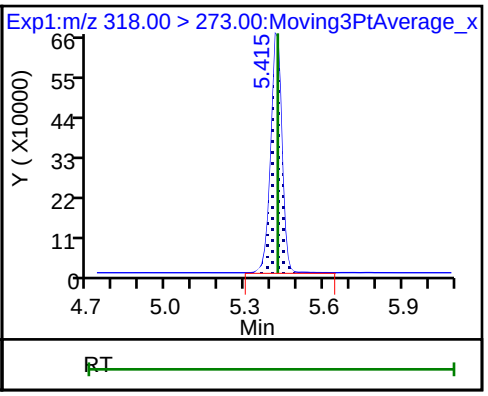
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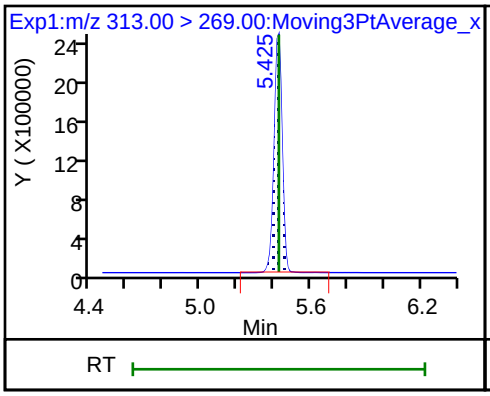
* 16 13C2 PFHxA



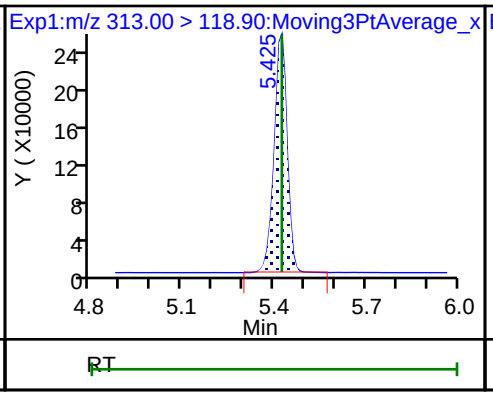
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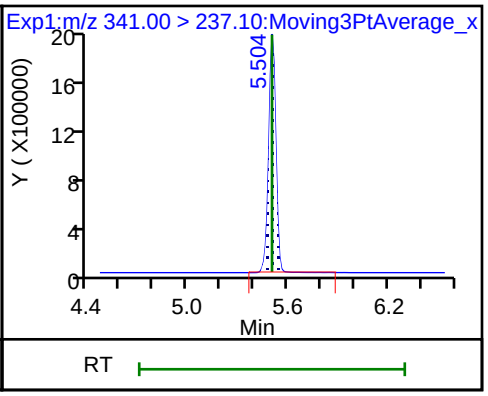
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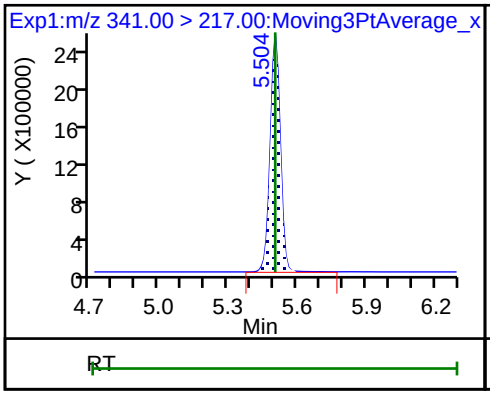
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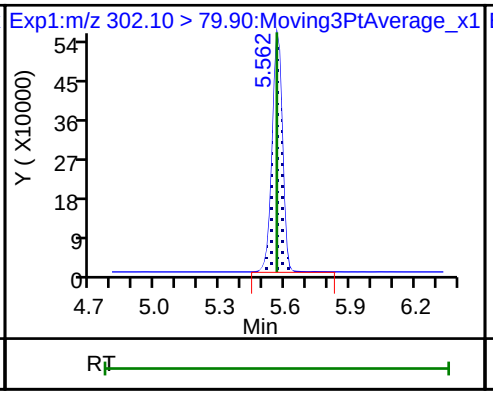
18 5:3 FTCA



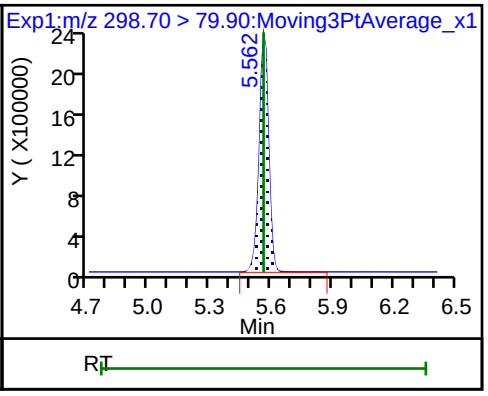
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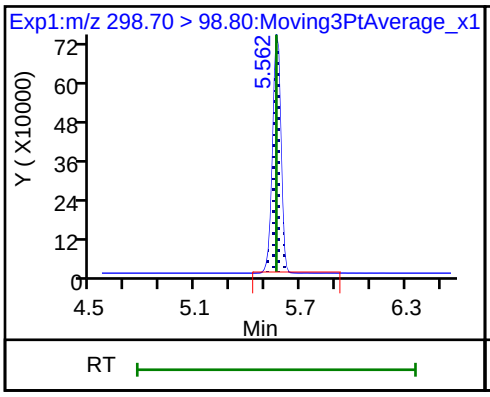
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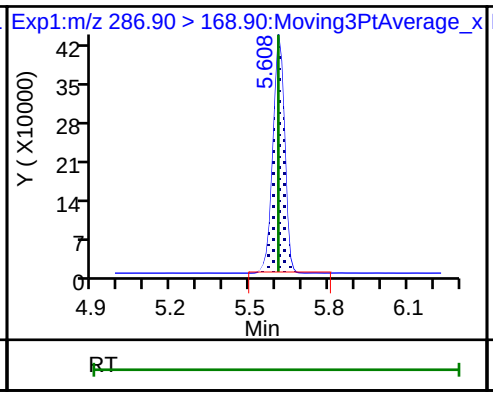
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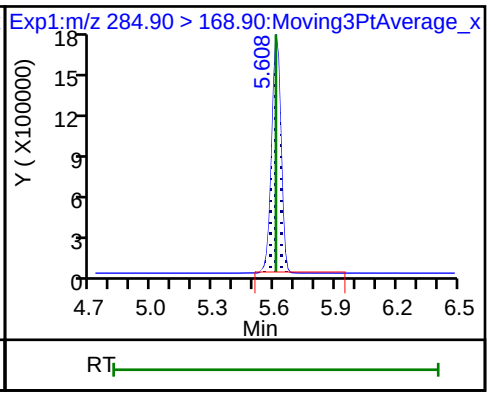
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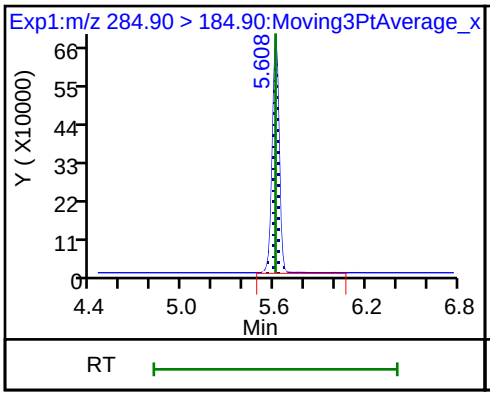
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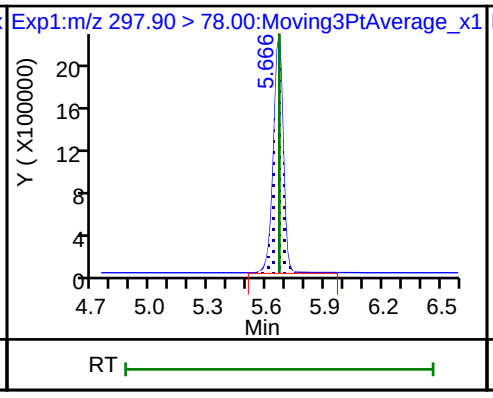
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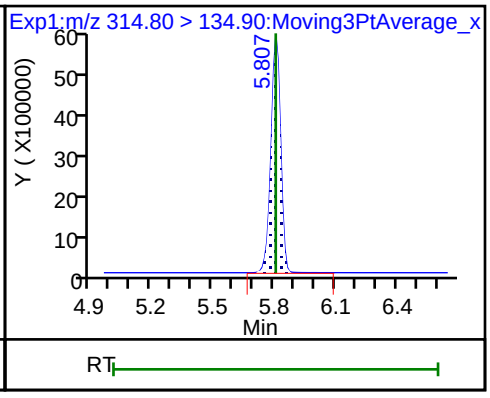
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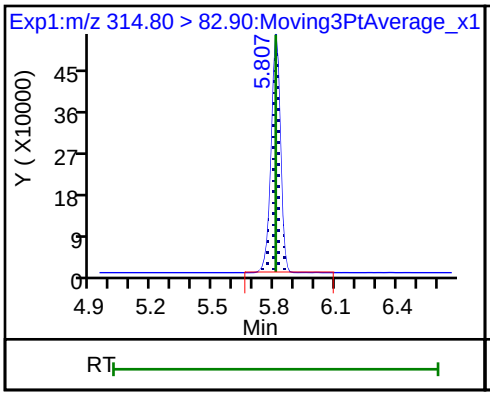
21 FBSA



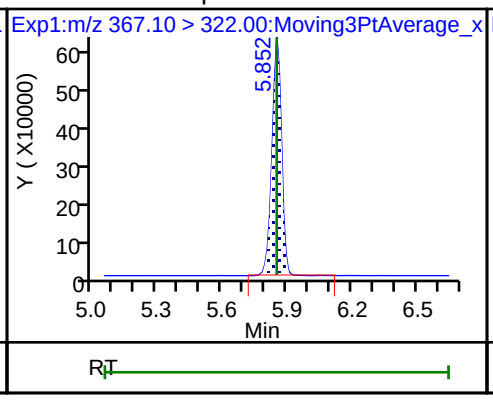
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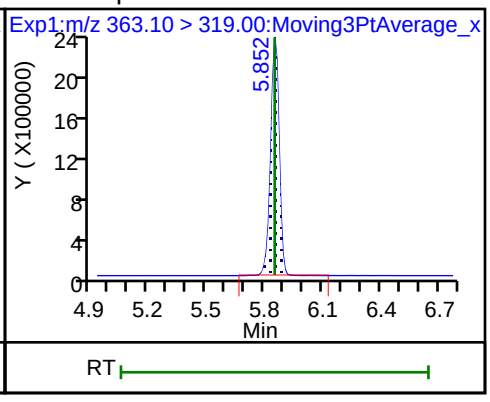
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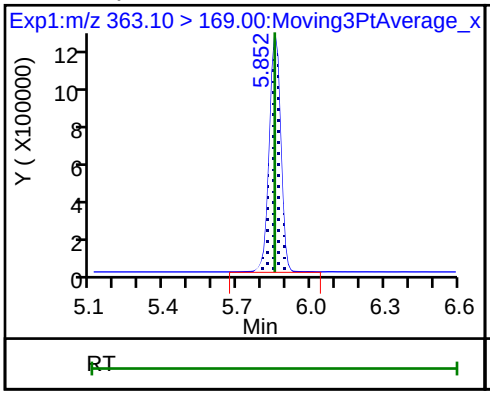
D 28 13C4 PFHpA



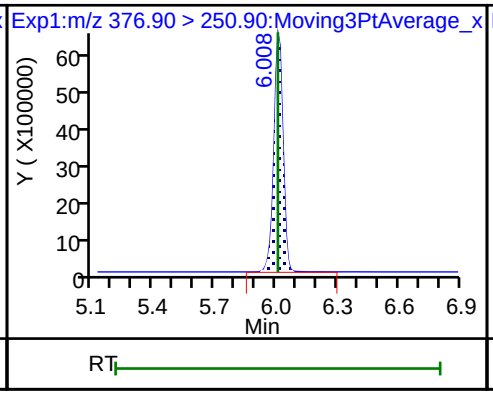
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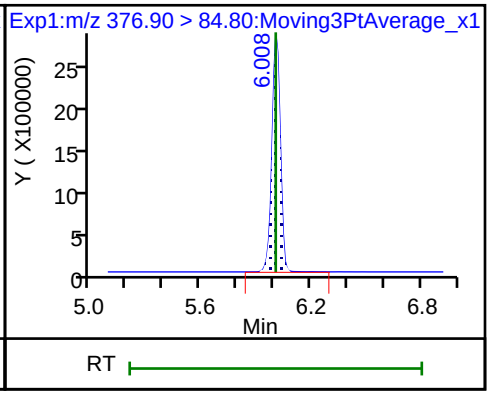
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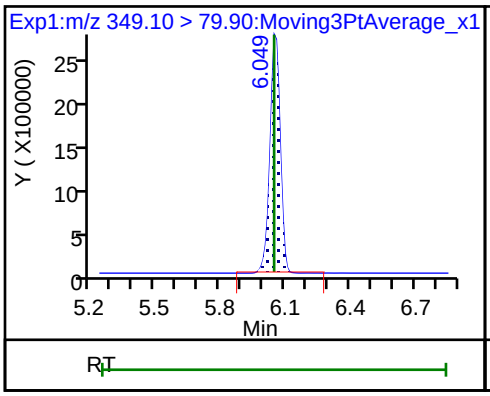
29 ADONA



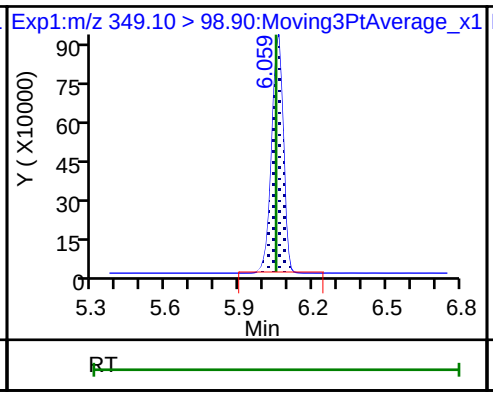
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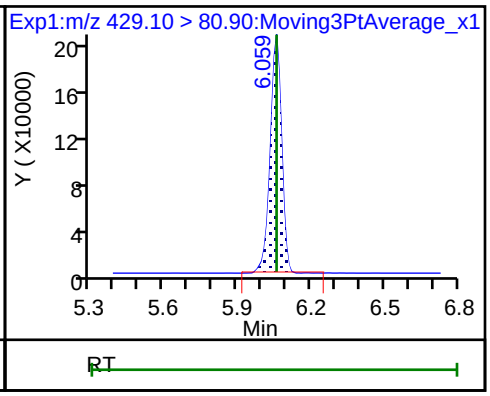
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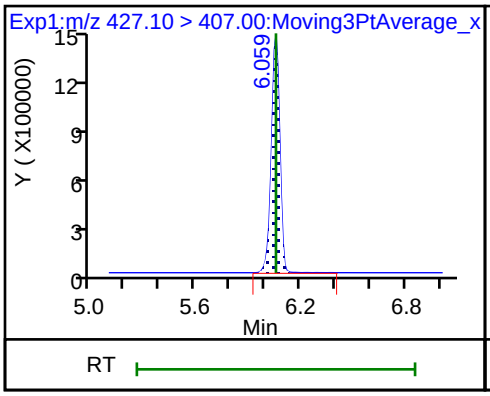
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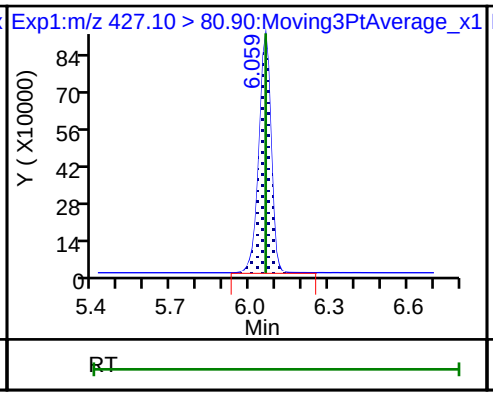
D 32 13C2-6:2FTS



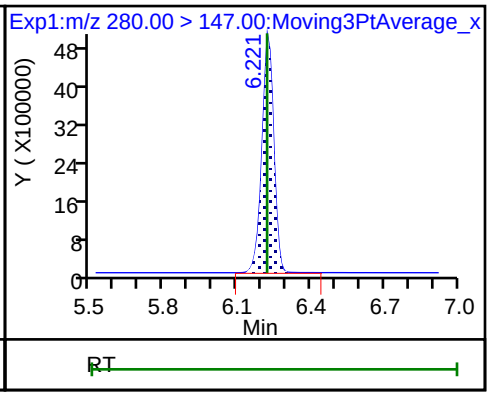
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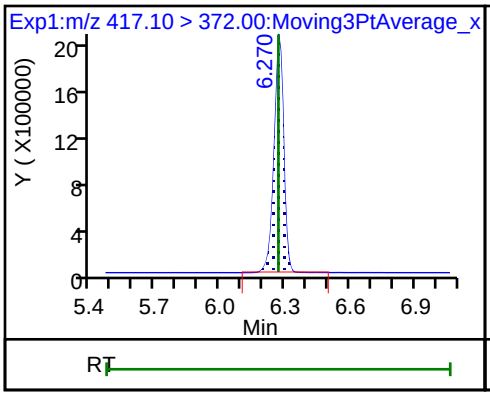
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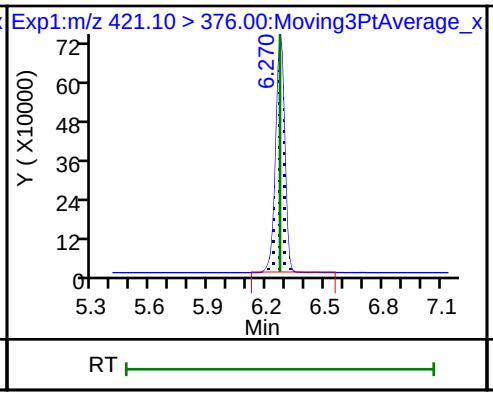
33 BTS



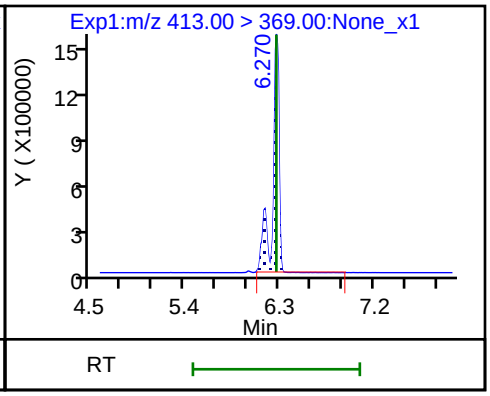
* 34 13C4 PFOA



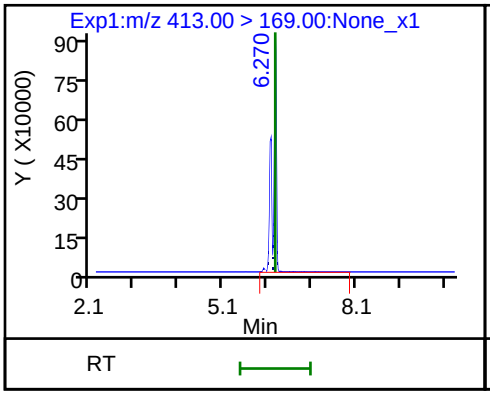
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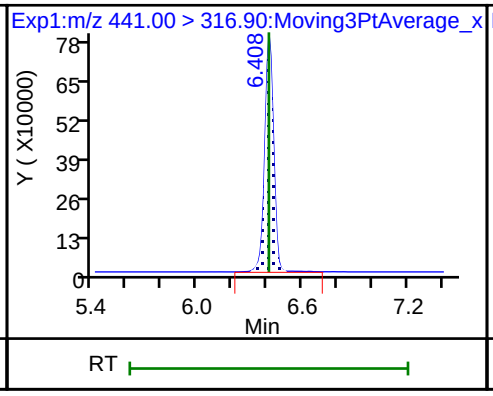
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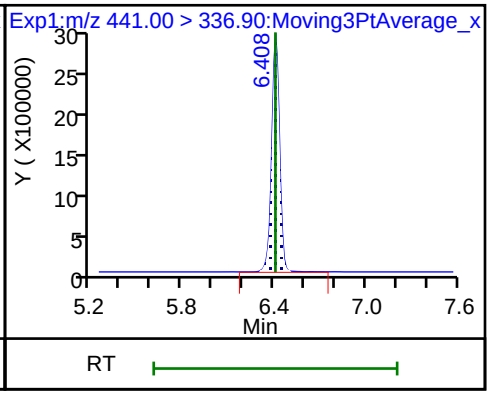
36 PFOA



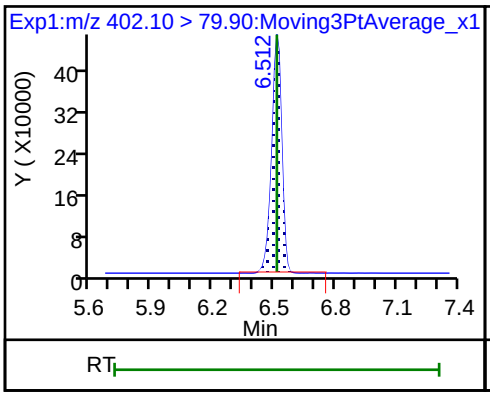
37 7:3 FTCA



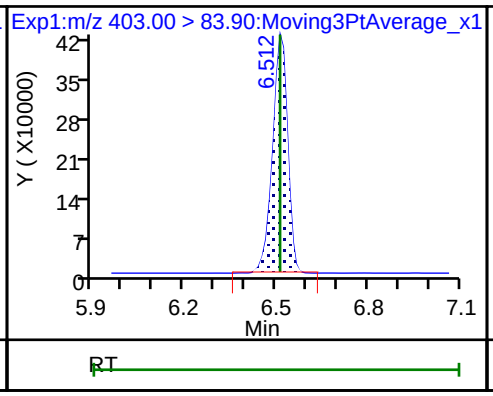
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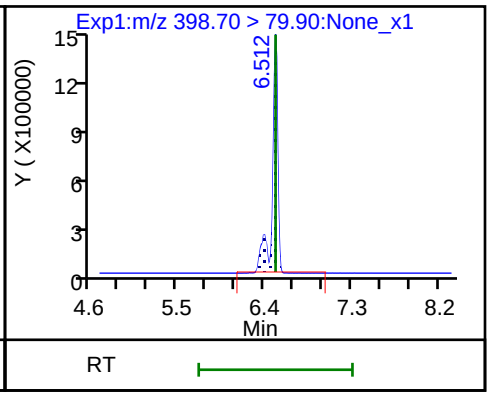
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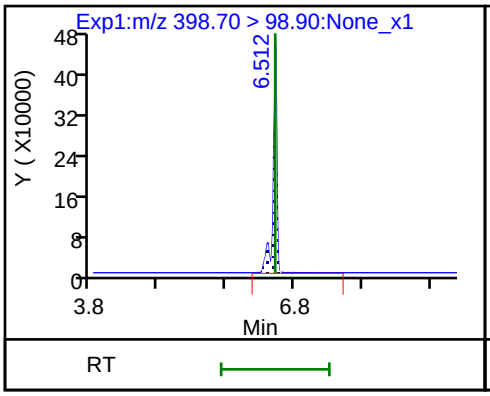
* 39 18O2 PFHxS



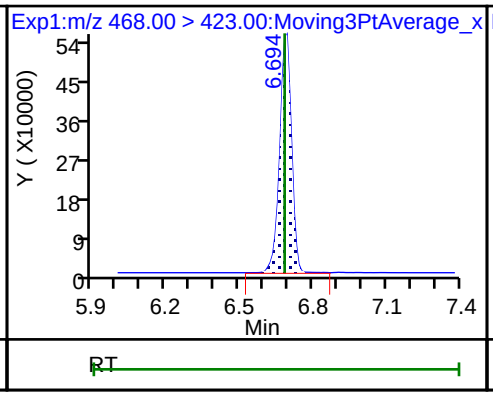
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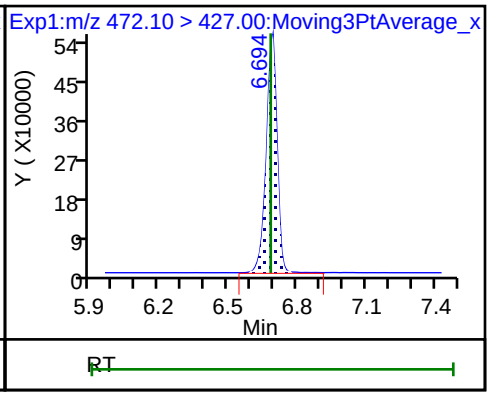
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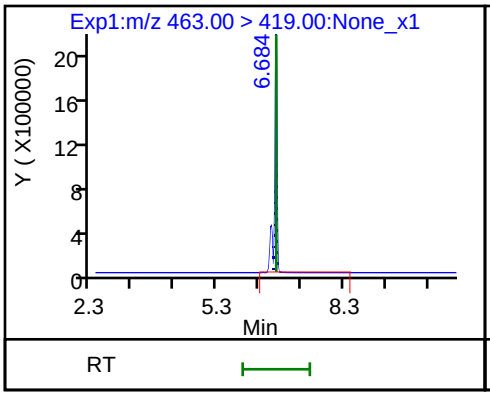
* 42 13C5 PFNA



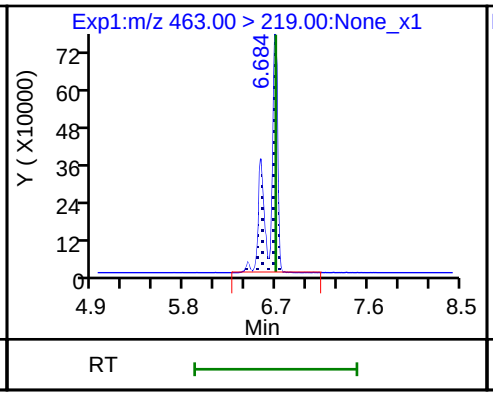
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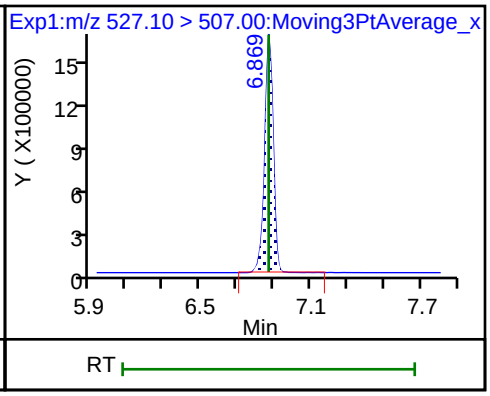
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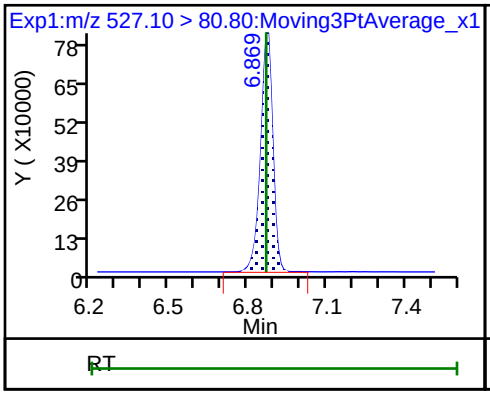
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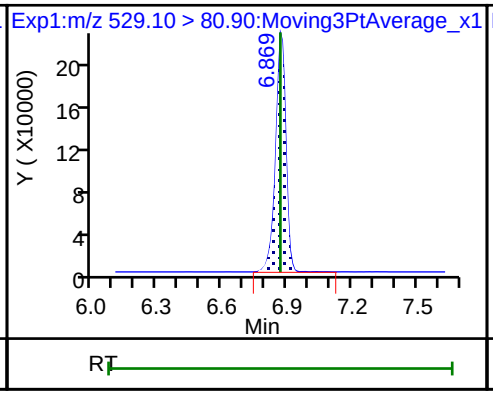
45 8:2FTS



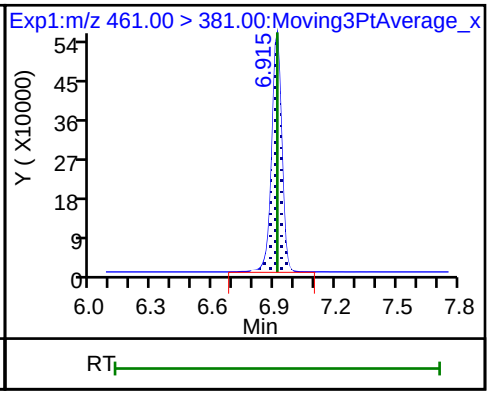
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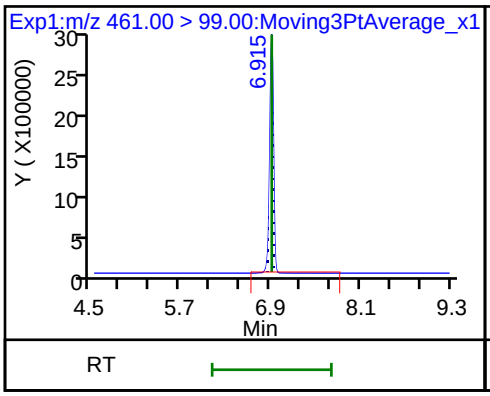
D 44 13C2-8:2FTS



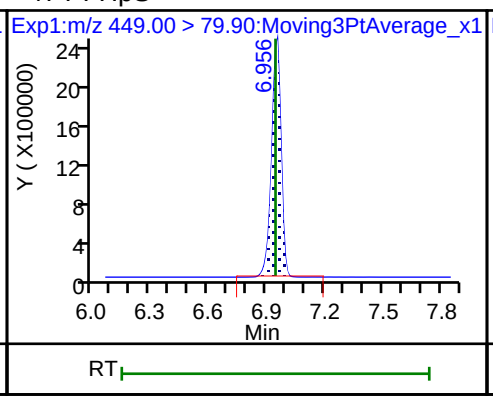
46 PFECHS



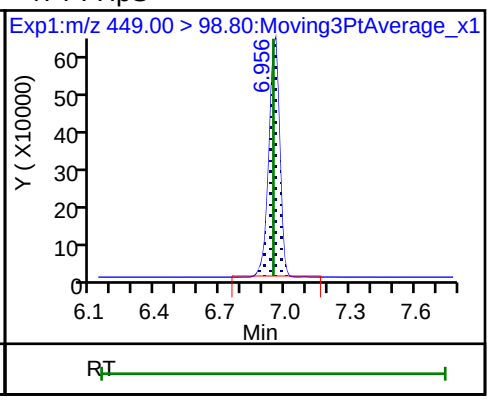
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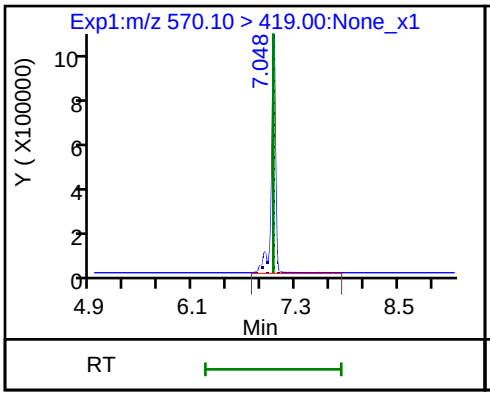
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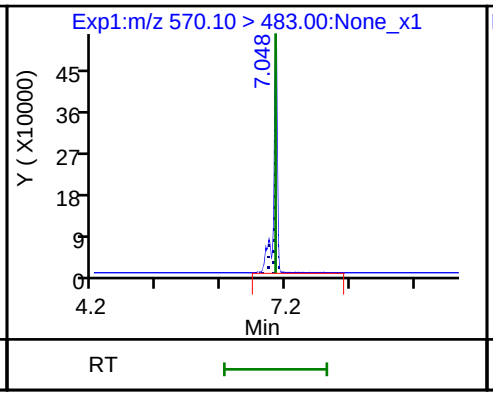
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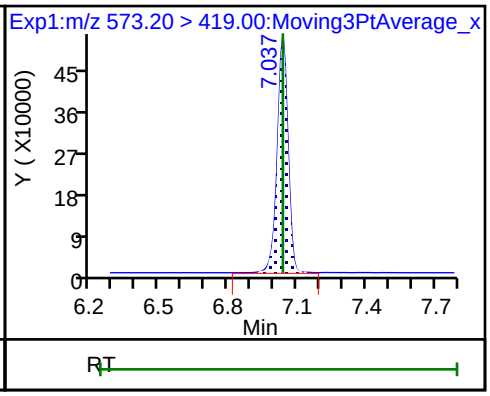
50 NMeFOSAA



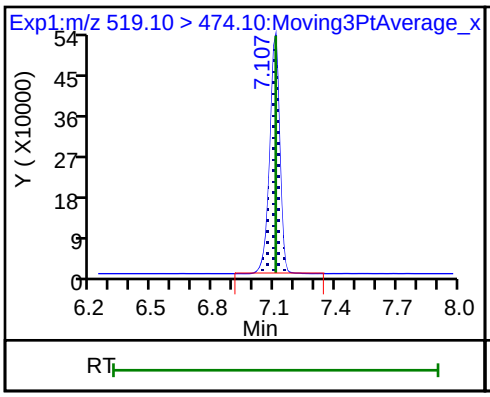
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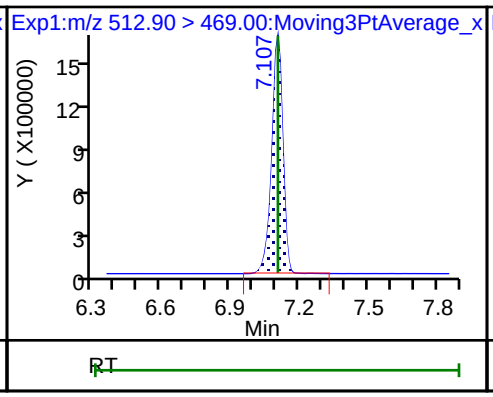
D 49 d3-NMeFOSAA



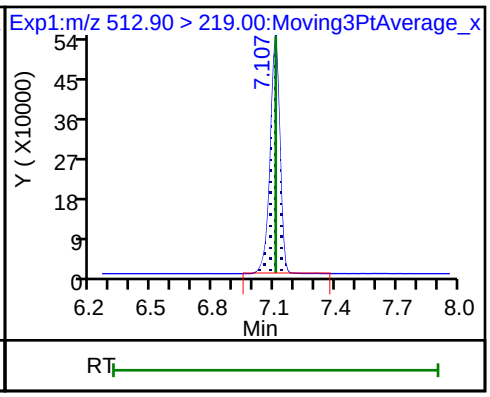
D 52 13C6 PFDA



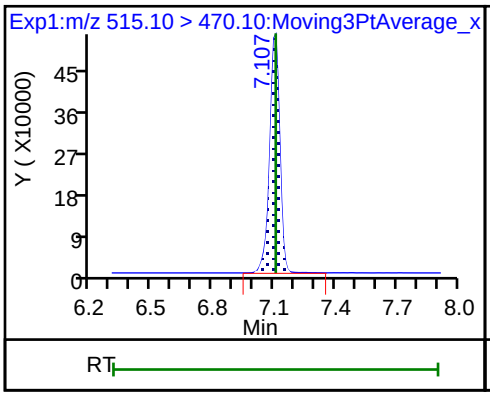
53 PFDA



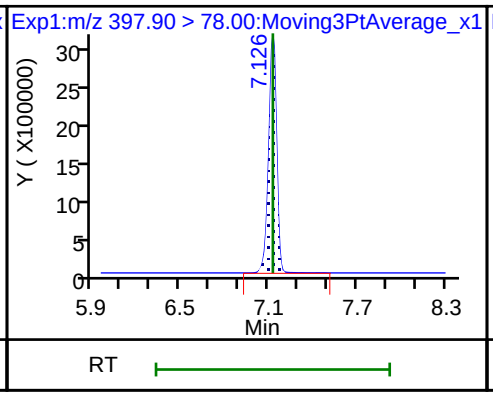
53 PFDA



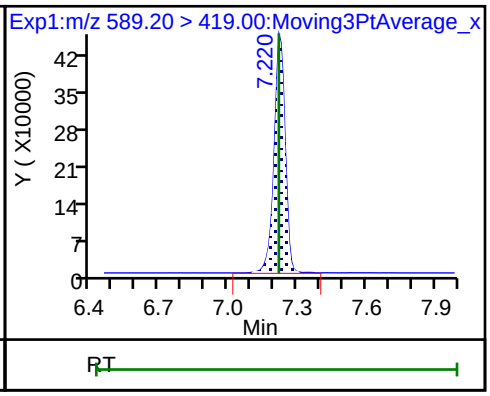
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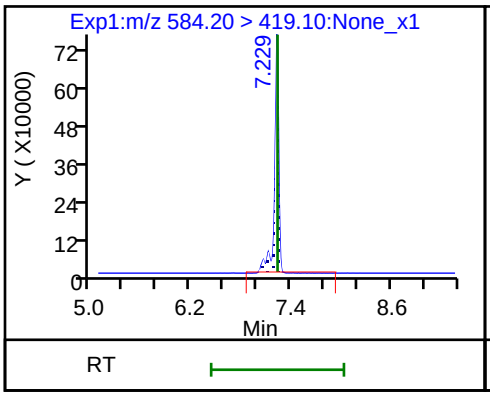
48 FHxSA



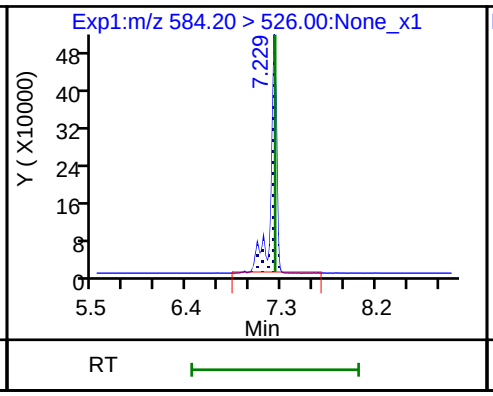
D 54 d5-NEtFOSAA



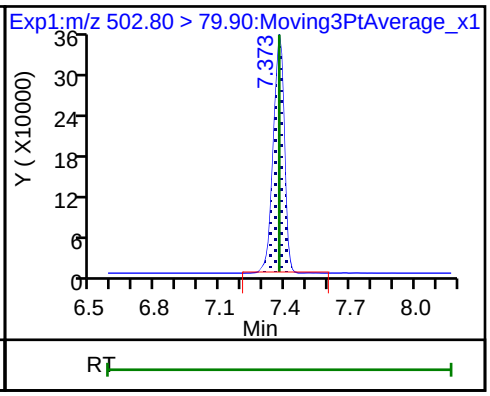
55 NEtFOSAA



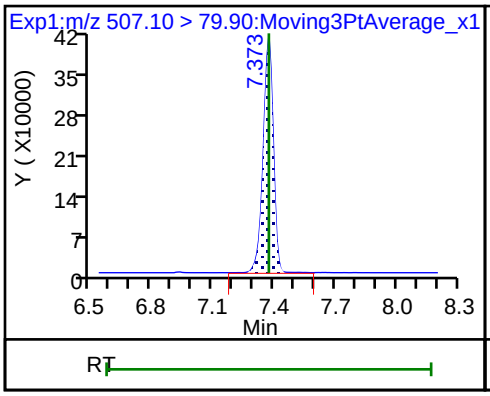
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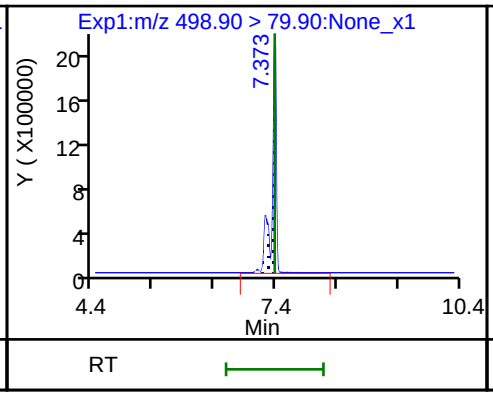
* 57 13C4 PFOS



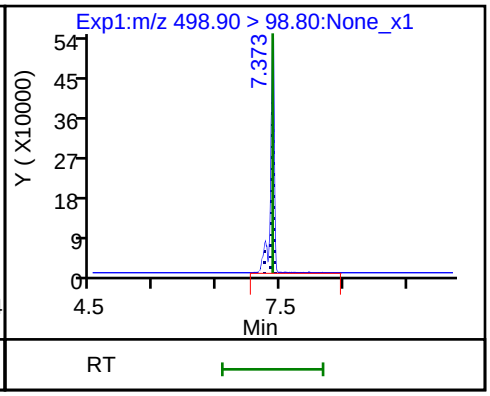
D 56 13C8 PFOS



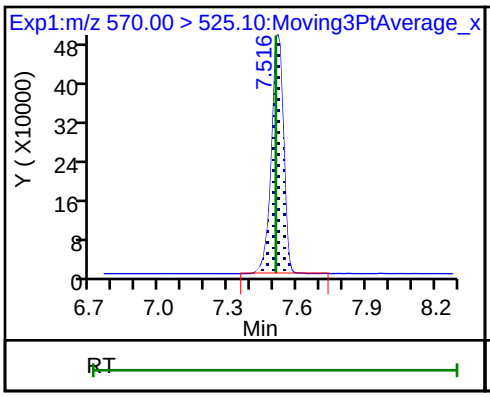
58 PFOS



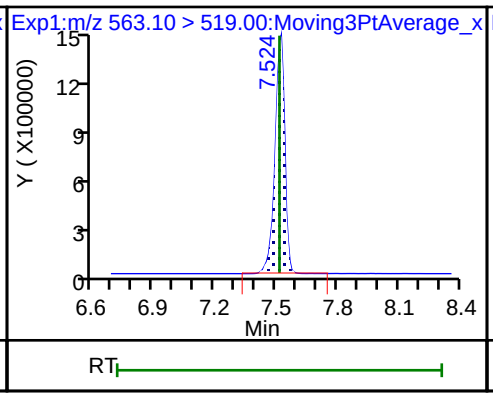
58 PFOS



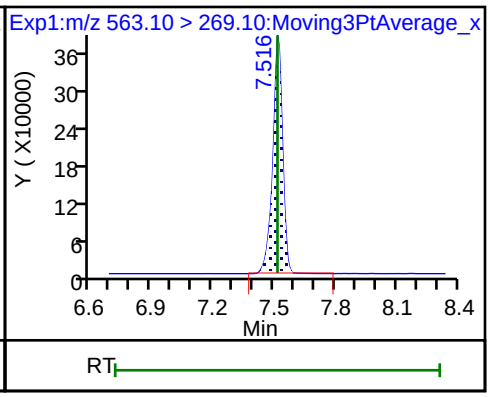
D 59 13C7 PFUnA



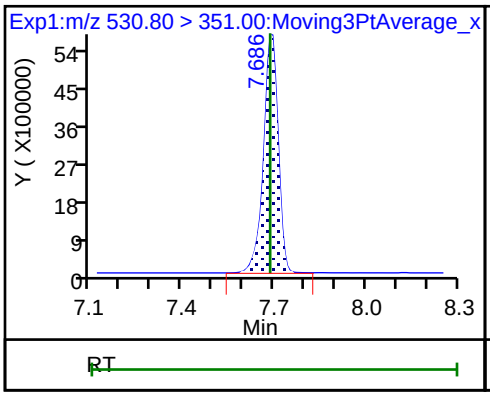
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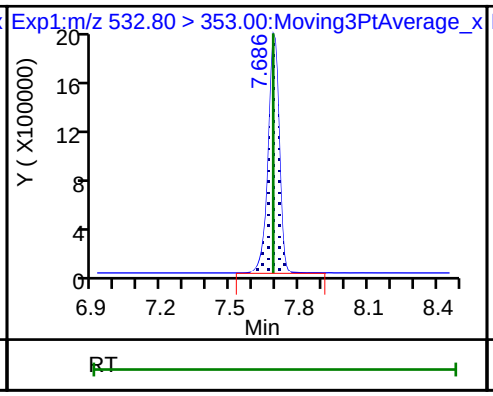
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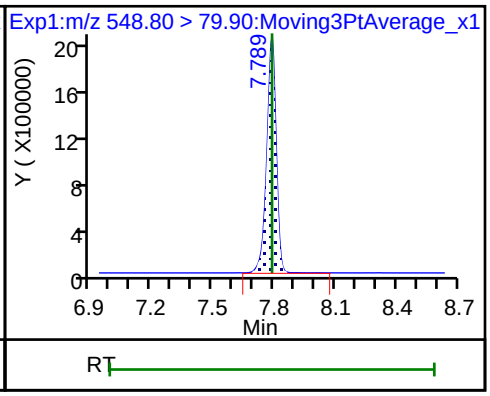
61 9ClFOS



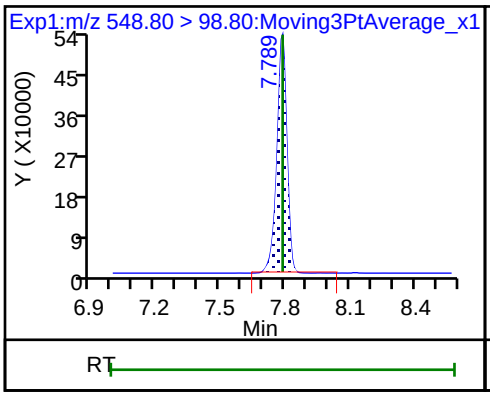
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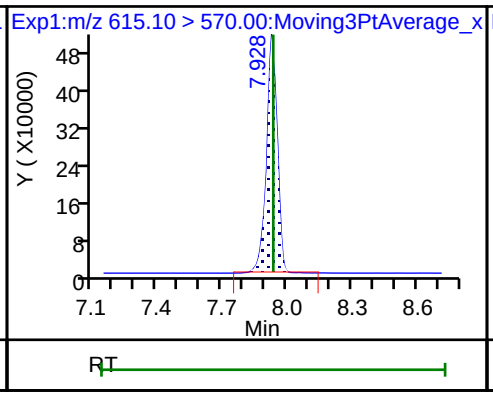
62 PFNS



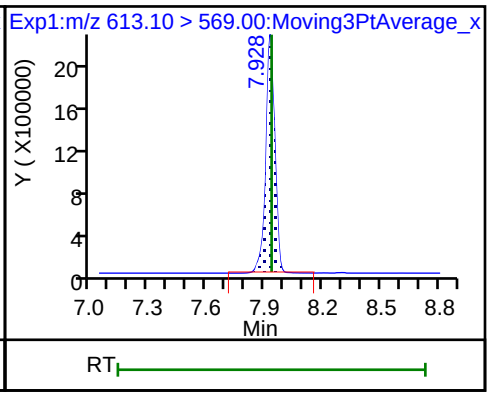
62 PFNS



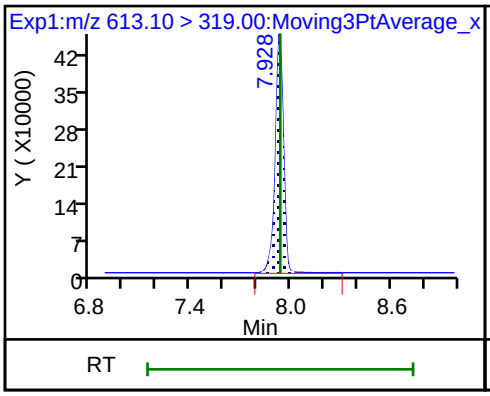
D 81 PFDoA



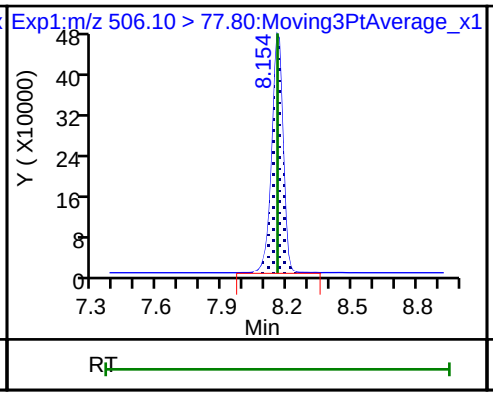
63 PFDoA



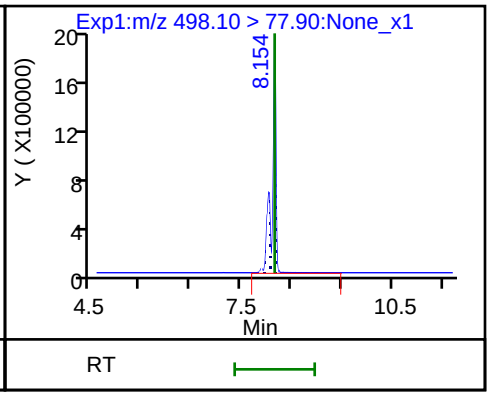
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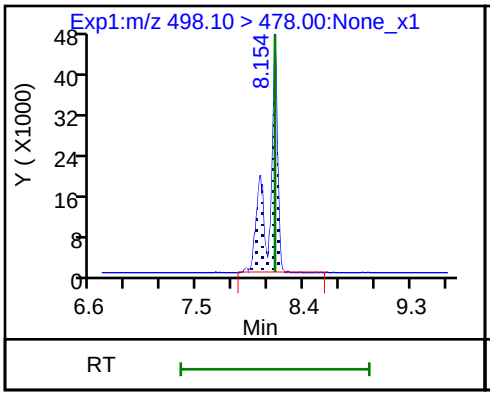
D 65 13C8 FOSA



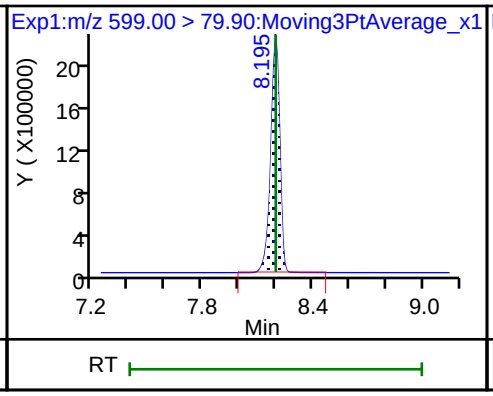
64 PFOSA



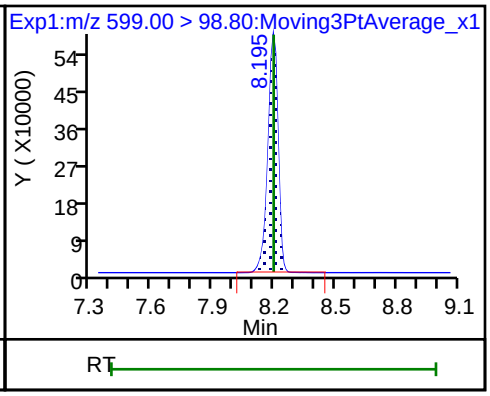
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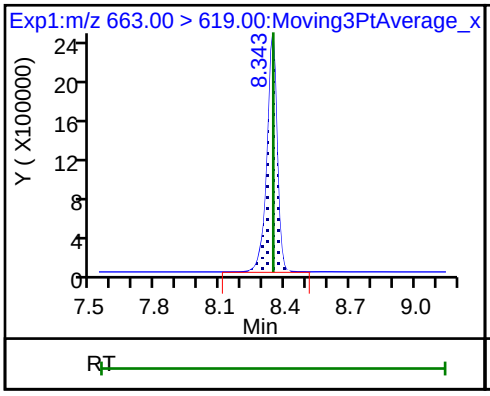
66 PFDS



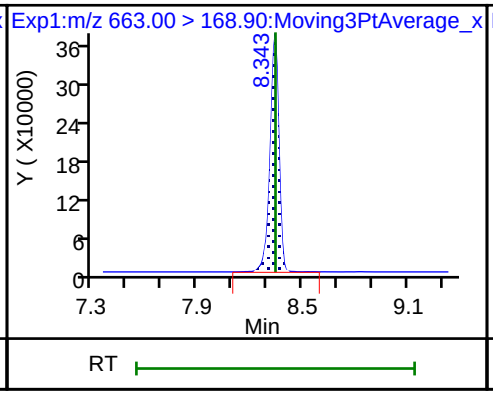
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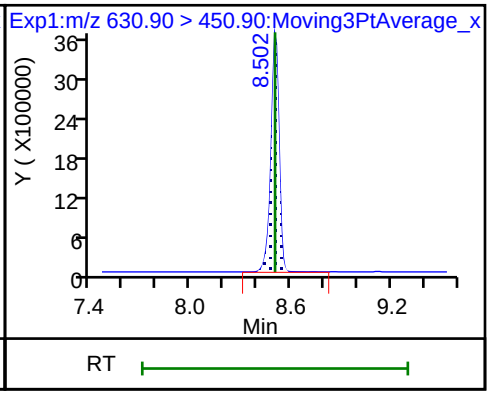
67 PFTrDA



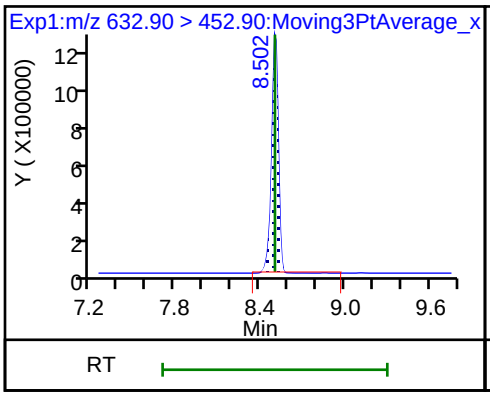
67 PFTrDA



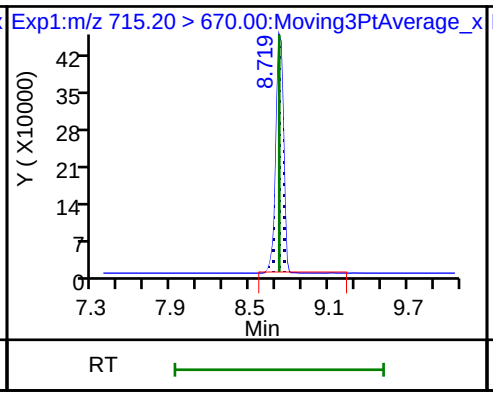
68 11ClFOS



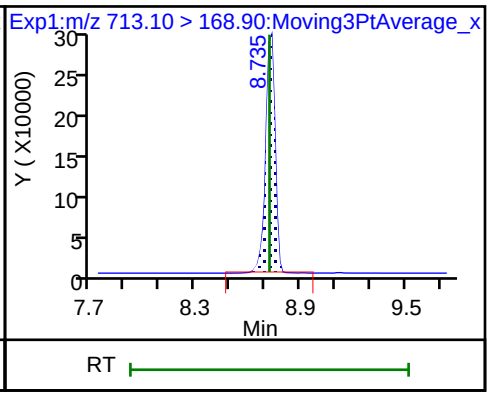
68 11ClFOS



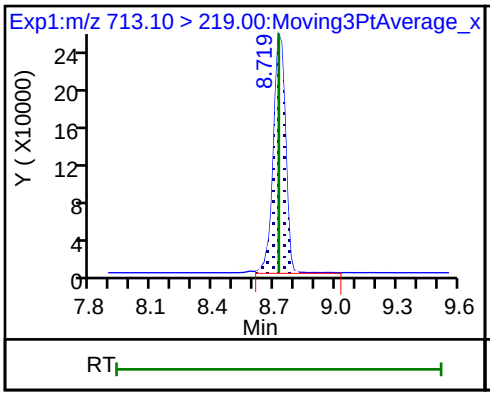
D 70 13C2 PFTeDA



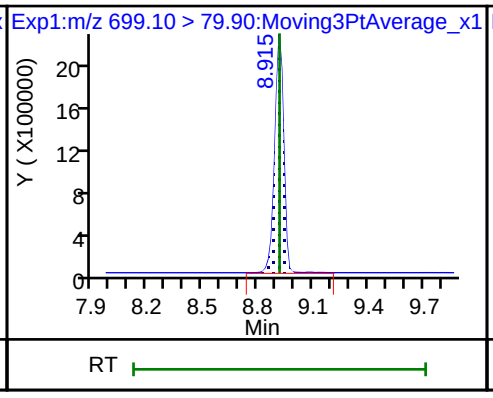
69 PFTeDA



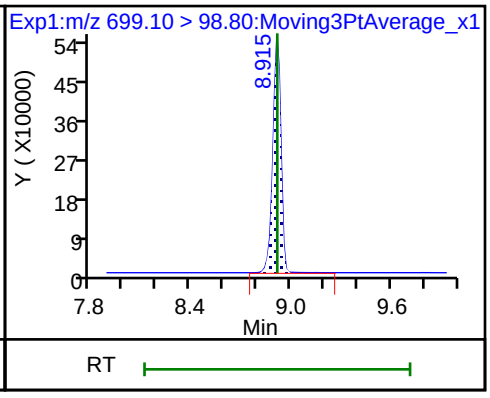
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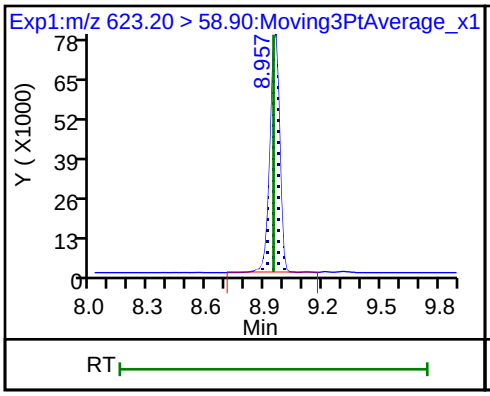
71 PFDoS



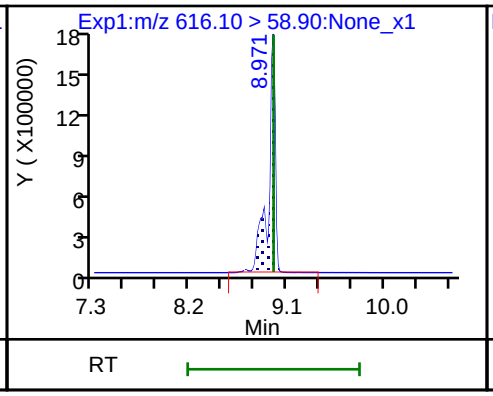
71 PFDoS



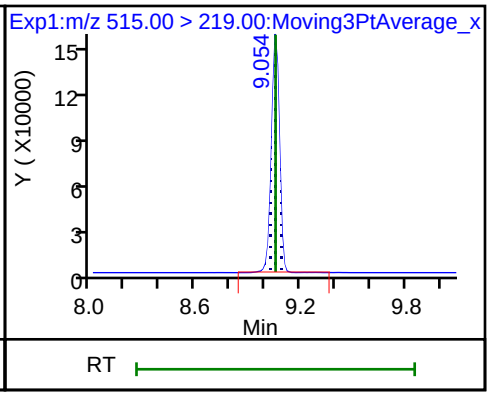
D 72 d7-N-Me-FOSE



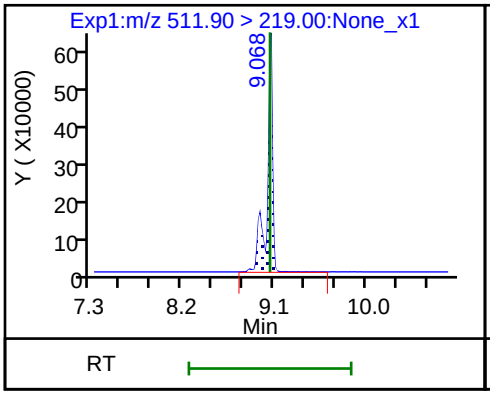
73 N-MeFOSE-M



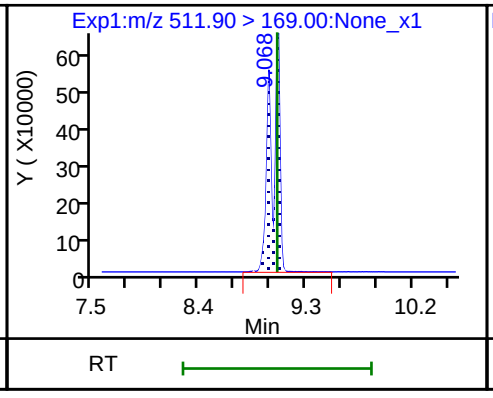
D 75 d3-NMePFOSA



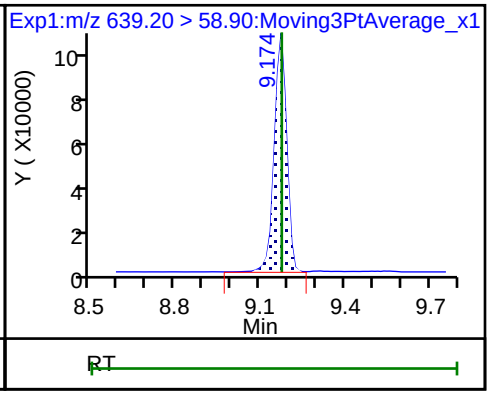
74 NMeFOSA



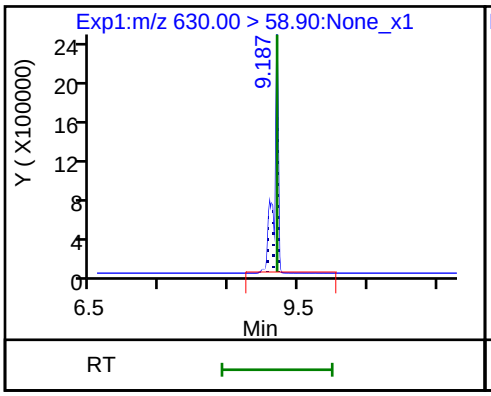
74 NMeFOSA



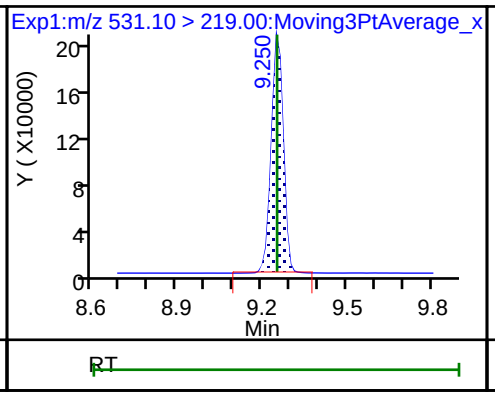
D 76 d9-N-EtFOSE



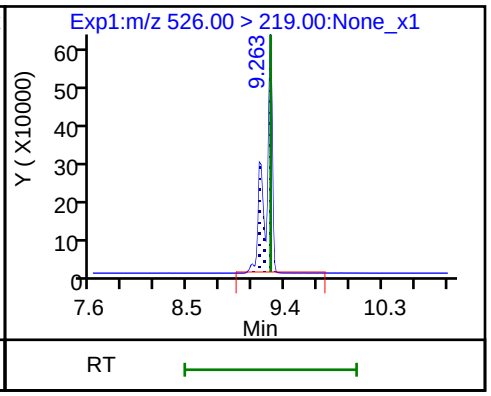
77 N-EtFOSE-M



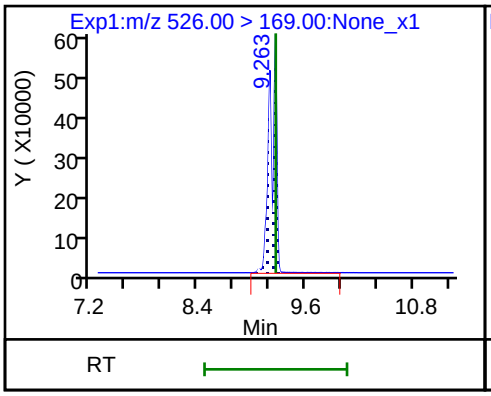
D 78 d5-NEtPFOSA



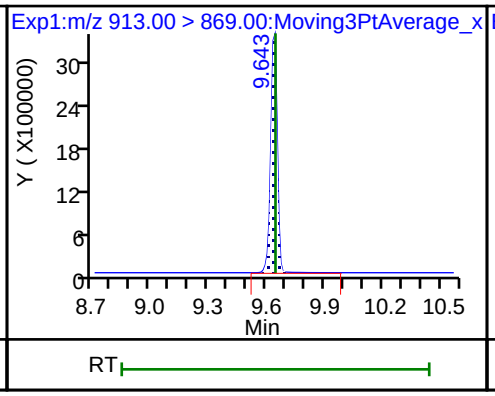
79 N-EtFOSA-M



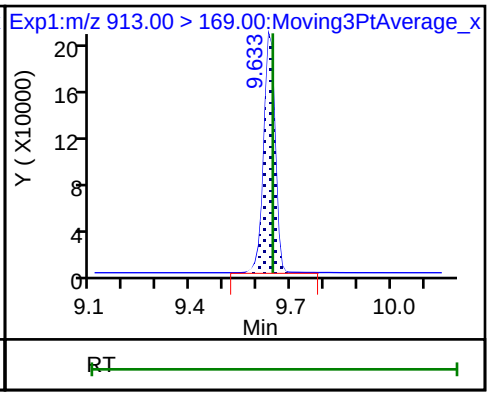
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d
Lims ID: IC CAL 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 16-Feb-2026 21:57:13 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 8
Misc. Info.: Plate: 1 Rack: 1 410-0175852-008
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 08:22:14 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:43:27
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.00 > 121.00	2.167	2.133	0.034	0.502	1117656	3.41		170	2089	
3 PFBA										
212.80 > 168.90	4.310	4.302	0.008	0.998	40468938	96.3		96.3	625167	
D 4 13C4-PFBA										
216.80 > 171.90	4.317	4.309	0.008	1.000	917538	1.97		98.6	4748	
* 5 13C3PFBA										
216.00 > 172.00	4.317	4.309	0.008		945628	2.00			1807	
D 8 13C5 PFPeA										
268.30 > 223.00	4.953	4.959	-0.006	0.914	1218861	1.89		94.7	3232	
9 PFPA										
263.00 > 219.00	4.953	4.959	-0.006	1.000	31772856	45.4		90.8	12449	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.228	5.235	-0.007	0.804	971825	6.66		142	5486	
* 16 13C2 PFHxA										
315.10 > 270.00	5.419	5.424	-0.005		3626438	5.00			5466	
D 15 13C5 PFHxA										
318.00 > 273.00	5.419	5.424	-0.005	1.000	1475003	1.87		93.4	3924	
17 PFHxA										
313.00 > 269.00	5.419	5.424	-0.005	1.000	27817305	50.6	Target=9.95	101	18360	
313.00 > 118.90	5.419	5.424	-0.005	1.000	2846261		9.77(4.98-14.93)	101	4049	
D 19 13C3 PFBS										
302.10 > 79.90	5.553	5.561	-0.008	0.854	1314971	1.89		101	3284	
20 PFBS										
298.70 > 79.90	5.565	5.561	0.004	1.002	24318007	38.6	Target=3.17	86.9	8417	
298.70 > 98.80	5.565	5.561	0.004	1.002	7824078		3.11(1.59-4.76)	86.9	5491	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.611	5.607	0.004	1.036	931799	1.81		90.6	2927	
23 HFPO-DA										
284.90 > 168.90	5.611	5.607	0.004	1.000	24004142	47.6	Target=2.55	95.1	4777	
284.90 > 184.90	5.611	5.607	0.004	1.000	9489825		2.53(1.27-3.82)	95.1	4465	
D 28 13C4 PFHpA										
367.10 > 322.00	5.844	5.851	-0.007	1.079	1367446	1.77		88.5	4499	
27 PFHpA										
363.10 > 319.00	5.844	5.851	-0.007	1.000	24415111	50.9	Target=1.64	102	8621	
363.10 > 169.00	5.844	5.851	-0.007	1.000	13906055		1.76(0.82-2.46)	102	4332	
29 ADONA										
376.90 > 250.90	6.001	6.007	-0.006	1.069	53823324	33.6	Target=2.22	94.7	9224	
376.90 > 84.80	6.001	6.007	-0.006	1.069	25205847		2.14(1.11-3.33)	94.7	5765	
30 PFPeS										
349.10 > 79.90	6.053	6.049	0.003	0.930	29927421	44.6	Target=3.23	94.9	7763	
349.10 > 98.90	6.053	6.049	0.003	0.930	9633151		3.11(1.61-4.84)	94.9	6896	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.053	6.059	-0.007	0.930	448382	3.69		77.6	3135	
* 34 13C4 PFOA										
417.10 > 372.00	6.263	6.269	-0.006		4959383	5.00			2903	
D 35 13C8 PFOA										
421.10 > 376.00	6.263	6.269	-0.006	1.000	1910849	2.01		101	4702	
36 PFOA										
413.00 > 369.00	6.273	6.269	0.004	1.002	26169202	52.0	Target=1.52	104	7725	
413.00 > 169.00	6.263	6.269	-0.006	1.000	16409947		1.59(0.76-2.27)	104	8296	
40 PFHxS										
398.70 > 79.90	6.506	6.512	-0.006	1.000	19078969	42.3	Target=3.27	92.8	32870	
398.70 > 98.90	6.517	6.512	0.005	1.002	6189866		3.08(1.63-4.90)	92.8	6626	
D 38 13C3 PFHxS										
402.10 > 79.90	6.506	6.512	-0.006	1.000	1124101	1.91		100	2956	
* 39 18O2 PFHxS										
403.00 > 83.90	6.506	6.512	-0.006		1024698	1.90			1891	
* 42 13C5 PFNA										
468.00 > 423.00	6.679	6.684	-0.005		1280182	2.00			3828	
D 41 13C9 PFNA										
472.10 > 427.00	6.679	6.684	-0.005	1.000	1393634	2.18		109	2269	
43 PFNA										
463.00 > 419.00	6.689	6.694	-0.005	1.001	30144518	47.6	Target=2.14	95.2	46497	
463.00 > 219.00	6.679	6.694	-0.015	1.000	14228142		2.12(1.07-3.21)	95.2	7047	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.865	6.868	-0.003	1.055	841018	6.73		140	4201	
47 PFHpS										
449.00 > 79.90	6.939	6.945	-0.006	0.942	29925955	45.6	Target=3.71	95.7	10978	
449.00 > 98.80	6.939	6.945	-0.006	0.942	7716013		3.88(1.86-5.57)	95.7	6740	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.031	7.037	-0.006	0.954	1584090	6.72		134	4791	
* 51 13C2 PFDA										
515.10 > 470.10	7.100	7.107	-0.006		1840991	2.00			3510	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 52 13C6 PFDA										
519.10 > 474.10	7.091	7.107	-0.015	0.999	1871666	2.04		102	4997	
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.223	7.219	0.004	0.980	1358252	6.30		126	2491	
* 57 13C4 PFOS										
502.80 > 79.90	7.367	7.373	-0.006		943565	1.92			3780	
D 56 13C8 PFOS										
507.10 > 79.90	7.367	7.373	-0.006	1.000	1000118	1.83		95.4	2906	
58 PFOS										
498.90 > 79.90	7.367	7.373	-0.006	1.000	32982885	45.8	Target=4.60	98.5	53083	
498.90 > 98.80	7.367	7.373	-0.006	1.000	7114623		4.64(2.30-6.89)	98.5	11359	
D 59 13C7 PFUnA										
570.00 > 525.10	7.511	7.506	0.005	1.058	1960917	2.05		102	4515	
D 81 PFDoA										
615.10 > 570.00	7.931	7.935	-0.004	1.117	1925634	2.01		101	4708	
D 65 13C8 FOSA										
506.10 > 77.80	8.149	8.155	-0.006	1.106	1639818	2.81		140	5285	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.724	8.722	0.002	1.229	1892663	2.15		108	4818	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.947	8.945	0.002	1.214	291230	7.52		150	878	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.058	9.057	0.001	1.229	445939	2.63		131	4103	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.165	9.176	-0.011	1.244	319824	7.24		145	725	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.254	9.252	0.002	1.256	541815	2.62		131	2469	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL8_00034 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 08:22:16 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Injection Date: 16-Feb-2026 21:57:13 Instrument ID: 30577

Lims ID: IC CAL 8

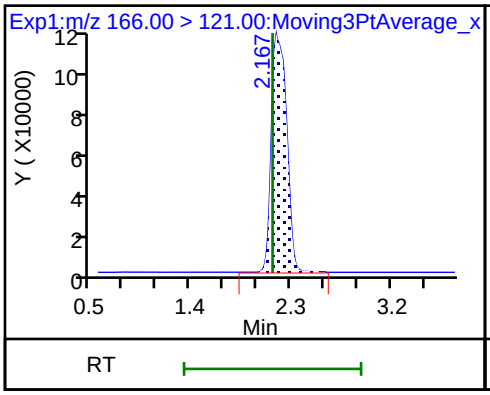
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Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 9 Worklist Smp#: 8

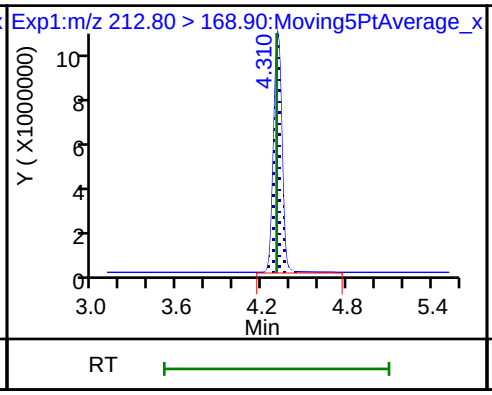
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

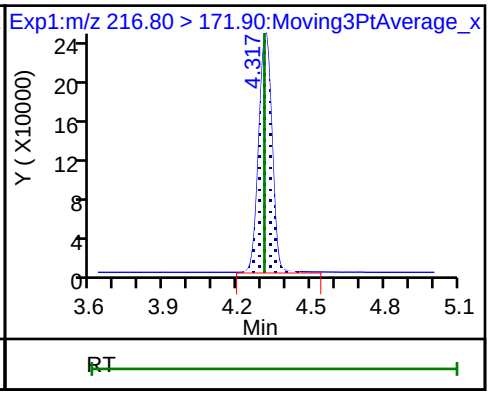
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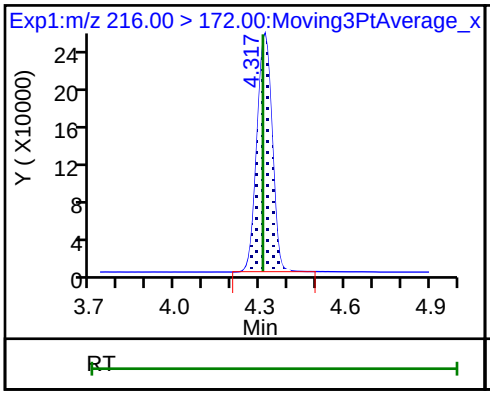
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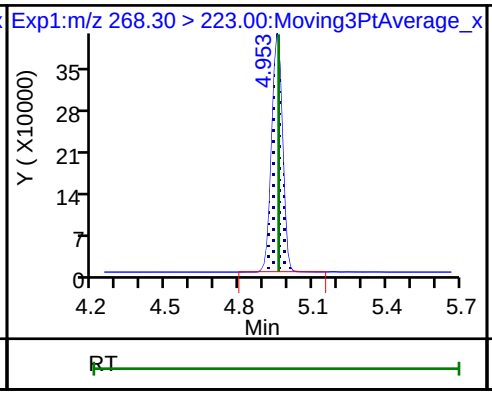
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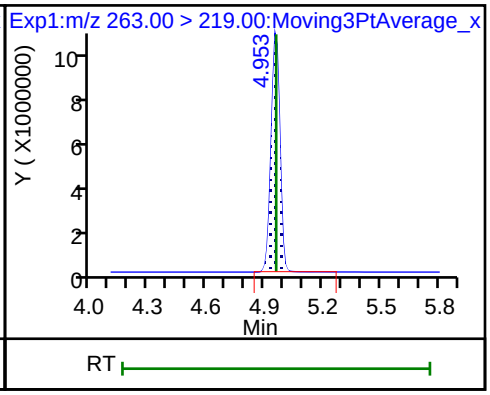
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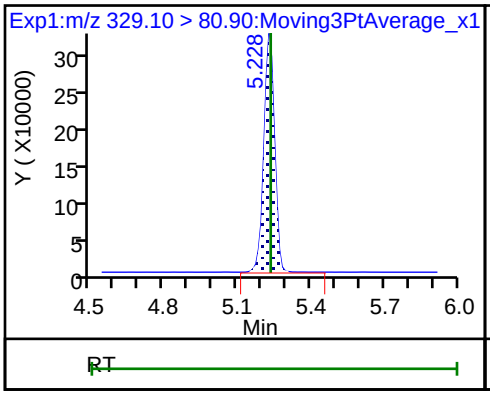
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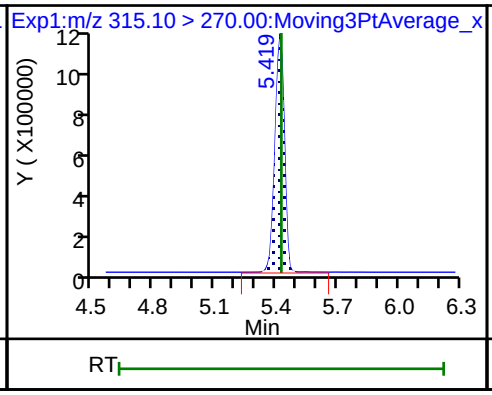
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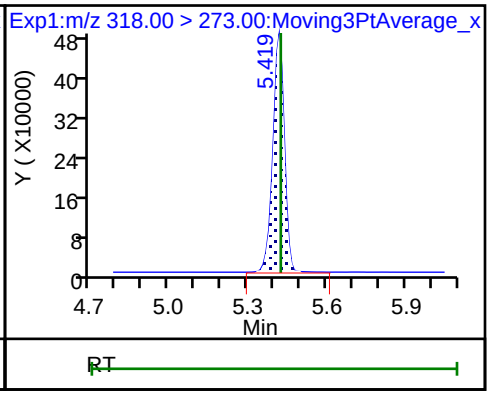
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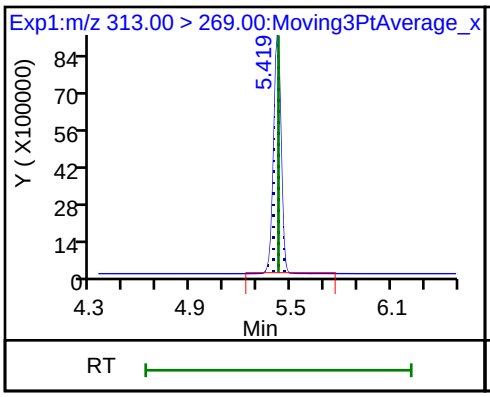
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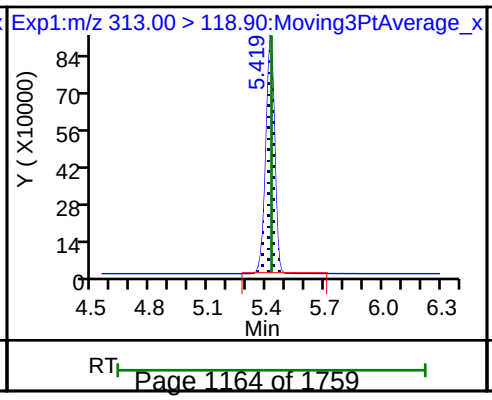
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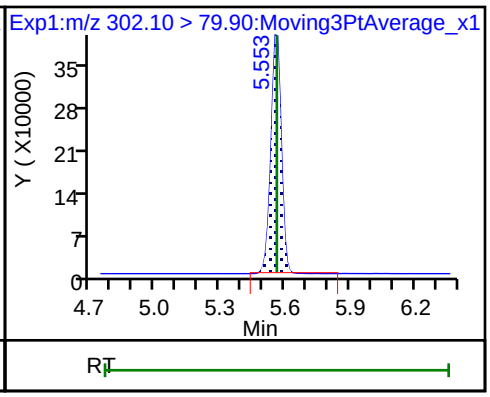
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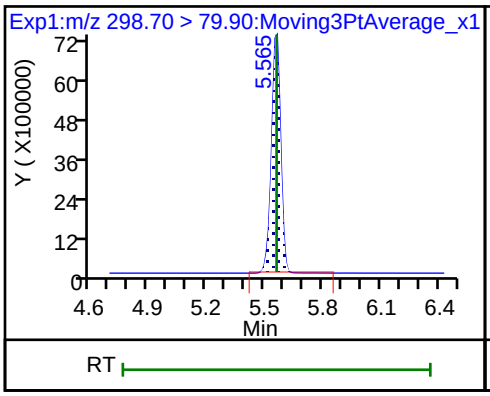
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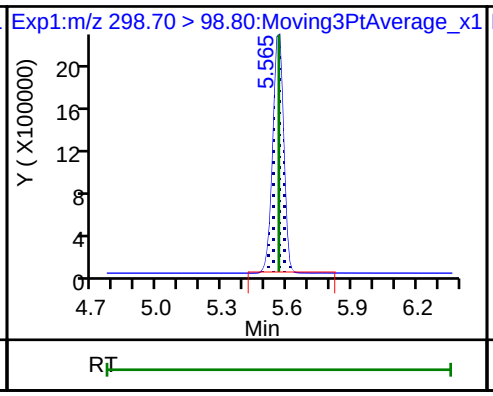
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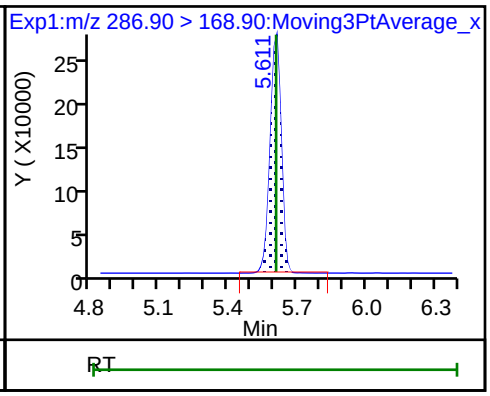
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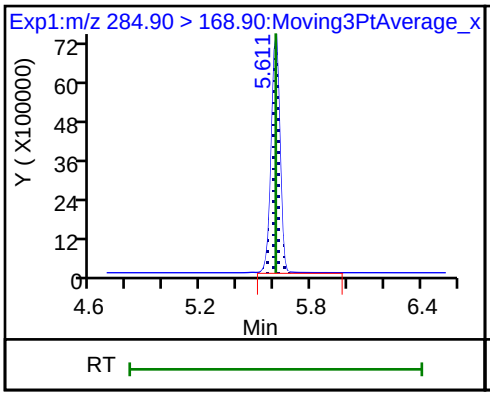
20 PFBS



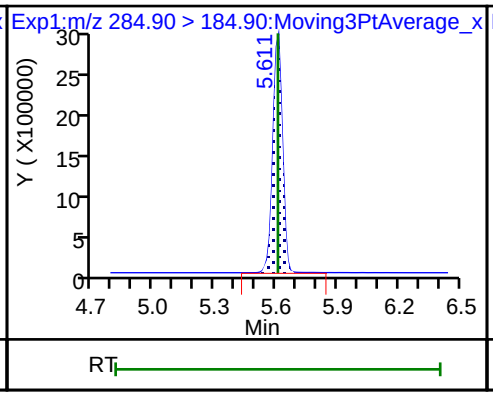
D 22 13C3 HFPO-DA



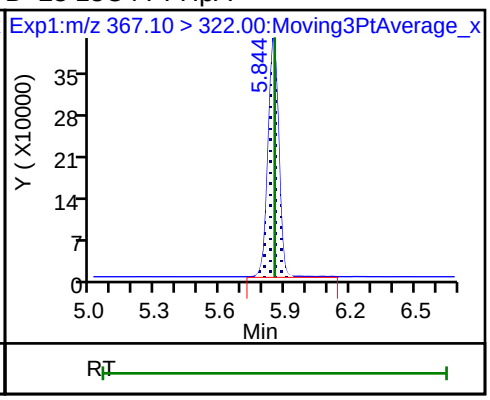
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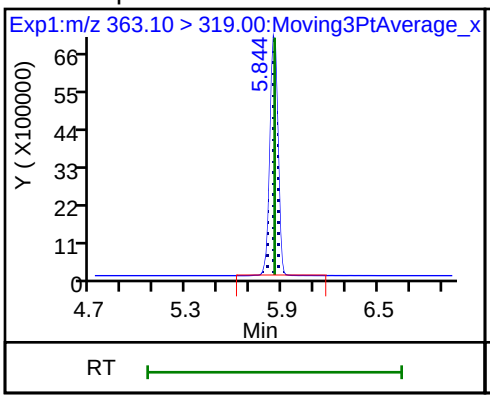
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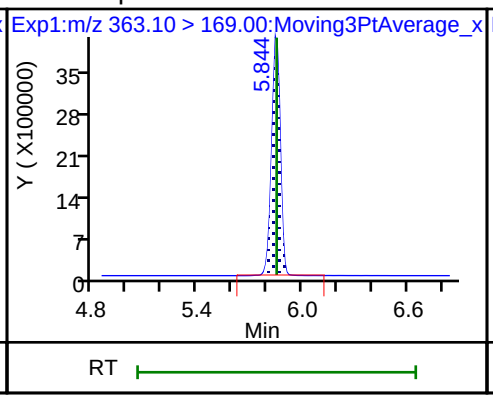
D 28 13C4 PFHpA



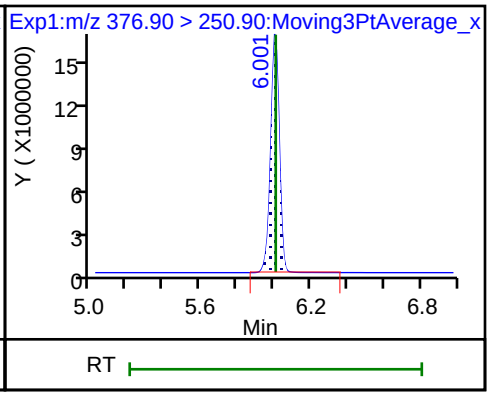
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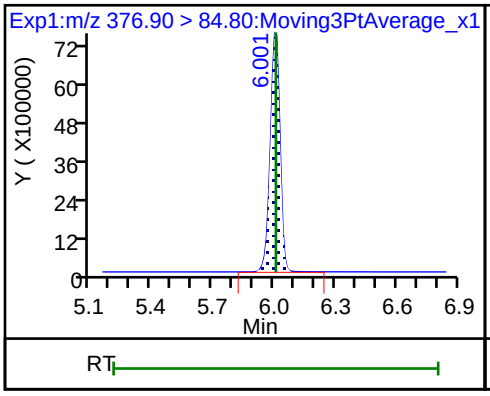
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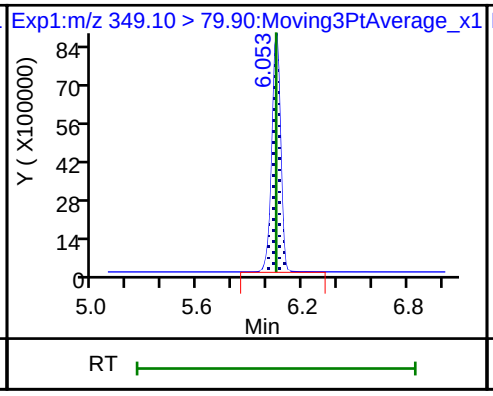
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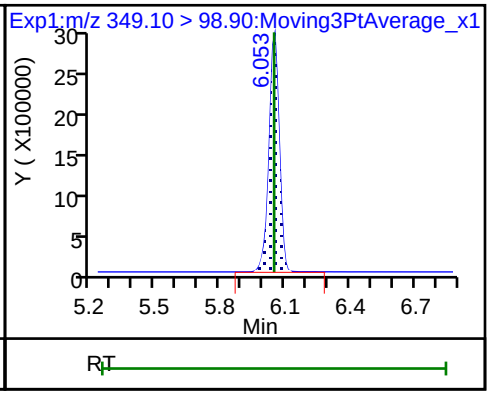
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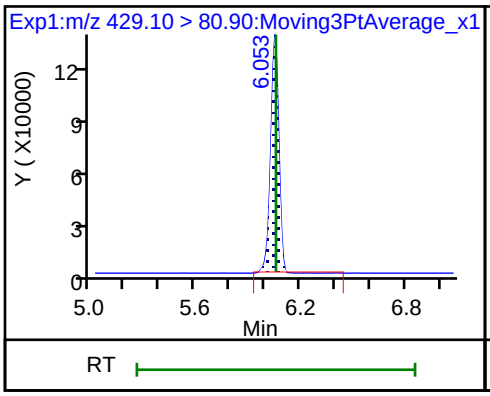
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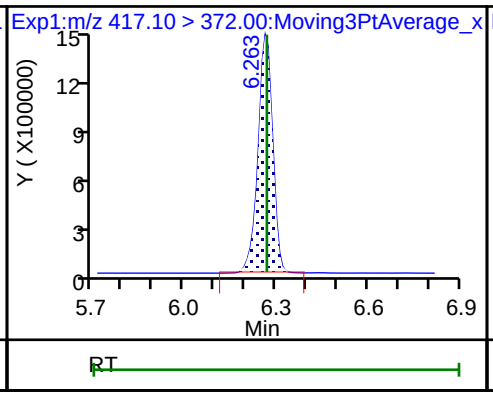
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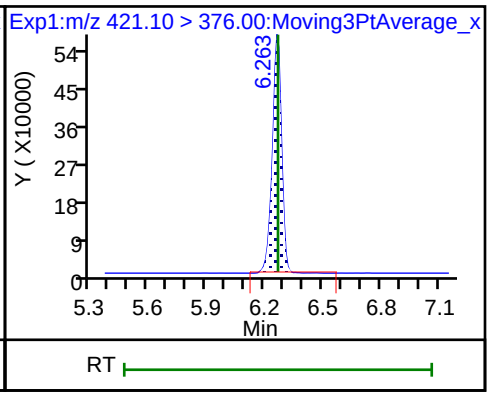
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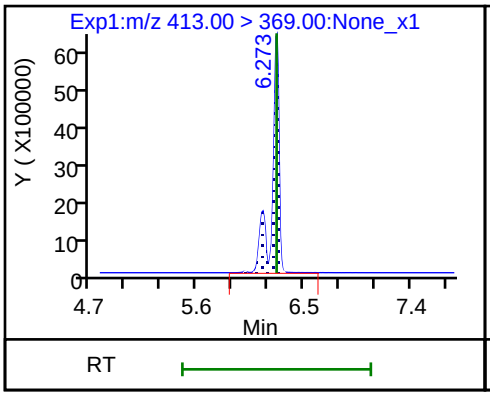
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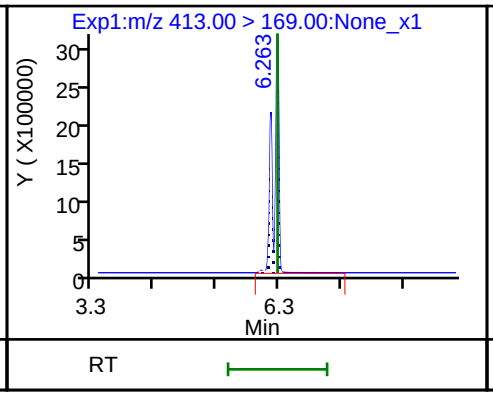
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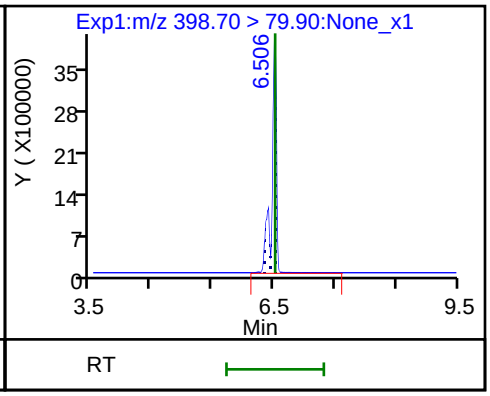
36 PFOA



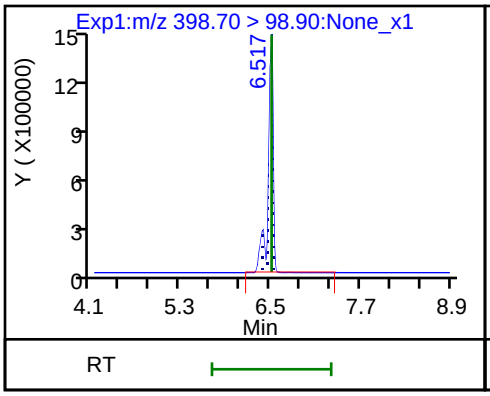
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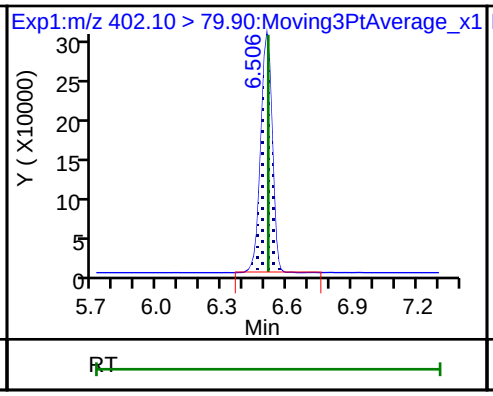
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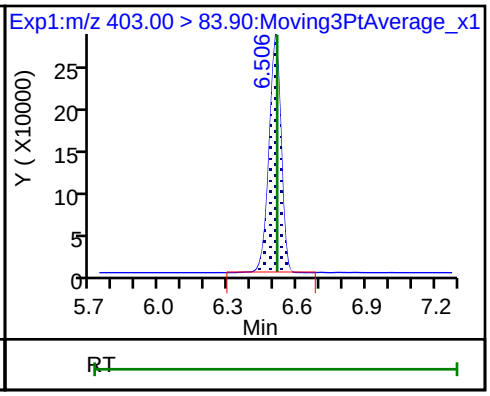
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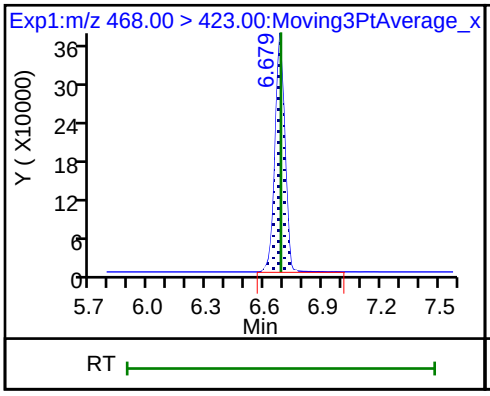
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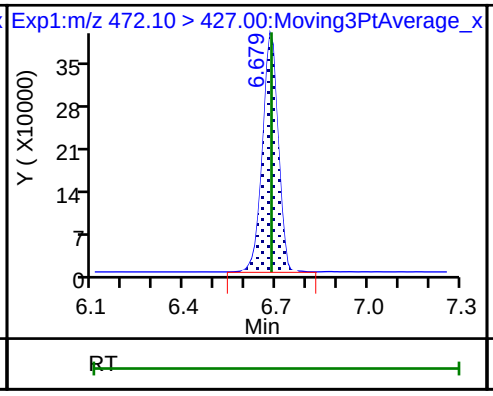
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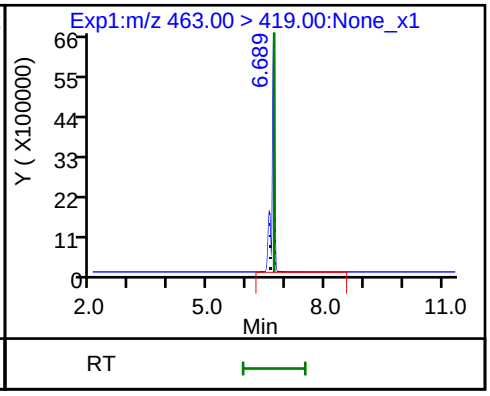
* 42 13C5 PFNA



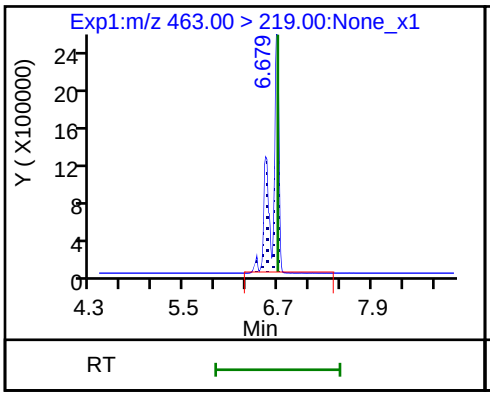
D 41 13C9 PFNA



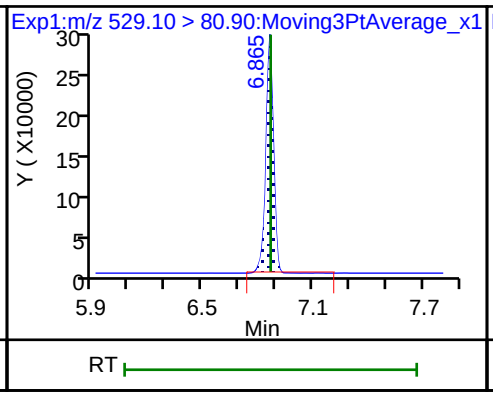
43 PFNA



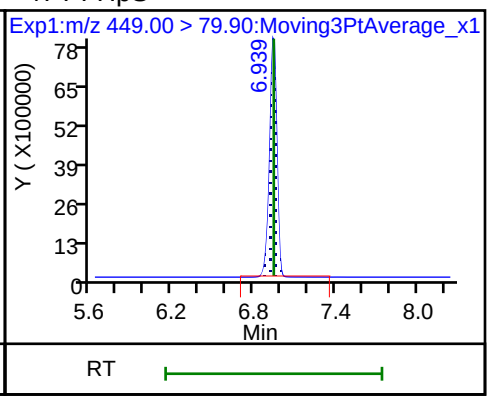
43 PFNA



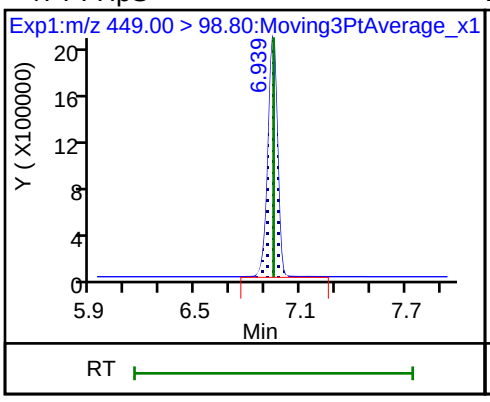
D 44 13C2-8:2FTS



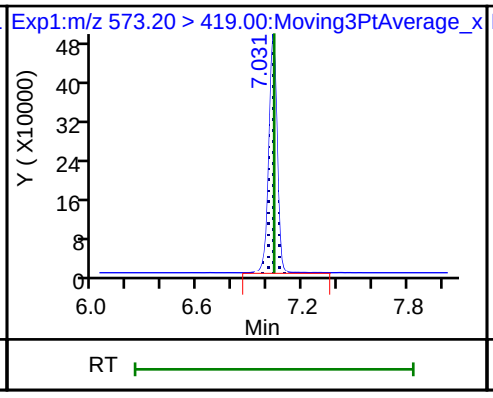
47 PFHpS



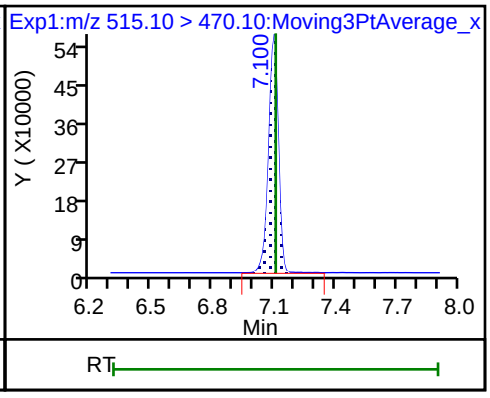
47 PFHpS



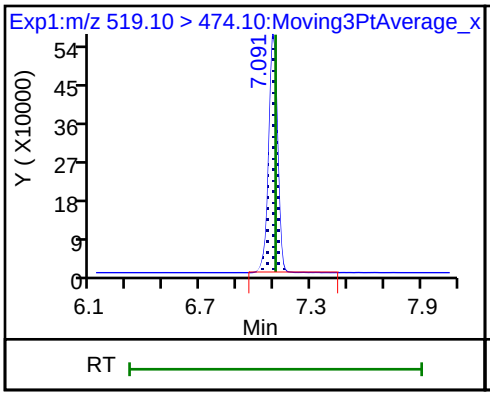
D 49 d3-NMeFOSAA



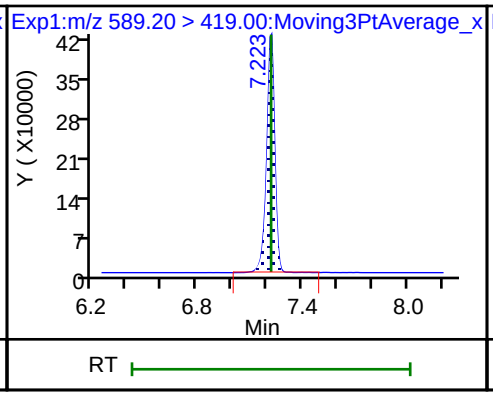
* 51 13C2 PFDA



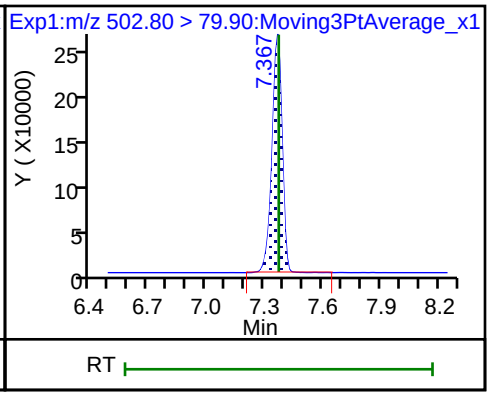
D 52 13C6 PFDA



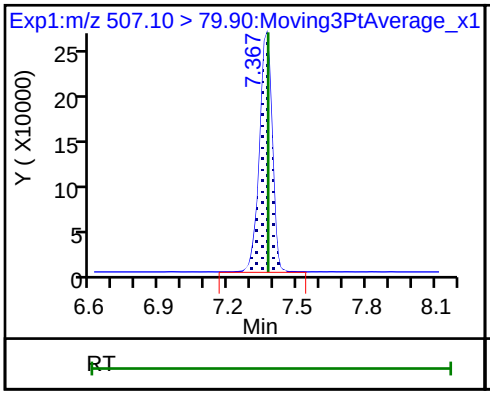
D 54 d5-NEtFOSAA



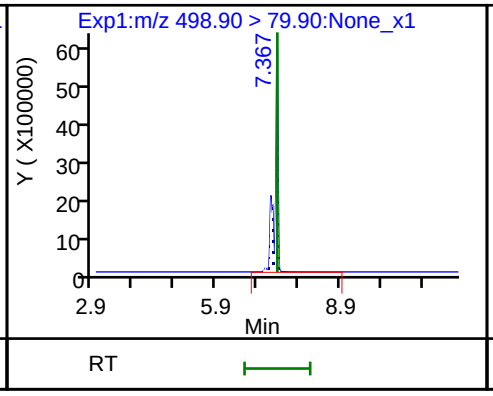
* 57 13C4 PFOS



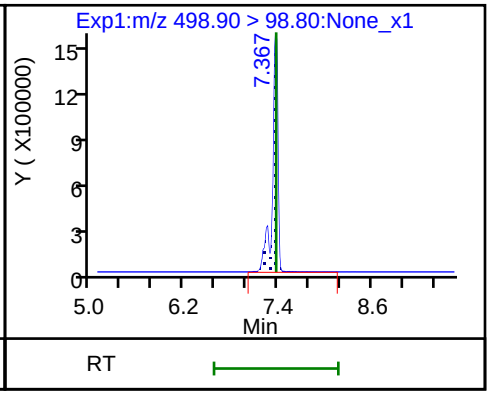
D 56 13C8 PFOS



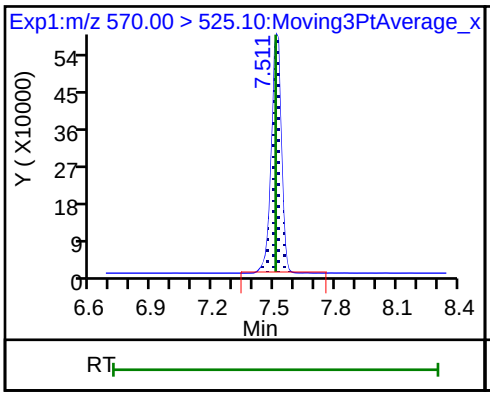
58 PFOS



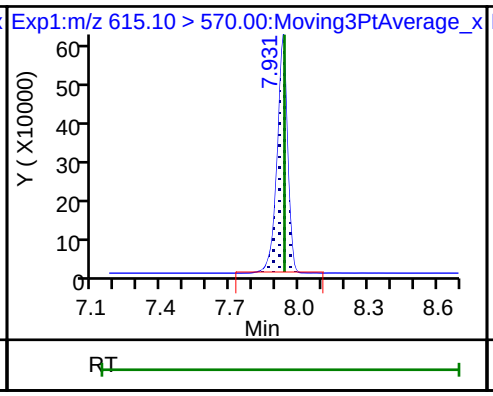
58 PFOS



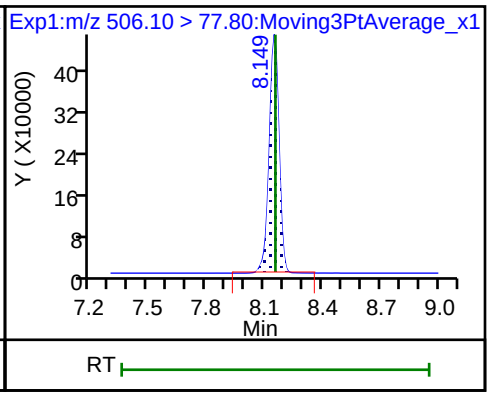
D 59 13C7 PFUnA



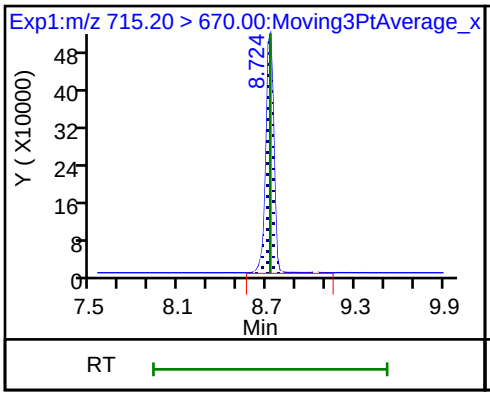
D 81 PFDoA



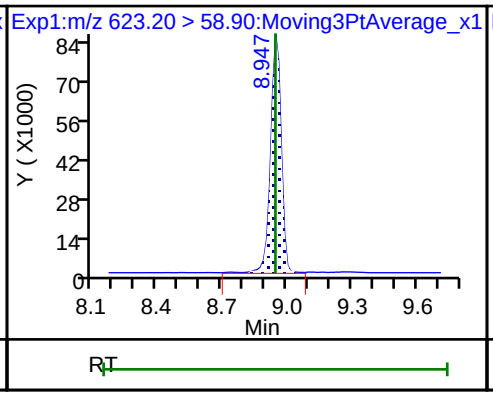
D 65 13C8 FOSA



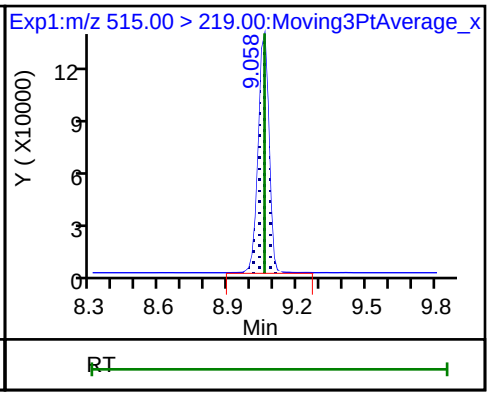
D 70 13C2 PFTeDA



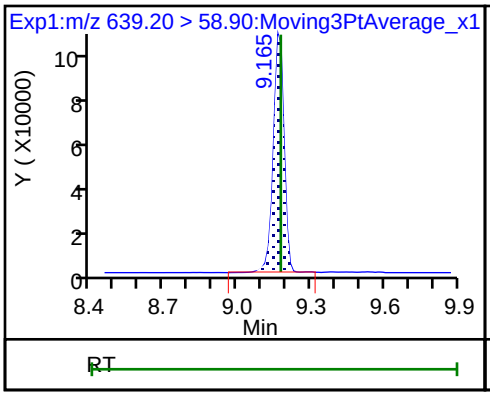
D 72 d7-N-Me-FOSE



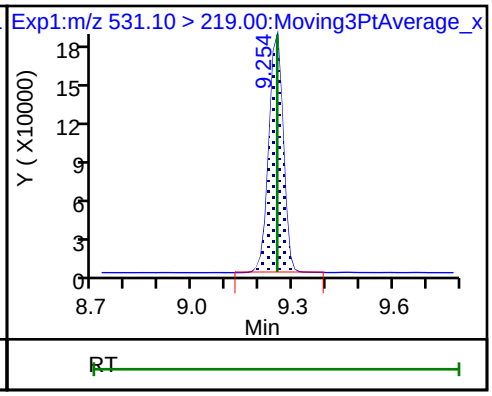
D 75 d3-NMePFOSA



D 76 d9-N-EtFOSE



D 78 d5-NEtPFOSA



Calibration / Perfluoropropionic acid

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

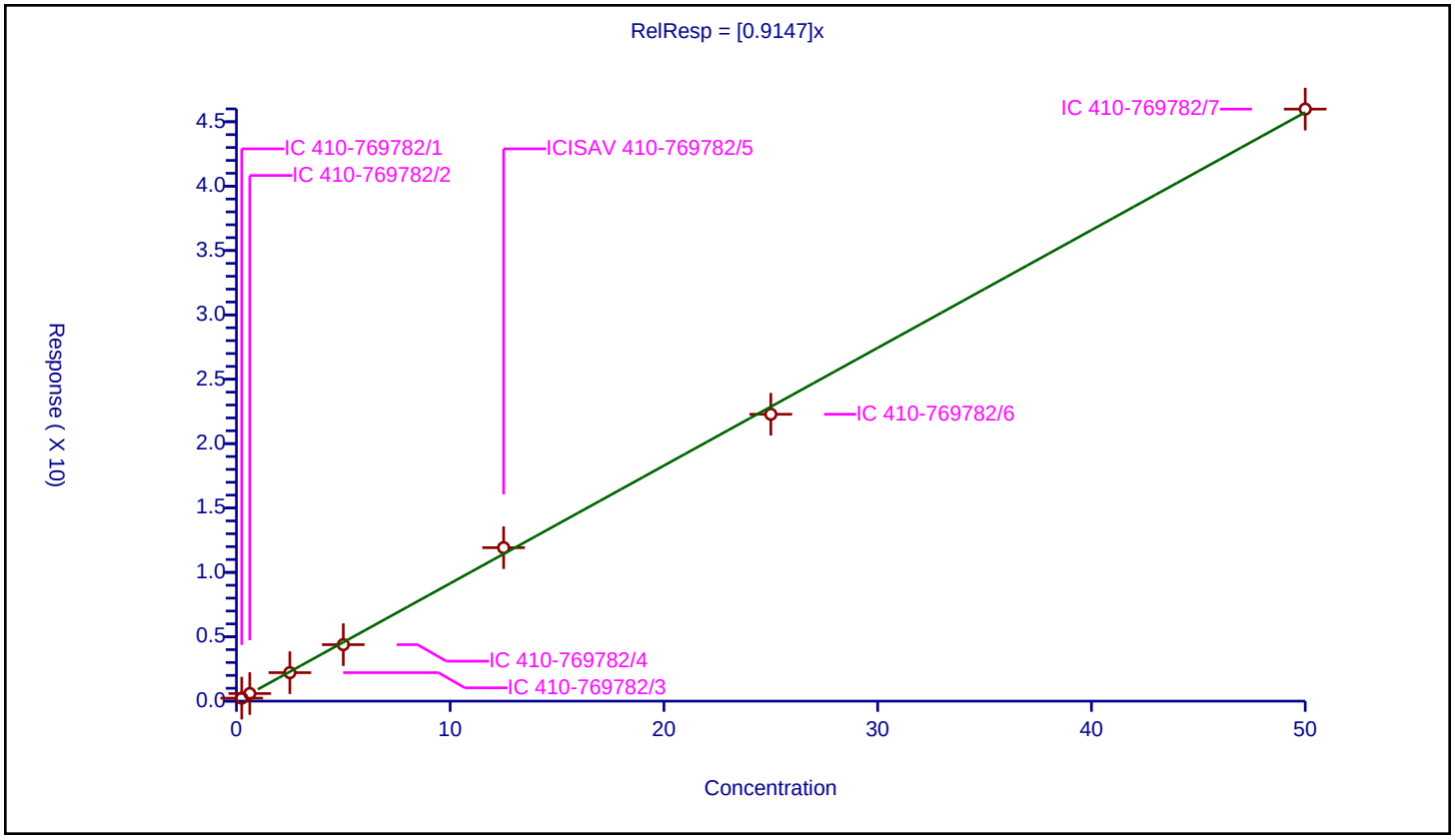
Curve Coefficients

Intercept:	0
Slope:	0.9147

Error Coefficients

Relative Standard Deviation:	3.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.25	0.233142	2.0	1110894.0	0.932568	Y
2	IC 410-769782/2	0.625	0.589683	2.0	1137041.0	0.943493	Y
3	IC 410-769782/3	2.5	2.212215	2.0	1434224.0	0.884886	Y
4	IC 410-769782/4	5.0	4.385879	2.0	1088843.0	0.877176	Y
5	ICISAV 410-769782/5	12.5	11.919674	2.0	1021889.0	0.953574	Y
6	IC 410-769782/6	25.0	22.281895	2.0	1047881.0	0.891276	Y
7	IC 410-769782/7	50.0	45.983501	2.0	1016316.0	0.91967	Y



Calibration / Perfluorobutanoic acid

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

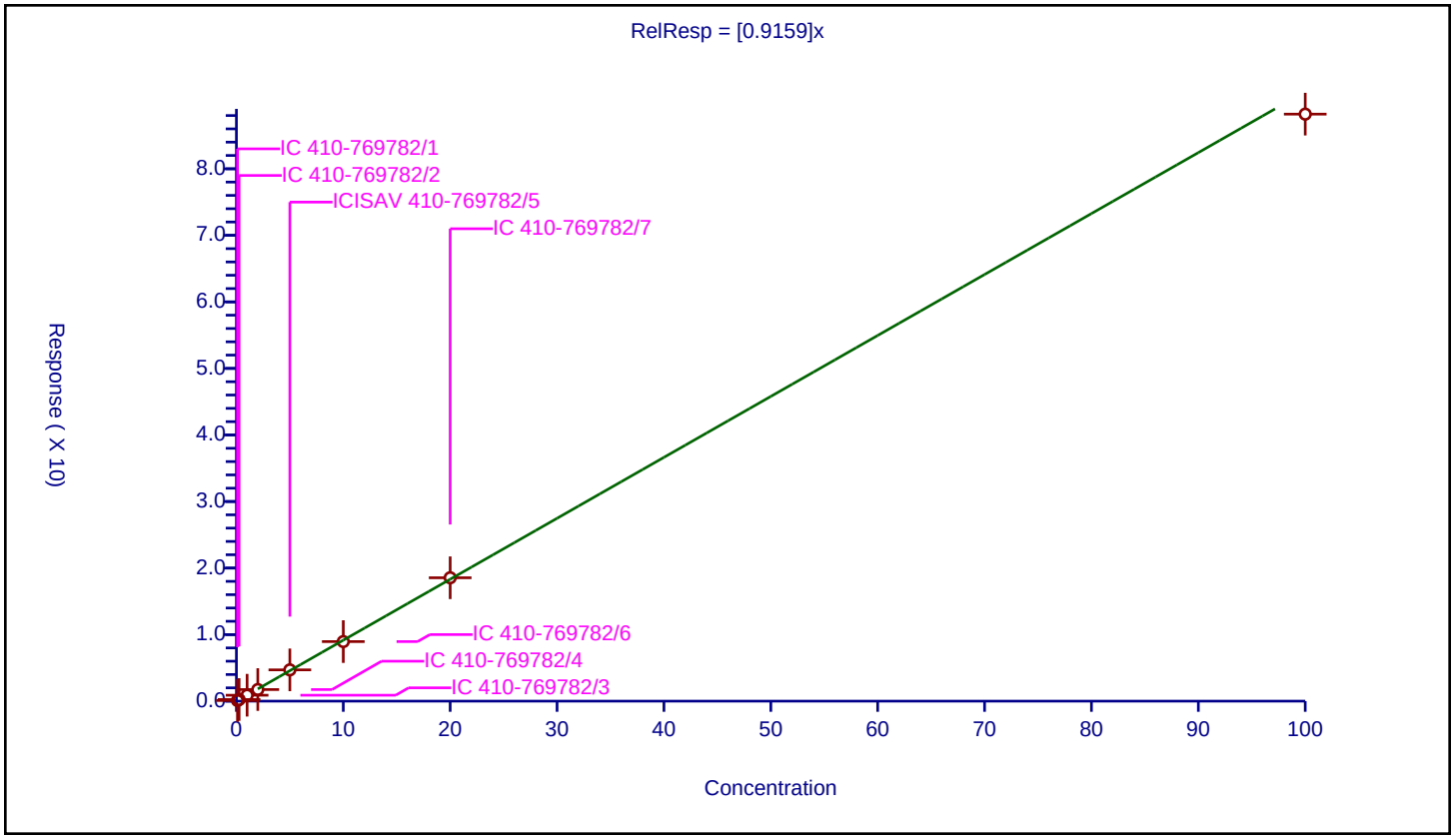
Curve Coefficients

Intercept:	0
Slope:	0.9159

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.1	0.095797	2.0	1591986.0	0.957973	Y
2	IC 410-769782/2	0.25	0.240394	2.0	1649018.0	0.961576	Y
3	IC 410-769782/3	1.0	0.891737	2.0	1934721.0	0.891737	Y
4	IC 410-769782/4	2.0	1.743021	2.0	1591361.0	0.871511	Y
5	ICISAV 410-769782/5	5.0	4.700086	2.0	1499361.0	0.940017	Y
6	IC 410-769782/6	10.0	8.949768	2.0	1473528.0	0.894977	Y
7	IC 410-769782/7	20.0	18.542996	2.0	1417593.0	0.92715	Y
8	IC 410-769782/8	100.0	88.212015	2.0	917538.0	0.88212	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

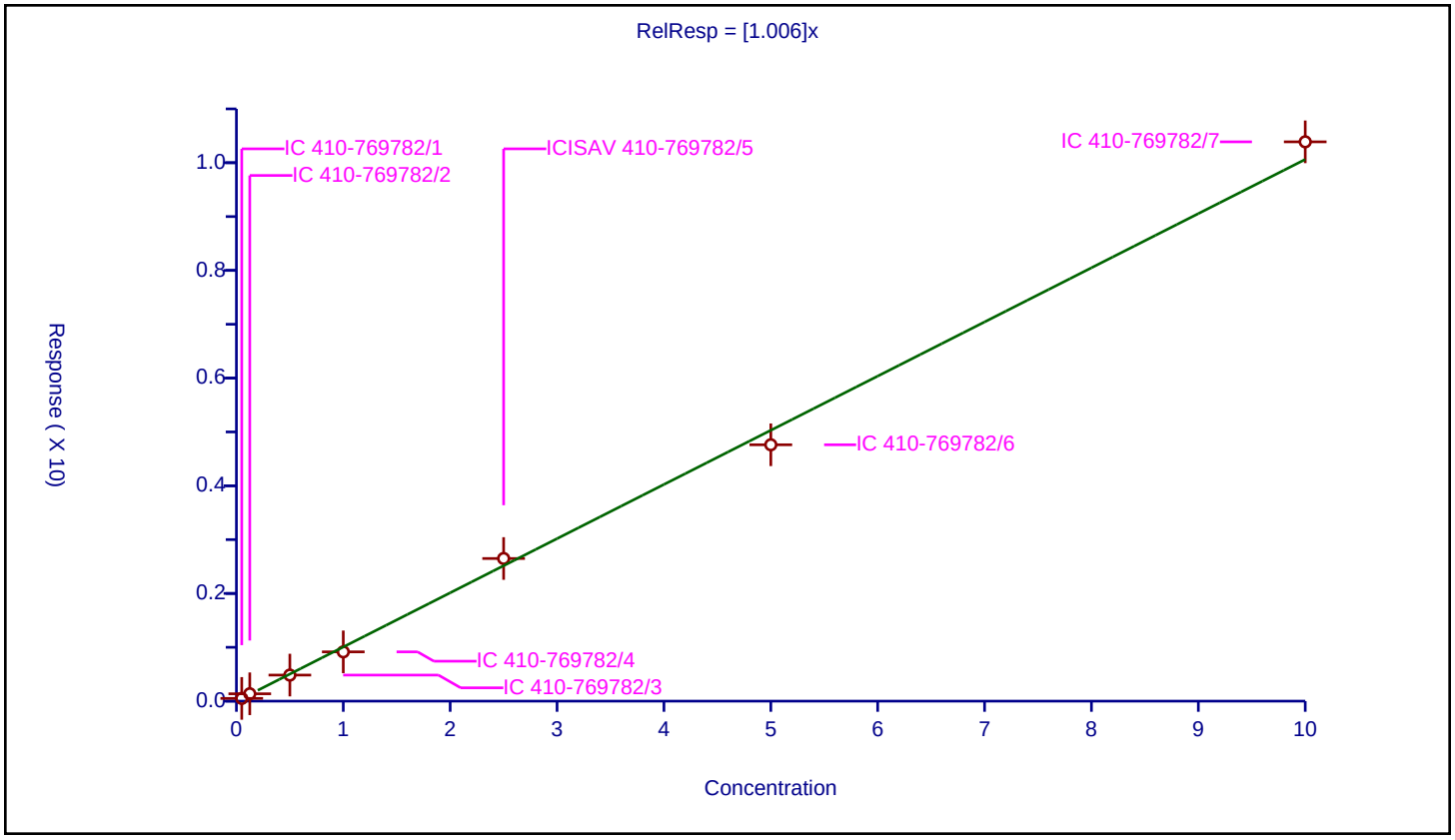
Curve Coefficients

Intercept:	0
Slope:	1.006

Error Coefficients

Relative Standard Deviation:	6.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.050783	2.0	1634812.0	1.015652	Y
2	IC 410-769782/2	0.125	0.1366	2.0	1643802.0	1.092803	Y
3	IC 410-769782/3	0.5	0.48393	2.0	2011241.0	0.96786	Y
4	IC 410-769782/4	1.0	0.915504	2.0	1688006.0	0.915504	Y
5	ICISAV 410-769782/5	2.5	2.649105	2.0	1562040.0	1.059642	Y
6	IC 410-769782/6	5.0	4.761654	2.0	1538909.0	0.952331	Y
7	IC 410-769782/7	10.0	10.388191	2.0	1533298.0	1.038819	Y



Calibration / 3:3 FTCA

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

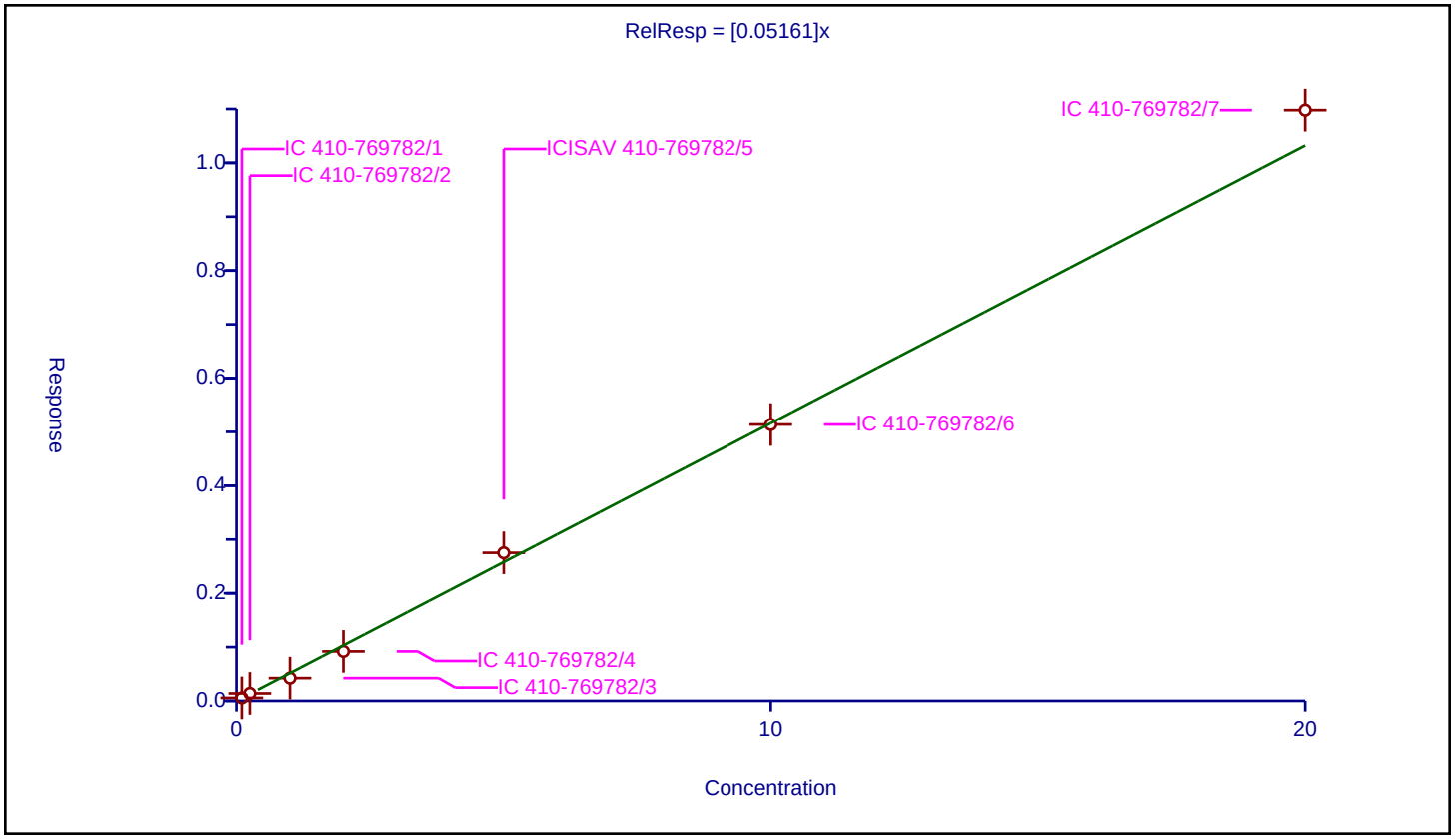
Curve Coefficients

Intercept:	0
Slope:	0.05161

Error Coefficients

Relative Standard Deviation:	10.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.1	0.005596	2.0	1634812.0	0.055958	Y
2	IC 410-769782/2	0.25	0.013918	2.0	1643802.0	0.055671	Y
3	IC 410-769782/3	1.0	0.042348	2.0	2011241.0	0.042348	Y
4	IC 410-769782/4	2.0	0.091974	2.0	1688006.0	0.045987	Y
5	ICISAV 410-769782/5	5.0	0.275277	2.0	1562040.0	0.055055	Y
6	IC 410-769782/6	10.0	0.513746	2.0	1538909.0	0.051375	Y
7	IC 410-769782/7	20.0	1.097807	2.0	1533298.0	0.05489	Y



Calibration / Perfluoropentanoic acid

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

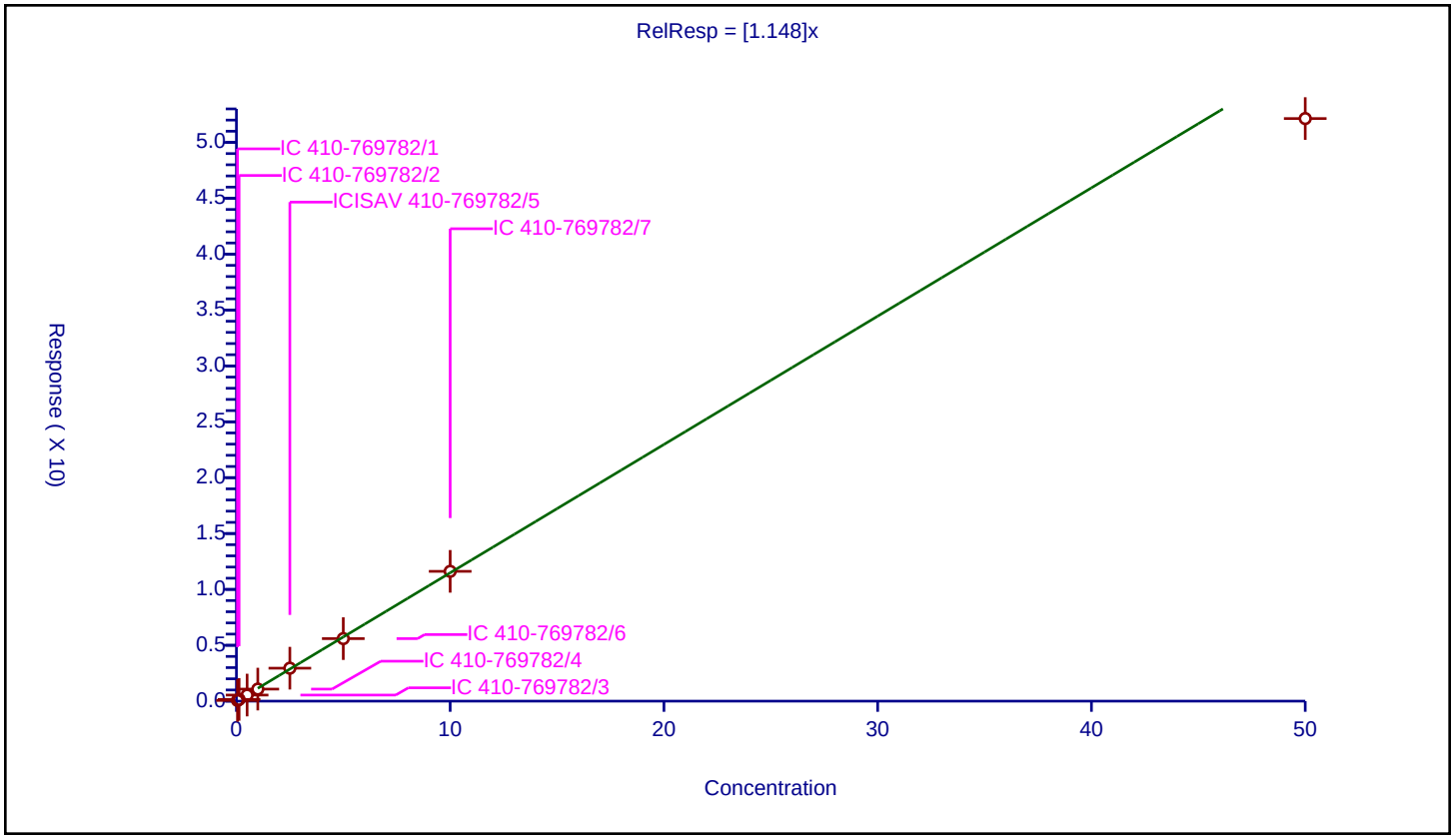
Curve Coefficients

Intercept:	0
Slope:	1.148

Error Coefficients

Relative Standard Deviation:	7.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.064125	2.0	1634812.0	1.282496	Y
2	IC 410-769782/2	0.125	0.15451	2.0	1643802.0	1.236081	Y
3	IC 410-769782/3	0.5	0.543635	2.0	2011241.0	1.087271	Y
4	IC 410-769782/4	1.0	1.078207	2.0	1688006.0	1.078207	Y
5	ICISAV 410-769782/5	2.5	2.9497	2.0	1562040.0	1.17988	Y
6	IC 410-769782/6	5.0	5.595578	2.0	1538909.0	1.119116	Y
7	IC 410-769782/7	10.0	11.614738	2.0	1533298.0	1.161474	Y
8	IC 410-769782/8	50.0	52.135323	2.0	1218861.0	1.042706	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

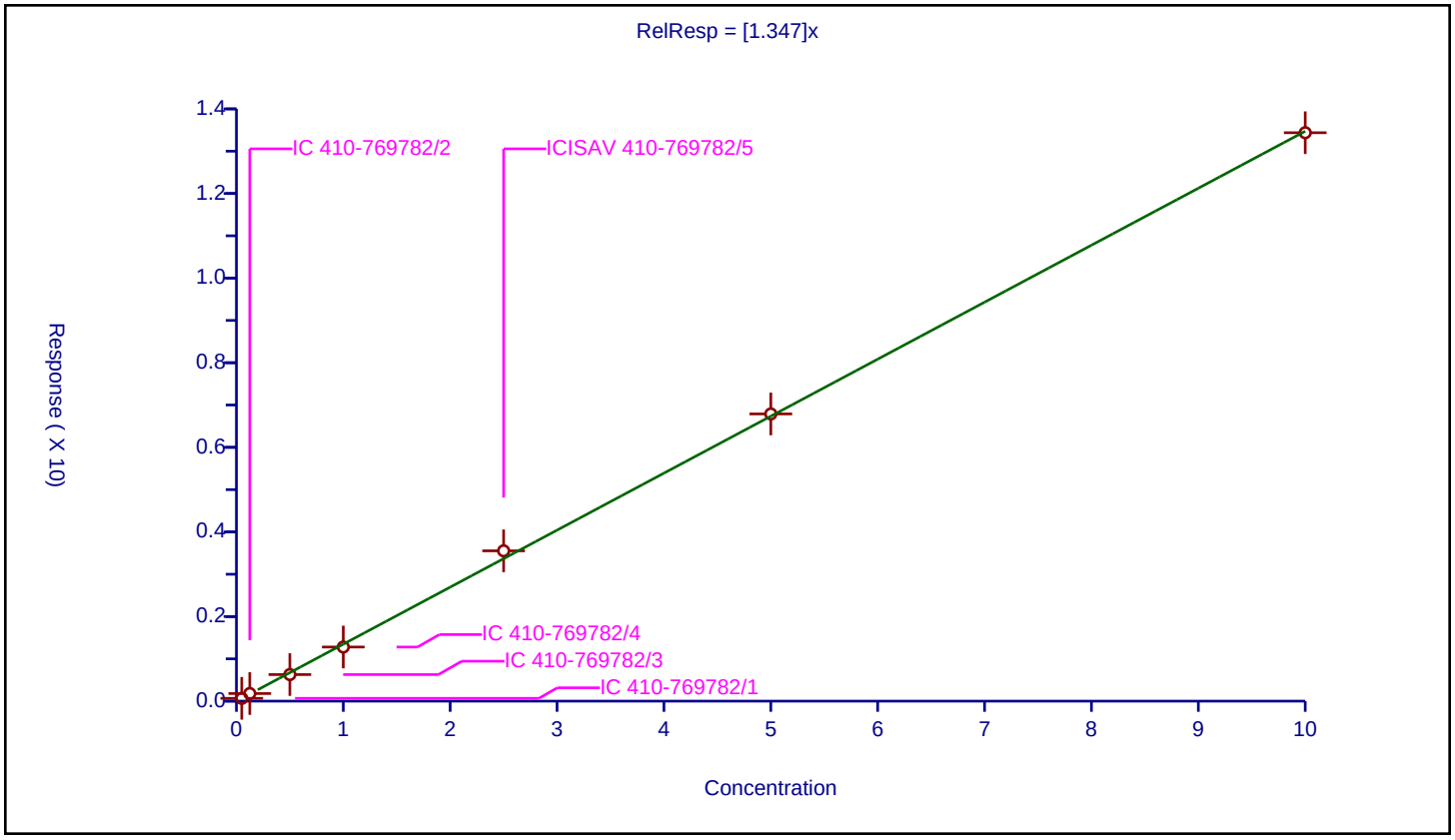
Curve Coefficients

Intercept:	0
Slope:	1.347

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.066684	2.0	1634812.0	1.333682	Y
2	IC 410-769782/2	0.125	0.179808	2.0	1643802.0	1.43846	Y
3	IC 410-769782/3	0.5	0.628059	2.0	2011241.0	1.256118	Y
4	IC 410-769782/4	1.0	1.279163	2.0	1688006.0	1.279163	Y
5	ICISAV 410-769782/5	2.5	3.55337	2.0	1562040.0	1.421348	Y
6	IC 410-769782/6	5.0	6.789435	2.0	1538909.0	1.357887	Y
7	IC 410-769782/7	10.0	13.436712	2.0	1533298.0	1.343671	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

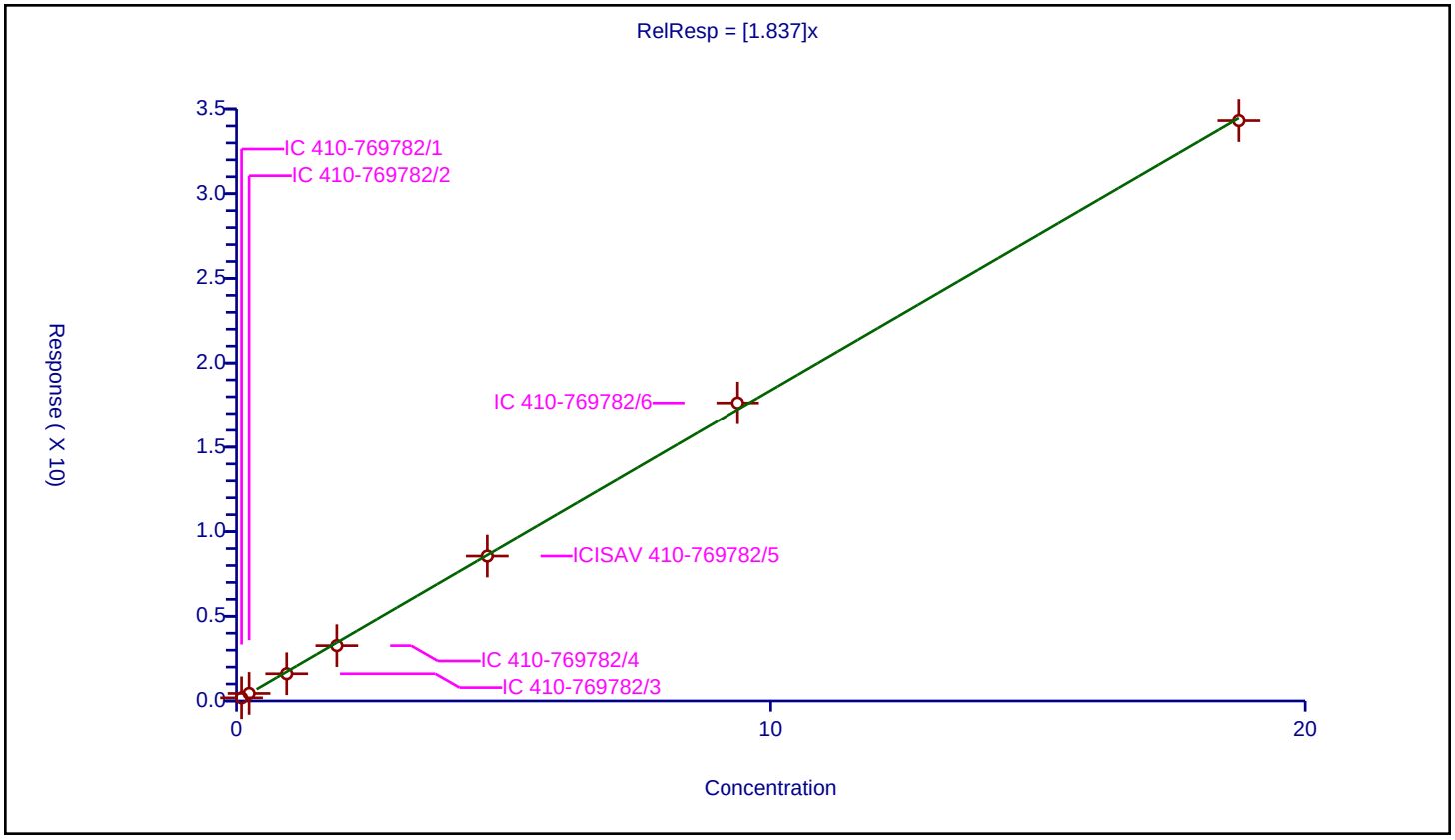
Curve Coefficients

Intercept:	0
Slope:	1.837

Error Coefficients

Relative Standard Deviation:	4.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0938	0.185248	4.69	1029130.0	1.974921	Y
2	IC 410-769782/2	0.2345	0.445218	4.69	1138301.0	1.898584	Y
3	IC 410-769782/3	0.938	1.606802	4.69	1331292.0	1.713009	Y
4	IC 410-769782/4	1.876	3.267061	4.69	1081024.0	1.741504	Y
5	ICISAV 410-769782/5	4.69	8.556538	4.69	1016117.0	1.824422	Y
6	IC 410-769782/6	9.38	17.632706	4.69	879102.0	1.879819	Y
7	IC 410-769782/7	18.76	34.320235	4.69	878629.0	1.829437	Y



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

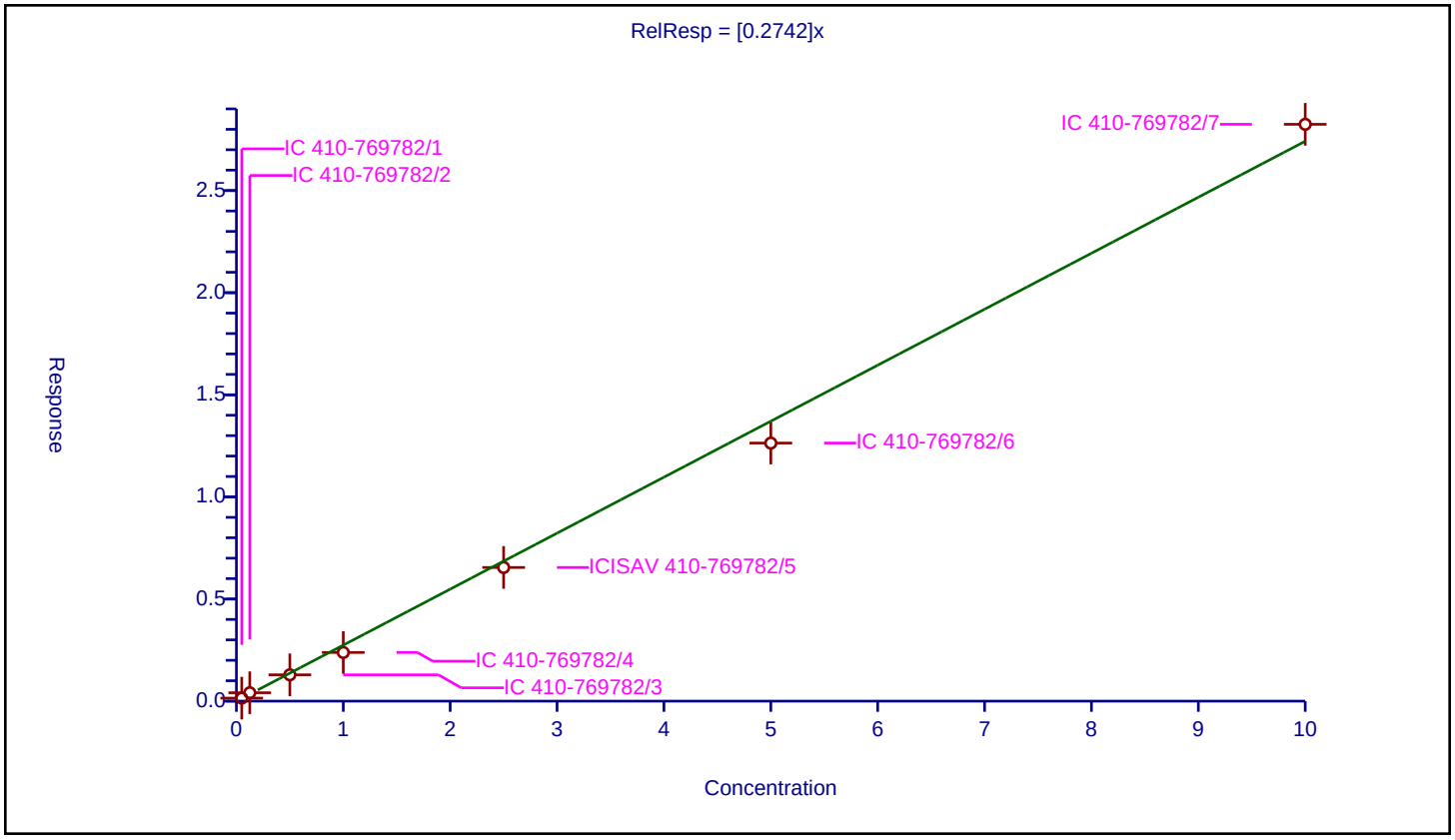
Curve Coefficients

Intercept:	0
Slope:	0.2742

Error Coefficients

Relative Standard Deviation:	11.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.014851	2.0	1961713.0	0.297026	Y
2	IC 410-769782/2	0.125	0.041104	2.0	2055444.0	0.328828	Y
3	IC 410-769782/3	0.5	0.128965	2.0	2424250.0	0.25793	Y
4	IC 410-769782/4	1.0	0.238278	2.0	2051314.0	0.238278	Y
5	ICISAV 410-769782/5	2.5	0.654543	2.0	1905556.0	0.261817	Y
6	IC 410-769782/6	5.0	1.263602	2.0	1923314.0	0.25272	Y
7	IC 410-769782/7	10.0	2.824514	2.0	1938053.0	0.282451	Y



Calibration / Perfluorohexanoic acid

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

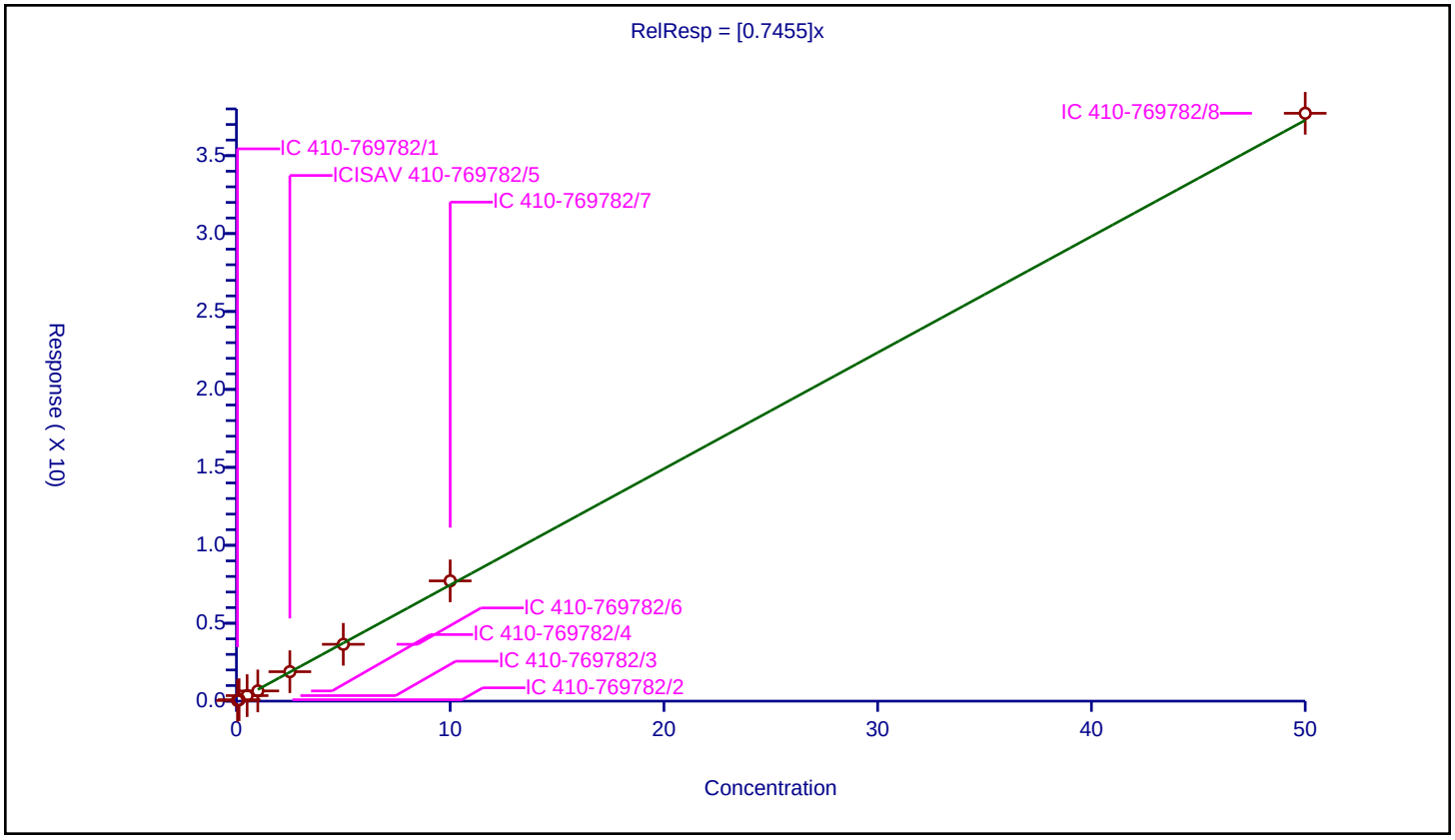
Curve Coefficients

Intercept:	0
Slope:	0.7455

Error Coefficients

Relative Standard Deviation:	7.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.042669	2.0	1961713.0	0.853377	Y
2	IC 410-769782/2	0.125	0.092013	2.0	2055444.0	0.736106	Y
3	IC 410-769782/3	0.5	0.354319	2.0	2424250.0	0.708638	Y
4	IC 410-769782/4	1.0	0.654548	2.0	2051314.0	0.654548	Y
5	ICISAV 410-769782/5	2.5	1.889567	2.0	1905556.0	0.755827	Y
6	IC 410-769782/6	5.0	3.647023	2.0	1923314.0	0.729405	Y
7	IC 410-769782/7	10.0	7.71614	2.0	1938053.0	0.771614	Y
8	IC 410-769782/8	50.0	37.718303	2.0	1475003.0	0.754366	Y



Calibration / 5:3 FTCA

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

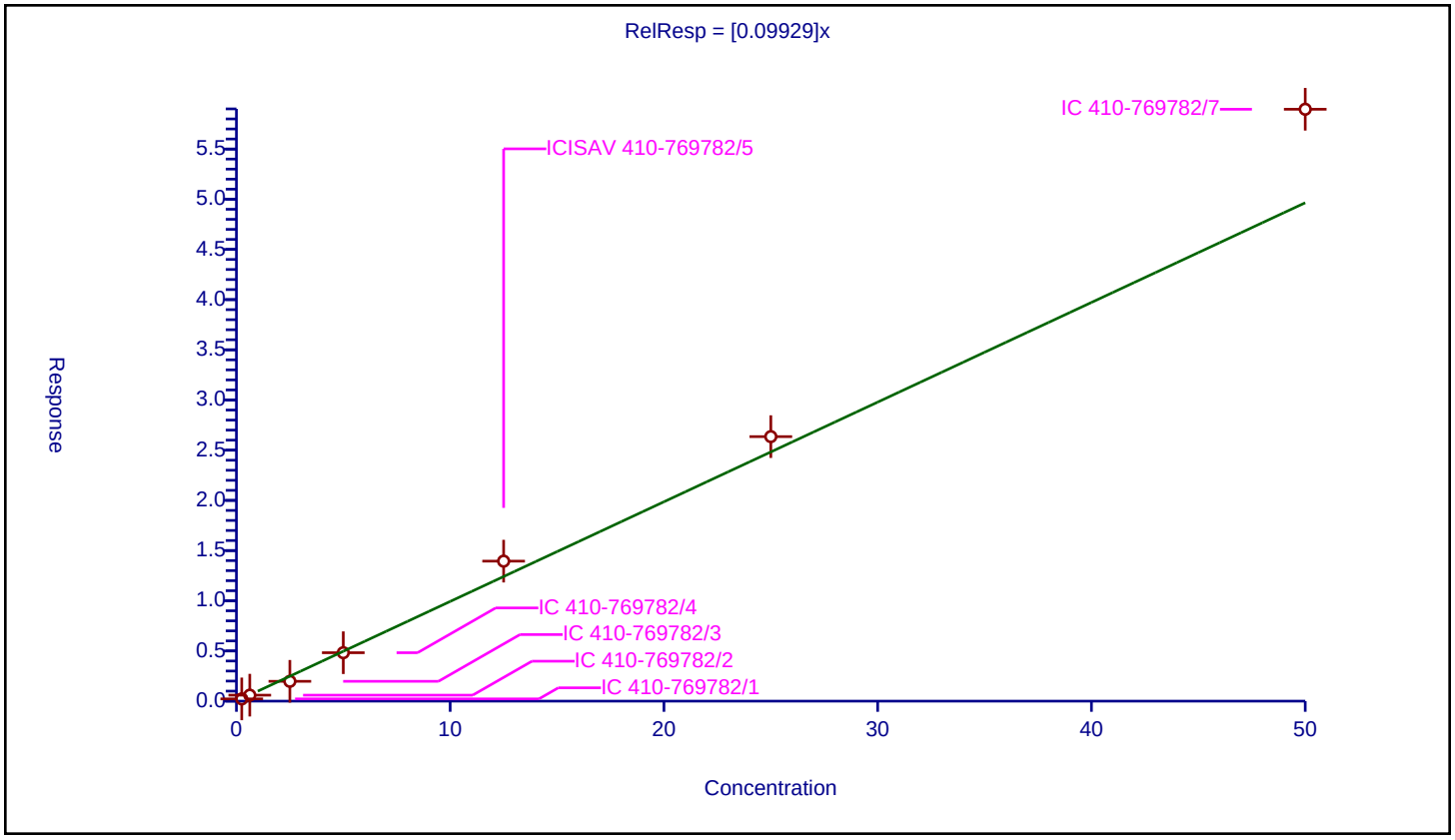
Curve Coefficients

Intercept:	0
Slope:	0.09929

Error Coefficients

Relative Standard Deviation:	13.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.25	0.022362	2.0	1961713.0	0.089448	Y
2	IC 410-769782/2	0.625	0.059468	2.0	2055444.0	0.095149	Y
3	IC 410-769782/3	2.5	0.197612	2.0	2424250.0	0.079045	Y
4	IC 410-769782/4	5.0	0.482538	2.0	2051314.0	0.096508	Y
5	ICISAV 410-769782/5	12.5	1.394696	2.0	1905556.0	0.111576	Y
6	IC 410-769782/6	25.0	2.635187	2.0	1923314.0	0.105407	Y
7	IC 410-769782/7	50.0	5.896403	2.0	1938053.0	0.117928	Y



Calibration / Perfluorobutanesulfonic acid

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

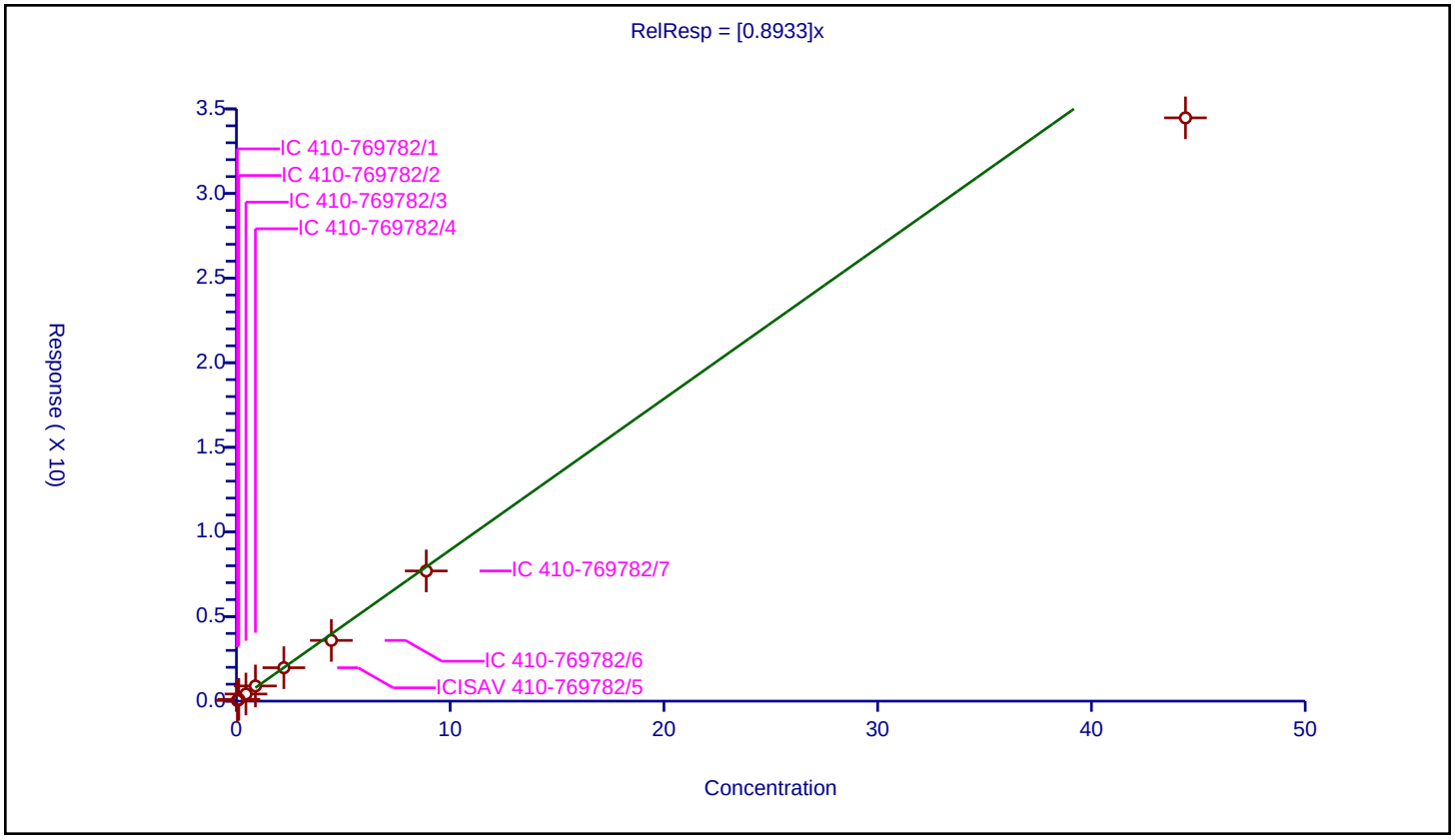
Curve Coefficients

Intercept:	0
Slope:	0.8933

Error Coefficients

Relative Standard Deviation:	8.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0444	0.040303	1.864	1948391.0	0.907732	Y
2	IC 410-769782/2	0.111	0.104568	1.864	1947362.0	0.94205	Y
3	IC 410-769782/3	0.444	0.420307	1.864	2398676.0	0.946637	Y
4	IC 410-769782/4	0.888	0.896385	1.864	1895700.0	1.009442	Y
5	ICISAV 410-769782/5	2.22	1.974224	1.864	1952663.0	0.88929	Y
6	IC 410-769782/6	4.44	3.589146	1.864	1921355.0	0.808366	Y
7	IC 410-769782/7	8.88	7.693814	1.864	1812920.0	0.86642	Y
8	IC 410-769782/8	44.4	34.471304	1.864	1314971.0	0.776381	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

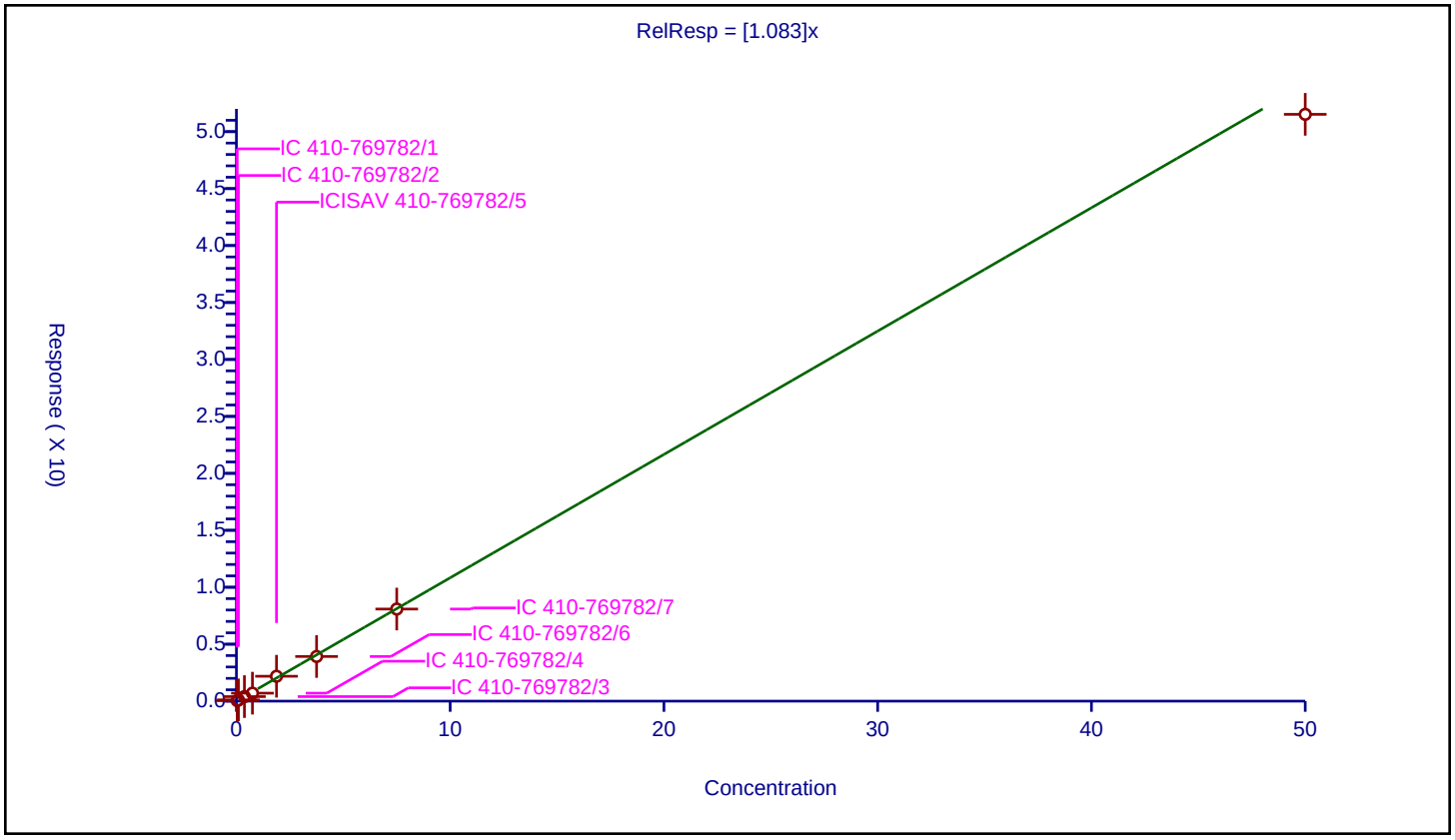
Curve Coefficients

Intercept:	0
Slope:	1.083

Error Coefficients

Relative Standard Deviation:	7.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0375	0.043747	2.0	1256458.0	1.166581	Y
2	IC 410-769782/2	0.09375	0.110865	2.0	1360417.0	1.182555	Y
3	IC 410-769782/3	0.375	0.398289	2.0	1454195.0	1.062104	Y
4	IC 410-769782/4	0.75	0.699545	2.0	1413007.0	0.932727	Y
5	ICISAV 410-769782/5	1.875	2.186106	2.0	1245633.0	1.165923	Y
6	IC 410-769782/6	3.75	3.920705	2.0	1258717.0	1.045521	Y
7	IC 410-769782/7	7.5	8.085207	2.0	1308739.0	1.078028	Y
8	IC 410-769782/8	50.0	51.522146	2.0	931799.0	1.030443	Y



Calibration / FBSA

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

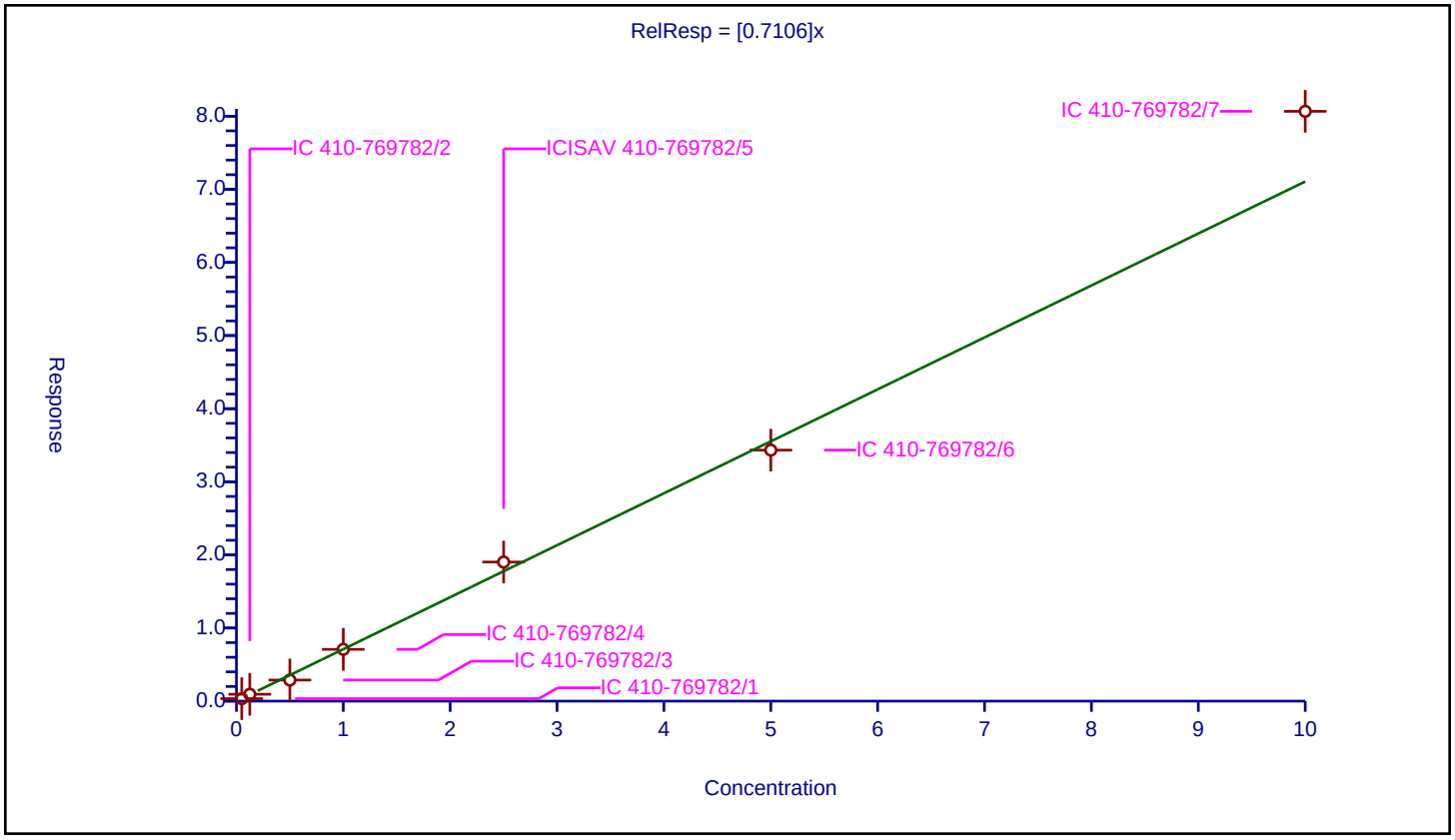
Curve Coefficients

Intercept:	0
Slope:	0.7106

Error Coefficients

Relative Standard Deviation:	10.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.03417	1.864	1948391.0	0.6834	Y
2	IC 410-769782/2	0.125	0.094018	1.864	1947362.0	0.752146	Y
3	IC 410-769782/3	0.5	0.288189	1.864	2398676.0	0.576378	Y
4	IC 410-769782/4	1.0	0.708229	1.864	1895700.0	0.708229	Y
5	ICISAV 410-769782/5	2.5	1.902445	1.864	1952663.0	0.760978	Y
6	IC 410-769782/6	5.0	3.432908	1.864	1921355.0	0.686582	Y
7	IC 410-769782/7	10.0	8.066918	1.864	1812920.0	0.806692	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

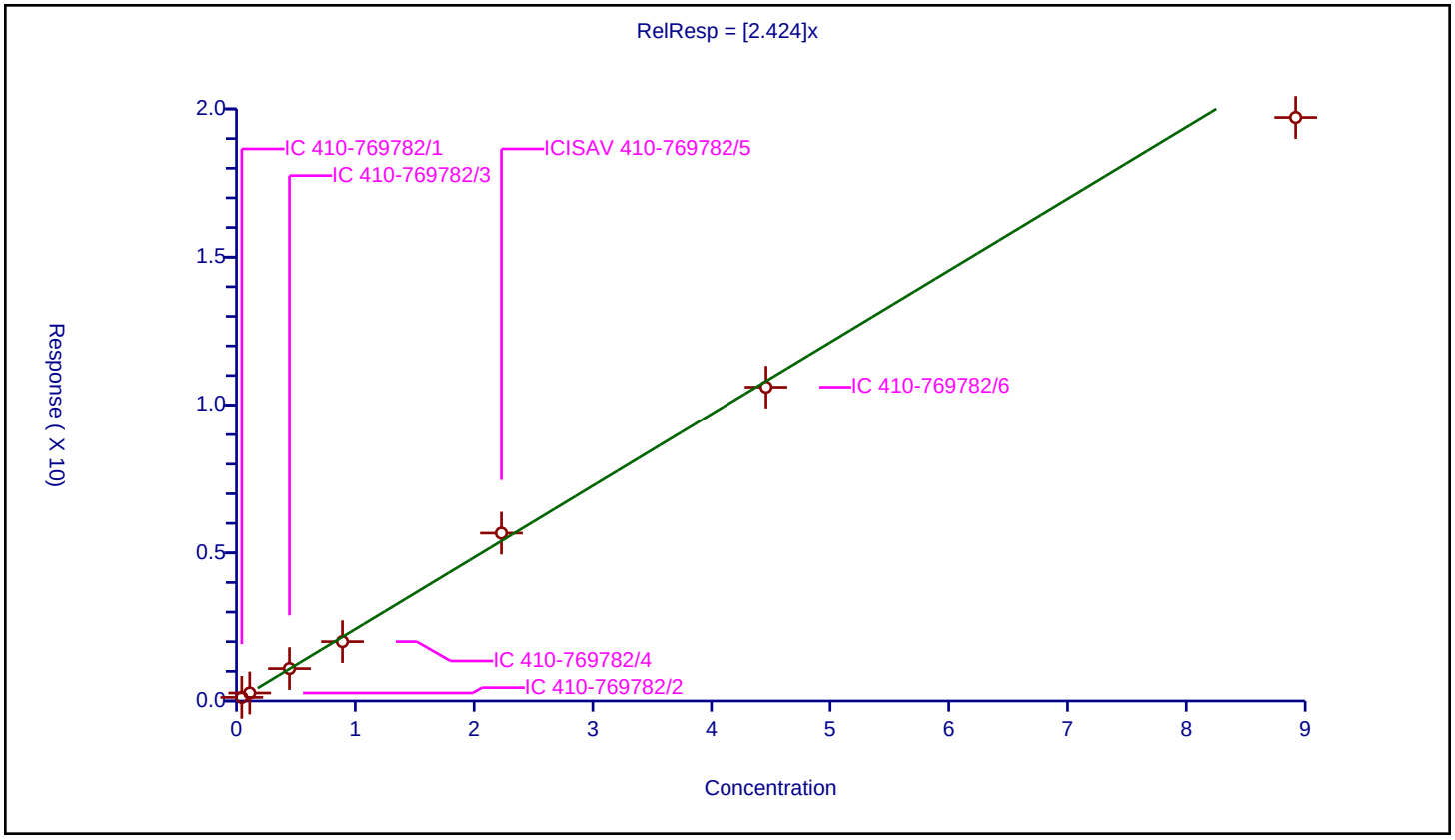
Curve Coefficients

Intercept:	0
Slope:	2.424

Error Coefficients

Relative Standard Deviation:	7.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0446	0.12146	2.0	1961713.0	2.723322	Y
2	IC 410-769782/2	0.1115	0.269676	2.0	2055444.0	2.418619	Y
3	IC 410-769782/3	0.446	1.092057	2.0	2424250.0	2.448559	Y
4	IC 410-769782/4	0.892	2.002169	2.0	2051314.0	2.244584	Y
5	ICISAV 410-769782/5	2.23	5.668262	2.0	1905556.0	2.541821	Y
6	IC 410-769782/6	4.46	10.606609	2.0	1923314.0	2.378164	Y
7	IC 410-769782/7	8.92	19.711656	2.0	1938053.0	2.209827	Y



Calibration / Perfluoroheptanoic acid

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

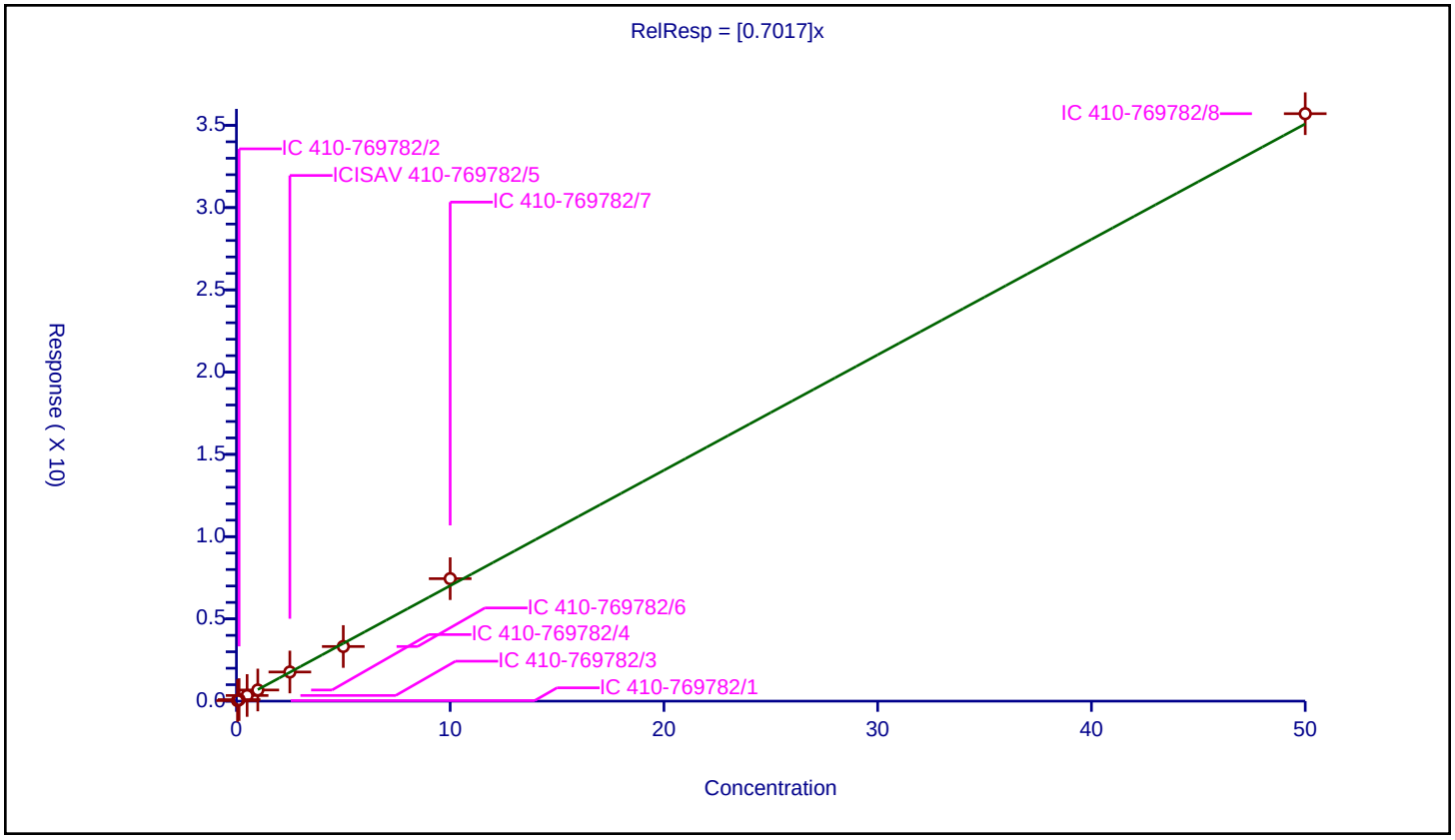
Curve Coefficients

Intercept:	0
Slope:	0.7017

Error Coefficients

Relative Standard Deviation:	4.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.033461	2.0	1993486.0	0.66922	Y
2	IC 410-769782/2	0.125	0.093325	2.0	2037469.0	0.746597	Y
3	IC 410-769782/3	0.5	0.343958	2.0	2352736.0	0.687916	Y
4	IC 410-769782/4	1.0	0.678234	2.0	1938922.0	0.678234	Y
5	ICISAV 410-769782/5	2.5	1.772279	2.0	1924295.0	0.708912	Y
6	IC 410-769782/6	5.0	3.321724	2.0	1849354.0	0.664345	Y
7	IC 410-769782/7	10.0	7.444178	2.0	1947996.0	0.744418	Y
8	IC 410-769782/8	50.0	35.709068	2.0	1367446.0	0.714181	Y



Calibration / DONA

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

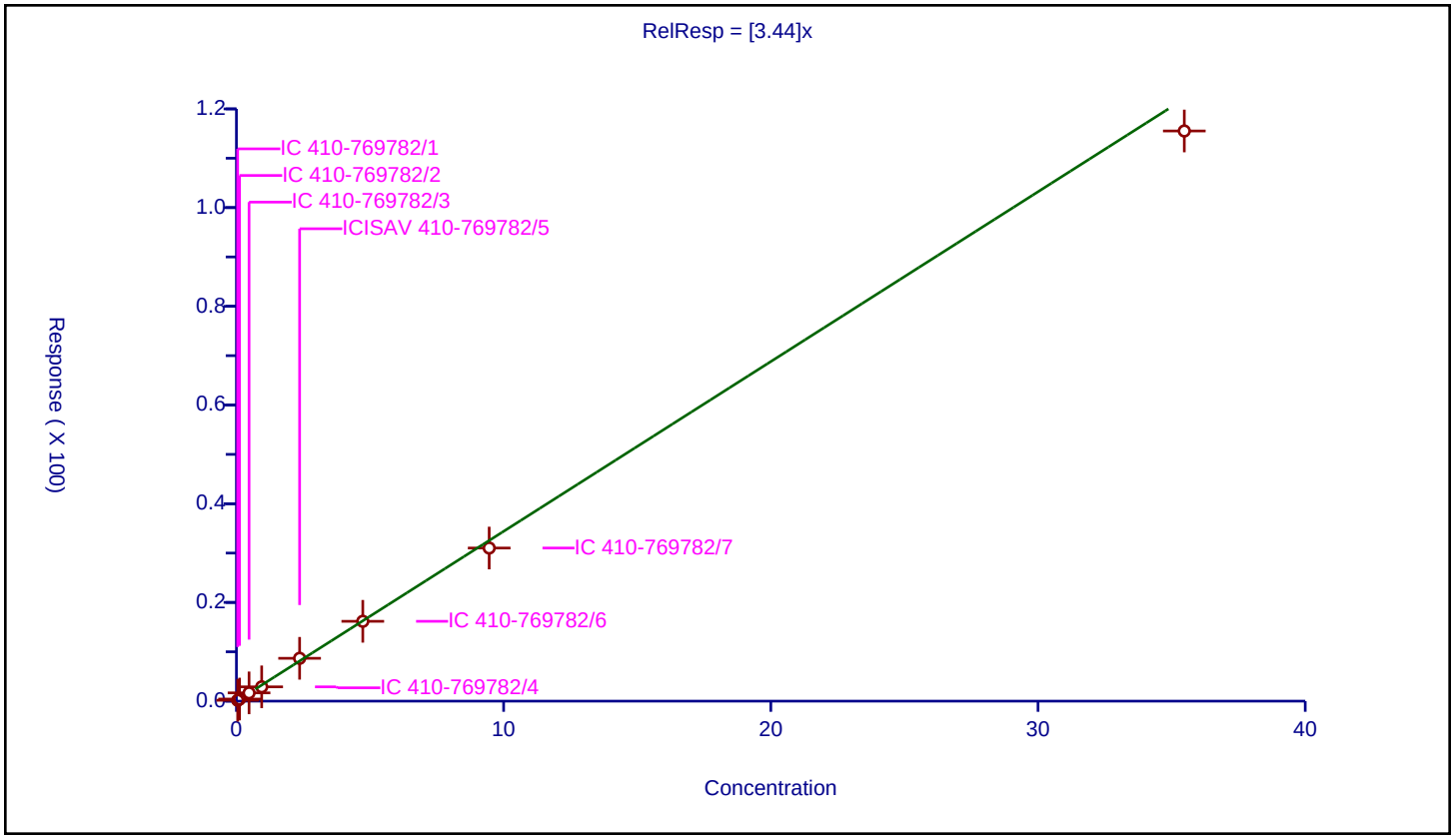
Curve Coefficients

Intercept:	0
Slope:	3.44

Error Coefficients

Relative Standard Deviation:	6.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0473	0.175116	2.0	1256458.0	3.702243	Y
2	IC 410-769782/2	0.11825	0.424962	2.0	1360417.0	3.593762	Y
3	IC 410-769782/3	0.473	1.674151	2.0	1454195.0	3.539431	Y
4	IC 410-769782/4	0.946	2.896497	2.0	1413007.0	3.061836	Y
5	ICISAV 410-769782/5	2.365	8.678783	2.0	1245633.0	3.669676	Y
6	IC 410-769782/6	4.73	16.174104	2.0	1258717.0	3.419472	Y
7	IC 410-769782/7	9.46	31.024058	2.0	1308739.0	3.279499	Y
8	IC 410-769782/8	35.475	115.52561	2.0	931799.0	3.256536	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

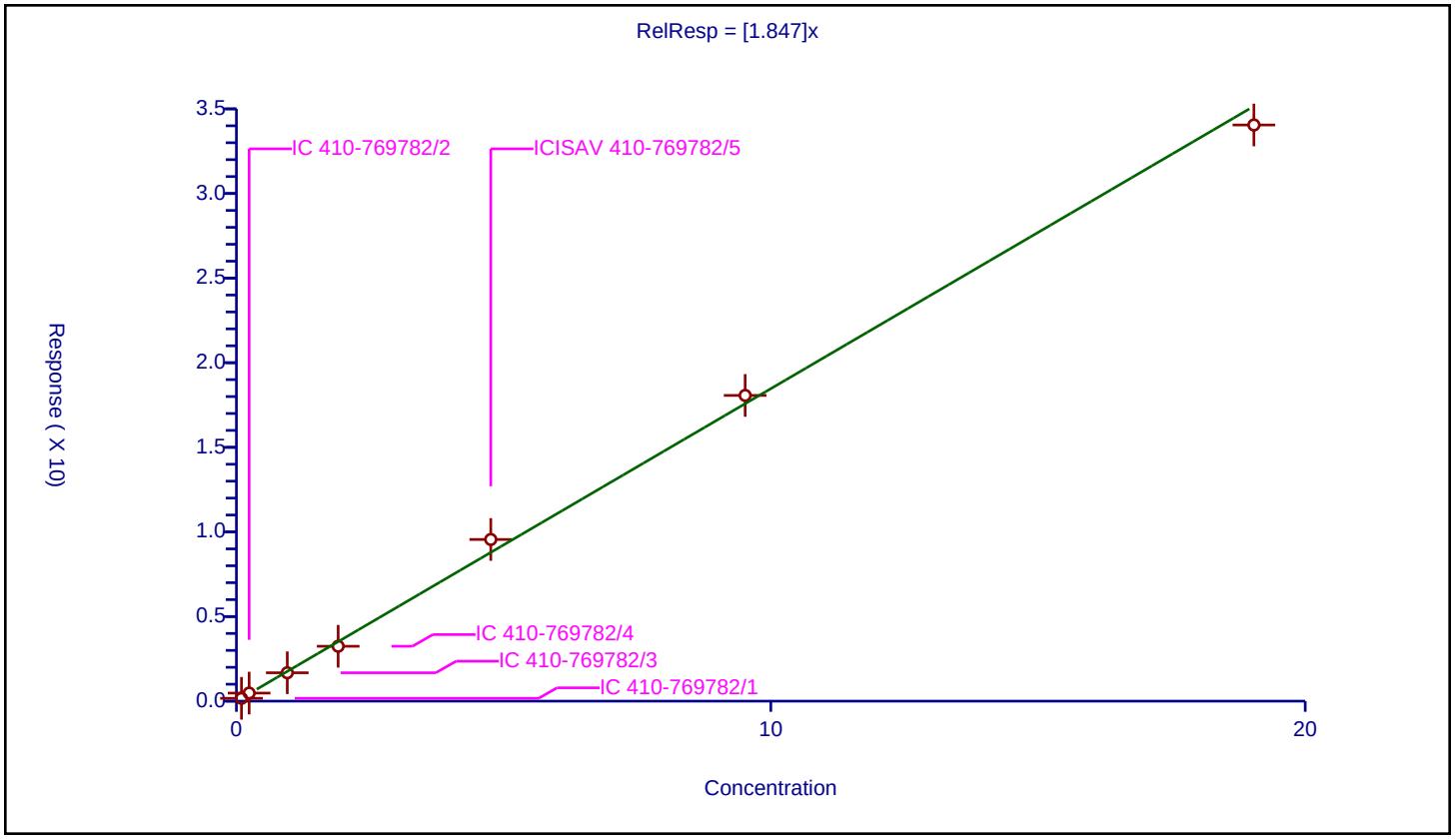
Curve Coefficients

Intercept:	0
Slope:	1.847

Error Coefficients

Relative Standard Deviation:	6.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0952	0.16812	4.76	988015.0	1.765965	Y
2	IC 410-769782/2	0.238	0.476401	4.76	972241.0	2.001685	Y
3	IC 410-769782/3	0.952	1.67702	4.76	1227072.0	1.761576	Y
4	IC 410-769782/4	1.904	3.243153	4.76	922049.0	1.703337	Y
5	ICISAV 410-769782/5	4.76	9.553673	4.76	749341.0	2.007074	Y
6	IC 410-769782/6	9.52	18.066478	4.76	713500.0	1.897739	Y
7	IC 410-769782/7	19.04	34.049583	4.76	663930.0	1.788318	Y



Calibration / Perfluoropentanesulfonic acid

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

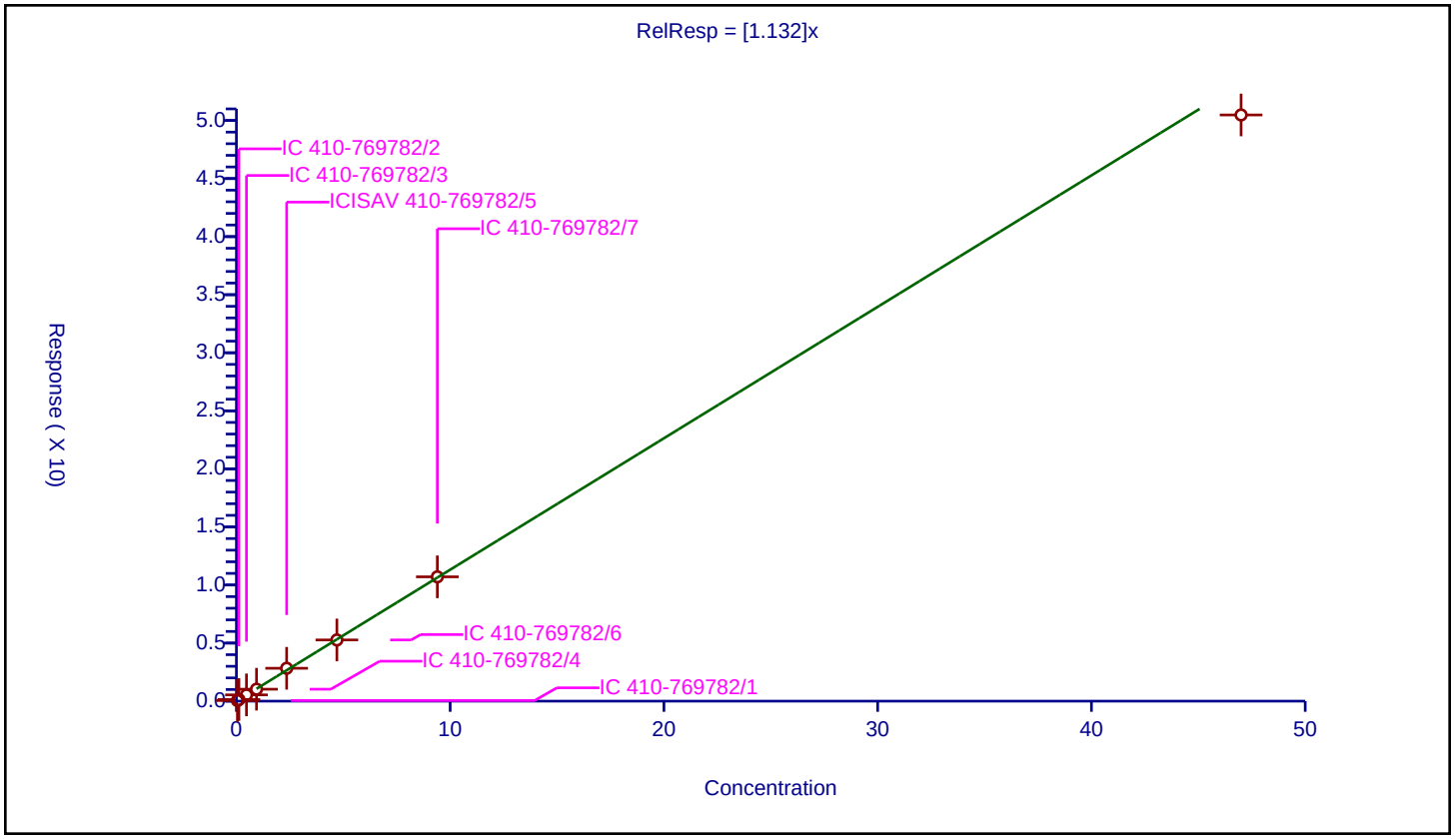
Curve Coefficients

Intercept:	0
Slope:	1.132

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.047	0.051508	1.896	1677087.0	1.095918	Y
2	IC 410-769782/2	0.1175	0.138528	1.896	1742388.0	1.178965	Y
3	IC 410-769782/3	0.47	0.539326	1.896	2001917.0	1.147503	Y
4	IC 410-769782/4	0.94	1.02791	1.896	1706074.0	1.093521	Y
5	ICISAV 410-769782/5	2.35	2.831057	1.896	1587137.0	1.204705	Y
6	IC 410-769782/6	4.7	5.2684	1.896	1662256.0	1.120936	Y
7	IC 410-769782/7	9.4	10.705987	1.896	1577514.0	1.138935	Y
8	IC 410-769782/8	47.0	50.478018	1.896	1124101.0	1.074	Y



Calibration / bis(trifluoromethane)sulfonimide

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

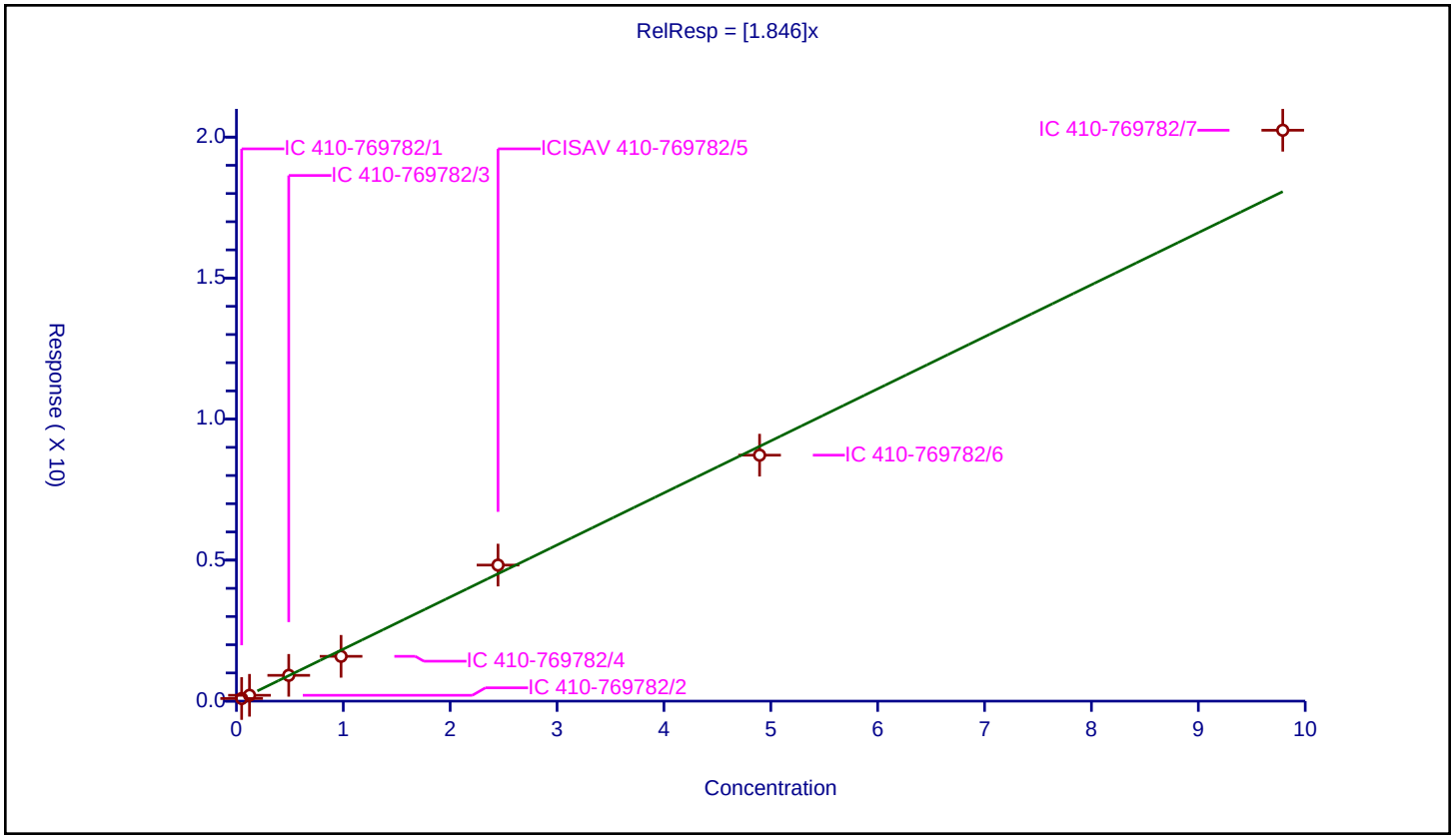
Curve Coefficients

Intercept:	0
Slope:	1.846

Error Coefficients

Relative Standard Deviation:	8.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.04895	0.093451	1.896	1677087.0	1.909109	Y
2	IC 410-769782/2	0.122375	0.20774	1.896	1742388.0	1.697568	Y
3	IC 410-769782/3	0.4895	0.914465	1.896	2001917.0	1.868161	Y
4	IC 410-769782/4	0.979	1.589287	1.896	1706074.0	1.623378	Y
5	ICISAV 410-769782/5	2.4475	4.824286	1.896	1587137.0	1.971108	Y
6	IC 410-769782/6	4.895	8.721792	1.896	1662256.0	1.781776	Y
7	IC 410-769782/7	9.79	20.242911	1.896	1577514.0	2.067713	Y



Calibration / Perfluorooctanoic acid

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

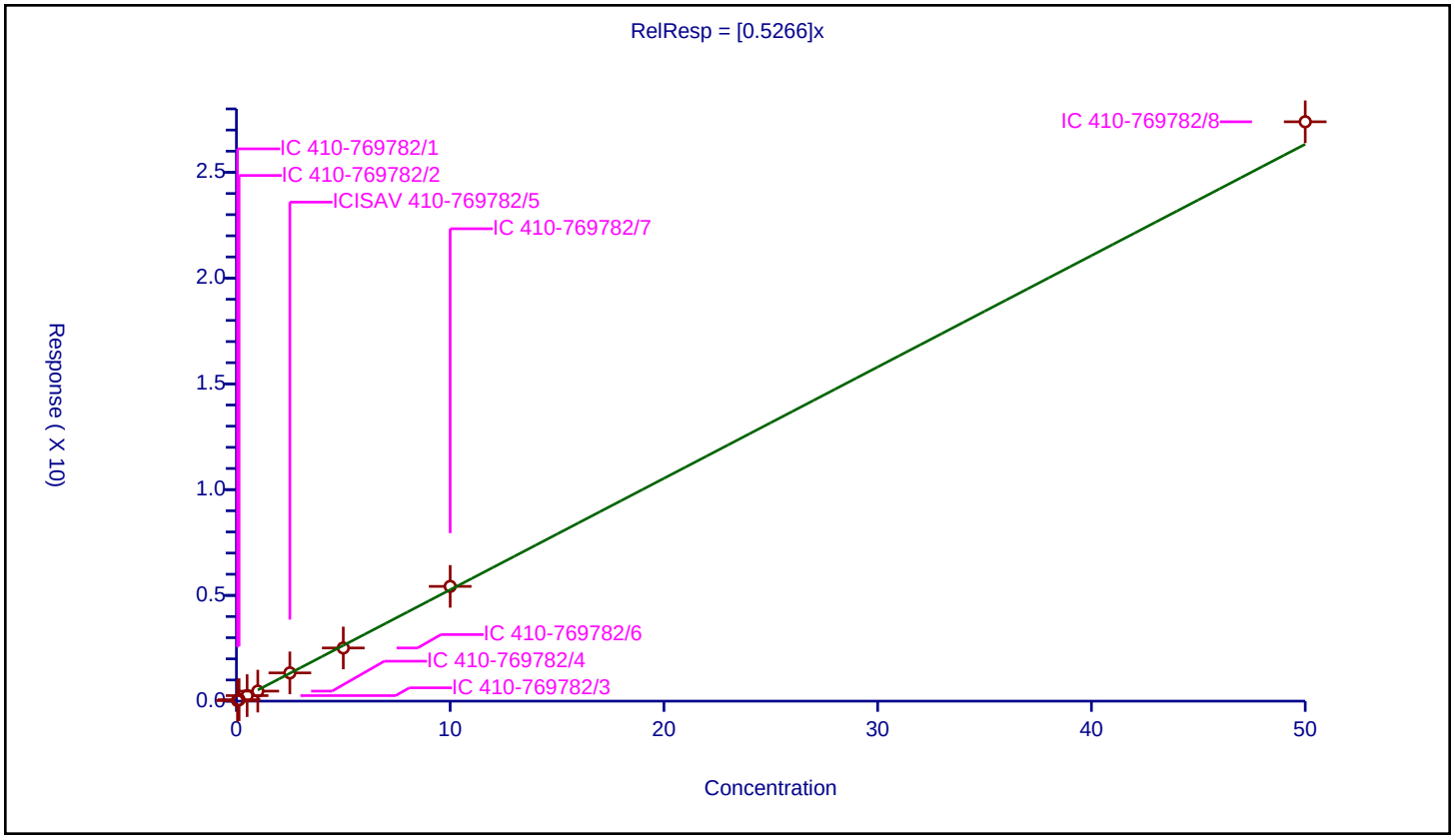
Curve Coefficients

Intercept:	0
Slope:	0.5266

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.027213	2.0	2531722.0	0.544262	Y
2	IC 410-769782/2	0.125	0.068304	2.0	2556684.0	0.546433	Y
3	IC 410-769782/3	0.5	0.260663	2.0	2698297.0	0.521326	Y
4	IC 410-769782/4	1.0	0.473785	2.0	2538178.0	0.473785	Y
5	ICISAV 410-769782/5	2.5	1.334876	2.0	2385604.0	0.53395	Y
6	IC 410-769782/6	5.0	2.513837	2.0	2403075.0	0.502767	Y
7	IC 410-769782/7	10.0	5.425437	2.0	2350487.0	0.542544	Y
8	IC 410-769782/8	50.0	27.390131	2.0	1910849.0	0.547803	Y



Calibration / 7:3 FTCA

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

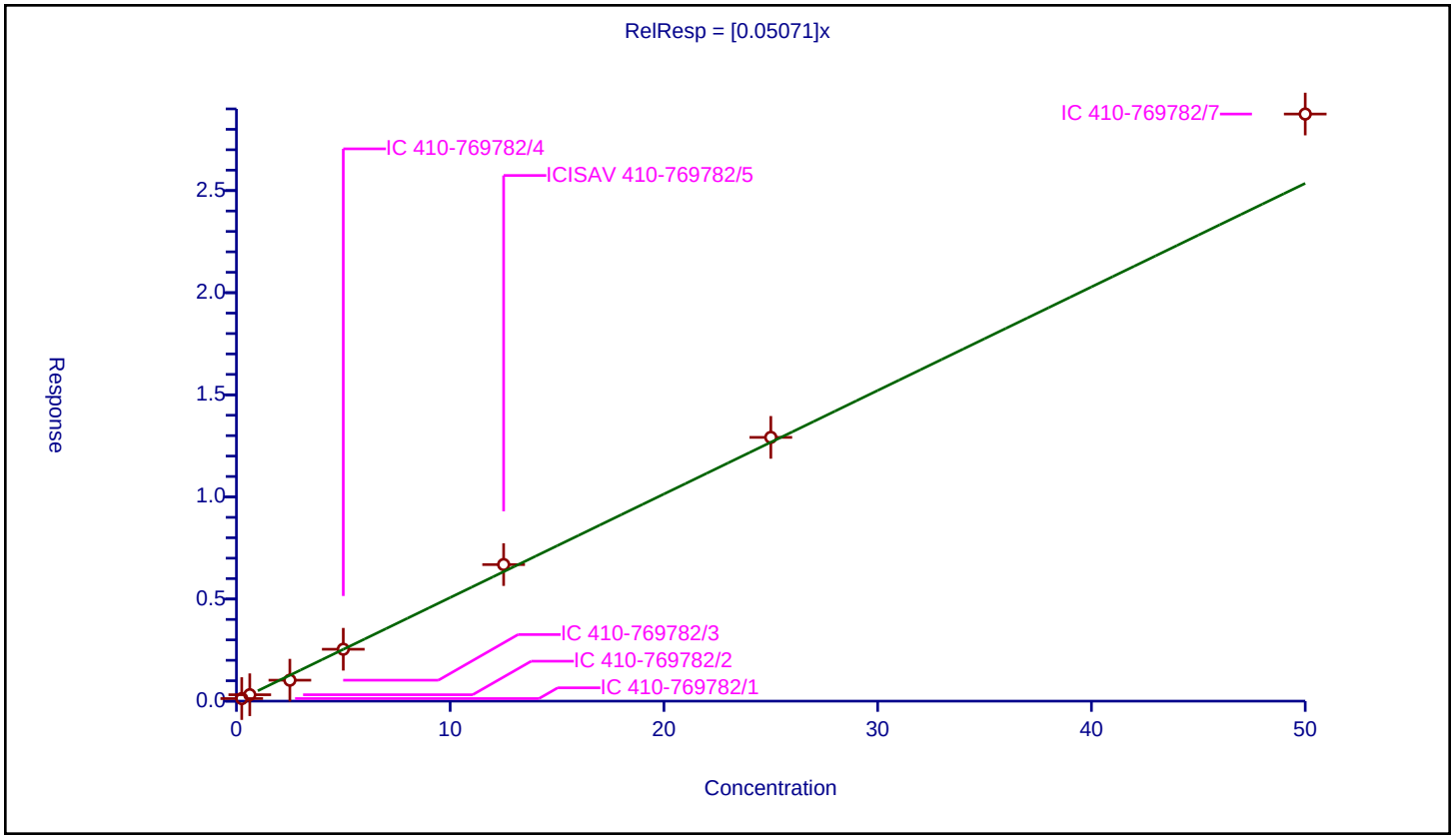
Curve Coefficients

Intercept:	0
Slope:	0.05071

Error Coefficients

Relative Standard Deviation:	9.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.25	0.012546	2.0	1961713.0	0.050185	Y
2	IC 410-769782/2	0.625	0.031396	2.0	2055444.0	0.050233	Y
3	IC 410-769782/3	2.5	0.102598	2.0	2424250.0	0.041039	Y
4	IC 410-769782/4	5.0	0.25417	2.0	2051314.0	0.050834	Y
5	ICISAV 410-769782/5	12.5	0.668712	2.0	1905556.0	0.053497	Y
6	IC 410-769782/6	25.0	1.291518	2.0	1923314.0	0.051661	Y
7	IC 410-769782/7	50.0	2.874851	2.0	1938053.0	0.057497	Y



Calibration / Perfluorohexanesulfonic acid

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

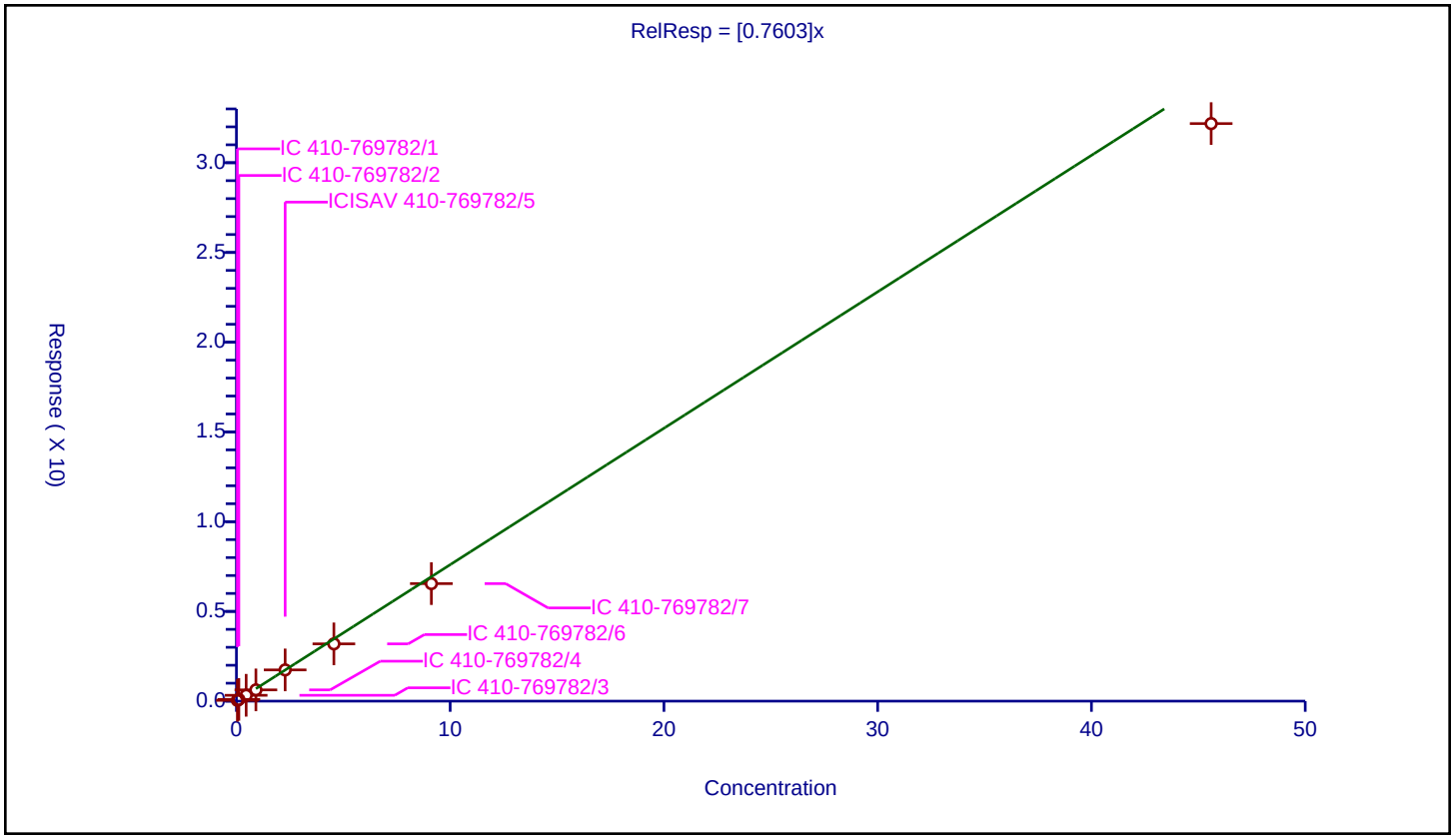
Curve Coefficients

Intercept:	0
Slope:	0.7603

Error Coefficients

Relative Standard Deviation:	11.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0456	0.043208	1.896	1677087.0	0.947539	Y
2	IC 410-769782/2	0.114	0.096204	1.896	1742388.0	0.843898	Y
3	IC 410-769782/3	0.456	0.326484	1.896	2001917.0	0.715973	Y
4	IC 410-769782/4	0.912	0.627667	1.896	1706074.0	0.688231	Y
5	ICISAV 410-769782/5	2.28	1.739434	1.896	1587137.0	0.76291	Y
6	IC 410-769782/6	4.56	3.191394	1.896	1662256.0	0.699867	Y
7	IC 410-769782/7	9.12	6.548226	1.896	1577514.0	0.718007	Y
8	IC 410-769782/8	45.6	32.180138	1.896	1124101.0	0.705705	Y



Calibration / Perfluorononanoic acid

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

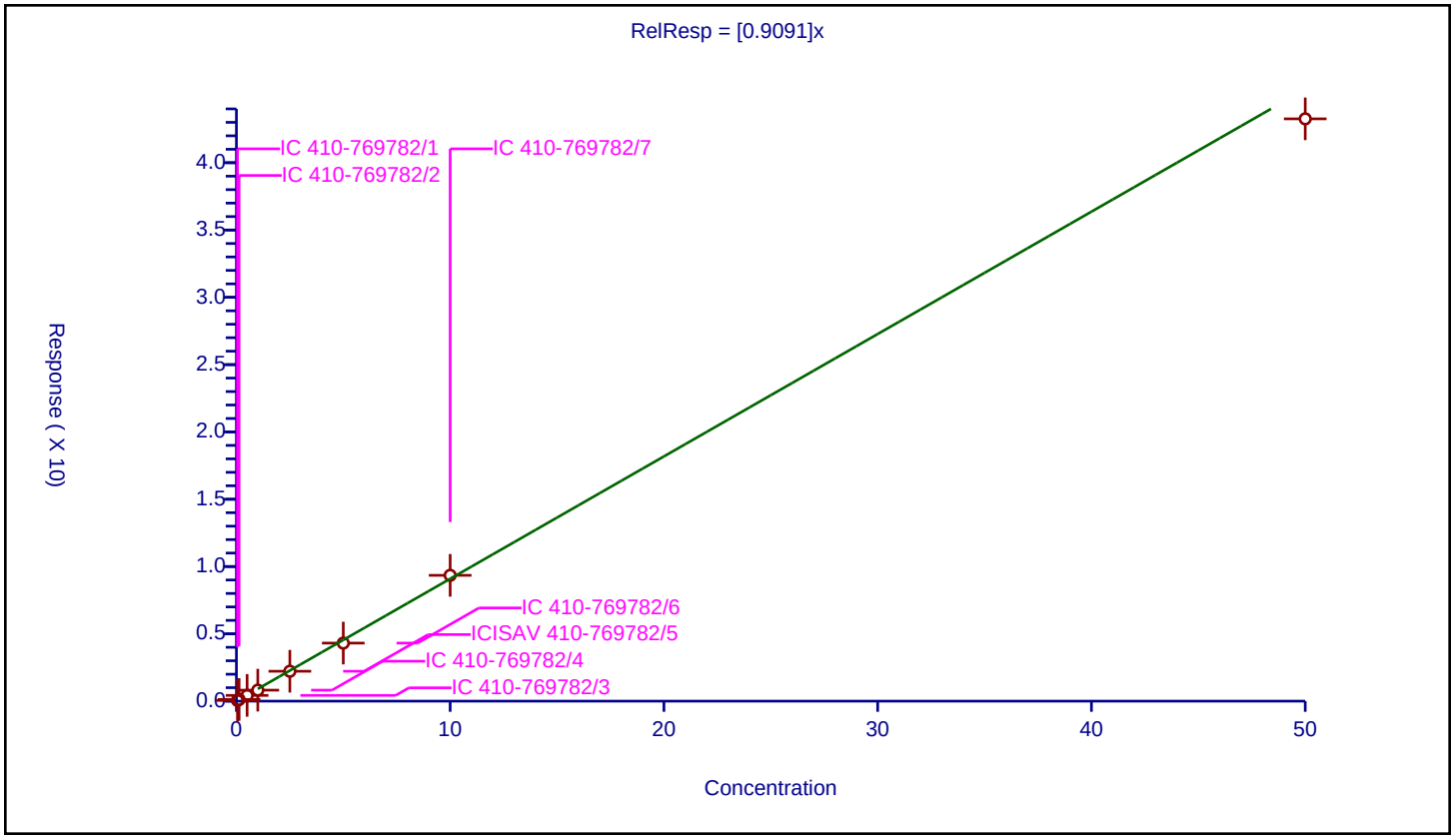
Curve Coefficients

Intercept:	0
Slope:	0.9091

Error Coefficients

Relative Standard Deviation:	9.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.053066	2.0	1938864.0	1.061323	Y
2	IC 410-769782/2	0.125	0.123916	2.0	1823046.0	0.991326	Y
3	IC 410-769782/3	0.5	0.426487	2.0	2492846.0	0.852974	Y
4	IC 410-769782/4	1.0	0.816764	2.0	1962435.0	0.816764	Y
5	ICISAV 410-769782/5	2.5	2.220301	2.0	1844501.0	0.888121	Y
6	IC 410-769782/6	5.0	4.313085	2.0	1816407.0	0.862617	Y
7	IC 410-769782/7	10.0	9.345818	2.0	1801307.0	0.934582	Y
8	IC 410-769782/8	50.0	43.260308	2.0	1393634.0	0.865206	Y



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

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

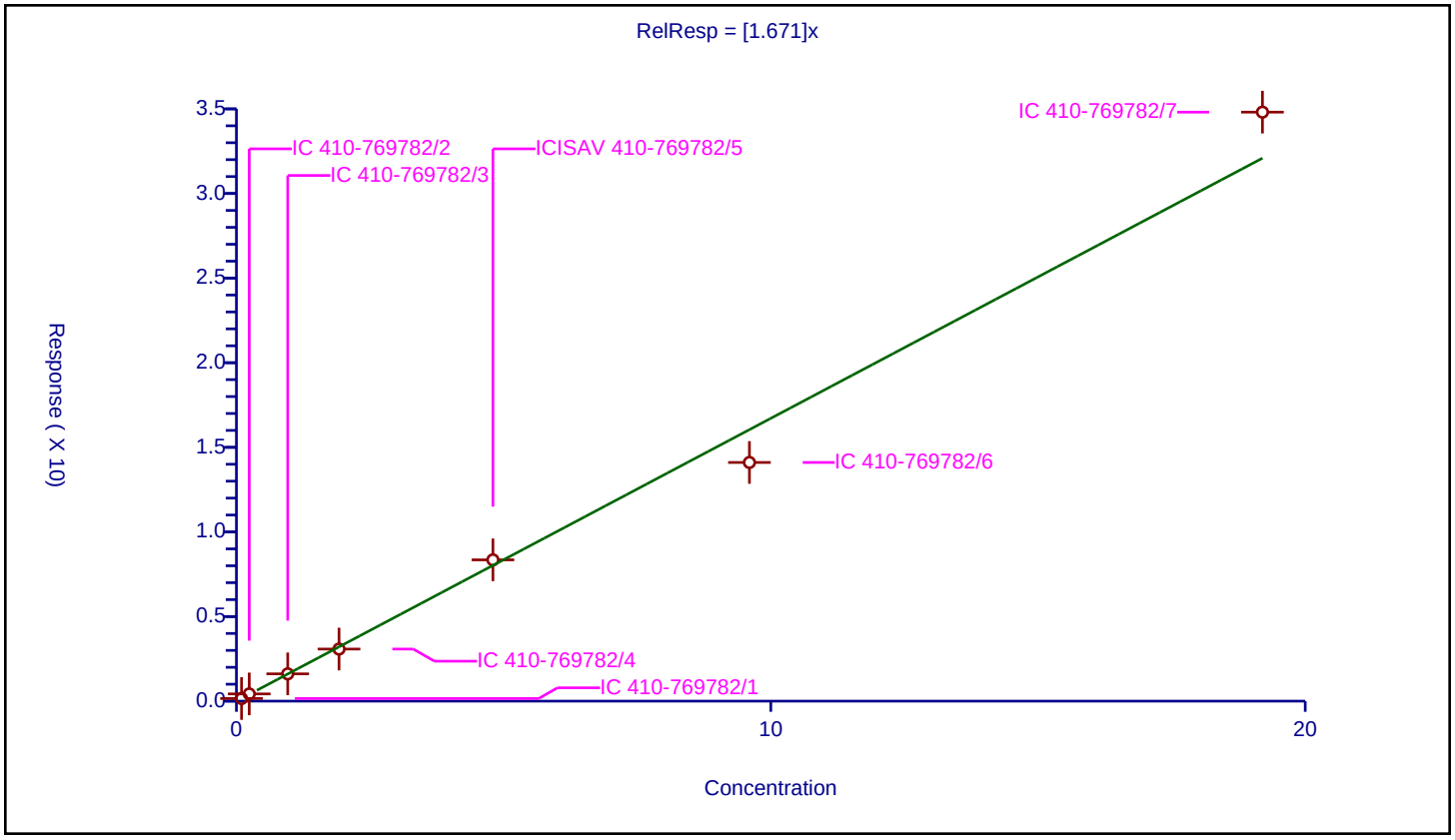
Curve Coefficients

Intercept:	0
Slope:	1.671

Error Coefficients

Relative Standard Deviation:	7.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.096	0.154835	4.8	944499.0	1.612866	Y
2	IC 410-769782/2	0.24	0.427526	4.8	1006222.0	1.781356	Y
3	IC 410-769782/3	0.96	1.613083	4.8	1152485.0	1.680295	Y
4	IC 410-769782/4	1.92	3.077544	4.8	886246.0	1.602887	Y
5	ICISAV 410-769782/5	4.8	8.349077	4.8	838590.0	1.739391	Y
6	IC 410-769782/6	9.6	14.104709	4.8	879695.0	1.46924	Y
7	IC 410-769782/7	19.2	34.807481	4.8	729572.0	1.81289	Y



Calibration / PFECHS

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

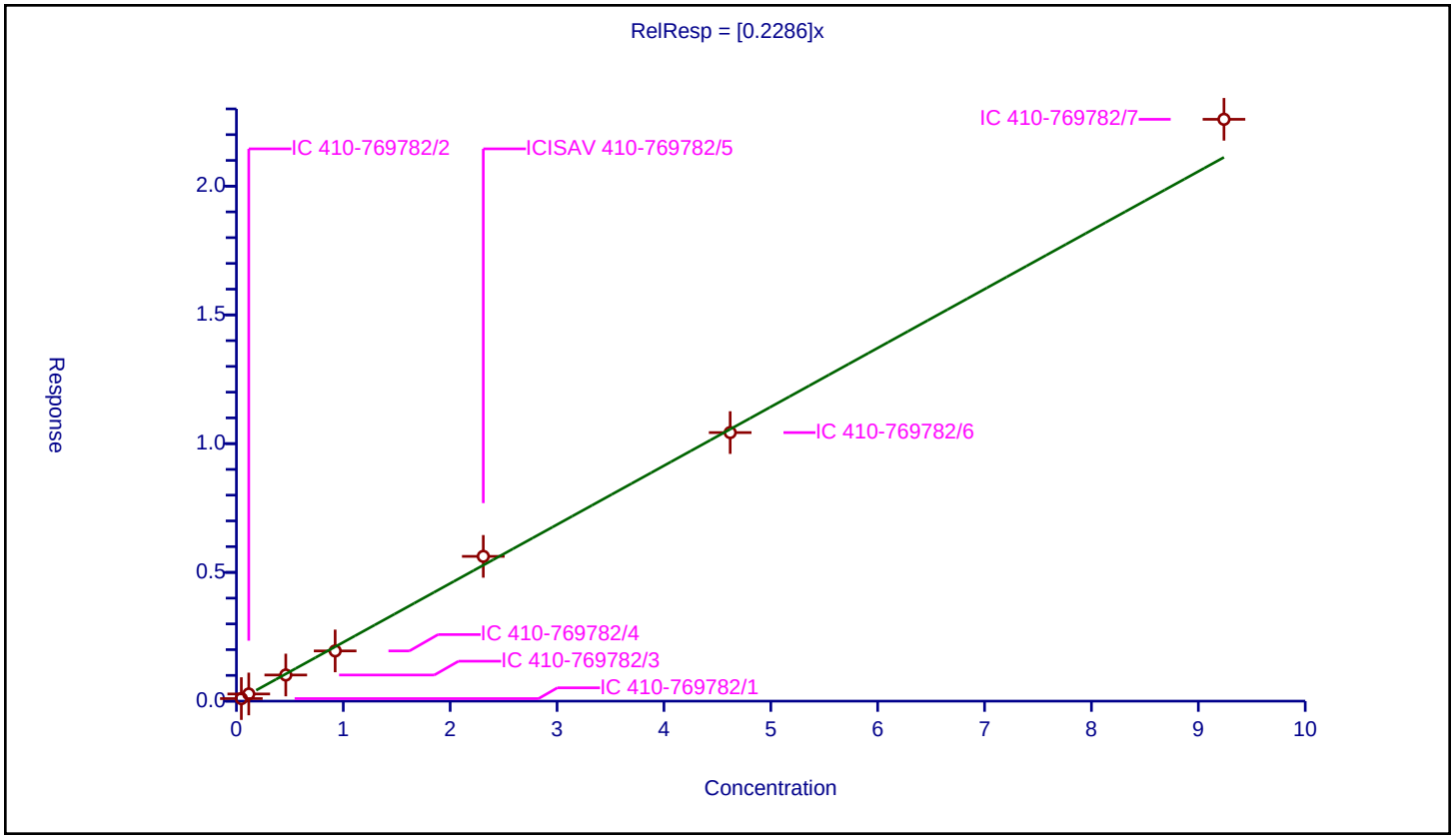
Curve Coefficients

Intercept:	0
Slope:	0.2286

Error Coefficients

Relative Standard Deviation:	6.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0462	0.009897	1.896	1677087.0	0.214214	Y
2	IC 410-769782/2	0.1155	0.027871	1.896	1742388.0	0.241308	Y
3	IC 410-769782/3	0.462	0.10154	1.896	2001917.0	0.219783	Y
4	IC 410-769782/4	0.924	0.194994	1.896	1706074.0	0.211032	Y
5	ICISAV 410-769782/5	2.31	0.56217	1.896	1587137.0	0.243364	Y
6	IC 410-769782/6	4.62	1.042946	1.896	1662256.0	0.225746	Y
7	IC 410-769782/7	9.24	2.259541	1.896	1577514.0	0.244539	Y



Calibration / Perfluoroheptanesulfonic acid

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

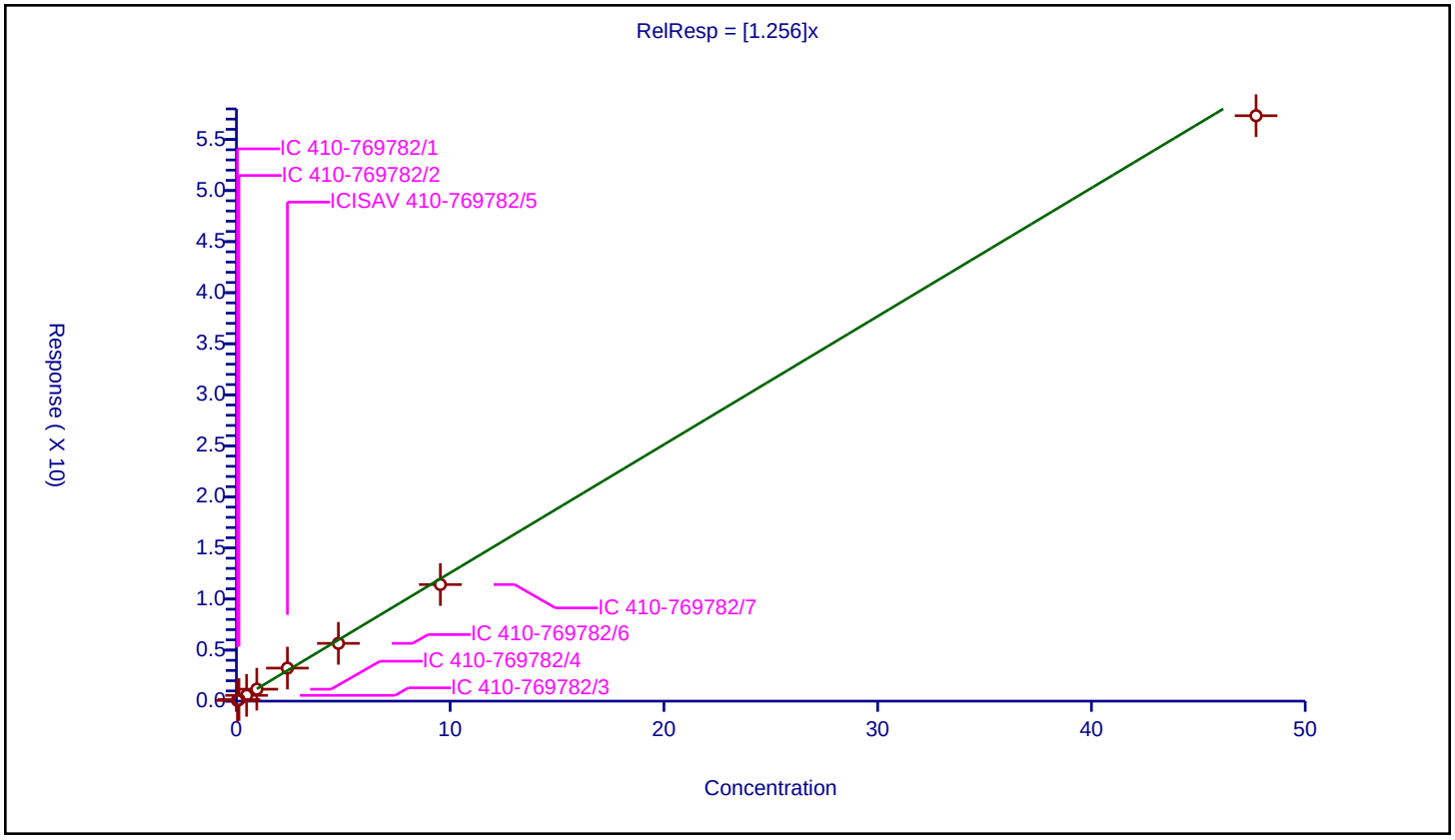
Curve Coefficients

Intercept:	0
Slope:	1.256

Error Coefficients

Relative Standard Deviation:	6.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0477	0.067605	1.916	1511992.0	1.417301	Y
2	IC 410-769782/2	0.11925	0.152067	1.916	1561579.0	1.275198	Y
3	IC 410-769782/3	0.477	0.567747	1.916	1850000.0	1.190245	Y
4	IC 410-769782/4	0.954	1.169689	1.916	1493372.0	1.226089	Y
5	ICISAV 410-769782/5	2.385	3.23618	1.916	1431022.0	1.356889	Y
6	IC 410-769782/6	4.77	5.657887	1.916	1506071.0	1.18614	Y
7	IC 410-769782/7	9.54	11.419315	1.916	1392852.0	1.196993	Y
8	IC 410-769782/8	47.7	57.331365	1.916	1000118.0	1.201915	Y



Calibration / N-methylperfluorooctanesulfonamidoacetic acid

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

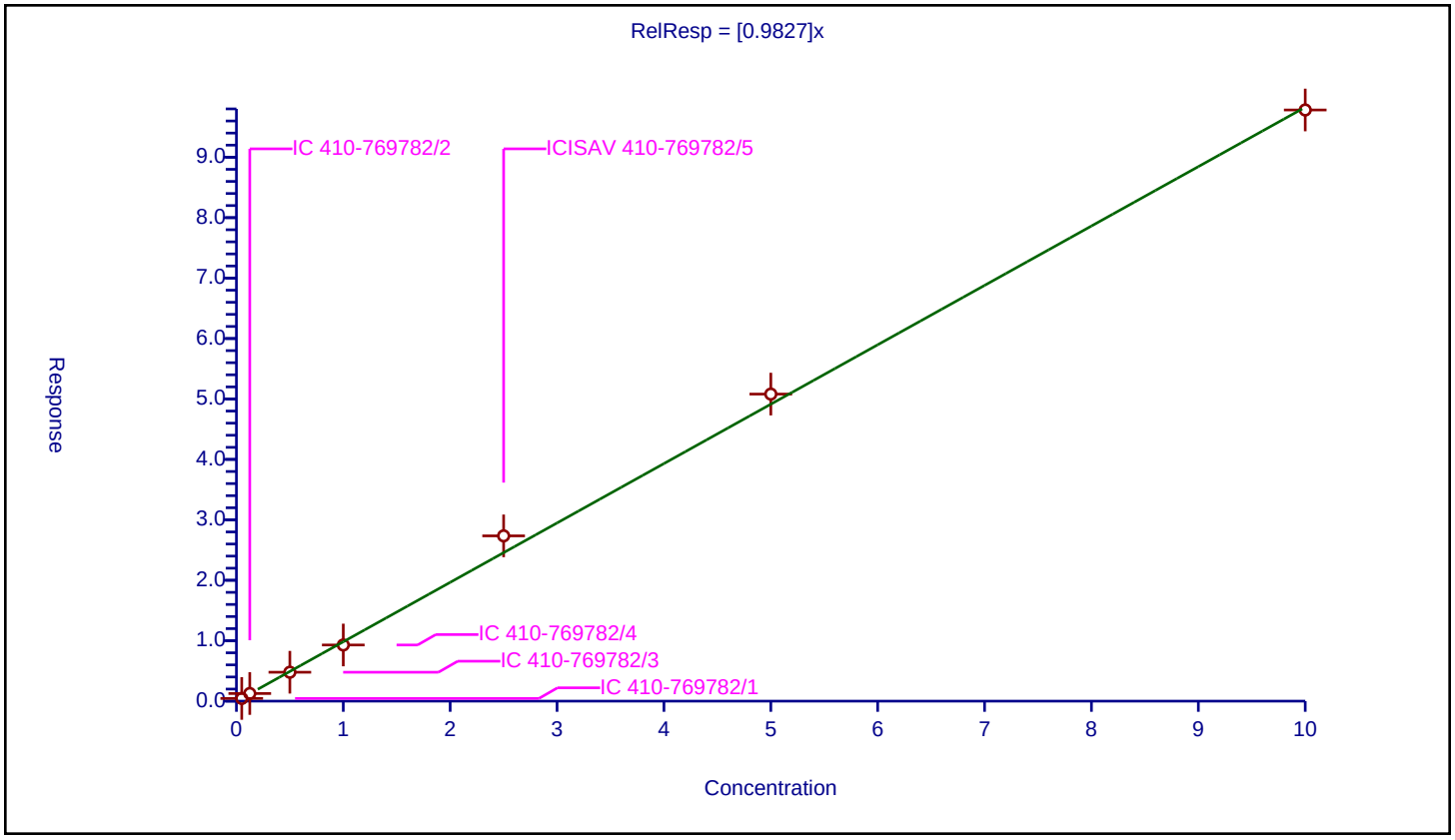
Curve Coefficients

Intercept:	0
Slope:	0.9827

Error Coefficients

Relative Standard Deviation:	6.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.044731	5.0	1677590.0	0.894617	Y
2	IC 410-769782/2	0.125	0.126268	5.0	1748619.0	1.010146	Y
3	IC 410-769782/3	0.5	0.478481	5.0	1957715.0	0.956963	Y
4	IC 410-769782/4	1.0	0.929141	5.0	1686487.0	0.929141	Y
5	ICISAV 410-769782/5	2.5	2.735005	5.0	1608593.0	1.094002	Y
6	IC 410-769782/6	5.0	5.080839	5.0	1596011.0	1.016168	Y
7	IC 410-769782/7	10.0	9.782031	5.0	1687371.0	0.978203	Y



Calibration / Perfluorodecanoic acid

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

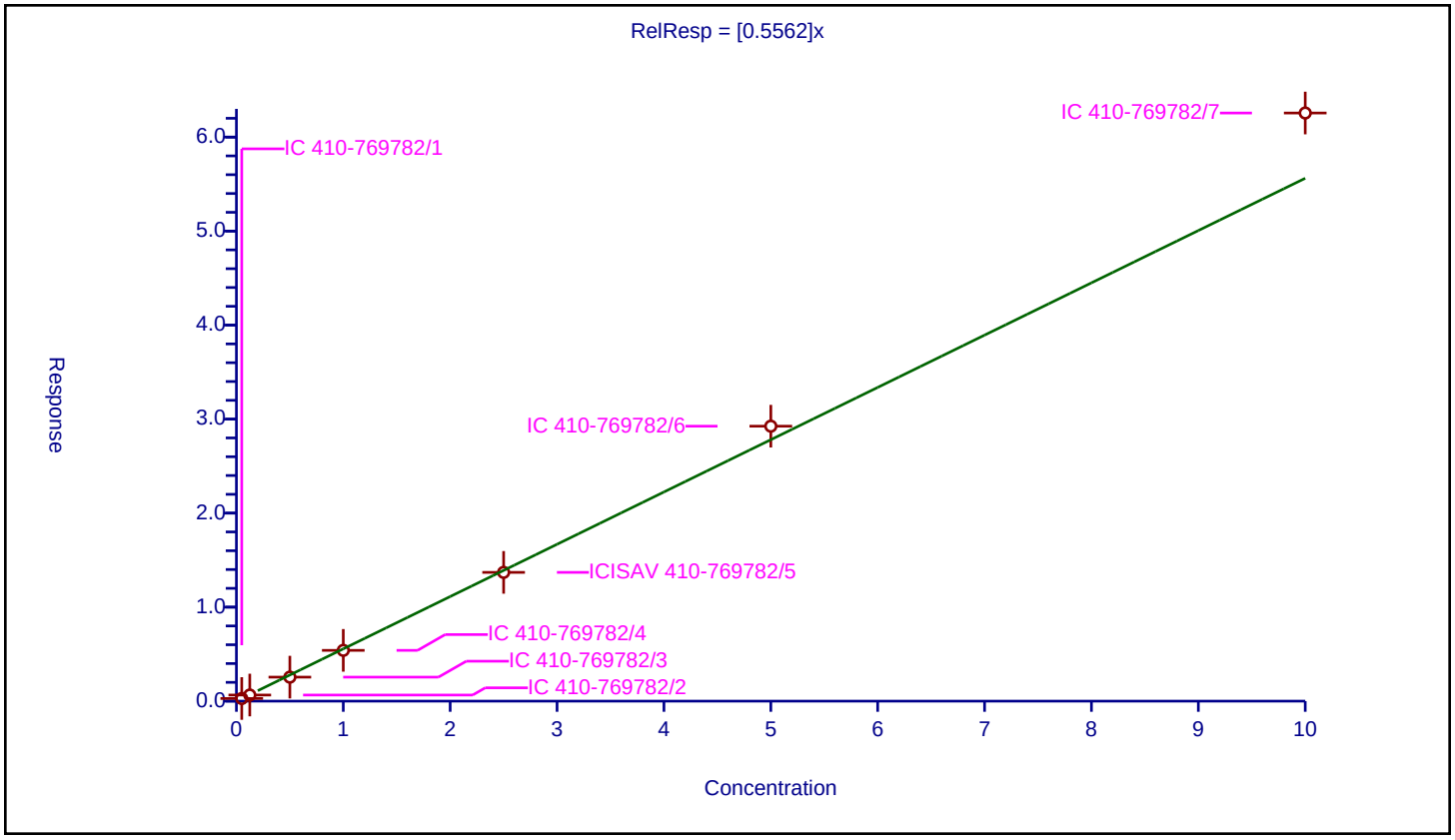
Curve Coefficients

Intercept:	0
Slope:	0.5562

Error Coefficients

Relative Standard Deviation:	7.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.028149	2.0	2027277.0	0.562982	Y
2	IC 410-769782/2	0.125	0.065155	2.0	2145786.0	0.521237	Y
3	IC 410-769782/3	0.5	0.255331	2.0	2447208.0	0.510662	Y
4	IC 410-769782/4	1.0	0.540108	2.0	1980918.0	0.540108	Y
5	ICISAV 410-769782/5	2.5	1.369592	2.0	1984472.0	0.547837	Y
6	IC 410-769782/6	5.0	2.924775	2.0	1792704.0	0.584955	Y
7	IC 410-769782/7	10.0	6.255991	2.0	1792462.0	0.625599	Y



Calibration / FHxSA

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

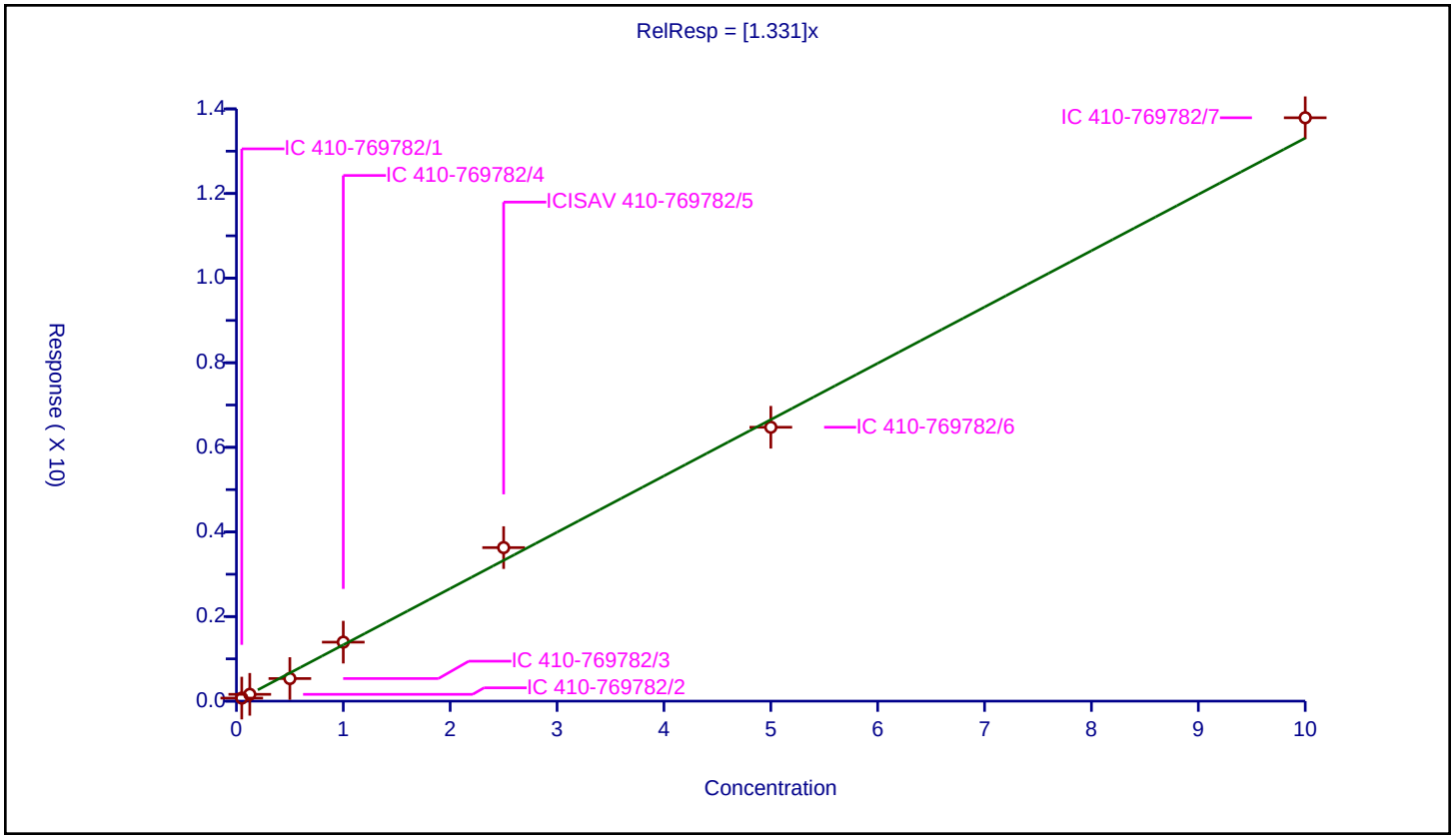
Curve Coefficients

Intercept:	0
Slope:	1.331

Error Coefficients

Relative Standard Deviation:	10.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.072062	1.896	1677087.0	1.441247	Y
2	IC 410-769782/2	0.125	0.160861	1.896	1742388.0	1.286886	Y
3	IC 410-769782/3	0.5	0.534133	1.896	2001917.0	1.068265	Y
4	IC 410-769782/4	1.0	1.394498	1.896	1706074.0	1.394498	Y
5	ICISAV 410-769782/5	2.5	3.629125	1.896	1587137.0	1.45165	Y
6	IC 410-769782/6	5.0	6.474567	1.896	1662256.0	1.294913	Y
7	IC 410-769782/7	10.0	13.790317	1.896	1577514.0	1.379032	Y



Calibration / N-ethylperfluorooctanesulfonamidoacetic acid

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

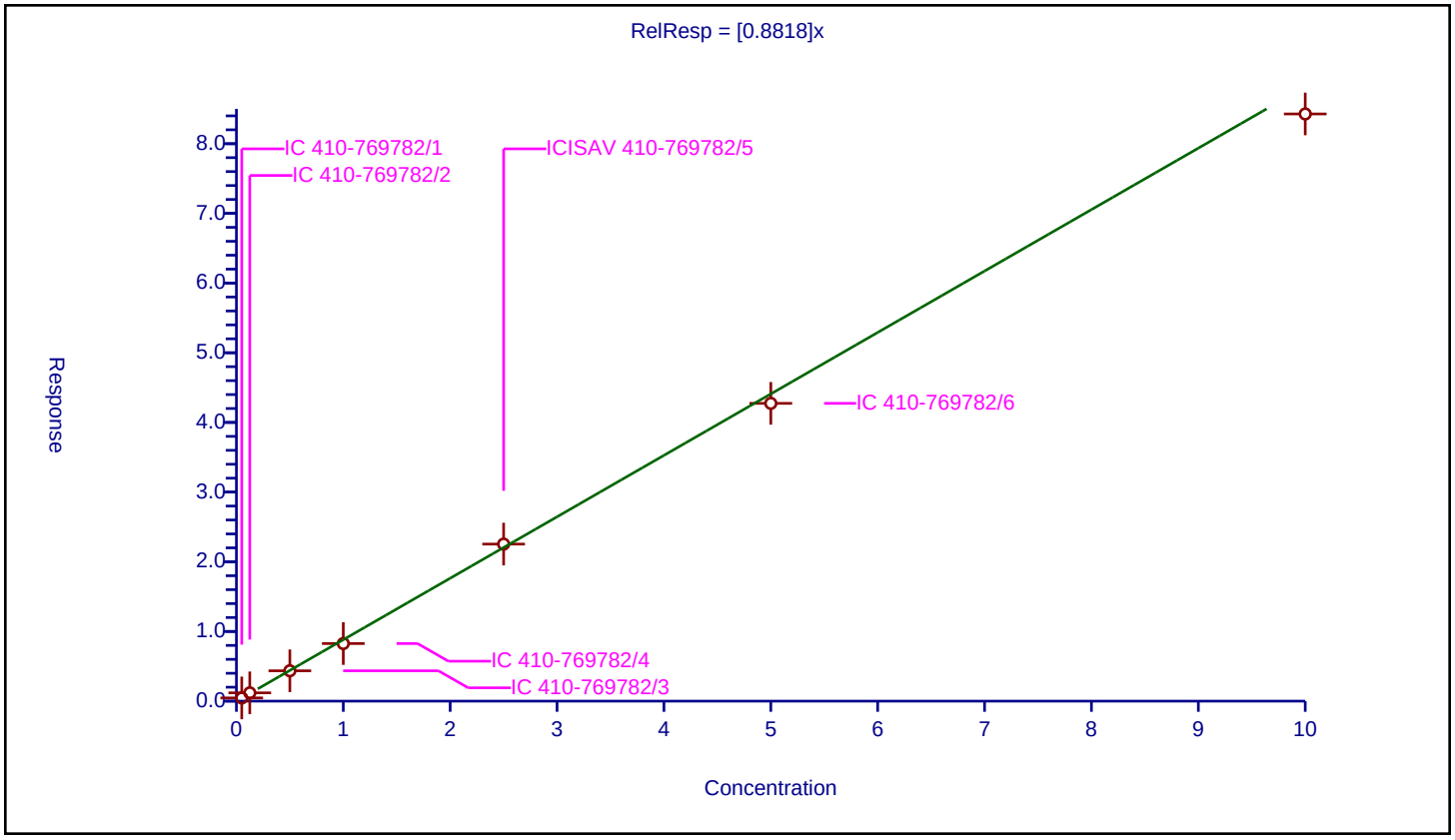
Curve Coefficients

Intercept:	0
Slope:	0.8818

Error Coefficients

Relative Standard Deviation:	5.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.046101	5.0	1604310.0	0.922016	Y
2	IC 410-769782/2	0.125	0.11919	5.0	1566322.0	0.95352	Y
3	IC 410-769782/3	0.5	0.435725	5.0	1769006.0	0.87145	Y
4	IC 410-769782/4	1.0	0.826739	5.0	1520486.0	0.826739	Y
5	ICISAV 410-769782/5	2.5	2.254106	5.0	1478116.0	0.901642	Y
6	IC 410-769782/6	5.0	4.273762	5.0	1500280.0	0.854752	Y
7	IC 410-769782/7	10.0	8.427556	5.0	1511863.0	0.842756	Y



Calibration / Perfluorooctanesulfonic acid

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

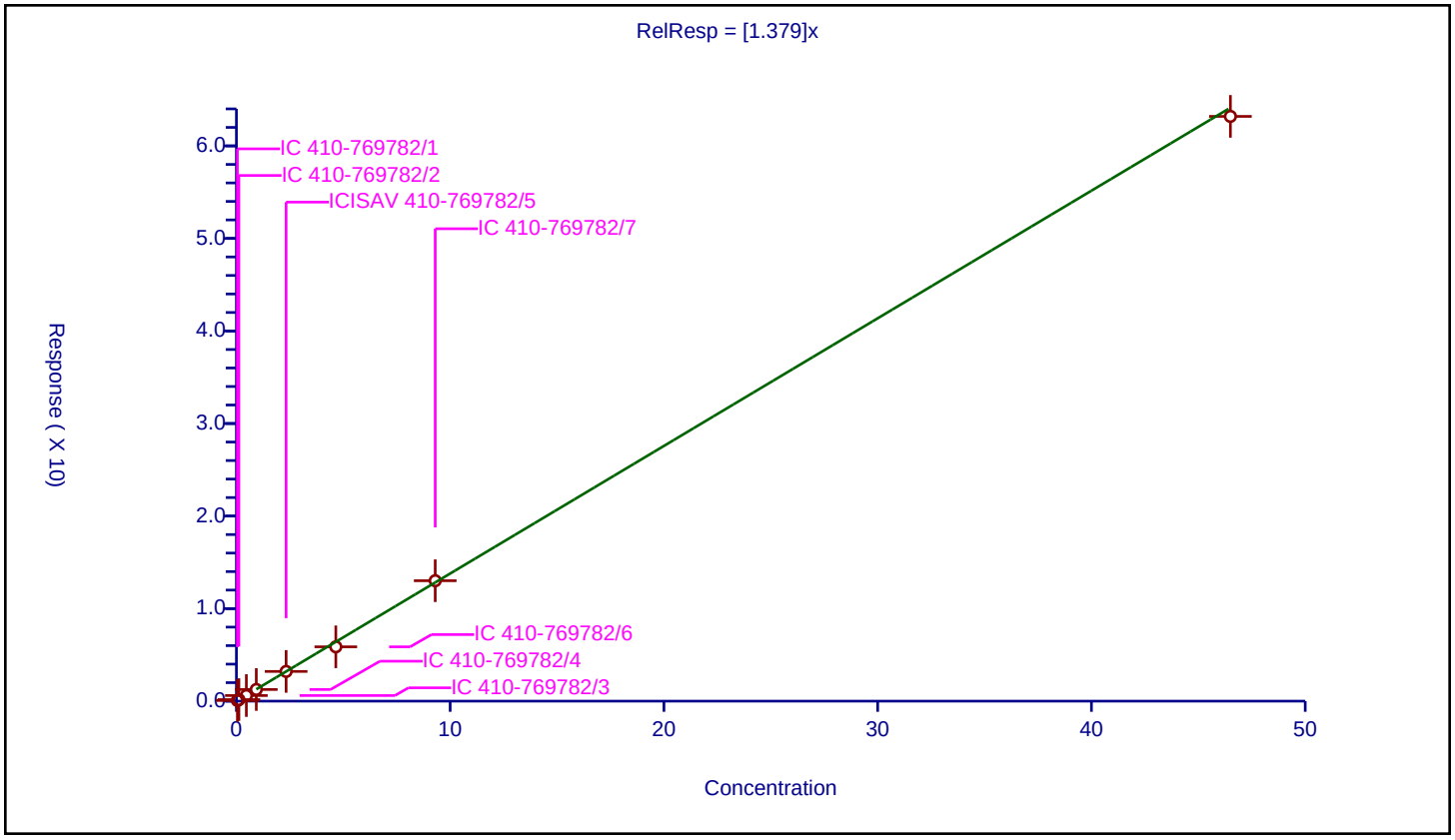
Curve Coefficients

Intercept:	0
Slope:	1.379

Error Coefficients

Relative Standard Deviation:	6.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0465	0.071743	1.916	1511992.0	1.542853	Y
2	IC 410-769782/2	0.11625	0.166158	1.916	1561579.0	1.429315	Y
3	IC 410-769782/3	0.465	0.605839	1.916	1850000.0	1.30288	Y
4	IC 410-769782/4	0.93	1.260331	1.916	1493372.0	1.355194	Y
5	ICISAV 410-769782/5	2.325	3.211098	1.916	1431022.0	1.381118	Y
6	IC 410-769782/6	4.65	5.870189	1.916	1506071.0	1.262406	Y
7	IC 410-769782/7	9.3	13.013336	1.916	1392852.0	1.399283	Y
8	IC 410-769782/8	46.5	63.187752	1.916	1000118.0	1.358876	Y



Calibration / Perfluoroundecanoic acid

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

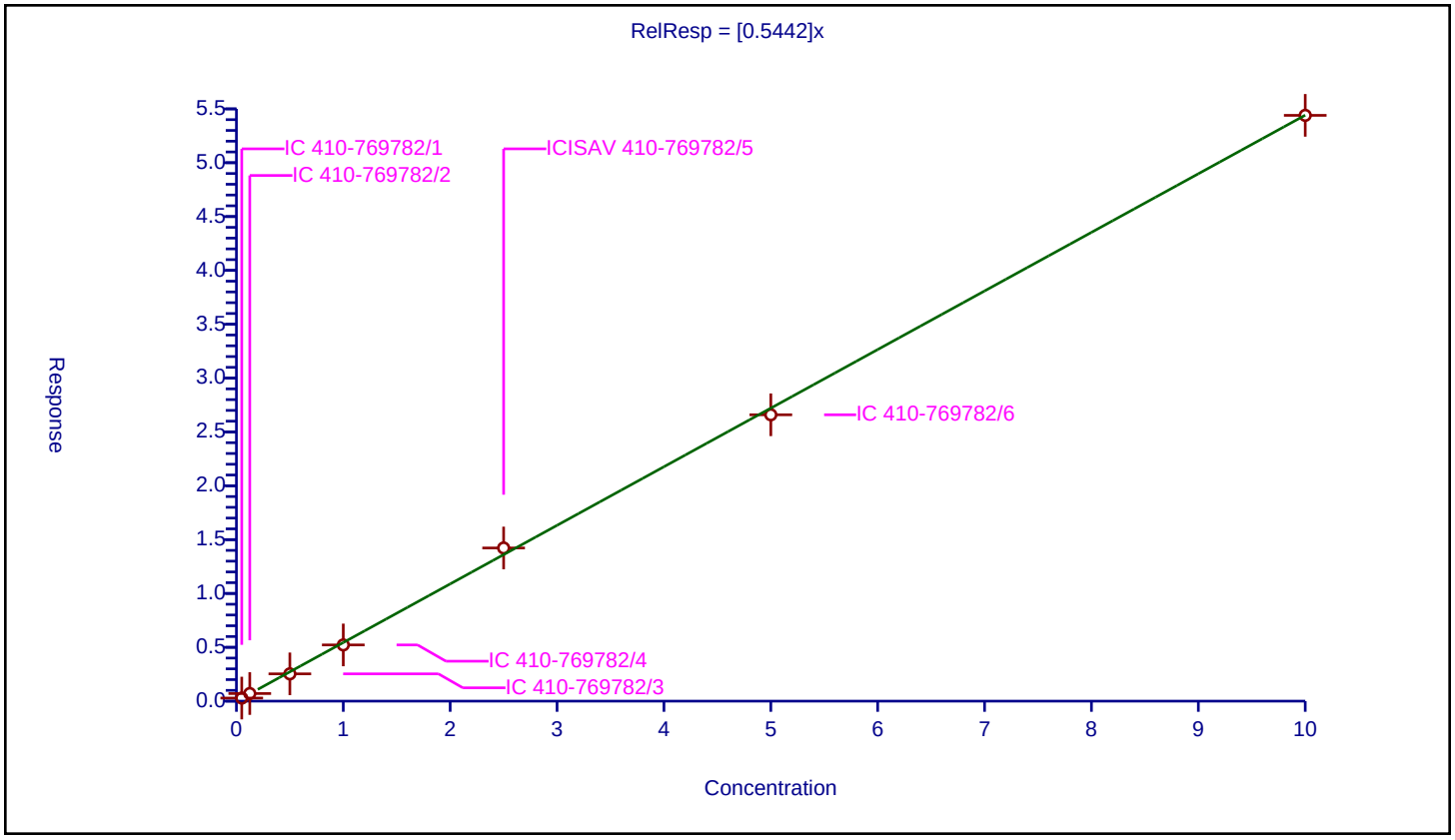
Curve Coefficients

Intercept:	0
Slope:	0.5442

Error Coefficients

Relative Standard Deviation:	4.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.028575	2.0	2168585.0	0.571506	Y
2	IC 410-769782/2	0.125	0.070504	2.0	2142266.0	0.564031	Y
3	IC 410-769782/3	0.5	0.253412	2.0	2773070.0	0.506823	Y
4	IC 410-769782/4	1.0	0.521969	2.0	2061705.0	0.521969	Y
5	ICISAV 410-769782/5	2.5	1.422346	2.0	2025565.0	0.568938	Y
6	IC 410-769782/6	5.0	2.659173	2.0	1891648.0	0.531835	Y
7	IC 410-769782/7	10.0	5.440009	2.0	1787471.0	0.544001	Y



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

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

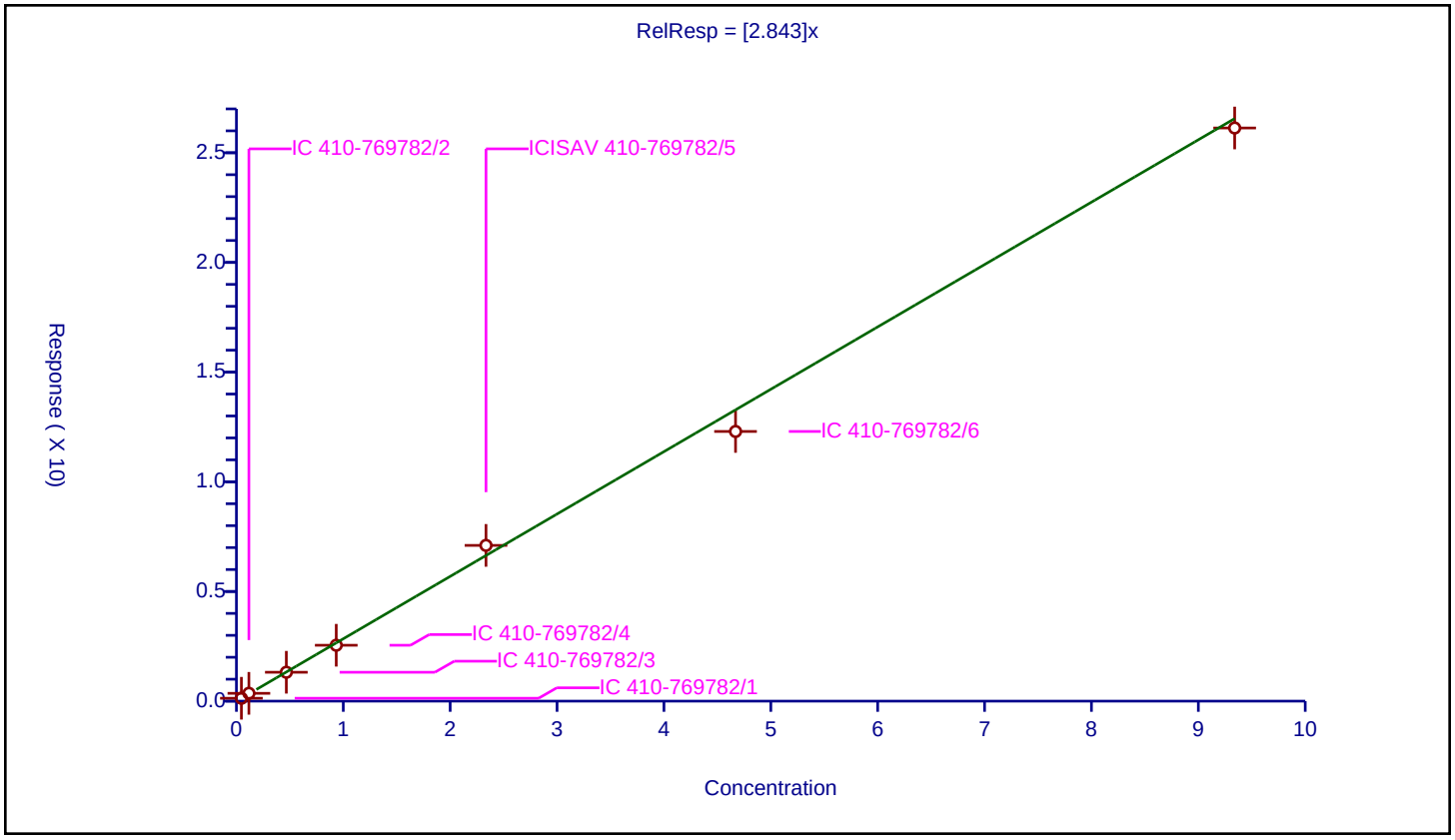
Curve Coefficients

Intercept:	0
Slope:	2.843

Error Coefficients

Relative Standard Deviation:	5.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0467	0.132195	1.916	1511992.0	2.830719	Y
2	IC 410-769782/2	0.11675	0.356677	1.916	1561579.0	3.055049	Y
3	IC 410-769782/3	0.467	1.316569	1.916	1850000.0	2.819205	Y
4	IC 410-769782/4	0.934	2.548002	1.916	1493372.0	2.728053	Y
5	ICISAV 410-769782/5	2.335	7.100477	1.916	1431022.0	3.04089	Y
6	IC 410-769782/6	4.67	12.294347	1.916	1506071.0	2.632622	Y
7	IC 410-769782/7	9.34	26.128959	1.916	1392852.0	2.797533	Y



Calibration / Perfluorononanesulfonic acid

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

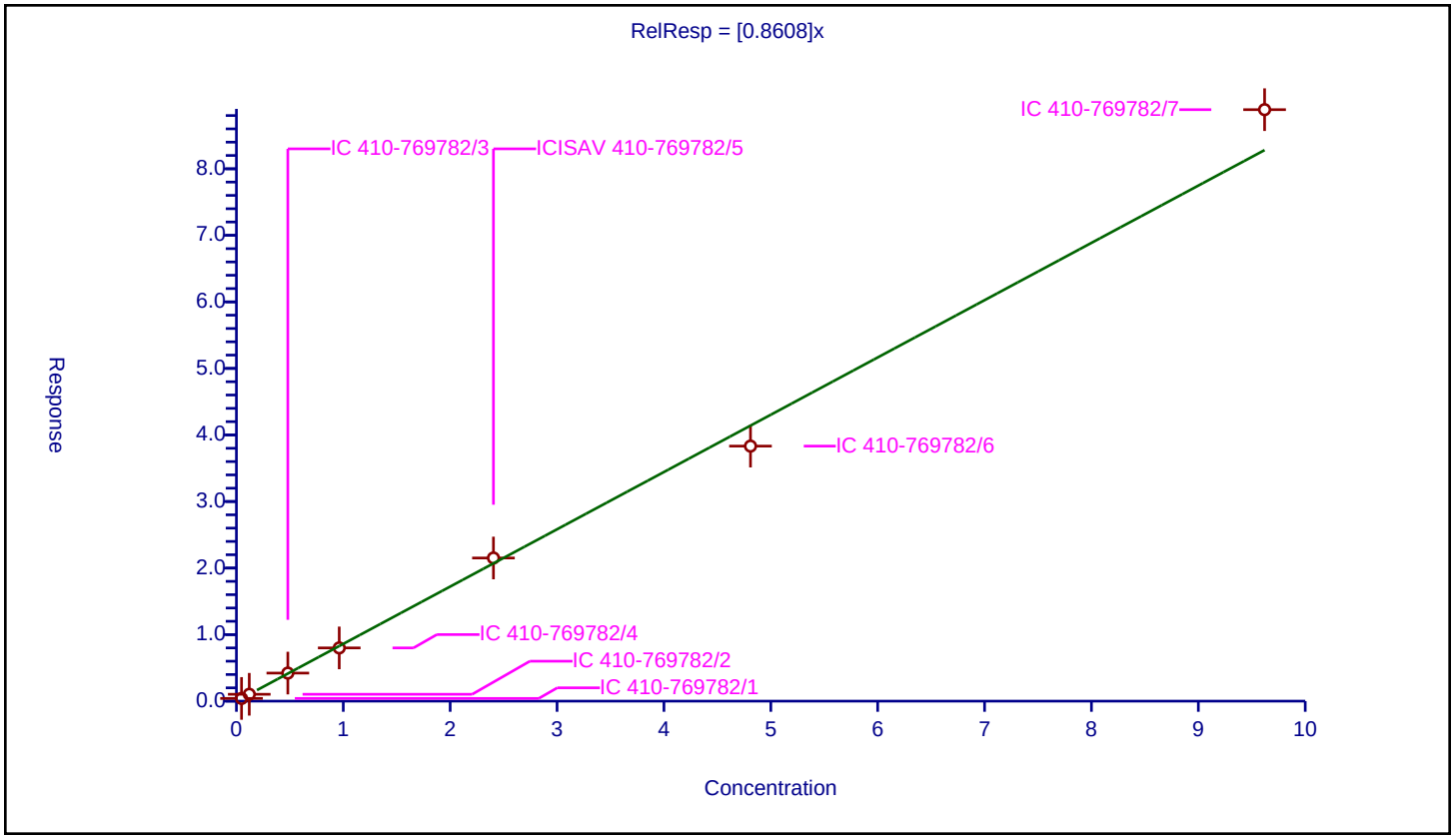
Curve Coefficients

Intercept:	0
Slope:	0.8608

Error Coefficients

Relative Standard Deviation:	4.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0481	0.040673	1.916	1511992.0	0.845601	Y
2	IC 410-769782/2	0.12025	0.103082	1.916	1561579.0	0.857232	Y
3	IC 410-769782/3	0.481	0.421462	1.916	1850000.0	0.87622	Y
4	IC 410-769782/4	0.962	0.799737	1.916	1493372.0	0.831327	Y
5	ICISAV 410-769782/5	2.405	2.151216	1.916	1431022.0	0.894476	Y
6	IC 410-769782/6	4.81	3.832413	1.916	1506071.0	0.79676	Y
7	IC 410-769782/7	9.62	8.88853	1.916	1392852.0	0.923964	Y



Calibration / Perfluorododecanoic acid

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

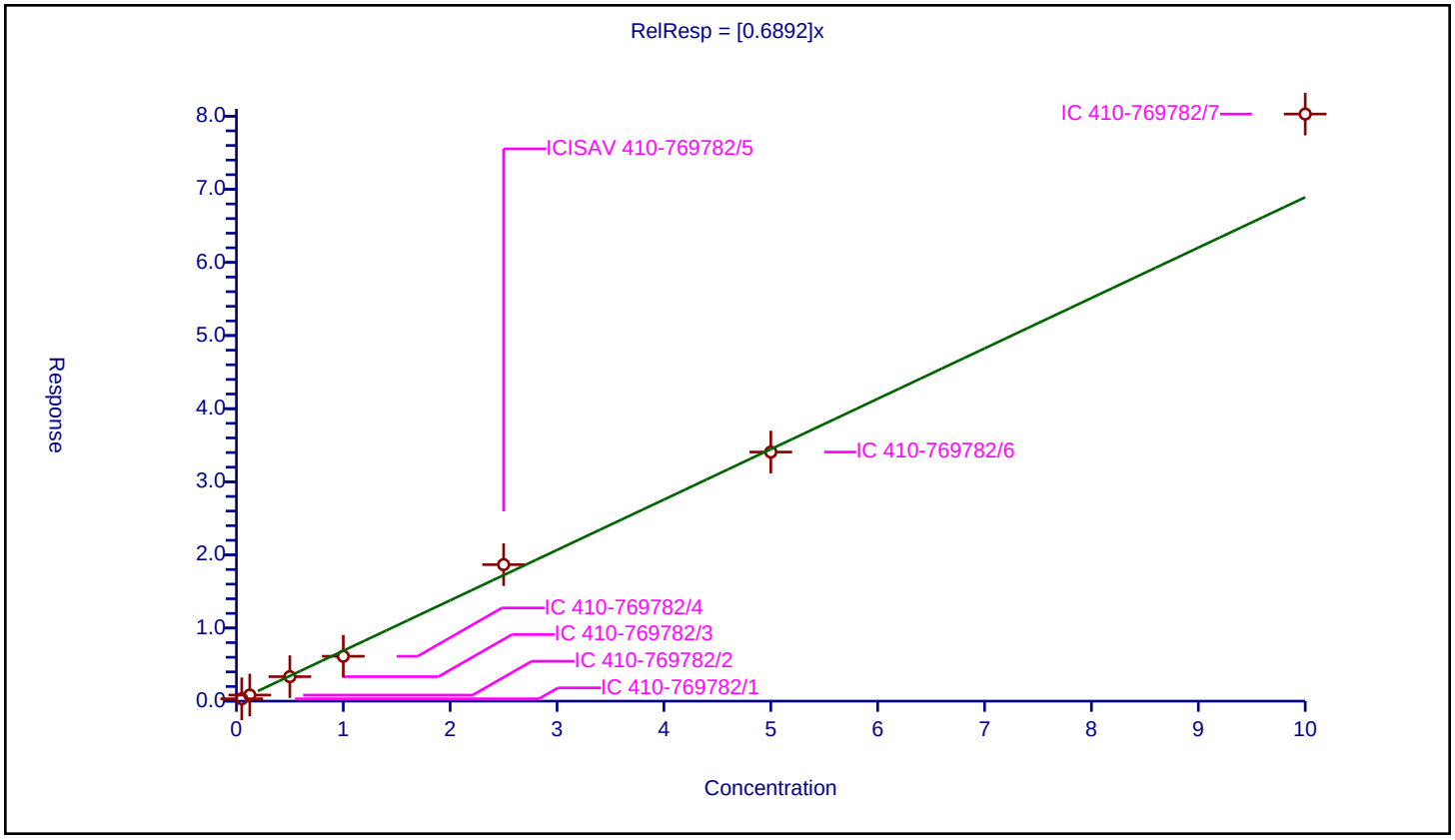
Curve Coefficients

Intercept:	0
Slope:	0.6892

Error Coefficients

Relative Standard Deviation:	9.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.032209	2.0	2115198.0	0.644176	Y
2	IC 410-769782/2	0.125	0.083187	2.0	2214759.0	0.665499	Y
3	IC 410-769782/3	0.5	0.3348	2.0	2739305.0	0.669599	Y
4	IC 410-769782/4	1.0	0.613751	2.0	2275550.0	0.613751	Y
5	ICISAV 410-769782/5	2.5	1.866904	2.0	1864578.0	0.746762	Y
6	IC 410-769782/6	5.0	3.406763	2.0	1911121.0	0.681353	Y
7	IC 410-769782/7	10.0	8.029316	2.0	1766814.0	0.802932	Y



Calibration / Perfluorooctanesulfonamide

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

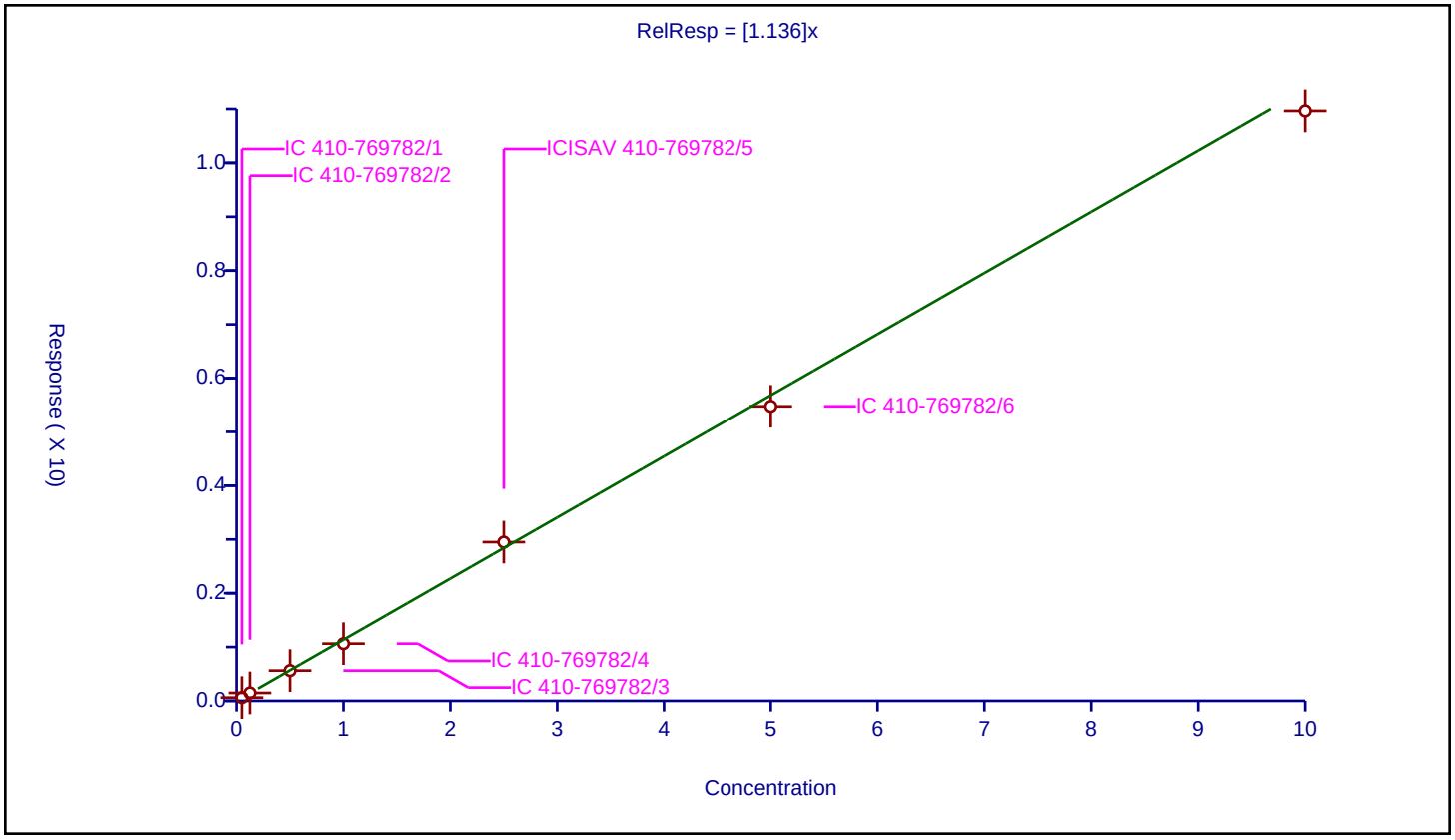
Curve Coefficients

Intercept:	0
Slope:	1.136

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.060835	2.0	1722143.0	1.216693	Y
2	IC 410-769782/2	0.125	0.147416	2.0	1690636.0	1.179324	Y
3	IC 410-769782/3	0.5	0.562154	2.0	1670663.0	1.124308	Y
4	IC 410-769782/4	1.0	1.063022	2.0	1724977.0	1.063022	Y
5	ICISAV 410-769782/5	2.5	2.950092	2.0	1687659.0	1.180037	Y
6	IC 410-769782/6	5.0	5.476552	2.0	1619947.0	1.09531	Y
7	IC 410-769782/7	10.0	10.963847	2.0	1702127.0	1.096385	Y



Calibration / Perfluorodecanesulfonic acid

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

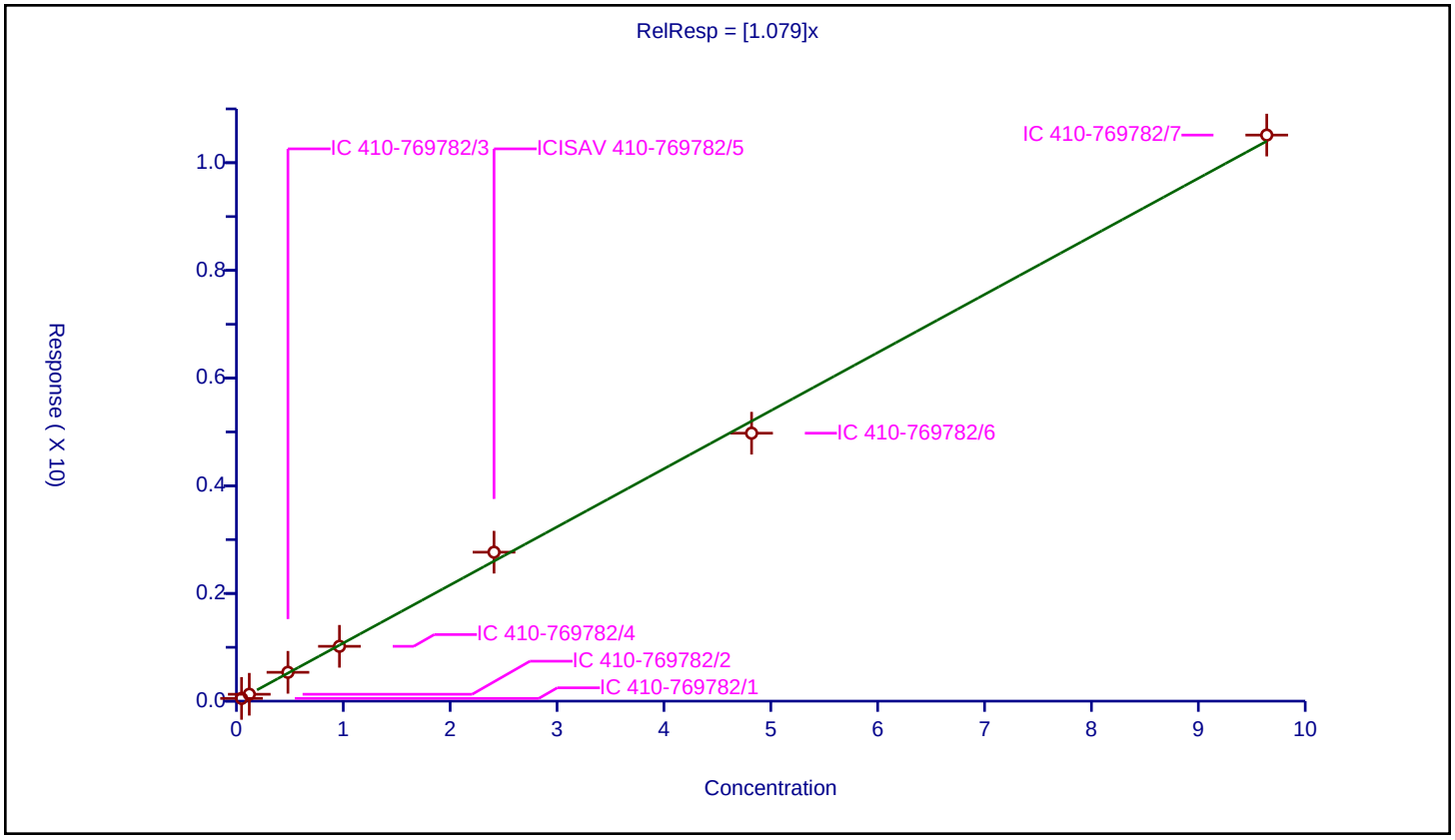
Curve Coefficients

Intercept:	0
Slope:	1.079

Error Coefficients

Relative Standard Deviation:	3.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0482	0.05086	1.916	1511992.0	1.055196	Y
2	IC 410-769782/2	0.1205	0.127652	1.916	1561579.0	1.059353	Y
3	IC 410-769782/3	0.482	0.53528	1.916	1850000.0	1.110539	Y
4	IC 410-769782/4	0.964	1.018146	1.916	1493372.0	1.056168	Y
5	ICISAV 410-769782/5	2.41	2.766735	1.916	1431022.0	1.148023	Y
6	IC 410-769782/6	4.82	4.976844	1.916	1506071.0	1.03254	Y
7	IC 410-769782/7	9.64	10.51393	1.916	1392852.0	1.090657	Y



Calibration / Perfluorotridecanoic acid

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

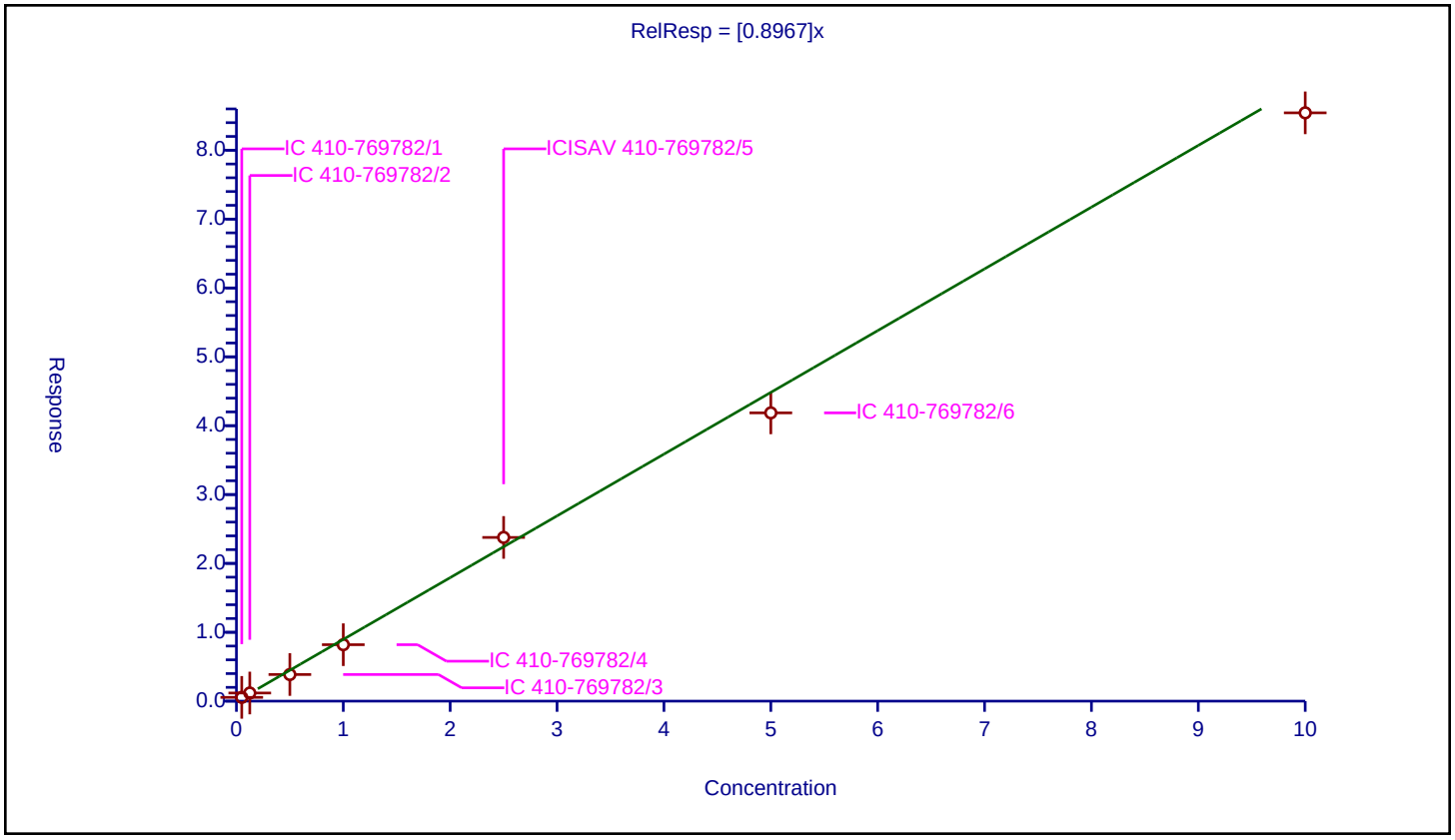
Curve Coefficients

Intercept:	0
Slope:	0.8967

Error Coefficients

Relative Standard Deviation:	12.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.054799	2.0	1628455.0	1.095984	Y
2	IC 410-769782/2	0.125	0.118172	2.0	1906812.0	0.945377	Y
3	IC 410-769782/3	0.5	0.386519	2.0	2635796.0	0.773037	Y
4	IC 410-769782/4	1.0	0.819843	2.0	1932604.0	0.819843	Y
5	ICISAV 410-769782/5	2.5	2.377349	2.0	1770843.0	0.95094	Y
6	IC 410-769782/6	5.0	4.186038	2.0	1847092.0	0.837208	Y
7	IC 410-769782/7	10.0	8.542667	2.0	1794753.0	0.854267	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

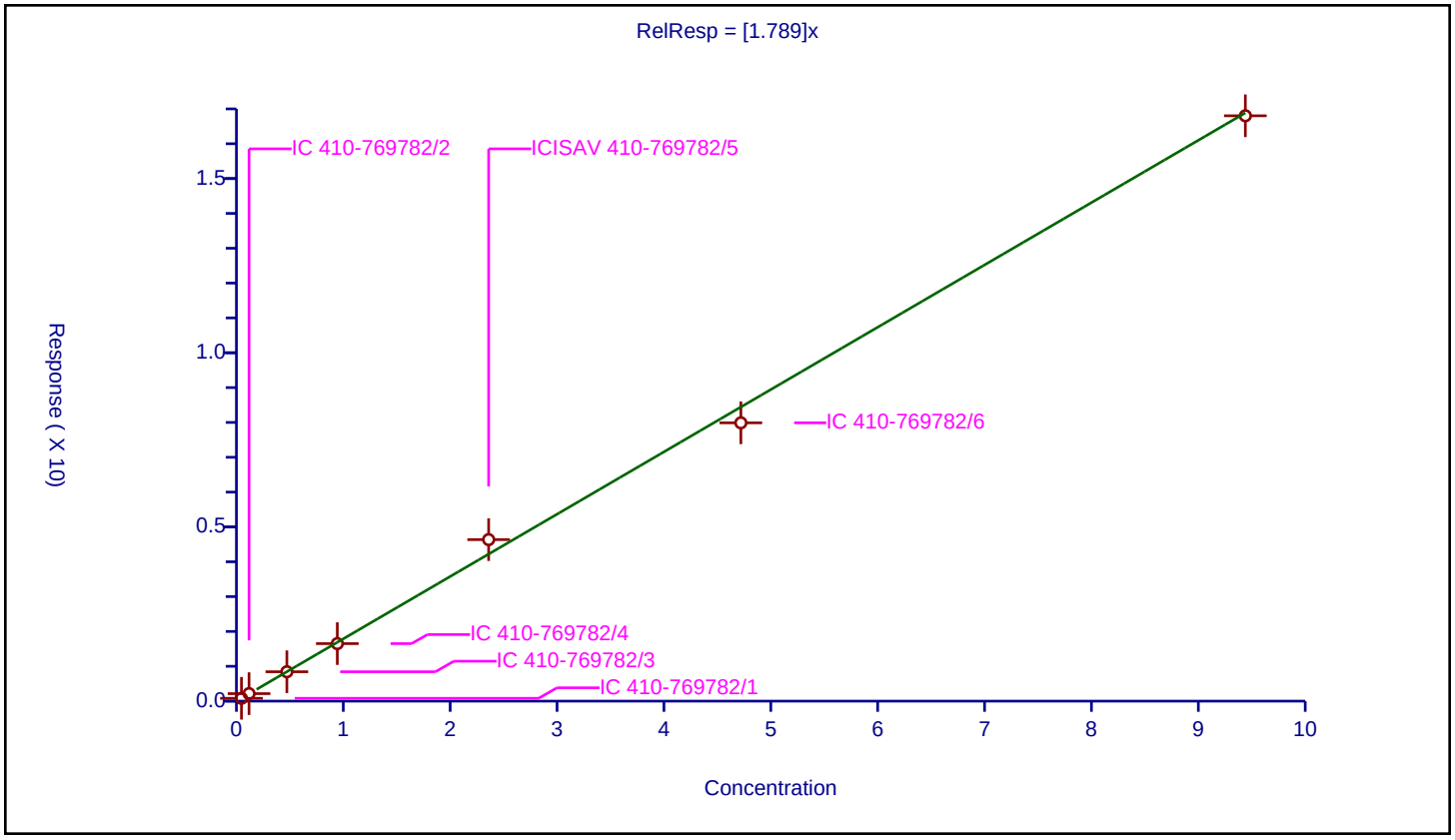
Curve Coefficients

Intercept:	0
Slope:	1.789

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0472	0.081344	1.916	1511992.0	1.723395	Y
2	IC 410-769782/2	0.118	0.21538	1.916	1561579.0	1.825253	Y
3	IC 410-769782/3	0.472	0.843487	1.916	1850000.0	1.78705	Y
4	IC 410-769782/4	0.944	1.650653	1.916	1493372.0	1.748573	Y
5	ICISAV 410-769782/5	2.36	4.636654	1.916	1431022.0	1.964684	Y
6	IC 410-769782/6	4.72	7.988577	1.916	1506071.0	1.692495	Y
7	IC 410-769782/7	9.44	16.80207	1.916	1392852.0	1.77988	Y



Calibration / Perfluorotetradecanoic acid

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

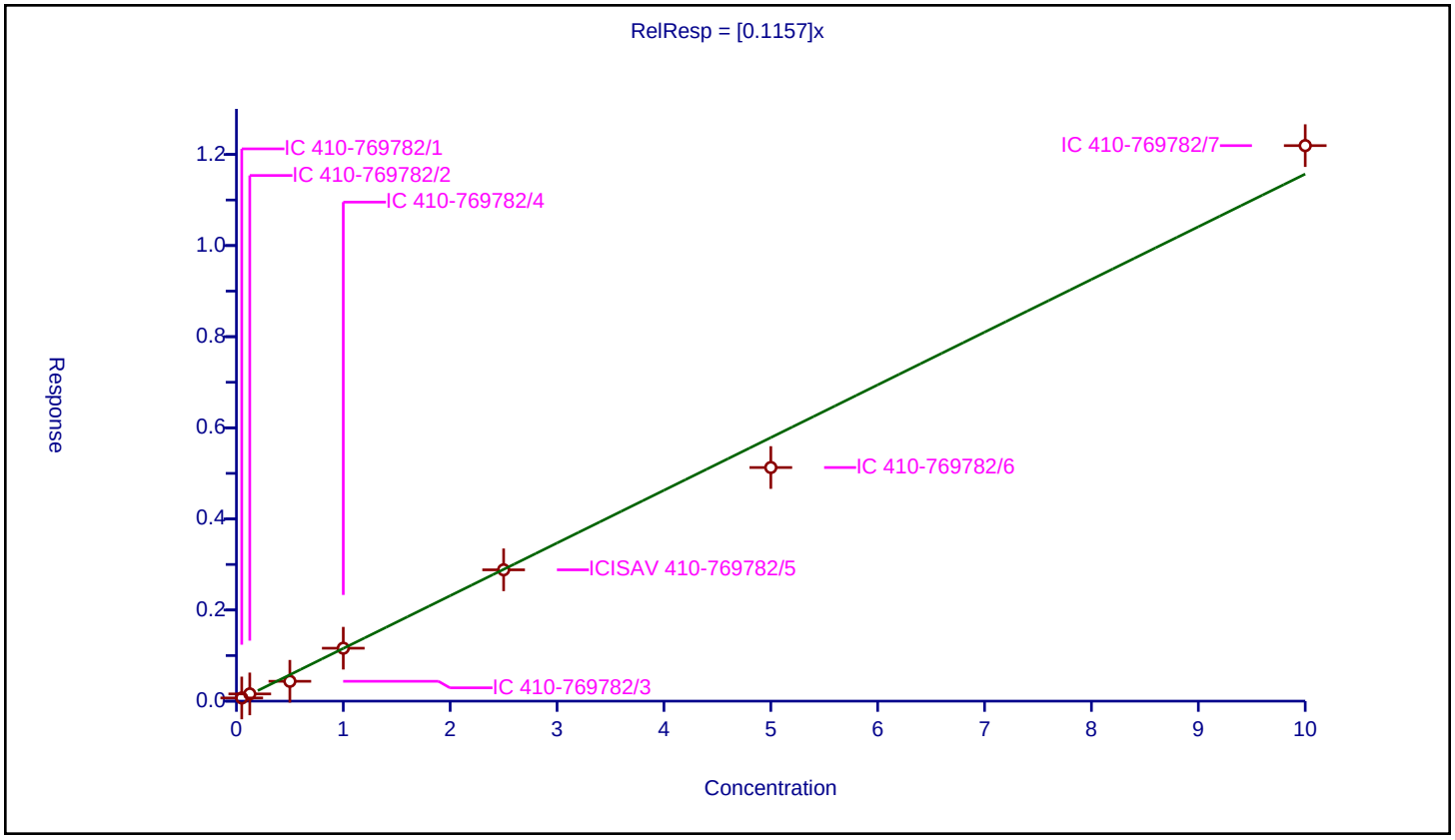
Curve Coefficients

Intercept:	0
Slope:	0.1157

Error Coefficients

Relative Standard Deviation:	14.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.006981	2.0	1628455.0	0.139617	Y
2	IC 410-769782/2	0.125	0.015884	2.0	1906812.0	0.127073	Y
3	IC 410-769782/3	0.5	0.043611	2.0	2635796.0	0.087222	Y
4	IC 410-769782/4	1.0	0.116192	2.0	1932604.0	0.116192	Y
5	ICISAV 410-769782/5	2.5	0.288262	2.0	1770843.0	0.115305	Y
6	IC 410-769782/6	5.0	0.512801	2.0	1847092.0	0.10256	Y
7	IC 410-769782/7	10.0	1.219401	2.0	1794753.0	0.12194	Y



Calibration / Perfluorododecanesulfonic acid (PFDoS)

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

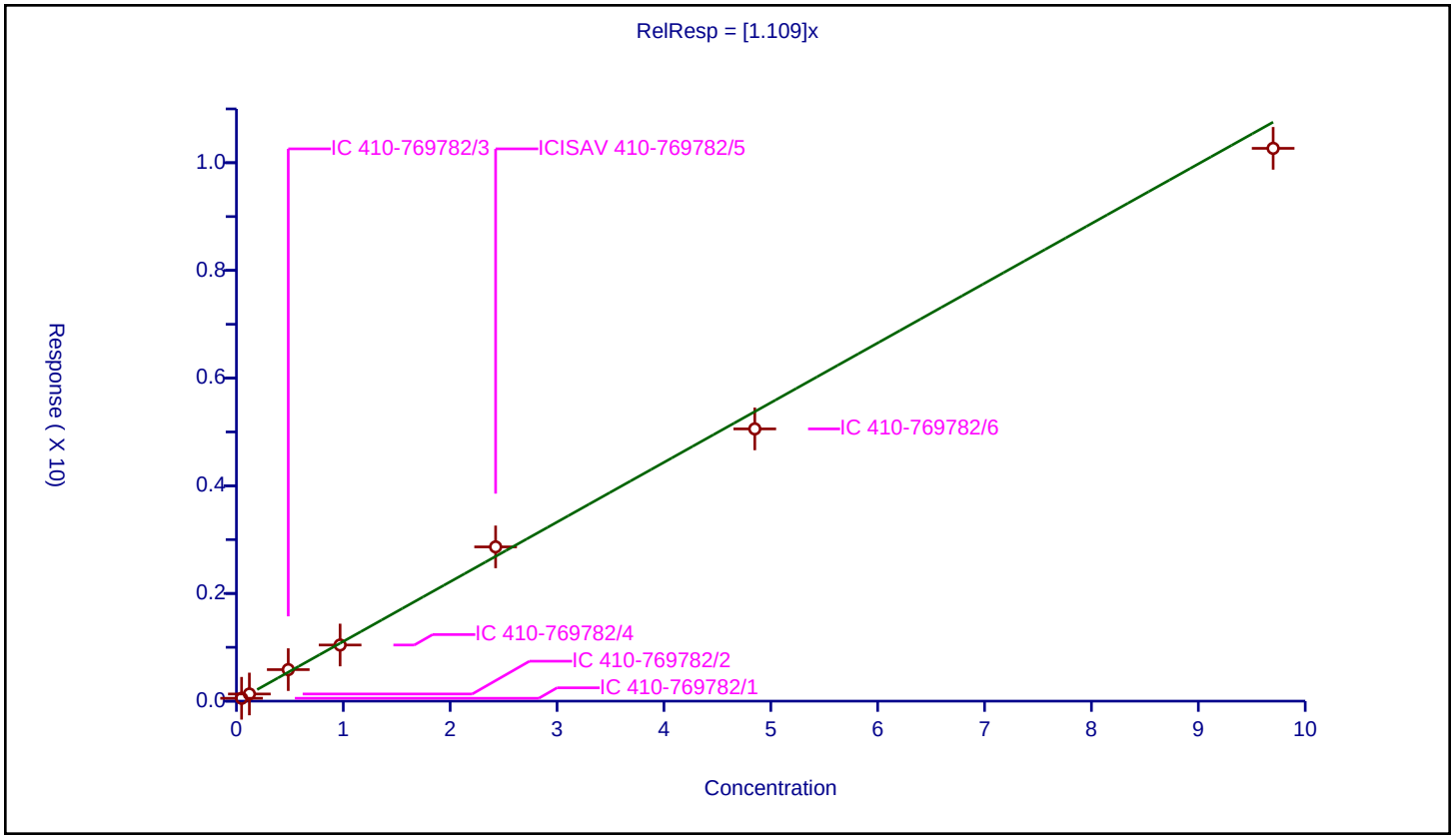
Curve Coefficients

Intercept:	0
Slope:	1.109

Error Coefficients

Relative Standard Deviation:	5.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.0485	0.053394	1.916	1511992.0	1.100898	Y
2	IC 410-769782/2	0.12125	0.132799	1.916	1561579.0	1.095251	Y
3	IC 410-769782/3	0.485	0.585624	1.916	1850000.0	1.207472	Y
4	IC 410-769782/4	0.97	1.04252	1.916	1493372.0	1.074763	Y
5	ICISAV 410-769782/5	2.425	2.864883	1.916	1431022.0	1.181395	Y
6	IC 410-769782/6	4.85	5.056567	1.916	1506071.0	1.042591	Y
7	IC 410-769782/7	9.7	10.26744	1.916	1392852.0	1.058499	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

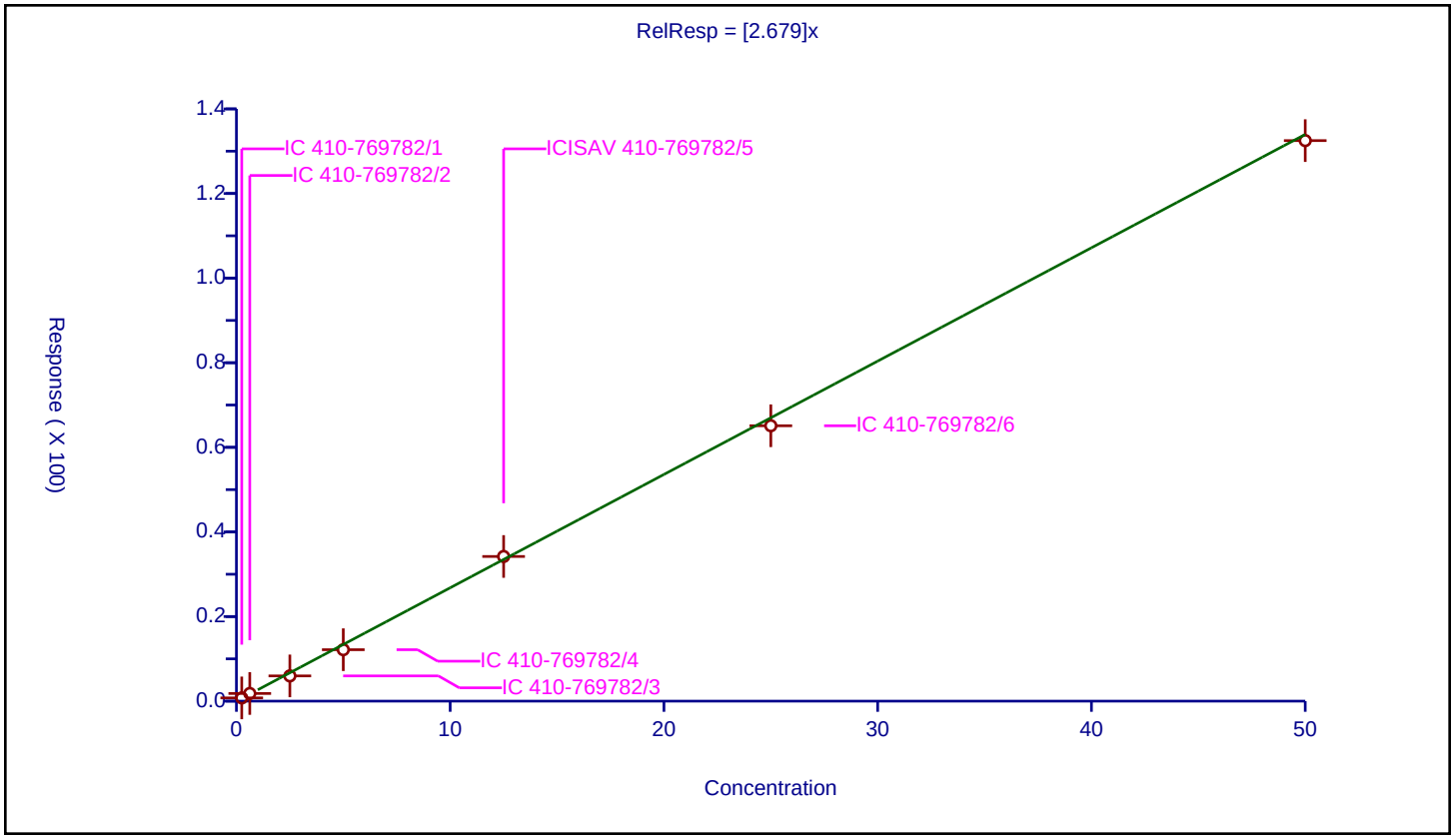
Curve Coefficients

Intercept:	0
Slope:	2.679

Error Coefficients

Relative Standard Deviation:	8.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.25	0.762996	5.0	271738.0	3.051984	Y
2	IC 410-769782/2	0.625	1.809145	5.0	281984.0	2.894632	Y
3	IC 410-769782/3	2.5	5.966183	5.0	294230.0	2.386473	Y
4	IC 410-769782/4	5.0	12.16094	5.0	301112.0	2.432188	Y
5	ICISAV 410-769782/5	12.5	34.193626	5.0	267413.0	2.73549	Y
6	IC 410-769782/6	25.0	65.099857	5.0	268433.0	2.603994	Y
7	IC 410-769782/7	50.0	132.500018	5.0	275182.0	2.65	Y



Calibration / NMeFOSA

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

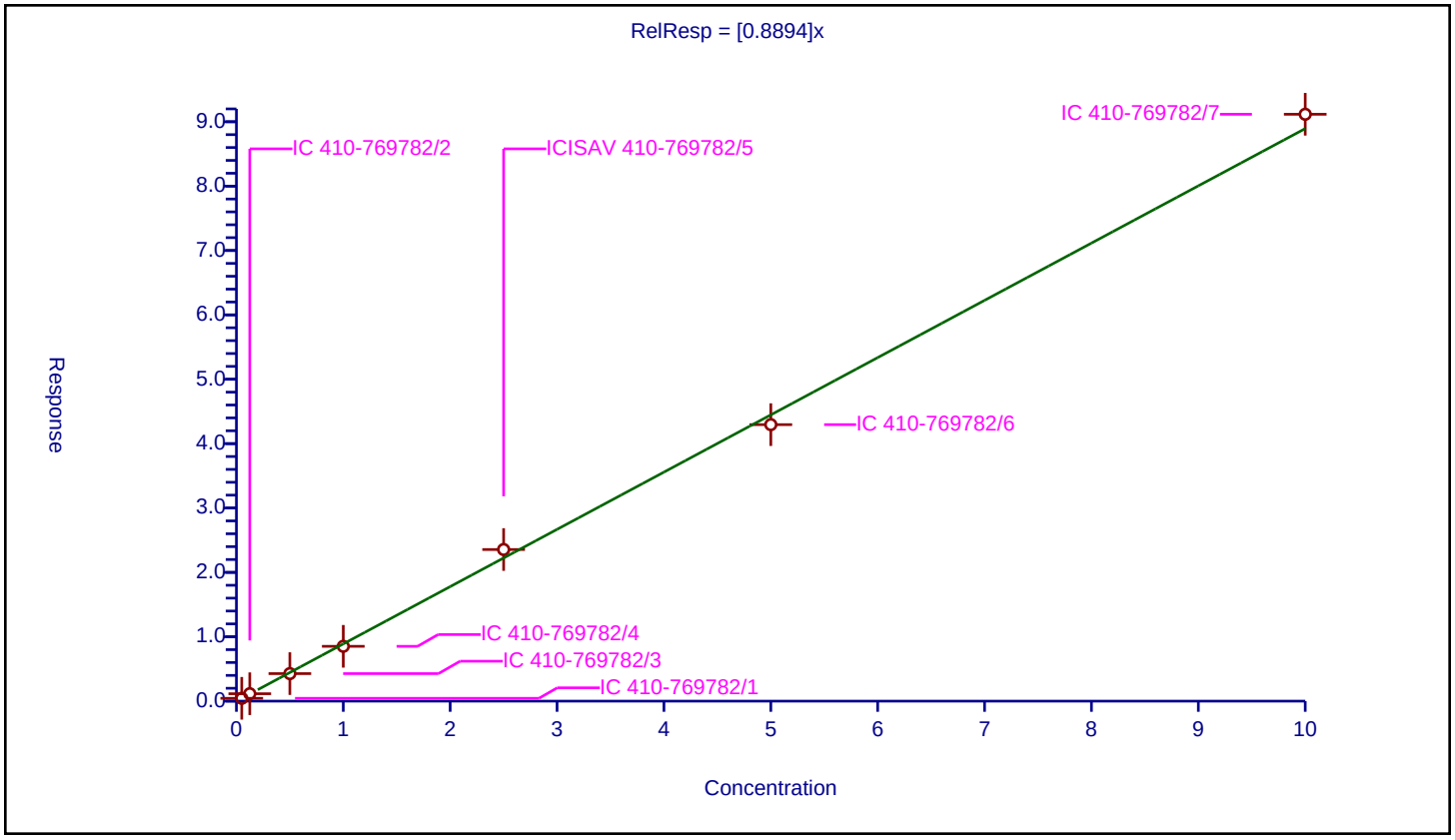
Curve Coefficients

Intercept:	0
Slope:	0.8894

Error Coefficients

Relative Standard Deviation:	4.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.044146	2.0	470353.0	0.882911	Y
2	IC 410-769782/2	0.125	0.115351	2.0	482580.0	0.922807	Y
3	IC 410-769782/3	0.5	0.427679	2.0	510158.0	0.855359	Y
4	IC 410-769782/4	1.0	0.851863	2.0	498202.0	0.851863	Y
5	ICISAV 410-769782/5	2.5	2.355273	2.0	471384.0	0.942109	Y
6	IC 410-769782/6	5.0	4.295355	2.0	503353.0	0.859071	Y
7	IC 410-769782/7	10.0	9.116235	2.0	497714.0	0.911624	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

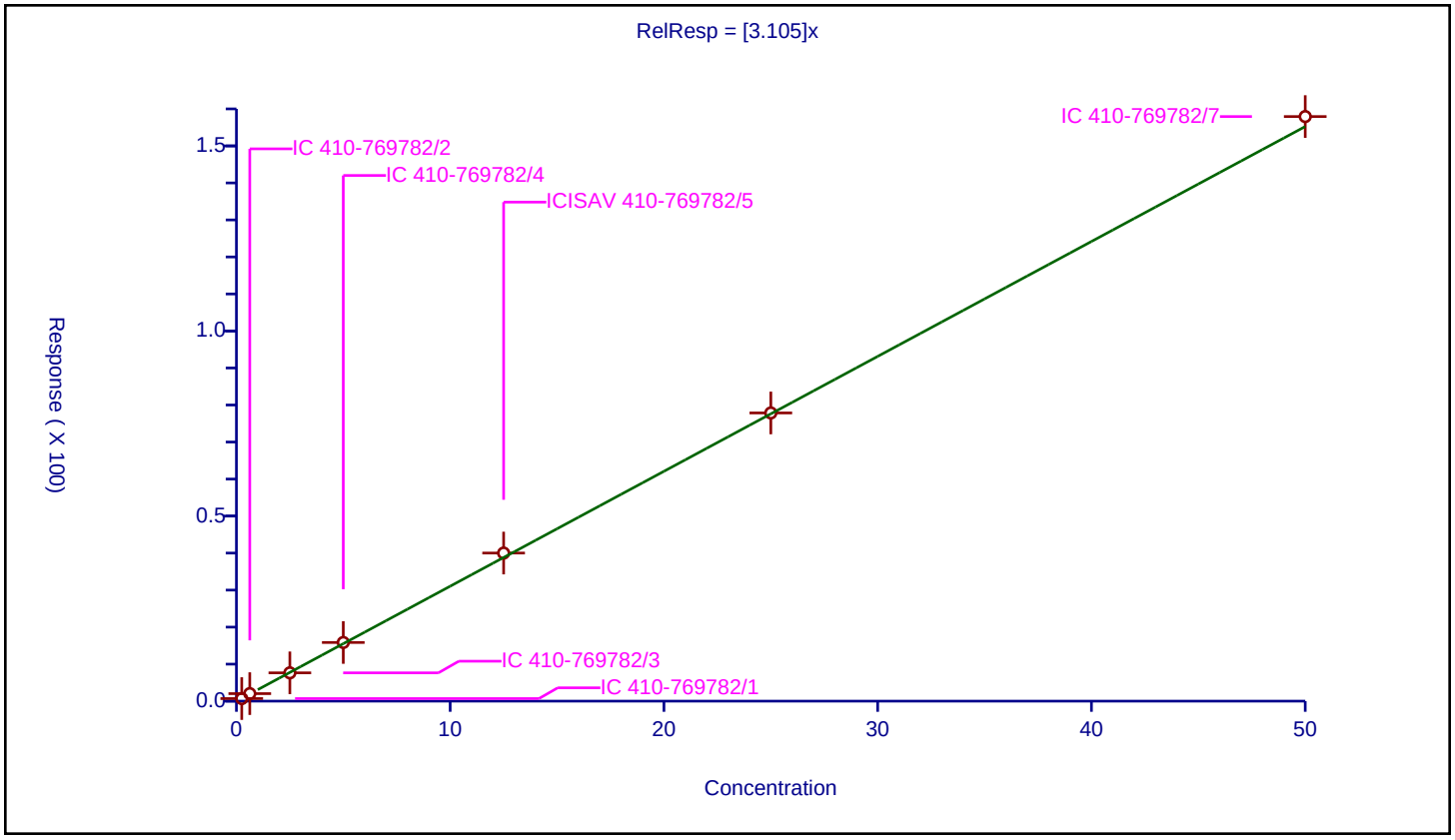
Curve Coefficients

Intercept:	0
Slope:	3.105

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.25	0.695552	5.0	350865.0	2.78221	Y
2	IC 410-769782/2	0.625	2.030461	5.0	345914.0	3.248738	Y
3	IC 410-769782/3	2.5	7.643722	5.0	316304.0	3.057489	Y
4	IC 410-769782/4	5.0	15.849453	5.0	295343.0	3.169891	Y
5	ICISAV 410-769782/5	12.5	40.006227	5.0	304298.0	3.200498	Y
6	IC 410-769782/6	25.0	77.856424	5.0	306075.0	3.114257	Y
7	IC 410-769782/7	50.0	157.926657	5.0	315423.0	3.158533	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

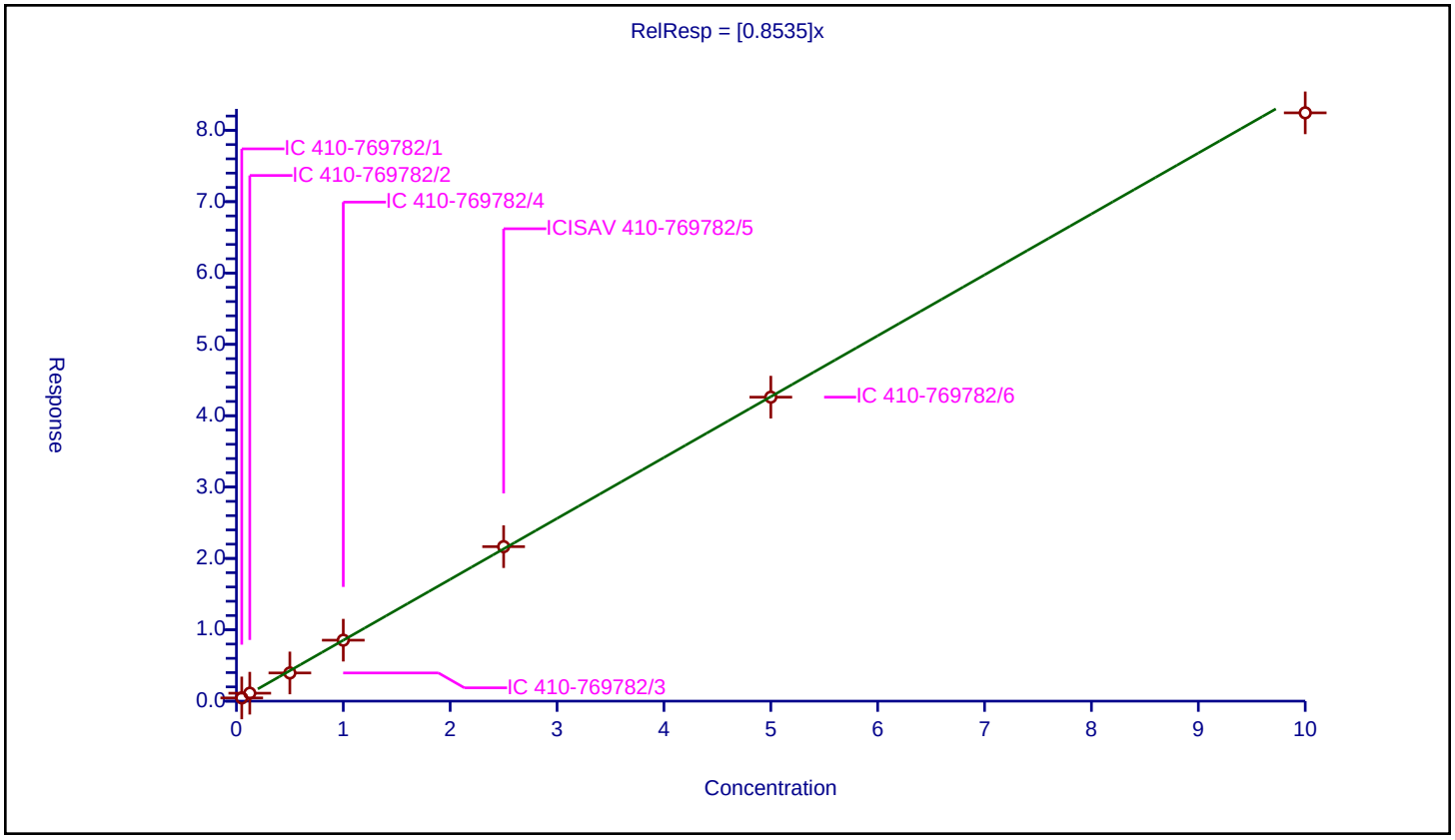
Curve Coefficients

Intercept:	0
Slope:	0.8535

Error Coefficients

Relative Standard Deviation:	4.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.044881	2.0	595885.0	0.897623	Y
2	IC 410-769782/2	0.125	0.111246	2.0	588659.0	0.889969	Y
3	IC 410-769782/3	0.5	0.395018	2.0	627830.0	0.790036	Y
4	IC 410-769782/4	1.0	0.854077	2.0	583343.0	0.854077	Y
5	ICISAV 410-769782/5	2.5	2.164942	2.0	599921.0	0.865977	Y
6	IC 410-769782/6	5.0	4.260228	2.0	582881.0	0.852046	Y
7	IC 410-769782/7	10.0	8.244728	2.0	611650.0	0.824473	Y



Calibration / Perfluorooctadecanoic acid

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

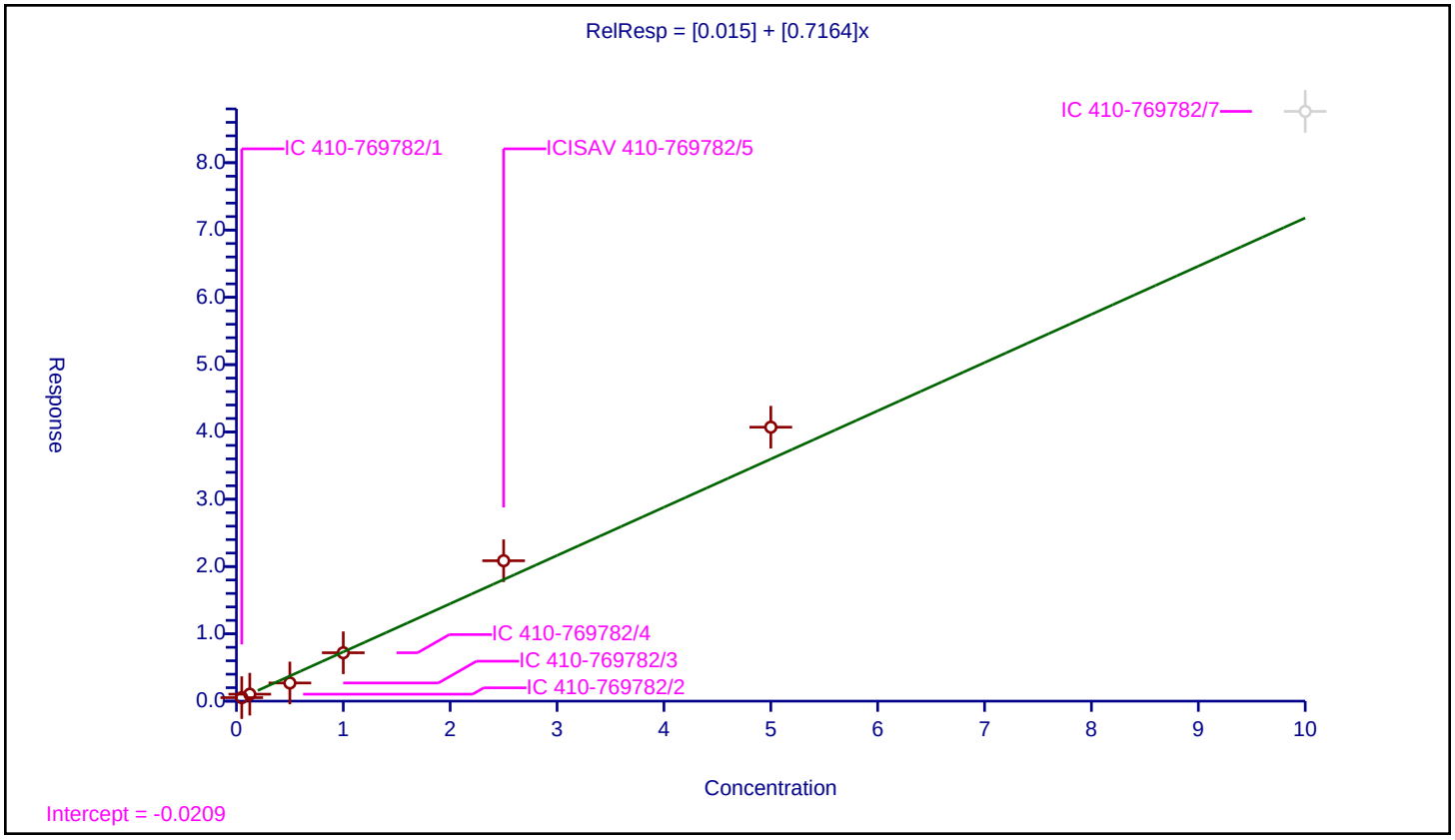
Curve Coefficients

Intercept:	0.015
Slope:	0.7164

Error Coefficients

Relative Standard Deviation:	17.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-769782/1	0.05	0.05192	2.0	1628455.0	1.038408	Y
2	IC 410-769782/2	0.125	0.103363	2.0	1906812.0	0.826905	Y
3	IC 410-769782/3	0.5	0.270047	2.0	2635796.0	0.540093	Y
4	IC 410-769782/4	1.0	0.718875	2.0	1932604.0	0.718875	Y
5	ICISAV 410-769782/5	2.5	2.085976	2.0	1770843.0	0.83439	Y
6	IC 410-769782/6	5.0	4.070544	2.0	1847092.0	0.814109	Y
7	IC 410-769782/7	10.0	8.762909	2.0	1794753.0	0.876291	N



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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-764556/1	26FEB04CAL-01.d
Level 2	IC 410-764556/2	26FEB04CAL-02.d
Level 3	IC 410-764556/3	26FEB04CAL-03.d
Level 4	IC 410-764556/4	26FEB04CAL-04.d
Level 5	ICISAV 410-764556/5	26FEB04CAL-05.d
Level 6	IC 410-764556/6	26FEB04CAL-06.d
Level 7	IC 410-764556/7	26FEB04CAL-07.d
Level 8	IC 410-764556/8	26FEB04CAL-08.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 8	LVL 4	LVL 5		B	M1	M2								
Perfluoropropionic acid (PFPrA)	0.9257 0.9257	0.9494 0.9383	0.8896	0.9158	0.9714	AveID		0.9309				2.8		20.0			
Perfluorobutanoic acid (PFBA)	0.0812 0.0775	0.0887 0.0803	0.0813 0.0960	0.0831	0.0847	AveID		0.0841				6.9		20.0			
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.1424 1.1273	1.1171 1.1268	1.0890	1.0939	1.1954	AveID		1.1274				3.1		20.0			
3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.0418 0.0393	0.0408 0.0412	0.0402	0.0372	0.0414	AveID		0.0403				3.9		20.0			
Perfluoropentanoic acid (PFPeA)	0.9320 0.8579	0.8979 0.9030	0.8643 0.8970	0.8481	0.9488	AveID		0.8936				4.0		20.0			
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.4018 1.3297	1.3813 1.4049	1.3013	1.3555	1.4395	AveID		1.3734				3.5		20.0			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.7461 1.7277	1.7411 1.7122	1.6678	1.6747	1.8756	AveID		1.7350				4.0		20.0			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.4325 0.4093	0.4047 0.4258	0.4064	0.4264	0.4461	AveID		0.4216				3.7		20.0			
Perfluorohexanoic acid (PFHxA)	1.0775 1.0247	1.1041 1.0482	0.9954 0.9651	1.0630	1.1196	AveID		1.0497				5.0		20.0			
3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.1158 0.1189	0.1269 0.1275	0.1124	0.1174	0.1259	AveID		0.1207				5.0		20.0			
Perfluorobutanesulfonic acid (PFBS)	1.0017 0.9796	1.0351 1.0107	0.9481 0.9515	1.0177	1.0550	AveID		0.9999				3.8		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
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

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 8	LVL 4	LVL 5		B	M1	M2								
Hexafluoropropylene oxide dimer acid (HFPO DA)	1.0271 1.0779	1.0781 1.0669	0.9884 0.9359	1.0484	1.1162	AveID		1.0424				5.5		20.0			
Perfluorobutanesulfonamide (FBSA)	0.8484 0.9671	0.9584 1.0008	0.8731	0.8876	0.9736	AveID		0.9299				6.3		20.0			
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.5838 1.6763	1.7020 1.7344	1.6021	1.7852	1.8182	AveID		1.7003				5.2		20.0			
Perfluoroheptanoic acid (PFHpA)	1.1595 1.0639	1.1400 1.1566	1.0744 1.0646	1.1570	1.1248	AveID		1.1176				3.8		20.0			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.8988 3.5296	4.0230 3.4356	3.7774 2.7505	3.6704	3.9267	AveID		3.6265				11.2		20.0			
Perfluoropentanesulfonic acid (PFPeS)	1.3135 1.1837	1.2261 1.2087	1.1886 1.1397	1.2243	1.2742	AveID		1.2199				4.4		20.0			
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1.6698 1.6868	1.6068 1.7834	1.5573	1.6230	1.7605	AveID		1.6697				4.9		20.0			
Bis(trifluoromethane)sulfonamide (TFSI)	1.9593 2.0334	2.2085 2.1585	2.0158	2.0681	2.1720	AveID		2.0879				4.4		20.0			
Perfluorooctanoic acid (PFOA)	0.9286 0.8643	0.9150 0.9016	0.8558 0.8385	0.8650	0.9629	AveID		0.8915				4.8		20.0			
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.0649 0.0714	0.0701 0.0764	0.0656	0.0712	0.0738	AveID		0.0705				5.9		20.0			
Perfluorohexanesulfonic acid (PFHxS)	1.0565 0.8295	0.8759 0.8704	0.8291 0.8600	0.8823	0.9025	AveID		0.8883				8.2		20.0			
Perfluorononanoic acid (PFNA)	0.9458 0.8937	0.9389 0.8744	0.8968 0.8795	0.9013	0.9171	AveID		0.9059				2.9		20.0			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.6521 1.2956	1.2733 1.3078	1.2834	1.2981	1.4422	AveID		1.3646				10.2		20.0			
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)	1.8280 1.7605	1.5917 1.7928	1.6940	1.7469	1.8608	AveID		1.7535				5.1		20.0			
Perfluoroheptanesulfonic acid (PFHpS)	1.1766 1.0437	1.1010 1.0370	1.0479 0.9866	1.0579	1.1335	AveID		1.0730				5.6		20.0			
Perfluorohexanesulfonamide (FHxSA)	1.6290 1.5369	1.6284 1.6547	1.4933	1.5518	1.6445	AveID		1.5912				4.0		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

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 8	LVL 4	LVL 5		B	M1	M2								
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.9534 1.1214	1.2807 1.1735	1.1117	1.1165	1.1939	AveId		1.1359				8.8		20.0			
Perfluorodecanoic acid (PFDA)	1.0273 0.9437	1.0428 0.9900	0.9476	0.9683	1.0585	AveId		0.9969				4.7		20.0			
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.1121 1.1026	1.1894 1.0858	1.1328	1.1534	1.2080	AveId		1.1406				4.0		20.0			
Perfluorooctanesulfonic acid (PFOS)	1.2186 1.1248	1.2041 1.1853	1.0961 1.1251	1.1282	1.2152	AveId		1.1622				4.2		20.0			
Perfluoroundecanoic acid (PFUnA)	0.9117 0.8658	0.9535 0.9007	0.8571	0.8558	0.9069	AveId		0.8931				4.0		20.0			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.1164 2.0942	2.1542 2.0991	1.9839	2.0846	2.1812	AveId		2.1019				3.0		20.0			
Perfluorononanesulfonic acid (PFNS)	0.9573 0.8594	0.8778 0.8540	0.8272	0.8599	0.9163	AveId		0.8789				5.0		20.0			
Perfluorododecanoic acid (PFDoA)	1.0873 1.0248	1.1225 1.0673	1.0313	1.0898	1.1153	AveId		1.0769				3.5		20.0			
Perfluorooctanesulfonamide (FOSA)	0.8720 0.8191	0.8269 0.8426	0.7899	0.7968	0.8639	AveId		0.8302				3.8		20.0			
Perfluorodecanesulfonic acid (PFDS)	1.0755 1.1121	1.1731 1.0825	1.0629	1.1009	1.1885	AveId		1.1136				4.4		20.0			
Perfluorotridecanoic acid (PFTrDA)	1.9425 1.9096	2.1244 1.8442	1.9117	1.9732	2.0633	AveId		1.9670				4.9		20.0			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.7975 1.8617	1.8145 1.8647	1.7307	1.8404	1.9484	AveId		1.8368				3.7		20.0			
Perfluorotetradecanoic acid (PFTeDA)	0.2409 0.2050	0.2162 0.2091	0.2122	0.2106	0.2202	AveId		0.2163				5.5		20.0			
Perfluorododecanesulfonic acid (PFDoS)	0.9974 1.0456	1.0215 1.0550	0.9815	1.0027	1.1269	AveId		1.0329				4.7		20.0			
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.2909 2.2027	2.2166 2.2472	2.0958	2.1870	2.3859	AveId		2.2323				4.1		20.0			
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.9564 0.9225	0.8967 0.9701	0.8903	0.9097	0.9700	AveId		0.9308				3.7		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

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 8	LVL 4	LVL 5		B	M1	M2								
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	2.9537 3.0976	3.1002 3.0683	2.9299	3.0649	3.2121	AveId		3.0610				3.1		20.0			
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.8680 0.8032	0.8715 0.8390	0.8123	0.8280	0.8725	AveId		0.8421				3.5		20.0			
Perfluoro-n-octadecanoic acid (PFODA)	2.9692 2.6887	3.0411 2.7440	2.6719	2.7575	2.7691	AveId		2.8059				5.1		20.0			
13C3-PFPrA	0.9907 0.9802	1.0077 0.9888	0.9980 +++++	1.0104	0.9410	Ave		0.9881				2.4		20.0			
13C4 PFBA	1.1592 1.1615	1.1796 1.1905	1.1704 1.1433	1.1851	1.1285	Ave		1.1648				1.8		20.0			
13C5 PFPeA	1.2437 1.2637	1.2954 1.2652	1.2625 1.1190	1.3232	1.2186	Ave		1.2489				4.9		20.0			
M2-4:2 FTS	0.2300 0.2206	0.2225 0.2101	0.2312 +++++	0.2332	0.2146	Ave		0.2232				3.9		20.0			
13C5 PFHxA	1.5581 1.5000	1.5362 1.4896	1.5469 1.3801	1.5313	1.4489	Ave		1.4989				4.0		20.0			
13C3 PFBS	1.2149 1.2495	1.2023 1.2123	1.2759 1.1760	1.2654	1.2131	Ave		1.2262				2.8		20.0			
13C3 HFPO-DA	0.8268 0.8433	0.8096 0.8953	0.7853 0.9798	0.8533	0.7923	Ave		0.8482				7.5		20.0			
13C4 PFHpA	1.4272 1.4208	1.3886 1.4047	1.4158 1.2317	1.3900	1.3765	Ave		1.3819				4.6		20.0			
M2-6:2 FTS	0.2057 0.1829	0.2003 0.1593	0.2087 +++++	0.2084	0.1866	Ave		0.1931				9.4		20.0			
13C8 PFOA	1.5624 1.4871	1.5753 1.5078	1.5872 1.4654	1.5976	1.3990	Ave		1.5227				4.6		20.0			
13C3 PFHxS	1.0791 1.1424	1.1053 1.0874	1.1399 1.1042	1.1424	1.1167	Ave		1.1147				2.2		20.0			
13C9 PFNA	0.9781 1.0140	0.9890 0.9787	0.9788 0.9637	0.9935	0.9722	Ave		0.9835				1.6		20.0			
M2-8:2 FTS	0.1826 0.1885	0.1935 0.1854	0.1976 +++++	0.1998	0.1930	Ave		0.1915				3.3		20.0			
d3-NMeFOSAA	0.3305 0.3365	0.3235 0.3413	0.3197 +++++	0.3421	0.3385	Ave		0.3332				2.7		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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

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 8	LVL 4	LVL 5		B	M1	M2								
13C6 PFDA	1.1540 1.1087	1.0900 1.1445	1.1027 1.0907	1.1430	1.0984	Ave		1.1165				2.4		20.0			
d5-NEtFOSAA	0.4094 0.4121	0.4166 0.4494	0.4073 +++++	0.4254	0.4173	Ave		0.4196				3.4		20.0			
13C8 PFOS	1.3810 1.3598	1.4140 1.3920	1.3807 1.3775	1.4224	1.3743	Ave		1.3877				1.5		20.0			
13C7 PFUnA	1.1909 1.0794	1.1004 1.1358	1.0958 1.1036	1.1246	1.0926	Ave		1.1154				3.2		20.0			
13C2 PFDoA	1.1033 1.0547	1.0424 1.0727	1.0567 1.0462	1.0521	1.0205	Ave		1.0561				2.3		20.0			
13C8 FOSA	1.3553 1.3352	1.4157 1.4956	1.3533 +++++	1.4196	1.3479	Ave		1.3890				4.2		20.0			
13C2 PFTeDA	0.6633 0.6278	0.5979 0.6737	0.6275 0.6166	0.6376	0.6212	Ave		0.6332				3.9		20.0			
d7-N-MeFOSE-M	0.3503 0.3505	0.3598 0.3815	0.3421 +++++	0.3573	0.3416	Ave		0.3547				3.8		20.0			
d3-NMePFOSA	0.3429 0.3388	0.3558 0.3601	0.3388 +++++	0.3540	0.3403	Ave		0.3472				2.6		20.0			
d9-N-EtFOSE-M	0.4690 0.4632	0.4800 0.5020	0.4578 +++++	0.4823	0.4638	Ave		0.4740				3.2		20.0			
d5-NEtPFOSA	0.4746 0.4674	0.4878 0.4984	0.4547 +++++	0.4732	0.4602	Ave		0.4737				3.2		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
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-764556/1	26FEB04CAL-01.d
Level 2	IC 410-764556/2	26FEB04CAL-02.d
Level 3	IC 410-764556/3	26FEB04CAL-03.d
Level 4	IC 410-764556/4	26FEB04CAL-04.d
Level 5	ICISAV 410-764556/5	26FEB04CAL-05.d
Level 6	IC 410-764556/6	26FEB04CAL-06.d
Level 7	IC 410-764556/7	26FEB04CAL-07.d
Level 8	IC 410-764556/8	26FEB04CAL-08.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perfluoropropionic acid (PFPrA)		AveID	278241 27528577	707763 50447050	2625844	5542903	14437181	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorobutanoic acid (PFBA)		AveID	11425 1092698	30975 2079813	112571 9072619	235855	603838	0.100 10.0	0.250 20.0	1.00 100	2.00	5.00
Perfluoro-3-methoxypropanoic acid (PFMPA)		AveID	80285 8188974	199216 15276979	757637	1615458	4257128	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
3-Perfluoropropylpropanoic acid (3:3 FTCA)		AveID	5876 570694	14554 1116877	55966	109890	294950	0.100 10.0	0.250 20.0	1.00	2.00	5.00
Perfluoropentanoic acid (PFPeA)		AveID	65498 6232077	160127 12242862	601313 49684892	1252348	3378751	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
Perfluoro-4-methoxybutanoic acid (PFMBA)		AveID	98519 9658643	246341 19047648	905343	2001655	5126135	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)		AveID	38382 3475789	93061 6373626	354798	729161	1893313	0.0938 9.38	0.235 18.8	0.938	1.88	4.69
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)		AveID	38082 3529327	85582 6797319	346460	728714	1888782	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorohexanoic acid (PFHxA)		AveID	94873 8835732	233510 16731511	848587 65922904	1816704	4740416	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
3-Perfluoropentylpropanoic acid (5:3 FTCA)		AveID	50996 5124287	134158 10176865	479289	1003032	2665730	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorobutanesulfonic acid (PFBS)		AveID	55054 5282423	141518 10276193	526849 38474416	1138086	2849794	0.0444 4.44	0.111 8.88	0.444 44.4	0.888	2.22
Hexafluoropropylene oxide dimer acid (HFPO DA)		AveID	35990	90129	320823	748830	1938382	0.0375	0.0938	0.375	0.750	1.88

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			3919079	7676611	45391383			3.75	7.50	50.0		
Perfluorobutanesulfonamide (FBSA)		AveID	52507 5873028	147560 11458863	546335	1117883	2961814	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)		AveID	124386 12892922	321077 24695096	1218261	2721340	6866989	0.0446 4.46	0.112 8.92	0.446	0.892	2.23
Perfluoroheptanoic acid (PFHpA)		AveID	93513 8689204	217940 17409359	838297 64904861	1794870	4525049	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)		AveID	172315 16186641	424204 31180440	1546518 94644023	3306646	8601398	0.0473 4.73	0.118 9.46	0.473 35.5	0.946	2.37
Perfluoropentanesulfonic acid (PFPeS)		AveID	67879 6178012	163131 11668433	624652 45802267	1308441	3353790	0.0470 4.70	0.118 9.40	0.470 47.0	0.940	2.35
6:2 Fluorotelomer sulfonic acid (6:2 FTS)		AveID	33314 2855610	78476 5108178	303432	640800	1568556	0.0952 9.52	0.238 19.0	0.952	1.90	4.76
Bis(trifluoromethane)sulfonamide (TFSI)		AveID	105455 11052905	306030 21701361	1103275	2301945	5954340	0.0490 4.90	0.122 9.79	0.490	0.979	2.45
Perfluorooctanoic acid (PFOA)		AveID	88011 8276164	217877 16222302	797709 66945906	1694720	4474027	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
3-Perfluoroheptylpropanoic acid (7:3 FTCA)		AveID	28559 3079190	74138 6095406	279604	608541	1562012	0.250 25.0	0.625 50.0	2.50	5.00	12.5
Perfluorohexanesulfonic acid (PFHxS)		AveID	52972 4200308	113068 8152071	422706 33530576	914898	2304709	0.0456 4.56	0.114 9.12	0.456 45.6	0.912	2.28
Perfluorononanoic acid (PFNA)		AveID	81544 7801730	193248 14608946	726249 61155596	1566933	3910358	0.0500 5.00	0.125 10.0	0.500 50.0	1.00	2.50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)		AveID	29508 2279394	60588 4395622	238847	495591	1340215	0.0960 9.60	0.240 19.2	0.960	1.92	4.80
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)		AveID	92858 9031785	208161 17012258	875065	1835216	4814492	0.0462 4.62	0.116 9.24	0.462	0.924	2.31
Perfluoroheptanesulfonic acid (PFHpS)		AveID	62238 5495337	149056 10210401	567923 40389435	1153011	2991423	0.0477 4.77	0.119 9.54	0.477 47.7	0.954	2.39
Perfluorohexanesulfonamide (FHxSA)		AveID	89558 8533125	230478 16993147	834879	1764274	4604820	0.0500 5.00	0.125 10.0	0.500	1.00	2.50

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	12650 1531553	41578 2970032	146221	306780	813450	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorodecanoic acid (PFDA)		AveID	89559 8464978	227455 16170215	833027	1768585	4778678	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		AveID	18278 1844088	49726 3617862	189823	394092	1014878	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorooctanesulfonic acid (PFOS)		AveID	62836 5773447	158903 11377134	579083 44900313	1198701	3126440	0.0465 4.65	0.116 9.30	0.465 46.5	0.930	2.33
Perfluoroundecanoic acid (PFUnA)		AveID	82027 7561167	209951 14600421	748810	1538048	4073037	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O		AveID	109603 10795208	285510 20235102	1052681	2224366	5635698	0.0467 4.67	0.117 9.34	0.467	0.934	2.34
Perfluorononanesulfonic acid (PFNS)		AveID	51061 4563015	119825 8479910	452076	945114	2438449	0.0481 4.81	0.120 9.62	0.481	0.962	2.41
Perfluorododecanoic acid (PFDoA)		AveID	90629 8745190	234151 16339872	868857	1832422	4678080	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorooctanesulfonamide (FOSA)		AveID	47452 4438736	117485 9344114	439838	908495	2344136	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorodecanesulfonic acid (PFDS)		AveID	57484 5917018	160472 10770560	582096	1212423	3169327	0.0482 4.82	0.121 9.64	0.482	0.964	2.41
Perfluorotridecanoic acid (PFTrDA)		AveID	97333 9698775	254151 17733269	956395	2010681	5268071	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF		AveID	94085 9699780	243073 18168169	928118	1984867	5087998	0.0472 4.72	0.118 9.44	0.472	0.944	2.36
Perfluorotetradecanoic acid (PFTeDA)		AveID	12070 1040963	25861 2010291	106173	214582	562264	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluorododecanesulfonic acid (PFDoS)		AveID	53645 5597840	140611 10562138	540847	1111133	3023856	0.0485 4.85	0.121 9.70	0.485	0.970	2.43
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)		AveID	161092 15665981	400192 31782943	1475184	3137821	8204030	0.250 25.0	0.625 50.0	2.50	5.00	12.5
N-methylperfluorooctane sulfonamide (NMeFOSA)		AveID	13165	32017	124096	258664	664499	0.0500	0.125	0.500	1.00	2.50

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			1268592	2590610				5.00	10.0			
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)		AveID	278078 29118302	746694 57106994	2759575	5935849	14995559	0.250 25.0	0.625 50.0	2.50	5.00	12.5
N-ethylperfluorooctane sulfonamide (NEtFOSA)		AveID	16540 1523671	42661 3100680	151948	314703	808234	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
Perfluoro-n-octadecanoic acid (PFODA)		AveID	148780 13655527	363827 26384980	1336734	2809867	7070359	0.0500 5.00	0.125 10.0	0.500	1.00	2.50
13C3-PFPrA	13C3PFBA	Ave	2404465 2379145	2385495 2150484	2361407 +++++	2421052	2377927	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
13C4 PFBA	13C3PFBA	Ave	2813561 2819104	2792290 2589004	2769251 1889484	2839817	2851606	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C5 PFPeA	PFHxA	Ave	2811222 2905594	2853412 2711588	2782928 2215556	2953471	2848934	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
M2-4:2 FTS	PFHxS	Ave	1099055 1005887	1069012 930611	1063669 +++++	1088469	1009443	4.69 4.69	4.69 4.69	4.69 +++++	4.69	4.69
13C5 PFHxA	PFHxA	Ave	3521818 3449060	3383840 3192496	3409886 2732412	3417973	3387343	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C3 PFBS	PFHxS	Ave	2307320 2263940	2295982 2134216	2332830 1697503	2347484	2268156	1.86 1.86	1.86 1.86	1.86 1.86	1.86	1.86
13C3 HFPO-DA	PFHxA	Ave	1868799 1939124	1783433 1918771	1731113 1939932	1904641	1852407	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C4 PFHpA	PFHxA	Ave	3226019 3266964	3058741 3010502	3121010 2438614	3102581	3218249	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
M2-6:2 FTS	PFHxS	Ave	997560 846456	976821 716059	974200 +++++	987085	890984	4.76 4.76	4.76 4.76	4.76 +++++	4.76	4.76
13C8 PFOA	PFOA	Ave	3790965 3830053	3809899 3598631	3728374 3193460	3918443	3716986	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C3 PFHxS	PFHxS	Ave	2084720 2105440	2146864 1947126	2119976 1621214	2155662	2123659	1.90 1.90	1.90 1.90	1.90 1.90	1.90	1.90
13C9 PFNA	PFNA	Ave	3448822 3491927	3293182 3341544	3239170 2781281	3477073	3411148	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
M2-8:2 FTS	PFHxS	Ave	893033 879675	951674 840271	930514 +++++	954482	929267	4.80 4.80	4.80 4.80	4.80 +++++	4.80	4.80
d3-NMeFOSAA	PFOS	Ave	1326795 1365788	1298653 1265512	1315335 +++++	1373837	1362633	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
13C6 PFDA	PFDA	Ave	3487233	3489794	3516485	3653105	3611812	2.00	2.00	2.00	2.00	2.00

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

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
			3588002	3266695	3500176			2.00	2.00	2.00		
d5-NEtFOSAA	PFOS	Ave	1643529 1672462	1672312 1666064	1675737 +++++	1708388	1680203	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
13C8 PFOS	PFOS	Ave	2124710 2114928	2175112 1977566	2176934 1644351	2188935	2120134	1.92 1.92	1.92 1.92	1.92 1.92	1.92	1.92
13C7 PFUnA	PFDA	Ave	3598805 3493112	3523165 3241872	3494584 3541560	3594207	3592995	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C2 PFDoA	PFDA	Ave	3334069 3413285	3337451 3061885	3369863 3357304	3362788	3355712	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
13C8 FOSA	PFOS	Ave	2176631 2167746	2273126 2217951	2227311 +++++	2280300	2170696	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
13C2 PFTeDA	PFDA	Ave	2004319 2031559	1914175 1923101	2001140 1978499	2037964	2042629	2.00 2.00	2.00 2.00	2.00 2.00	2.00	2.00
d7-N-MeFOSE-M	PFOS	Ave	1406351 1422442	1444350 1414352	1407753 +++++	1434773	1375399	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
d3-NMePFOSA	PFOS	Ave	550622 550094	571311 534076	557561 +++++	568694	548015	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00
d9-N-EtFOSE-M	PFOS	Ave	1882907 1880046	1926824 1861171	1883741 +++++	1936697	1867355	5.00 5.00	5.00 5.00	5.00 +++++	5.00	5.00
d5-NEtPFOSA	PFOS	Ave	762181 758837	783203 739142	748268 +++++	760190	741041	2.00 2.00	2.00 2.00	2.00 +++++	2.00	2.00

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 Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-764556/1	26FEB04CAL-01.d
Level 2	IC 410-764556/2	26FEB04CAL-02.d
Level 3	IC 410-764556/3	26FEB04CAL-03.d
Level 4	IC 410-764556/4	26FEB04CAL-04.d
Level 5	ICISAV 410-764556/5	26FEB04CAL-05.d
Level 6	IC 410-764556/6	26FEB04CAL-06.d
Level 7	IC 410-764556/7	26FEB04CAL-07.d
Level 8	IC 410-764556/8	26FEB04CAL-08.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluoropropionic acid (PFPrA)	-0.5 0.8	2.0	-4.4	-1.6	4.4	-0.6	30 30	30	30	30	30	30
Perfluorobutanoic acid (PFBA)	-3.4 -4.5	5.5 14.2	-3.3	-1.3	0.7	-7.8	30 30	30 30	30	30	30	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.3 -0.1	-0.9	-3.4	-3.0	6.0	0.0	30 30	30	30	30	30	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	3.8 2.3	1.3	-0.1	-7.6	2.8	-2.5	30 30	30	30	30	30	30
Perfluoropentanoic acid (PFPeA)	4.3 1.1	0.5 0.4	-3.3	-5.1	6.2	-4.0	30 30	30 30	30	30	30	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.1 2.3	0.6	-5.3	-1.3	4.8	-3.2	30 30	30	30	30	30	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.6 -1.3	0.3	-3.9	-3.5	8.1	-0.4	30 30	30	30	30	30	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.6 1.0	-4.0	-3.6	1.1	5.8	-2.9	30 30	30	30	30	30	30
Perfluorohexanoic acid (PFHxA)	2.7 -0.1	5.2 -8.1	-5.2	1.3	6.7	-2.4	30 30	30 30	30	30	30	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	-4.0 5.7	5.1	-6.8	-2.7	4.3	-1.5	30 30	30	30	30	30	30
Perfluorobutanesulfonic acid (PFBS)	0.2 1.1	3.5 -4.8	-5.2	1.8	5.5	-2.0	30 30	30 30	30	30	30	30
Hexafluoropropylene oxide dimer acid (HFPO DA)	-1.5 2.4	3.4 -10.2	-5.2	0.6	7.1	3.4	30 30	30 30	30	30	30	30
Perfluorobutanesulfonamide (FBSA)	-8.8 7.6	3.1	-6.1	-4.5	4.7	4.0	30 30	30	30	30	30	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	-6.9 2.0	0.1	-5.8	5.0	6.9	-1.4	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluoroheptanoic acid (PFHpA)	3.7 3.5	2.0 -4.7	-3.9	3.5	0.6	-4.8	30 30	30 30	30	30	30	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.5 -5.3	10.9 -24.2	4.2	1.2	8.3	-2.7	30 30	30 30	30	30	30	30
Perfluoropentanesulfonic acid (PFPeS)	7.7 -0.9	0.5 -6.6	-2.6	0.4	4.5	-3.0	30 30	30 30	30	30	30	30
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.0 6.8	-3.8	-6.7	-2.8	5.4	1.0	30 30	30	30	30	30	30
Bis(trifluoromethane)sulfonamide (TFSI)	-6.2 3.4	5.8	-3.5	-1.0	4.0	-2.6	30 30	30	30	30	30	30
Perfluorooctanoic acid (PFOA)	4.2 1.1	2.6 -5.9	-4.0	-3.0	8.0	-3.0	30 30	30 30	30	30	30	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	-8.0 8.4	-0.5	-6.9	1.0	4.7	1.3	30 30	30	30	30	30	30
Perfluorohexanesulfonic acid (PFHxS)	18.9 -2.0	-1.4 -3.2	-6.7	-0.7	1.6	-6.6	30 30	30 30	30	30	30	30
Perfluorononanoic acid (PFNA)	4.4 -3.5	3.6 -2.9	-1.0	-0.5	1.2	-1.4	30 30	30 30	30	30	30	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	21.1 -4.2	-6.7	-6.0	-4.9	5.7	-5.1	30 30	30	30	30	30	30
Perfluoro-4-ethylcyclohexanesulfonic acid (PFECHS)	4.2 2.2	-9.2	-3.4	-0.4	6.1	0.4	30 30	30	30	30	30	30
Perfluoroheptanesulfonic acid (PFHpS)	9.7 -3.4	2.6 -8.1	-2.3	-1.4	5.6	-2.7	30 30	30 30	30	30	30	30
Perfluorohexanesulfonamide (FHxSA)	2.4 4.0	2.3	-6.2	-2.5	3.3	-3.4	30 30	30	30	30	30	30
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-16.1 3.3	12.7	-2.1	-1.7	5.1	-1.3	30 30	30	30	30	30	30
Perfluorodecanoic acid (PFDA)	3.1 -0.7	4.6	-4.9	-2.9	6.2	-5.3	30 30	30	30	30	30	30
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	-2.5 -4.8	4.3	-0.7	1.1	5.9	-3.3	30 30	30	30	30	30	30
Perfluorooctanesulfonic acid (PFOS)	4.9 2.0	3.6 -3.2	-5.7	-2.9	4.6	-3.2	30 30	30 30	30	30	30	30
Perfluoroundecanoic acid (PFUnA)	2.1 0.9	6.8	-4.0	-4.2	1.5	-3.1	30 30	30	30	30	30	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.7 -0.1	2.5	-5.6	-0.8	3.8	-0.4	30 30	30	30	30	30	30

FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1 Analy Batch No.: 764556

SDG No.:

Instrument ID: 30637 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/04/2026 12:31 Calibration End Date: 02/04/2026 14:06 Calibration ID: 81518

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Perfluorononanesulfonic acid (PFNS)	8.9 -2.8	-0.1	-5.9	-2.2	4.3	-2.2	30 30	30	30	30	30	30
Perfluorododecanoic acid (PFDoA)	1.0 -0.9	4.2	-4.2	1.2	3.6	-4.8	30 30	30	30	30	30	30
Perfluorooctanesulfonamide (FOSA)	5.0 1.5	-0.4	-4.9	-4.0	4.1	-1.3	30 30	30	30	30	30	30
Perfluorodecanesulfonic acid (PFDS)	-3.4 -2.8	5.3	-4.6	-1.1	6.7	-0.1	30 30	30	30	30	30	30
Perfluorotridecanoic acid (PFTrDA)	-1.2 -6.2	8.0	-2.8	0.3	4.9	-2.9	30 30	30	30	30	30	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	-2.1 1.5	-1.2	-5.8	0.2	6.1	1.4	30 30	30	30	30	30	30
Perfluorotetradecanoic acid (PFTeDA)	11.4 -3.3	-0.1	-1.9	-2.6	1.8	-5.2	30 30	30	30	30	30	30
Perfluorododecanesulfonic acid (PFDoS)	-3.4 2.1	-1.1	-5.0	-2.9	9.1	1.2	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	2.6 0.7	-0.7	-6.1	-2.0	6.9	-1.3	30 30	30	30	30	30	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	2.7 4.2	-3.7	-4.4	-2.3	4.2	-0.9	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	-3.5 0.2	1.3	-4.3	0.1	4.9	1.2	30 30	30	30	30	30	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	3.1 -0.4	3.5	-3.5	-1.7	3.6	-4.6	30 30	30	30	30	30	30
Perfluoro-n-octadecanoic acid (PFODA)	5.8 -2.2	8.4	-4.8	-1.7	-1.3	-4.2	30 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-01.d
Lims ID: IC CAL 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 04-Feb-2026 12:31:17 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 1
Misc. Info.: 410-0174629-001 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 2
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:06 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:05:55
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.922	1.949	-0.027	0.475	2404465	2.01		100	1589	
2 Perfluoropropionic acid										
163.0 > 119.0	1.922	1.957	-0.035	1.000	278241	0.2486		99.5	128	
D 3 13C4-PFBA										
216.8 > 171.9	4.044	4.058	-0.014	1.000	2813561	1.99		99.5	5303	
* 4 13C3PFBA										
216.0 > 172.0	4.044	4.065	-0.021		2427129	2.00			5520	
5 PFBA										
212.8 > 168.9	4.052	4.065	-0.013	1.002	11425	0.0966		96.6	22.4	
6 PFMPA										
229.0 > 84.9	4.376	4.384	-0.008	0.929	80285	0.0507		101	437	
7 3:3 FTCA										
241.0 > 177.0	4.385	4.402	-0.017	0.931	5876	0.1038	Target=1.05	104	138	
241.0 > 117.0	4.385	4.402	-0.017	0.931	5680		1.03(0.53-1.58)	104	71.5	
D 8 13C5 PFPeA										
268.0 > 223.0	4.712	4.723	-0.011	0.910	2811222	1.99		99.6	4565	
9 PFPA										
263.0 > 219.0	4.712	4.735	-0.023	1.000	65498	0.0521		104	142	
10 PFMBA										
279.0 > 84.9	4.867	4.885	-0.018	1.033	98519	0.0510		102	681	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.988	5.008	-0.020	0.800	1099055	4.83		103	4986	
12 4:2FTS										
327.1 > 307.0	4.999	5.008	-0.009	1.002	38382	0.0944	Target=1.61	101	377	
327.1 > 80.9	4.999	5.008	-0.009	1.002	23740		1.62(0.80-2.41)	101	49.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.136	5.155	-0.019	0.992	38082	0.0513	Target=1.33	103	295	
295.0 > 84.9	5.136	5.155	-0.019	0.992	27659		1.38(0.67-2.00)	103	182	
D 16 13C5 PFHxA										
318.0 > 273.0	5.176	5.185	-0.009	1.000	3521818	2.08		104	5025	
* 15 13C2 PFHxA										
315.1 > 270.0	5.176	5.185	-0.009		5650858	5.00			6872	
17 PFHxA										
313.0 > 269.0	5.186	5.196	-0.010	1.002	94873	0.0513	Target=16.27	103	194	
313.0 > 118.9	5.196	5.196	0.0	1.004	6087		15.59(8.13-24.40)	103	42.1	
18 5:3 FTCA										
341.0 > 237.1	5.259	5.281	-0.022	1.016	50996	0.2400	Target=1.06	96.0	290	
341.0 > 217.0	5.259	5.281	-0.022	1.016	49786		1.02(0.53-1.58)	96.0	231	
D 20 13C3 PFBS										
302.1 > 79.9	5.315	5.325	-0.010	0.853	2307320	1.85		99.1	6787	
19 PFBS										
298.7 > 79.9	5.326	5.337	-0.011	1.002	55054	0.0445	Target=3.39	100	245	
298.7 > 98.8	5.326	5.337	-0.011	1.002	16483		3.34(1.70-5.09)	100	94.4	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.360	5.370	-0.010	1.036	1868799	1.95		97.5	3665	
22 HFPO-DA										
284.9 > 168.9	5.371	5.382	-0.011	1.002	35990	0.0370	Target=1.73	98.5	180	
284.9 > 184.9	5.371	5.382	-0.011	1.002	20893		1.72(0.87-2.60)	98.5	101	
23 FBSA										
298.0 > 78.0	5.394	5.405	-0.010	1.015	52507	0.0456		91.2	216	
25 PFEESA										
314.8 > 134.9	5.564	5.574	-0.010	1.075	124386	0.0415	Target=10.20	93.1	525	
314.8 > 82.9	5.564	5.574	-0.010	1.075	11621		10.70(5.10-15.30)	93.1	73.9	
D 27 13C4 PFHpA										
367.0 > 322.0	5.597	5.620	-0.023	1.081	3226019	2.07		103	6220	
28 PFHpA										
363.1 > 319.0	5.609	5.620	-0.011	1.002	93513	0.0519	Target=3.01	104	196	
363.1 > 169.0	5.609	5.620	-0.011	1.002	33037		2.83(1.50-4.51)	104	144	
29 ADONA										
376.9 > 250.9	5.758	5.780	-0.022	1.074	172315	0.0509	Target=2.15	108	509	
376.9 > 84.8	5.758	5.780	-0.022	1.074	75767		2.27(1.08-3.22)	108	348	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.803	5.814	-0.011	0.931	997560	5.07		107	3726	
31 PFPeS										
349.0 > 79.9	5.803	5.814	-0.011	0.933	67879	0.0506	Target=3.70	108	223	
349.0 > 98.8	5.803	5.814	-0.011	0.933	17326		3.92(1.85-5.54)	108	74.8	
32 6:2FTS										
427.1 > 407.0	5.803	5.825	-0.022	1.000	33314	0.0952	Target=1.45	100	16.3	
427.1 > 80.9	5.803	5.825	-0.022	1.000	25709		1.30(0.72-2.17)	100	19.4	
33 BTS										
280.0 > 147.0	5.963	5.985	-0.022	0.958	105455	0.0459		93.8	548	
D 36 13C8 PFOA										
421.0 > 376.0	5.998	6.020	-0.022	0.998	3790965	2.05		103	4038	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.009	6.020	-0.011		6065862	5.00			5504	
34 PFOA										
413.0 > 369.0	6.009	6.032	-0.023	1.002	88011	0.0521	Target=2.52	104	178	
413.0 > 169.0	6.009	6.032	-0.023	1.002	34176		2.58(1.26-3.77)	104	89.5	
37 7:3 FTCA										
441.0 > 316.9	6.080	6.091	-0.011	1.175	28559	0.2301	Target=0.53	92.0	94.0	
441.0 > 336.9	6.068	6.091	-0.023	1.172	57581		0.50(0.26-0.79)	92.0	176	
D 38 13C3 PFHxS										
402.0 > 79.9	6.223	6.243	-0.020	0.998	2084720	1.84		96.8	5715	
* 39 18O2 PFHxS										
403.0 > 83.9	6.233	6.243	-0.010		1931821	1.90			5365	
40 PFHxS										
398.7 > 79.9	6.233	6.254	-0.021	1.002	52972	0.0542	Target=4.48	119	251	
398.7 > 98.8	6.233	6.254	-0.021	1.002	12065		4.39(2.24-6.72)	119	51.9	
D 41 13C9 PFNA										
472.0 > 427.0	6.401	6.413	-0.012	1.000	3448822	1.99		99.5	5315	
43 PFNA										
463.0 > 419.0	6.413	6.424	-0.011	1.002	81544	0.0522	Target=2.90	104	268	
463.0 > 219.0	6.401	6.424	-0.023	1.000	26894		3.03(1.45-4.35)	104	45.2	
* 42 13C5 PFNA										
468.0 > 423.0	6.401	6.424	-0.023		3526072	2.00			8059	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.577	6.600	-0.023	1.055	893033	4.58		95.4	3146	
45 8:2FTS										
527.1 > 507.0	6.577	6.600	-0.023	1.000	29508	0.1162	Target=1.40	121	124	
527.1 > 80.9	6.577	6.600	-0.023	1.000	18104		1.63(0.70-2.09)	121	88.2	
46 PFECHS										
461.0 > 381.0	6.611	6.633	-0.022	1.062	92858	0.0482	Target=1.63	104	420	
461.0 > 99.0	6.611	6.633	-0.022	1.062	54067		1.72(0.81-2.44)	104	175	
47 PFHpS										
449.0 > 79.9	6.655	6.676	-0.021	0.944	62238	0.0523	Target=4.66	110	287	
449.0 > 98.8	6.644	6.676	-0.032	0.942	11893		5.23(2.33-6.98)	110	67.4	
48 FHxSA										
398.0 > 78.0	6.655	6.687	-0.032	1.069	89558	0.0512		102	310	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.720	6.752	-0.032	0.953	1326795	4.96		99.2	1999	
50 NMeFOSAA										
570.0 > 419.0	6.730	6.762	-0.032	1.002	12650	0.0420	Target=1.27	83.9	3230	
570.0 > 483.0	6.730	6.762	-0.032	1.002	13766		0.92(0.64-1.91)	83.9	3172	
D 52 13C6 PFDA										
519.0 > 474.0	6.794	6.814	-0.020	1.000	3487233	2.07		103	7090	
* 51 13C2 PFDA										
515.1 > 470.1	6.794	6.825	-0.031		3021950	2.00			7004	
53 PFDA										
512.9 > 469.0	6.804	6.825	-0.021	1.002	89559	0.0515	Target=6.58	103	343	
512.9 > 219.0	6.804	6.825	-0.021	1.002	12980		6.90(3.29-9.87)	103	54.4	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.900	6.932	-0.032	0.978	1643529	4.88		97.6	3719	
55 NEtFOSAA										
584.0 > 419.0	6.910	6.932	-0.022	1.002	18278	0.0488	Target=1.61	97.5	75.9	
584.0 > 526.0	6.900	6.932	-0.032	1.000	12462		1.47(0.80-2.41)	97.5	116	
D 56 13C8 PFOS										
507.0 > 79.9	7.053	7.084	-0.031	1.000	2124710	1.91		99.5	3295	
* 57 13C4 PFOS										
502.8 > 79.9	7.053	7.084	-0.031		1538517	1.92			5330	
58 PFOS										
498.9 > 79.9	7.064	7.084	-0.020	1.001	62836	0.0488	Target=5.51	105	219	
498.9 > 98.8	7.064	7.084	-0.020	1.001	12766		4.92(2.75-8.26)	105	59.2	
D 59 13C7 PFUnA										
570.0 > 525.0	7.194	7.227	-0.033	1.059	3598805	2.14		107	6663	
60 PFUnA										
563.1 > 519.0	7.204	7.239	-0.035	1.001	82027	0.0510	Target=5.78	102	641	
563.1 > 269.1	7.204	7.239	-0.035	1.001	14325		5.73(2.89-8.67)	102	104	
61 9ClFOS										
530.8 > 351.0	7.379	7.405	-0.026	1.046	109603	0.0470	Target=3.05	101	439	
532.8 > 353.0	7.379	7.405	-0.026	1.046	39332		2.79(1.52-4.57)	101	312	
62 PFNS										
548.8 > 79.9	7.467	7.503	-0.036	1.059	51061	0.0524	Target=4.62	109	431	
548.8 > 98.8	7.467	7.503	-0.036	1.059	9178		5.56(2.31-6.93)	109	68.8	
D 63 13C2 PFDoA										
615.0 > 570.0	7.614	7.636	-0.022	1.121	3334069	2.09		104	3692	
64 PFDoA										
613.0 > 569.0	7.614	7.647	-0.033	1.000	90629	0.0505	Target=6.26	101	703	
613.0 > 319.0	7.614	7.647	-0.033	1.000	14510		6.25(3.13-9.39)	101	4903	
D 65 13C8 FOSA										
506.1 > 77.8	7.755	7.788	-0.033	1.100	2176631	1.95		97.6	4616	
66 PFOSA										
498.1 > 77.9	7.755	7.799	-0.044	1.000	47452	0.0525	Target=42.30	105	159	
498.1 > 478.0	7.743	7.799	-0.056	0.999	992		47.83(21.15-63.45)	105	7.6	
67 PFDS										
599.0 > 79.9	7.874	7.906	-0.032	1.116	57484	0.0465	Target=4.95	96.6	382	
599.0 > 98.8	7.874	7.906	-0.032	1.116	12538		4.58(2.48-7.43)	96.6	141	
68 PFTrDA										
663.0 > 619.0	8.029	8.061	-0.032	0.953	97333	0.0494	Target=7.25	98.8	705	
663.0 > 168.9	8.018	8.061	-0.043	0.952	13757		7.08(3.63-10.88)	98.8	151	
69 11ClFOS										
630.9 > 450.9	8.199	8.224	-0.025	1.163	94085	0.0462	Target=3.03	97.9	706	
632.9 > 452.9	8.199	8.224	-0.025	1.163	31065		3.03(1.51-4.54)	97.9	377	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.424	8.452	-0.028	1.240	2004319	2.09		105	2422	
71 PFTeDA										
713.1 > 168.9	8.438	8.466	-0.028	1.002	12070	0.0557	Target=1.21	111	145	
713.1 > 219.0	8.424	8.466	-0.042	1.000	9760		1.24(0.61-1.82)	111	137	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.648	8.673	-0.025	1.226	53645	0.0468	Target=5.37	96.6	500	
699.1 > 98.8	8.648	8.673	-0.025	1.226	9938		5.40(2.69-8.06)	96.6	201	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.710	8.735	-0.025	1.235	1406351	4.94		98.7	426	
74 N-MeFOSE-M										
616.1 > 58.9	8.723	8.748	-0.025	1.001	161092	0.2566		103	71.2	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.822	8.845	-0.023	1.251	550622	1.97		98.7	2551	
76 NMeFOSA										
511.9 > 219.0	8.822	8.857	-0.035	1.000	13165	0.0514	Target=0.75	103	189	
511.9 > 169.0	8.834	8.857	-0.023	1.001	16937		0.78(0.37-1.12)	103	78.5	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.951	8.975	-0.024	1.269	1882907	4.95		98.9	726	
78 N-EtFOSE-M										
630.0 > 58.9	8.975	8.998	-0.023	1.003	278078	0.2412		96.5	89.2	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.046	9.069	-0.023	1.283	762181	2.00		100	2638	
80 N-EtFOSA-M										
526.0 > 219.0	9.057	9.081	-0.024	1.001	16540	0.0515	Target=0.84	103	188	
526.0 > 169.0	9.057	9.081	-0.024	1.001	19076		0.87(0.42-1.26)	103	198	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.454	9.470	-0.016	1.122	148780	0.0529	Target=9.33	106	2675	
913.0 > 169.0	9.454	9.470	-0.016	1.122	15742		9.45(4.66-13.99)	106	660	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL1_00080 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:06 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-01.d

Injection Date: 04-Feb-2026 12:31:17 Instrument ID: 30637

Lims ID: IC CAL 1

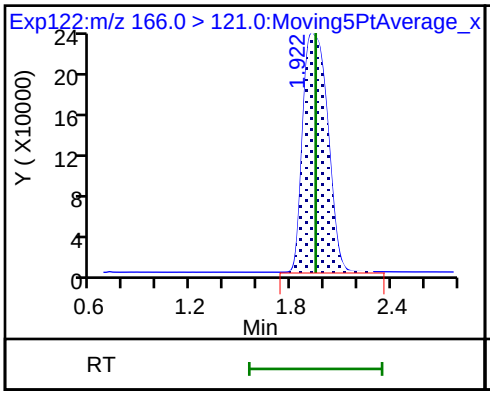
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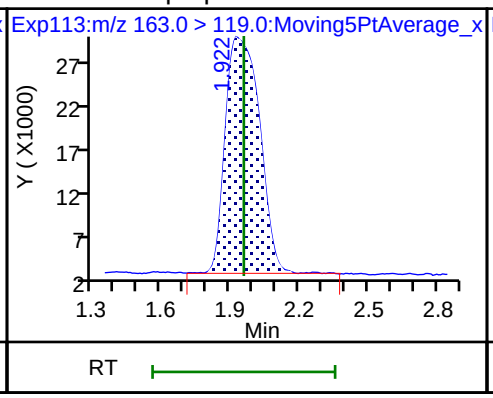
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

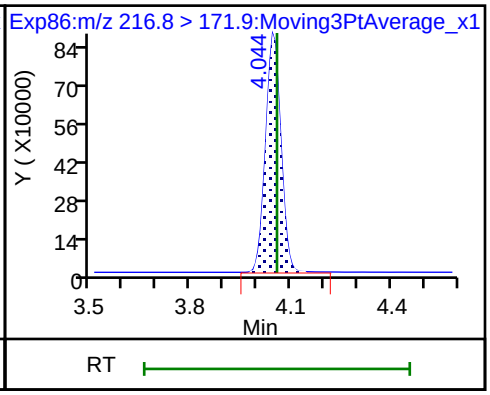
D 1 13C3PFPrA



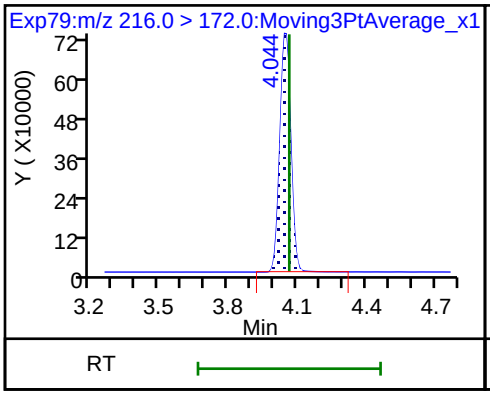
2 Perfluoropropionic acid



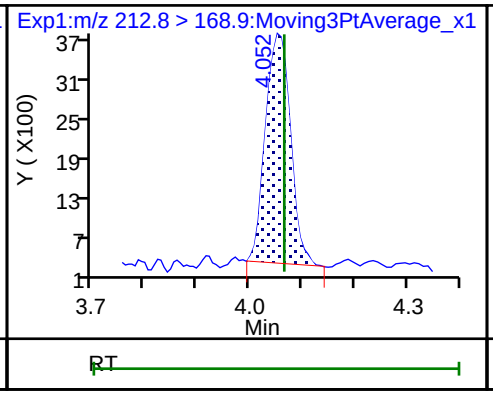
D 3 13C4-PFBA



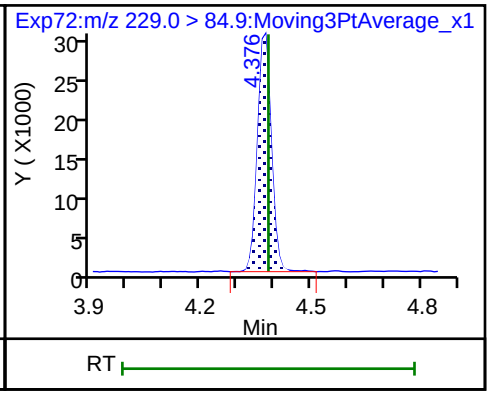
* 4 13C3PFBA



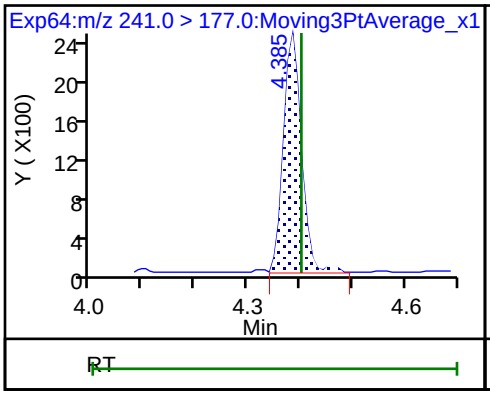
5 PFBA



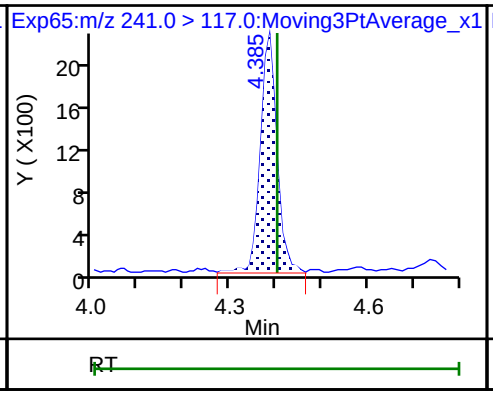
6 PFMPA



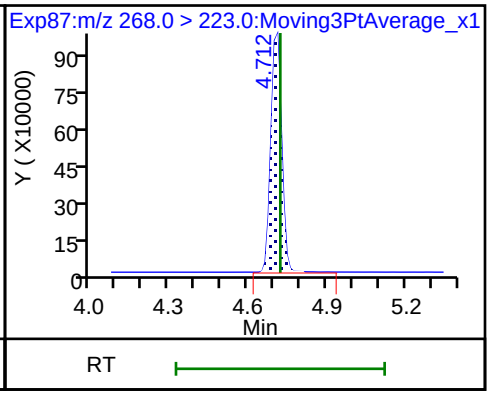
7 3:3 FTCA



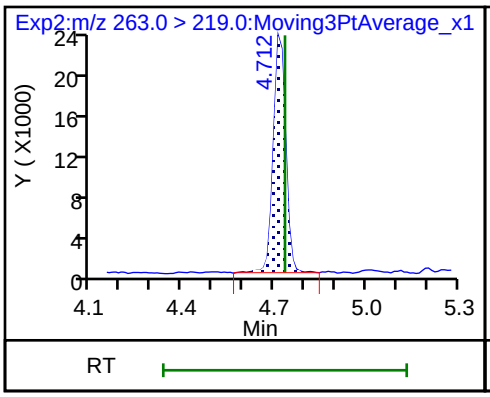
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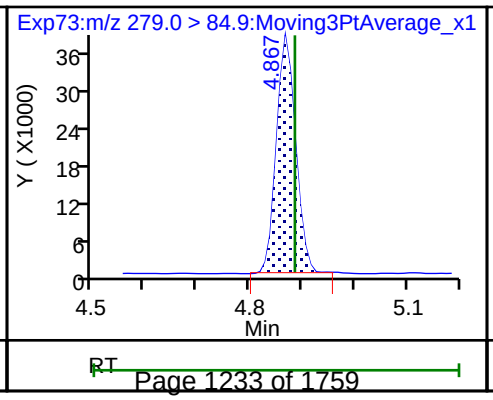
D 8 13C5 PFPeA



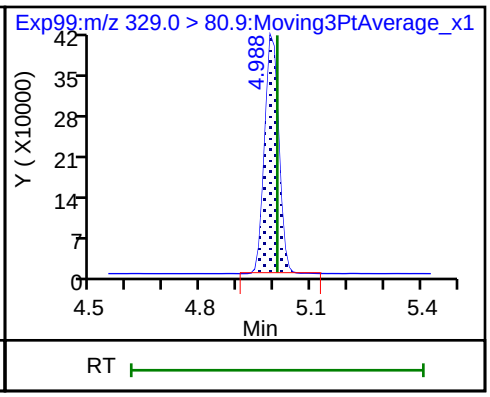
9 PFPA



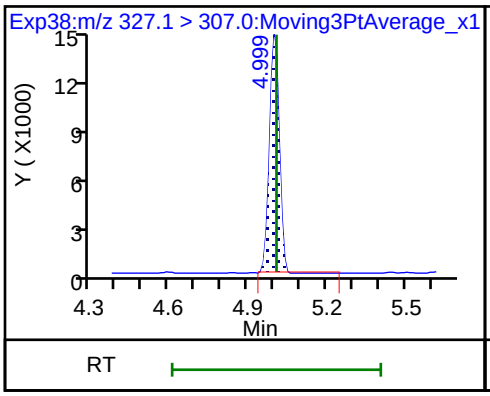
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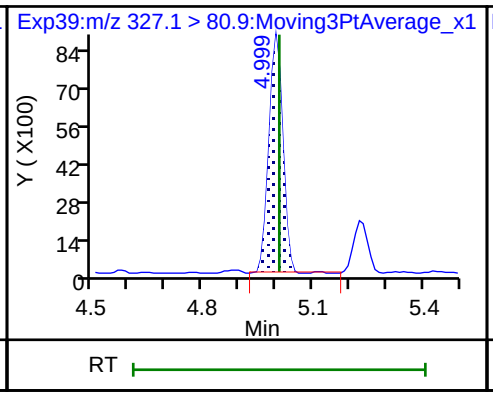
D 11 13C2-4:2FTS



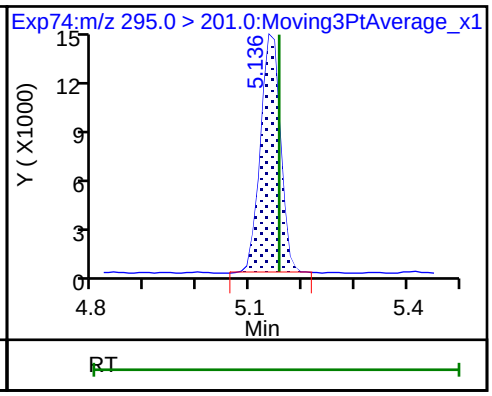
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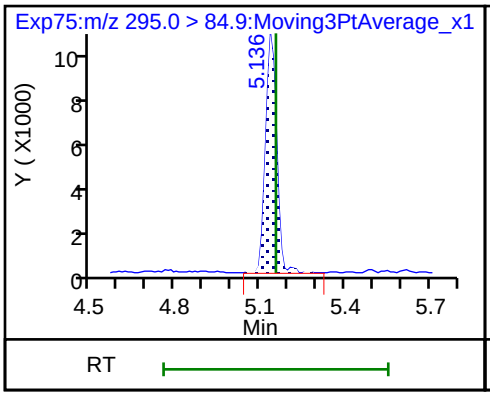
12 4:2FTS



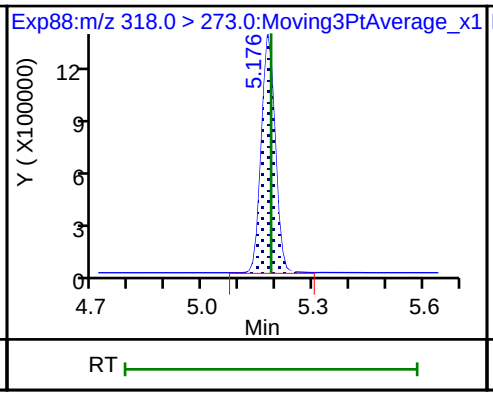
14 NFDHA



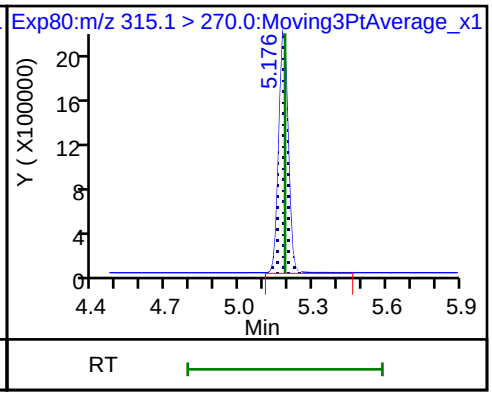
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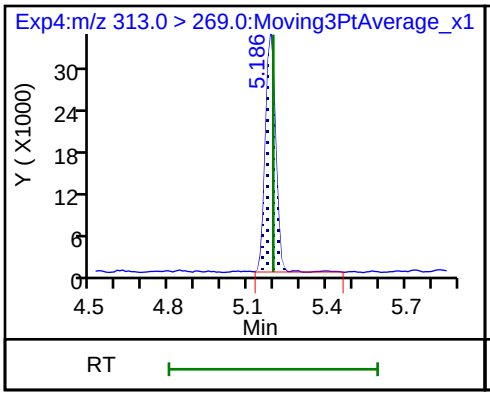
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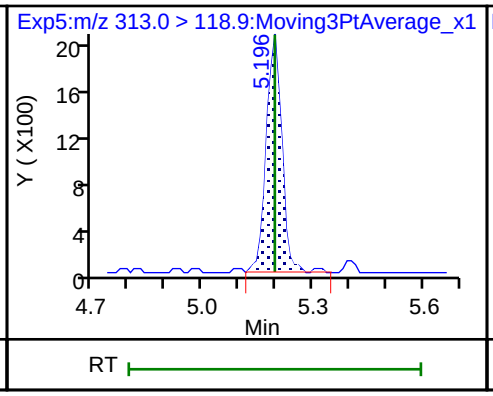
* 15 13C2 PFHxA



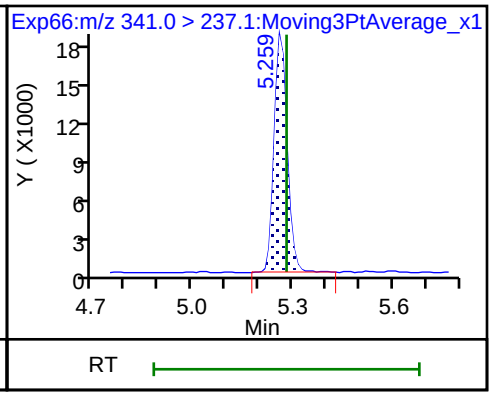
17 PFHxA



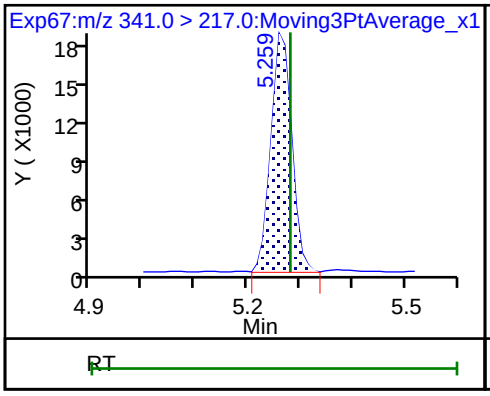
17 PFHxA



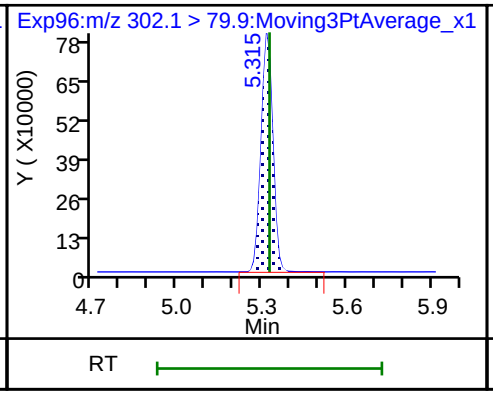
18 5:3 FTCA



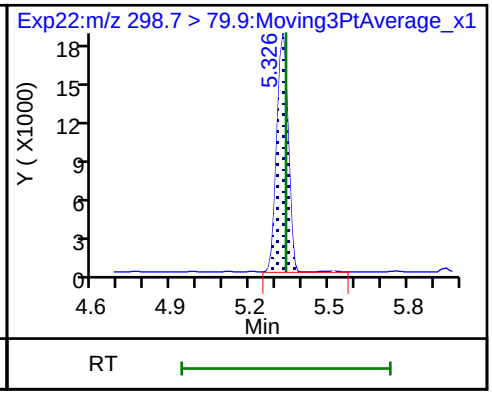
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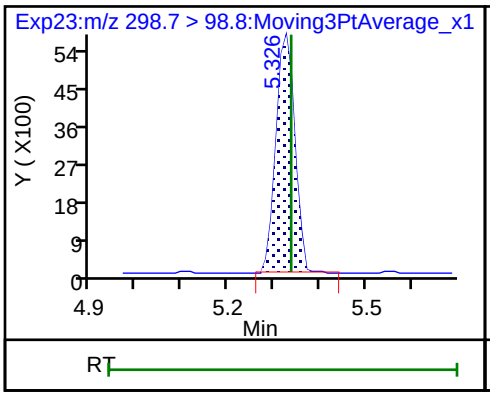
D 20 13C3 PFBS



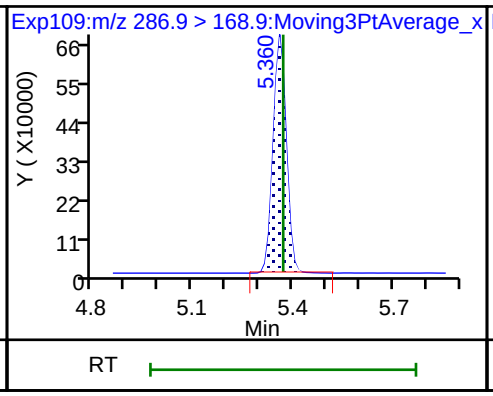
19 PFBS



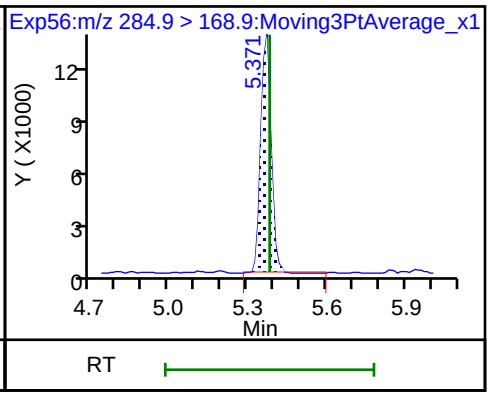
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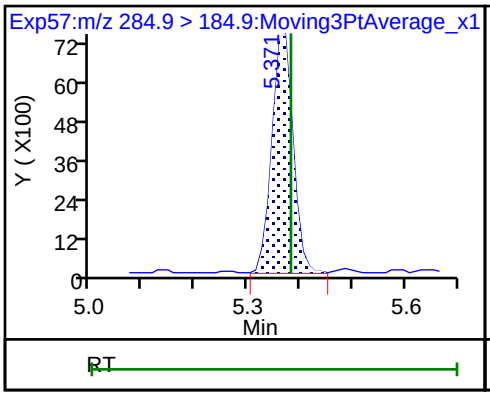
D 21 13C3 HFPO-DA



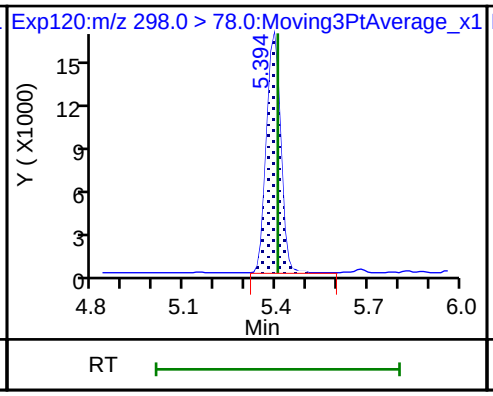
22 HFPO-DA



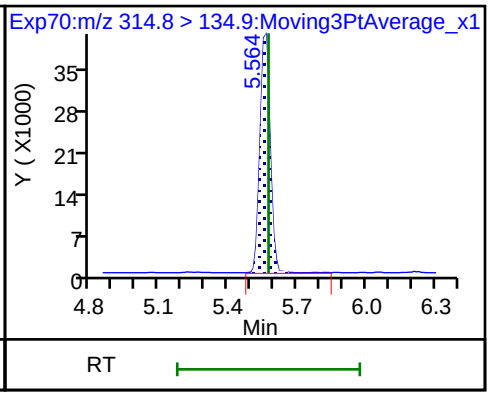
22 HFPO-DA



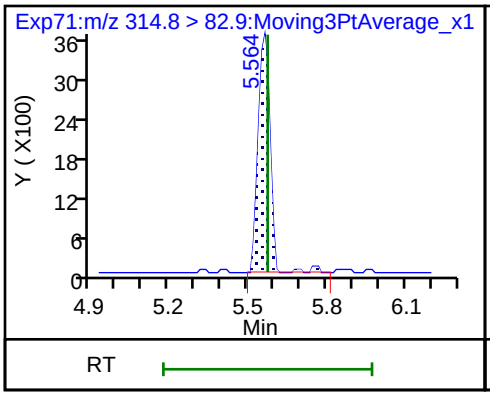
23 FBSA



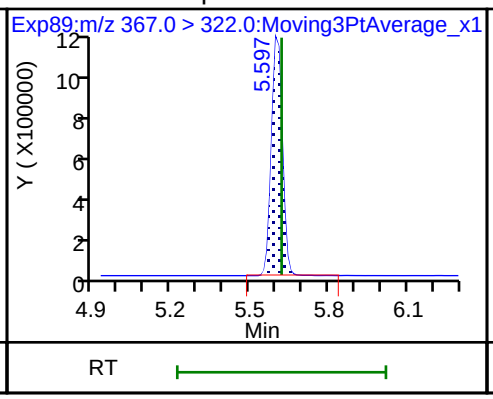
25 PFEESA



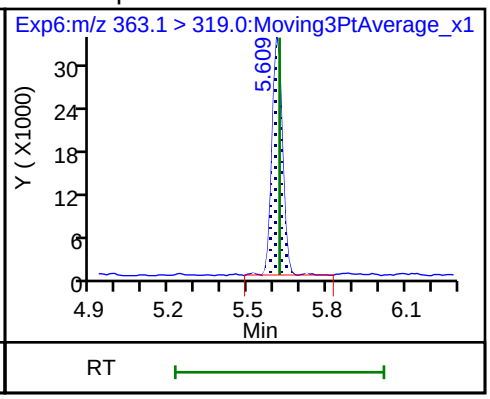
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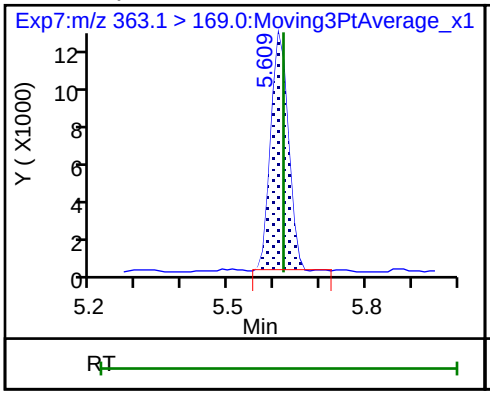
D 27 13C4 PFHpA



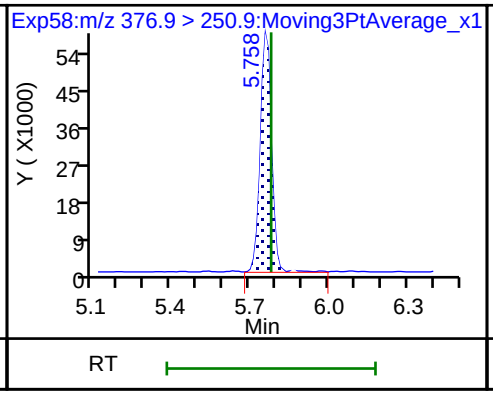
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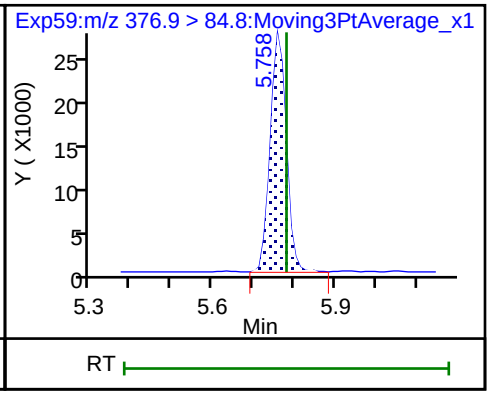
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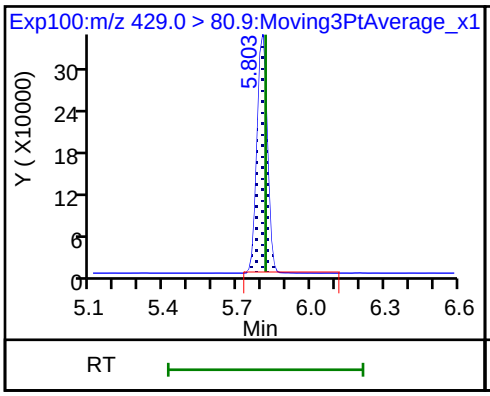
29 ADONA



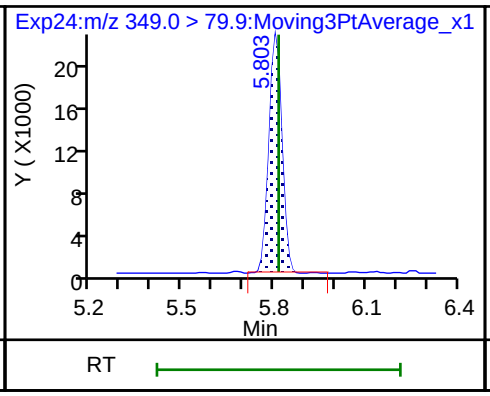
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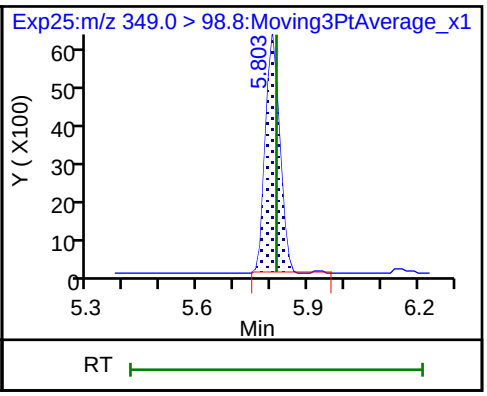
D 30 13C2-6:2FTS



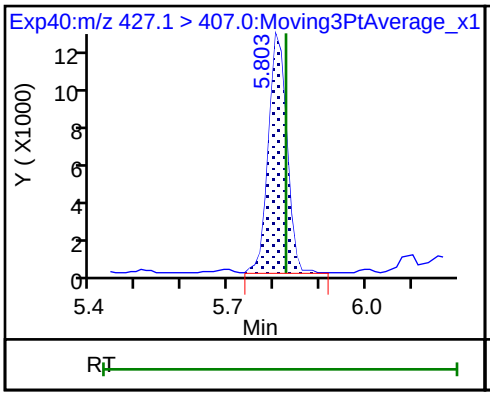
31 PFPeS



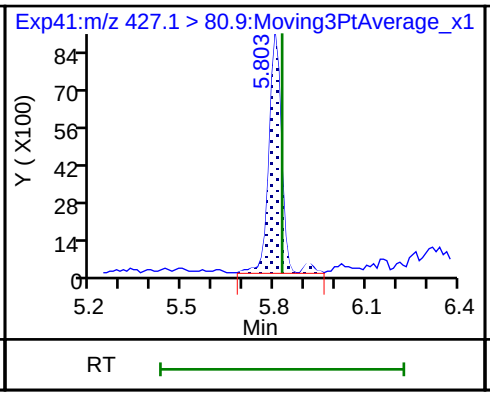
31 PFPeS



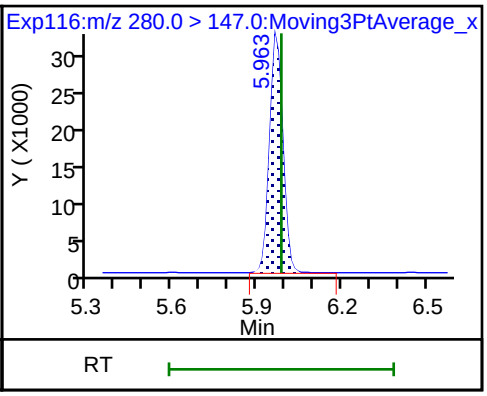
32 6:2FTS



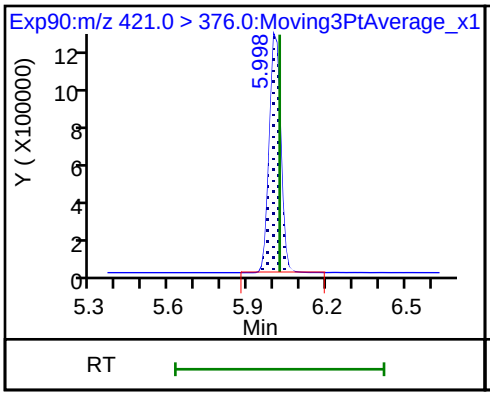
32 6:2FTS



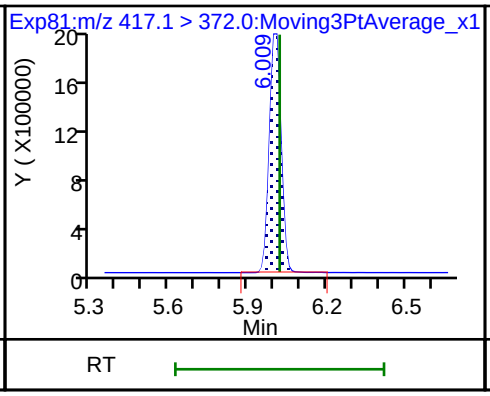
33 BTS



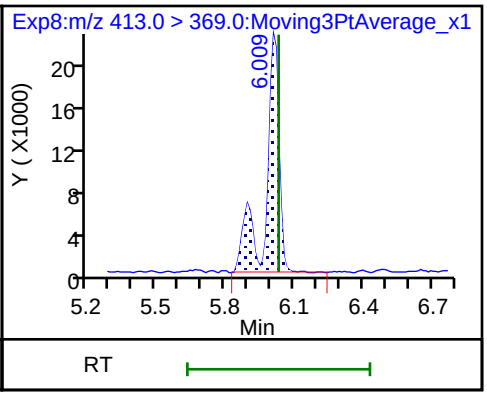
D 36 13C8 PFOA



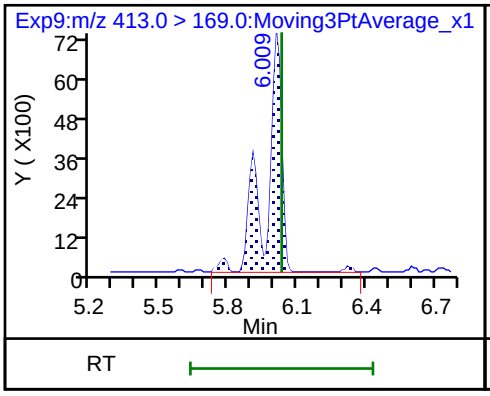
* 35 13C4 PFOA



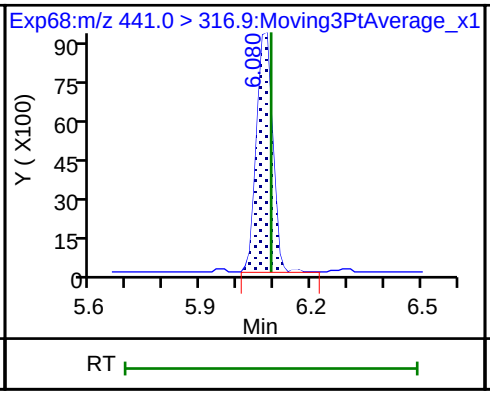
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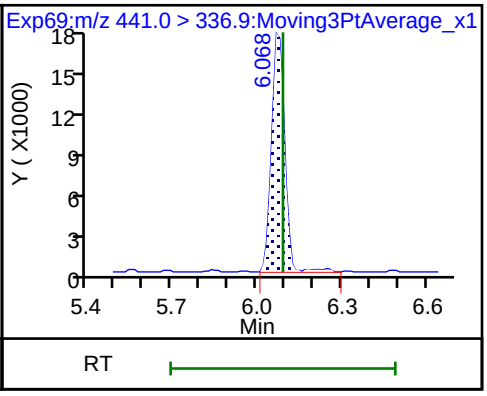
34 PFOA



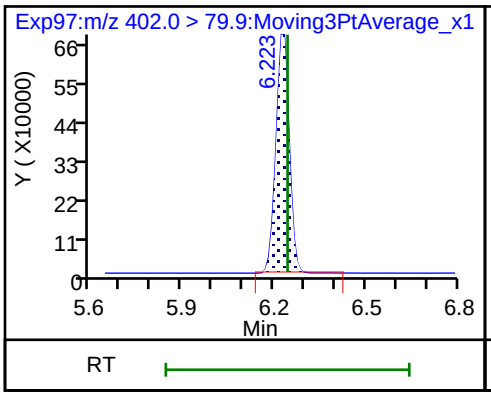
37 7:3 FTCA



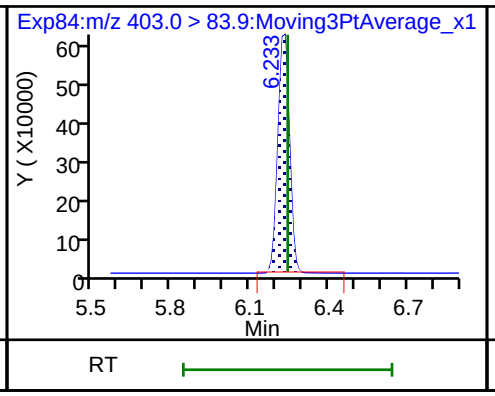
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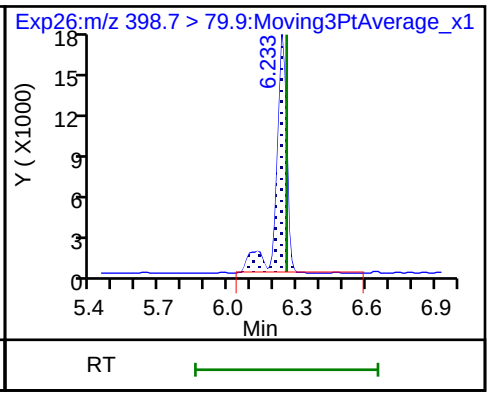
D 38 13C3 PFHxS



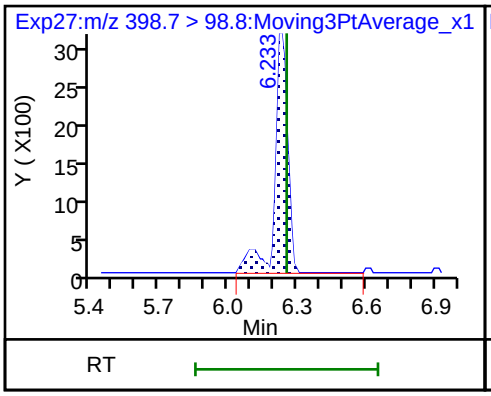
* 39 18O2 PFHxS



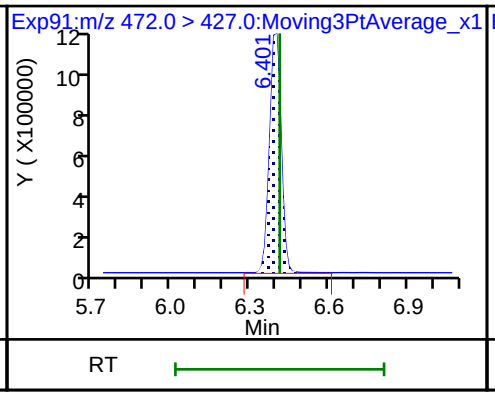
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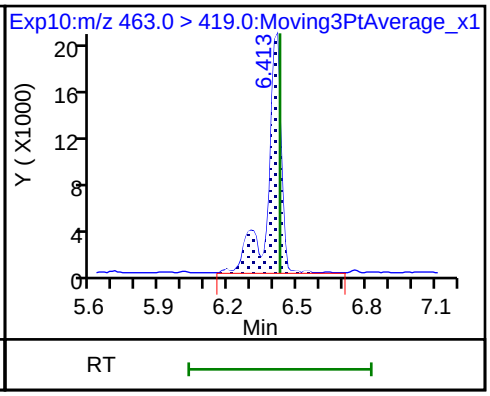
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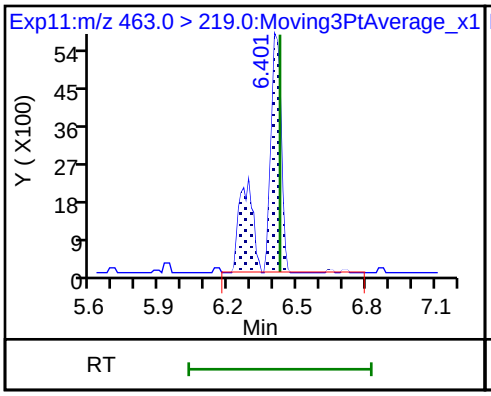
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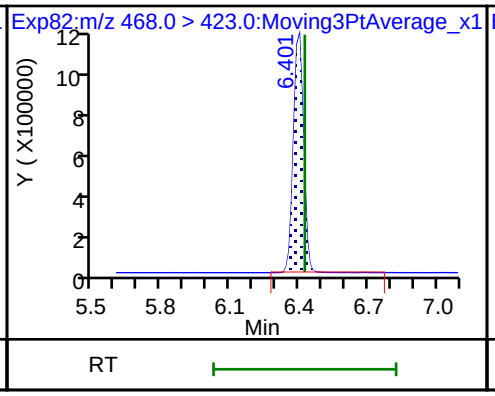
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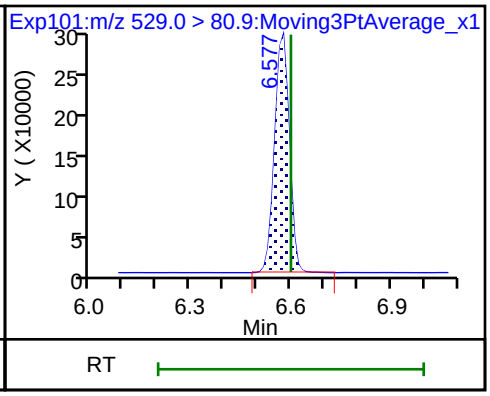
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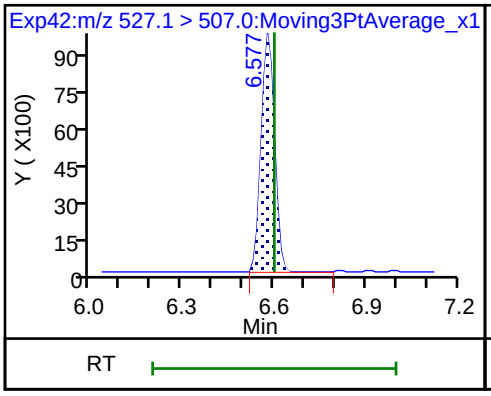
* 42 13C5 PFNA



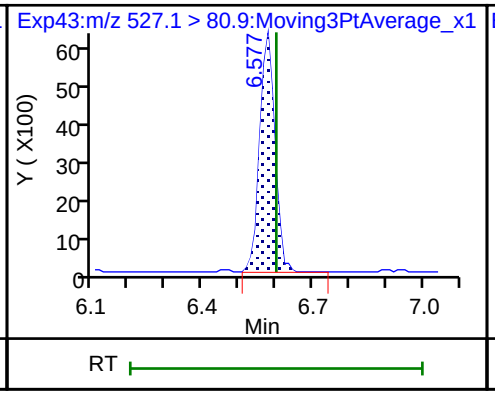
D 44 13C2-8:2FTS



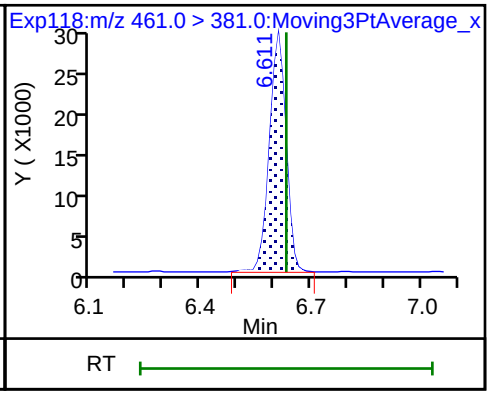
45 8:2FTS



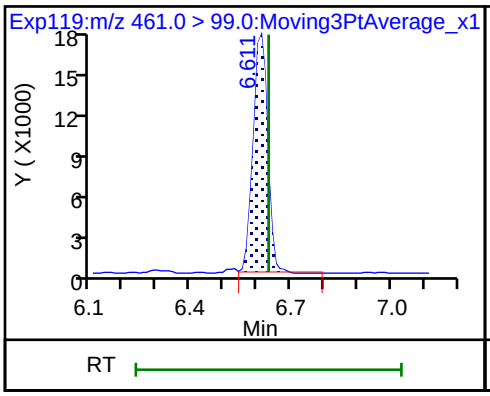
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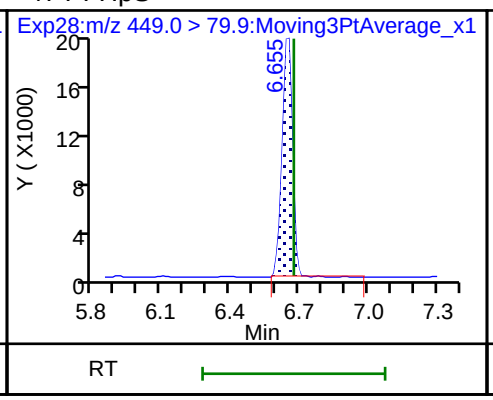
46 PFECHS



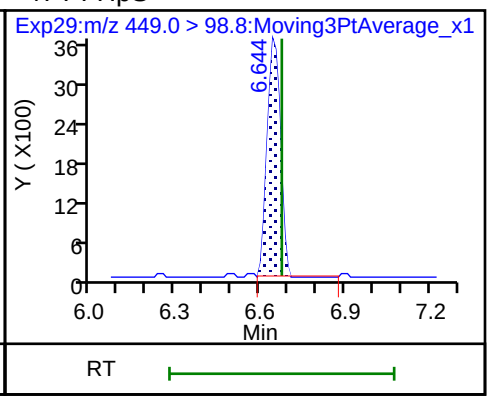
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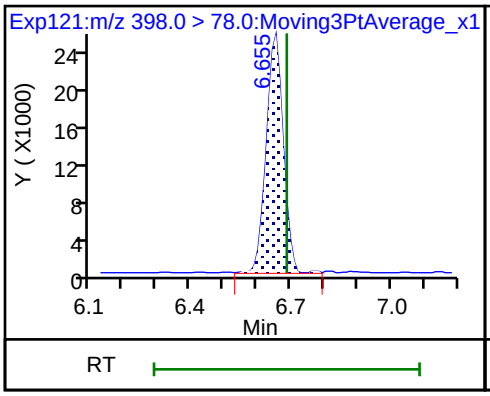
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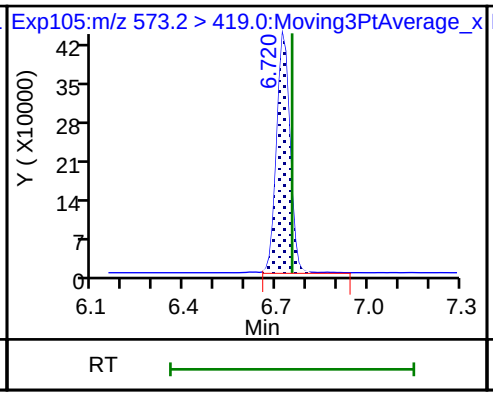
47 PFHpS



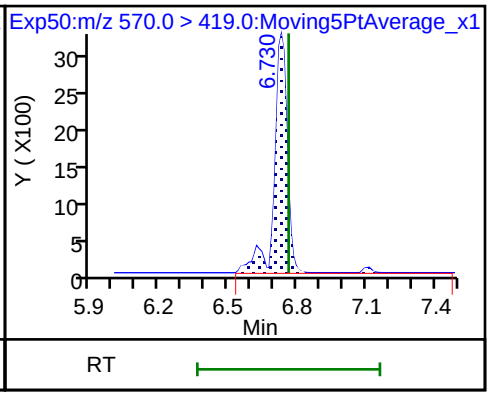
48 FHxSA



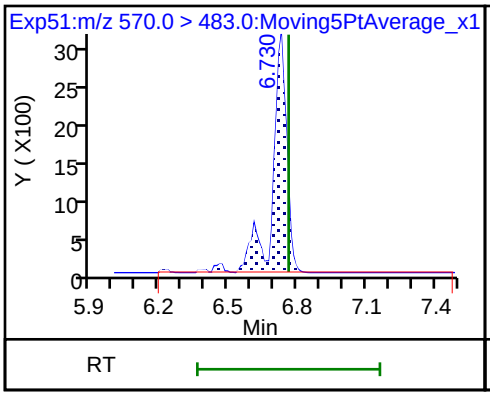
D 49 d3-NMeFOSAA



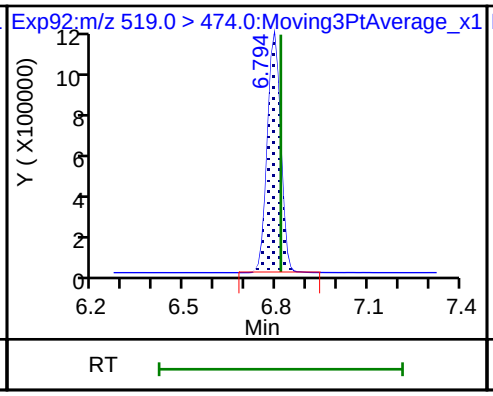
50 NMeFOSAA



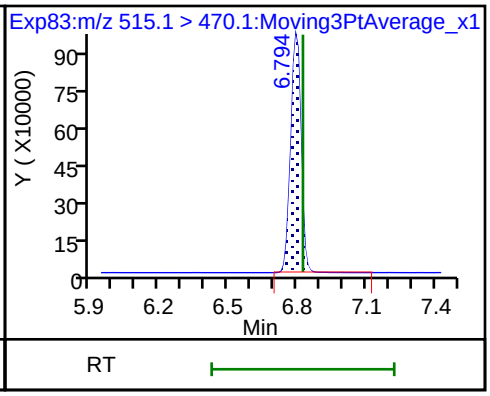
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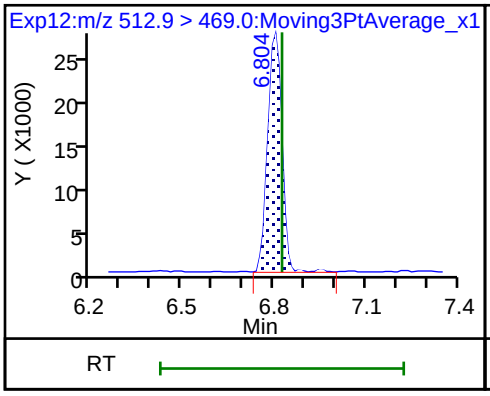
D 52 13C6 PFDA



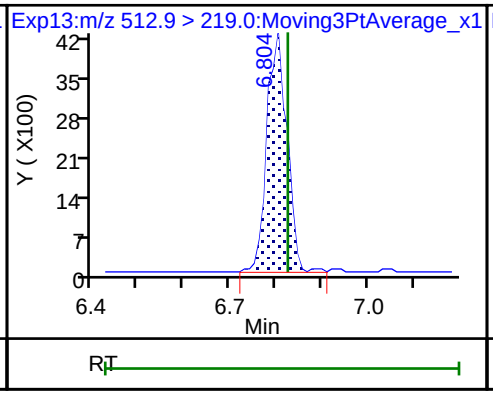
* 51 13C2 PFDA



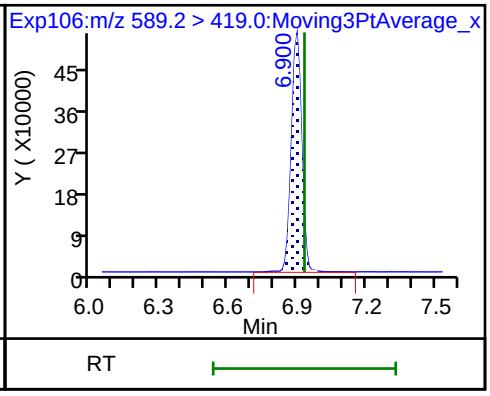
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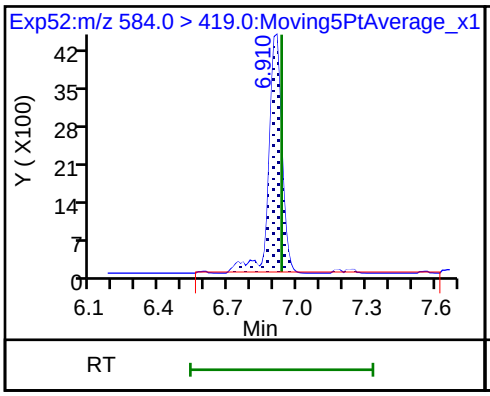
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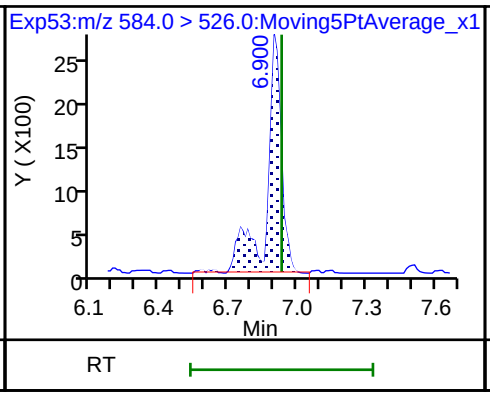
D 54 d5-NEtFOSAA



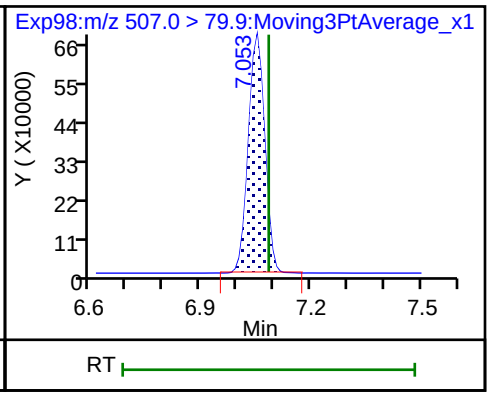
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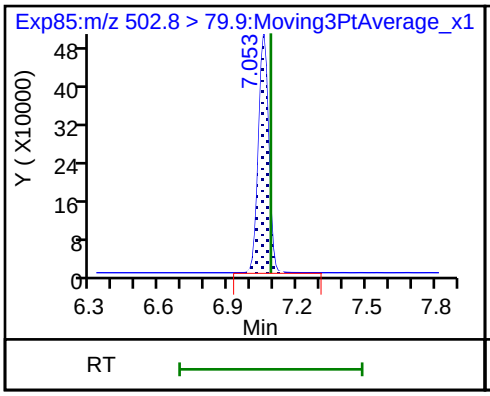
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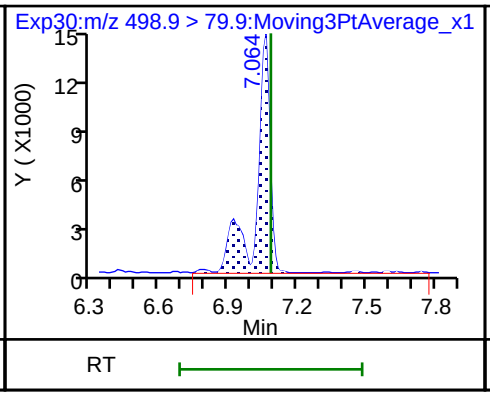
D 56 13C8 PFOS



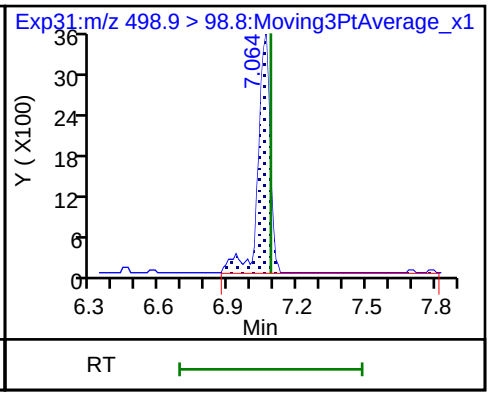
* 57 13C4 PFOS



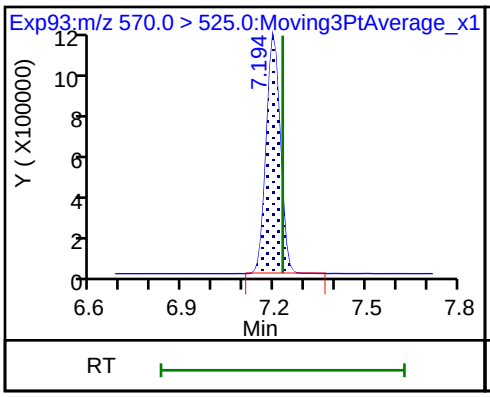
58 PFOS



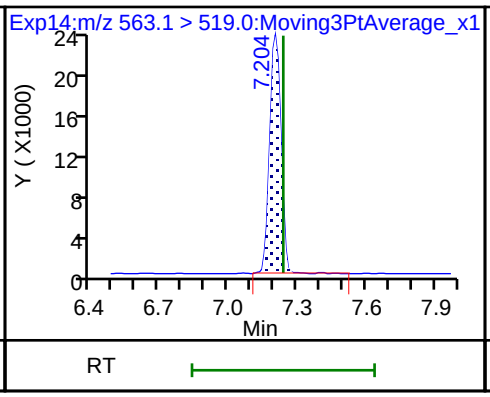
58 PFOS



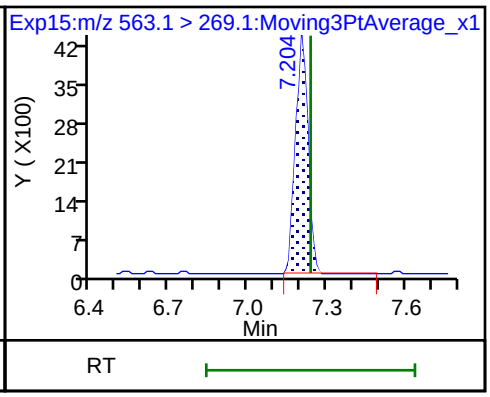
D 59 13C7 PFUnA



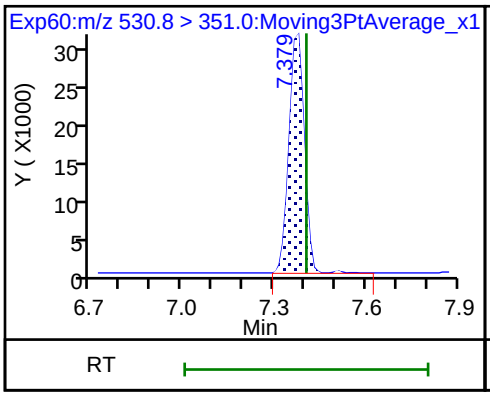
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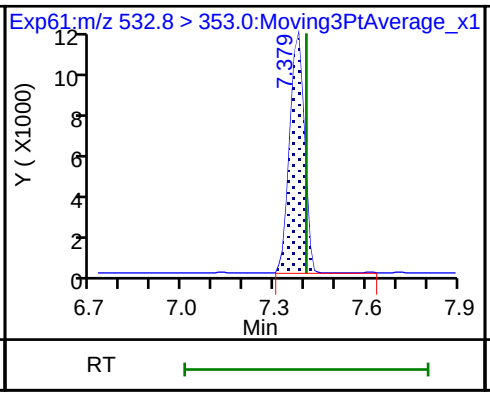
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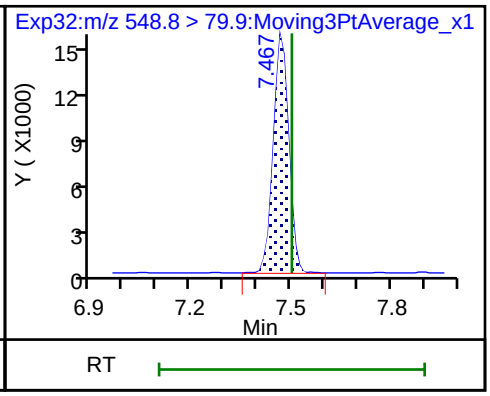
61 9ClFOS



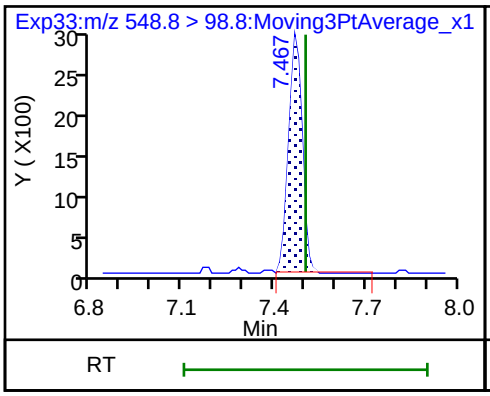
61 9ClFOS



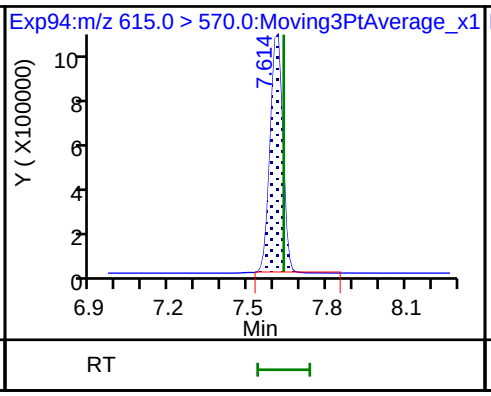
62 PFNS



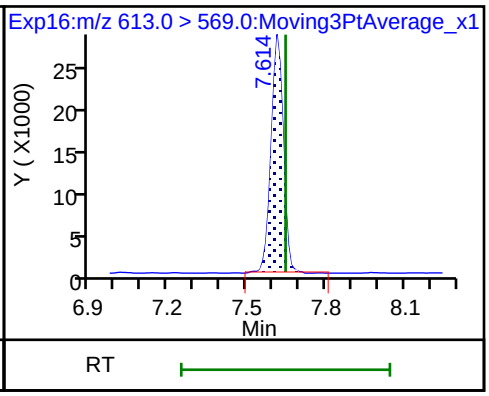
62 PFNS



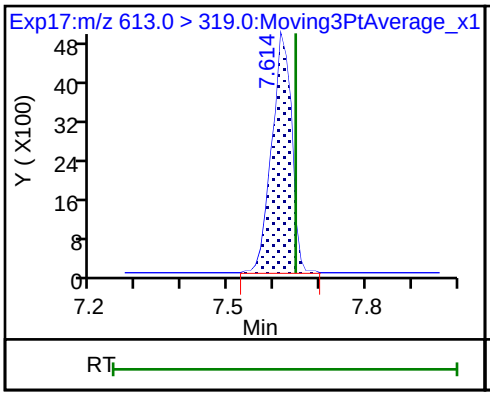
D 63 13C2 PFDoA



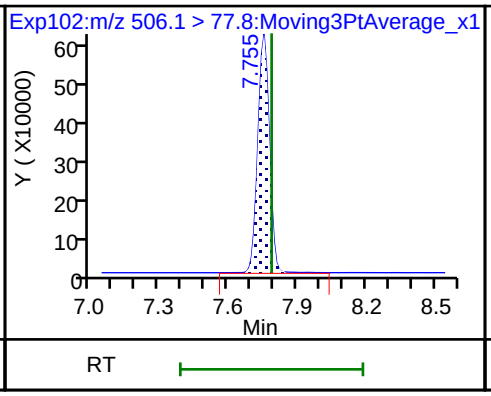
64 PFDoA



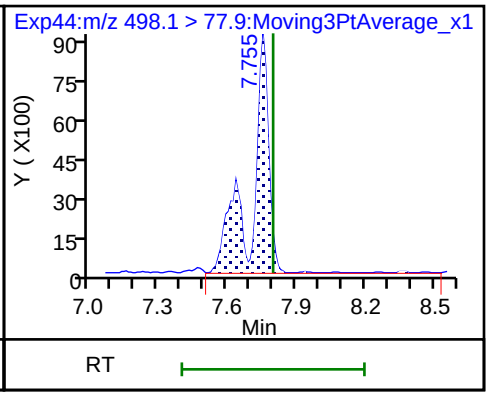
64 PFDoA



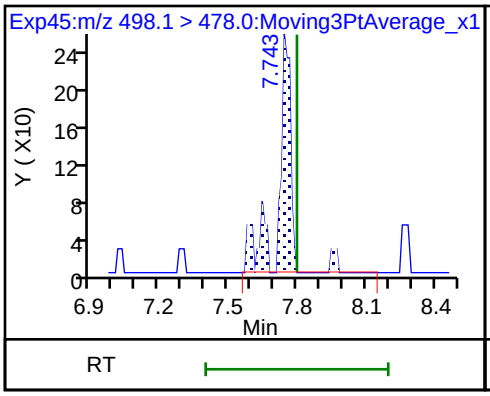
D 65 13C8 FOSA



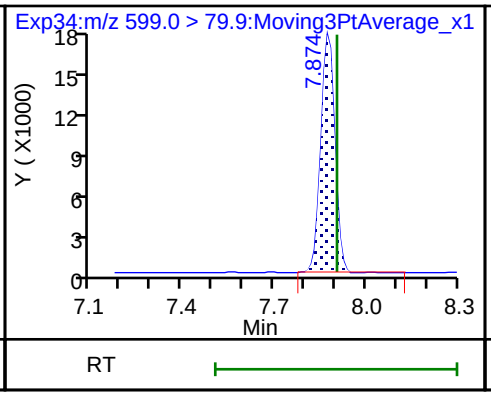
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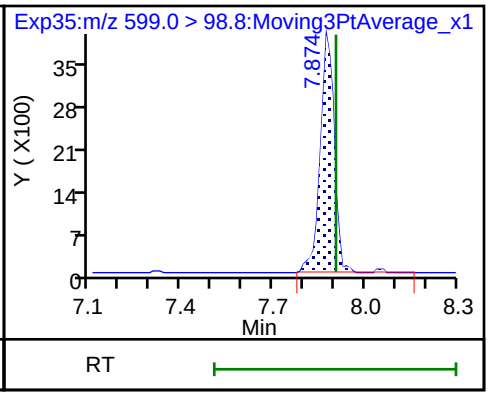
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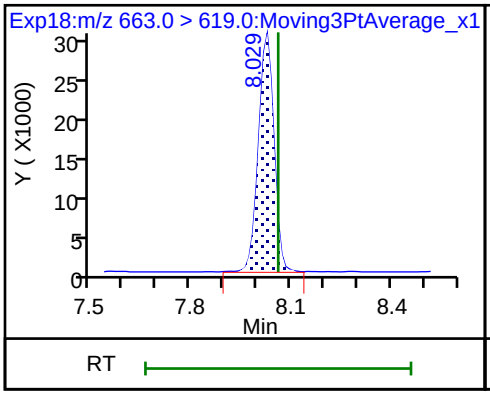
67 PFDS



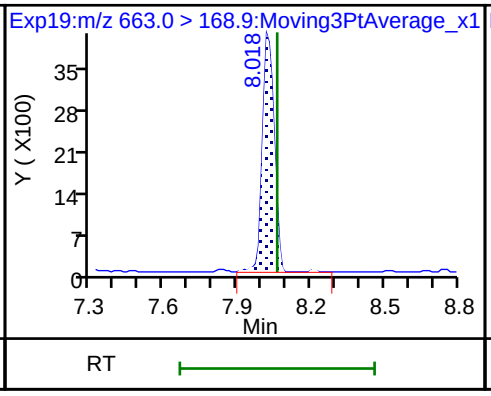
67 PFDS



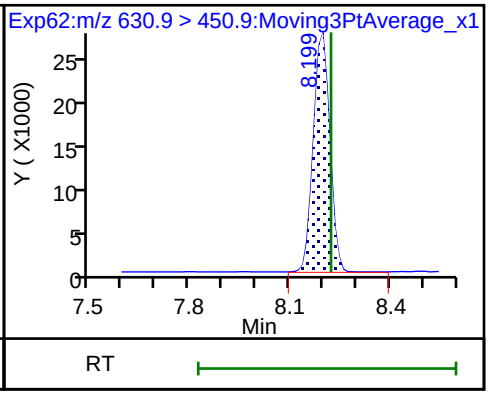
68 PFTrDA



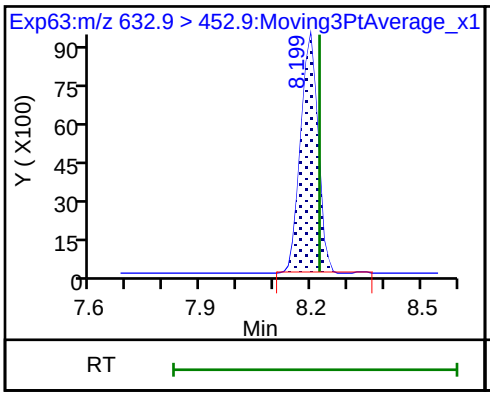
68 PFTrDA



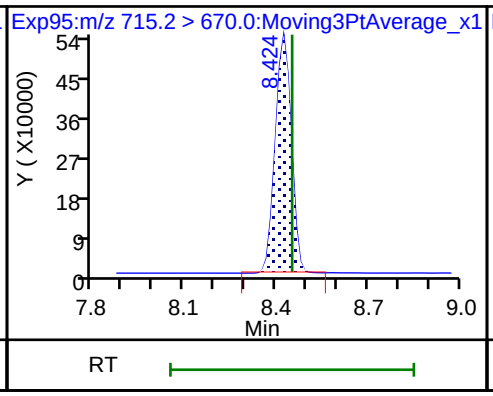
69 11ClFOS



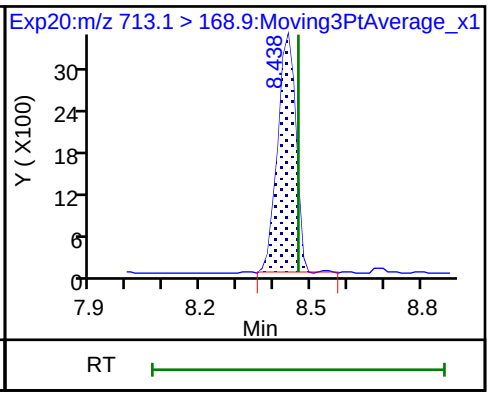
69 11ClFOS



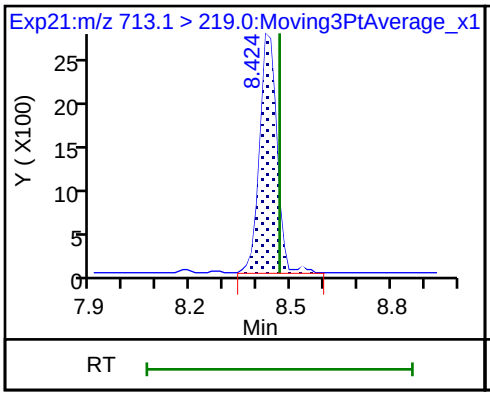
D 70 13C2 PFTeDA



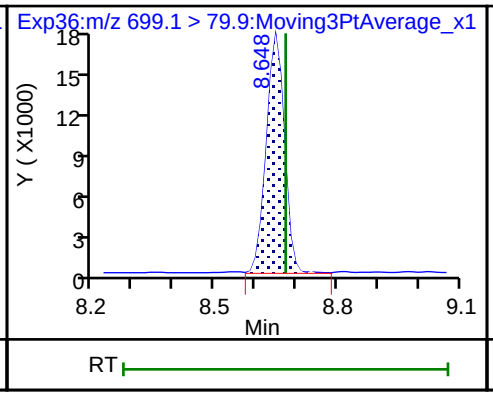
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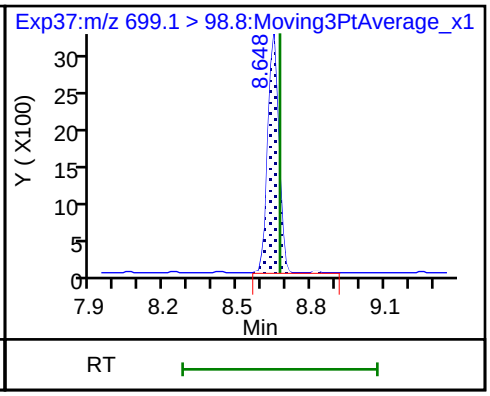
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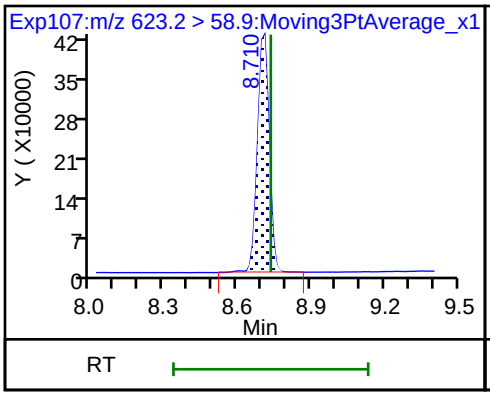
72 PFDoS



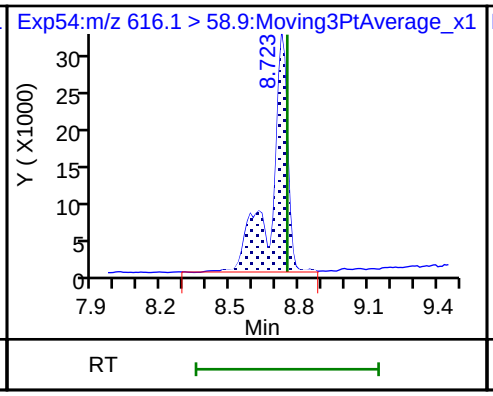
72 PFDoS



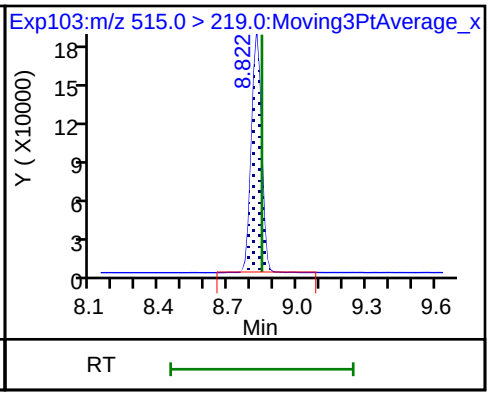
D 73 d7-N-Me-FOSE



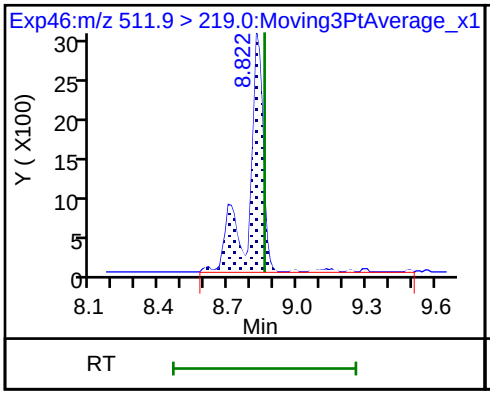
74 N-MeFOSE-M



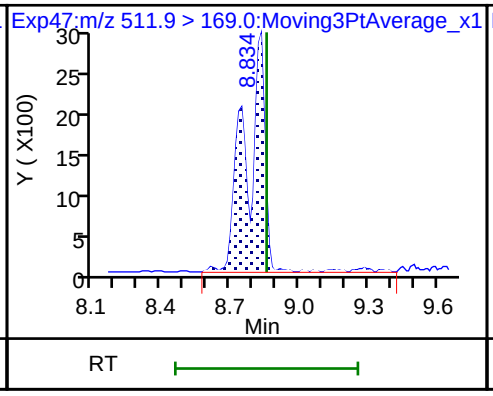
D 75 d3-NMePFOSA



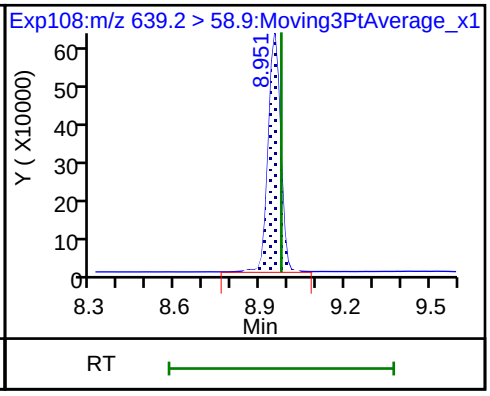
76 NMeFOSA



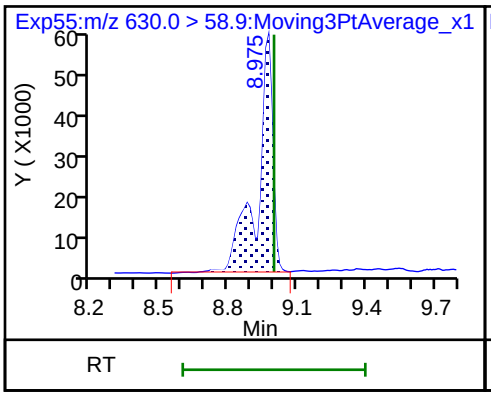
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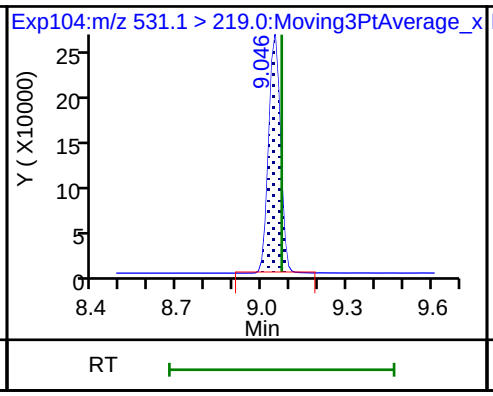
D 77 d9-N-EtFOSE



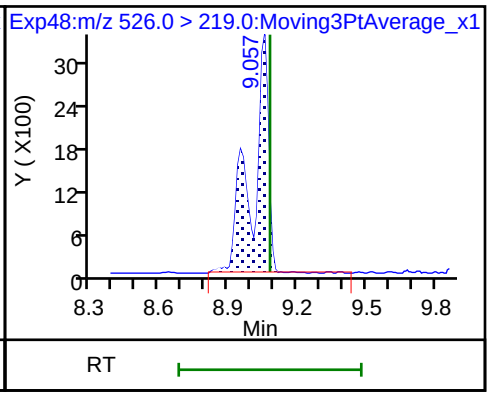
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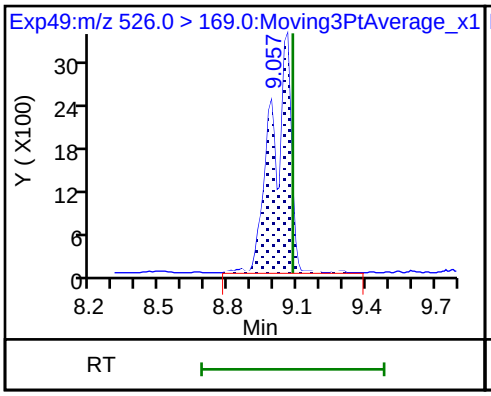
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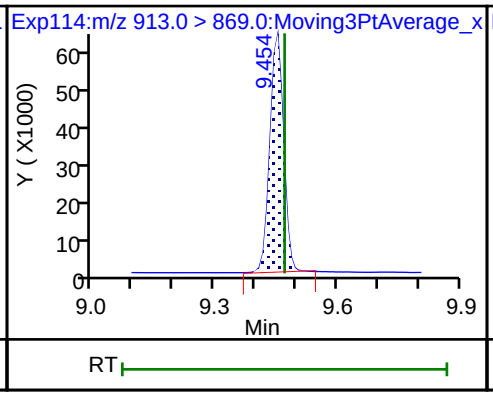
80 N-EtFOSA-M



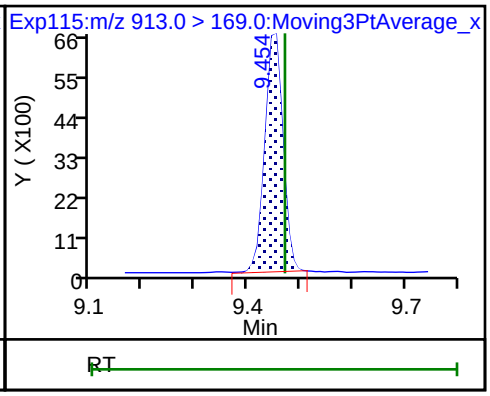
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-02.d
Lims ID: IC CAL 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-Feb-2026 12:44:50 ALS Bottle#: 3 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 2
Misc. Info.: 410-0174629-002 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 3
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:11 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:06:25
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.940	1.949	-0.009	0.478	2385495	2.04		102	1328	
2 Perfluoropropionic acid										
163.0 > 119.0	1.940	1.957	-0.017	1.000	707763	0.6375		102	355	
D 3 13C4-PFBA										
216.8 > 171.9	4.050	4.058	-0.008	0.998	2792290	2.03		101	7525	
* 4 13C3PFBA										
216.0 > 172.0	4.058	4.065	-0.007		2367248	2.00			5916	
5 PFBA										
212.8 > 168.9	4.058	4.065	-0.007	1.002	30975	0.2638		106	66.8	
6 PFMPA										
229.0 > 84.9	4.384	4.384	0.0	0.931	199216	0.1239		99.1	1160	
7 3:3 FTCA										
241.0 > 177.0	4.393	4.402	-0.009	0.933	14554	0.2533	Target=1.05	101	277	
241.0 > 117.0	4.393	4.402	-0.009	0.933	13324		1.09(0.53-1.58)	101	158	
D 8 13C5 PFPeA										
268.0 > 223.0	4.710	4.723	-0.013	0.908	2853412	2.07		104	4965	
9 PFPA										
263.0 > 219.0	4.722	4.735	-0.013	1.003	160127	0.1256		100	388	
10 PFMBA										
279.0 > 84.9	4.876	4.885	-0.009	1.035	246341	0.1257		101	1589	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.997	5.008	-0.011	0.800	1069012	4.68		99.7	4907	
12 4:2FTS										
327.1 > 307.0	5.008	5.008	0.0	1.002	93061	0.2353	Target=1.61	100	1258	
327.1 > 80.9	5.008	5.008	0.0	1.002	62362		1.49(0.80-2.41)	100	138	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.145	5.155	-0.010	0.992	85582	0.1200	Target=1.33	96.0	579	
295.0 > 84.9	5.145	5.155	-0.010	0.992	72564		1.18(0.67-2.00)	96.0	404	
D 16 13C5 PFHxA										
318.0 > 273.0	5.185	5.185	0.0	1.000	3383840	2.05		102	8891	
* 15 13C2 PFHxA										
315.1 > 270.0	5.185	5.185	0.0		5506921	5.00			8312	
17 PFHxA										
313.0 > 269.0	5.196	5.196	0.0	1.002	233510	0.1315	Target=16.27	105	435	
313.0 > 118.9	5.196	5.196	0.0	1.002	13839		16.87(8.13-24.40)	105	86.3	
18 5:3 FTCA										
341.0 > 237.1	5.269	5.281	-0.012	1.016	134158	0.6570	Target=1.06	105	651	
341.0 > 217.0	5.269	5.281	-0.012	1.016	119119		1.13(0.53-1.58)	105	363	
D 20 13C3 PFBS										
302.1 > 79.9	5.325	5.325	0.0	0.853	2295982	1.83		98.1	6336	
19 PFBS										
298.7 > 79.9	5.325	5.337	-0.012	1.000	141518	0.1149	Target=3.39	104	1047	
298.7 > 98.8	5.325	5.337	-0.012	1.000	39182		3.61(1.70-5.09)	104	179	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.370	5.370	0.0	1.036	1783433	1.91		95.5	3568	
22 HFPO-DA										
284.9 > 168.9	5.370	5.382	-0.012	1.000	90129	0.0970	Target=1.73	103	406	
284.9 > 184.9	5.370	5.382	-0.012	1.000	54513		1.65(0.87-2.60)	103	306	
23 FBSA										
298.0 > 78.0	5.393	5.405	-0.011	1.013	147560	0.1288		103	508	
25 PFEESA										
314.8 > 134.9	5.563	5.574	-0.011	1.073	321077	0.1116	Target=10.20	100	1221	
314.8 > 82.9	5.563	5.574	-0.011	1.073	31307		10.26(5.10-15.30)	100	177	
D 27 13C4 PFHpA										
367.0 > 322.0	5.608	5.620	-0.012	1.082	3058741	2.01		100	4838	
28 PFHpA										
363.1 > 319.0	5.620	5.620	0.0	1.002	217940	0.1275	Target=3.01	102	522	
363.1 > 169.0	5.620	5.620	0.0	1.002	73992		2.95(1.50-4.51)	102	290	
29 ADONA										
376.9 > 250.9	5.768	5.780	-0.012	1.074	424204	0.1312	Target=2.15	111	1806	
376.9 > 84.8	5.768	5.780	-0.012	1.074	195701		2.17(1.08-3.22)	111	663	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.814	5.814	0.0	0.931	976821	4.94		104	3705	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.931	163131	0.1181	Target=3.70	101	752	
349.0 > 98.8	5.814	5.814	0.0	0.931	44012		3.71(1.85-5.54)	101	208	
32 6:2FTS										
427.1 > 407.0	5.814	5.825	-0.011	1.000	78476	0.2290	Target=1.45	96.2	41.1	
427.1 > 80.9	5.814	5.825	-0.011	1.000	61428		1.28(0.72-2.17)	96.2	45.4	
33 BTS										
280.0 > 147.0	5.974	5.985	-0.011	0.957	306030	0.1294		106	1530	
D 36 13C8 PFOA										
421.0 > 376.0	6.009	6.020	-0.011	0.998	3809899	2.07		103	6368	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		6046317	5.00			4990	
34 PFOA										
413.0 > 369.0	6.020	6.032	-0.012	1.002	217877	0.1283	Target=2.52	103	463	
413.0 > 169.0	6.020	6.032	-0.012	1.002	82558		2.64(1.26-3.77)	103	192	
37 7:3 FTCA										
441.0 > 316.9	6.079	6.091	-0.012	1.172	74138	0.6217	Target=0.53	99.5	357	
441.0 > 336.9	6.079	6.091	-0.012	1.172	148384		0.50(0.26-0.79)	99.5	427	
D 38 13C3 PFHxS										
402.0 > 79.9	6.243	6.243	0.0	1.000	2146864	1.88		99.2	4847	
* 39 18O2 PFHxS										
403.0 > 83.9	6.243	6.243	0.0		1942367	1.90			4971	
40 PFHxS										
398.7 > 79.9	6.243	6.254	-0.011	1.000	113068	0.1124	Target=4.48	98.6	498	
398.7 > 98.8	6.243	6.254	-0.011	1.000	23671		4.78(2.24-6.72)	98.6	89.4	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	1.000	3293182	2.01		101	5977	
43 PFNA										
463.0 > 419.0	6.413	6.424	-0.011	1.000	193248	0.1295	Target=2.90	104	362	
463.0 > 219.0	6.413	6.424	-0.011	1.000	62368		3.10(1.45-4.35)	104	155	
* 42 13C5 PFNA										
468.0 > 423.0	6.413	6.424	-0.011		3329800	2.00			4967	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.588	6.600	-0.012	1.055	951674	4.85		101	3925	
45 8:2FTS										
527.1 > 507.0	6.588	6.600	-0.012	1.000	60588	0.2239	Target=1.40	93.3	235	
527.1 > 80.9	6.600	6.600	0.0	1.002	48686		1.24(0.70-2.09)	93.3	283	
46 PFECHS										
461.0 > 381.0	6.622	6.633	-0.011	1.061	208161	0.1048	Target=1.63	90.8	891	
461.0 > 99.0	6.622	6.633	-0.011	1.061	142518		1.46(0.81-2.44)	90.8	438	
47 PFHpS										
449.0 > 79.9	6.665	6.676	-0.011	0.942	149056	0.1224	Target=4.66	103	485	
449.0 > 98.8	6.665	6.676	-0.011	0.942	35802		4.16(2.33-6.98)	103	223	
48 FHxSA										
398.0 > 78.0	6.665	6.687	-0.022	1.068	230478	0.1279		102	870	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.741	6.752	-0.011	0.953	1298653	4.86		97.1	2494	
50 NMeFOSAA										
570.0 > 419.0	6.741	6.762	-0.021	1.000	41578	0.1409	Target=1.27	113	10224	
570.0 > 483.0	6.741	6.762	-0.021	1.000	25967		1.60(0.64-1.91)	113	196	
D 52 13C6 PFDA										
519.0 > 474.0	6.804	6.814	-0.010	0.998	3489794	1.95		97.6	7734	
* 51 13C2 PFDA										
515.1 > 470.1	6.814	6.825	-0.011		3201594	2.00			8595	
53 PFDA										
512.9 > 469.0	6.814	6.825	-0.011	1.002	227455	0.1308	Target=6.58	105	838	
512.9 > 219.0	6.814	6.825	-0.011	1.002	36873		6.17(3.29-9.87)	105	87.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.910	6.932	-0.022	0.977	1672312	4.96		99.3	2061	
55 NEtFOSAA										
584.0 > 419.0	6.921	6.932	-0.011	1.002	49726	0.1303	Target=1.61	104	383	
584.0 > 526.0	6.932	6.932	0.0	1.003	30240		1.64(0.80-2.41)	104	203	
D 56 13C8 PFOS										
507.0 > 79.9	7.074	7.084	-0.010	1.000	2175112	1.95		102	2510	
* 57 13C4 PFOS										
502.8 > 79.9	7.074	7.084	-0.010		1538243	1.92			4551	
58 PFOS										
498.9 > 79.9	7.074	7.084	-0.010	1.000	158903	0.1204	Target=5.51	104	248	
498.9 > 98.8	7.084	7.084	0.0	1.001	26802		5.93(2.75-8.26)	104	127	
D 59 13C7 PFUnA										
570.0 > 525.0	7.216	7.227	-0.011	1.059	3523165	1.97		98.7	7122	
60 PFUnA										
563.1 > 519.0	7.228	7.239	-0.011	1.002	209951	0.1335	Target=5.78	107	968	
563.1 > 269.1	7.228	7.239	-0.011	1.002	33554		6.26(2.89-8.67)	107	213	
61 9ClFOS										
530.8 > 351.0	7.392	7.405	-0.013	1.045	285510	0.1197	Target=3.05	102	1892	
532.8 > 353.0	7.392	7.405	-0.013	1.045	91056		3.14(1.52-4.57)	102	700	
62 PFNS										
548.8 > 79.9	7.491	7.503	-0.012	1.059	119825	0.1201	Target=4.62	99.9	796	
548.8 > 98.8	7.491	7.503	-0.012	1.059	28483		4.21(2.31-6.93)	99.9	206	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.121	3337451	1.97		98.7	3168	
64 PFDoA										
613.0 > 569.0	7.636	7.647	-0.011	1.000	234151	0.1303	Target=6.26	104	1172	
613.0 > 319.0	7.636	7.647	-0.011	1.000	35643		6.57(3.13-9.39)	104	277	
D 65 13C8 FOSA										
506.1 > 77.8	7.777	7.788	-0.011	1.099	2273126	2.04		102	4811	
66 PFOSA										
498.1 > 77.9	7.777	7.799	-0.022	1.000	117485	0.1245	Target=42.30	99.6	627	
498.1 > 478.0	7.766	7.799	-0.033	0.999	3517		33.40(21.15-63.45)	99.6	19.0	
67 PFDS										
599.0 > 79.9	7.895	7.906	-0.011	1.116	160472	0.1269	Target=4.95	105	1053	
599.0 > 98.8	7.895	7.906	-0.011	1.116	29072		5.52(2.48-7.43)	105	304	
68 PFTrDA										
663.0 > 619.0	8.051	8.061	-0.010	0.953	254151	0.1350	Target=7.25	108	1508	
663.0 > 168.9	8.051	8.061	-0.010	0.953	36604		6.94(3.63-10.88)	108	310	
69 11ClFOS										
630.9 > 450.9	8.224	8.224	0.0	1.163	243073	0.1166	Target=3.03	98.8	1841	
632.9 > 452.9	8.224	8.224	0.0	1.163	86852		2.80(1.51-4.54)	98.8	695	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.452	8.452	0.0	1.240	1914175	1.89		94.4	3108	
71 PFTeDA										
713.1 > 168.9	8.466	8.466	0.0	1.002	25861	0.1249	Target=1.21	99.9	280	
713.1 > 219.0	8.466	8.466	0.0	1.002	21557		1.20(0.61-1.82)	99.9	217	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.673	8.673	0.0	1.226	140611	0.1199	Target=5.37	98.9	1409	
699.1 > 98.8	8.673	8.673	0.0	1.226	26879		5.23(2.69-8.06)	98.9	347	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.735	8.735	0.0	1.235	1444350	5.07		101	493	
74 N-MeFOSE-M										
616.1 > 58.9	8.748	8.748	0.0	1.001	400192	0.6206		99.3	163	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.846	8.845	0.001	1.250	571311	2.05		102	2239	
76 NMeFOSA										
511.9 > 219.0	8.857	8.857	0.0	1.001	32017	0.1204	Target=0.75	96.3	298	
511.9 > 169.0	8.857	8.857	0.0	1.001	44888		0.71(0.37-1.12)	96.3	304	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.975	8.975	0.0	1.269	1926824	5.06		101	741	
78 N-EtFOSE-M										
630.0 > 58.9	8.999	8.998	0.001	1.003	746694	0.6330		101	294	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.069	9.069	0.0	1.282	783203	2.06		103	2435	
80 N-EtFOSA-M										
526.0 > 219.0	9.081	9.081	0.0	1.001	42661	0.1294	Target=0.84	103	523	
526.0 > 169.0	9.081	9.081	0.0	1.001	50709		0.84(0.42-1.26)	103	309	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.462	9.470	-0.008	1.120	363827	0.1355	Target=9.33	108	7293	
913.0 > 169.0	9.462	9.470	-0.008	1.120	39171		9.29(4.66-13.99)	108	1732	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL2_00036 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:11 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-02.d

Injection Date: 04-Feb-2026 12:44:50 Instrument ID: 30637

Lims ID: IC CAL 2

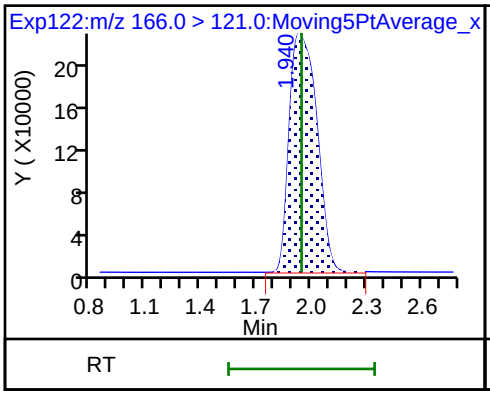
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 3 Worklist Smp#: 2

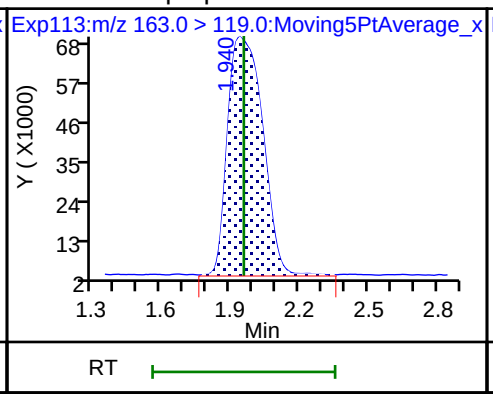
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

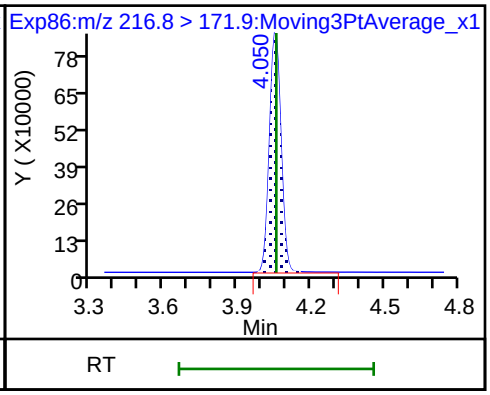
D 1 13C3PFPrA



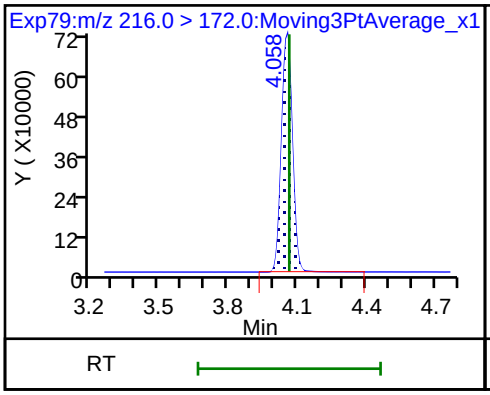
2 Perfluoropropionic acid



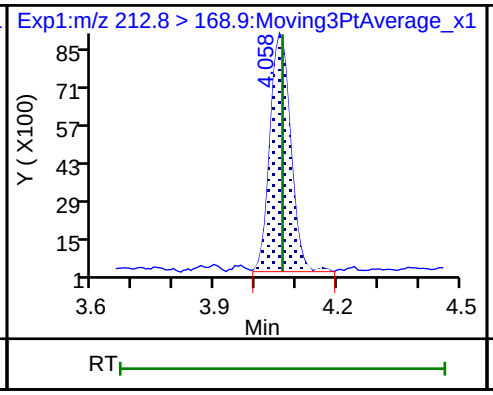
D 3 13C4-PFBA



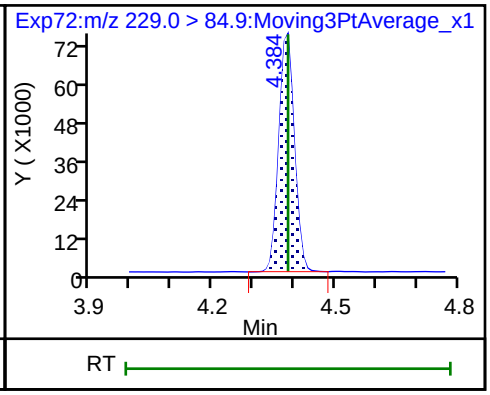
* 4 13C3PFBA



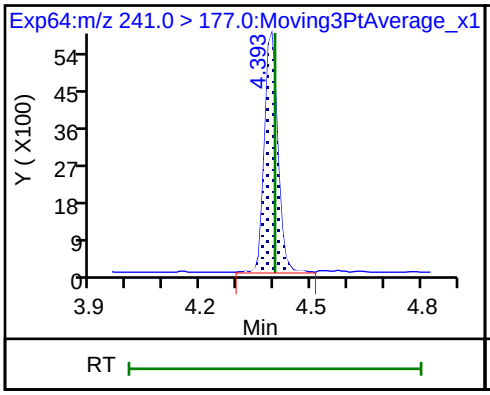
5 PFBA



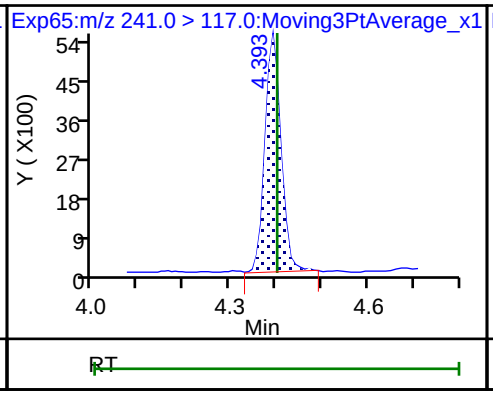
6 PFMPA



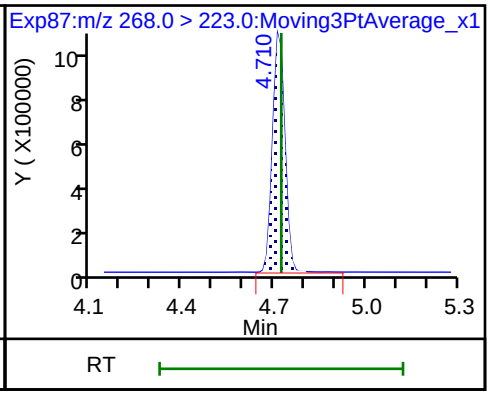
7 3:3 FTCA



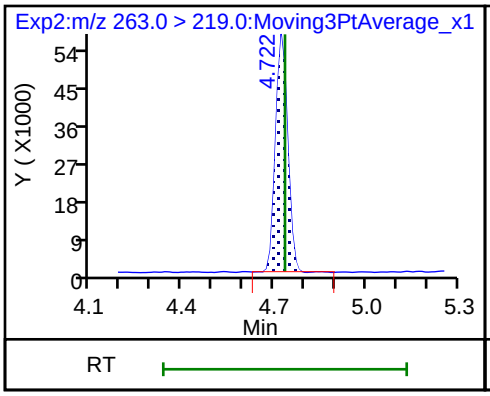
7 3:3 FTCA



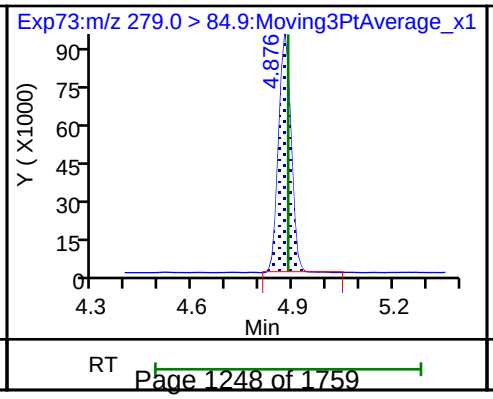
D 8 13C5 PFPeA



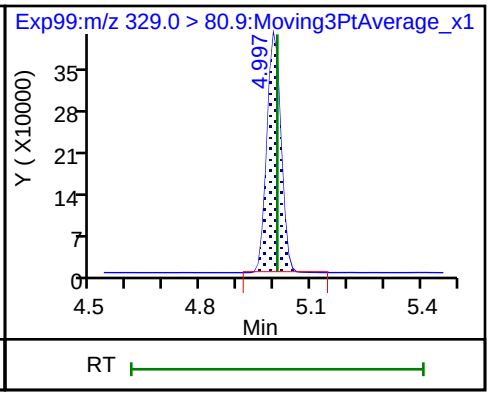
9 PFPA



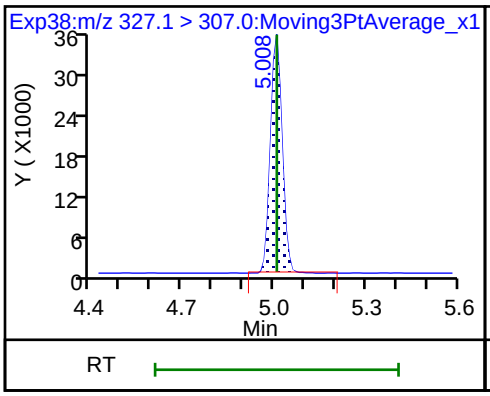
10 PFMBA



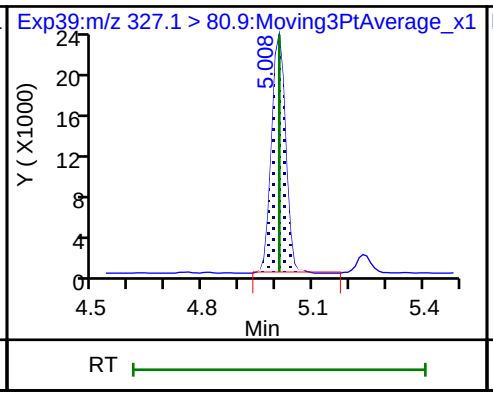
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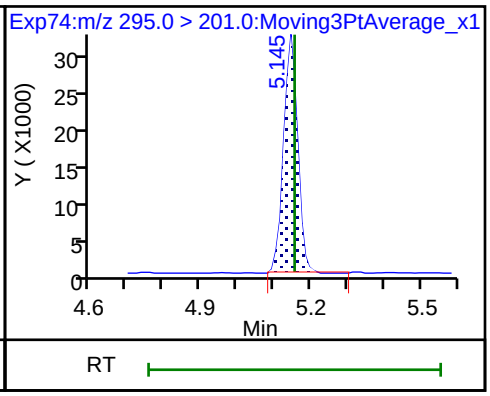
12 4:2FTS



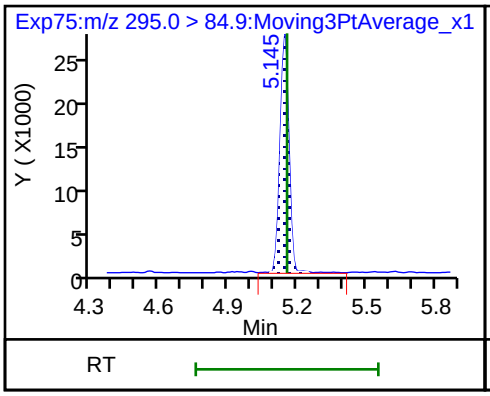
12 4:2FTS



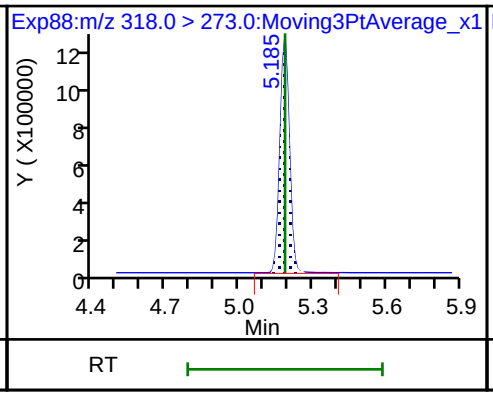
14 NFDHA



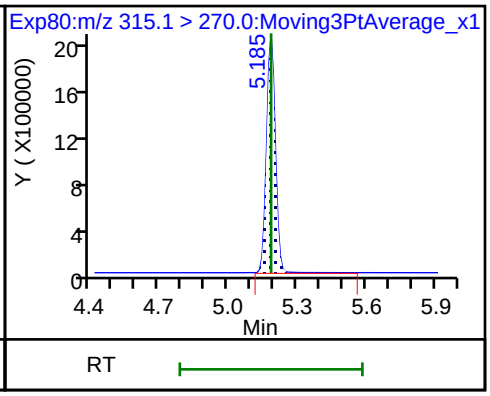
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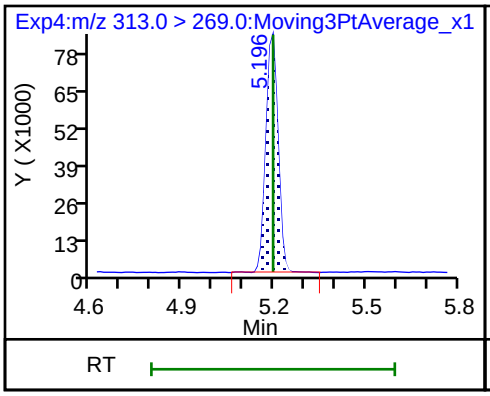
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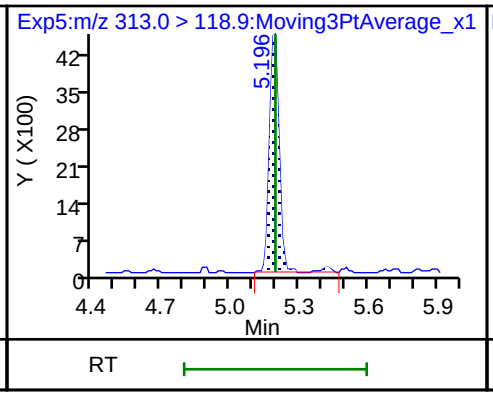
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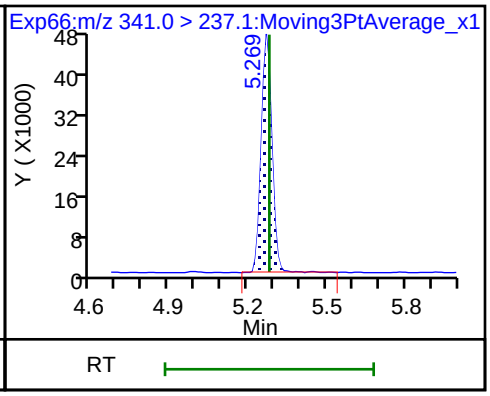
17 PFHxA



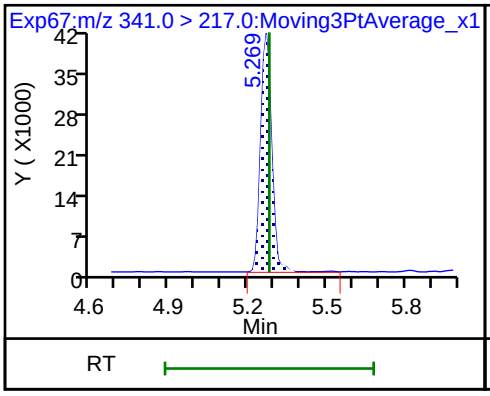
17 PFHxA



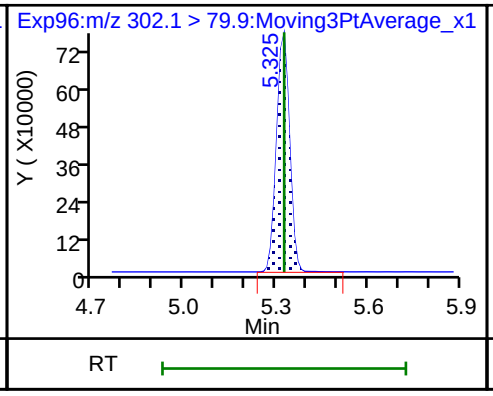
18 5:3 FTCA



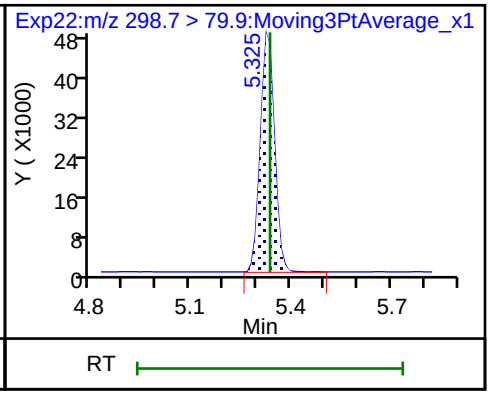
18 5:3 FTCA



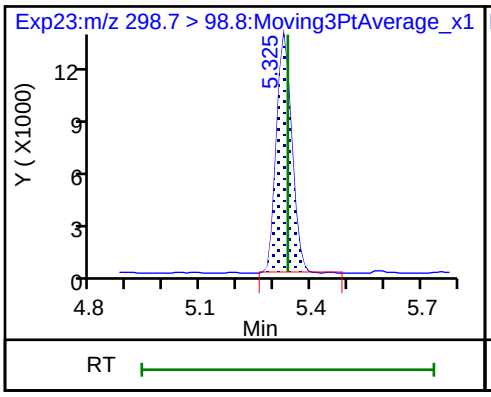
D 20 13C3 PFBS



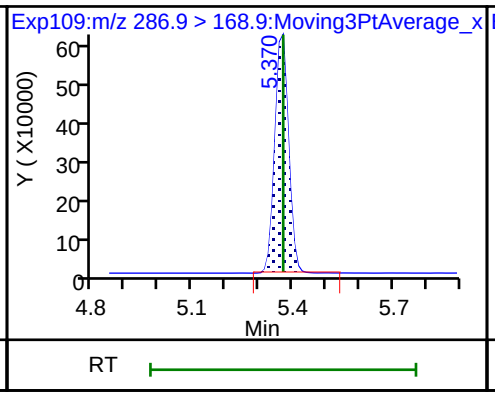
19 PFBS



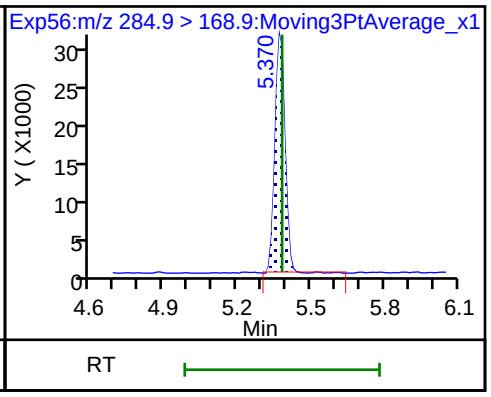
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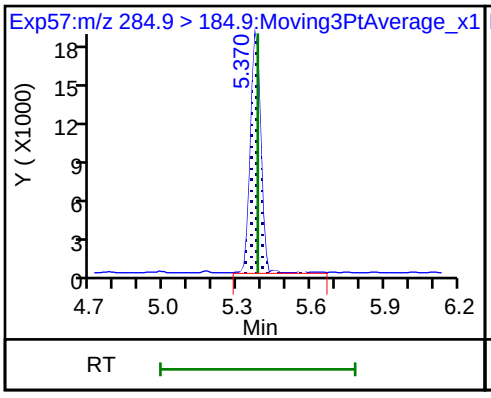
D 21 13C3 HFPO-DA



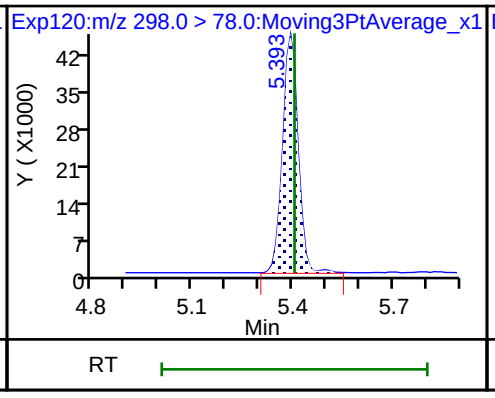
22 HFPO-DA



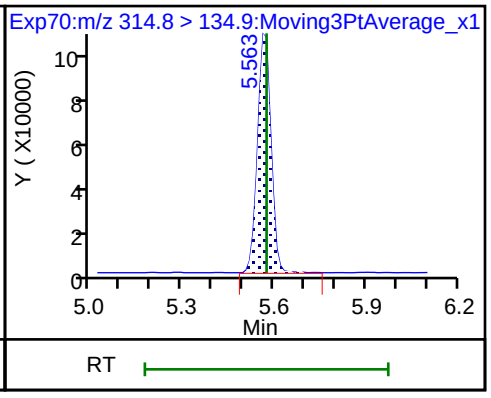
22 HFPO-DA



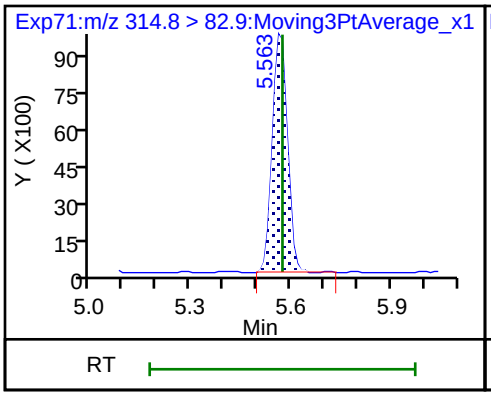
23 FBSA



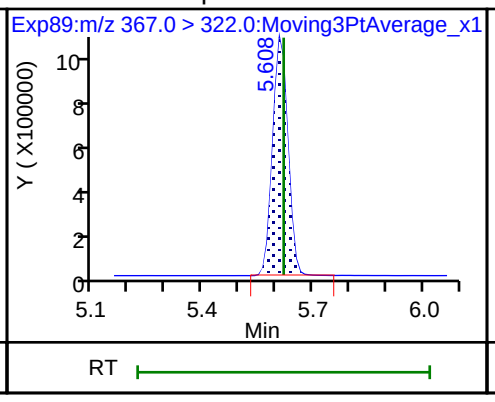
25 PFEESA



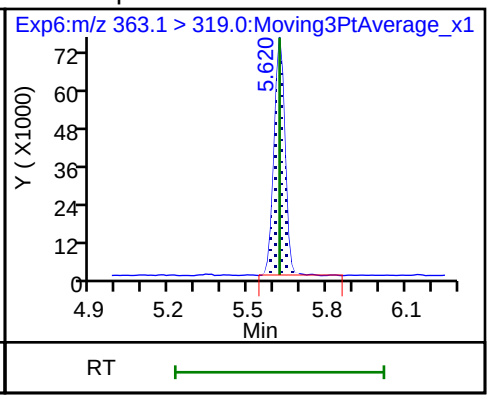
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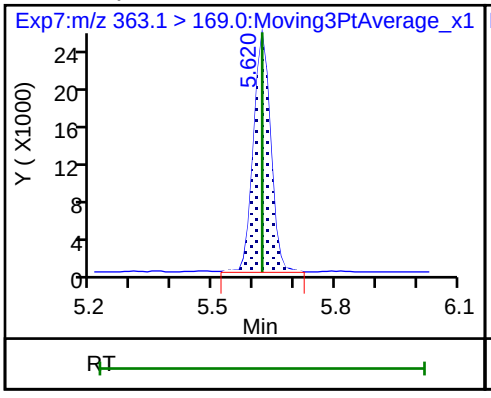
D 27 13C4 PFHpA



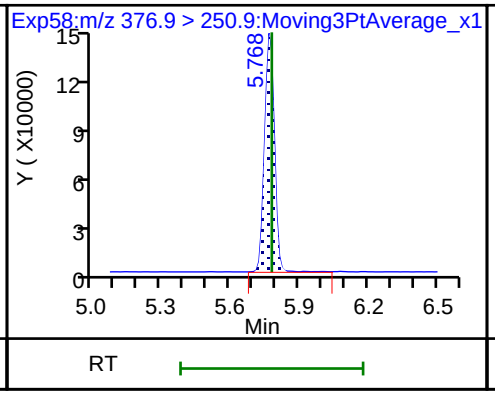
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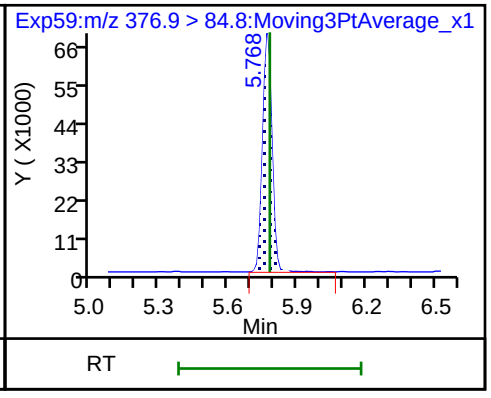
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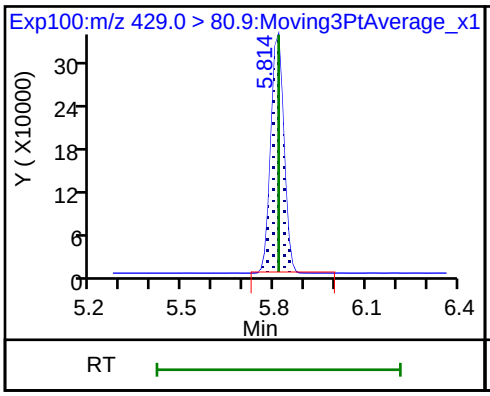
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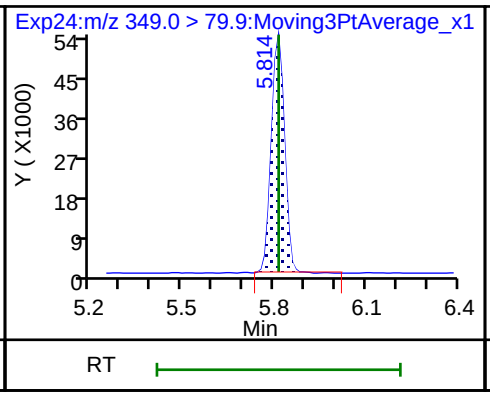
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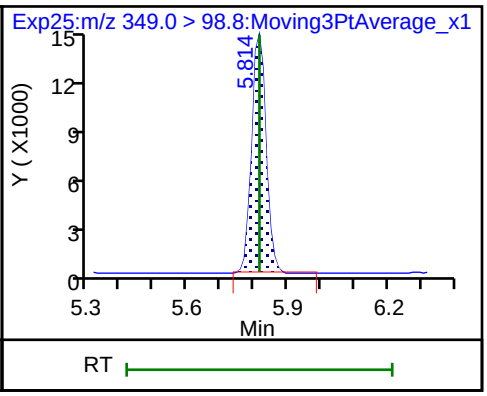
D 30 13C2-6:2FTS



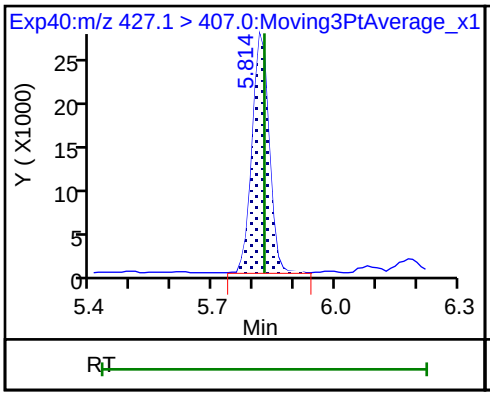
31 PFPeS



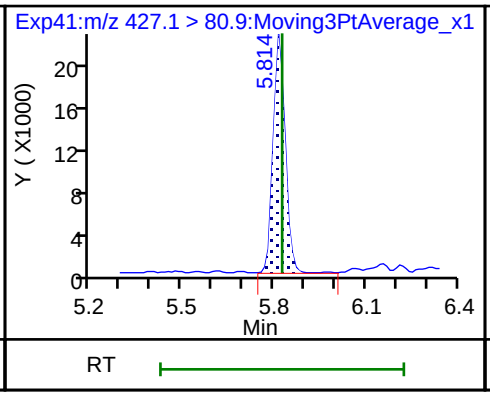
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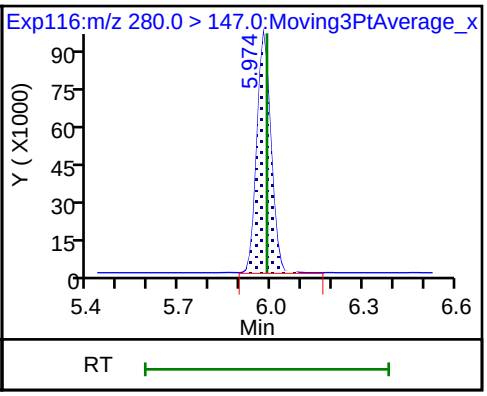
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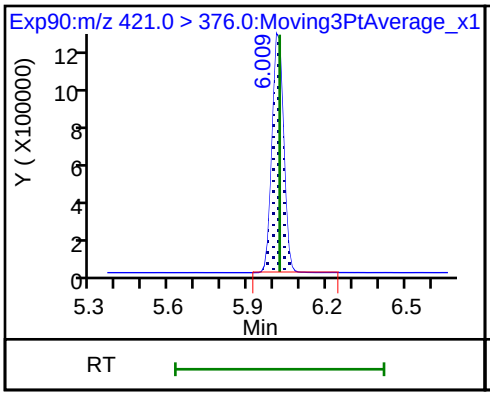
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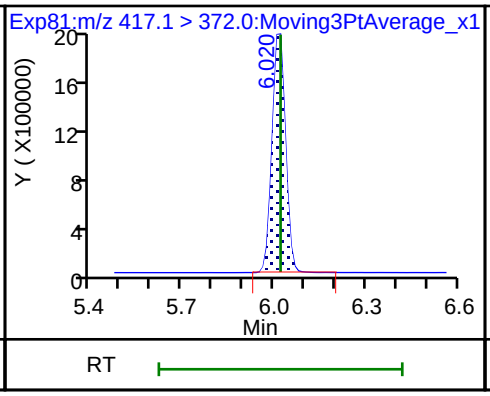
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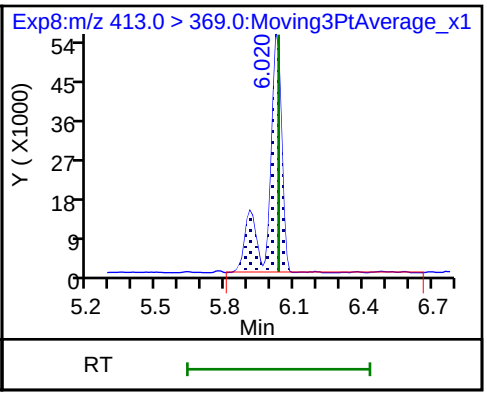
D 36 13C8 PFOA



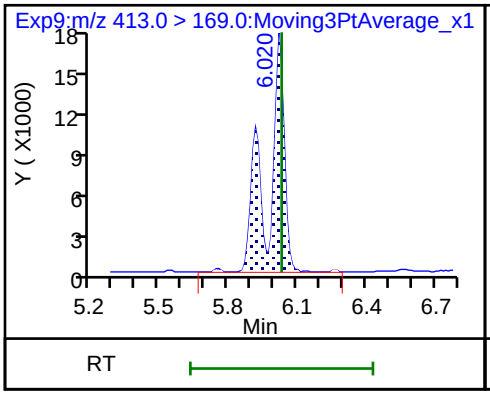
* 35 13C4 PFOA



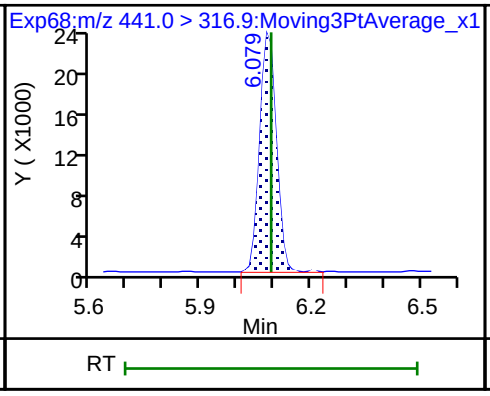
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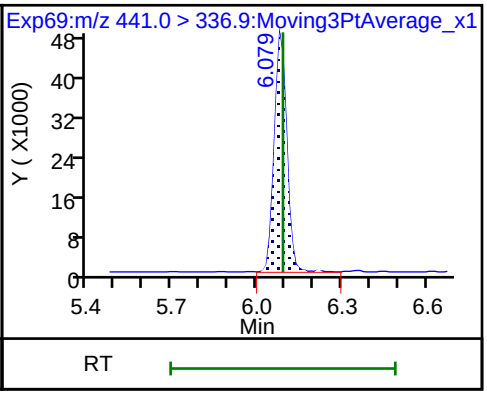
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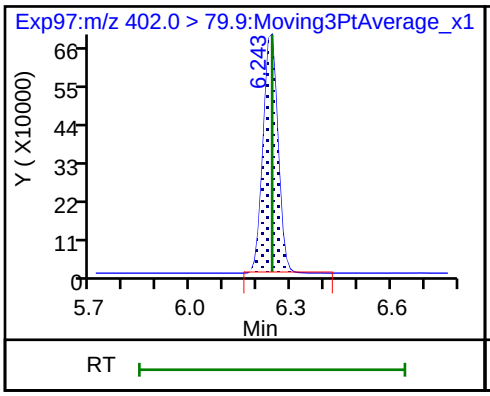
37 7:3 FTCA



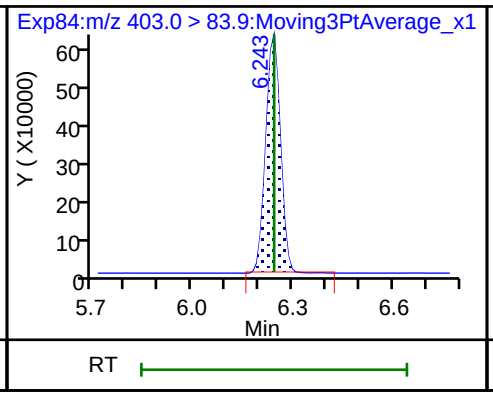
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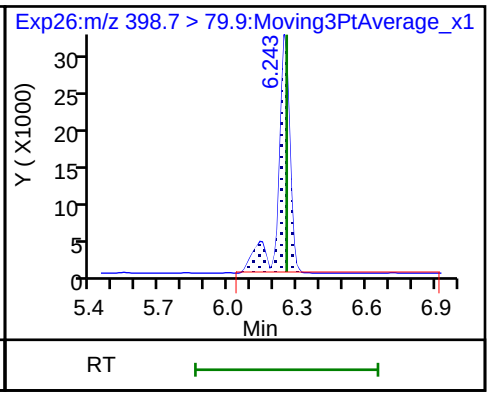
D 38 13C3 PFHxS



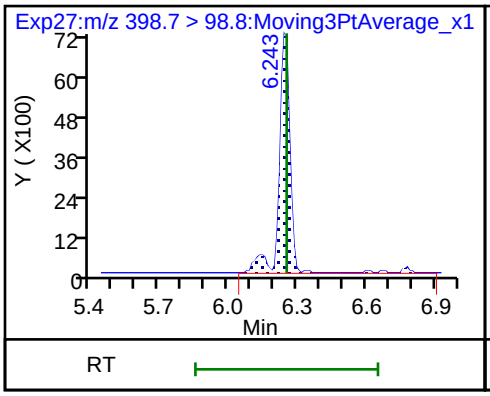
* 39 18O2 PFHxS



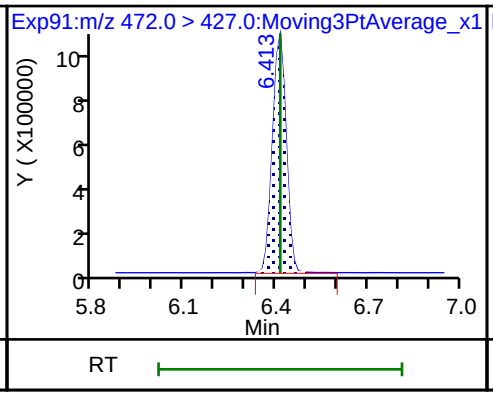
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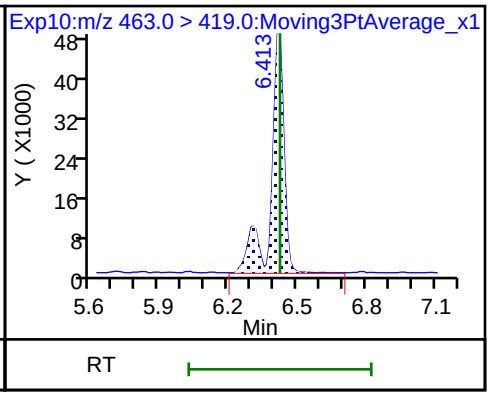
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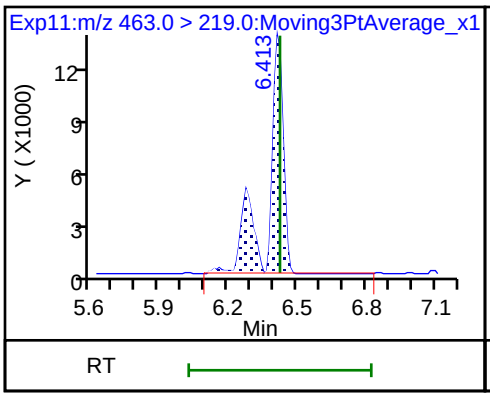
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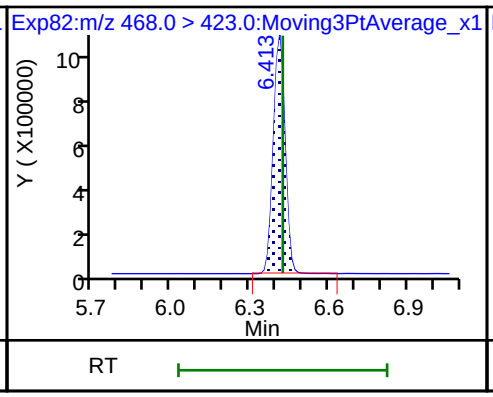
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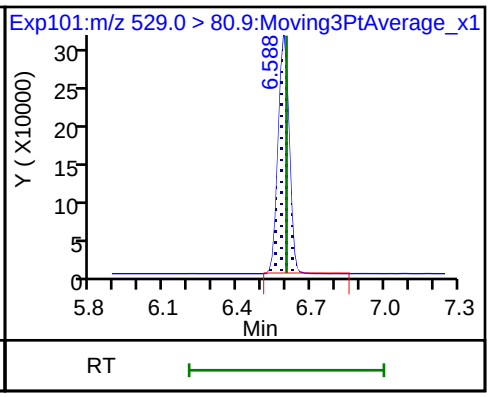
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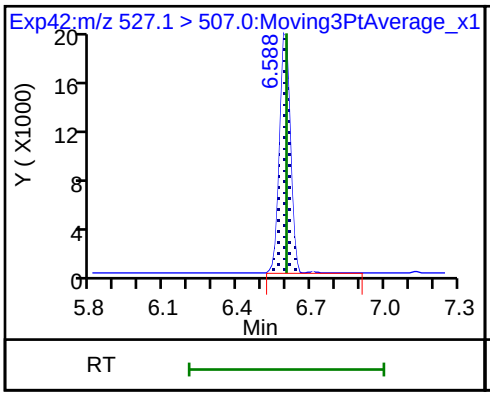
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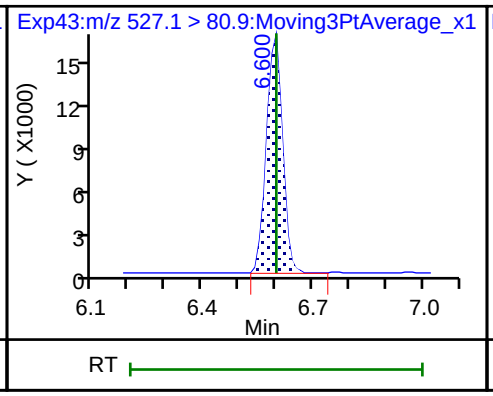
D 44 13C2-8:2FTS



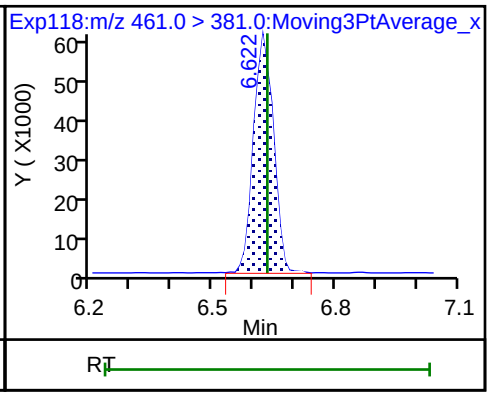
45 8:2FTS



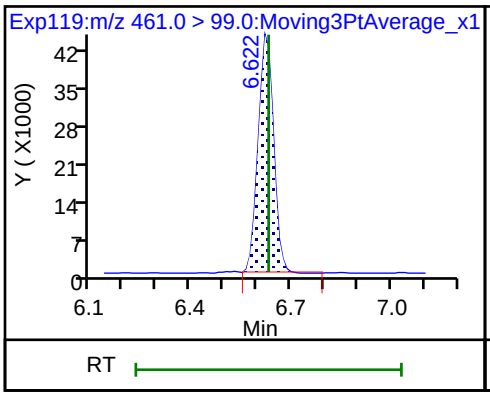
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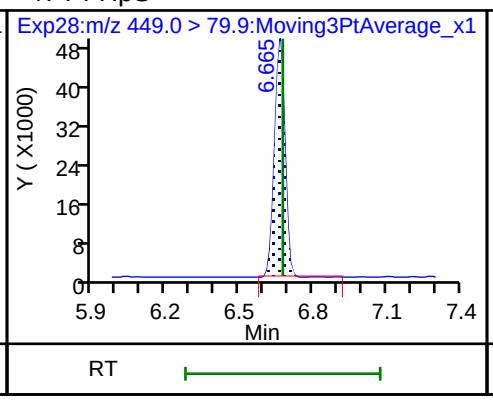
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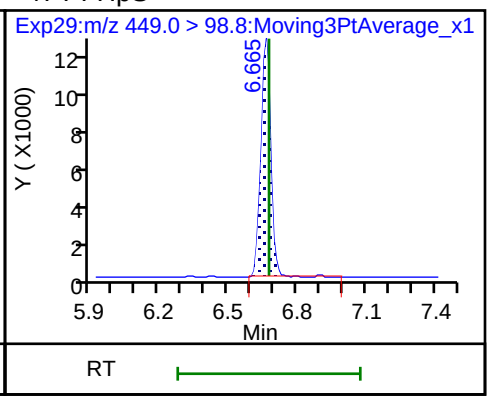
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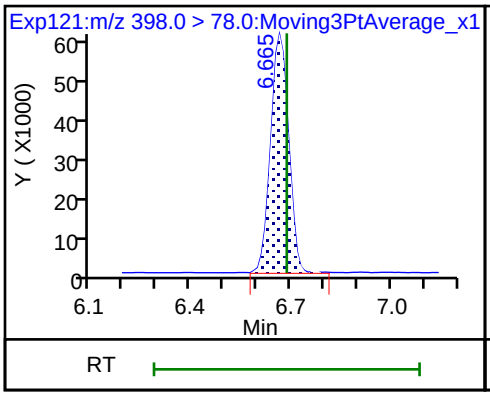
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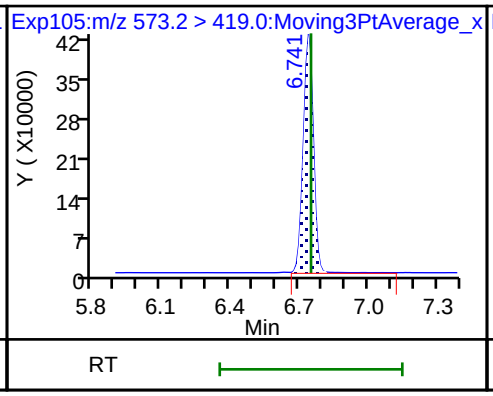
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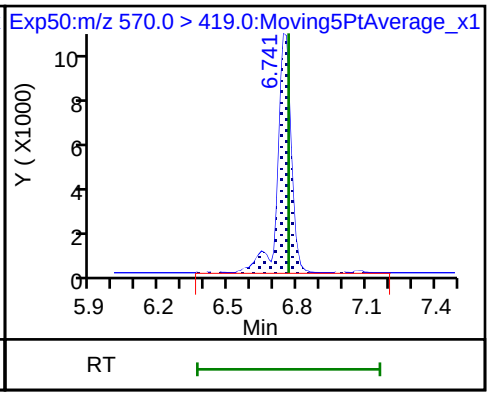
48 FHxSA



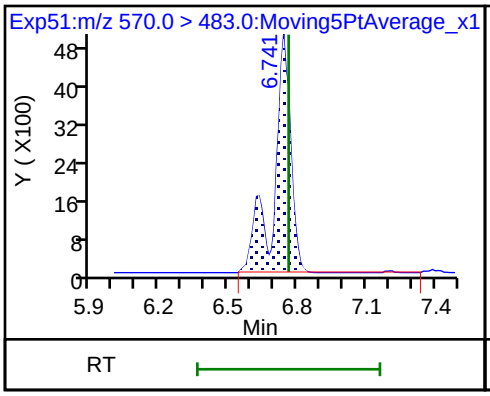
D 49 d3-NMeFOSAA



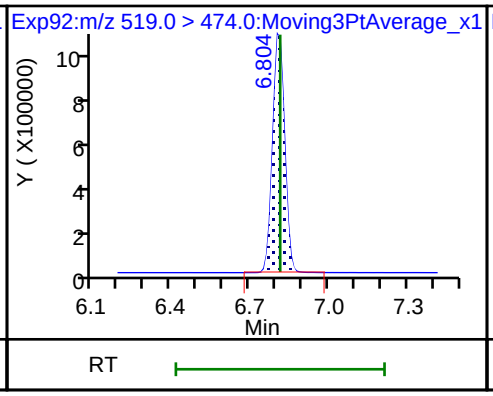
50 NMeFOSAA



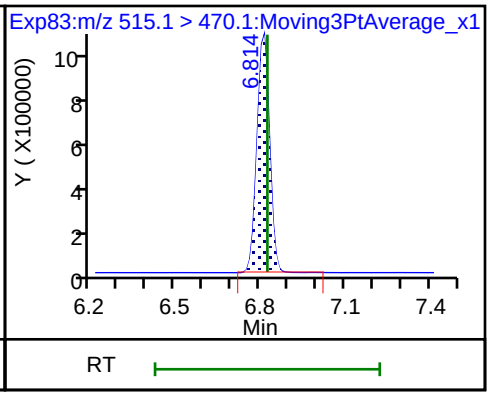
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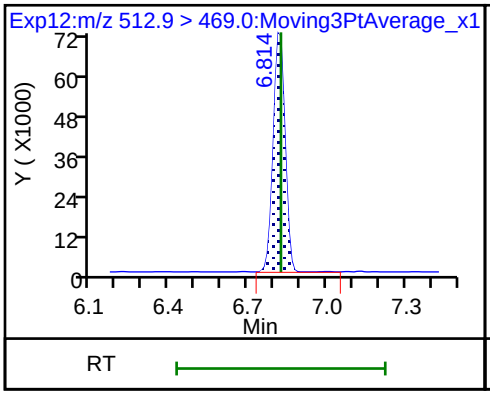
D 52 13C6 PFDA



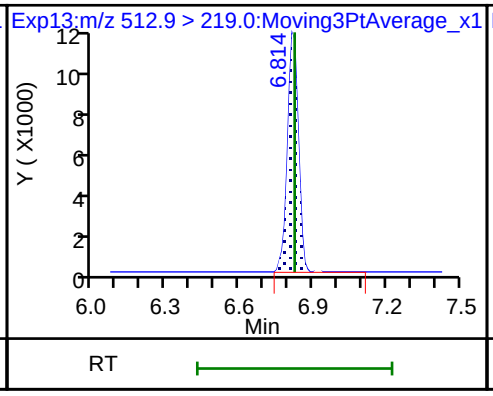
* 51 13C2 PFDA



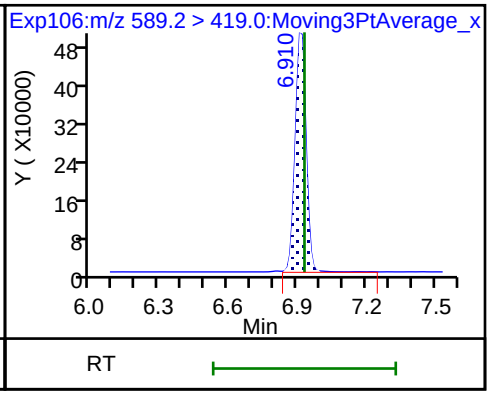
53 PFDA



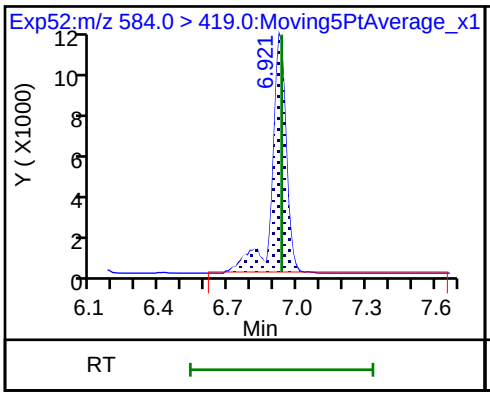
53 PFDA



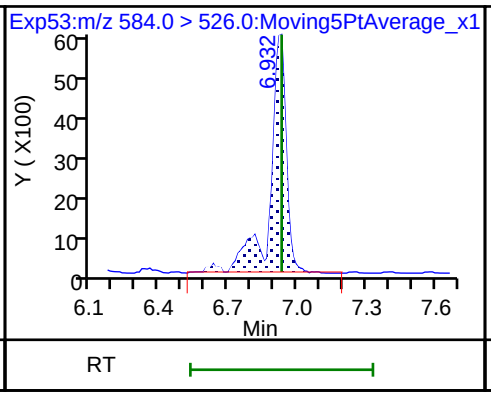
D 54 d5-NEtFOSAA



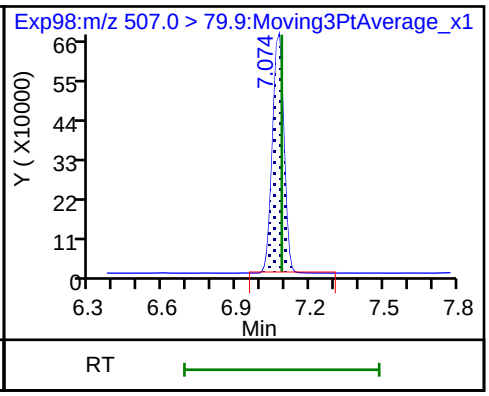
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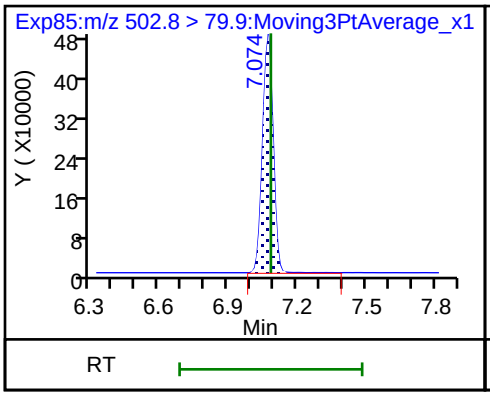
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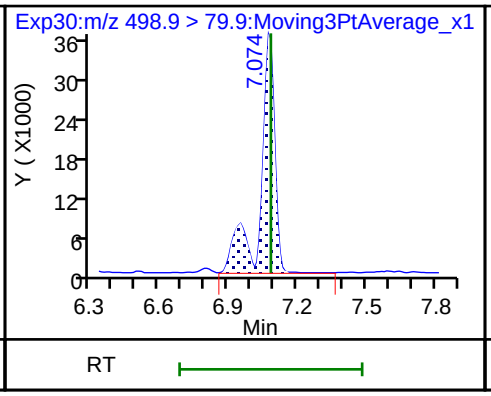
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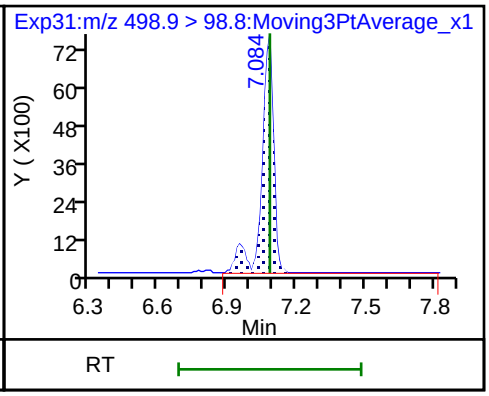
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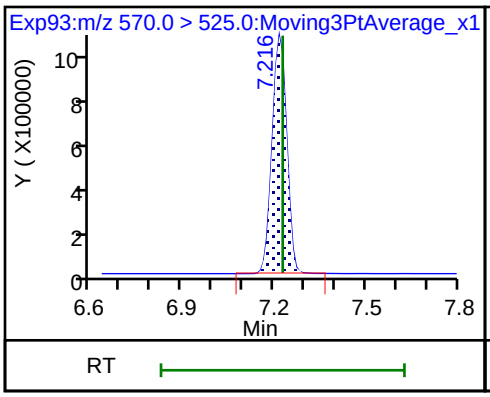
58 PFOS



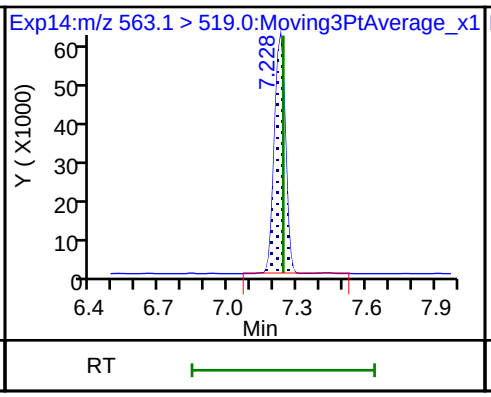
58 PFOS



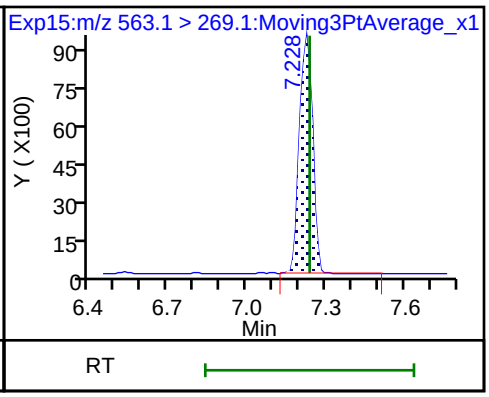
D 59 13C7 PFUnA



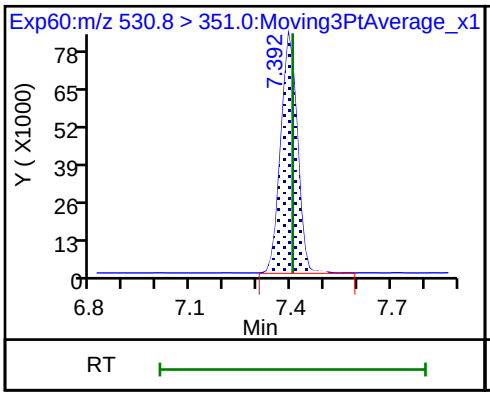
60 PFUnA



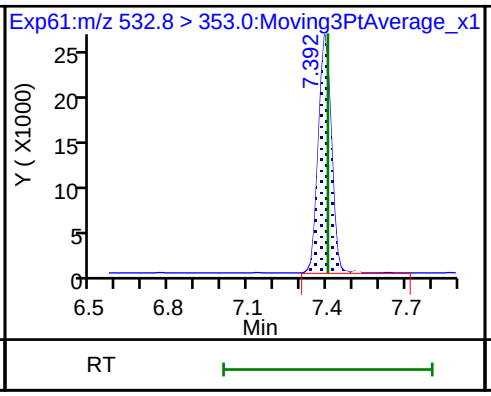
60 PFUnA



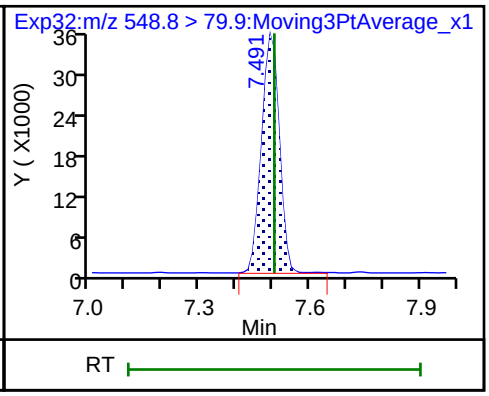
61 9ClFOS



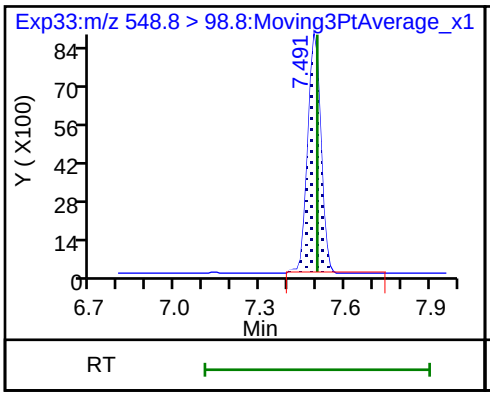
61 9ClFOS



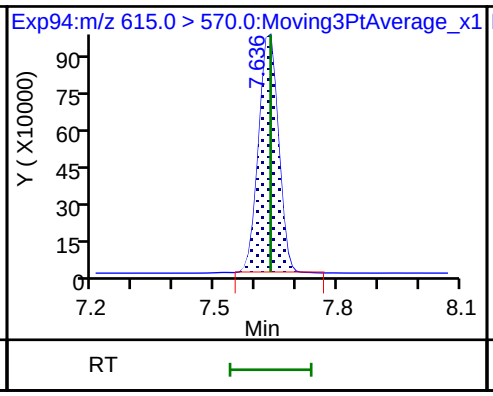
62 PFNS



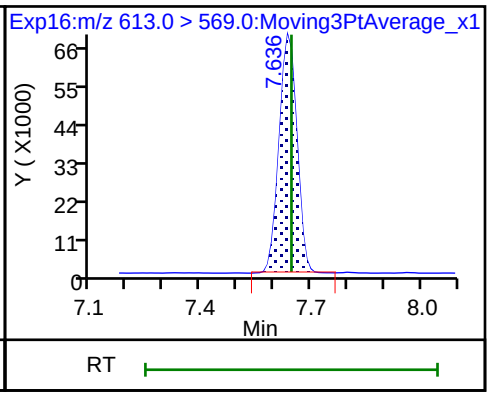
62 PFNS



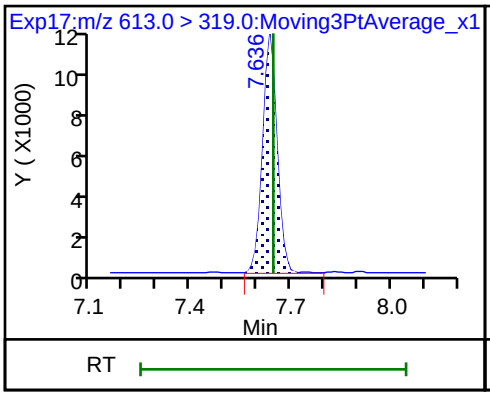
D 63 13C2 PFDoA



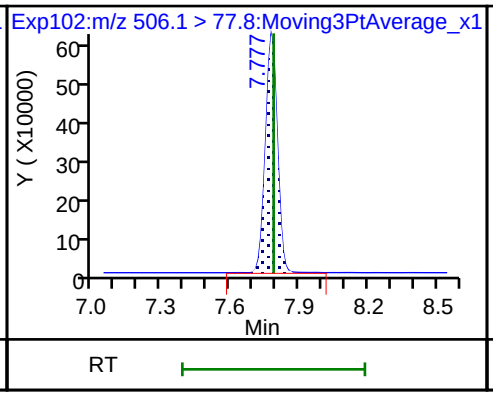
64 PFDoA



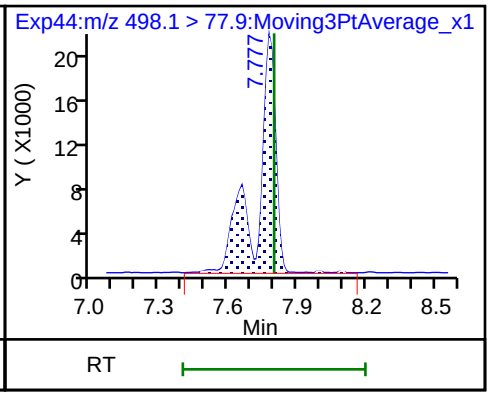
64 PFDoA



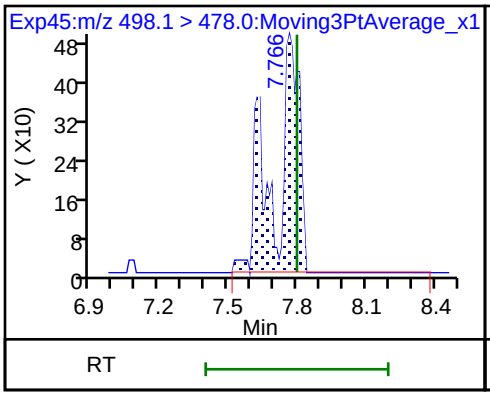
D 65 13C8 FOSA



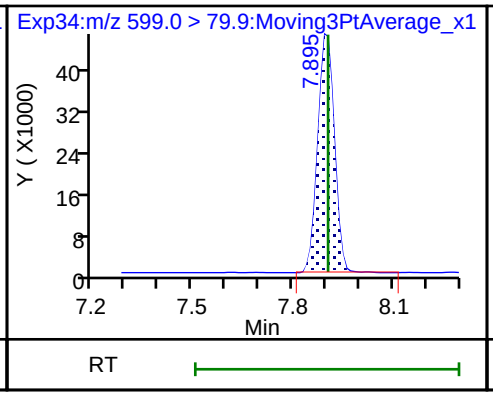
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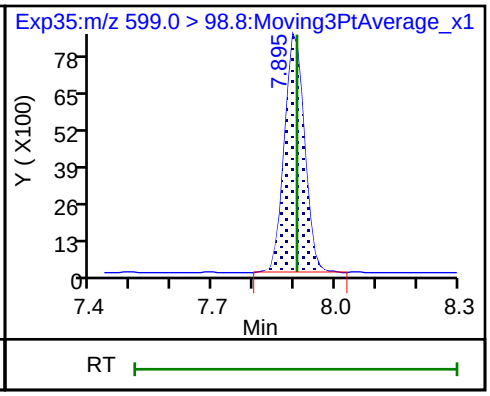
66 PFOSA



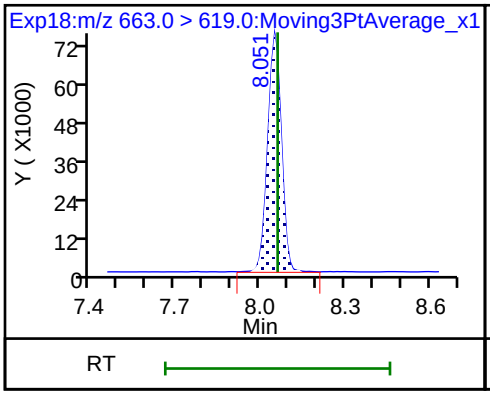
67 PFDS



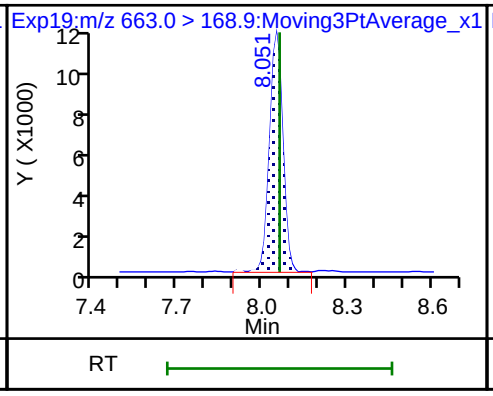
67 PFDS



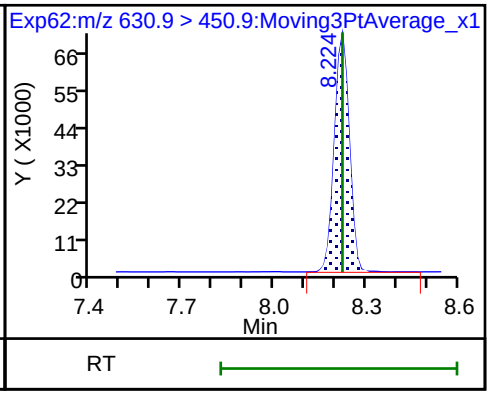
68 PFTrDA



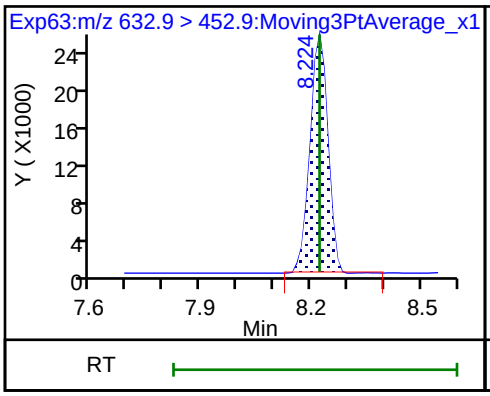
68 PFTrDA



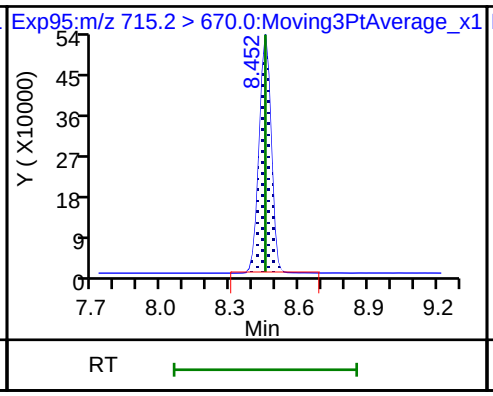
69 11ClFOS



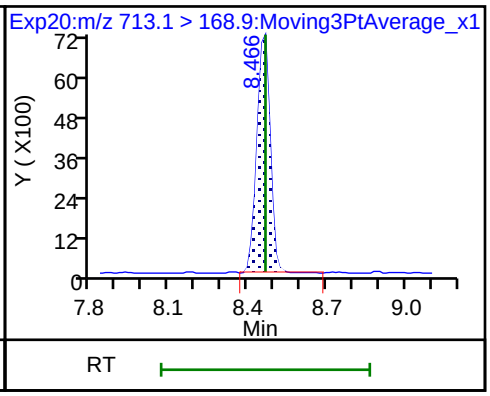
69 11ClFOS



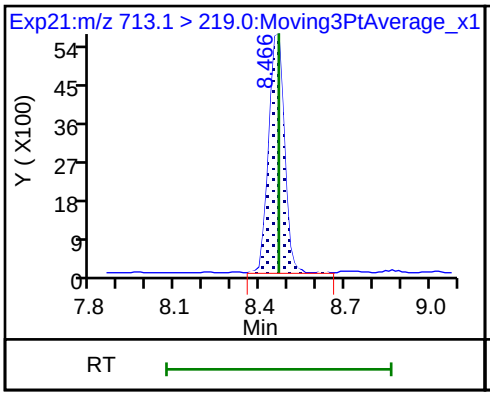
D 70 13C2 PFTeDA



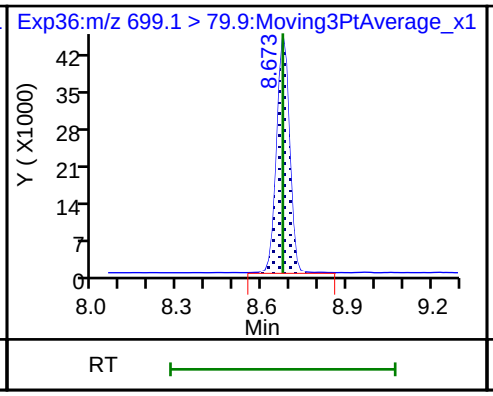
71 PFTeDA



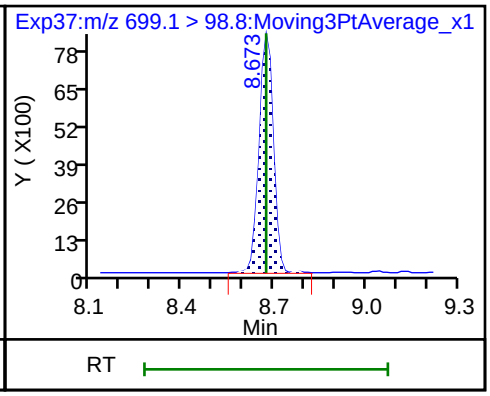
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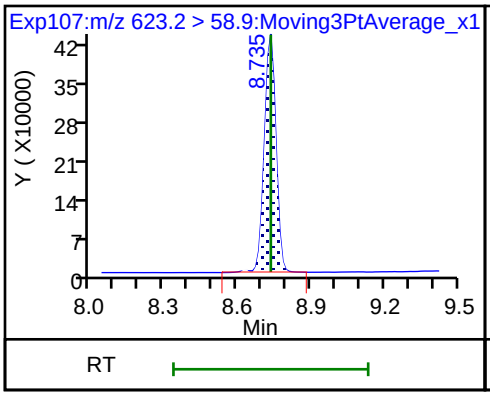
72 PFDoS



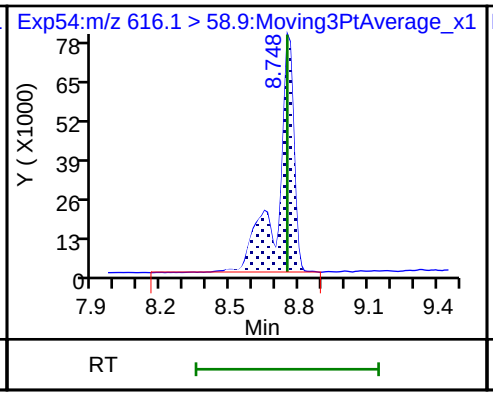
72 PFDoS



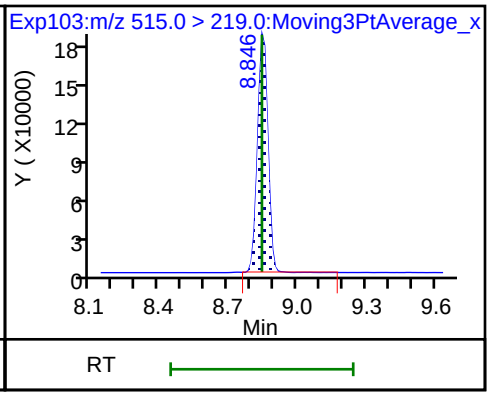
D 73 d7-N-Me-FOSE



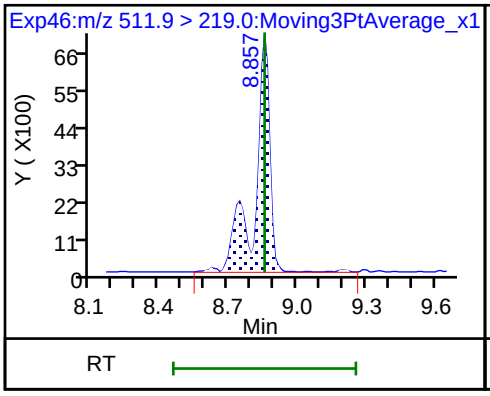
74 N-MeFOSE-M



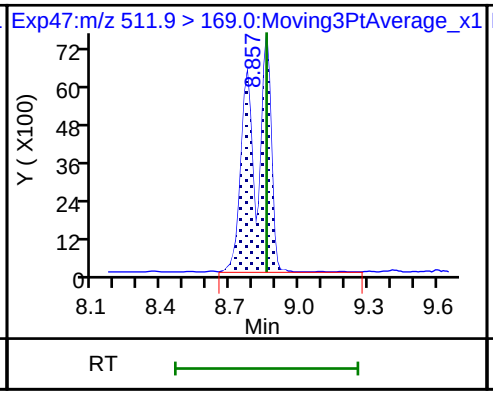
D 75 d3-NMePFOSA



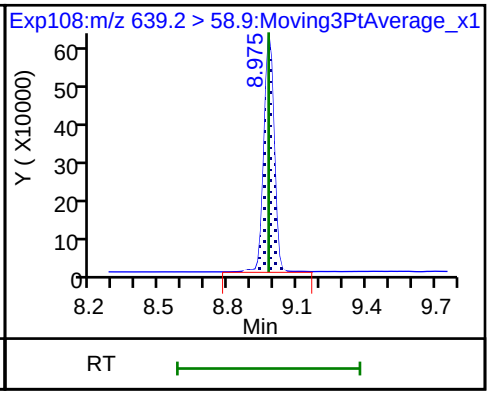
76 NMeFOSA



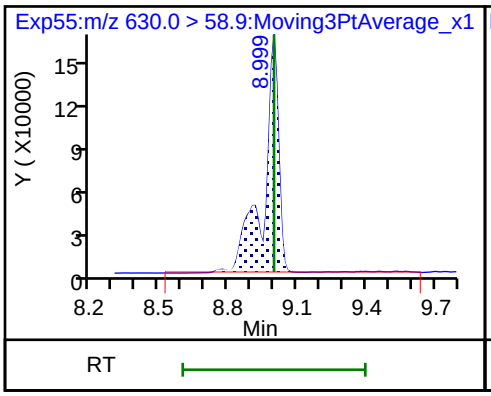
76 NMeFOSA



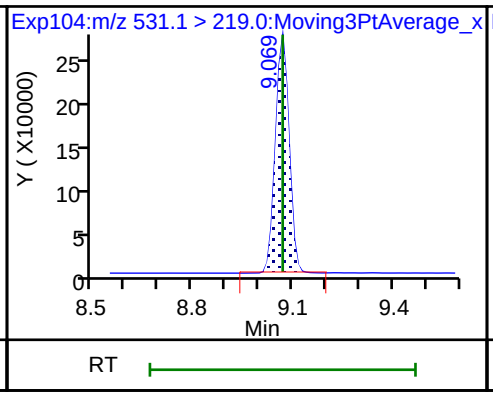
D 77 d9-N-EtFOSE



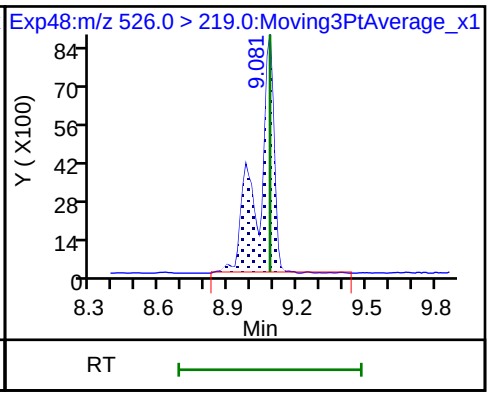
78 N-EtFOSE-M



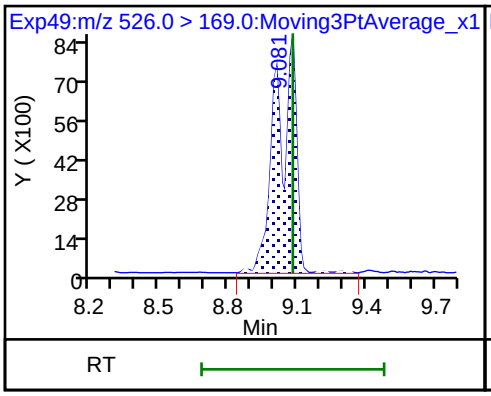
D 79 d5-NEtPFOSA



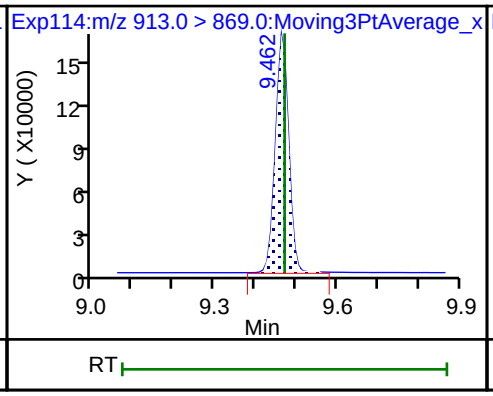
80 N-EtFOSA-M



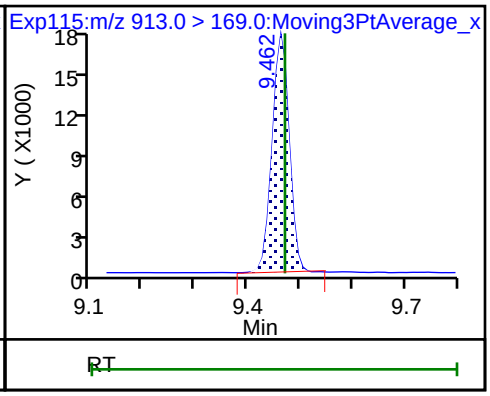
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-03.d
Lims ID: IC CAL 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 04-Feb-2026 12:58:22 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 3
Misc. Info.: 410-0174629-003 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 4
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:17 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:06:50
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.940	1.949	-0.009	0.478	2361407	2.02		101	1540	
2 Perfluoropropionic acid										
163.0 > 119.0	1.948	1.957	-0.009	1.004	2625844	2.39		95.6	1104	
D 3 13C4-PFBA										
216.8 > 171.9	4.059	4.058	0.001	1.000	2769251	2.01		100	6563	
* 4 13C3PFBA										
216.0 > 172.0	4.059	4.065	-0.006		2366081	2.00			5779	
5 PFBA										
212.8 > 168.9	4.066	4.065	0.001	1.002	112571	0.9666		96.7	254	
6 PFMPA										
229.0 > 84.9	4.385	4.384	0.001	0.931	757637	0.4830		96.6	3596	
7 3:3 FTCA										
241.0 > 177.0	4.394	4.402	-0.008	0.933	55966	1.00	Target=1.05	99.9	1251	
241.0 > 117.0	4.394	4.402	-0.008	0.933	51862		1.08(0.53-1.58)	99.9	503	
D 8 13C5 PFPeA										
268.0 > 223.0	4.712	4.723	-0.011	0.909	2782928	2.02		101	4897	
9 PFPA										
263.0 > 219.0	4.724	4.735	-0.011	1.003	601313	0.4836		96.7	1210	
10 PFMBA										
279.0 > 84.9	4.876	4.885	-0.009	1.035	905343	0.4737		94.7	3112	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.998	5.008	-0.010	0.800	1063669	4.86		104	4667	
12 4:2FTS										
327.1 > 307.0	5.008	5.008	0.0	1.002	354798	0.9016	Target=1.61	96.1	3013	
327.1 > 80.9	5.008	5.008	0.0	1.002	221685		1.60(0.80-2.41)	96.1	601	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.146	5.155	-0.009	0.992	346460	0.4820	Target=1.33	96.4	2069	
295.0 > 84.9	5.146	5.155	-0.009	0.992	248508		1.39(0.67-2.00)	96.4	1363	
D 16 13C5 PFHxA										
318.0 > 273.0	5.186	5.185	0.001	1.000	3409886	2.06		103	8288	
* 15 13C2 PFHxA										
315.1 > 270.0	5.186	5.185	0.001		5510887	5.00			8948	
17 PFHxA										
313.0 > 269.0	5.196	5.196	0.0	1.002	848587	0.4742	Target=16.27	94.8	1626	
313.0 > 118.9	5.196	5.196	0.0	1.002	52215		16.25(8.13-24.40)	94.8	445	
18 5:3 FTCA										
341.0 > 237.1	5.270	5.281	-0.011	1.016	479289	2.33	Target=1.06	93.2	1937	
341.0 > 217.0	5.270	5.281	-0.011	1.016	453194		1.06(0.53-1.58)	93.2	969	
D 20 13C3 PFBS										
302.1 > 79.9	5.326	5.325	0.001	0.853	2332830	1.94		104	7312	
19 PFBS										
298.7 > 79.9	5.337	5.337	0.0	1.002	526849	0.4210	Target=3.39	94.8	2696	
298.7 > 98.8	5.337	5.337	0.0	1.002	155942		3.38(1.70-5.09)	94.8	876	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.371	5.370	0.001	1.036	1731113	1.85		92.6	3693	
22 HFPO-DA										
284.9 > 168.9	5.382	5.382	0.0	1.002	320823	0.3556	Target=1.73	94.8	1250	
284.9 > 184.9	5.382	5.382	0.0	1.002	205886		1.56(0.87-2.60)	94.8	1035	
23 FBSA										
298.0 > 78.0	5.405	5.405	0.001	1.015	546335	0.4695		93.9	1408	
25 PFEESA										
314.8 > 134.9	5.575	5.574	0.001	1.075	1218261	0.4203	Target=10.20	94.2	5394	
314.8 > 82.9	5.575	5.574	0.001	1.075	124818		9.76(5.10-15.30)	94.2	590	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.620	0.0	1.084	3121010	2.05		102	7772	
28 PFHpA										
363.1 > 319.0	5.632	5.620	0.012	1.002	838297	0.4807	Target=3.01	96.1	1470	
363.1 > 169.0	5.620	5.620	0.0	1.000	284081		2.95(1.50-4.51)	96.1	1091	
29 ADONA										
376.9 > 250.9	5.780	5.780	0.0	1.076	1546518	0.4927	Target=2.15	104	3776	
376.9 > 84.8	5.780	5.780	0.0	1.076	715123		2.16(1.08-3.22)	104	1676	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.814	5.814	0.0	0.931	974200	5.14		108	3868	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.931	624652	0.4580	Target=3.70	97.4	2184	
349.0 > 98.8	5.814	5.814	0.0	0.931	179245		3.48(1.85-5.54)	97.4	765	
32 6:2FTS										
427.1 > 407.0	5.826	5.825	0.001	1.002	303432	0.8880	Target=1.45	93.3	165	
427.1 > 80.9	5.826	5.825	0.001	1.002	199738		1.52(0.72-2.17)	93.3	116	
33 BTS										
280.0 > 147.0	5.986	5.985	0.001	0.959	1103275	0.4726		96.5	3128	
D 36 13C8 PFOA										
421.0 > 376.0	6.021	6.020	0.001	1.000	3728374	2.08		104	6717	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.021	6.020	0.001		5872743	5.00			6162	
34 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	797709	0.4800	Target=2.52	96.0	913	
413.0 > 169.0	6.032	6.032	0.0	1.002	332843		2.40(1.26-3.77)	96.0	667	
37 7:3 FTCA										
441.0 > 316.9	6.092	6.091	0.001	1.175	279604	2.33	Target=0.53	93.1	623	
441.0 > 336.9	6.092	6.091	0.001	1.175	533997		0.52(0.26-0.79)	93.1	2023	
D 38 13C3 PFHxS										
402.0 > 79.9	6.244	6.243	0.001	1.000	2119976	1.94		102	4679	
* 39 18O2 PFHxS										
403.0 > 83.9	6.244	6.243	0.001		1859757	1.90			4375	
40 PFHxS										
398.7 > 79.9	6.254	6.254	0.0	1.002	422706	0.4256	Target=4.48	93.3	1421	
398.7 > 98.8	6.254	6.254	0.0	1.002	95664		4.42(2.24-6.72)	93.3	362	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	1.000	3239170	1.99		99.5	4857	
43 PFNA										
463.0 > 419.0	6.425	6.424	0.001	1.002	726249	0.4950	Target=2.90	99.0	1783	
463.0 > 219.0	6.425	6.424	0.001	1.002	248111		2.93(1.45-4.35)	99.0	640	
* 42 13C5 PFNA										
468.0 > 423.0	6.413	6.424	-0.011		3309276	2.00			7958	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.600	6.600	0.0	1.057	930514	4.95		103	3132	
45 8:2FTS										
527.1 > 507.0	6.600	6.600	0.0	1.000	238847	0.9029	Target=1.40	94.0	1377	
527.1 > 80.9	6.600	6.600	0.0	1.000	176012		1.36(0.70-2.09)	94.0	670	
46 PFECHS										
461.0 > 381.0	6.633	6.633	0.0	1.062	875065	0.4463	Target=1.63	96.6	2403	
461.0 > 99.0	6.633	6.633	0.0	1.062	533405		1.64(0.81-2.44)	96.6	1340	
47 PFHpS										
449.0 > 79.9	6.677	6.676	0.001	0.944	567923	0.4658	Target=4.66	97.7	1527	
449.0 > 98.8	6.666	6.676	-0.010	0.942	118126		4.81(2.33-6.98)	97.7	389	
48 FHxSA										
398.0 > 78.0	6.677	6.687	-0.010	1.069	834879	0.4692		93.8	1424	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.741	6.752	-0.011	0.953	1315335	4.80		96.0	1538	
50 NMeFOSAA										
570.0 > 419.0	6.752	6.762	-0.010	1.002	146221	0.4893	Target=1.27	97.9	7029	
570.0 > 483.0	6.752	6.762	-0.010	1.002	111444		1.31(0.64-1.91)	97.9	22996	
D 52 13C6 PFDA										
519.0 > 474.0	6.815	6.814	0.001	1.000	3516485	1.98		98.8	5499	
* 51 13C2 PFDA										
515.1 > 470.1	6.815	6.825	-0.010		3189106	2.00			5186	
53 PFDA										
512.9 > 469.0	6.825	6.825	0.0	1.002	833027	0.4753	Target=6.58	95.1	2833	
512.9 > 219.0	6.825	6.825	0.0	1.002	124618		6.68(3.29-9.87)	95.1	626	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.921	6.932	-0.011	0.978	1675737	4.85		97.1	2515	
55 NEtFOSAA										
584.0 > 419.0	6.932	6.932	0.0	1.002	189823	0.4966	Target=1.61	99.3	43678	
584.0 > 526.0	6.932	6.932	0.0	1.002	112333		1.69(0.80-2.41)	99.3	1972	
D 56 13C8 PFOS										
507.0 > 79.9	7.074	7.084	-0.010	1.000	2176934	1.91		99.5	1949	
* 57 13C4 PFOS										
502.8 > 79.9	7.074	7.084	-0.010		1576685	1.92			6819	
58 PFOS										
498.9 > 79.9	7.085	7.084	0.001	1.001	579083	0.4386	Target=5.51	94.3	881	
498.9 > 98.8	7.085	7.084	0.001	1.001	105509		5.49(2.75-8.26)	94.3	434	
D 59 13C7 PFUnA										
570.0 > 525.0	7.216	7.227	-0.011	1.059	3494584	1.96		98.2	7079	
60 PFUnA										
563.1 > 519.0	7.227	7.239	-0.012	1.002	748810	0.4799	Target=5.78	96.0	3606	
563.1 > 269.1	7.227	7.239	-0.012	1.002	126115		5.94(2.89-8.67)	96.0	918	
61 9ClFOS										
530.8 > 351.0	7.392	7.405	-0.013	1.045	1052681	0.4408	Target=3.05	94.4	5846	
532.8 > 353.0	7.392	7.405	-0.013	1.045	345025		3.05(1.52-4.57)	94.4	1446	
62 PFNS										
548.8 > 79.9	7.491	7.503	-0.012	1.059	452076	0.4527	Target=4.62	94.1	2590	
548.8 > 98.8	7.491	7.503	-0.012	1.059	100395		4.50(2.31-6.93)	94.1	417	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.121	3369863	2.00		100	4516	
64 PFDoA										
613.0 > 569.0	7.636	7.647	-0.011	1.000	868857	0.4788	Target=6.26	95.8	4225	
613.0 > 319.0	7.636	7.647	-0.011	1.000	142364		6.10(3.13-9.39)	95.8	874	
D 65 13C8 FOSA										
506.1 > 77.8	7.788	7.788	0.0	1.101	2227311	1.95		97.4	6173	
66 PFOSA										
498.1 > 77.9	7.788	7.799	-0.011	1.000	439838	0.4757	Target=42.30	95.1	1810	
498.1 > 478.0	7.788	7.799	-0.011	1.000	11281		38.99(21.15-63.45)	95.1	63.8	
67 PFDS										
599.0 > 79.9	7.895	7.906	-0.011	1.116	582096	0.4600	Target=4.95	95.4	3649	
599.0 > 98.8	7.895	7.906	-0.011	1.116	120802		4.82(2.48-7.43)	95.4	1229	
68 PFTrDA										
663.0 > 619.0	8.051	8.061	-0.010	0.954	956395	0.4859	Target=7.25	97.2	3340	
663.0 > 168.9	8.051	8.061	-0.010	0.954	129883		7.36(3.63-10.88)	97.2	948	
69 11ClFOS										
630.9 > 450.9	8.212	8.224	-0.012	1.161	928118	0.4447	Target=3.03	94.2	9638	
632.9 > 452.9	8.224	8.224	0.0	1.163	306705		3.03(1.51-4.54)	94.2	3548	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.438	8.452	-0.014	1.238	2001140	1.98		99.1	2573	
71 PFTeDA										
713.1 > 168.9	8.452	8.466	-0.014	1.002	106173	0.4906	Target=1.21	98.1	945	
713.1 > 219.0	8.452	8.466	-0.014	1.002	83624		1.27(0.61-1.82)	98.1	748	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.661	8.673	-0.012	1.224	540847	0.4608	Target=5.37	95.0	2593	
699.1 > 98.8	8.661	8.673	-0.012	1.224	103640		5.22(2.69-8.06)	95.0	1063	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.723	8.735	-0.012	1.233	1407753	4.82		96.5	448	
74 N-MeFOSE-M										
616.1 > 58.9	8.748	8.748	0.0	1.003	1475184	2.35		93.9	540	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.846	8.845	0.001	1.250	557561	1.95		97.6	2212	
76 NMeFOSA										
511.9 > 219.0	8.846	8.857	-0.011	1.000	124096	0.4782	Target=0.75	95.6	846	
511.9 > 169.0	8.846	8.857	-0.011	1.000	163202		0.76(0.37-1.12)	95.6	521	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.963	8.975	-0.012	1.267	1883741	4.83		96.6	691	
78 N-EtFOSE-M										
630.0 > 58.9	8.987	8.998	-0.011	1.003	2759575	2.39		95.7	849	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.057	9.069	-0.012	1.280	748268	1.92		96.0	2667	
80 N-EtFOSA-M										
526.0 > 219.0	9.069	9.081	-0.012	1.001	151948	0.4823	Target=0.84	96.5	1263	
526.0 > 169.0	9.069	9.081	-0.012	1.001	182626		0.83(0.42-1.26)	96.5	712	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.470	9.470	0.0	1.122	1336734	0.4761	Target=9.33	95.2	18201	
913.0 > 169.0	9.470	9.470	0.0	1.122	145320		9.20(4.66-13.99)	95.2	4834	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL3_00036 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:17 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-03.d

Injection Date: 04-Feb-2026 12:58:22 Instrument ID: 30637

Lims ID: IC CAL 3

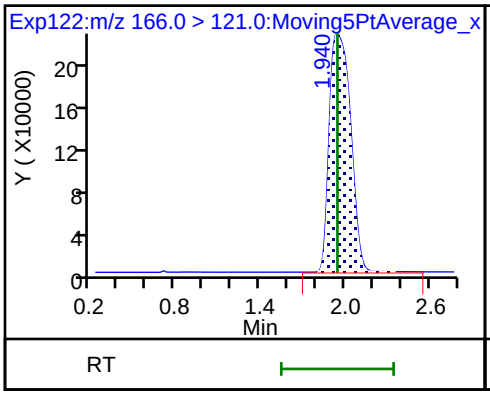
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 4 Worklist Smp#: 3

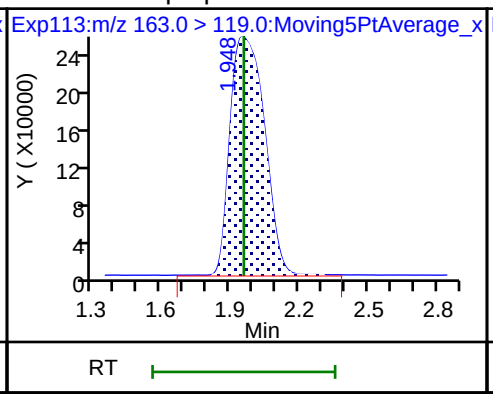
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

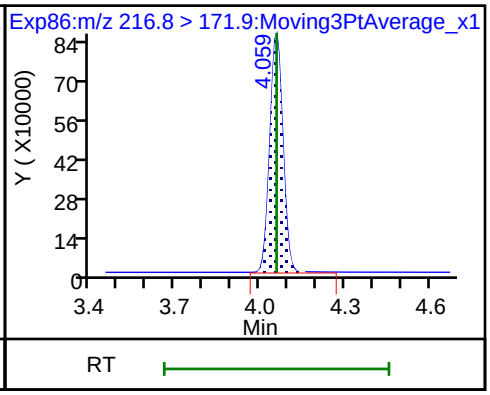
D 1 13C3PFPrA



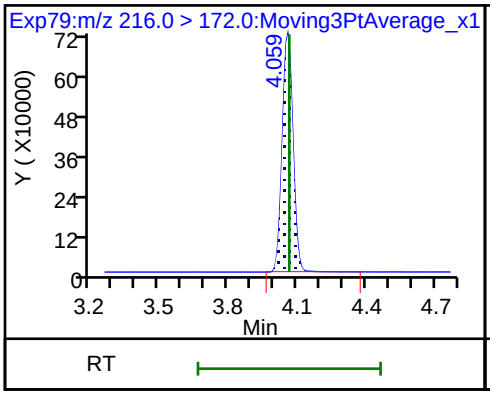
2 Perfluoropropionic acid



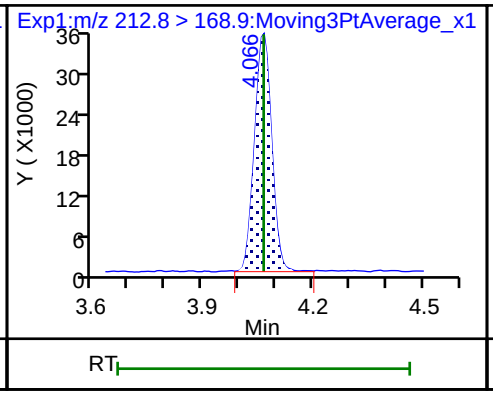
D 3 13C4-PFBA



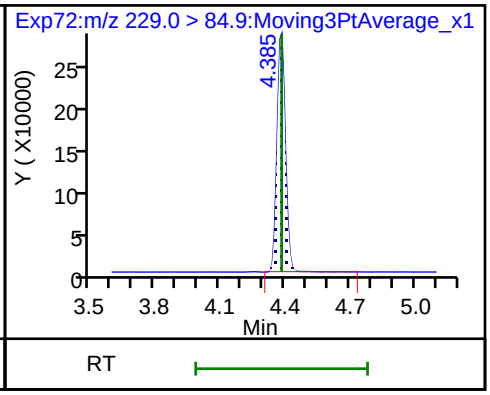
* 4 13C3PFBA



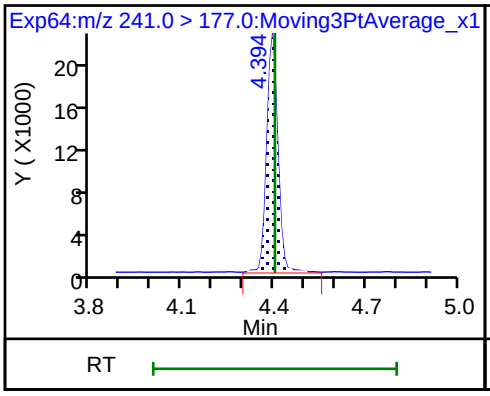
5 PFBA



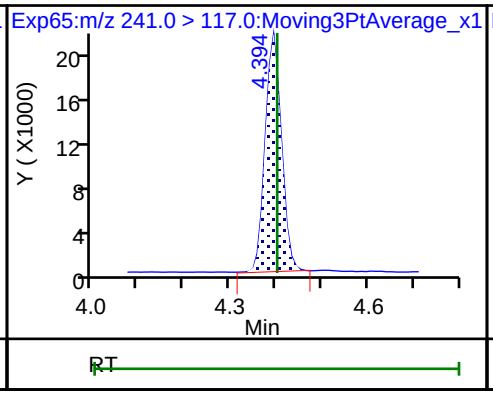
6 PFMPA



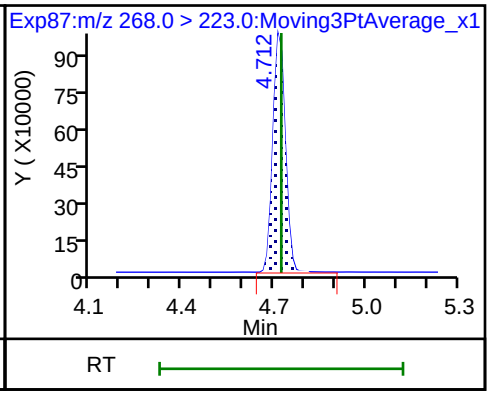
7 3:3 FTCA



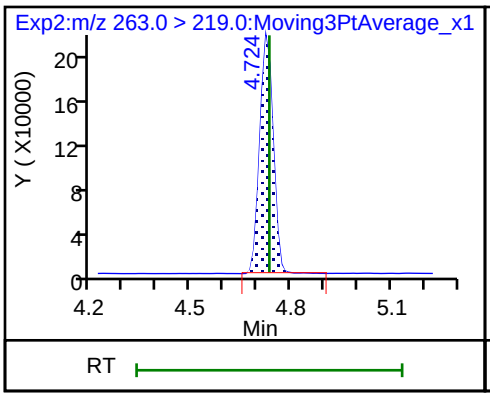
7 3:3 FTCA



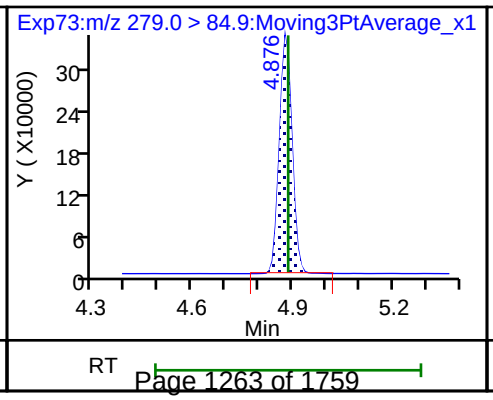
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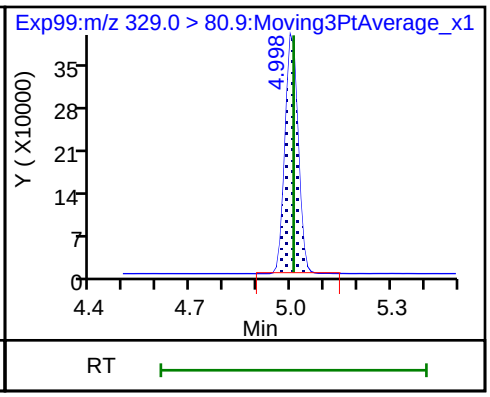
9 PFPA



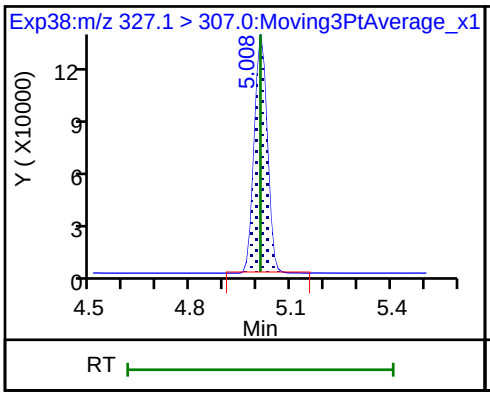
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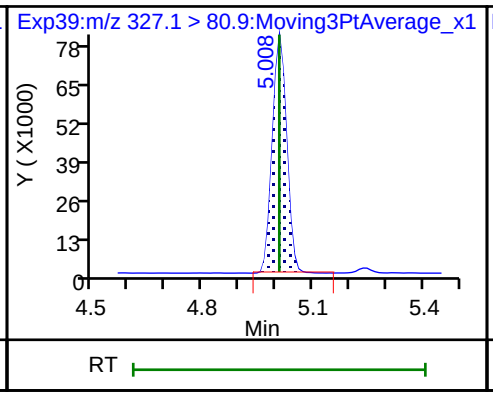
D 11 13C2-4:2FTS



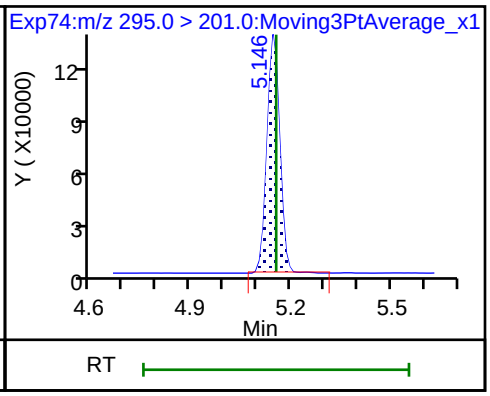
12 4:2FTS



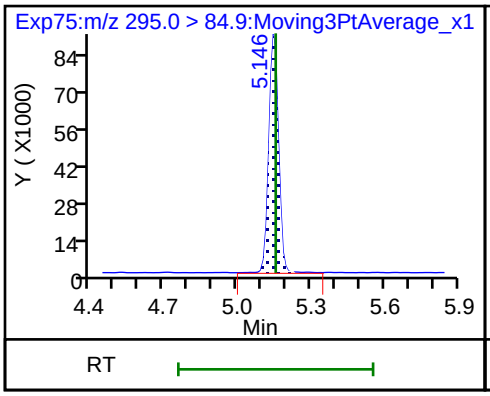
12 4:2FTS



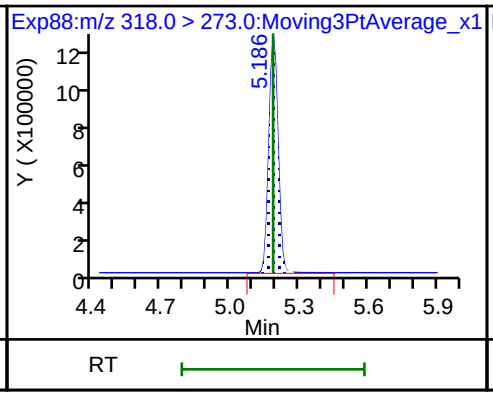
14 NFDHA



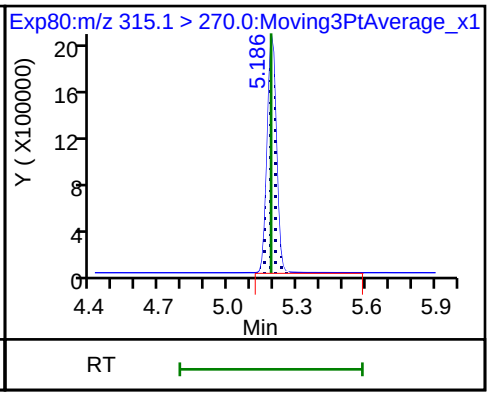
14 NFDHA



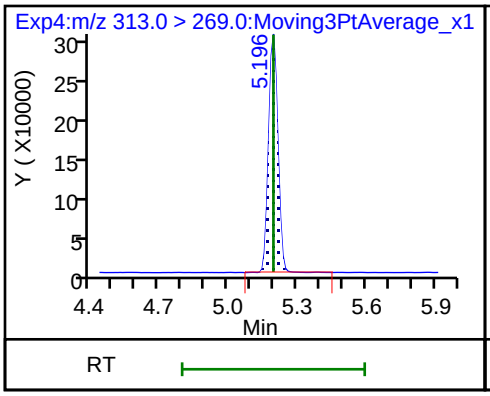
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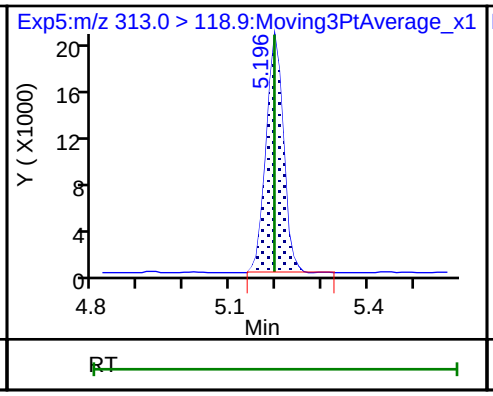
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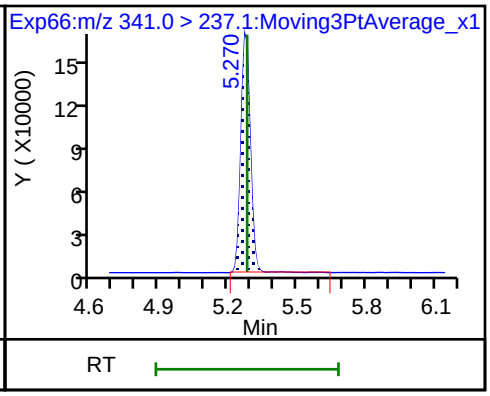
17 PFHxA



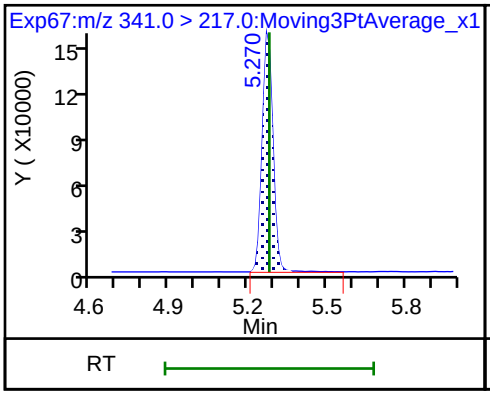
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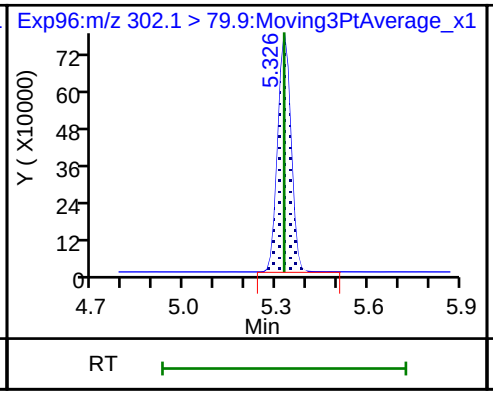
18 5:3 FTCA



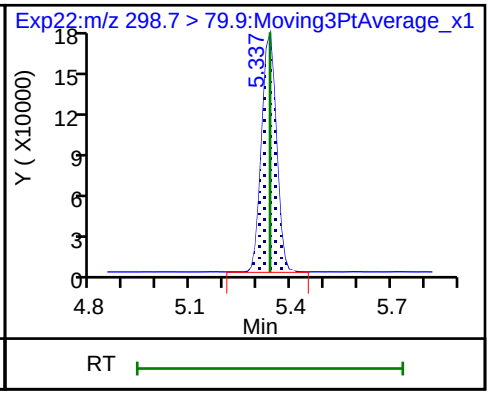
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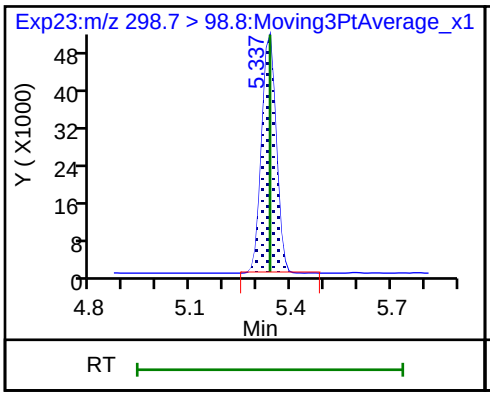
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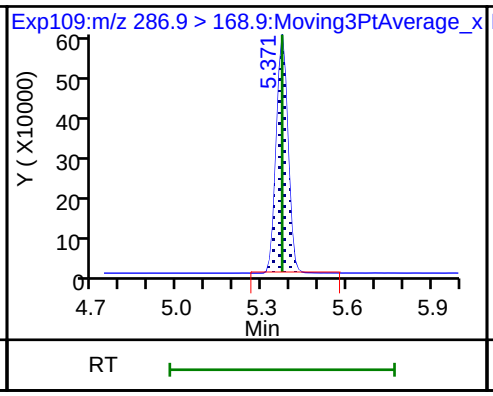
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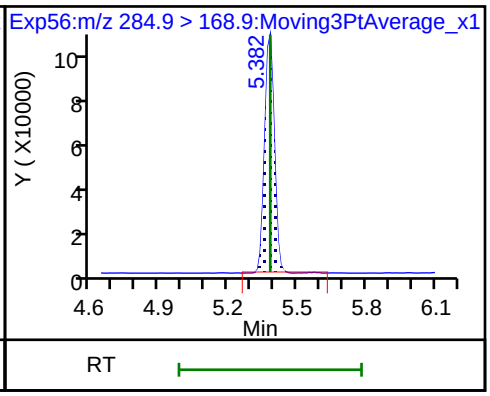
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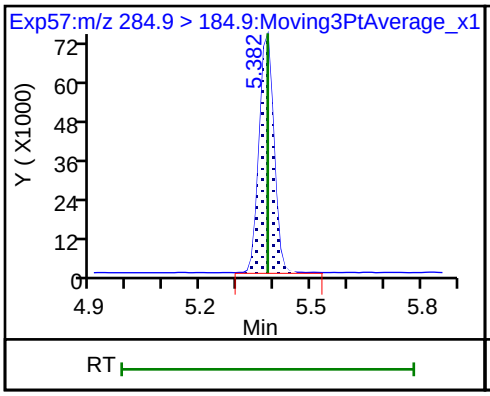
D 21 13C3 HFPO-DA



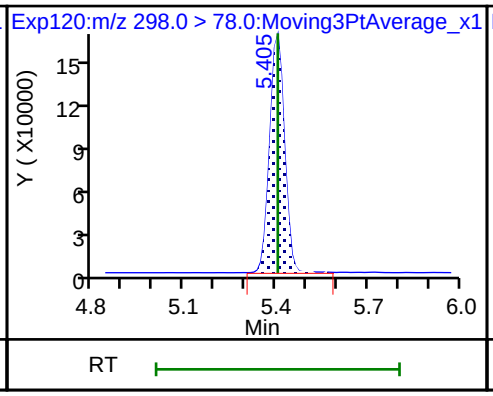
22 HFPO-DA



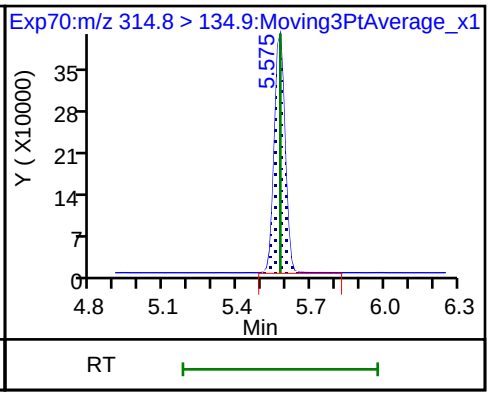
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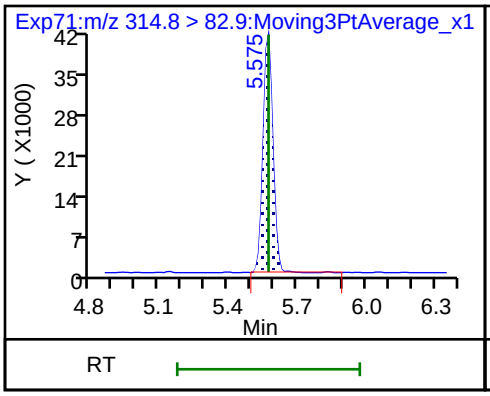
23 FBSA



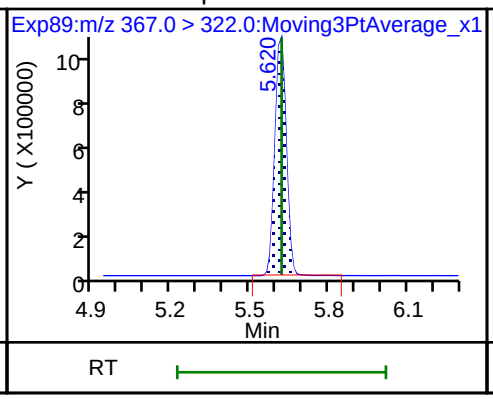
25 PFEESA



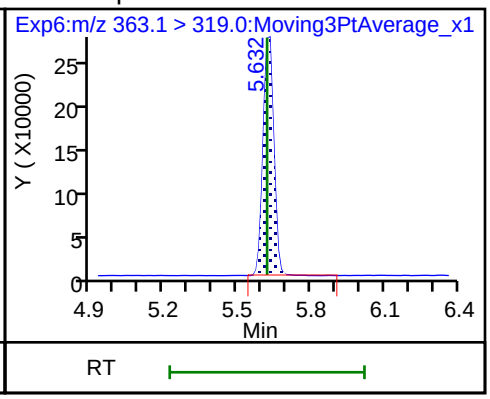
25 PFEESA



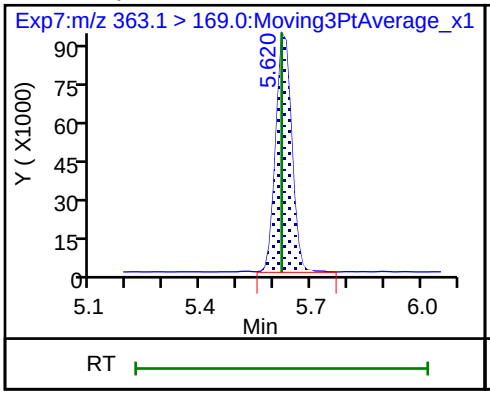
D 27 13C4 PFHpA



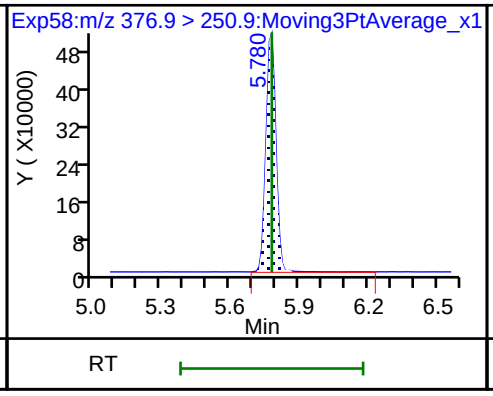
28 PFHpA



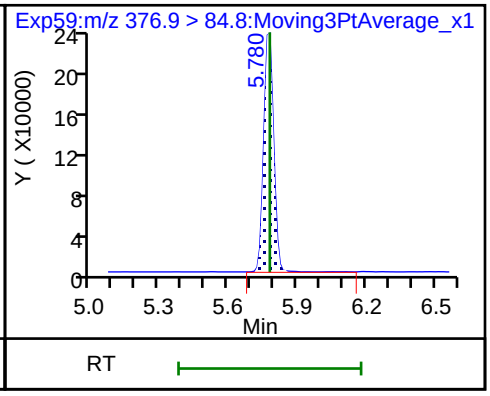
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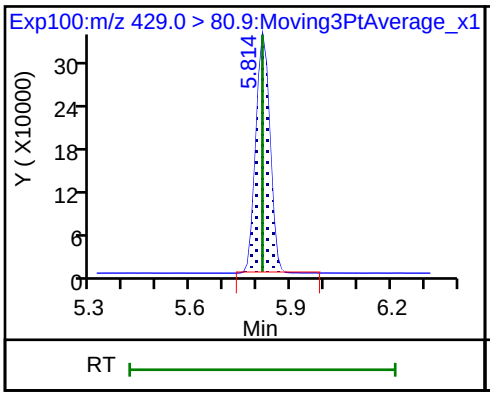
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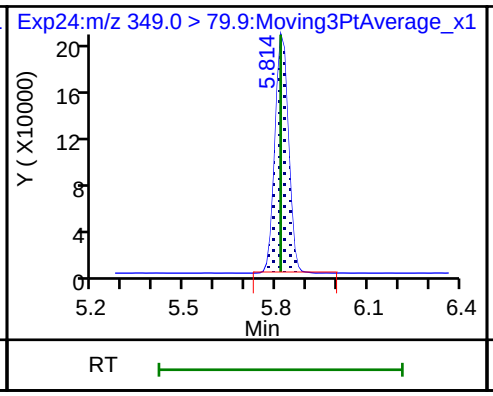
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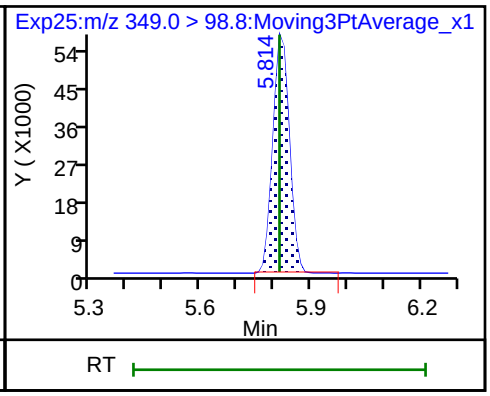
D 30 13C2-6:2FTS



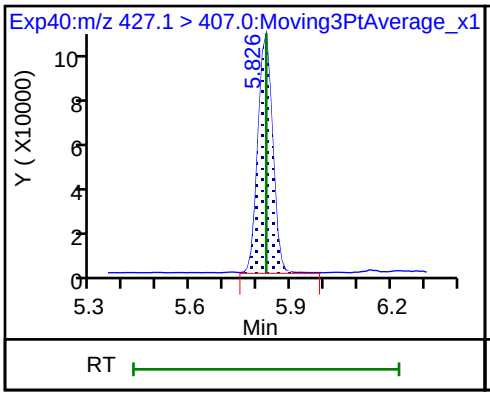
31 PFPeS



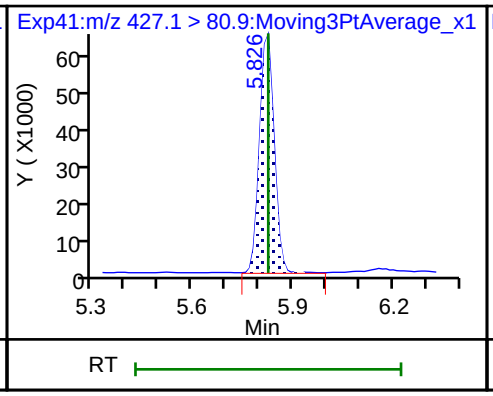
31 PFPeS



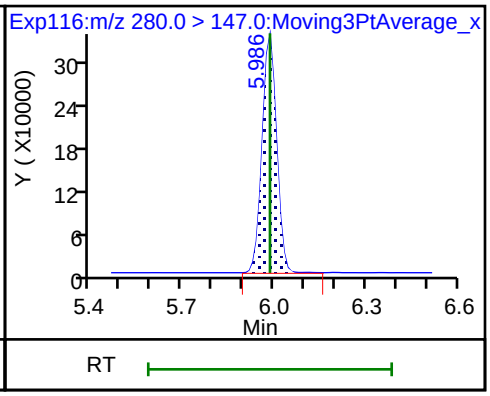
32 6:2FTS



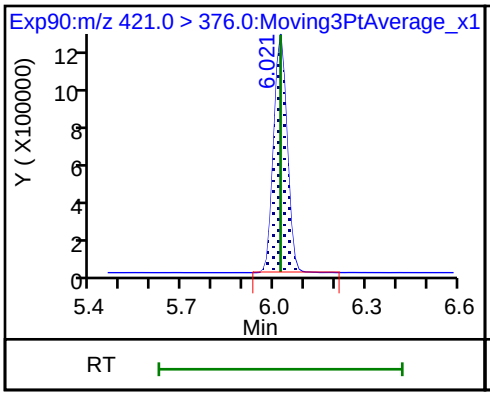
32 6:2FTS



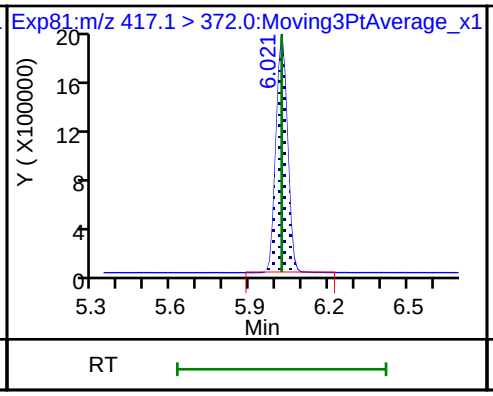
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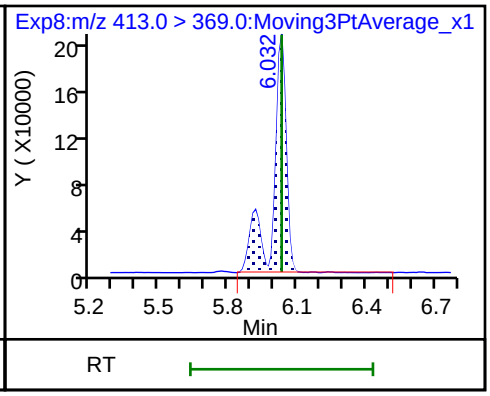
D 36 13C8 PFOA



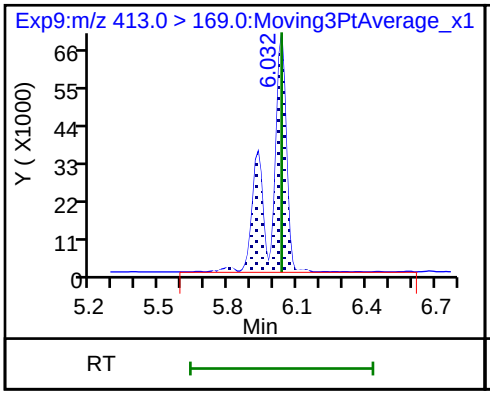
* 35 13C4 PFOA



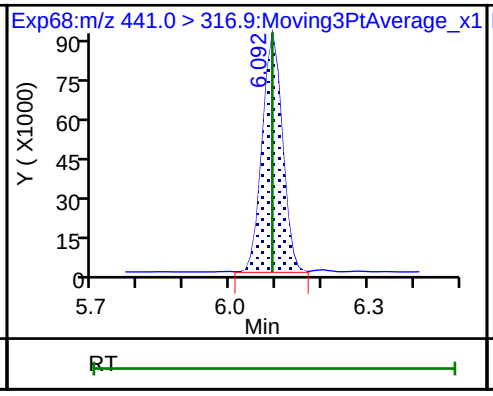
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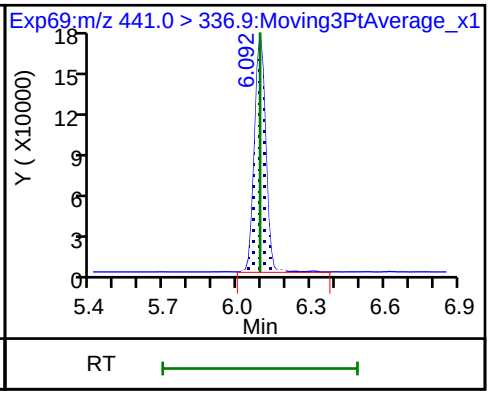
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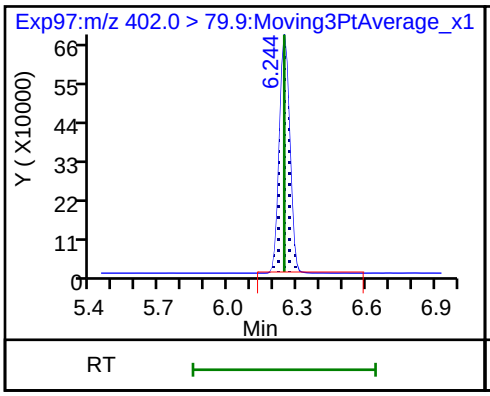
37 7:3 FTCA



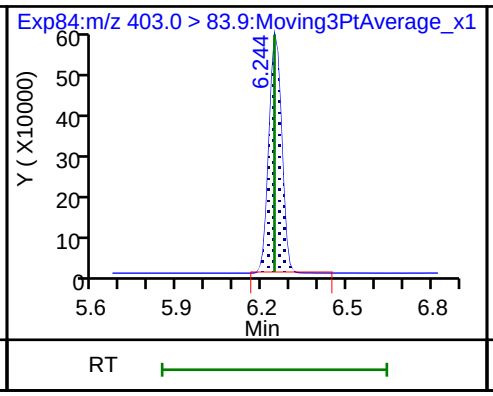
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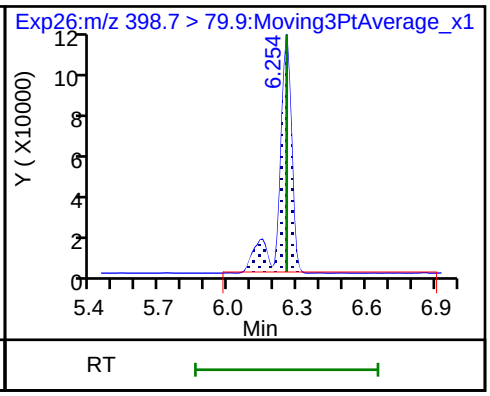
D 38 13C3 PFHxS



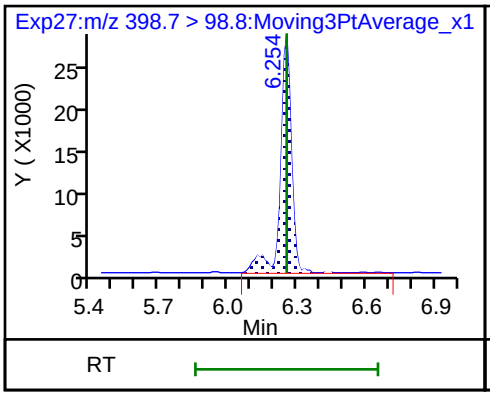
* 39 18O2 PFHxS



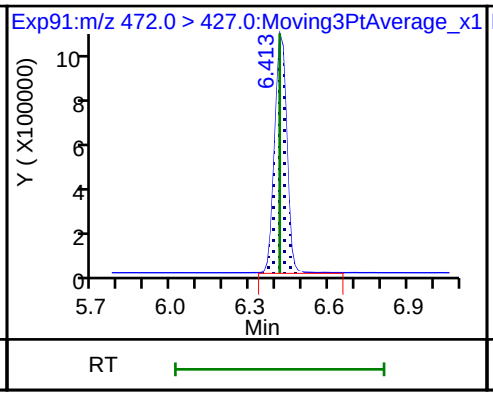
40 PFHxS



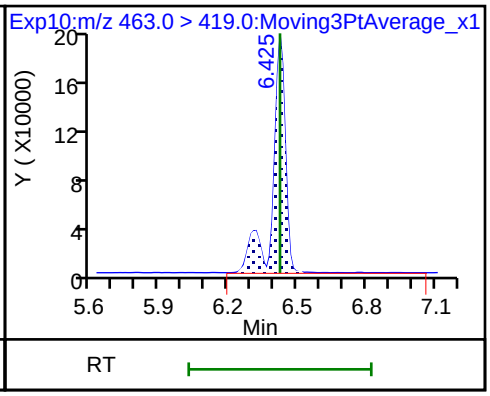
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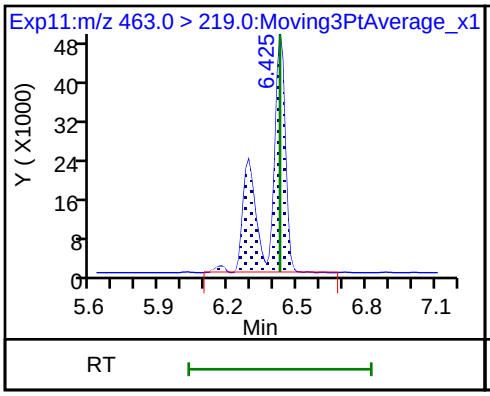
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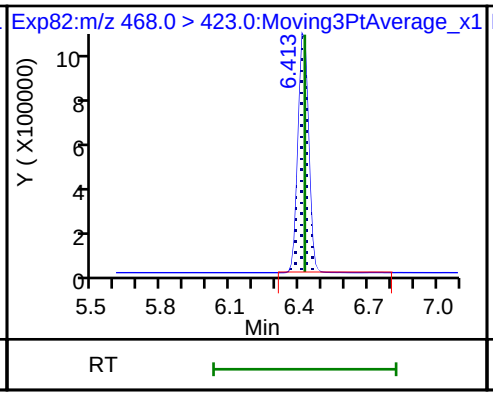
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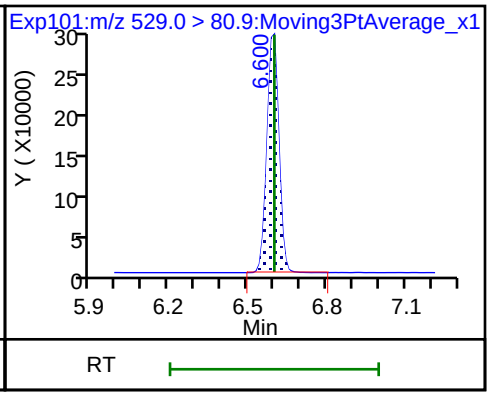
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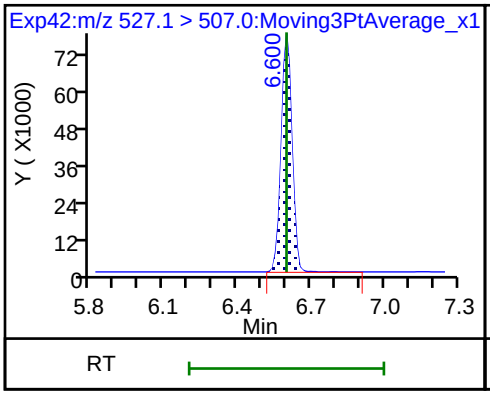
* 42 13C5 PFNA



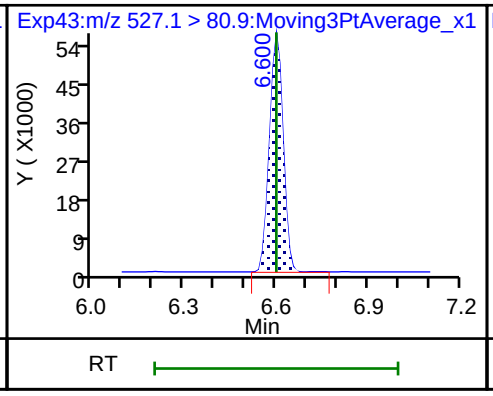
D 44 13C2-8:2FTS



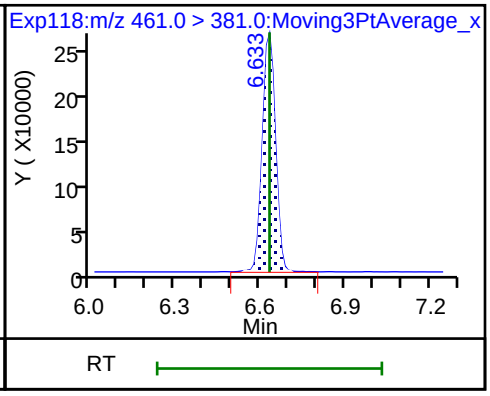
45 8:2FTS



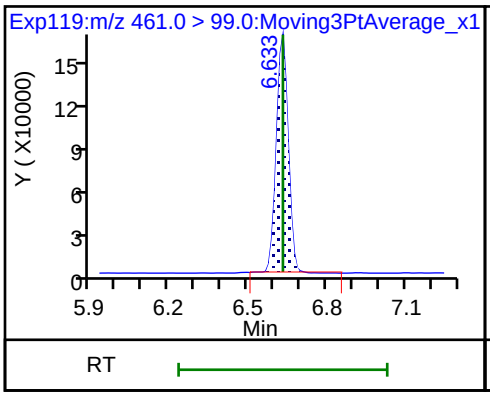
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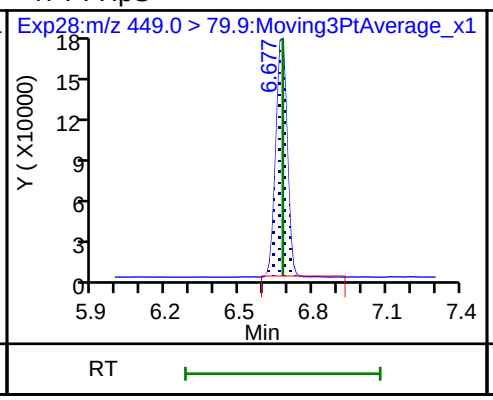
46 PFECHS



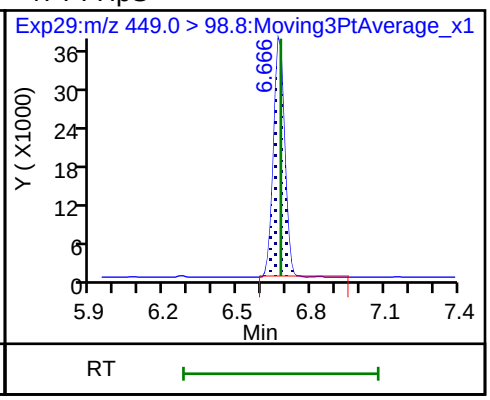
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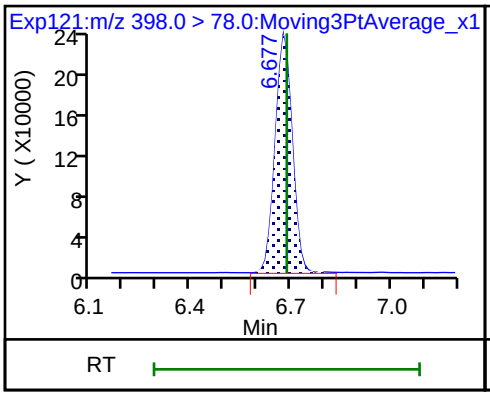
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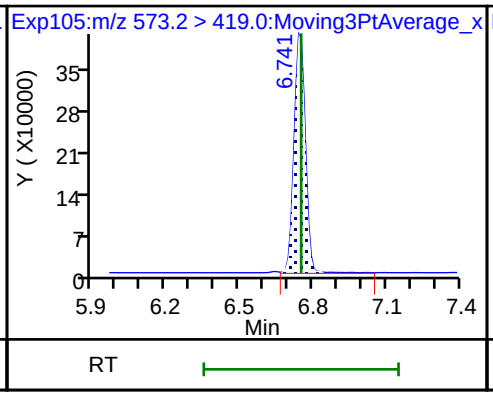
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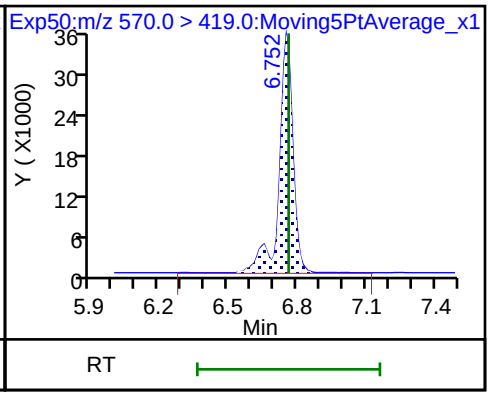
48 FHxSA



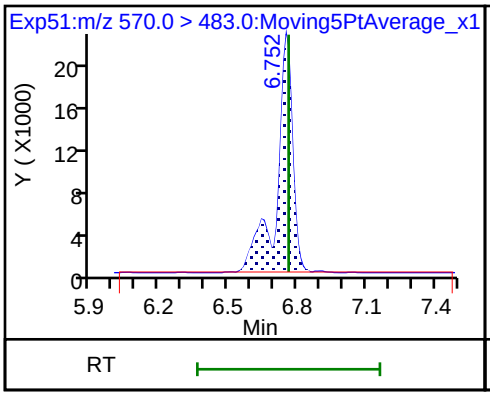
D 49 d3-NMeFOSAA



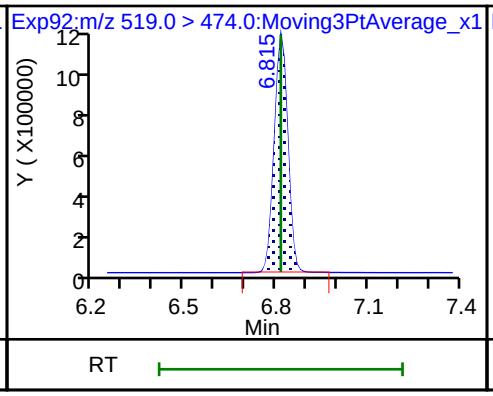
50 NMeFOSAA



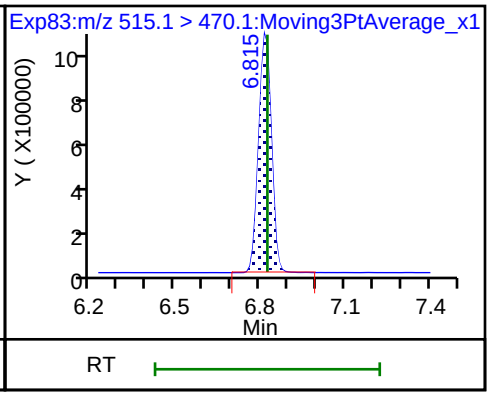
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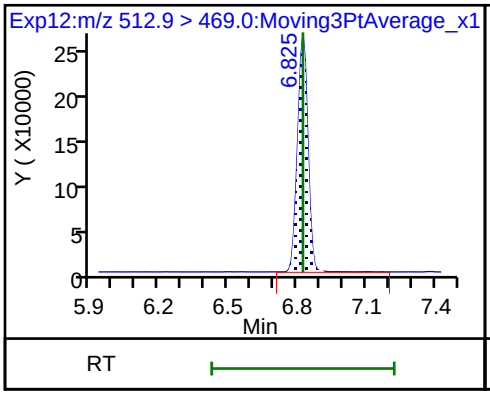
D 52 13C6 PFDA



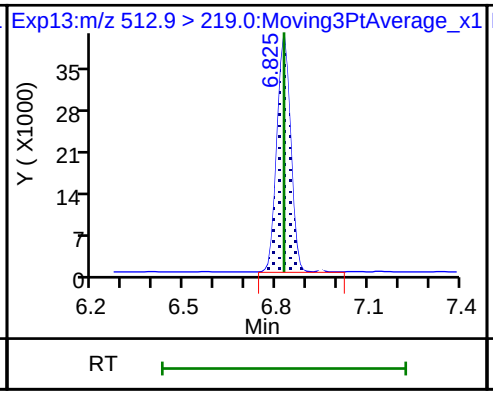
* 51 13C2 PFDA



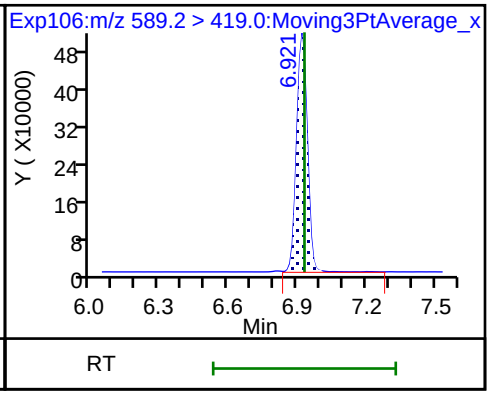
53 PFDA



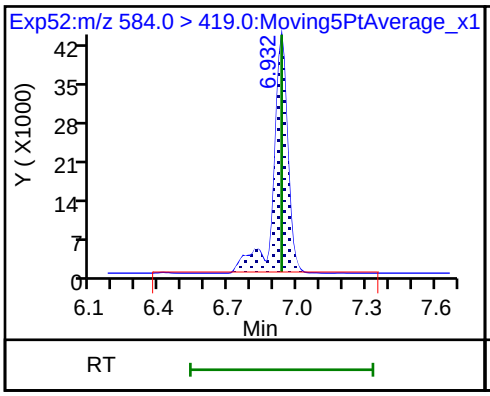
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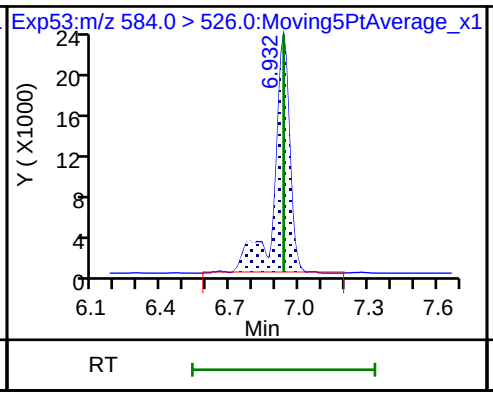
D 54 d5-NEtFOSAA



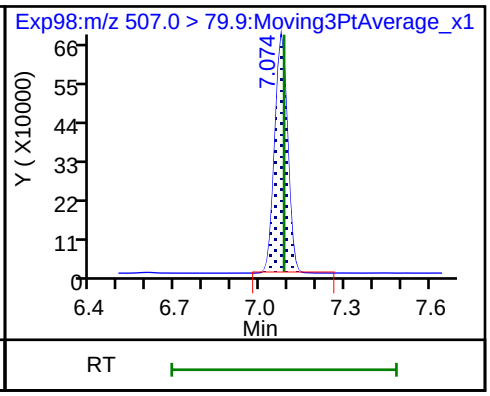
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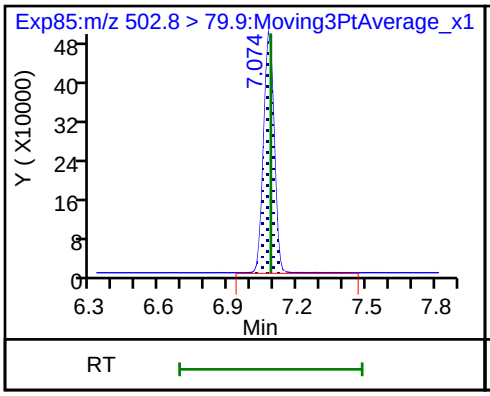
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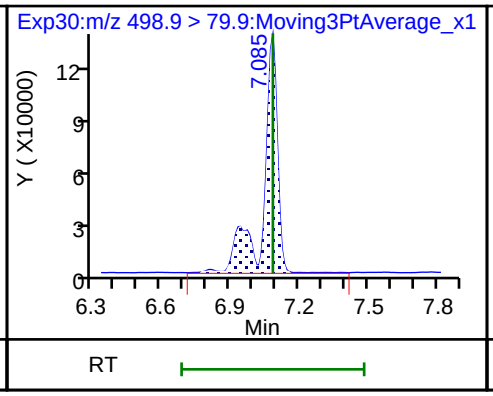
D 56 13C8 PFOS



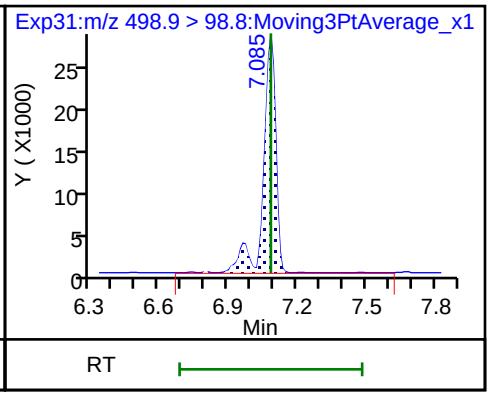
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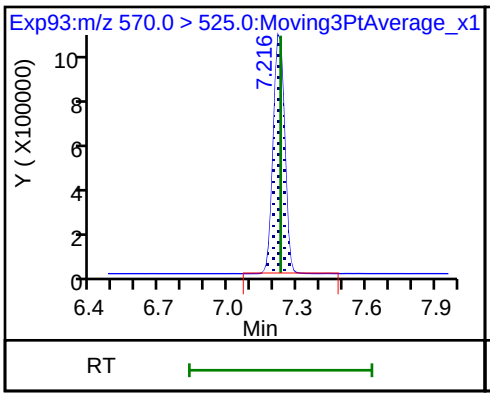
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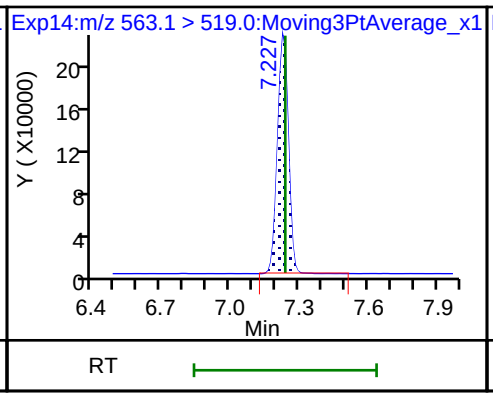
58 PFOS



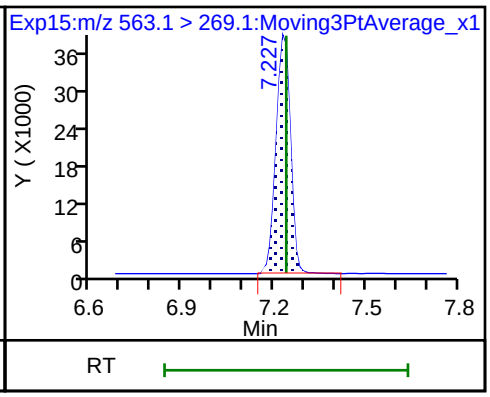
D 59 13C7 PFUnA



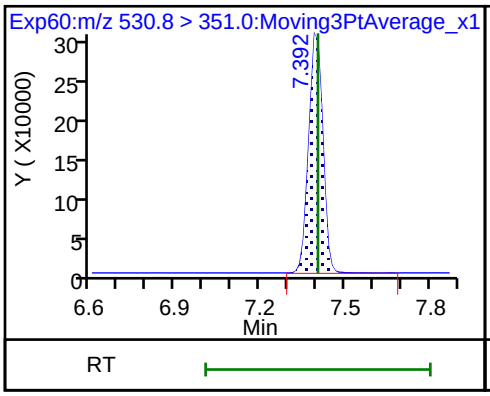
60 PFUnA



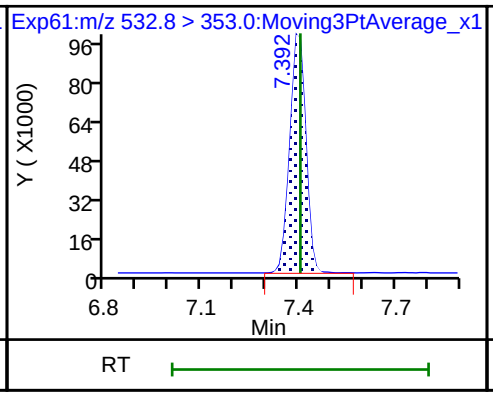
60 PFUnA



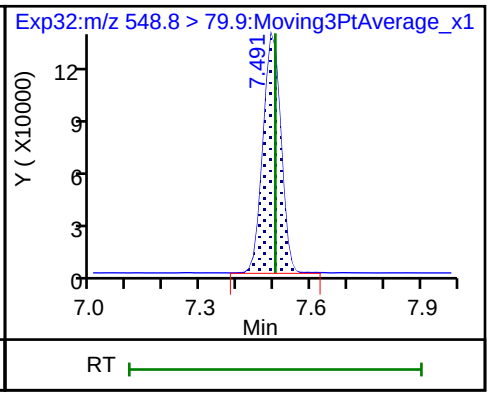
61 9ClFOS



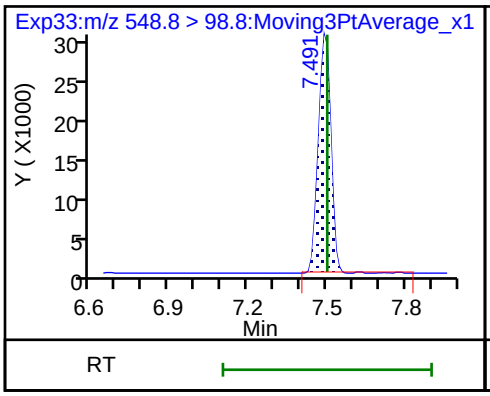
61 9ClFOS



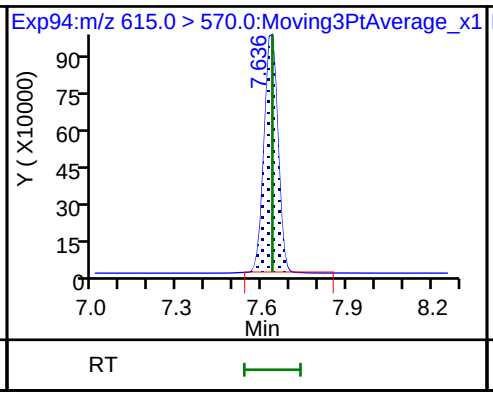
62 PFNS



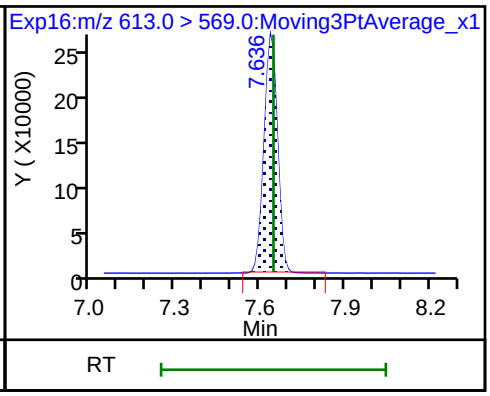
62 PFNS



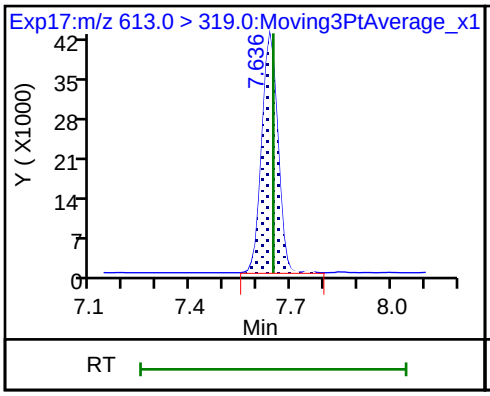
D 63 13C2 PFDoA



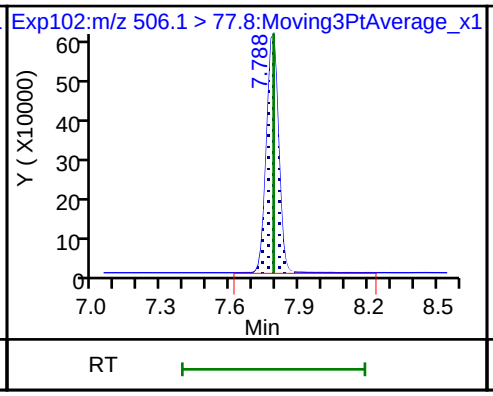
64 PFDoA



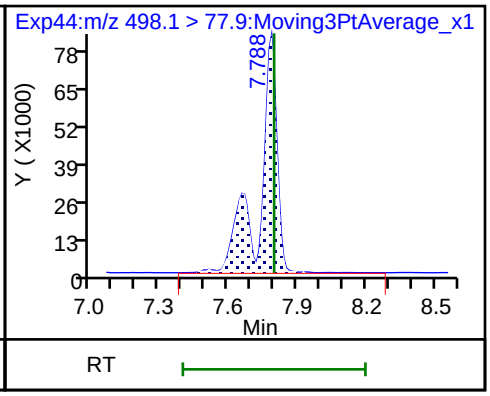
64 PFDoA



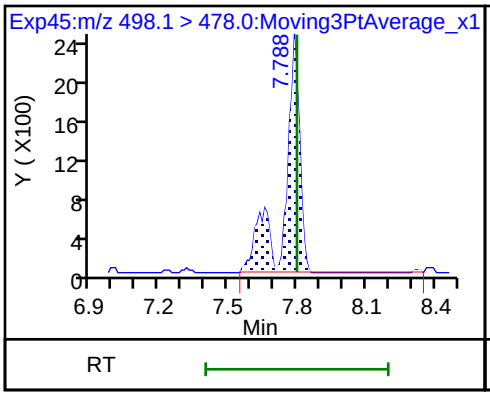
D 65 13C8 FOSA



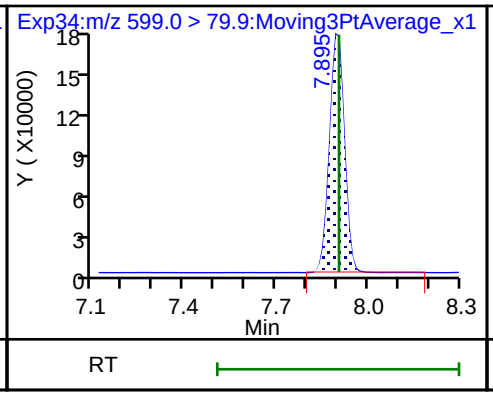
66 PFOSA



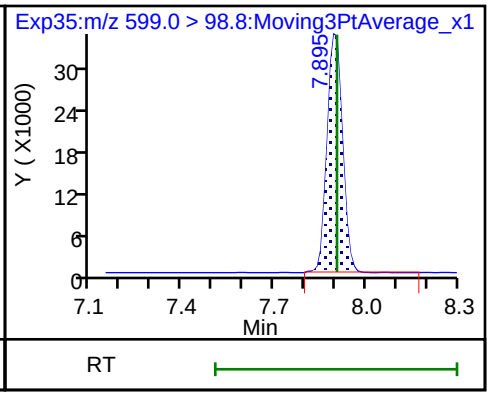
66 PFOSA



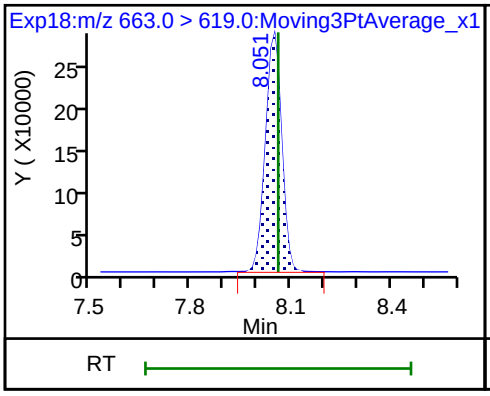
67 PFDS



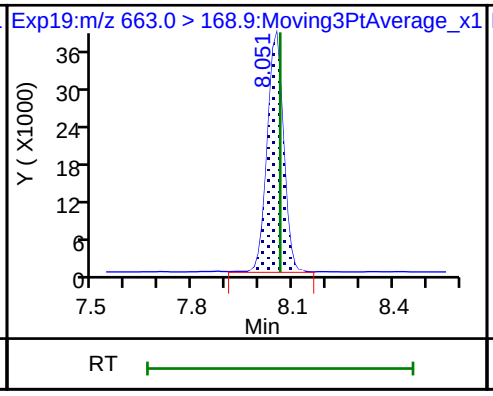
67 PFDS



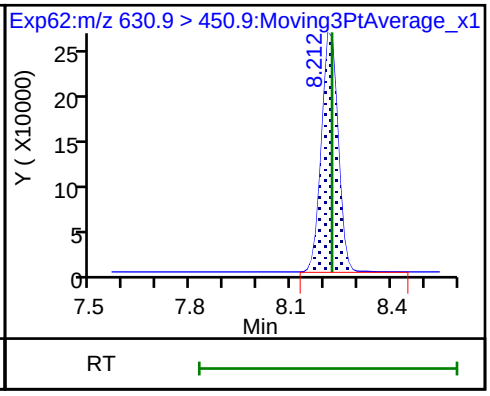
68 PFTrDA



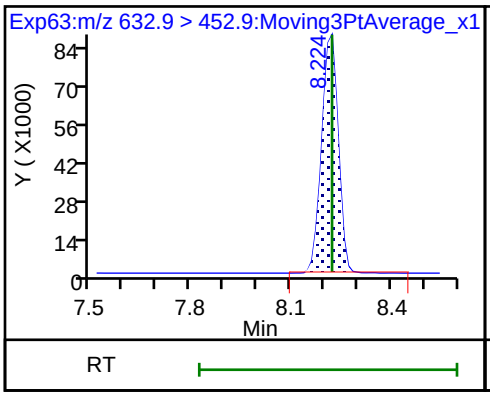
68 PFTrDA



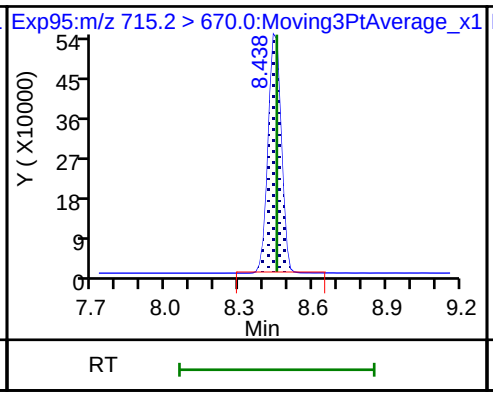
69 11ClFOS



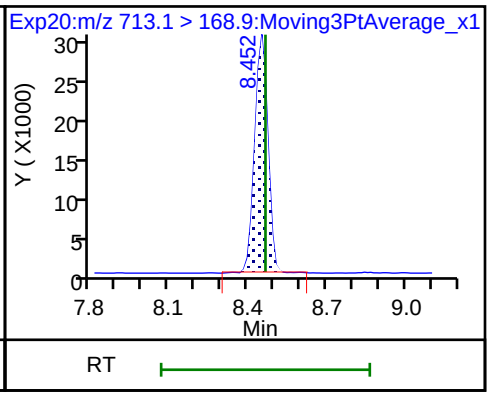
69 11ClFOS



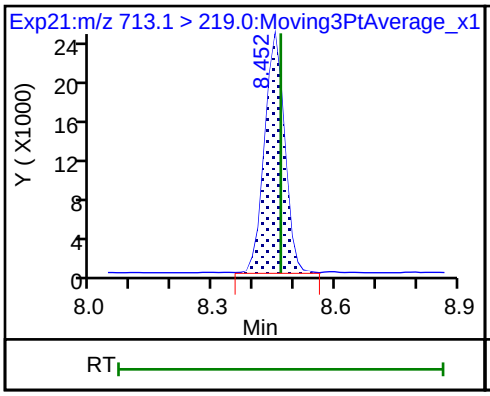
D 70 13C2 PFTeDA



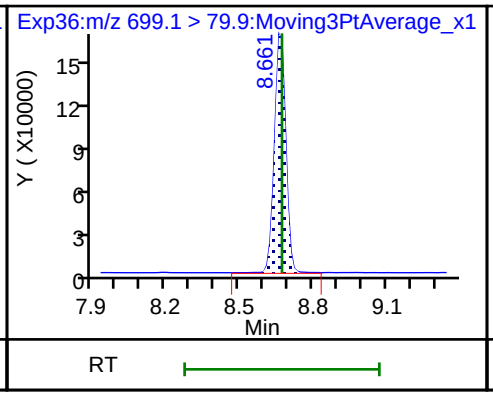
71 PFTeDA



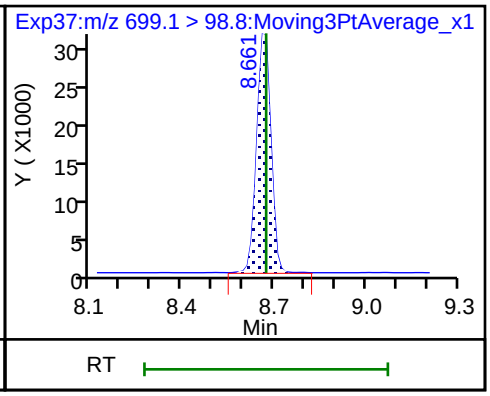
71 PFTeDA



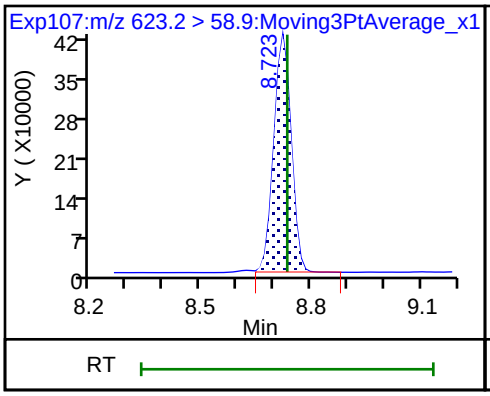
72 PFDoS



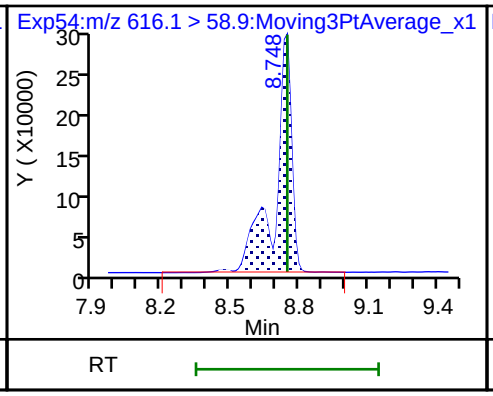
72 PFDoS



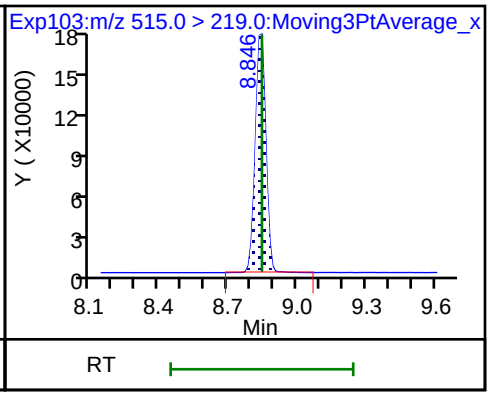
D 73 d7-N-Me-FOSE



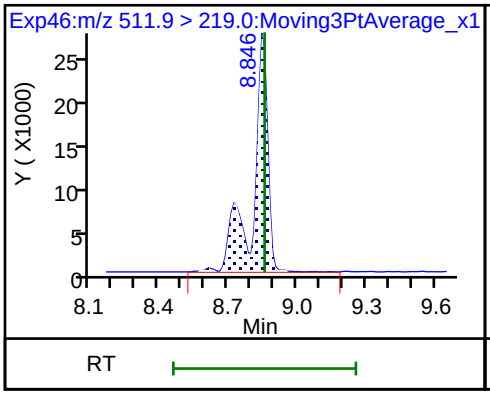
74 N-MeFOSE-M



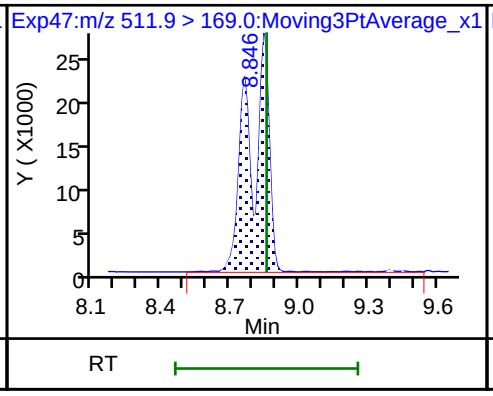
D 75 d3-NMePFOSA



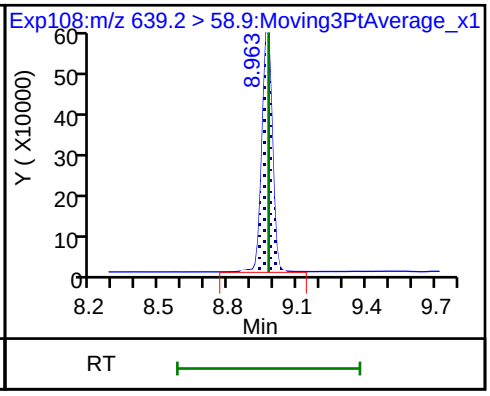
76 NMeFOSA



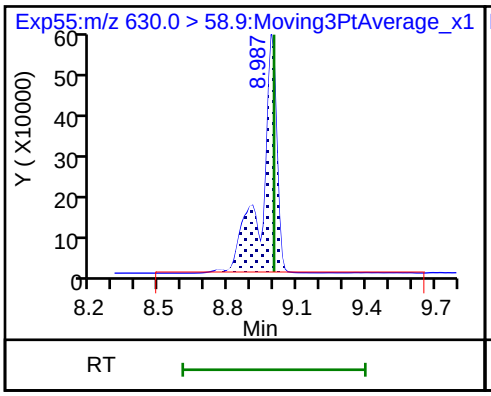
76 NMeFOSA



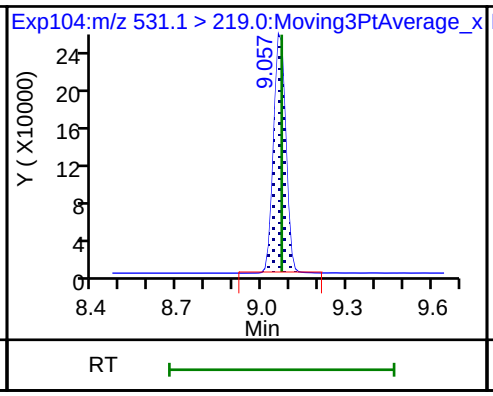
D 77 d9-N-EtFOSE



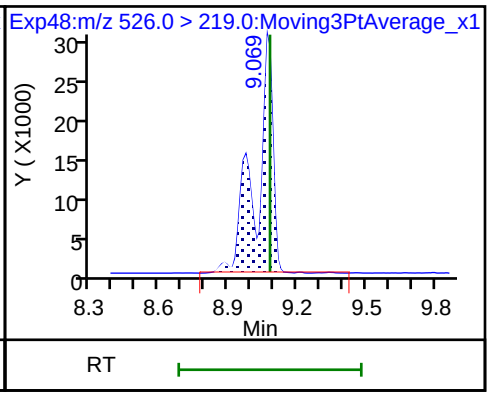
78 N-EtFOSE-M



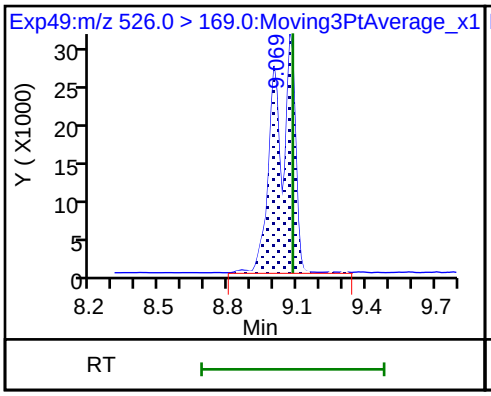
D 79 d5-NEtPFOSA



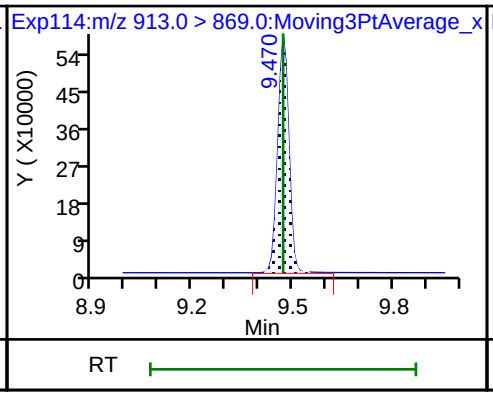
80 N-EtFOSA-M



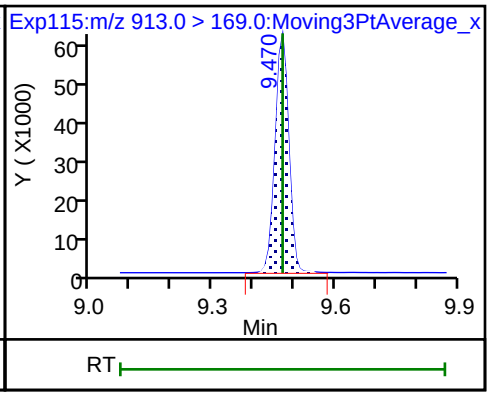
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-04.d
Lims ID: IC CAL 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 04-Feb-2026 13:11:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 4
Misc. Info.: 410-0174629-004 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 5
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:22 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:07:17
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.949	1.949	0.0	0.480	2421052	2.05		102	1600	
2 Perfluoropropionic acid										
163.0 > 119.0	1.949	1.957	-0.008	1.000	5542903	4.92		98.4	1268	
D 3 13C4-PFBA										
216.8 > 171.9	4.059	4.058	0.001	1.000	2839817	2.03		102	6768	
* 4 13C3PFBA										
216.0 > 172.0	4.059	4.065	-0.006		2396232	2.00			5975	
5 PFBA										
212.8 > 168.9	4.066	4.065	0.001	1.002	235855	1.97		98.7	546	
6 PFMPA										
229.0 > 84.9	4.385	4.384	0.001	0.931	1615458	0.9703		97.0	5341	
7 3:3 FTCA										
241.0 > 177.0	4.394	4.402	-0.008	0.933	109890	1.85	Target=1.05	92.4	2103	
241.0 > 117.0	4.394	4.402	-0.008	0.933	110161		1.00(0.53-1.58)	92.4	857	
D 8 13C5 PFPeA										
268.0 > 223.0	4.712	4.723	-0.011	0.907	2953471	2.12		106	5460	
9 PFPA										
263.0 > 219.0	4.724	4.735	-0.011	1.003	1252348	0.9490		94.9	1804	
10 PFMBA										
279.0 > 84.9	4.877	4.885	-0.008	1.035	2001655	0.9869		98.7	6517	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.999	5.008	-0.009	0.801	1088469	4.90		104	4383	
12 4:2FTS										
327.1 > 307.0	5.009	5.008	0.001	1.002	729161	1.81	Target=1.61	96.5	6358	
327.1 > 80.9	5.009	5.008	0.001	1.002	449668		1.62(0.80-2.41)	96.5	915	

Report Date: 04-Feb-2026 20:47:23 Chrom Revision: 2.3 29-Jan-2026 10:42:58
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-04.d
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.156	5.155	0.001	0.994	728714	1.01	Target=1.33	101	2315	
295.0 > 84.9	5.146	5.155	-0.009	0.992	546244		1.33(0.67-2.00)	101	2649	
D 16 13C5 PFHxA										
318.0 > 273.0	5.186	5.185	0.001	0.998	3417973	2.04		102	7773	
* 15 13C2 PFHxA										
315.1 > 270.0	5.196	5.185	0.011		5580261	5.00			5876	
17 PFHxA										
313.0 > 269.0	5.196	5.196	0.0	1.002	1816704	1.01	Target=16.27	101	2904	
313.0 > 118.9	5.196	5.196	0.0	1.002	114110		15.92(8.13-24.40)	101	693	
18 5:3 FTCA										
341.0 > 237.1	5.281	5.281	0.0	1.018	1003032	4.86	Target=1.06	97.3	2308	
341.0 > 217.0	5.281	5.281	0.0	1.018	994564		1.01(0.53-1.58)	97.3	1345	
D 20 13C3 PFBS										
302.1 > 79.9	5.326	5.325	0.001	0.853	2347484	1.92		103	7176	
19 PFBS										
298.7 > 79.9	5.337	5.337	0.0	1.002	1138086	0.9038	Target=3.39	102	4538	
298.7 > 98.8	5.337	5.337	0.0	1.002	323904		3.51(1.70-5.09)	102	1830	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.371	5.370	0.001	1.034	1904641	2.01		101	3806	
22 HFPO-DA										
284.9 > 168.9	5.382	5.382	0.0	1.002	748830	0.7544	Target=1.73	101	2626	
284.9 > 184.9	5.382	5.382	0.0	1.002	448684		1.67(0.87-2.60)	101	1434	
23 FBSA										
298.0 > 78.0	5.405	5.405	0.001	1.015	1117883	0.9546		95.5	1215	
25 PFEESA										
314.8 > 134.9	5.575	5.574	0.001	1.075	2721340	0.9365	Target=10.20	105	13335	
314.8 > 82.9	5.575	5.574	0.001	1.075	250174		10.88(5.10-15.30)	105	1650	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.620	0.0	1.082	3102581	2.01		101	5176	
28 PFHpA										
363.1 > 319.0	5.632	5.620	0.012	1.002	1794870	1.04	Target=3.01	104	1956	
363.1 > 169.0	5.632	5.620	0.012	1.002	598222		3.00(1.50-4.51)	104	2053	
29 ADONA										
376.9 > 250.9	5.780	5.780	0.0	1.076	3306646	0.9575	Target=2.15	101	6180	
376.9 > 84.8	5.780	5.780	0.0	1.076	1527783		2.16(1.08-3.22)	101	3736	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.814	5.814	0.0	0.931	987085	5.14		108	4372	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.931	1308441	0.9434	Target=3.70	100	4072	
349.0 > 98.8	5.814	5.814	0.0	0.931	353402		3.70(1.85-5.54)	100	1359	
32 6:2FTS										
427.1 > 407.0	5.826	5.825	0.001	1.002	640800	1.85	Target=1.45	97.2	270	
427.1 > 80.9	5.826	5.825	0.001	1.002	427543		1.50(0.72-2.17)	97.2	279	
33 BTS										
280.0 > 147.0	5.986	5.985	0.001	0.959	2301945	0.9697		99.0	6199	
D 36 13C8 PFOA										
421.0 > 376.0	6.021	6.020	0.001	1.000	3918443	2.10		105	5842	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.021	6.020	0.001		6131858	5.00			6365	
34 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	1694720	0.9703	Target=2.52	97.0	1144	
413.0 > 169.0	6.032	6.032	0.0	1.002	653825		2.59(1.26-3.77)	97.0	1058	
37 7:3 FTCA										
441.0 > 316.9	6.092	6.091	0.001	1.175	608541	5.05	Target=0.53	101	1022	
441.0 > 336.9	6.092	6.091	0.001	1.175	1131389		0.54(0.26-0.79)	101	2565	
D 38 13C3 PFHxS										
402.0 > 79.9	6.244	6.243	0.001	1.000	2155662	1.94		102	4990	
* 39 18O2 PFHxS										
403.0 > 83.9	6.244	6.243	0.001		1886938	1.90			6443	
40 PFHxS										
398.7 > 79.9	6.254	6.254	0.0	1.002	914898	0.9059	Target=4.48	99.3	4081	
398.7 > 98.8	6.254	6.254	0.0	1.002	198936		4.60(2.24-6.72)	99.3	909	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	0.998	3477073	2.02		101	5222	
43 PFNA										
463.0 > 419.0	6.425	6.424	0.001	1.002	1566933	0.99	Target=2.90	99.5	2341	
463.0 > 219.0	6.425	6.424	0.001	1.002	547379		2.86(1.45-4.35)	99.5	903	
* 42 13C5 PFNA										
468.0 > 423.0	6.425	6.424	0.001		3499929	2.00			6445	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.600	6.600	0.0	1.057	954482	5.01		104	3678	
45 8:2FTS										
527.1 > 507.0	6.600	6.600	0.0	1.000	495591	1.83	Target=1.40	95.1	1701	
527.1 > 80.9	6.600	6.600	0.0	1.000	365373		1.36(0.70-2.09)	95.1	1460	
46 PFECHS										
461.0 > 381.0	6.633	6.633	0.0	1.062	1835216	0.9205	Target=1.63	99.6	4157	
461.0 > 99.0	6.633	6.633	0.0	1.062	1163048		1.58(0.81-2.44)	99.6	1318	
47 PFHpS										
449.0 > 79.9	6.666	6.676	-0.010	0.942	1153011	0.9406	Target=4.66	98.6	3004	
449.0 > 98.8	6.666	6.676	-0.010	0.942	244440		4.72(2.33-6.98)	98.6	1053	
48 FHxSA										
398.0 > 78.0	6.677	6.687	-0.010	1.069	1764274	0.9752		97.5	1848	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.741	6.752	-0.011	0.953	1373837	5.13		103	1704	
50 NMeFOSAA										
570.0 > 419.0	6.752	6.762	-0.010	1.002	306780	0.9830	Target=1.27	98.3	10449	
570.0 > 483.0	6.752	6.762	-0.010	1.002	246951		1.24(0.64-1.91)	98.3	2869	
D 52 13C6 PFDA										
519.0 > 474.0	6.815	6.814	0.001	1.000	3653105	2.05		102	6173	
* 51 13C2 PFDA										
515.1 > 470.1	6.815	6.825	-0.010		3196128	2.00			6644	
53 PFDA										
512.9 > 469.0	6.825	6.825	0.0	1.002	1768585	0.9713	Target=6.58	97.1	4044	
512.9 > 219.0	6.825	6.825	0.0	1.002	277015		6.38(3.29-9.87)	97.1	1233	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.921	6.932	-0.011	0.978	1708388	5.07		101	2228	
55 NEtFOSAA										
584.0 > 419.0	6.932	6.932	0.0	1.002	394092	1.01	Target=1.61	101	94173	
584.0 > 526.0	6.932	6.932	0.0	1.002	240226		1.64(0.80-2.41)	101	1046	
D 56 13C8 PFOS										
507.0 > 79.9	7.074	7.084	-0.010	1.000	2188935	1.96		103	1001	
* 57 13C4 PFOS										
502.8 > 79.9	7.074	7.084	-0.010		1538856	1.92			6060	
58 PFOS										
498.9 > 79.9	7.085	7.084	0.001	1.001	1198701	0.9028	Target=5.51	97.1	2610	
498.9 > 98.8	7.085	7.084	0.001	1.001	221436		5.41(2.75-8.26)	97.1	1350	
D 59 13C7 PFUnA										
570.0 > 525.0	7.216	7.227	-0.011	1.059	3594207	2.02		101	8910	
60 PFUnA										
563.1 > 519.0	7.227	7.239	-0.012	1.002	1538048	0.9583	Target=5.78	95.8	7114	
563.1 > 269.1	7.227	7.239	-0.012	1.002	272992		5.63(2.89-8.67)	95.8	1508	
61 9ClFOS										
530.8 > 351.0	7.392	7.405	-0.013	1.045	2224366	0.9263	Target=3.05	99.2	8339	
532.8 > 353.0	7.405	7.405	0.0	1.047	734129		3.03(1.52-4.57)	99.2	2396	
62 PFNS										
548.8 > 79.9	7.491	7.503	-0.012	1.059	945114	0.9413	Target=4.62	97.8	5397	
548.8 > 98.8	7.491	7.503	-0.012	1.059	202011		4.68(2.31-6.93)	97.8	1400	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.120	3362788	1.99		99.6	4214	
64 PFDoA										
613.0 > 569.0	7.636	7.647	-0.011	1.000	1832422	1.01	Target=6.26	101	6045	
613.0 > 319.0	7.636	7.647	-0.011	1.000	288450		6.35(3.13-9.39)	101	1138	
D 65 13C8 FOSA										
506.1 > 77.8	7.788	7.788	0.0	1.101	2280300	2.04		102	8530	
66 PFOSA										
498.1 > 77.9	7.788	7.799	-0.011	1.000	908495	0.9598	Target=42.30	96.0	3119	
498.1 > 478.0	7.777	7.799	-0.022	0.999	19900		45.65(21.15-63.45)	96.0	140	
67 PFDS										
599.0 > 79.9	7.906	7.906	0.0	1.118	1212423	0.9530	Target=4.95	98.9	6443	
599.0 > 98.8	7.895	7.906	-0.011	1.116	247688		4.89(2.48-7.43)	98.9	2153	
68 PFTrDA										
663.0 > 619.0	8.051	8.061	-0.010	0.953	2010681	1.00	Target=7.25	100	3432	
663.0 > 168.9	8.051	8.061	-0.010	0.953	275163		7.31(3.63-10.88)	100	1395	
69 11ClFOS										
630.9 > 450.9	8.224	8.224	0.0	1.163	1984867	0.9458	Target=3.03	100	6555	
632.9 > 452.9	8.224	8.224	0.0	1.163	629438		3.15(1.51-4.54)	100	2193	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.452	8.452	0.0	1.240	2037964	2.01		101	4018	
71 PFTeDA										
713.1 > 168.9	8.452	8.466	-0.014	1.000	214582	0.9736	Target=1.21	97.4	1429	
713.1 > 219.0	8.452	8.466	-0.014	1.000	177995		1.21(0.61-1.82)	97.4	1041	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.673	8.673	0.0	1.226	1111133	0.9416	Target=5.37	97.1	6067	
699.1 > 98.8	8.673	8.673	0.0	1.226	201479		5.51(2.69-8.06)	97.1	1971	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.735	8.735	0.0	1.235	1434773	5.04		101	487	
74 N-MeFOSE-M										
616.1 > 58.9	8.748	8.748	0.0	1.001	3137821	4.90		98.0	1032	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.846	8.845	0.001	1.250	568694	2.04		102	2317	
76 NMeFOSA										
511.9 > 219.0	8.857	8.857	0.0	1.001	258664	0.9773	Target=0.75	97.7	1580	
511.9 > 169.0	8.857	8.857	0.0	1.001	348171		0.74(0.37-1.12)	97.7	955	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.975	8.975	0.0	1.269	1936697	5.09		102	708	
78 N-EtFOSE-M										
630.0 > 58.9	8.999	8.998	0.001	1.003	5935849	5.01		100	1587	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.069	9.069	0.0	1.282	760190	2.00		99.9	2476	
80 N-EtFOSA-M										
526.0 > 219.0	9.081	9.081	0.0	1.001	314703	0.9832	Target=0.84	98.3	1826	
526.0 > 169.0	9.081	9.081	0.0	1.001	376289		0.84(0.42-1.26)	98.3	1396	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.471	9.470	0.001	1.121	2809867	0.9827	Target=9.33	98.3	21904	
913.0 > 169.0	9.471	9.470	0.001	1.121	301206		9.33(4.66-13.99)	98.3	7390	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL4_00083 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:23 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-04.d

Injection Date: 04-Feb-2026 13:11:54 Instrument ID: 30637

Lims ID: IC CAL 4

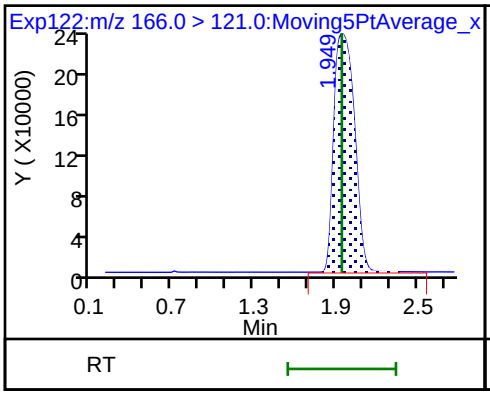
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 5 Worklist Smp#: 4

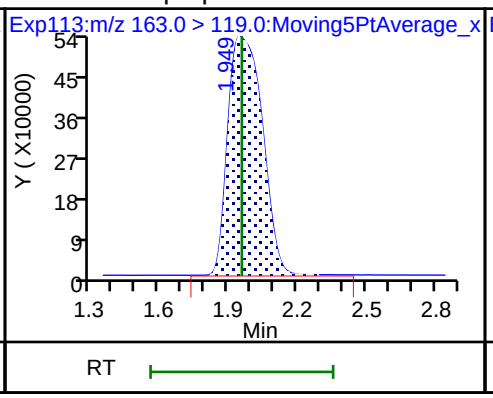
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

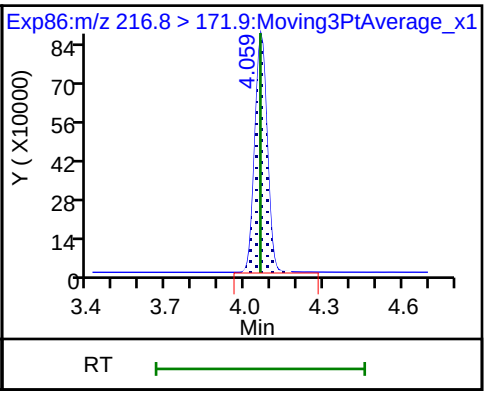
D 1 13C3PFPrA



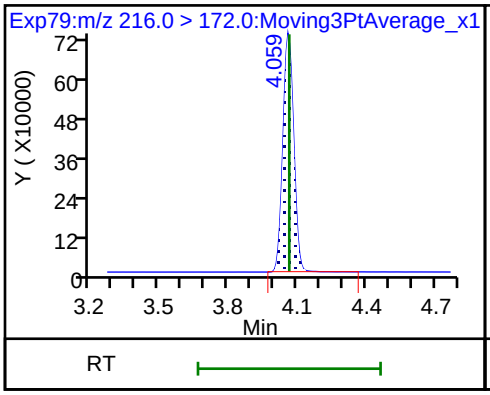
2 Perfluoropropionic acid



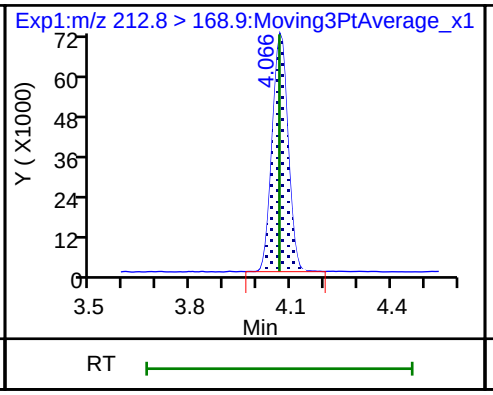
D 3 13C4-PFBA



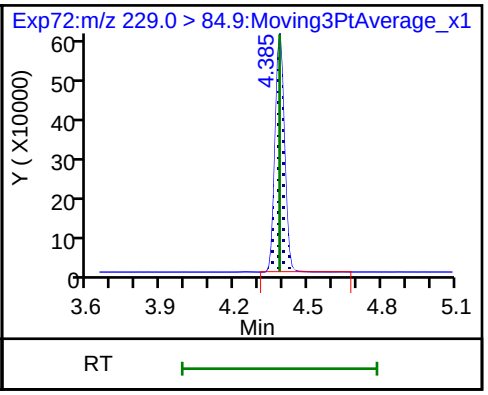
* 4 13C3PFBA



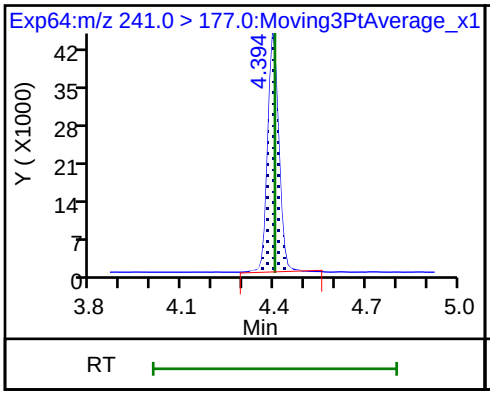
5 PFBA



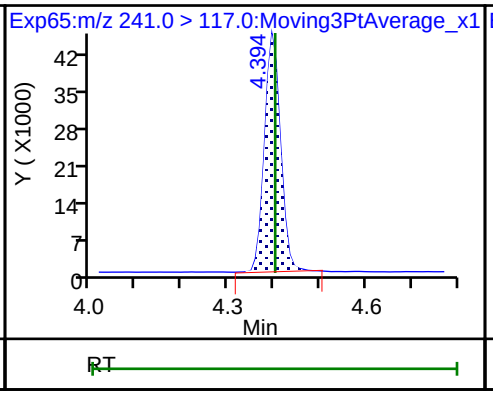
6 PFMPA



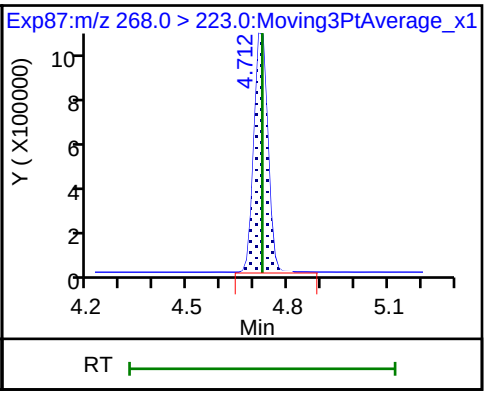
7 3:3 FTCA



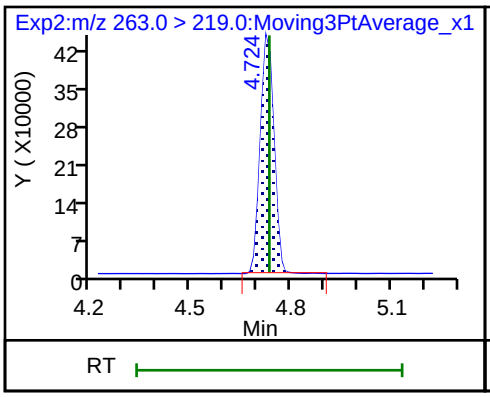
7 3:3 FTCA



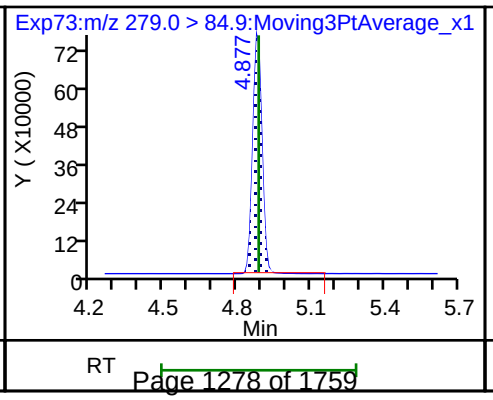
D 8 13C5 PFPeA



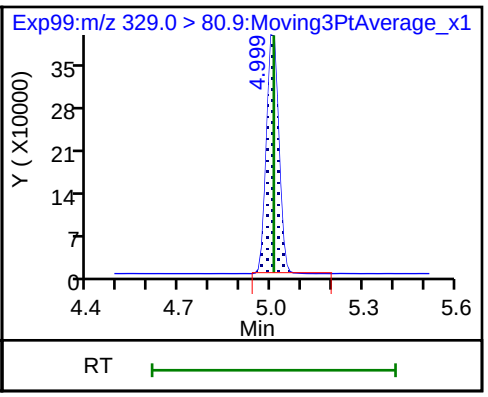
9 PFPA



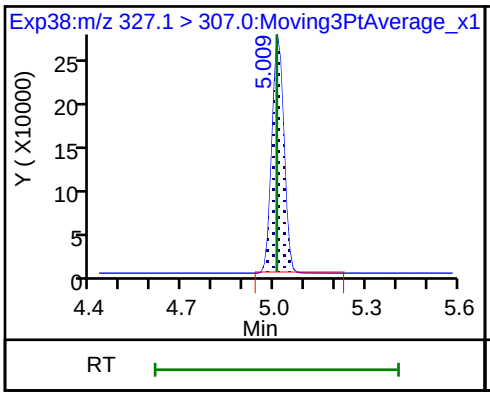
10 PFMBA



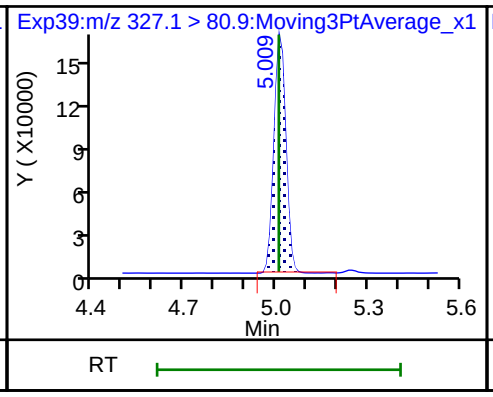
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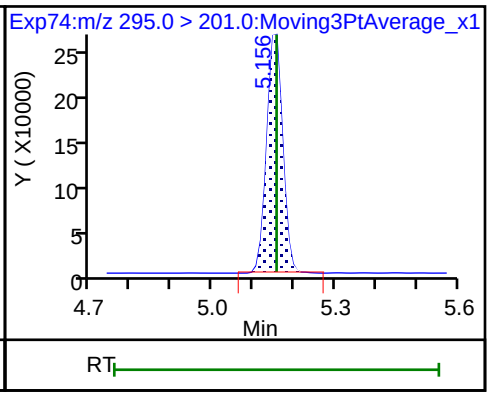
12 4:2FTS



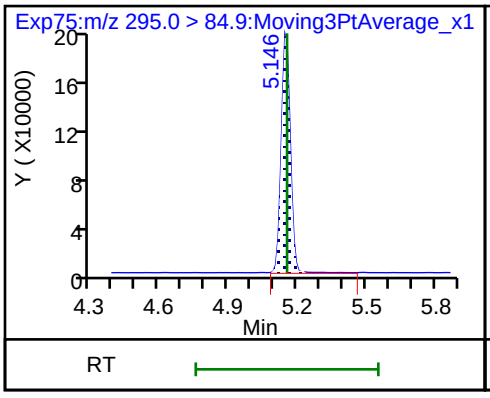
12 4:2FTS



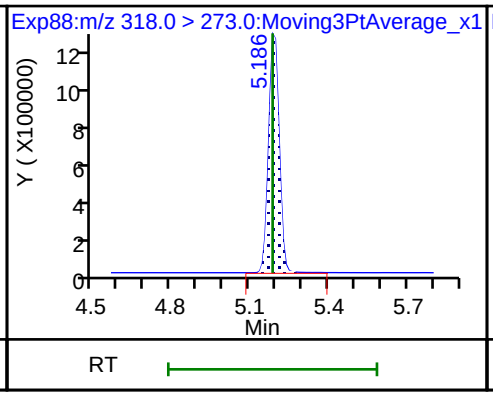
14 NFDHA



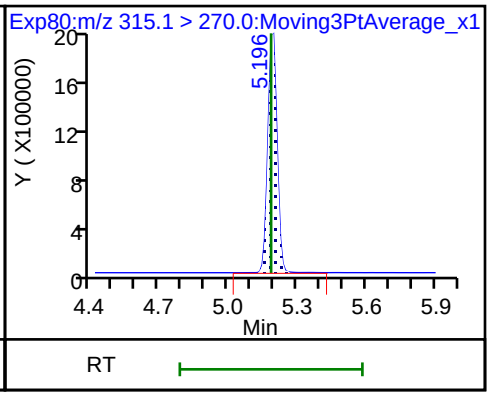
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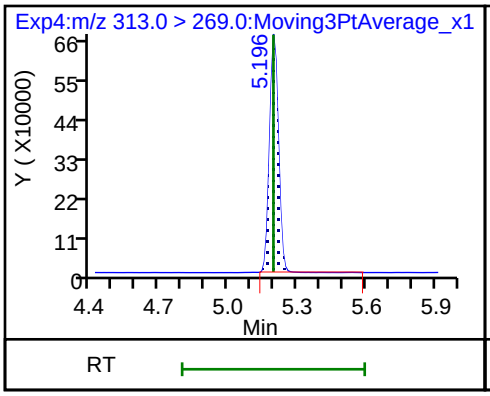
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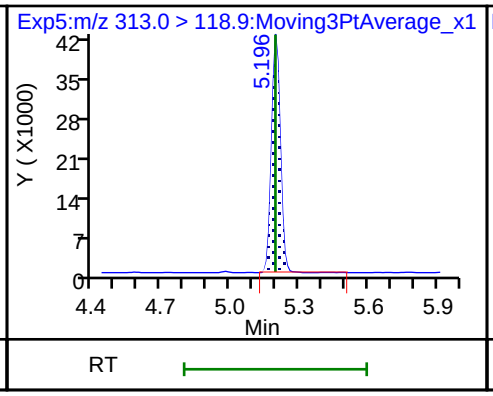
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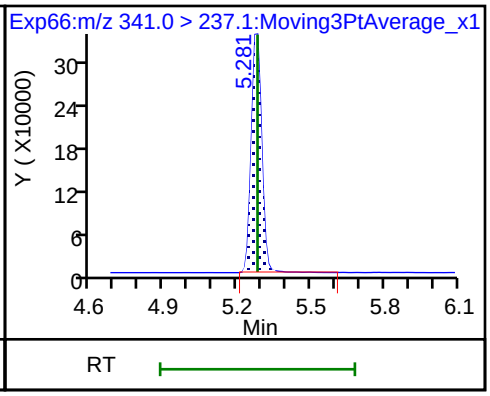
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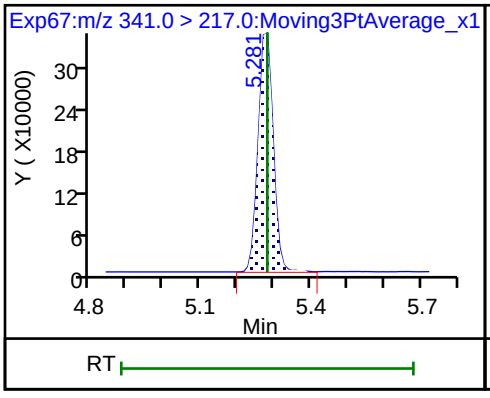
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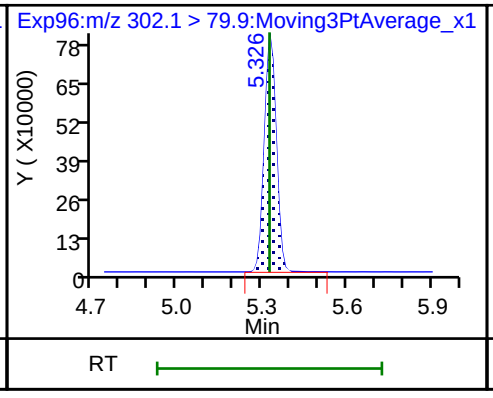
18 5:3 FTCA



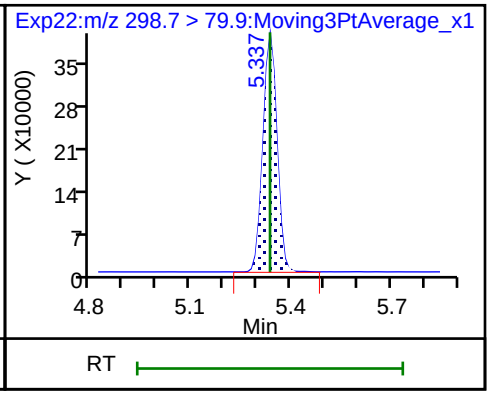
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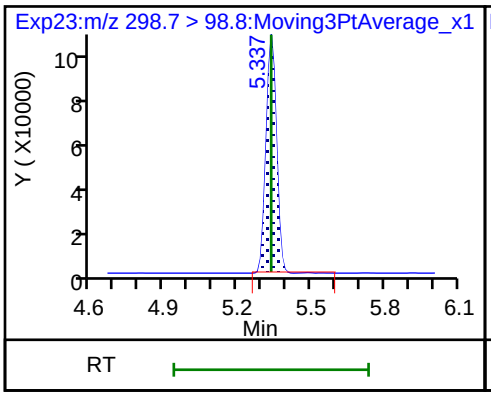
D 20 13C3 PFBS



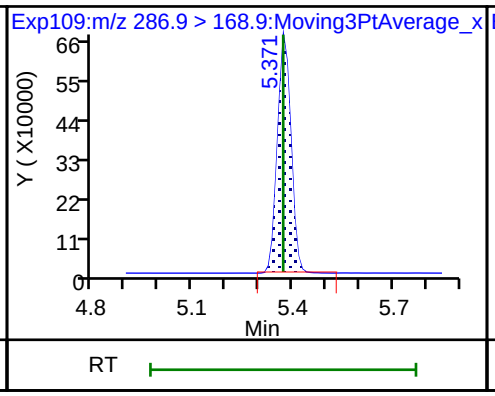
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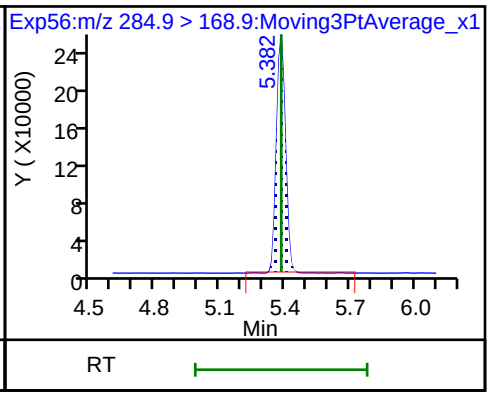
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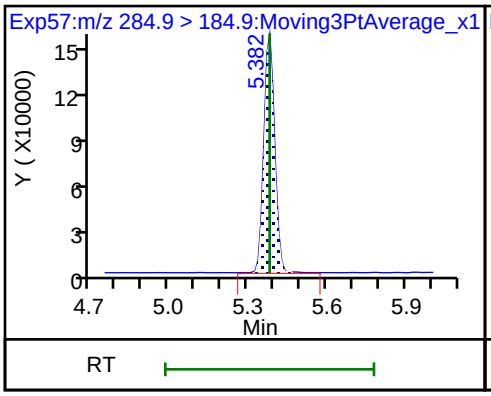
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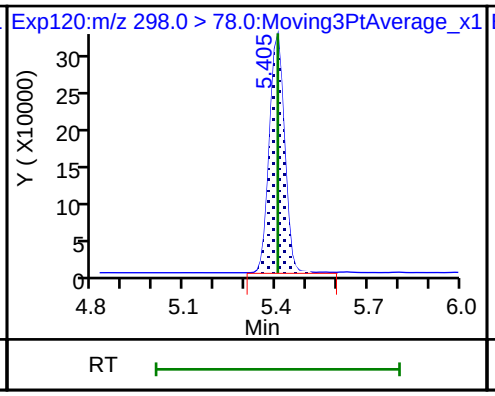
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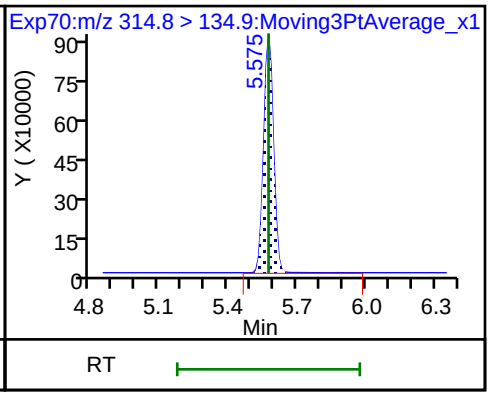
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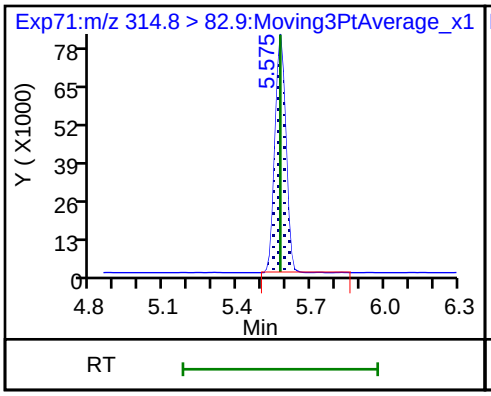
23 FBSA



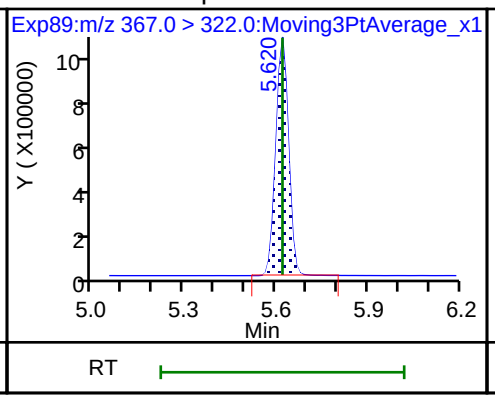
25 PFEESA



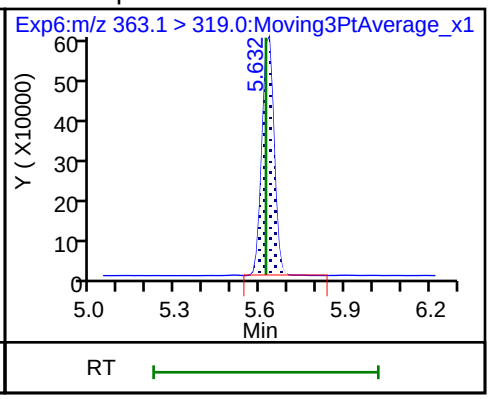
25 PFEESA



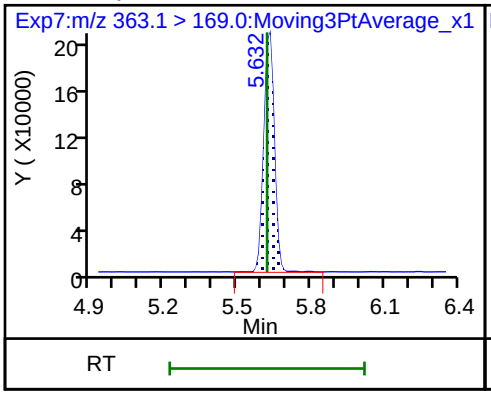
D 27 13C4 PFHpA



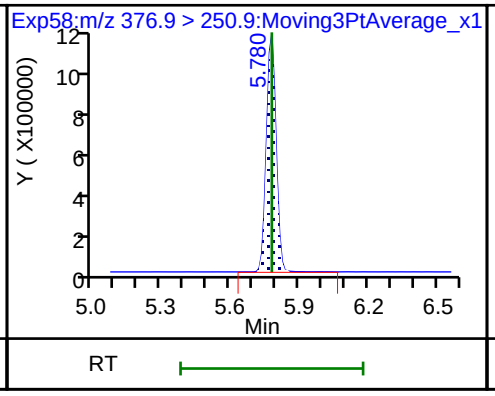
28 PFHpA



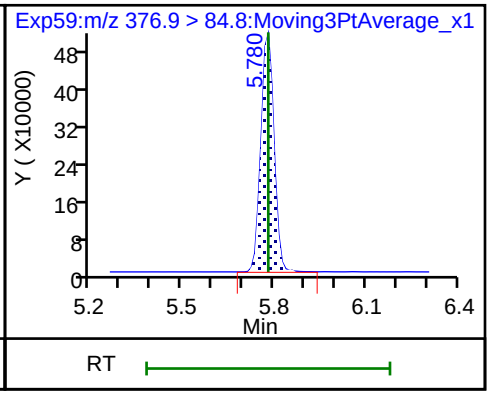
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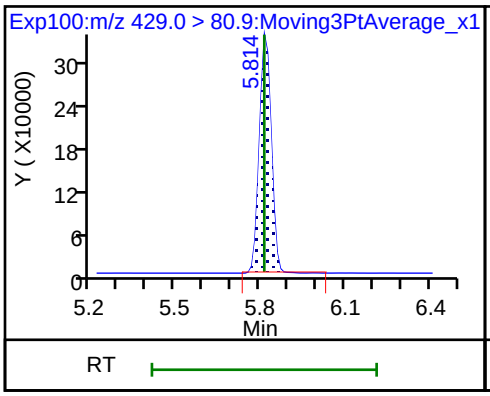
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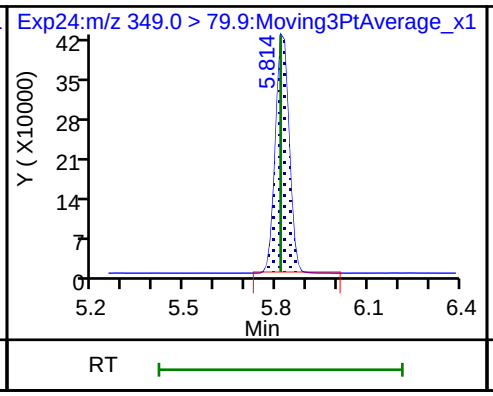
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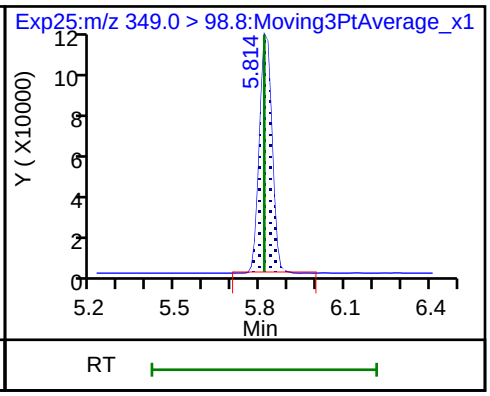
D 30 13C2-6:2FTS



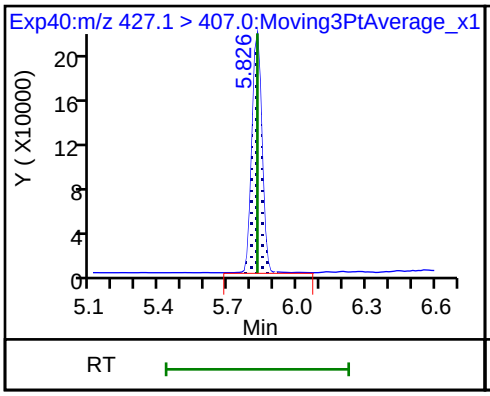
31 PFPeS



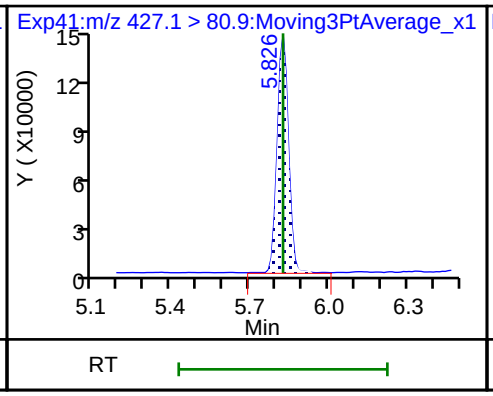
31 PFPeS



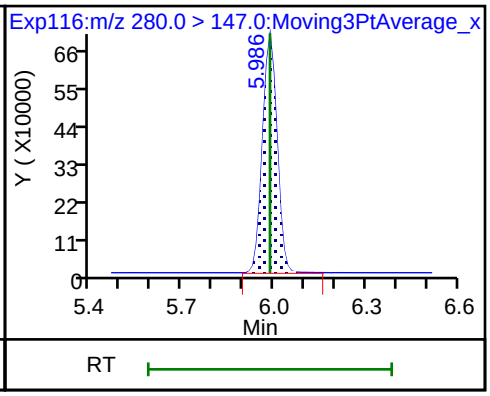
32 6:2FTS



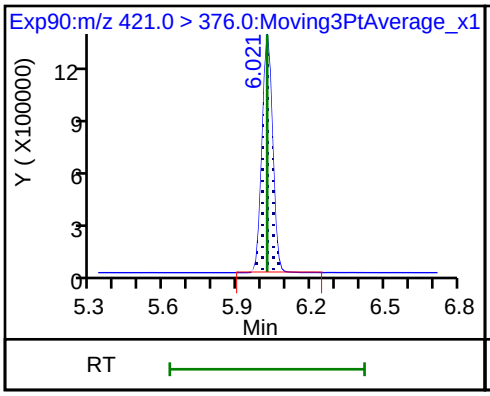
32 6:2FTS



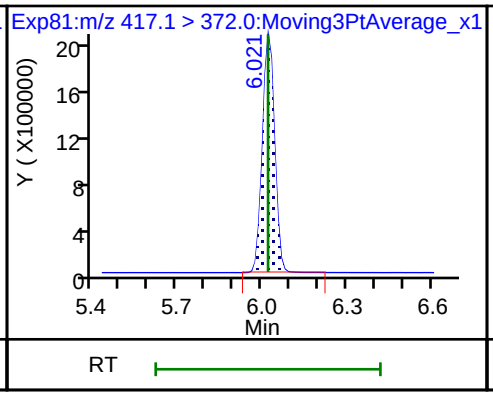
33 BTS



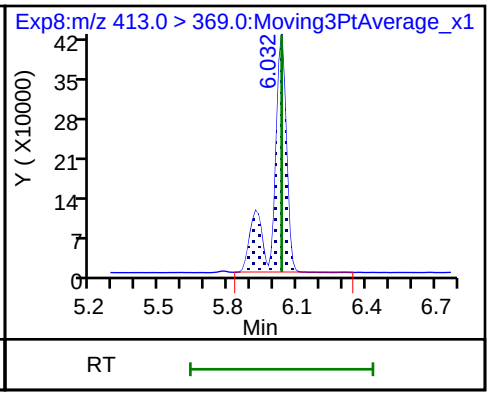
D 36 13C8 PFOA



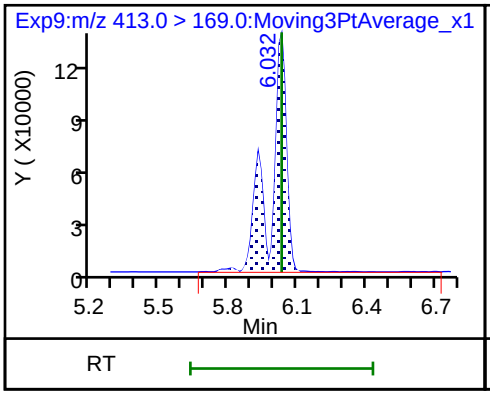
* 35 13C4 PFOA



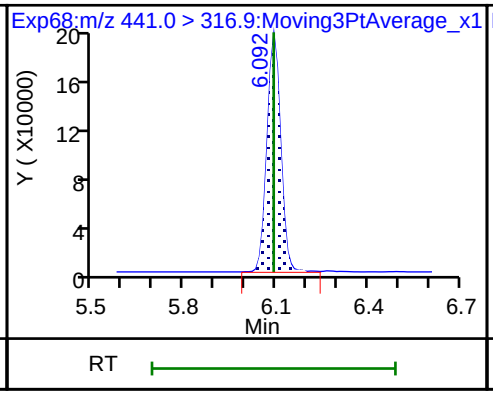
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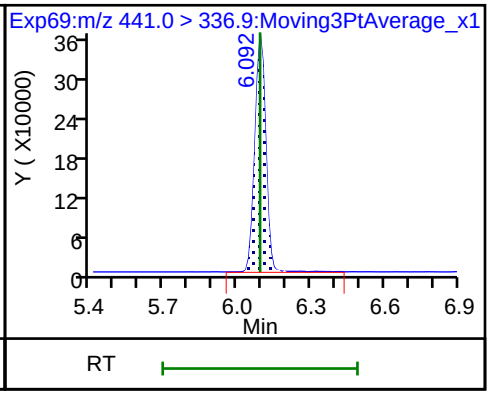
34 PFOA



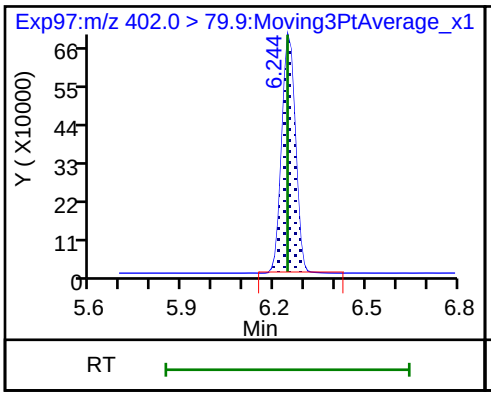
37 7:3 FTCA



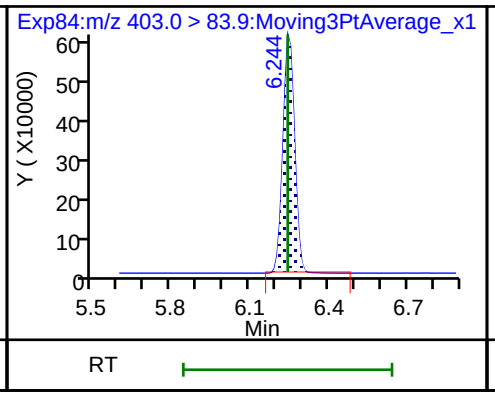
37 7:3 FTCA



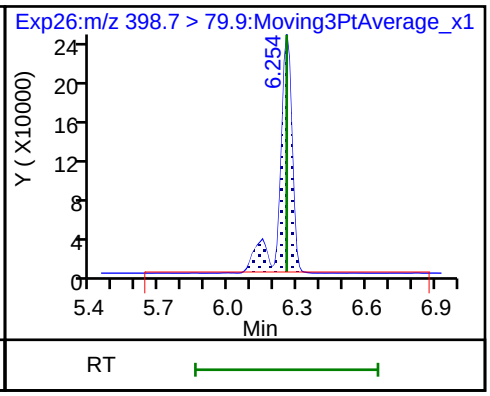
D 38 13C3 PFHxS



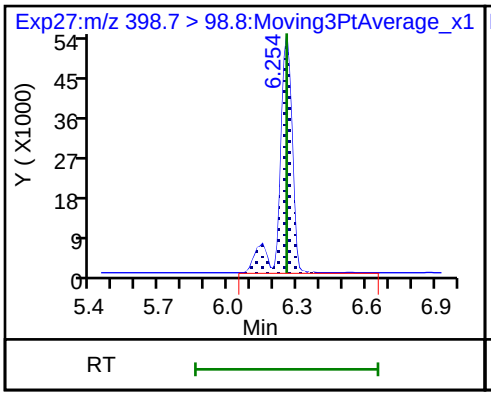
* 39 18O2 PFHxS



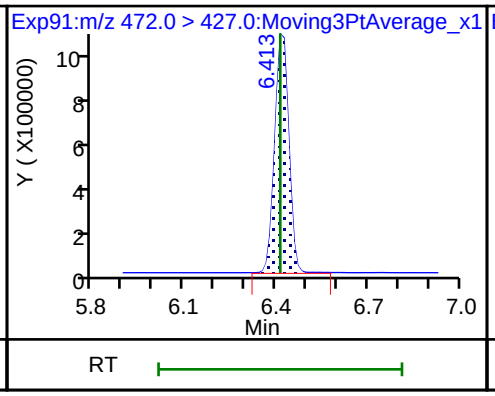
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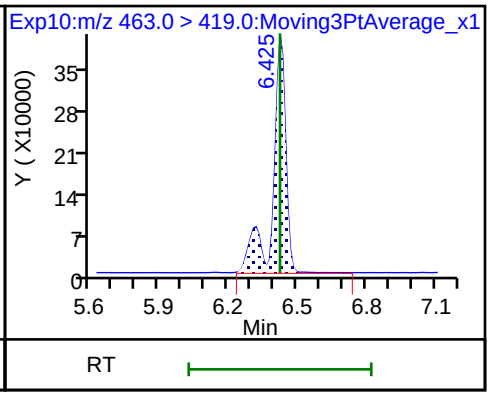
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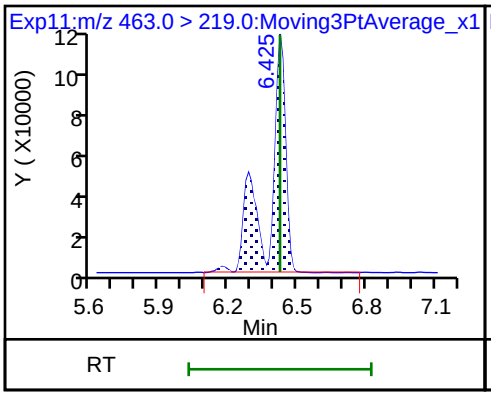
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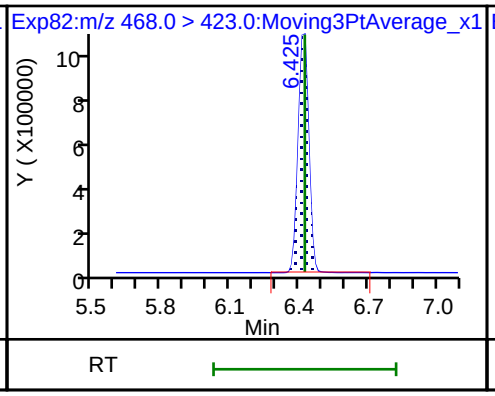
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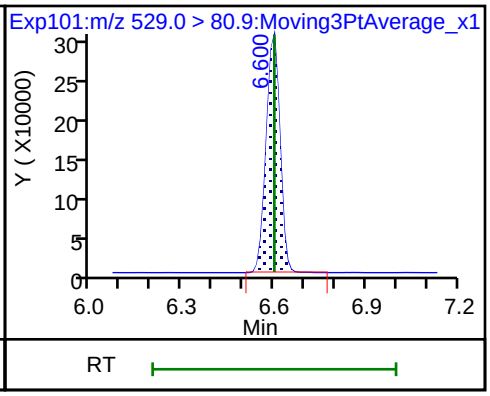
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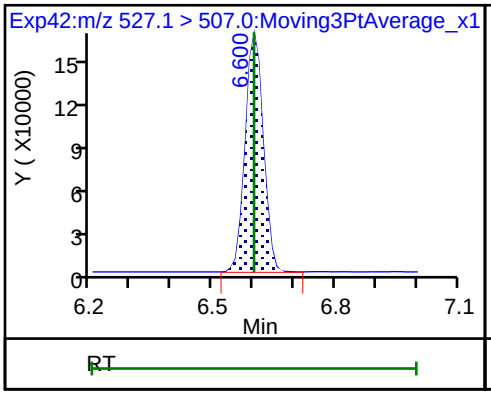
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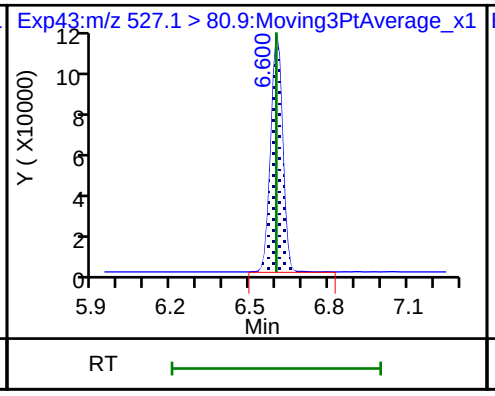
D 44 13C2-8:2FTS



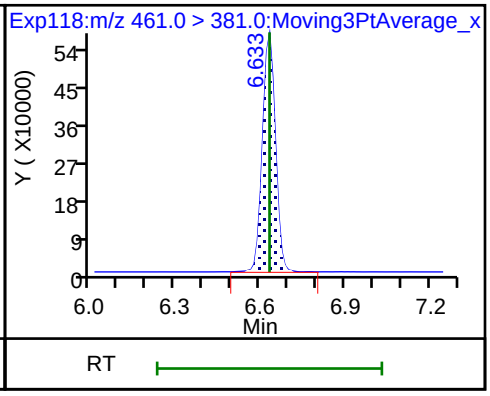
45 8:2FTS



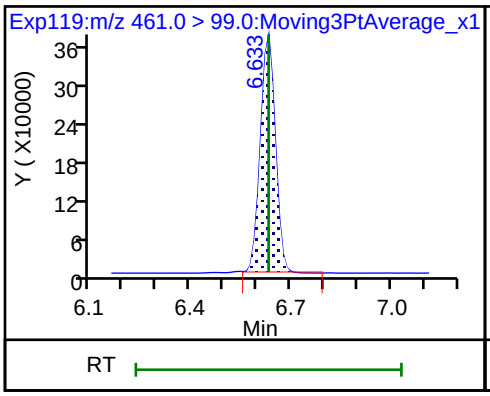
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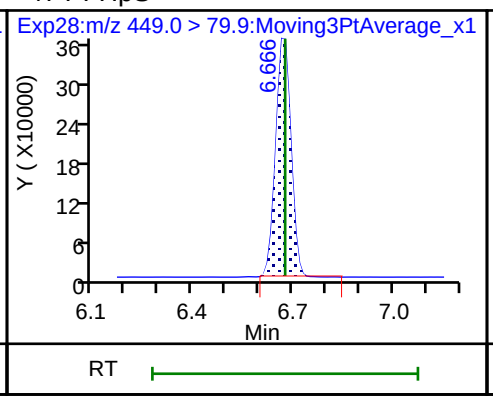
46 PFECHS



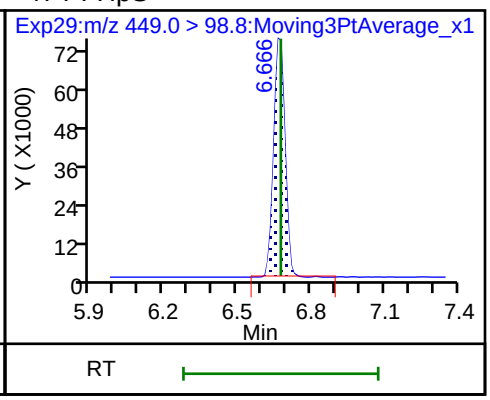
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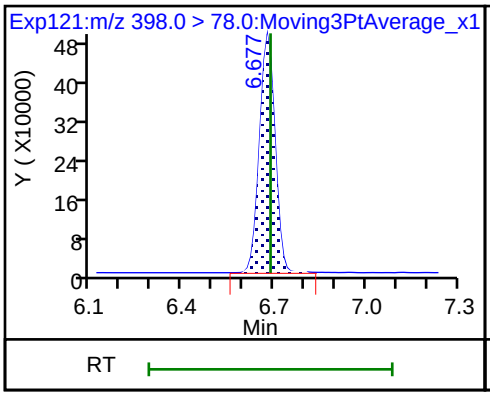
47 PFHpS



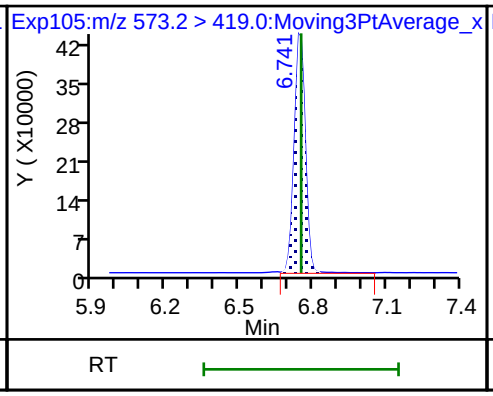
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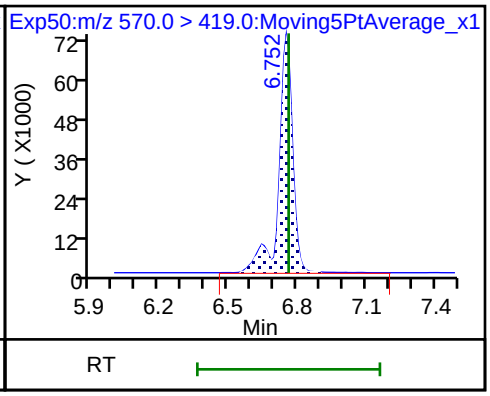
48 FHxSA



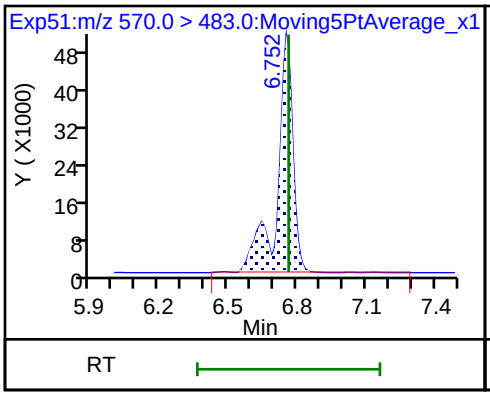
D 49 d3-NMeFOSAA



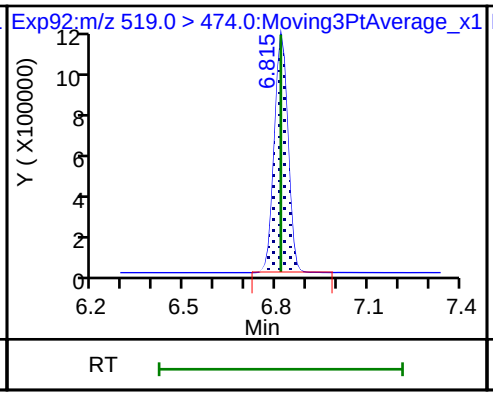
50 NMeFOSAA



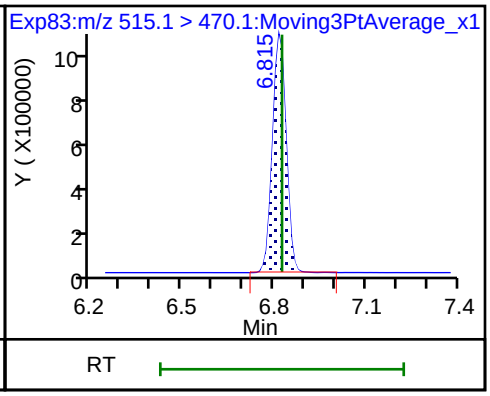
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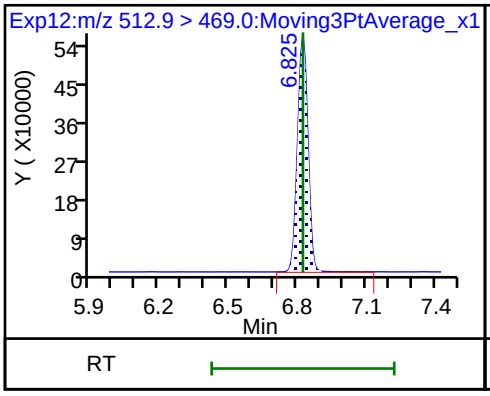
D 52 13C6 PFDA



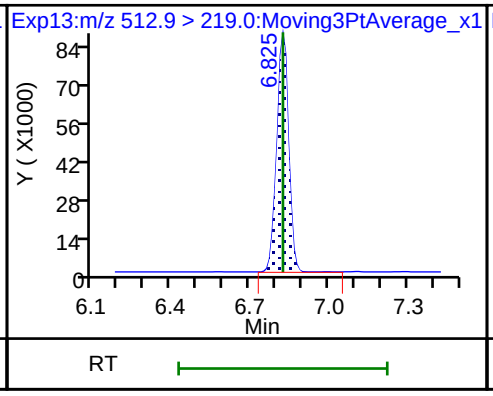
* 51 13C2 PFDA



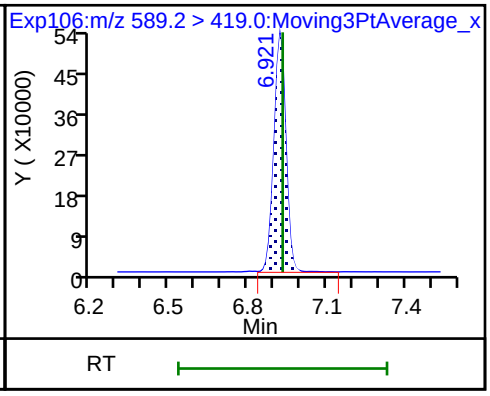
53 PFDA



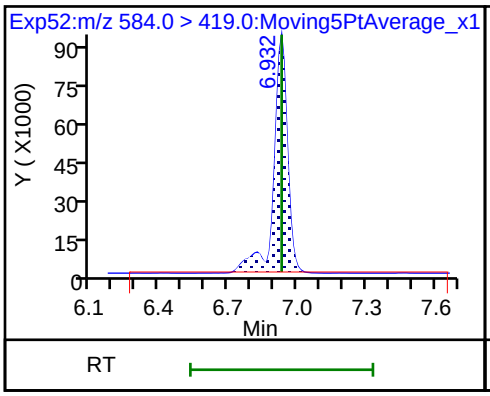
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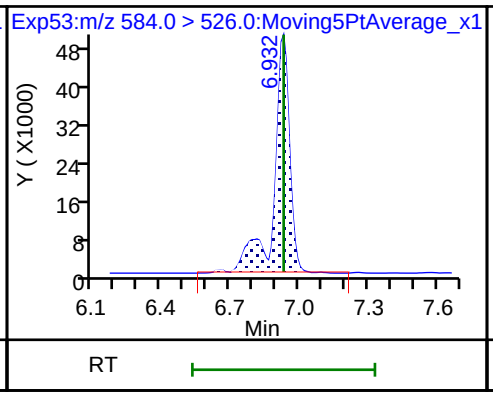
D 54 d5-NEtFOSAA



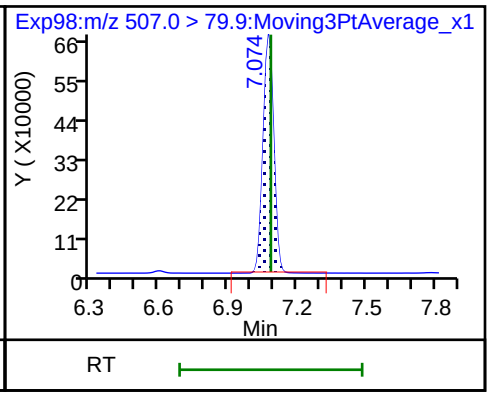
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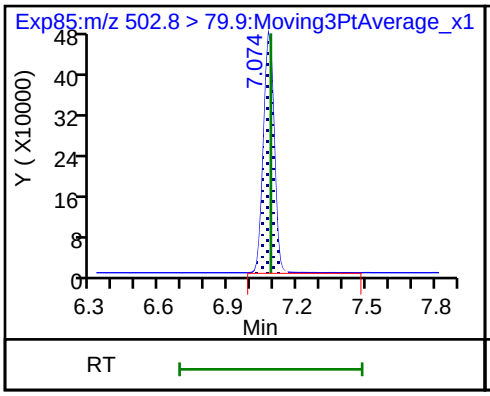
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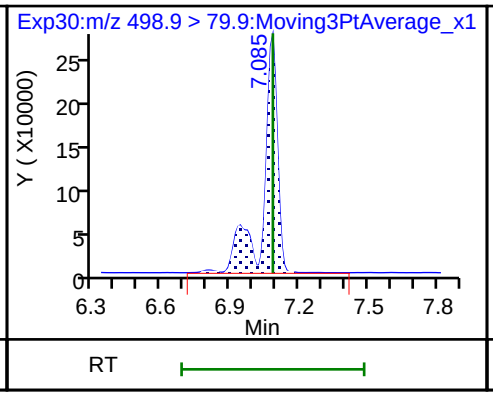
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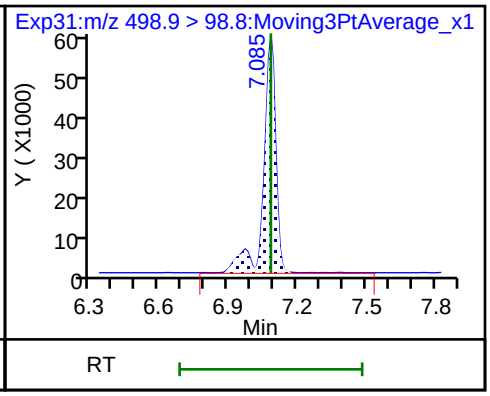
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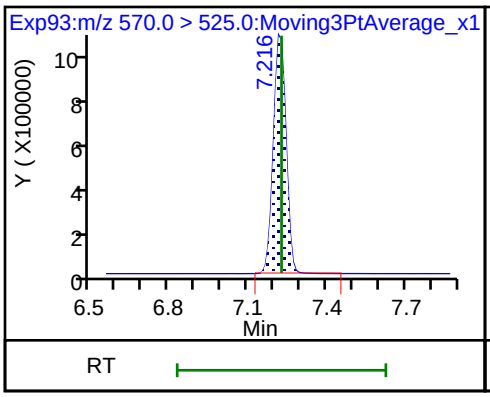
58 PFOS



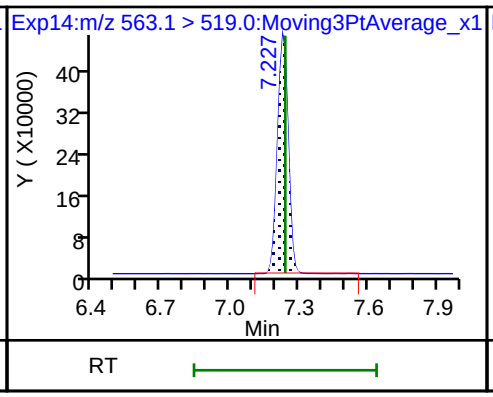
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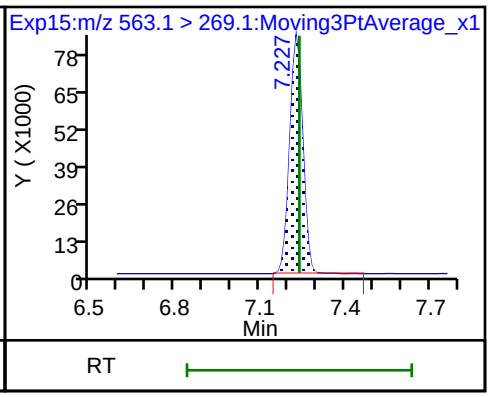
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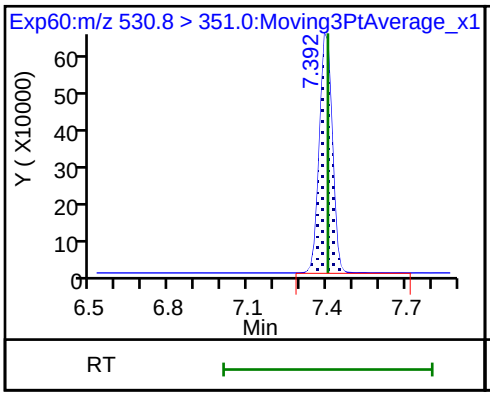
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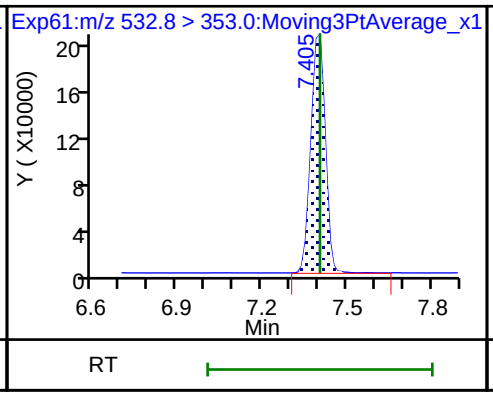
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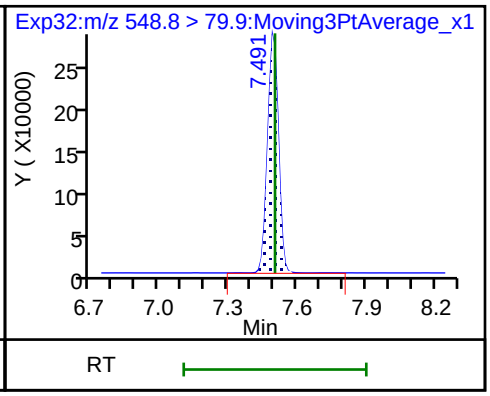
61 9ClFOS



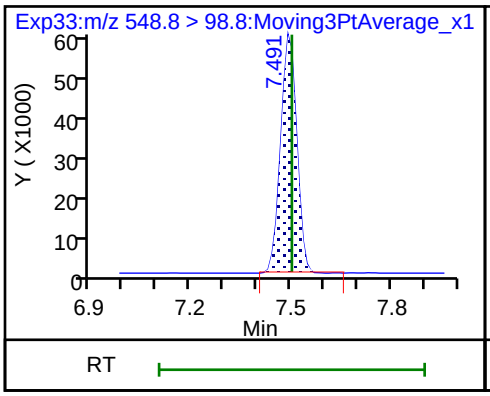
61 9ClFOS



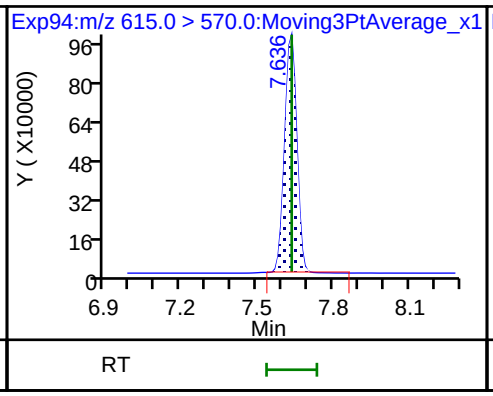
62 PFNS



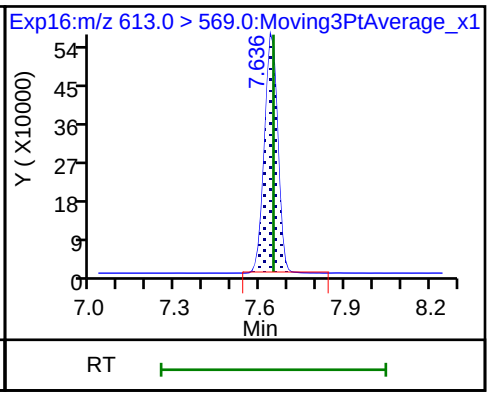
62 PFNS



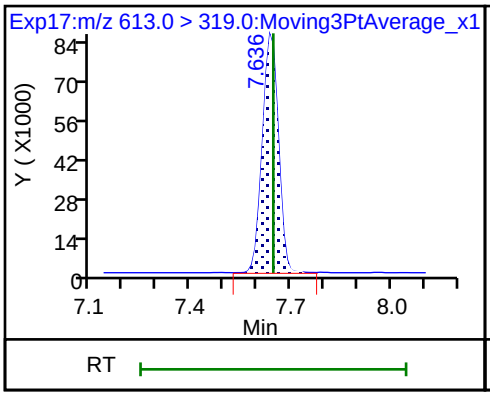
D 63 13C2 PFDoA



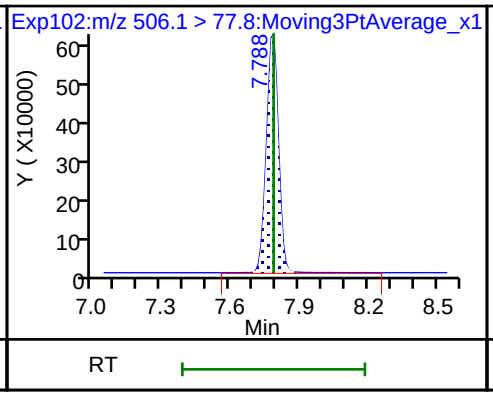
64 PFDoA



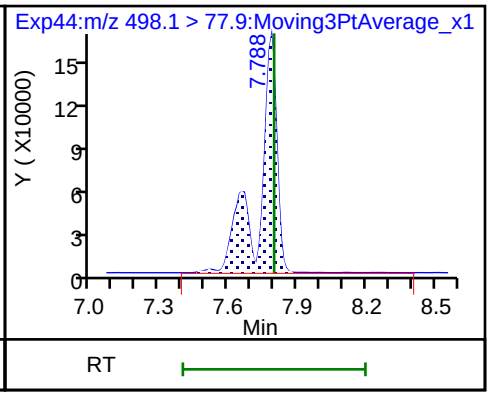
64 PFDoA



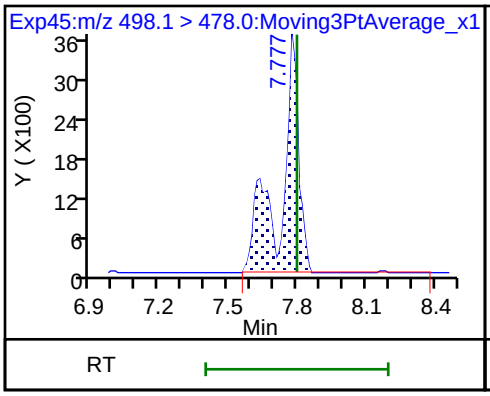
D 65 13C8 FOSA



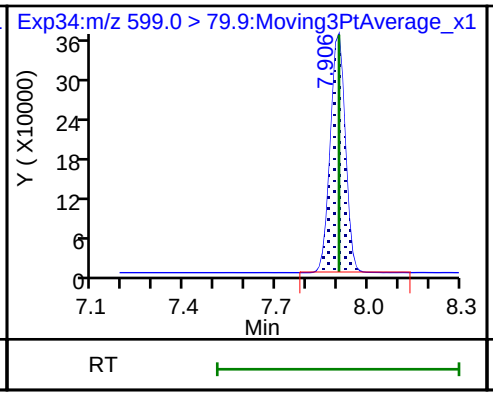
66 PFOSA



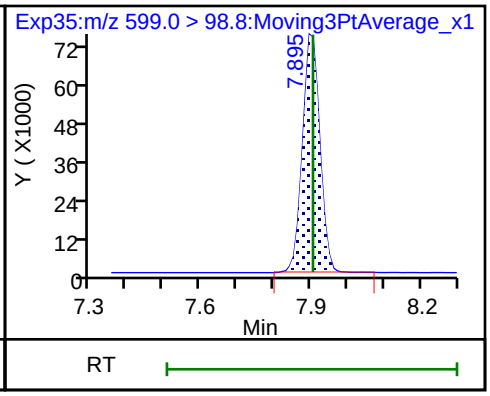
66 PFOSA



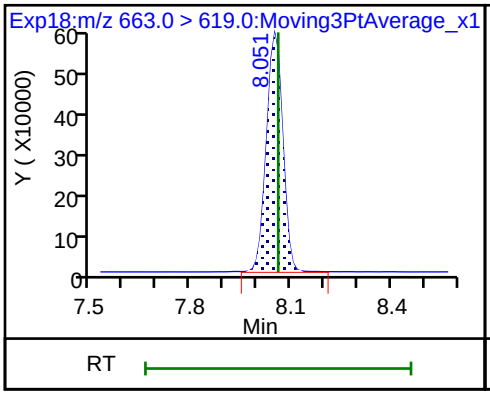
67 PFDS



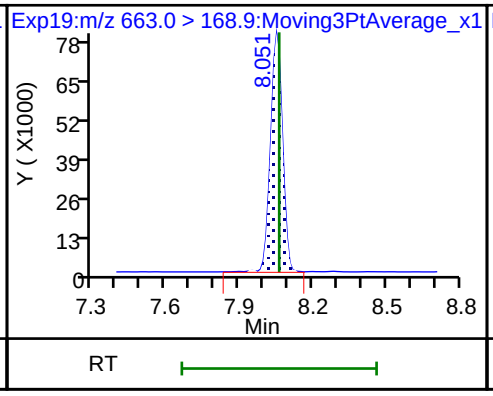
67 PFDS



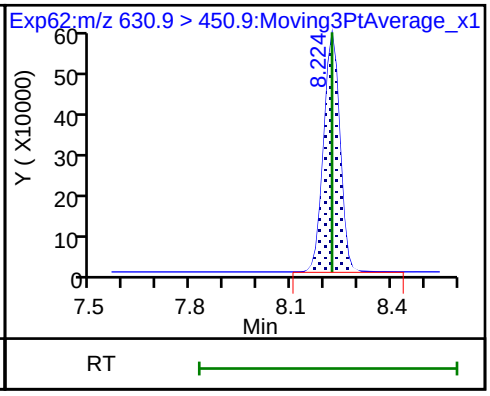
68 PFTrDA



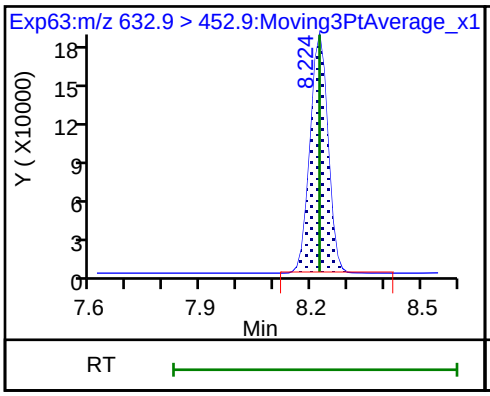
68 PFTrDA



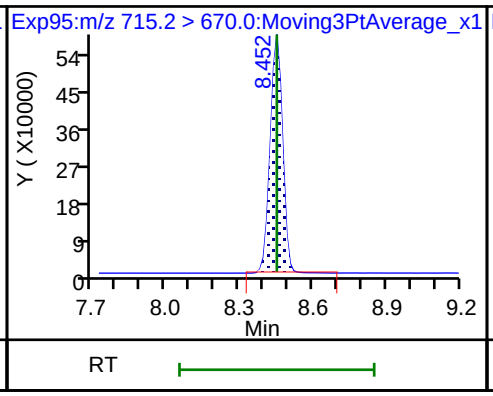
69 11ClFOS



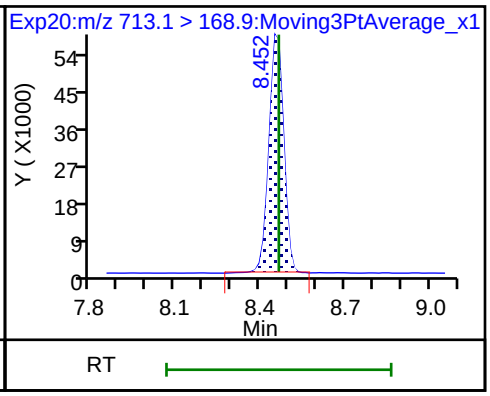
69 11ClFOS



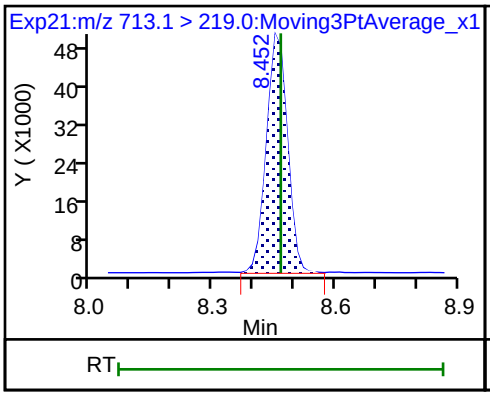
D 70 13C2 PFTeDA



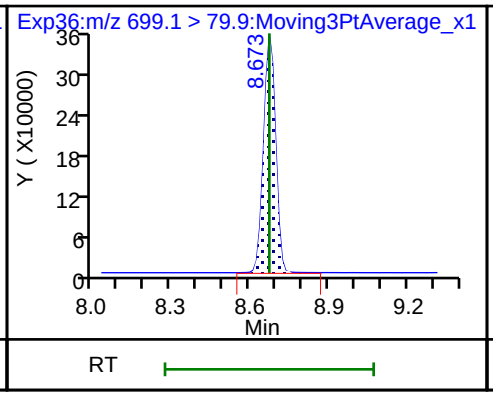
71 PFTeDA



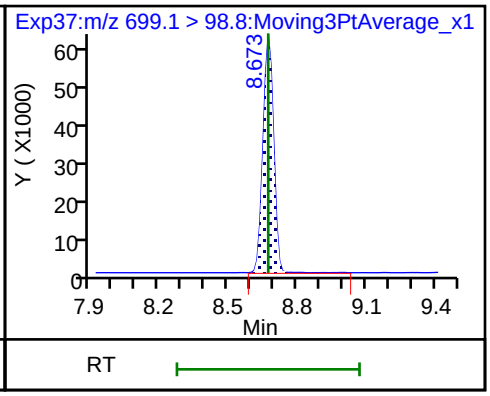
71 PFTeDA



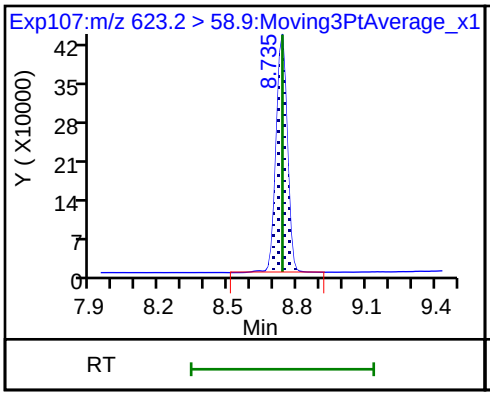
72 PFDoS



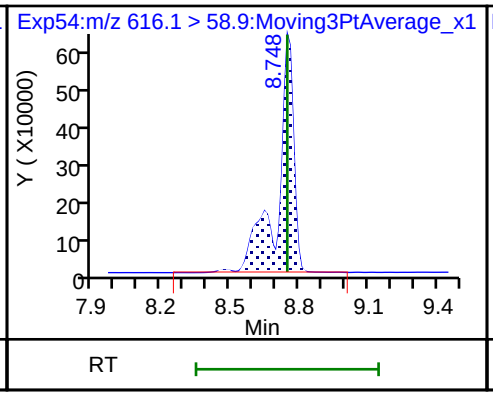
72 PFDoS



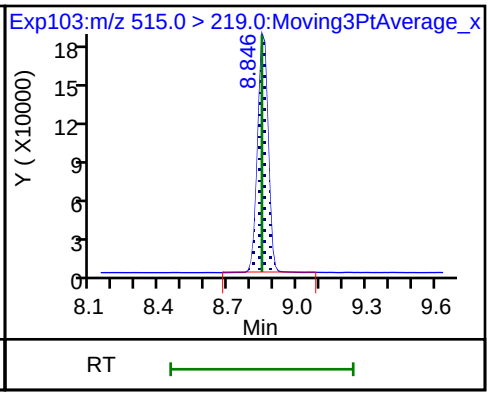
D 73 d7-N-Me-FOSE



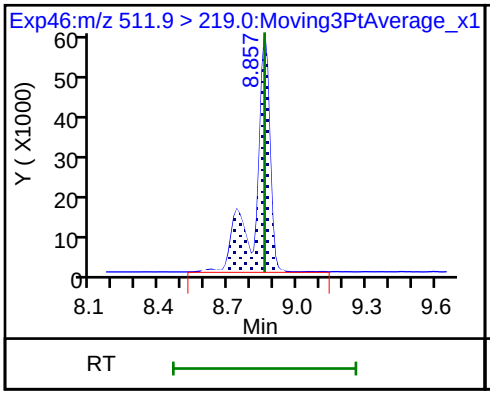
74 N-MeFOSE-M



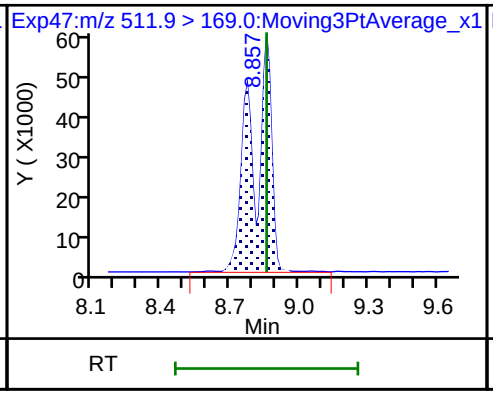
D 75 d3-NMePFOSA



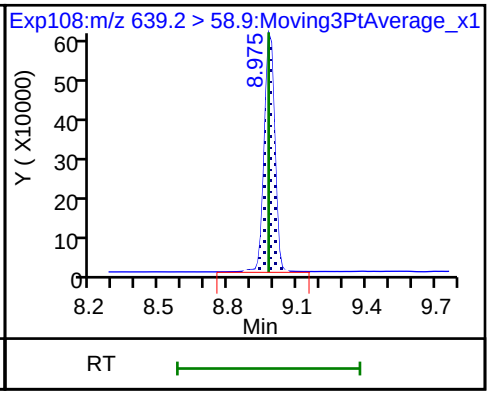
76 NMeFOSA



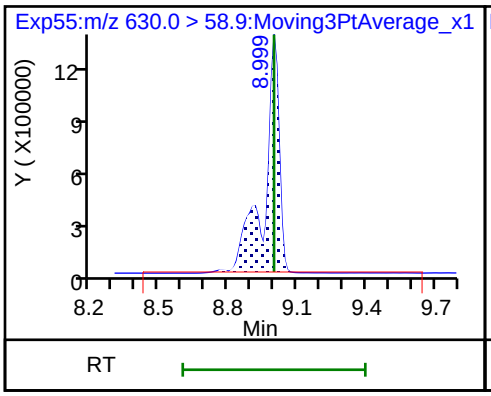
76 NMeFOSA



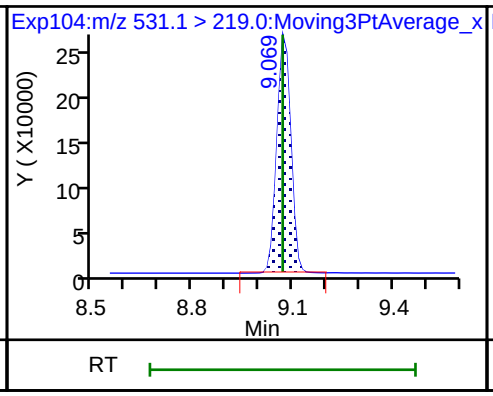
D 77 d9-N-EtFOSE



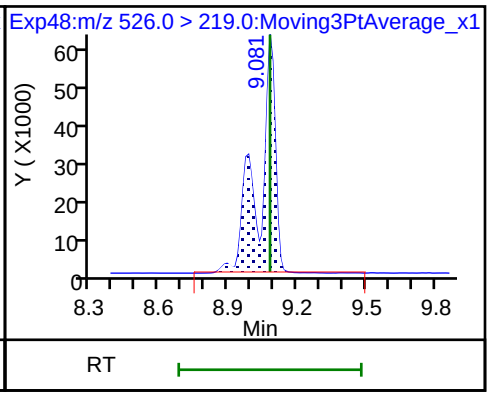
78 N-EtFOSE-M



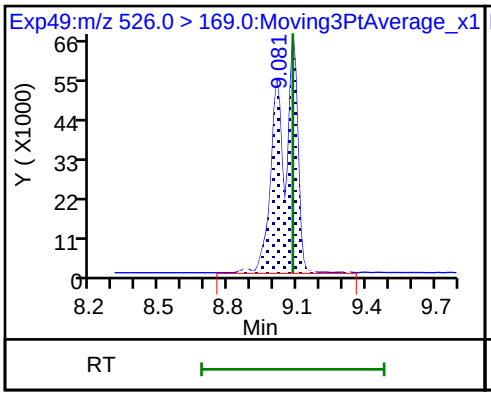
D 79 d5-NEtPFOSA



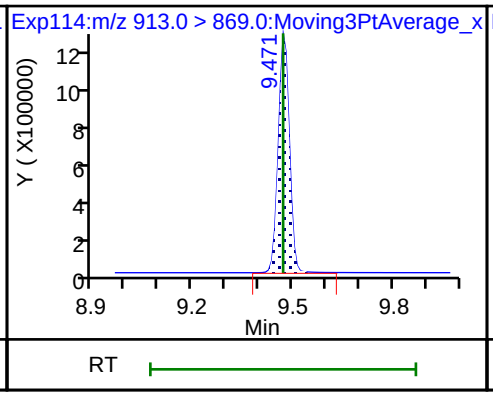
80 N-EtFOSA-M



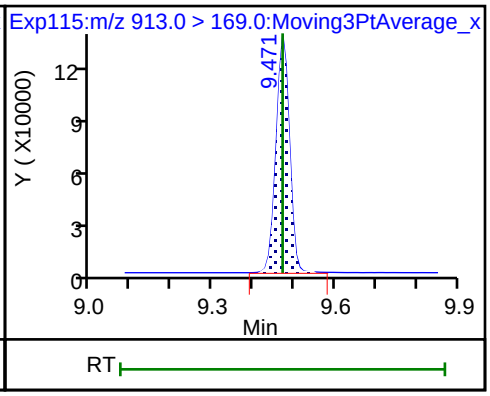
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-05.d
Lims ID: ICISAV CAL 5
Client ID:
Sample Type: ICISAV Calib Level: 5
Inject. Date: 04-Feb-2026 13:25:25 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICISAV CAL 5
Misc. Info.: 410-0174629-005 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 6
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:28 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:02:28
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.949	1.949	0.0	0.479	2377927	1.90		95.2	1387	
2 Perfluoropropionic acid										
163.0 > 119.0	1.957	1.957	0.0	1.004	14437181	13.0		104	1609	
D 3 13C4-PFBA										
216.8 > 171.9	4.058	4.058	0.0	0.998	2851606	1.94		96.9	6452	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.065	0.0		2526938	2.00			6204	
5 PFBA										
212.8 > 168.9	4.065	4.065	0.0	1.002	603838	5.04		101	1439	
6 PFMPA										
229.0 > 84.9	4.384	4.384	0.0	0.928	4257128	2.65		106	7329	
7 3:3 FTCA										
241.0 > 177.0	4.402	4.402	0.0	0.932	294950	5.14	Target=1.05	103	3375	
241.0 > 117.0	4.402	4.402	0.0	0.932	283572		1.04(0.53-1.58)	103	1821	
D 8 13C5 PFPeA										
268.0 > 223.0	4.723	4.723	0.0	0.911	2848934	1.95		97.6	5621	
9 PFPA										
263.0 > 219.0	4.735	4.735	0.0	1.003	3378751	2.65		106	4735	
10 PFMBA										
279.0 > 84.9	4.885	4.885	0.0	1.034	5126135	2.62		105	6792	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.008	5.008	0.0	0.802	1009443	4.51		96.2	4365	
12 4:2FTS										
327.1 > 307.0	5.008	5.008	0.0	1.000	1893313	5.07	Target=1.61	108	5819	
327.1 > 80.9	5.008	5.008	0.0	1.000	1155123		1.64(0.80-2.41)	108	2190	

Report Date: 04-Feb-2026 20:47:29 Chrom Revision: 2.3 29-Jan-2026 10:42:58
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-05.d
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.155	5.155	0.0	0.994	1888782	2.65	Target=1.33	106	4959	
295.0 > 84.9	5.145	5.155	-0.010	0.992	1378615		1.37(0.67-2.00)	106	4694	
D 16 13C5 PFHxA										
318.0 > 273.0	5.185	5.185	0.0	1.000	3387343	1.93		96.7	6825	
* 15 13C2 PFHxA										
315.1 > 270.0	5.185	5.185	0.0		5844844	5.00			8769	
17 PFHxA										
313.0 > 269.0	5.196	5.196	0.0	1.002	4740416	2.67	Target=16.27	107	5233	
313.0 > 118.9	5.196	5.196	0.0	1.002	278902		17.00(8.13-24.40)	107	2066	
18 5:3 FTCA										
341.0 > 237.1	5.281	5.281	0.0	1.018	2665730	13.0	Target=1.06	104	2759	
341.0 > 217.0	5.269	5.281	-0.012	1.016	2493253		1.07(0.53-1.58)	104	2169	
D 20 13C3 PFBS										
302.1 > 79.9	5.325	5.325	0.0	0.853	2268156	1.84		98.9	6652	
19 PFBS										
298.7 > 79.9	5.337	5.337	0.0	1.002	2849794	2.34	Target=3.39	106	9114	
298.7 > 98.8	5.337	5.337	0.0	1.002	872989		3.26(1.70-5.09)	106	3872	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.370	5.370	0.0	1.036	1852407	1.87		93.4	3363	
22 HFPO-DA										
284.9 > 168.9	5.382	5.382	0.0	1.002	1938382	2.01	Target=1.73	107	3647	
284.9 > 184.9	5.382	5.382	0.0	1.002	1130764		1.71(0.87-2.60)	107	2980	
23 FBSA										
298.0 > 78.0	5.405	5.405	0.0	1.015	2961814	2.62		105	1410	
25 PFEESA										
314.8 > 134.9	5.574	5.574	0.0	1.075	6866989	2.38	Target=10.20	107	10538	
314.8 > 82.9	5.574	5.574	0.0	1.075	695786		9.87(5.10-15.30)	107	3563	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.620	0.0	1.084	3218249	1.99		99.6	6112	
28 PFHpA										
363.1 > 319.0	5.620	5.620	0.0	1.000	4525049	2.52	Target=3.01	101	3966	
363.1 > 169.0	5.620	5.620	0.0	1.000	1477404		3.06(1.50-4.51)	101	2813	
29 ADONA										
376.9 > 250.9	5.780	5.780	0.0	1.076	8601398	2.56	Target=2.15	108	8826	
376.9 > 84.8	5.768	5.780	-0.012	1.074	3999872		2.15(1.08-3.22)	108	4568	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.814	5.814	0.0	0.931	890984	4.60		96.6	3842	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.931	3353790	2.45	Target=3.70	104	7096	
349.0 > 98.8	5.814	5.814	0.0	0.931	927343		3.62(1.85-5.54)	104	4078	
32 6:2FTS										
427.1 > 407.0	5.825	5.825	0.0	1.002	1568556	5.02	Target=1.45	105	712	
427.1 > 80.9	5.825	5.825	0.0	1.002	1043689		1.50(0.72-2.17)	105	688	
33 BTS										
280.0 > 147.0	5.985	5.985	0.0	0.959	5954340	2.55		104	11236	
D 36 13C8 PFOA										
421.0 > 376.0	6.020	6.020	0.0	1.000	3716986	1.84		91.9	4654	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		6642146	5.00			6193	
34 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	4474027	2.70	Target=2.52	108	1813	
413.0 > 169.0	6.032	6.032	0.0	1.002	1754839		2.55(1.26-3.77)	108	2064	
37 7:3 FTCA										
441.0 > 316.9	6.091	6.091	0.0	1.175	1562012	13.1	Target=0.53	105	2137	
441.0 > 336.9	6.091	6.091	0.0	1.175	2886174		0.54(0.26-0.79)	105	2695	
D 38 13C3 PFHxS										
402.0 > 79.9	6.243	6.243	0.0	1.000	2123659	1.90		100	5130	
* 39 18O2 PFHxS										
403.0 > 83.9	6.243	6.243	0.0		1901746	1.90			5587	
40 PFHxS										
398.7 > 79.9	6.254	6.254	0.0	1.002	2304709	2.32	Target=4.48	102	8318	
398.7 > 98.8	6.254	6.254	0.0	1.002	507570		4.54(2.24-6.72)	102	1819	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	0.998	3411148	1.98		98.9	6712	
43 PFNA										
463.0 > 419.0	6.424	6.424	0.0	1.002	3910358	2.53	Target=2.90	101	4249	
463.0 > 219.0	6.424	6.424	0.0	1.002	1405283		2.78(1.45-4.35)	101	2558	
* 42 13C5 PFNA										
468.0 > 423.0	6.424	6.424	0.0		3508549	2.00			8069	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.600	6.600	0.0	1.057	929267	4.84		101	4033	
45 8:2FTS										
527.1 > 507.0	6.600	6.600	0.0	1.000	1340215	5.07	Target=1.40	106	3107	
527.1 > 80.9	6.600	6.600	0.0	1.000	921419		1.45(0.70-2.09)	106	2905	
46 PFECHS										
461.0 > 381.0	6.633	6.633	0.0	1.062	4814492	2.45	Target=1.63	106	4990	
461.0 > 99.0	6.633	6.633	0.0	1.062	2882409		1.67(0.81-2.44)	106	4206	
47 PFHpS										
449.0 > 79.9	6.676	6.676	0.0	0.942	2991423	2.52	Target=4.66	106	3538	
449.0 > 98.8	6.676	6.676	0.0	0.942	634997		4.71(2.33-6.98)	106	2151	
48 FHxSA										
398.0 > 78.0	6.687	6.687	0.0	1.071	4604820	2.58		103	3529	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.752	6.752	0.0	0.953	1362633	5.08		102	2026	
50 NMeFOSAA										
570.0 > 419.0	6.762	6.762	0.0	1.002	813450	2.63	Target=1.27	105	10227	
570.0 > 483.0	6.752	6.762	-0.010	1.000	646526		1.26(0.64-1.91)	105	136887	
D 52 13C6 PFDA										
519.0 > 474.0	6.814	6.814	0.0	0.998	3611812	1.97		98.4	6698	
* 51 13C2 PFDA										
515.1 > 470.1	6.825	6.825	0.0		3288397	2.00			5184	
53 PFDA										
512.9 > 469.0	6.825	6.825	0.0	1.002	4778678	2.65	Target=6.58	106	8027	
512.9 > 219.0	6.825	6.825	0.0	1.002	701804		6.81(3.29-9.87)	106	2229	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.932	6.932	0.0	0.978	1680203	4.97		99.5	3665	
55 NEtFOSAA										
584.0 > 419.0	6.932	6.932	0.0	1.000	1014878	2.65	Target=1.61	106	2143	
584.0 > 526.0	6.932	6.932	0.0	1.000	620403		1.64(0.80-2.41)	106	2330	
D 56 13C8 PFOS										
507.0 > 79.9	7.084	7.084	0.0	1.000	2120134	1.90		99.0	510	
* 57 13C4 PFOS										
502.8 > 79.9	7.084	7.084	0.0		1542746	1.92			5785	
58 PFOS										
498.9 > 79.9	7.084	7.084	0.0	1.000	3126440	2.43	Target=5.51	105	5924	
498.9 > 98.8	7.084	7.084	0.0	1.000	563497		5.55(2.75-8.26)	105	3765	
D 59 13C7 PFUnA										
570.0 > 525.0	7.227	7.227	0.0	1.059	3592995	1.96		98.0	9812	
60 PFUnA										
563.1 > 519.0	7.239	7.239	0.0	1.002	4073037	2.54	Target=5.78	102	6018	
563.1 > 269.1	7.239	7.239	0.0	1.002	713438		5.71(2.89-8.67)	102	3012	
61 9ClFOS										
530.8 > 351.0	7.405	7.405	0.0	1.045	5635698	2.42	Target=3.05	104	18958	
532.8 > 353.0	7.405	7.405	0.0	1.045	1817499		3.10(1.52-4.57)	104	10825	
62 PFNS										
548.8 > 79.9	7.503	7.503	0.0	1.059	2438449	2.51	Target=4.62	104	6208	
548.8 > 98.8	7.503	7.503	0.0	1.059	554363		4.40(2.31-6.93)	104	3908	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.119	3355712	1.93		96.6	3624	
64 PFDoA										
613.0 > 569.0	7.647	7.647	0.0	1.001	4678080	2.59	Target=6.26	104	8592	
613.0 > 319.0	7.647	7.647	0.0	1.001	748493		6.25(3.13-9.39)	104	3150	
D 65 13C8 FOSA										
506.1 > 77.8	7.788	7.788	0.0	1.099	2170696	1.94		97.0	4219	
66 PFOSA										
498.1 > 77.9	7.799	7.799	0.0	1.001	2344136	2.60	Target=42.30	104	3261	
498.1 > 478.0	7.799	7.799	0.0	1.001	53267		44.01(21.15-63.45)	104	9806	
67 PFDS										
599.0 > 79.9	7.906	7.906	0.0	1.116	3169327	2.57	Target=4.95	107	9041	
599.0 > 98.8	7.906	7.906	0.0	1.116	637413		4.97(2.48-7.43)	107	2808	
68 PFTrDA										
663.0 > 619.0	8.061	8.061	0.0	0.954	5268071	2.62	Target=7.25	105	4062	
663.0 > 168.9	8.061	8.061	0.0	0.954	717787		7.34(3.63-10.88)	105	3571	
69 11ClFOS										
630.9 > 450.9	8.224	8.224	0.0	1.161	5087998	2.50	Target=3.03	106	13324	
632.9 > 452.9	8.224	8.224	0.0	1.161	1655461		3.07(1.51-4.54)	106	11042	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.452	8.452	0.0	1.238	2042629	1.96		98.1	3170	
71 PFTeDA										
713.1 > 168.9	8.466	8.466	0.0	1.002	562264	2.55	Target=1.21	102	2740	
713.1 > 219.0	8.466	8.466	0.0	1.002	476735		1.18(0.61-1.82)	102	2064	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.673	8.673	0.0	1.224	3023856	2.65	Target=5.37	109	9471	
699.1 > 98.8	8.673	8.673	0.0	1.224	538899		5.61(2.69-8.06)	109	5306	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.735	8.735	0.0	1.233	1375399	4.82		96.3	427	
74 N-MeFOSE-M										
616.1 > 58.9	8.748	8.748	0.0	1.001	8204030	13.4		107	1733	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.845	8.845	0.0	1.249	548015	1.96		98.0	2325	
76 NMeFOSA										
511.9 > 219.0	8.857	8.857	0.0	1.001	664499	2.61	Target=0.75	104	1891	
511.9 > 169.0	8.857	8.857	0.0	1.001	882372		0.75(0.37-1.12)	104	1266	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.975	8.975	0.0	1.267	1867355	4.89		97.9	674	
78 N-EtFOSE-M										
630.0 > 58.9	8.998	8.998	0.0	1.003	14995559	13.1		105	2831	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.069	9.069	0.0	1.280	741041	1.94		97.1	2652	
80 N-EtFOSA-M										
526.0 > 219.0	9.081	9.081	0.0	1.001	808234	2.59	Target=0.84	104	2086	
526.0 > 169.0	9.081	9.081	0.0	1.001	981767		0.82(0.42-1.26)	104	1882	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.470	9.470	0.0	1.121	7070359	2.47	Target=9.33	98.7	36767	
913.0 > 169.0	9.462	9.470	-0.008	1.120	733728		9.64(4.66-13.99)	98.7	10243	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL5_00038 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:29 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-05.d

Injection Date: 04-Feb-2026 13:25:25 Instrument ID: 30637

Lims ID: ICISAV CAL 5

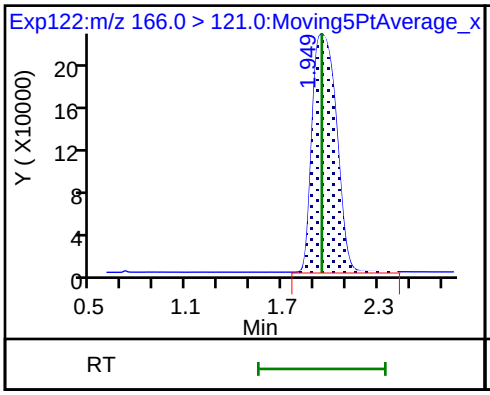
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 6 Worklist Smp#: 5

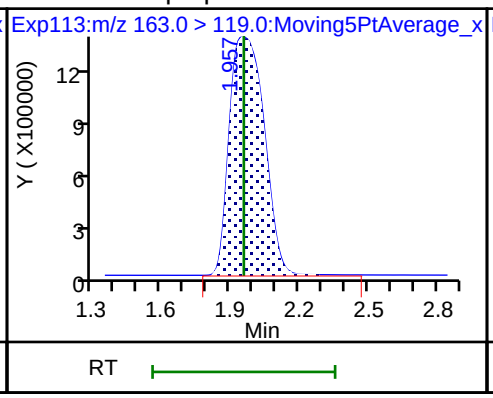
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

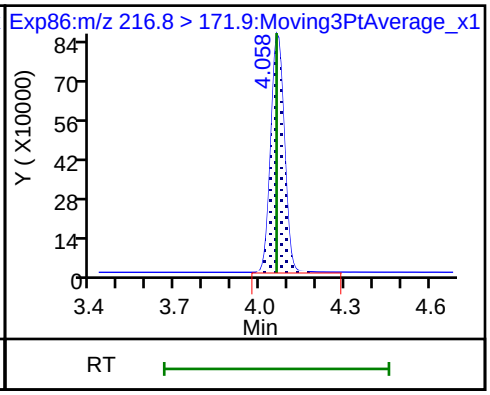
D 1 13C3PFPrA



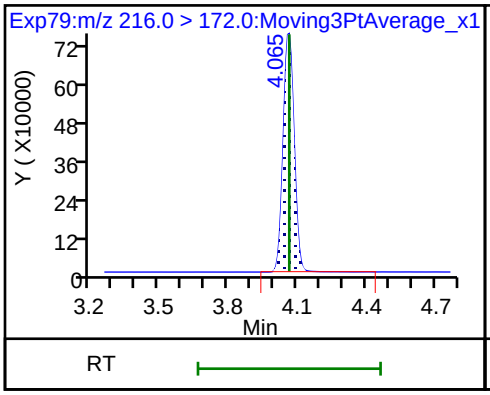
2 Perfluoropropionic acid



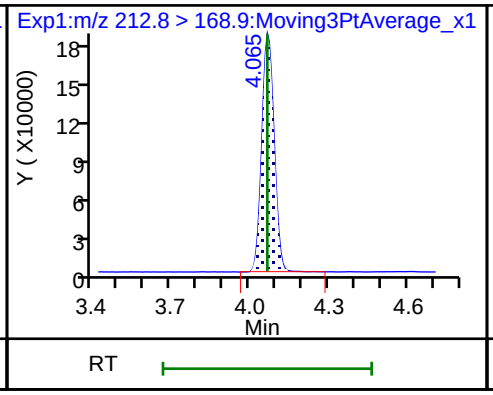
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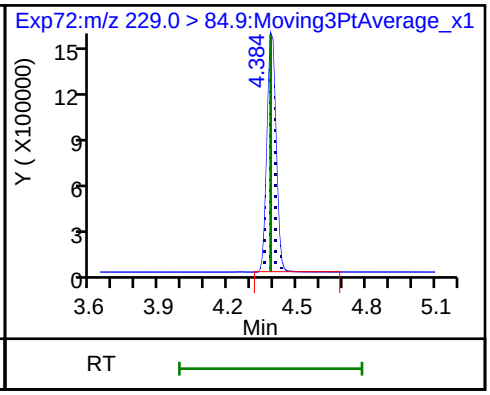
* 4 13C3PFBA



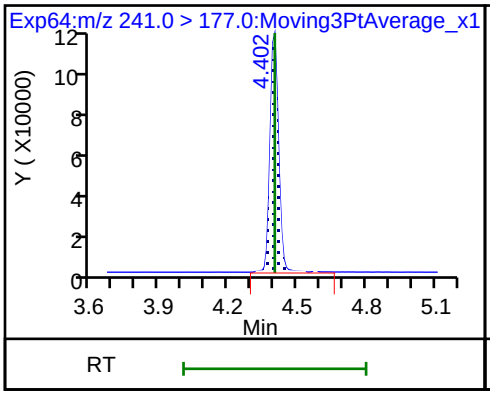
5 PFBA



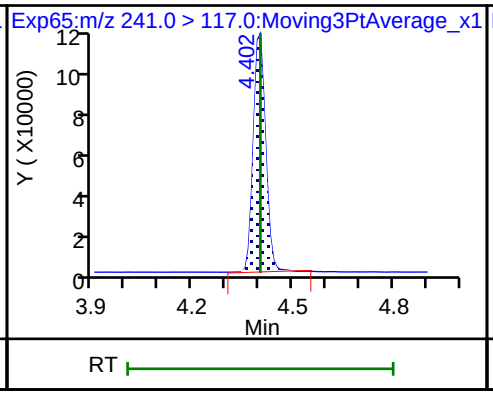
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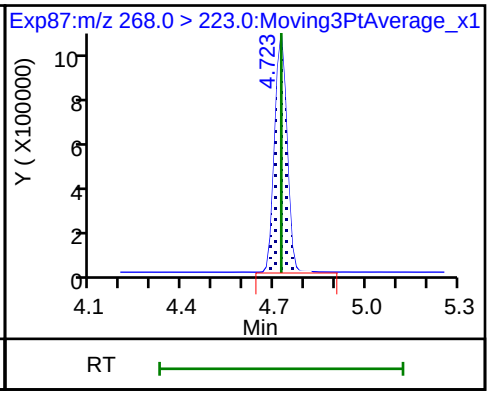
7 3:3 FTCA



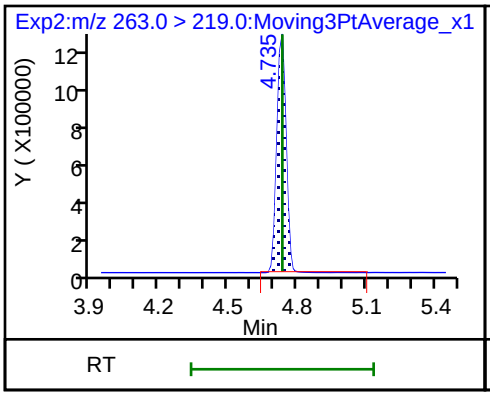
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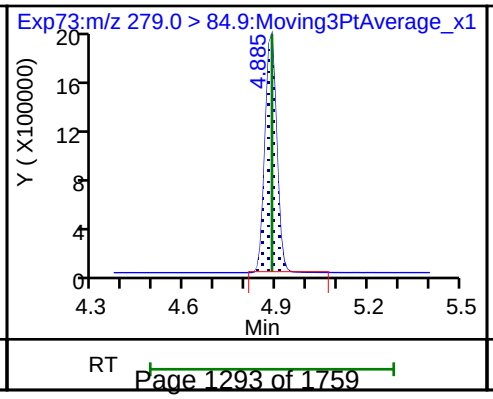
D 8 13C5 PFPeA



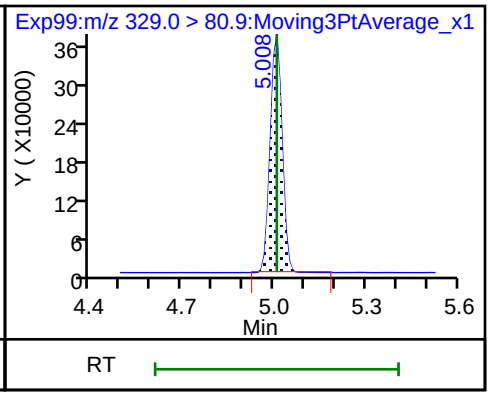
9 PFPA



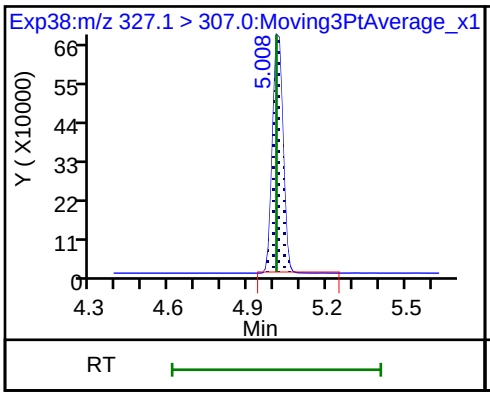
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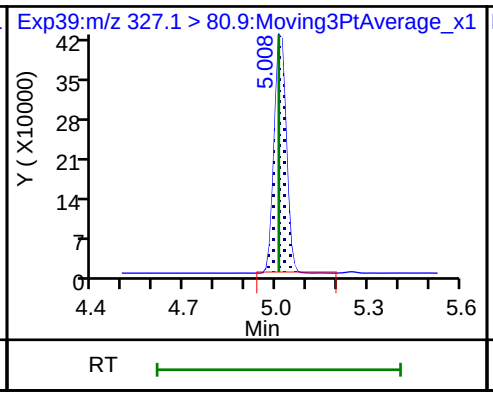
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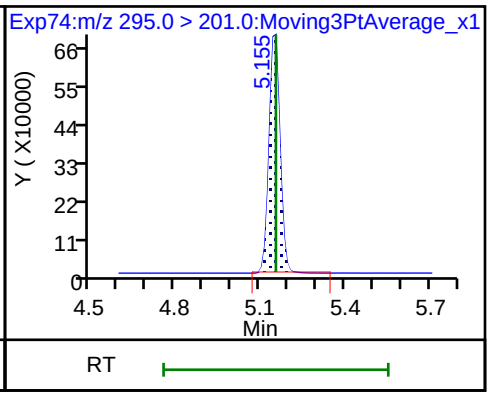
12 4:2FTS



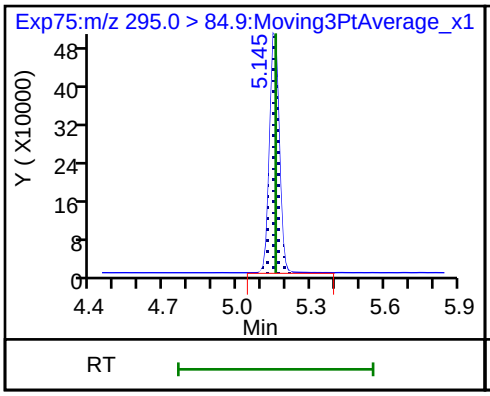
12 4:2FTS



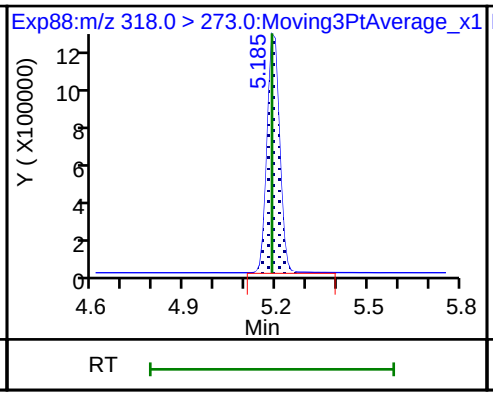
14 NFDHA



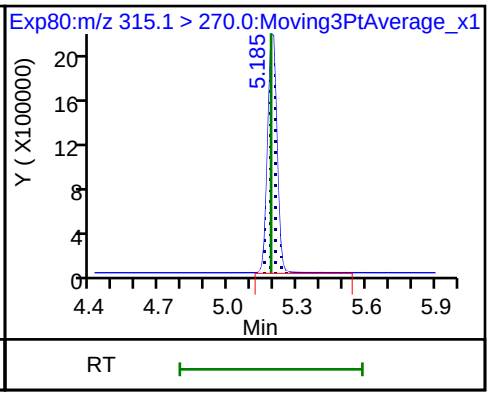
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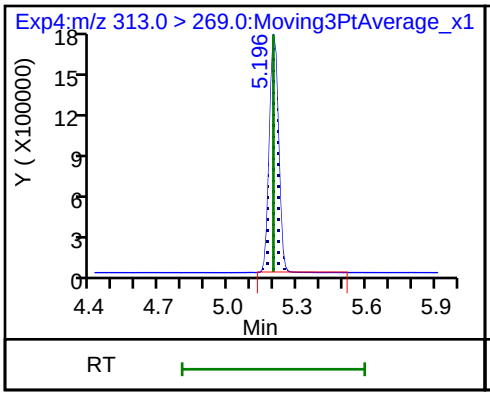
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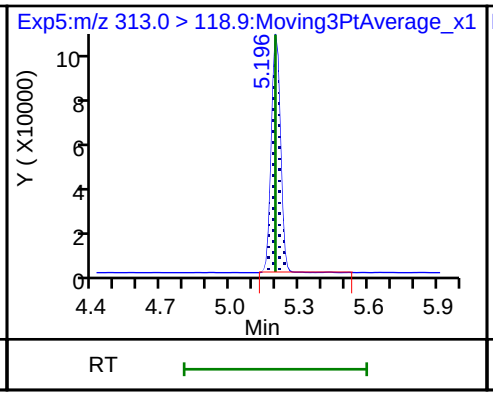
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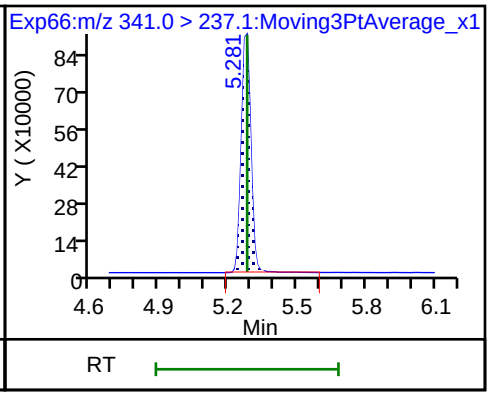
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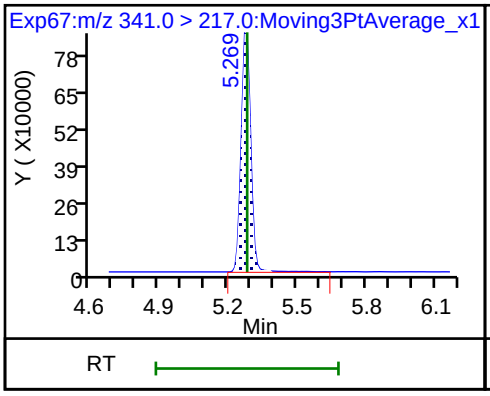
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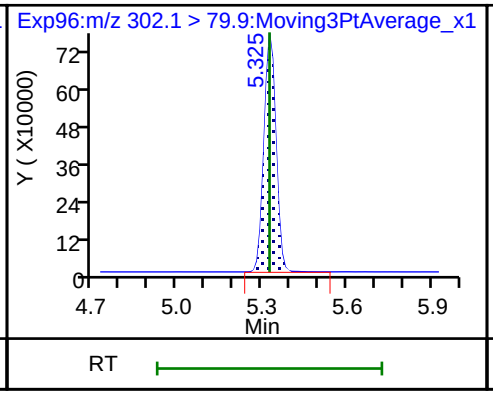
18 5:3 FTCA



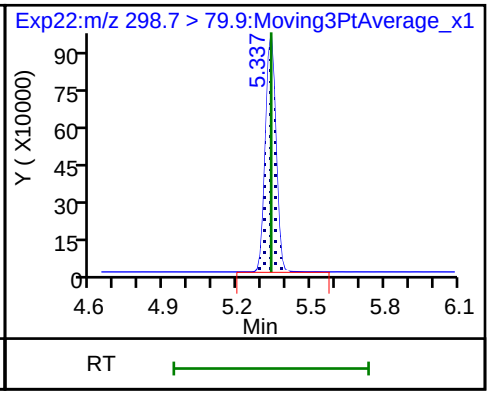
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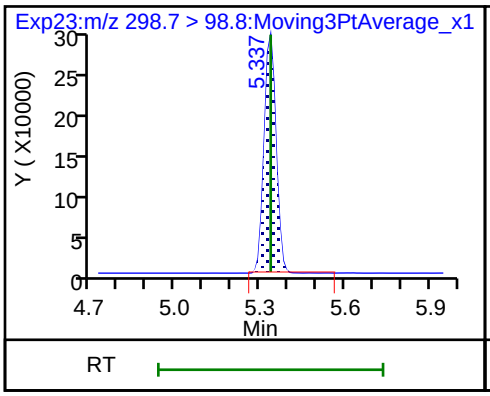
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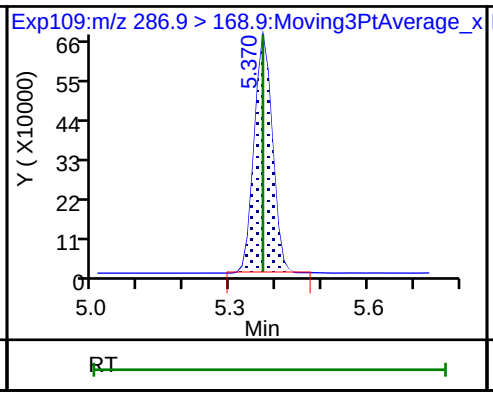
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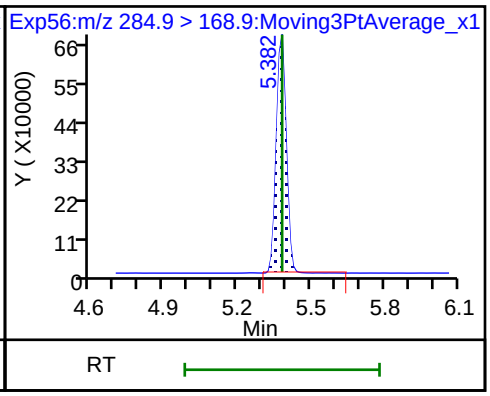
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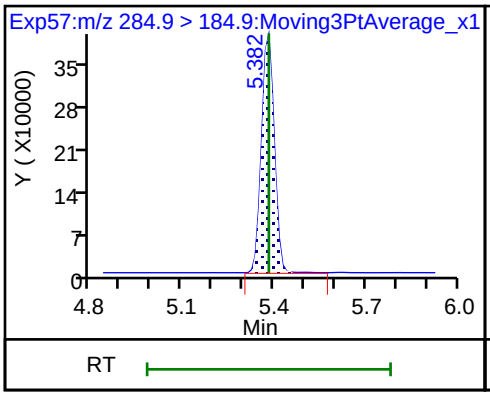
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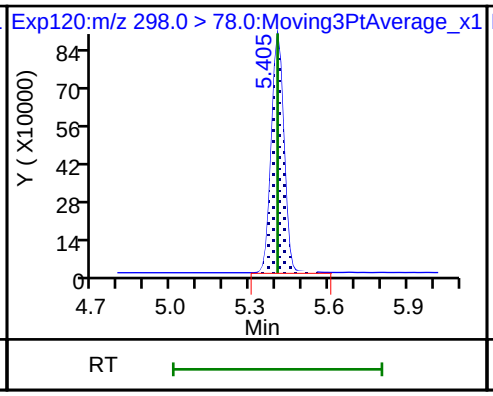
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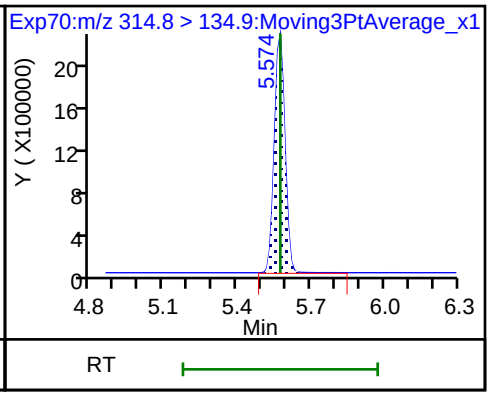
22 HFPO-DA



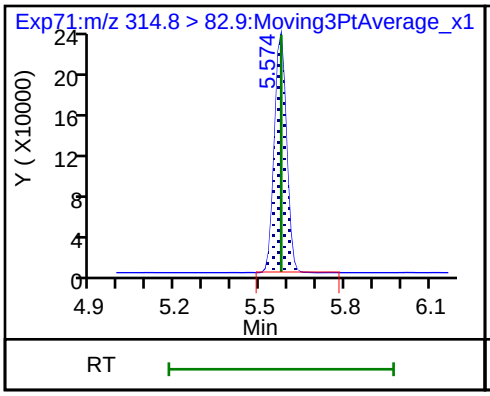
23 FBSA



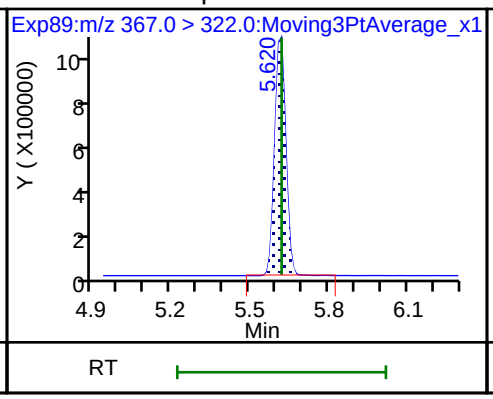
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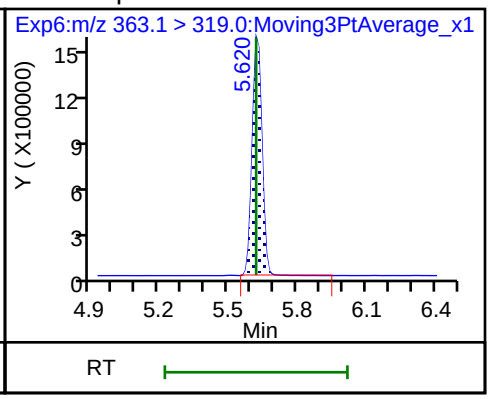
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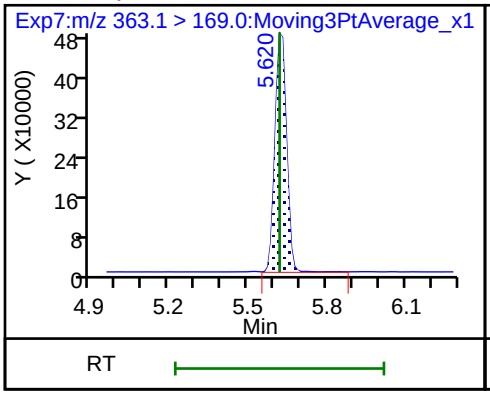
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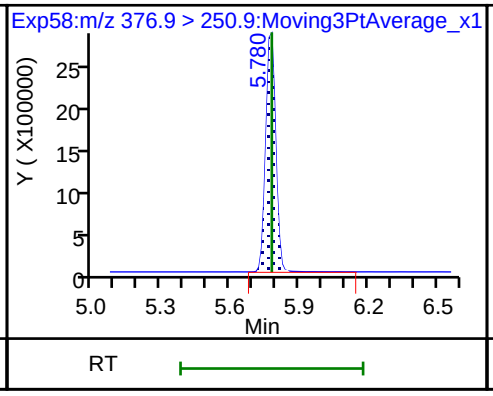
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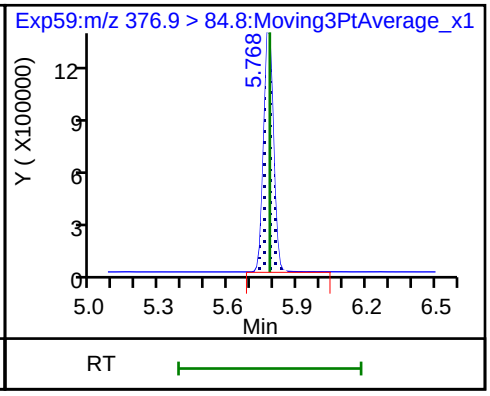
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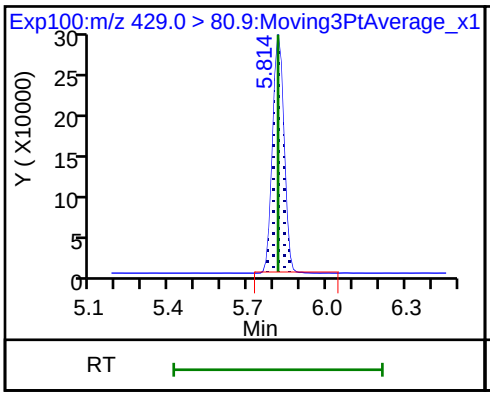
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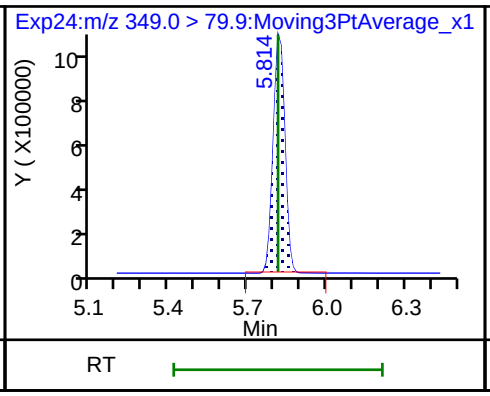
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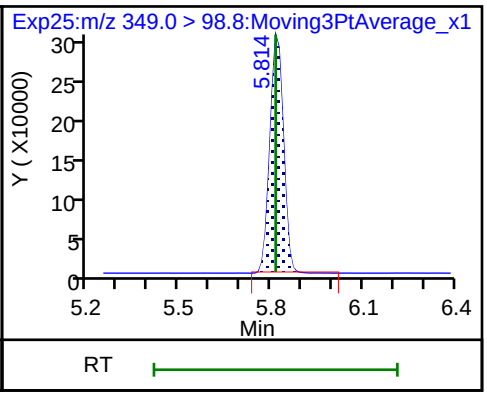
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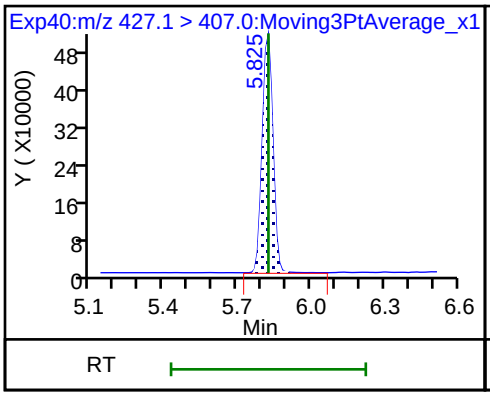
31 PFPeS



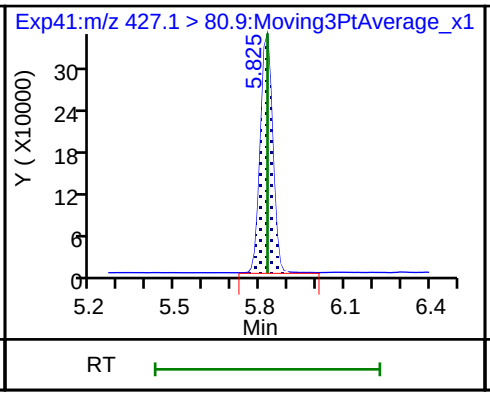
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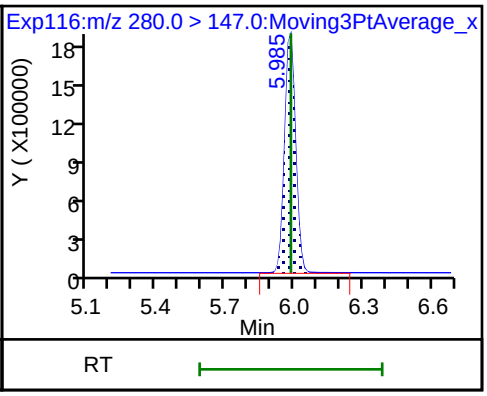
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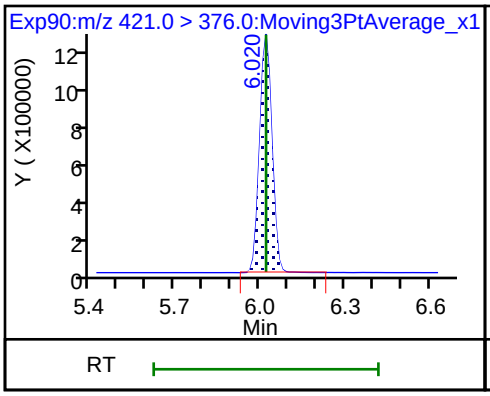
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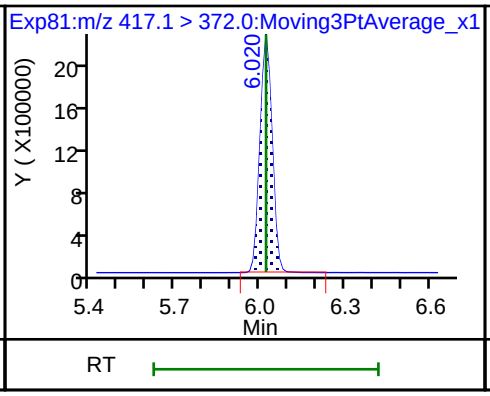
33 BTS



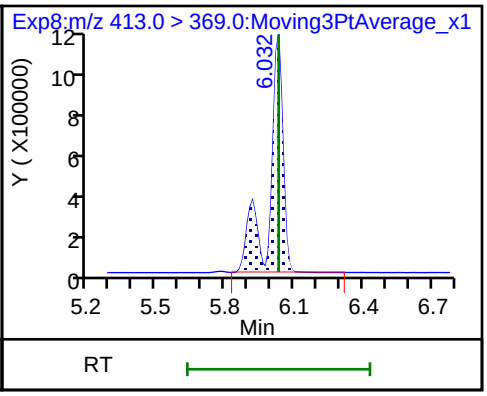
D 36 13C8 PFOA



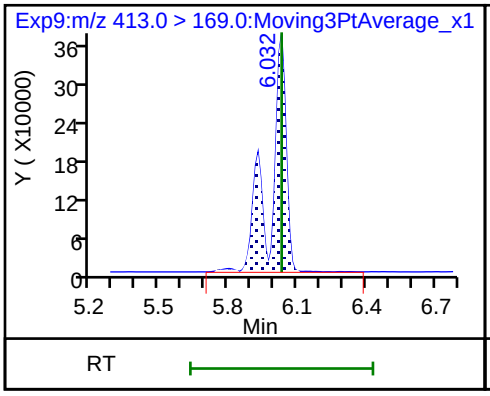
* 35 13C4 PFOA



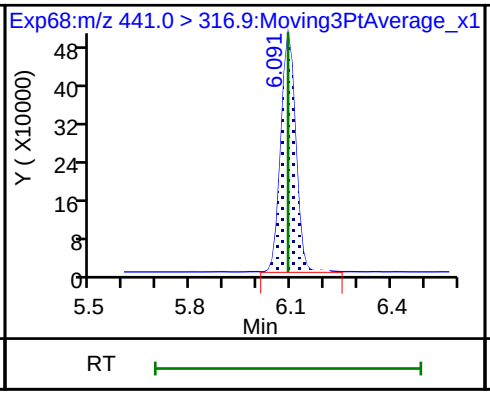
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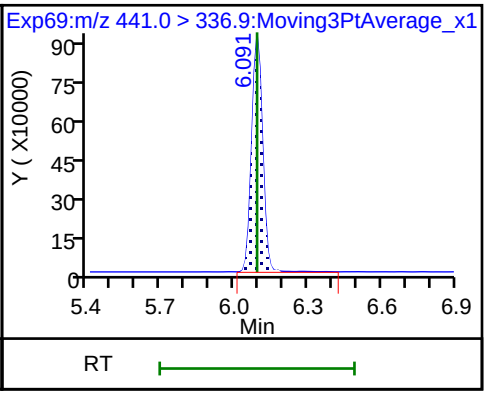
34 PFOA



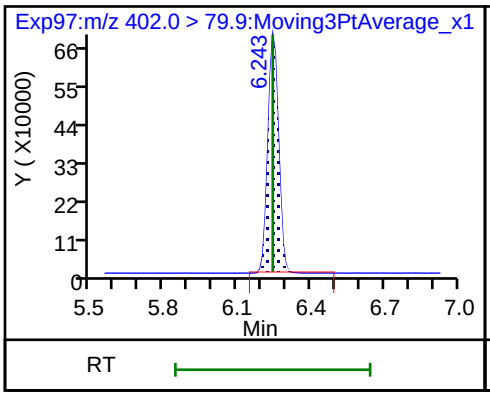
37 7:3 FTCA



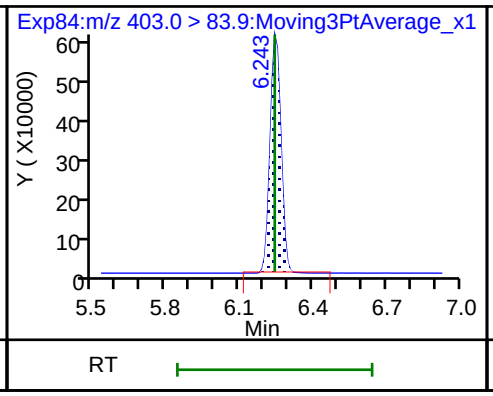
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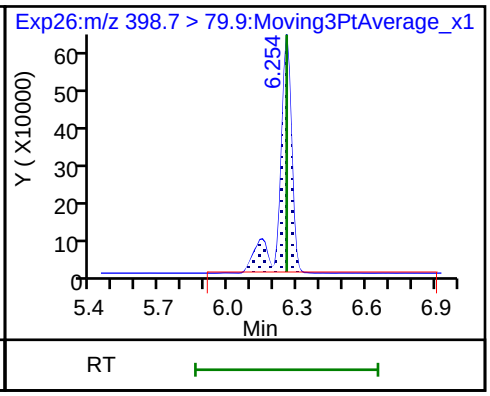
D 38 13C3 PFHxS



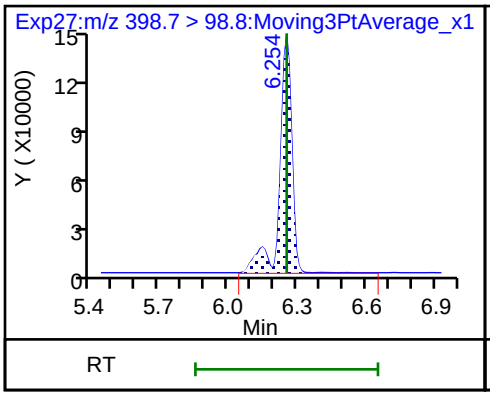
* 39 18O2 PFHxS



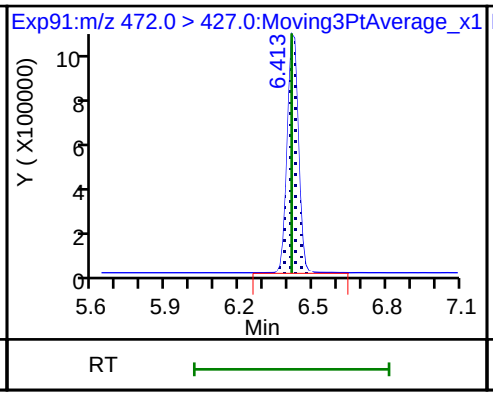
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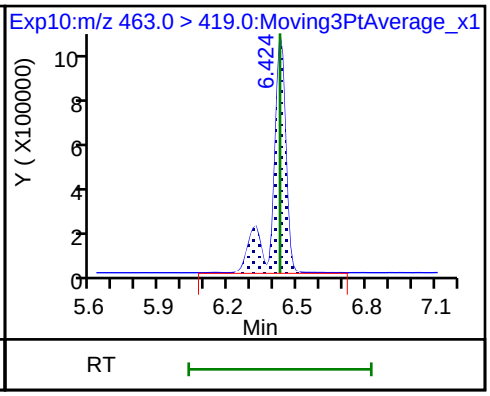
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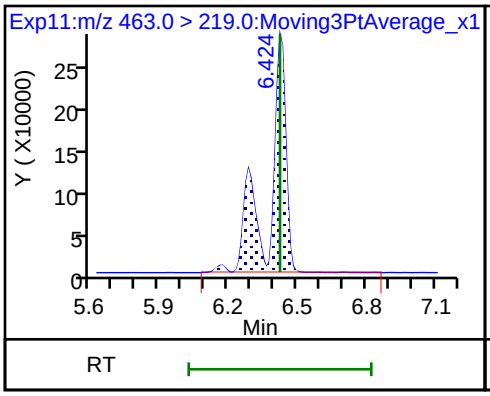
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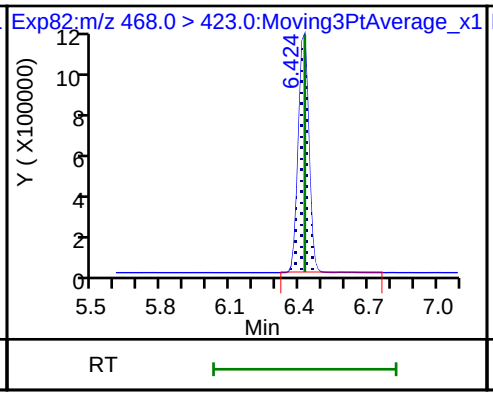
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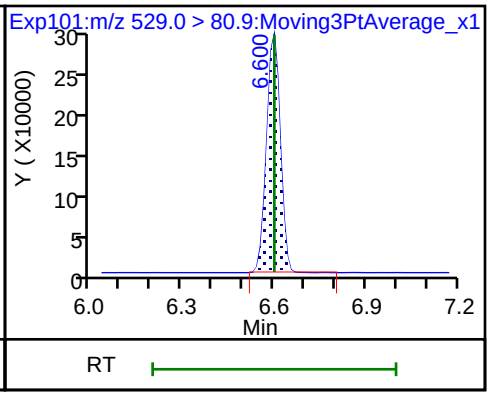
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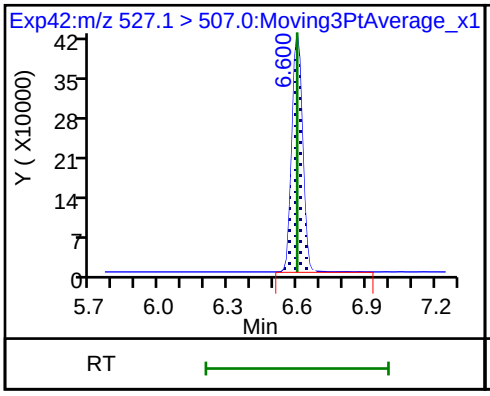
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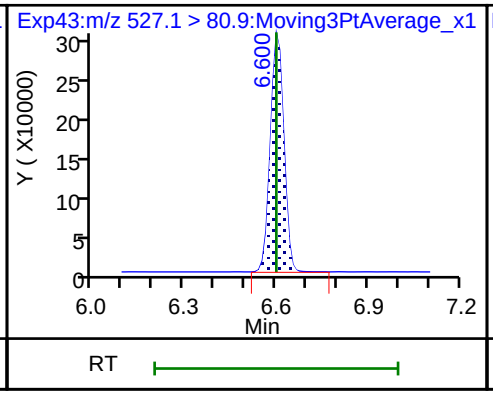
D 44 13C2-8:2FTS



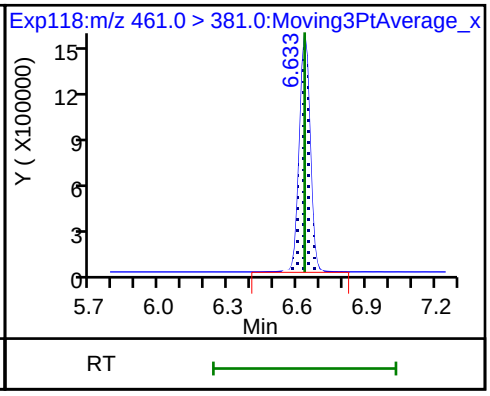
45 8:2FTS



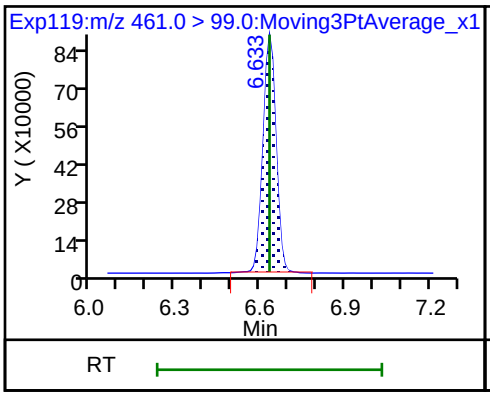
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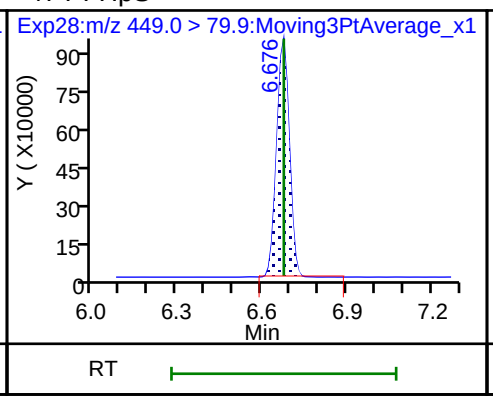
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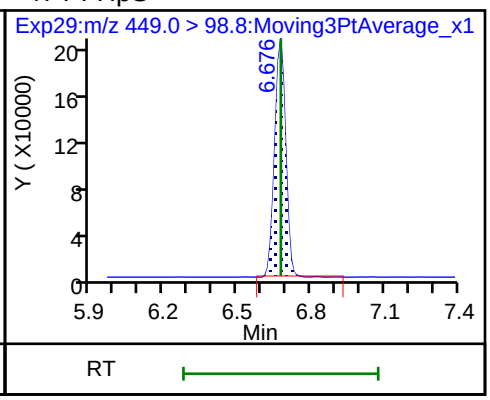
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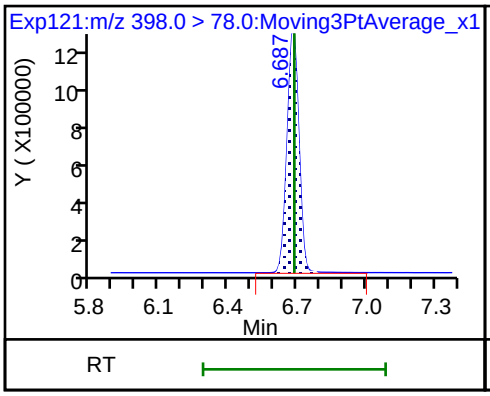
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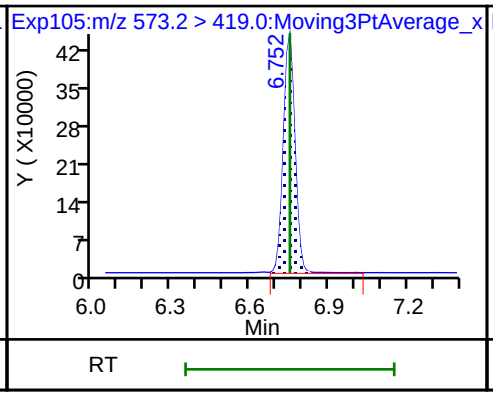
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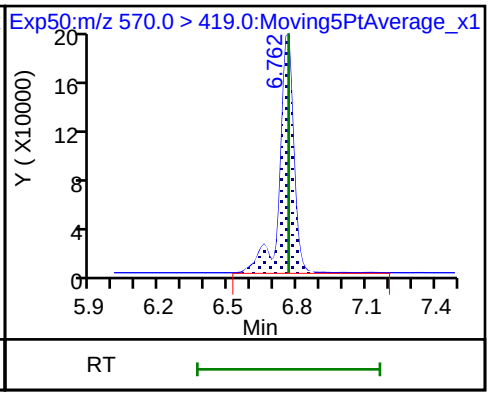
48 FHxSA



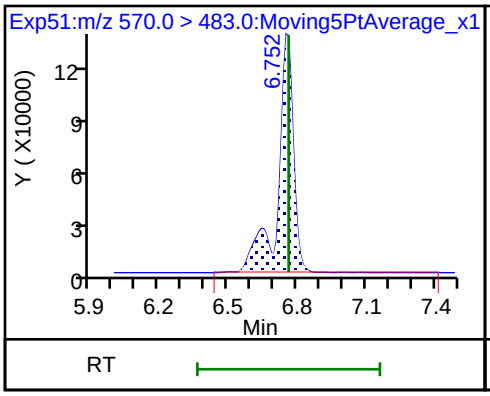
D 49 d3-NMeFOSAA



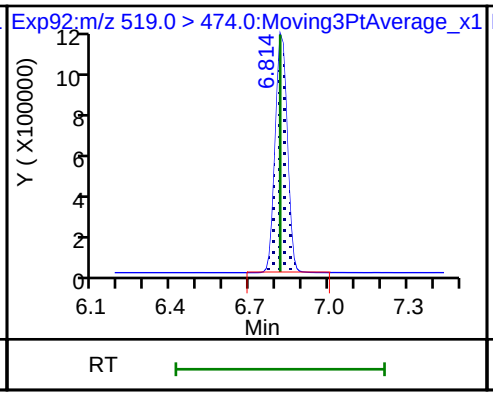
50 NMeFOSAA



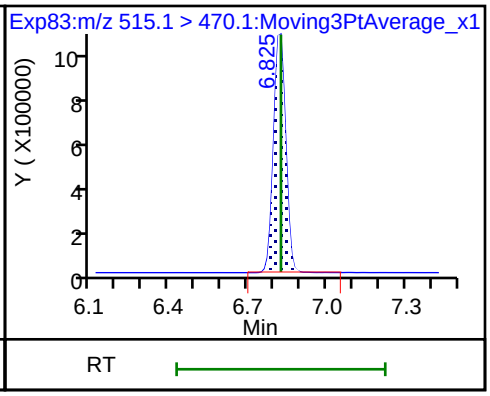
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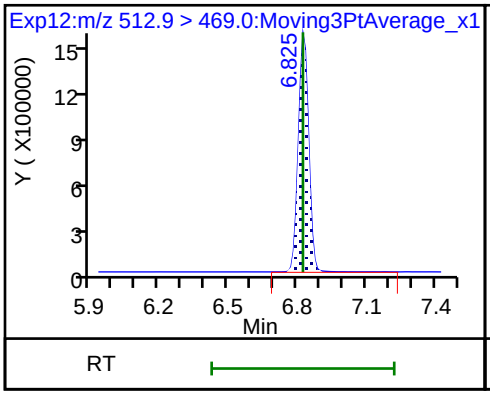
D 52 13C6 PFDA



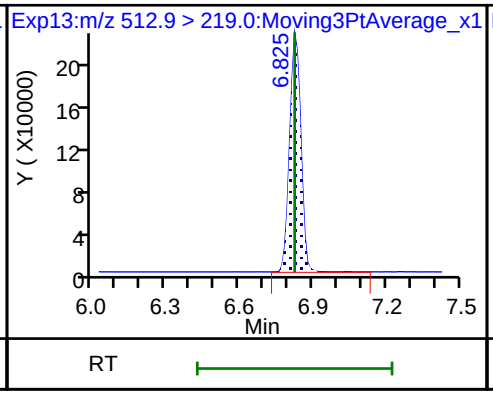
* 51 13C2 PFDA



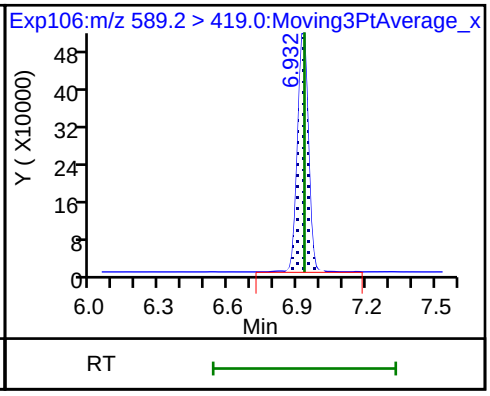
53 PFDA



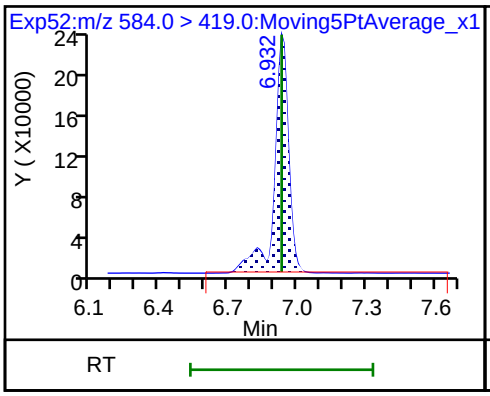
53 PFDA



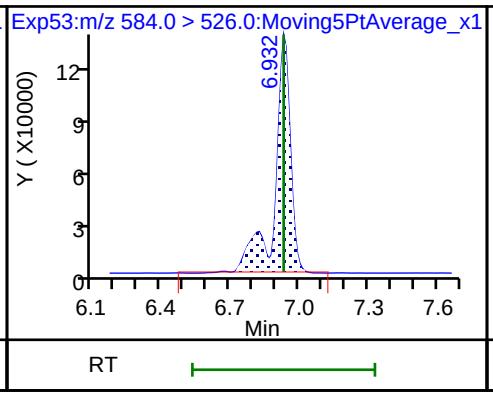
D 54 d5-NEtFOSAA



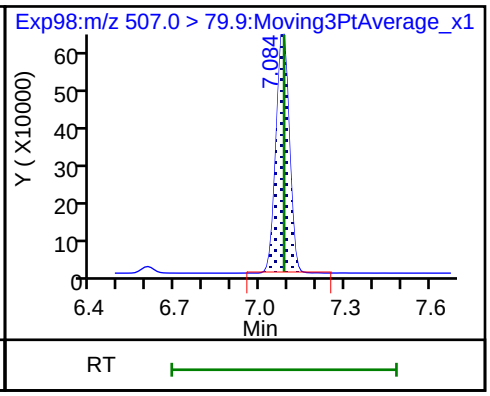
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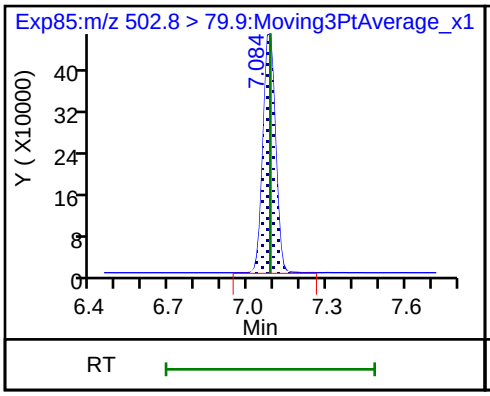
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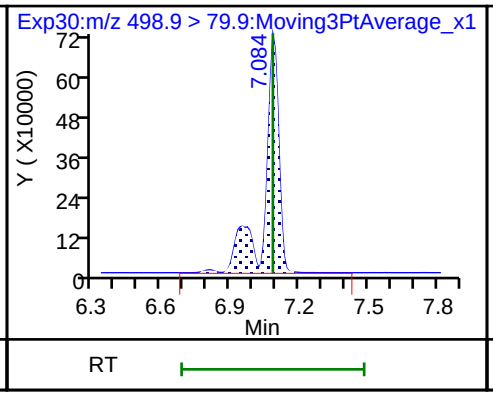
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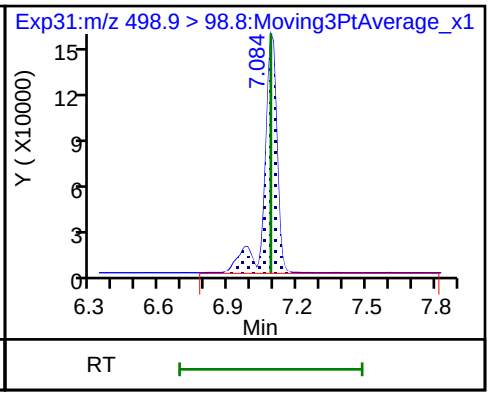
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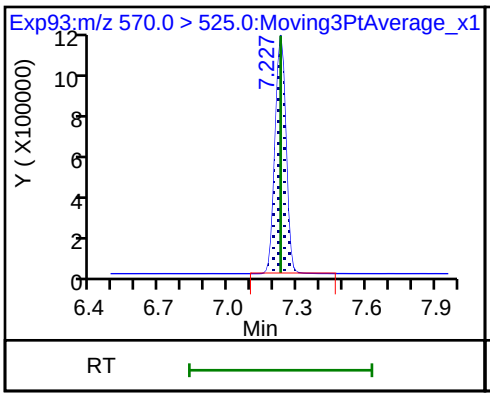
58 PFOS



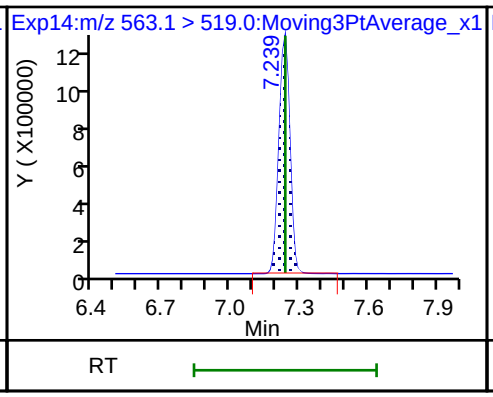
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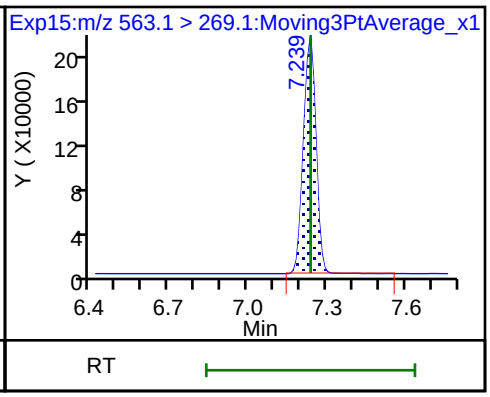
D 59 13C7 PFUnA



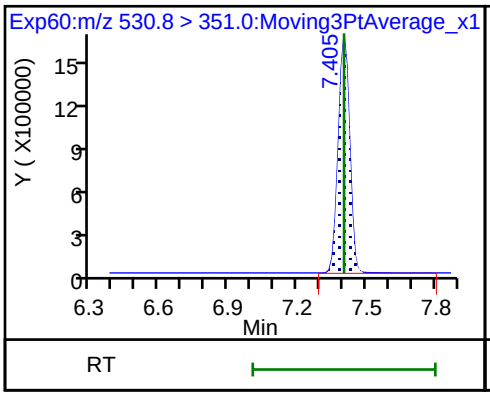
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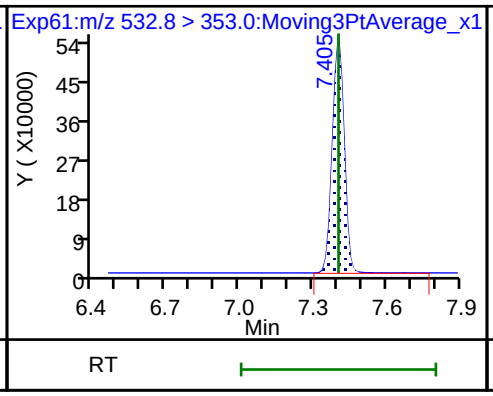
60 PFUnA



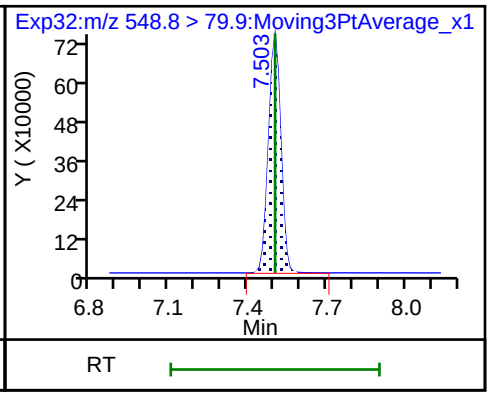
61 9ClFOS



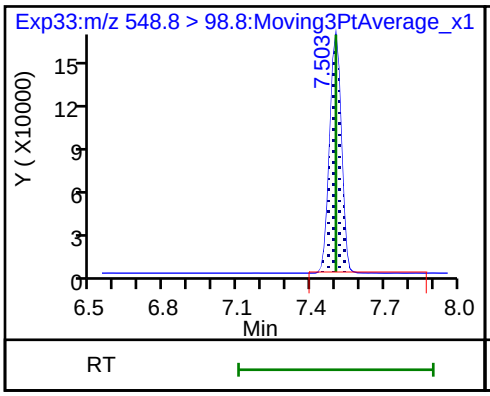
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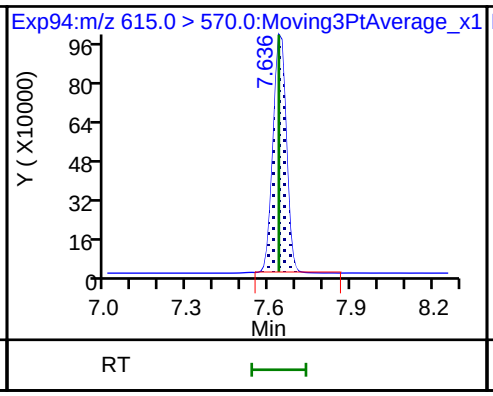
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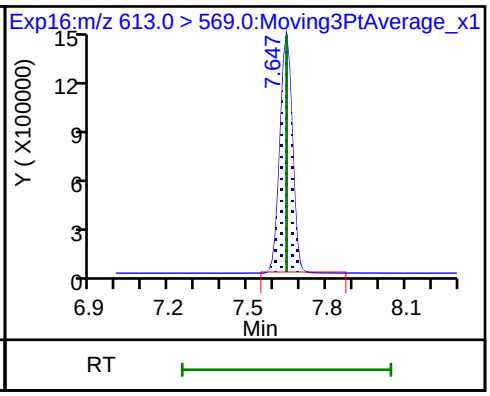
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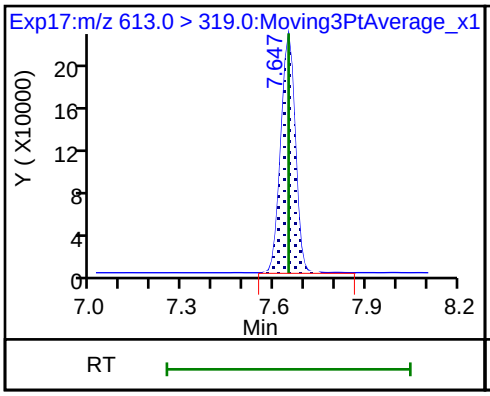
D 63 13C2 PFDoA



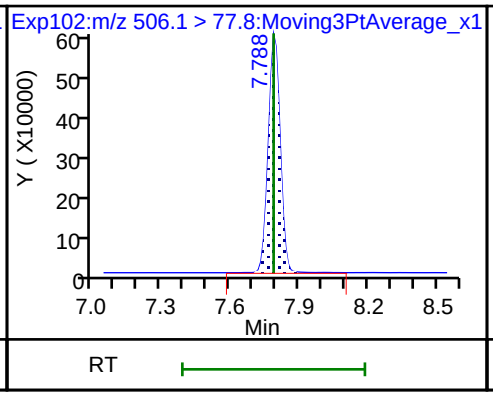
64 PFDoA



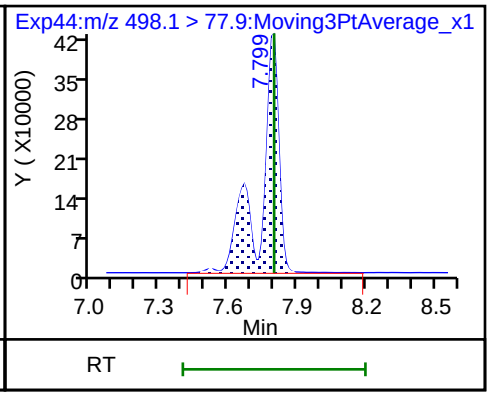
64 PFDoA



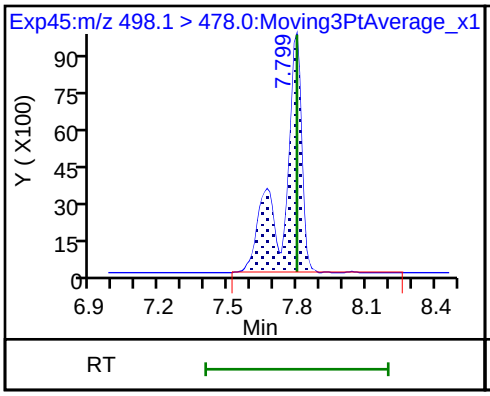
D 65 13C8 FOSA



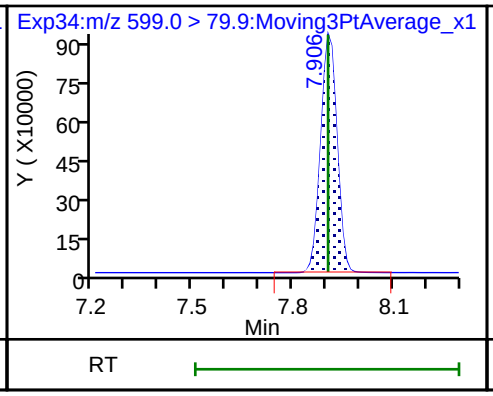
66 PFOSA



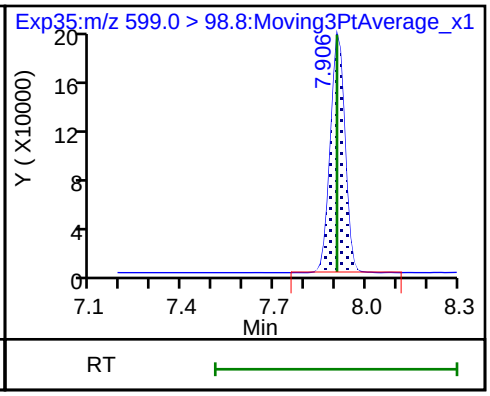
66 PFOSA



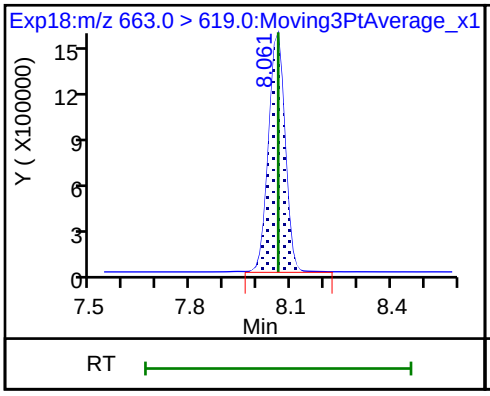
67 PFDS



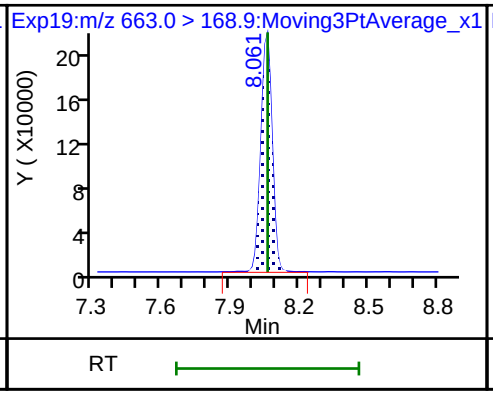
67 PFDS



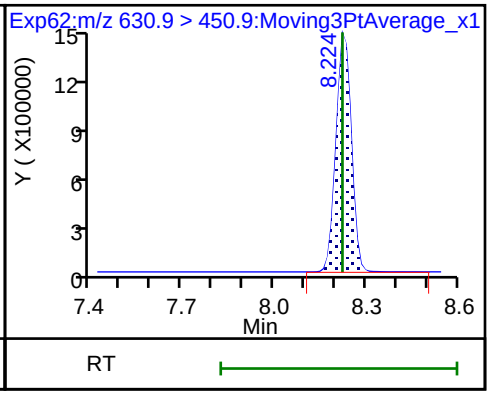
68 PFTrDA



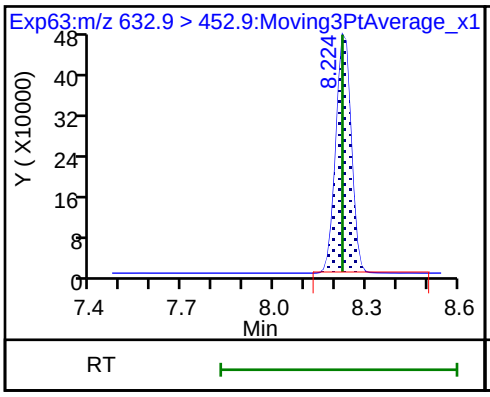
68 PFTrDA



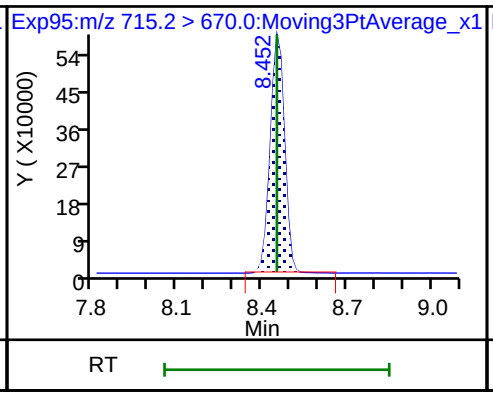
69 11ClFOS



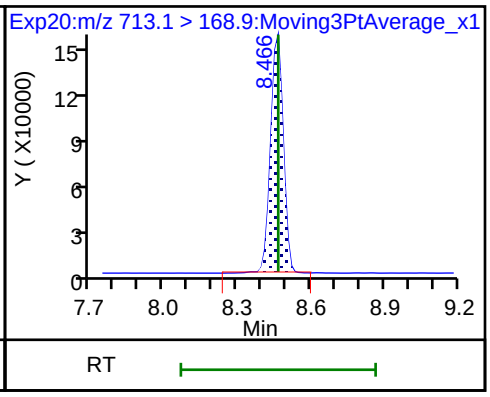
69 11ClFOS



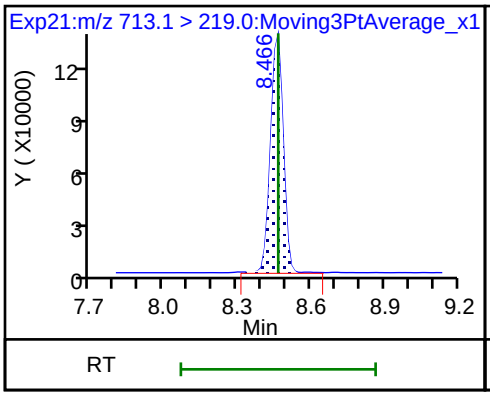
D 70 13C2 PFTeDA



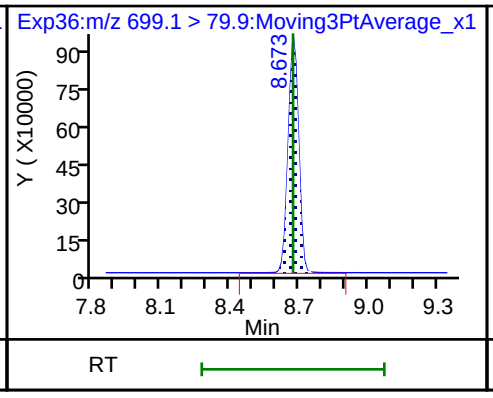
71 PFTeDA



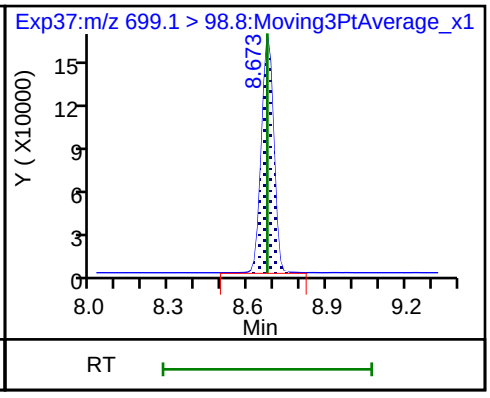
71 PFTeDA



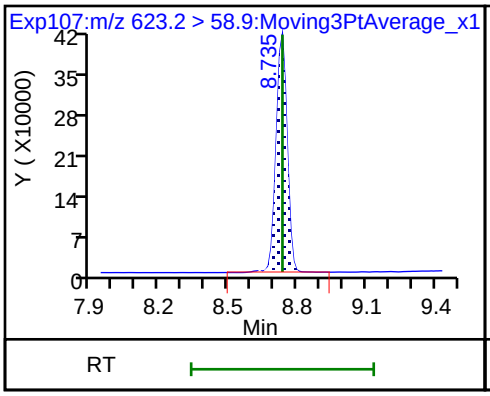
72 PFDoS



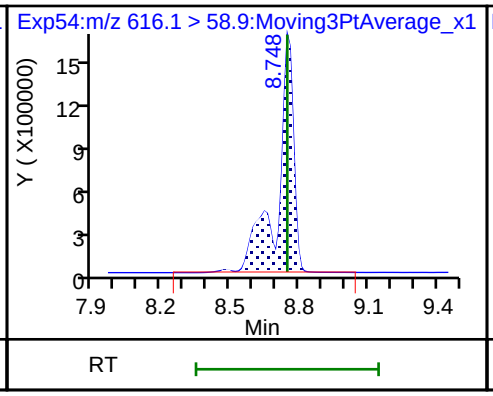
72 PFDoS



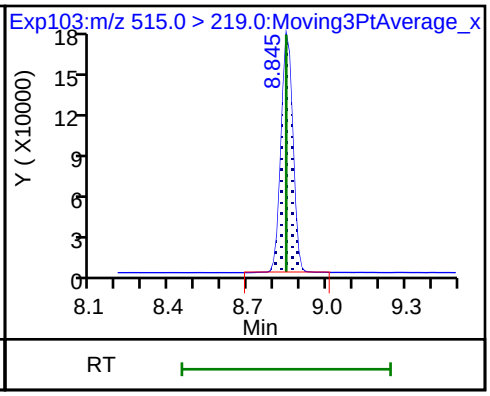
D 73 d7-N-Me-FOSE



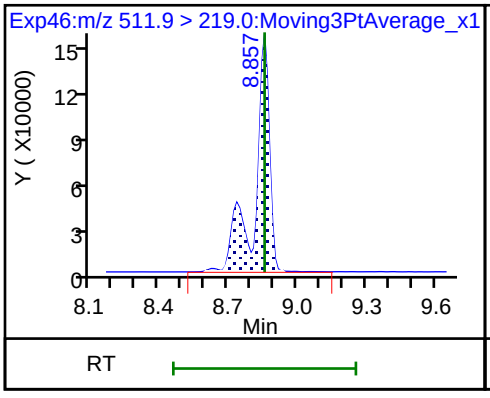
74 N-MeFOSE-M



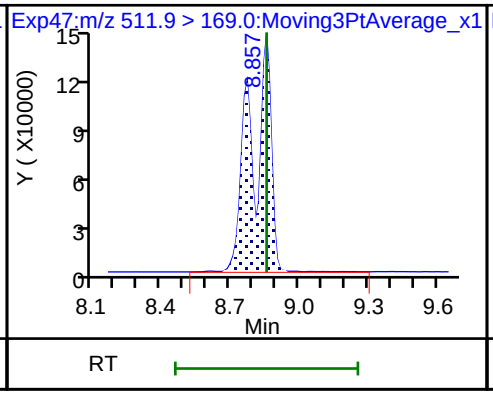
D 75 d3-NMePFOSA



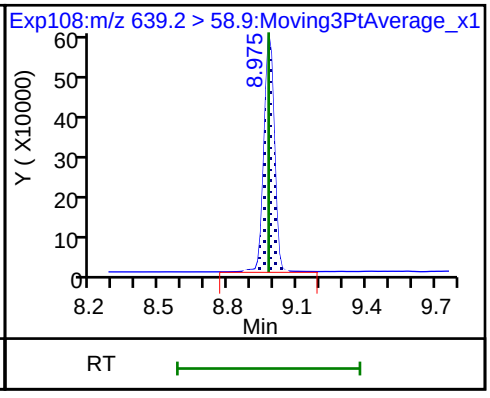
76 NMeFOSA



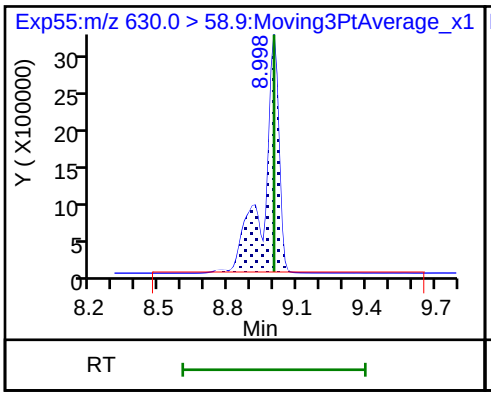
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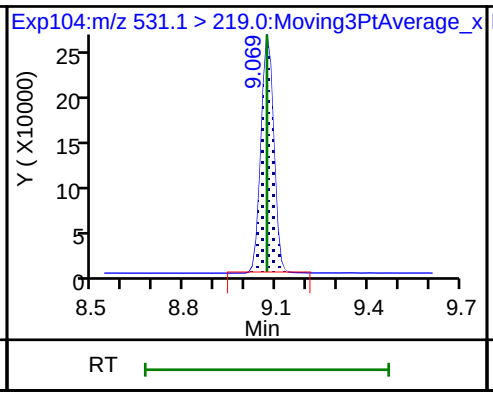
D 77 d9-N-EtFOSE



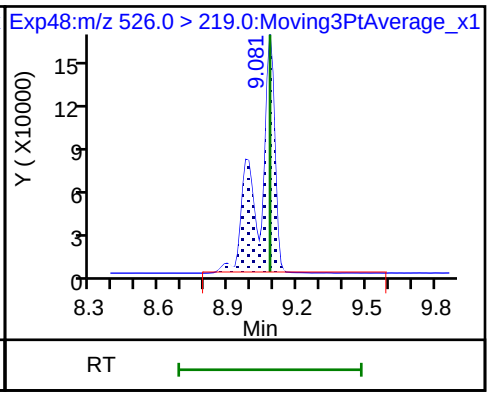
78 N-EtFOSE-M



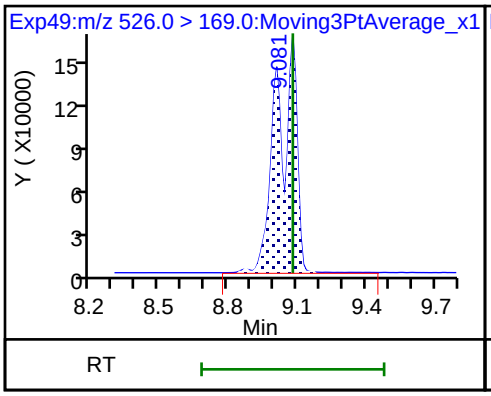
D 79 d5-NEtPFOSA



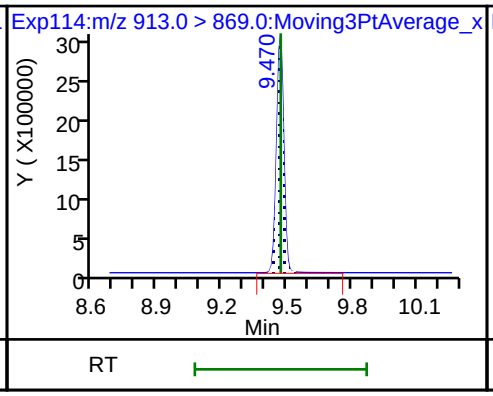
80 N-EtFOSA-M



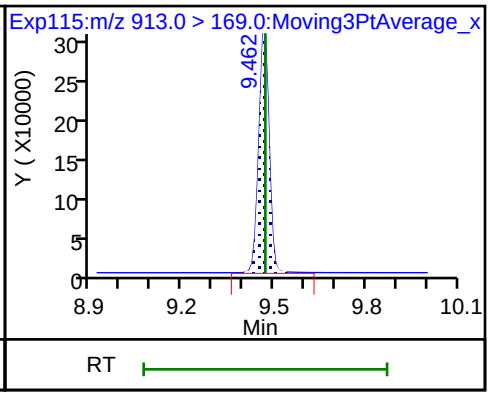
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-06.d
Lims ID: IC CAL 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 04-Feb-2026 13:39:01 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 6
Misc. Info.: 410-0174629-006 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 7
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:34 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 17:18:03
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.949	1.949	0.0	0.479	2379145	1.98		99.2	1313	
2 Perfluoropropionic acid										
163.0 > 119.0	1.957	1.957	0.0	1.004	27528577	24.9		99.4	2780	
D 3 13C4-PFBA										
216.8 > 171.9	4.065	4.058	0.007	1.000	2819104	1.99		99.7	5290	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.065	0.0		2427083	2.00			6804	
5 PFBA										
212.8 > 168.9	4.065	4.065	0.0	1.000	1092698	9.22		92.2	1906	
6 PFMPA										
229.0 > 84.9	4.383	4.384	-0.001	0.928	8188974	5.00		100	8684	
7 3:3 FTCA										
241.0 > 177.0	4.402	4.402	0.0	0.932	570694	9.75	Target=1.05	97.5	5659	
241.0 > 117.0	4.402	4.402	0.0	0.932	538277		1.06(0.53-1.58)	97.5	3089	
D 8 13C5 PFPeA										
268.0 > 223.0	4.722	4.723	-0.001	0.911	2905594	2.02		101	5015	
9 PFPA										
263.0 > 219.0	4.734	4.735	-0.001	1.003	6232077	4.80		96.0	5129	
10 PFMBA										
279.0 > 84.9	4.885	4.885	0.0	1.034	9658643	4.84		96.8	8658	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.008	5.008	0.0	0.802	1005887	4.64		98.9	4972	
12 4:2FTS										
327.1 > 307.0	5.008	5.008	0.0	1.000	3475789	9.34	Target=1.61	99.6	10844	
327.1 > 80.9	5.008	5.008	0.0	1.000	2099572		1.66(0.80-2.41)	99.6	4233	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.145	5.155	-0.010	0.992	3529327	4.85	Target=1.33	97.1	5840	
295.0 > 84.9	5.145	5.155	-0.010	0.992	2662764		1.33(0.67-2.00)	97.1	7498	
D 16 13C5 PFHxA										
318.0 > 273.0	5.185	5.185	0.0	1.000	3449060	2.00		100	9977	
* 15 13C2 PFHxA										
315.1 > 270.0	5.185	5.185	0.0		5748374	5.00			7315	
17 PFHxA										
313.0 > 269.0	5.195	5.196	-0.001	1.002	8835732	4.88	Target=16.27	97.6	6395	
313.0 > 118.9	5.195	5.196	-0.001	1.002	554888		15.92(8.13-24.40)	97.6	2381	
18 5:3 FTCA										
341.0 > 237.1	5.280	5.281	-0.001	1.018	5124287	24.6	Target=1.06	98.5	3888	
341.0 > 217.0	5.280	5.281	-0.001	1.018	4842929		1.06(0.53-1.58)	98.5	4585	
D 20 13C3 PFBS										
302.1 > 79.9	5.325	5.325	0.0	0.853	2263940	1.90		102	6248	
19 PFBS										
298.7 > 79.9	5.337	5.337	0.0	1.002	5282423	4.35	Target=3.39	98.0	10624	
298.7 > 98.8	5.337	5.337	0.0	1.002	1601677		3.30(1.70-5.09)	98.0	5684	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.370	5.370	0.0	1.036	1939124	1.99		99.4	3862	
22 HFPO-DA										
284.9 > 168.9	5.381	5.382	-0.001	1.002	3919079	3.88	Target=1.73	103	4693	
284.9 > 184.9	5.381	5.382	-0.001	1.002	2148585		1.82(0.87-2.60)	103	4303	
23 FBSA										
298.0 > 78.0	5.404	5.405	0.0	1.015	5873028	5.20		104	1616	
25 PFEESA										
314.8 > 134.9	5.574	5.574	0.0	1.075	12892922	4.40	Target=10.20	98.6	23347	
314.8 > 82.9	5.574	5.574	0.0	1.075	1279031		10.08(5.10-15.30)	98.6	4928	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.620	0.0	1.084	3266964	2.06		103	5674	
28 PFHpA										
363.1 > 319.0	5.631	5.620	0.011	1.002	8689204	4.76	Target=3.01	95.2	4761	
363.1 > 169.0	5.620	5.620	0.0	1.000	2911209		2.98(1.50-4.51)	95.2	4486	
29 ADONA										
376.9 > 250.9	5.779	5.780	-0.001	1.076	16186641	4.60	Target=2.15	97.3	11267	
376.9 > 84.8	5.779	5.780	-0.001	1.076	7501042		2.16(1.08-3.22)	97.3	4548	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.814	5.814	0.0	0.931	846456	4.51		94.7	3061	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.931	6178012	4.56	Target=3.70	97.0	9897	
349.0 > 98.8	5.814	5.814	0.0	0.931	1701468		3.63(1.85-5.54)	97.0	5338	
32 6:2FTS										
427.1 > 407.0	5.825	5.825	0.0	1.002	2855610	9.62	Target=1.45	101	1187	
427.1 > 80.9	5.825	5.825	0.0	1.002	1903421		1.50(0.72-2.17)	101	1239	
33 BTS										
280.0 > 147.0	5.985	5.985	0.0	0.959	11052905	4.77		97.4	10890	
D 36 13C8 PFOA										
421.0 > 376.0	6.020	6.020	0.0	1.000	3830053	1.95		97.7	5137	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		6438617	5.00			5112	
34 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	8276164	4.85	Target=2.52	97.0	1723	
413.0 > 169.0	6.032	6.032	0.0	1.002	3372840		2.45(1.26-3.77)	97.0	5994	
37 7:3 FTCA										
441.0 > 316.9	6.091	6.091	0.0	1.175	3079190	25.3	Target=0.53	101	2993	
441.0 > 336.9	6.091	6.091	0.0	1.175	5607153		0.55(0.26-0.79)	101	2214	
D 38 13C3 PFHxS										
402.0 > 79.9	6.243	6.243	0.0	1.000	2105440	1.94		102	4911	
* 39 18O2 PFHxS										
403.0 > 83.9	6.243	6.243	0.0		1843033	1.90			3375	
40 PFHxS										
398.7 > 79.9	6.254	6.254	0.0	1.002	4200308	4.26	Target=4.48	93.4	19094	
398.7 > 98.8	6.254	6.254	0.0	1.002	977144		4.30(2.24-6.72)	93.4	3614	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	0.998	3491927	2.06		103	4340	
43 PFNA										
463.0 > 419.0	6.424	6.424	0.0	1.002	7801730	4.93	Target=2.90	98.6	3688	
463.0 > 219.0	6.424	6.424	0.0	1.002	2743972		2.84(1.45-4.35)	98.6	4316	
* 42 13C5 PFNA										
468.0 > 423.0	6.424	6.424	0.0		3443827	2.00			5006	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.600	6.600	0.0	1.057	879675	4.73		98.5	2314	
45 8:2FTS										
527.1 > 507.0	6.600	6.600	0.0	1.000	2279394	9.11	Target=1.40	94.9	4958	
527.1 > 80.9	6.600	6.600	0.0	1.000	1719848		1.33(0.70-2.09)	94.9	4001	
46 PFECHS										
461.0 > 381.0	6.632	6.633	-0.001	1.062	9031785	4.64	Target=1.63	100	2824	
461.0 > 99.0	6.632	6.633	-0.001	1.062	5469632		1.65(0.81-2.44)	100	2129	
47 PFHpS										
449.0 > 79.9	6.676	6.676	0.0	0.944	5495337	4.64	Target=4.66	97.3	7167	
449.0 > 98.8	6.676	6.676	0.0	0.944	1208484		4.55(2.33-6.98)	97.3	5173	
48 FHxSA										
398.0 > 78.0	6.687	6.687	0.0	1.071	8533125	4.83		96.6	2935	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.751	6.752	-0.001	0.954	1365788	5.05		101	2038	
50 NMeFOSAA										
570.0 > 419.0	6.751	6.762	-0.011	1.000	1531553	4.94	Target=1.27	98.7	13145	
570.0 > 483.0	6.751	6.762	-0.011	1.000	1203396		1.27(0.64-1.91)	98.7	31580	
D 52 13C6 PFDA										
519.0 > 474.0	6.814	6.814	0.0	1.000	3588002	1.99		99.3	5471	
* 51 13C2 PFDA										
515.1 > 470.1	6.814	6.825	-0.011		3236141	2.00			6174	
53 PFDA										
512.9 > 469.0	6.825	6.825	0.0	1.002	8464978	4.73	Target=6.58	94.7	8381	
512.9 > 219.0	6.825	6.825	0.0	1.002	1307160		6.48(3.29-9.87)	94.7	3228	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.921	6.932	-0.011	0.978	1672462	4.91		98.2	2108	
55 NEtFOSAA										
584.0 > 419.0	6.931	6.932	-0.001	1.002	1844088	4.83	Target=1.61	96.7	1688	
584.0 > 526.0	6.931	6.932	-0.001	1.002	1167563		1.58(0.80-2.41)	96.7	3112	
D 56 13C8 PFOS										
507.0 > 79.9	7.074	7.084	-0.010	1.000	2114928	1.88		98.0	317	
* 57 13C4 PFOS										
502.8 > 79.9	7.074	7.084	-0.010		1555303	1.92			6843	
58 PFOS										
498.9 > 79.9	7.085	7.084	0.001	1.001	5773447	4.50	Target=5.51	96.8	9251	
498.9 > 98.8	7.085	7.084	0.001	1.001	1042454		5.54(2.75-8.26)	96.8	2057	
D 59 13C7 PFUnA										
570.0 > 525.0	7.228	7.227	0.001	1.061	3493112	1.94		96.8	6281	
60 PFUnA										
563.1 > 519.0	7.239	7.239	0.0	1.002	7561167	4.85	Target=5.78	96.9	20089	
563.1 > 269.1	7.239	7.239	0.0	1.002	1354003		5.58(2.89-8.67)	96.9	4126	
61 9ClFOS										
530.8 > 351.0	7.405	7.405	0.0	1.047	10795208	4.65	Target=3.05	99.6	53658	
532.8 > 353.0	7.405	7.405	0.0	1.047	3537801		3.05(1.52-4.57)	99.6	8401	
62 PFNS										
548.8 > 79.9	7.503	7.503	0.0	1.061	4563015	4.70	Target=4.62	97.8	10972	
548.8 > 98.8	7.503	7.503	0.0	1.061	993139		4.59(2.31-6.93)	97.8	6577	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.121	3413285	2.00		99.9	3610	
64 PFDoA										
613.0 > 569.0	7.636	7.647	-0.011	1.000	8745190	4.76	Target=6.26	95.2	9464	
613.0 > 319.0	7.636	7.647	-0.011	1.000	1443732		6.06(3.13-9.39)	95.2	2770	
D 65 13C8 FOSA										
506.1 > 77.8	7.788	7.788	0.0	1.101	2167746	1.92		96.1	3657	
66 PFOSA										
498.1 > 77.9	7.788	7.799	-0.011	1.000	4438736	4.93	Target=42.30	98.7	5194	
498.1 > 478.0	7.788	7.799	-0.011	1.000	104771		42.37(21.15-63.45)	98.7	718	
67 PFDS										
599.0 > 79.9	7.906	7.906	0.0	1.118	5917018	4.81	Target=4.95	99.9	38914	
599.0 > 98.8	7.906	7.906	0.0	1.118	1184541		5.00(2.48-7.43)	99.9	5457	
68 PFTrDA										
663.0 > 619.0	8.051	8.061	-0.010	0.952	9698775	4.85	Target=7.25	97.1	4612	
663.0 > 168.9	8.051	8.061	-0.010	0.952	1318672		7.35(3.63-10.88)	97.1	2551	
69 11ClFOS										
630.9 > 450.9	8.224	8.224	0.0	1.163	9699780	4.78	Target=3.03	101	46359	
632.9 > 452.9	8.224	8.224	0.0	1.163	3123570		3.11(1.51-4.54)	101	10129	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.453	8.452	0.001	1.240	2031559	1.98		99.1	3093	
71 PFTeDA										
713.1 > 168.9	8.453	8.466	-0.013	1.000	1040963	4.74	Target=1.21	94.8	3104	
713.1 > 219.0	8.453	8.466	-0.013	1.000	880635		1.18(0.61-1.82)	94.8	1249	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.674	8.673	0.001	1.226	5597840	4.91	Target=5.37	101	9541	
699.1 > 98.8	8.674	8.673	0.001	1.226	1051584		5.32(2.69-8.06)	101	5667	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.724	8.735	-0.011	1.233	1422442	4.94		98.8	440	
74 N-MeFOSE-M										
616.1 > 58.9	8.749	8.748	0.001	1.003	15665981	24.7		98.7	2485	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.846	8.845	0.001	1.251	550094	1.95		97.6	2183	
76 NMeFOSA										
511.9 > 219.0	8.858	8.857	0.001	1.001	1268592	4.96	Target=0.75	99.1	2050	
511.9 > 169.0	8.858	8.857	0.001	1.001	1710364		0.74(0.37-1.12)	99.1	1949	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.976	8.975	0.001	1.269	1880046	4.89		97.7	699	
78 N-EtFOSE-M										
630.0 > 58.9	8.999	8.998	0.001	1.003	29118302	25.3		101	4752	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.070	9.069	0.001	1.282	758837	1.97		98.7	2400	
80 N-EtFOSA-M										
526.0 > 219.0	9.082	9.081	0.001	1.001	1523671	4.77	Target=0.84	95.4	2291	
526.0 > 169.0	9.082	9.081	0.001	1.001	1827476		0.83(0.42-1.26)	95.4	4380	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.471	9.470	0.001	1.121	13655527	4.79	Target=9.33	95.8	42954	
913.0 > 169.0	9.471	9.470	0.001	1.121	1451661		9.41(4.66-13.99)	95.8	13787	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL6_00037 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:34 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-06.d

Injection Date: 04-Feb-2026 13:39:01 Instrument ID: 30637

Lims ID: IC CAL 6

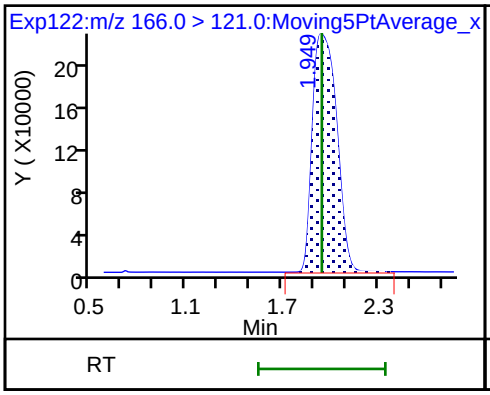
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 7 Worklist Smp#: 6

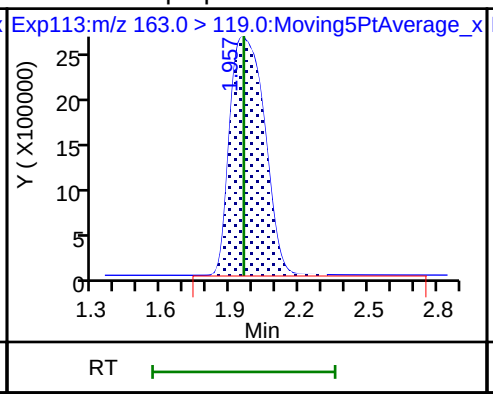
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

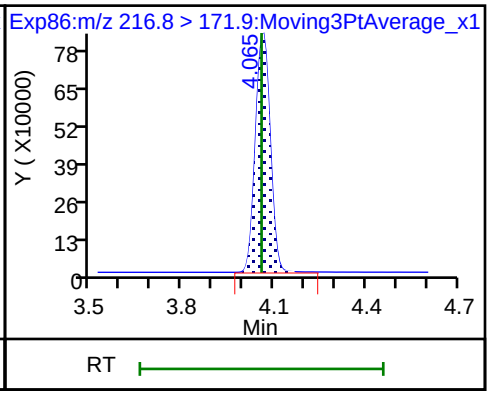
D 1 13C3PFPrA



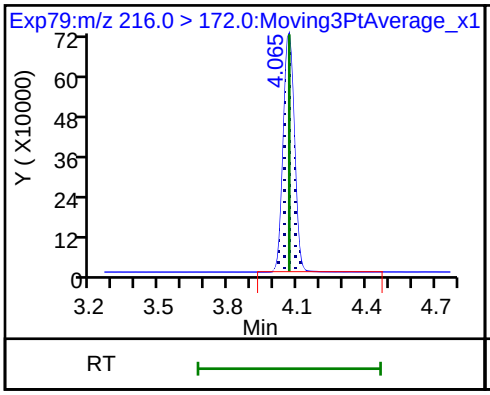
2 Perfluoropropionic acid



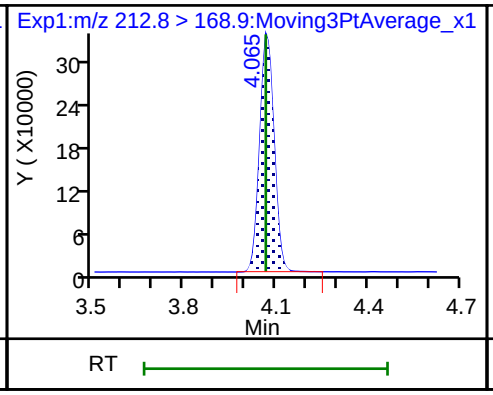
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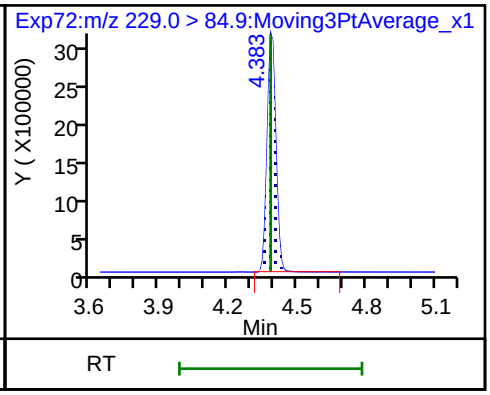
* 4 13C3PFBA



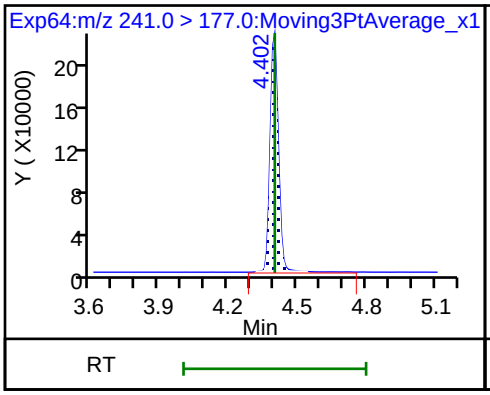
5 PFBA



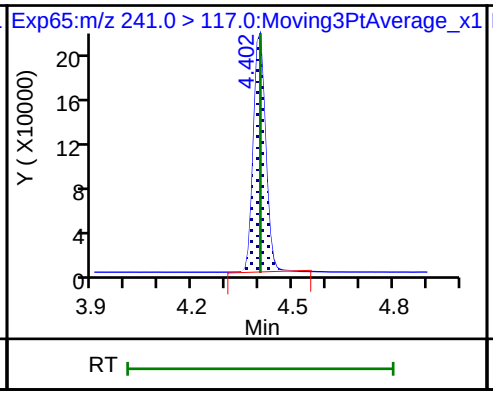
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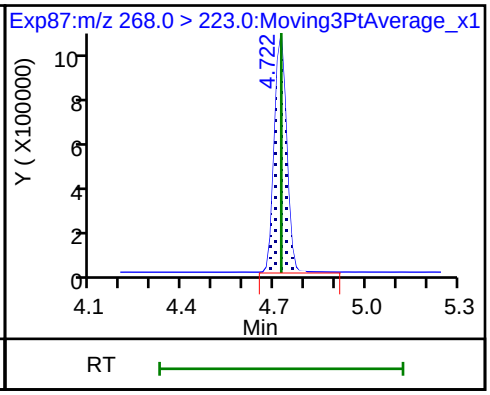
7 3:3 FTCA



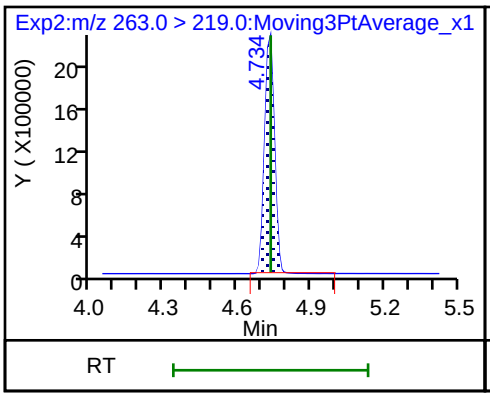
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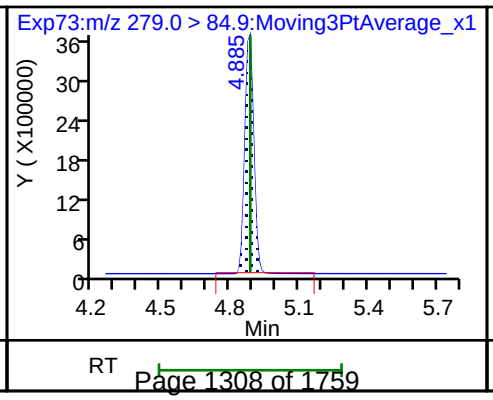
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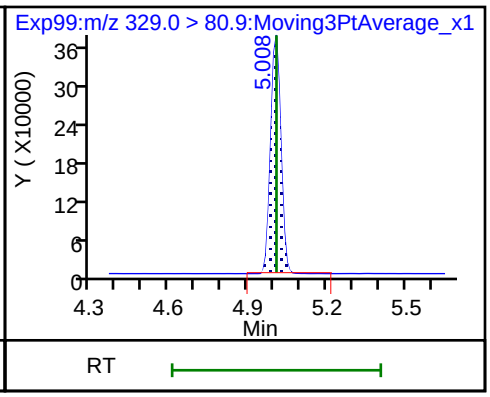
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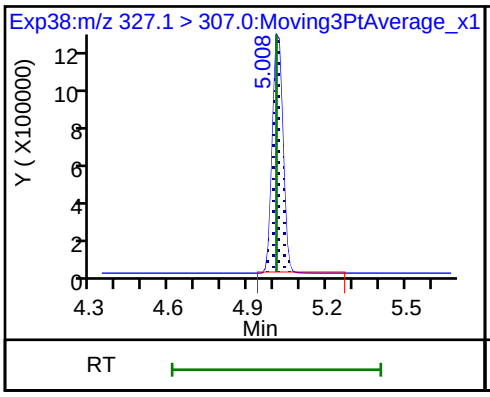
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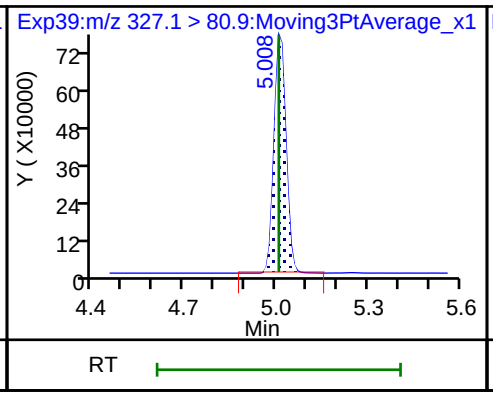
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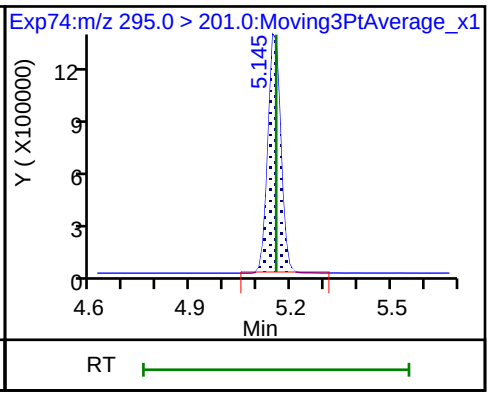
12 4:2FTS



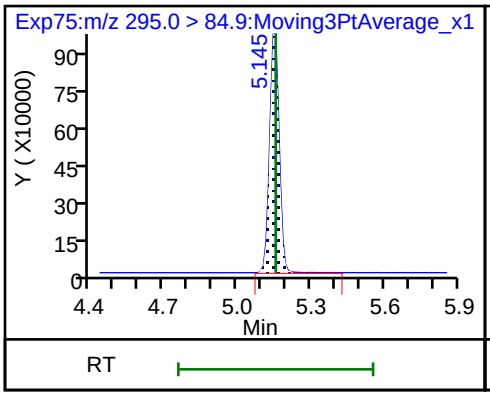
12 4:2FTS



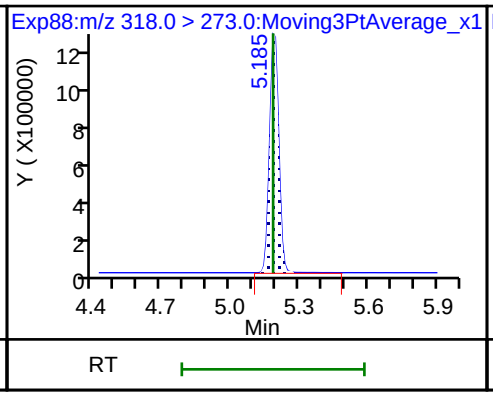
14 NFDHA



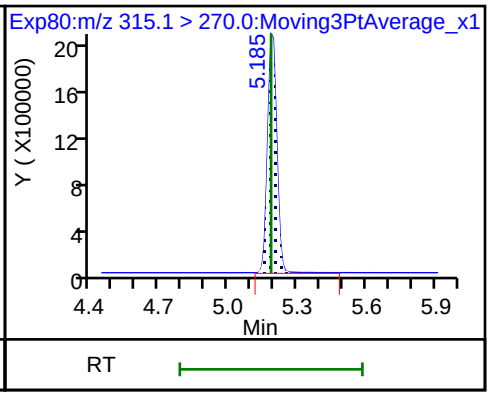
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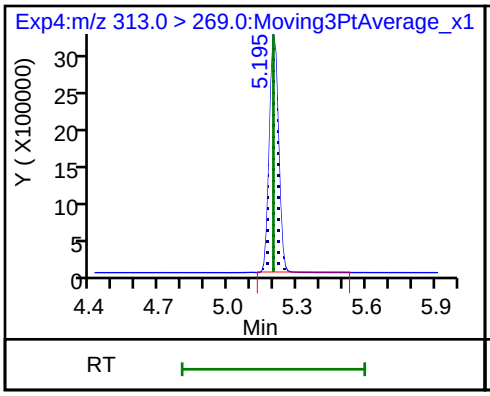
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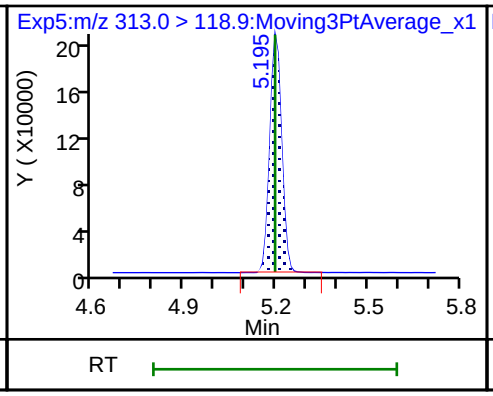
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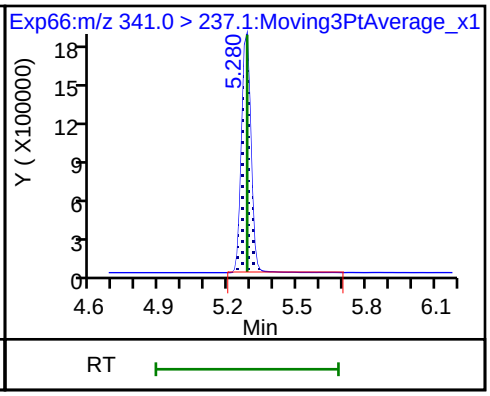
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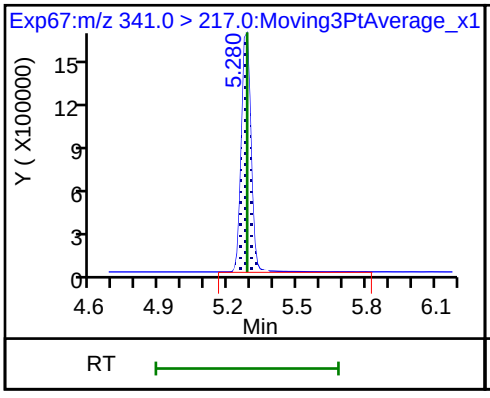
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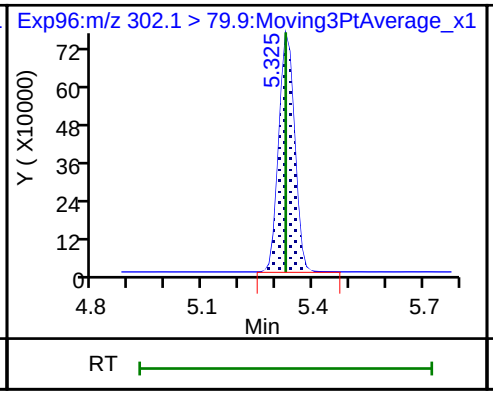
18 5:3 FTCA



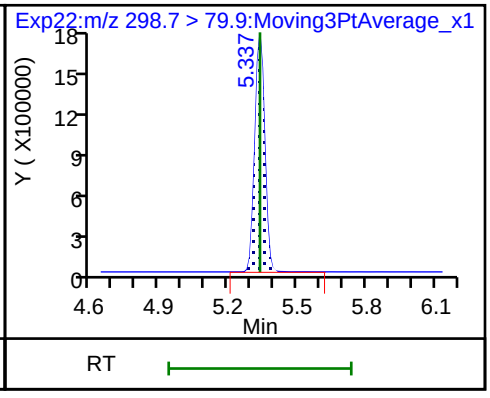
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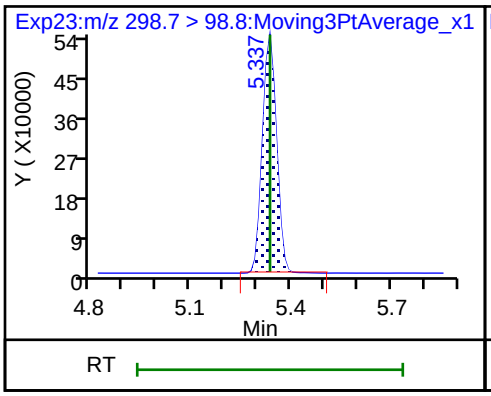
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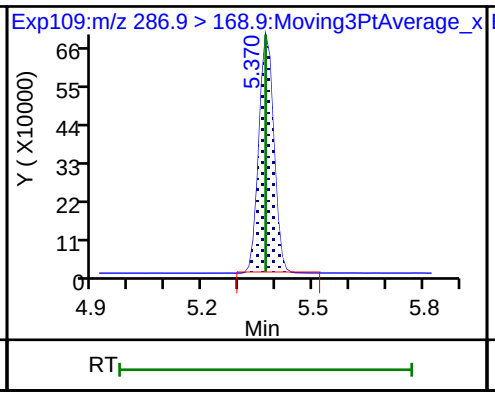
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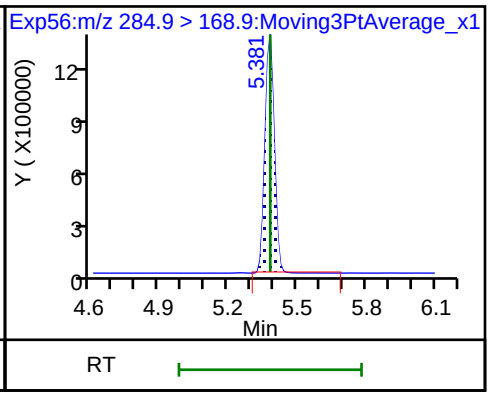
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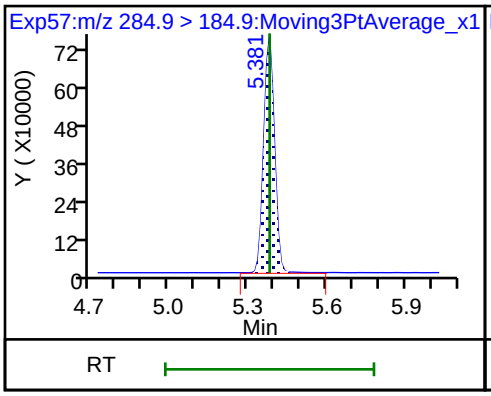
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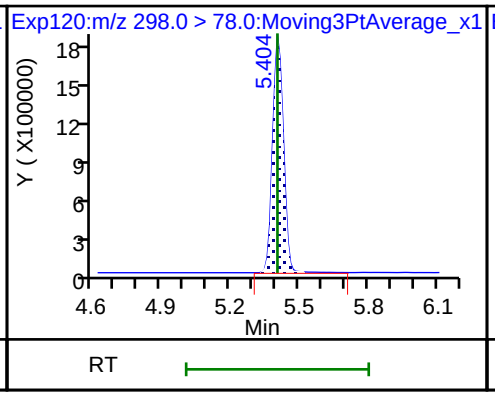
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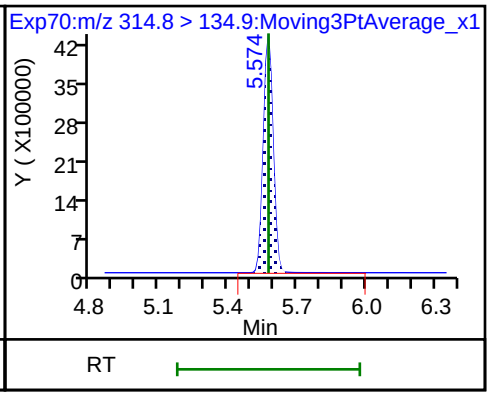
22 HFPO-DA



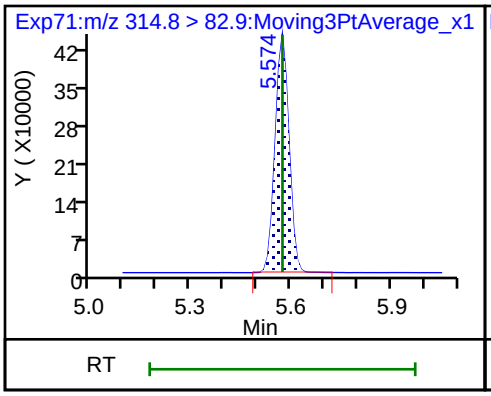
23 FBSA



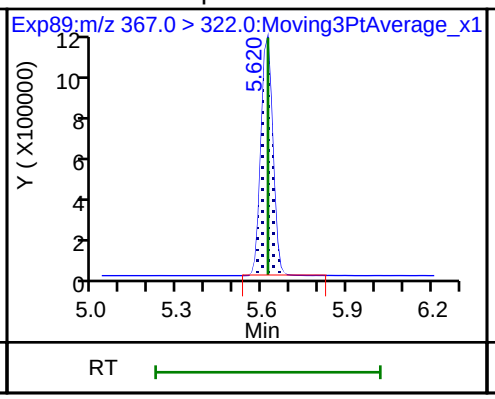
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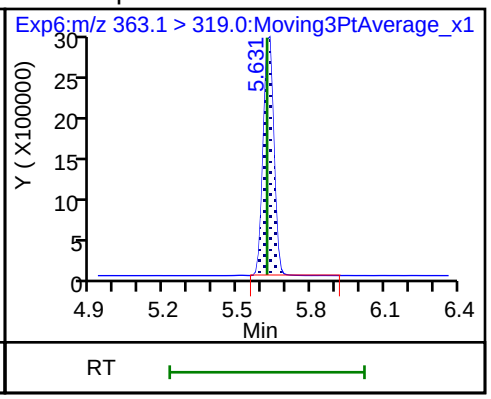
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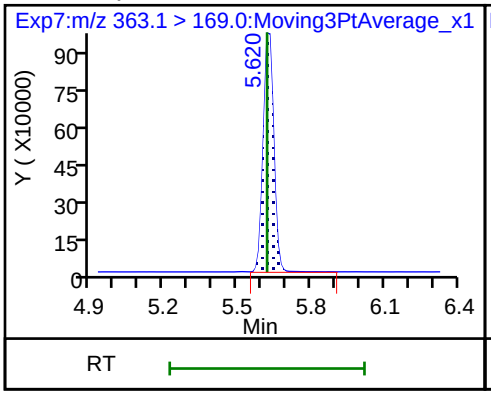
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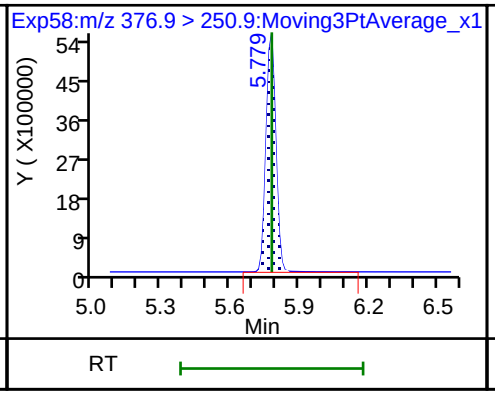
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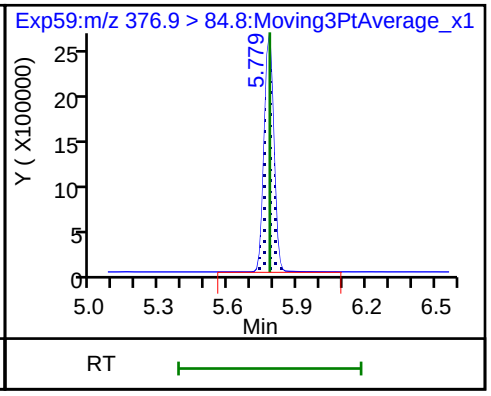
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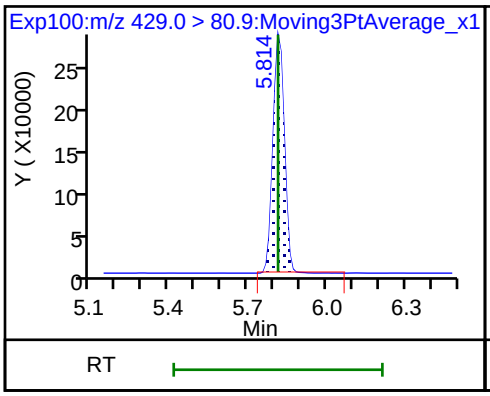
29 ADONA



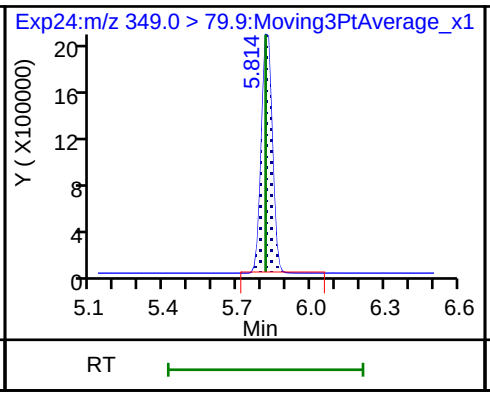
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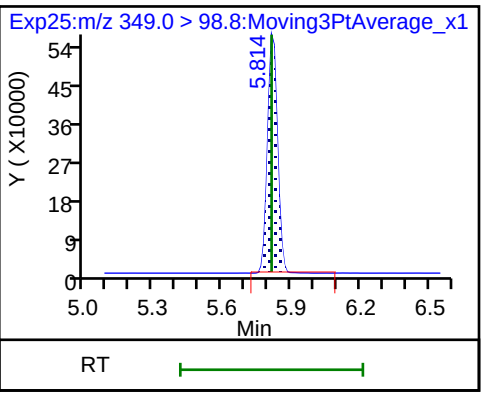
D 30 13C2-6:2FTS



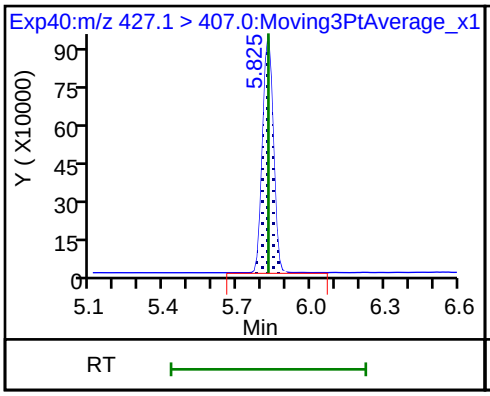
31 PFPeS



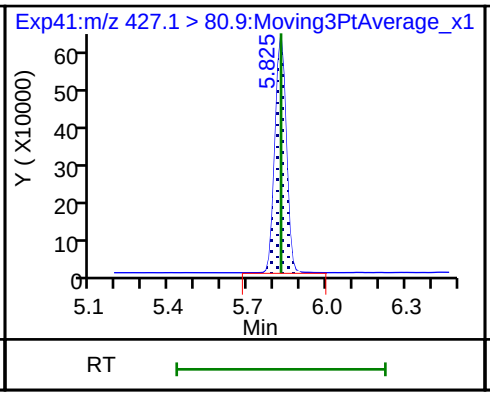
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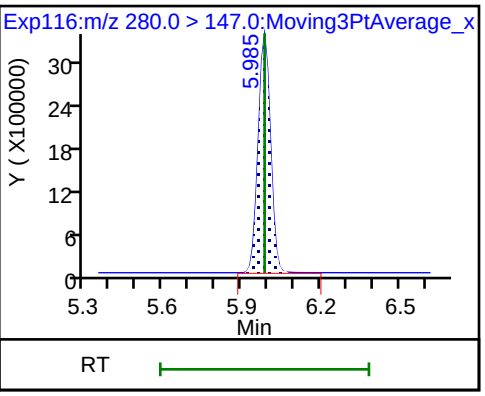
32 6:2FTS



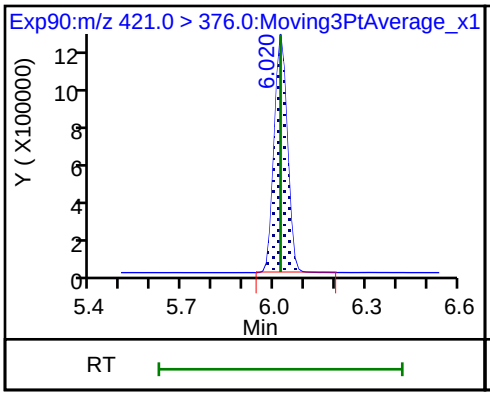
32 6:2FTS



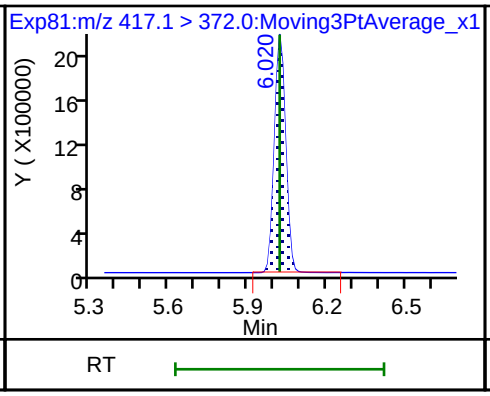
33 BTS



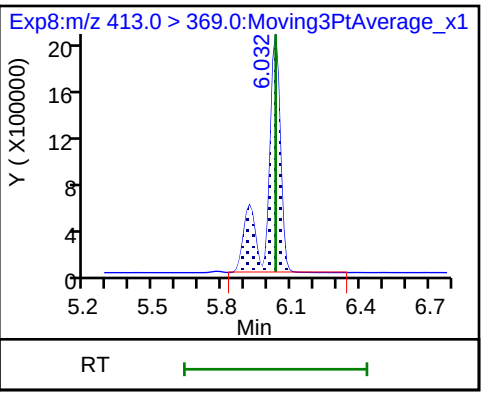
D 36 13C8 PFOA



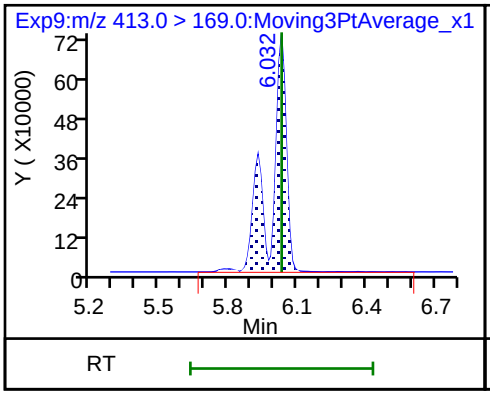
* 35 13C4 PFOA



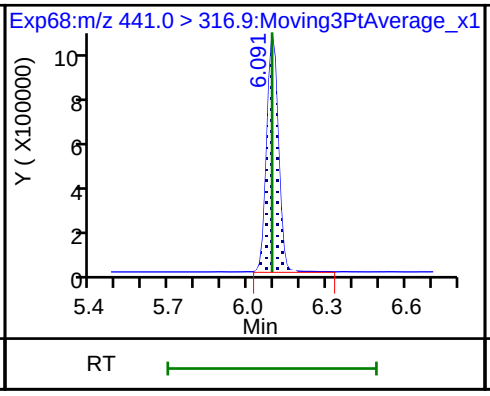
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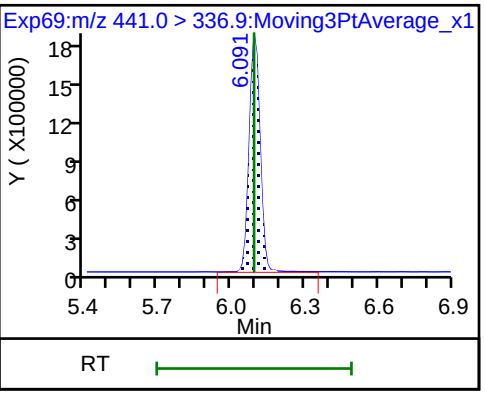
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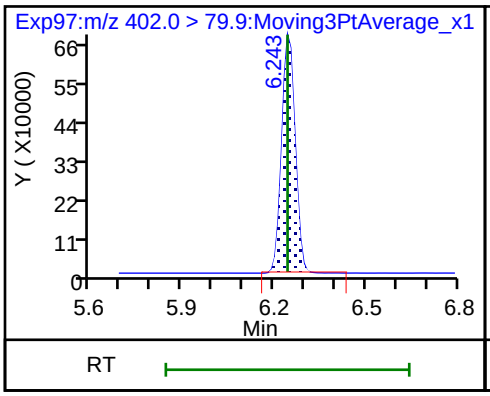
37 7:3 FTCA



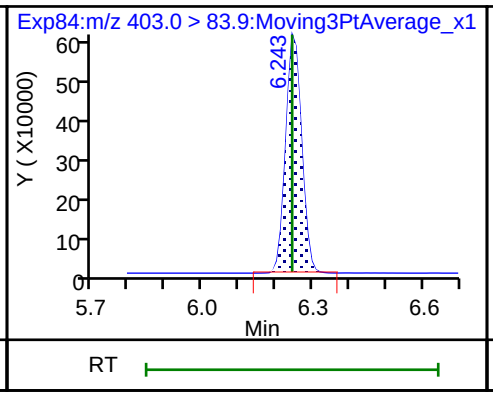
37 7:3 FTCA



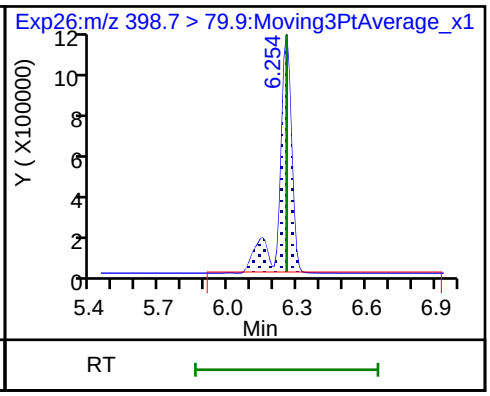
D 38 13C3 PFHxS



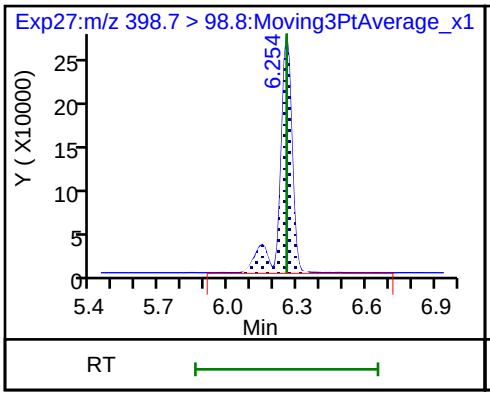
* 39 18O2 PFHxS



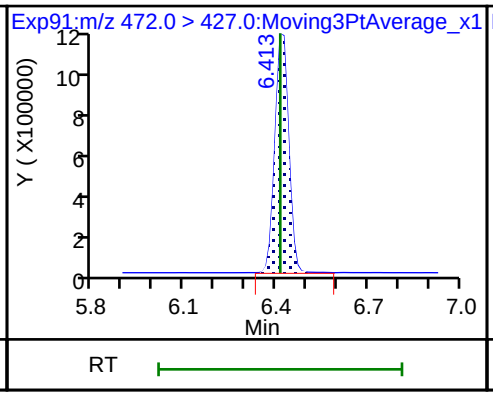
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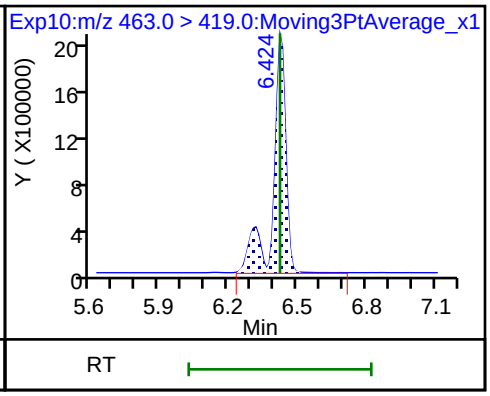
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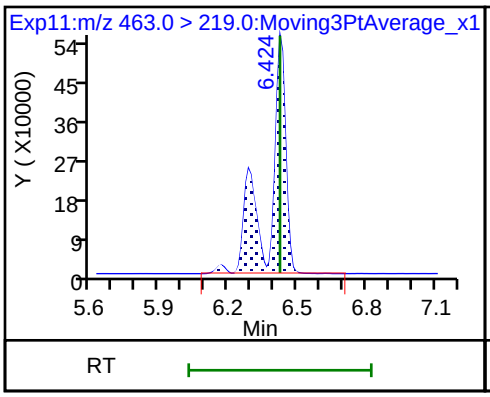
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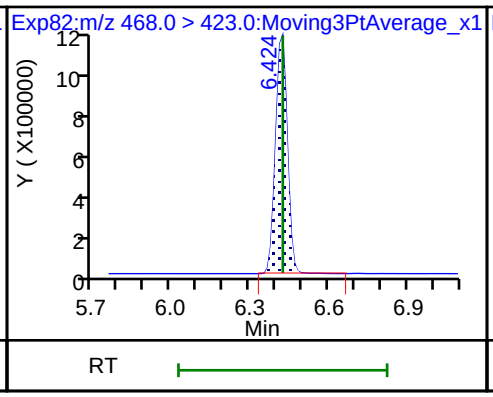
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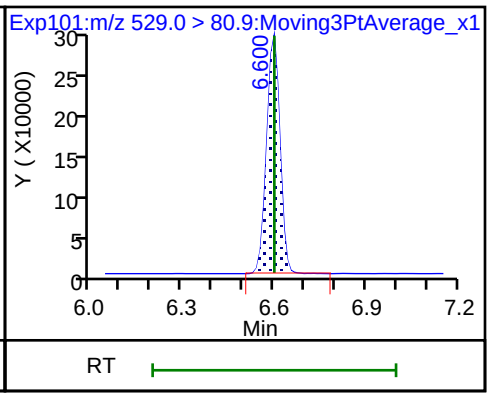
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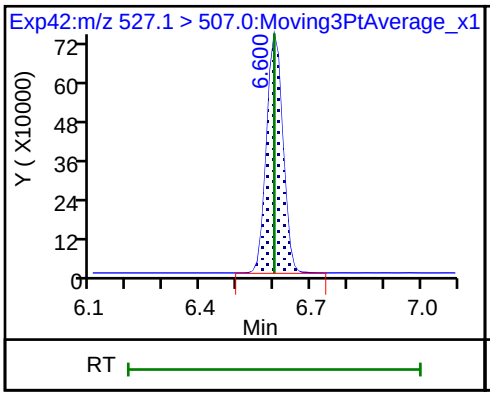
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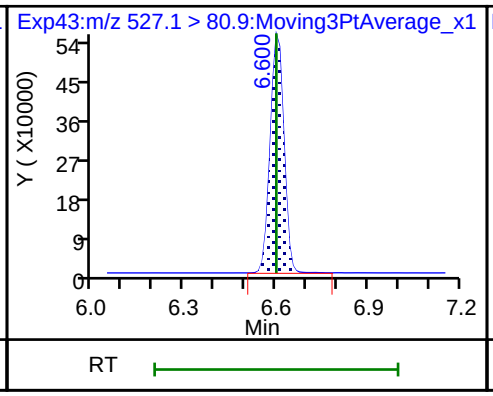
D 44 13C2-8:2FTS



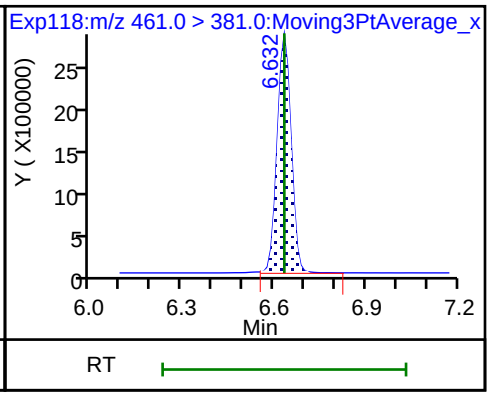
45 8:2FTS



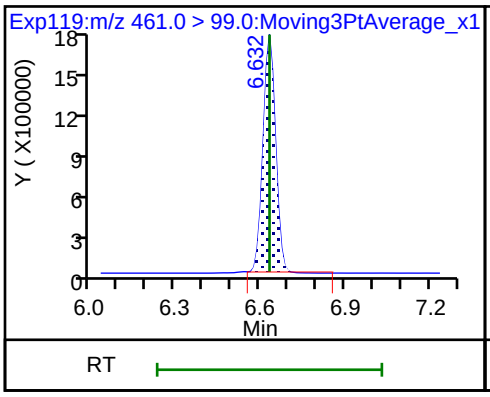
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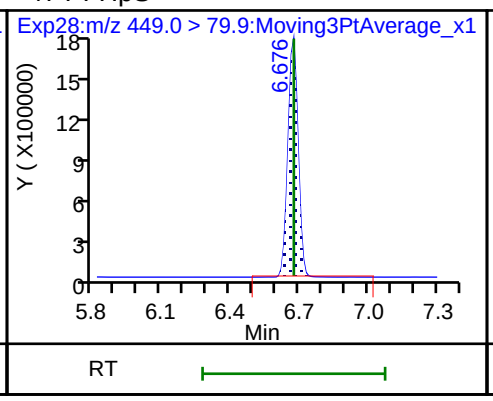
46 PFECHS



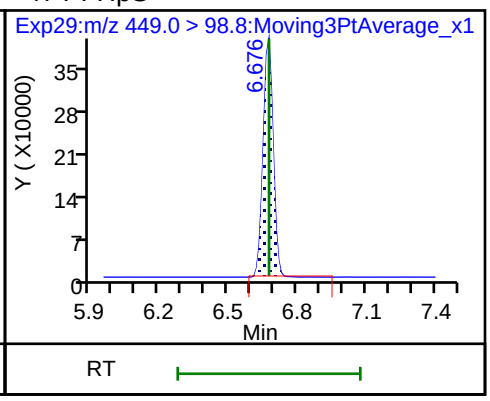
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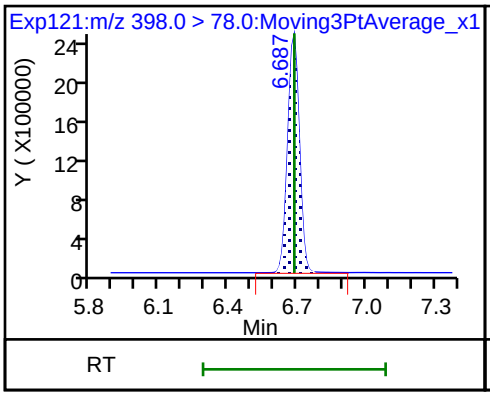
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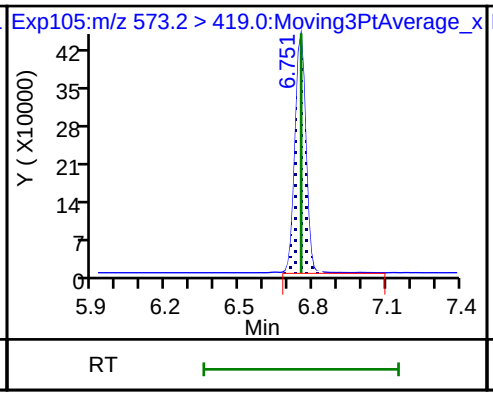
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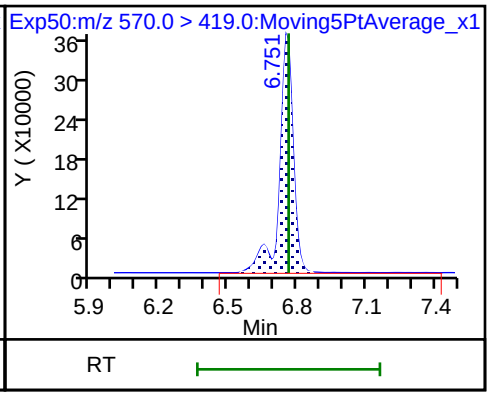
48 FHxSA



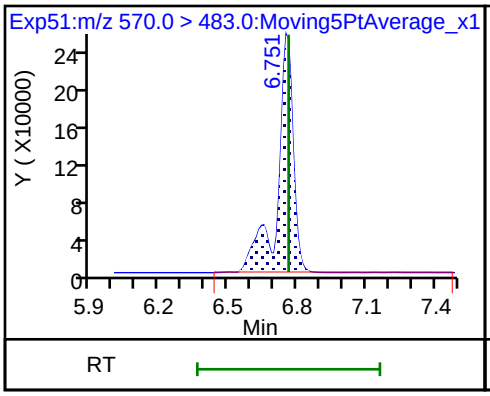
D 49 d3-NMeFOSAA



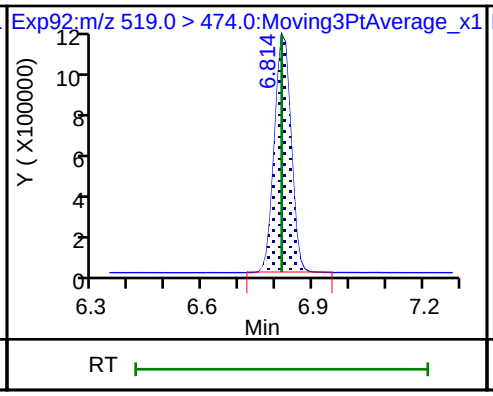
50 NMeFOSAA



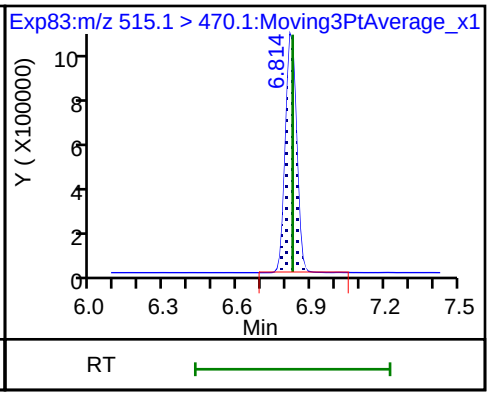
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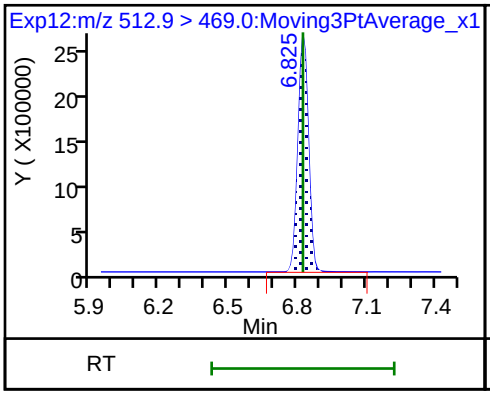
D 52 13C6 PFDA



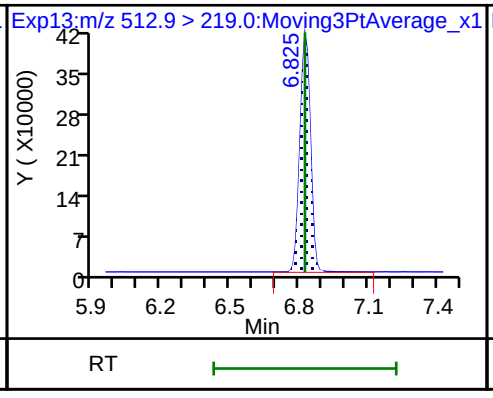
* 51 13C2 PFDA



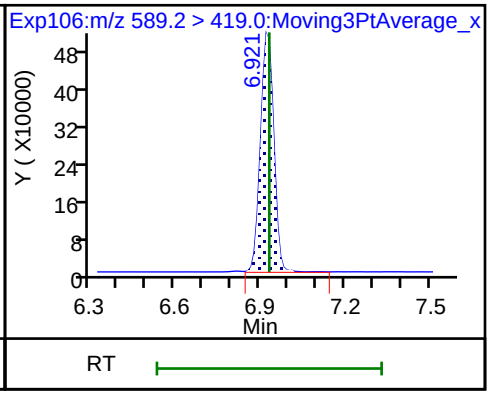
53 PFDA



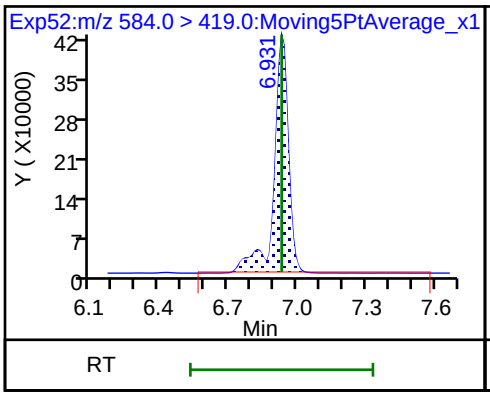
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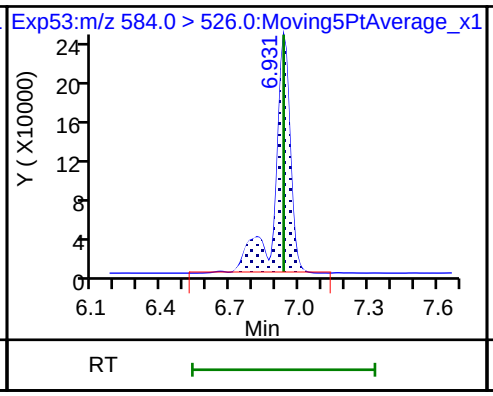
D 54 d5-NEtFOSAA



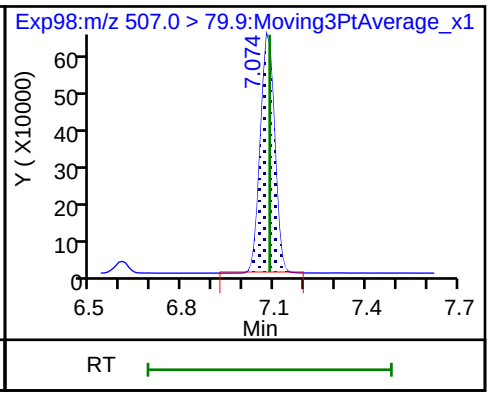
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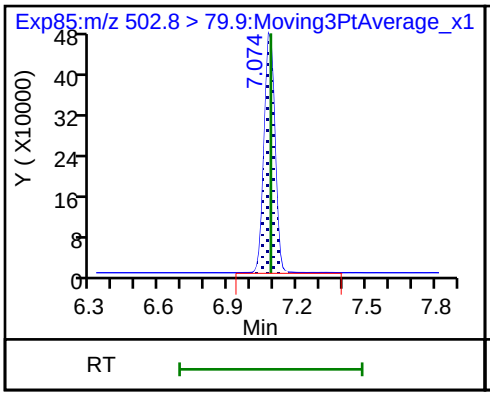
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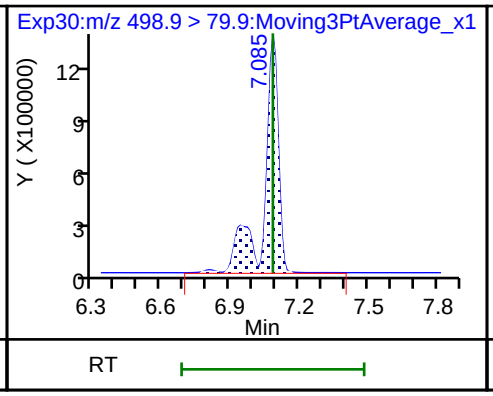
D 56 13C8 PFOS



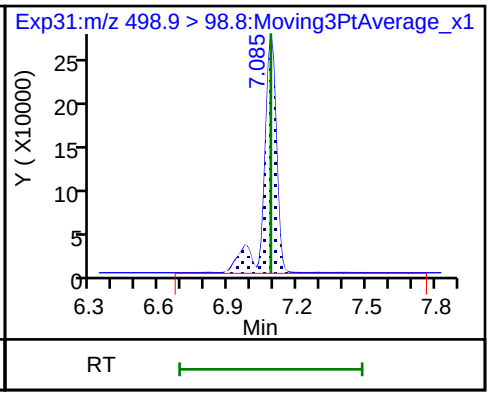
* 57 13C4 PFOS



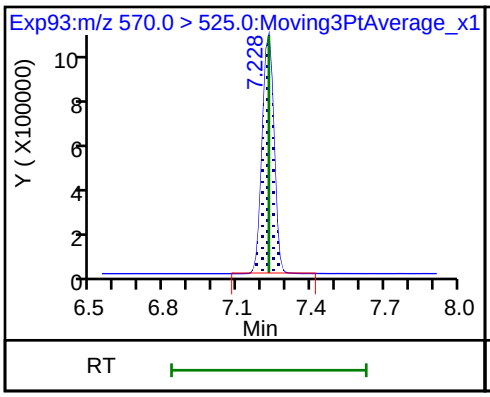
58 PFOS



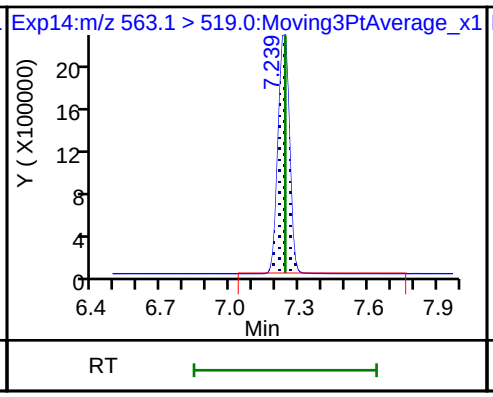
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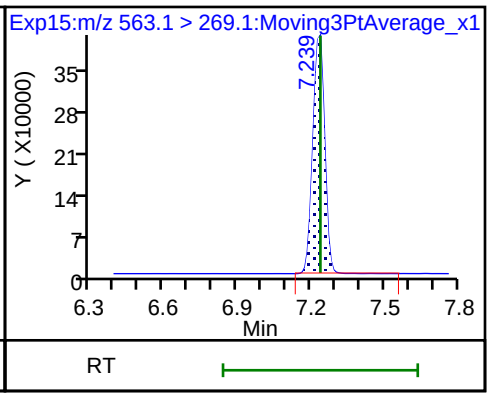
D 59 13C7 PFUnA



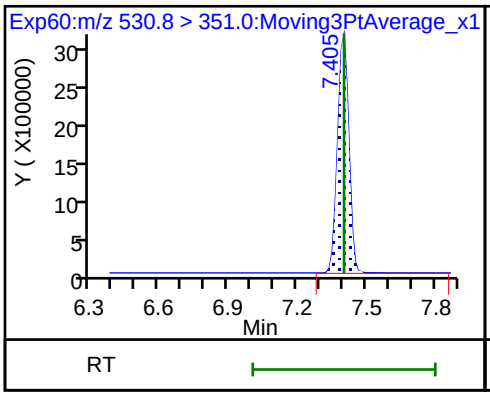
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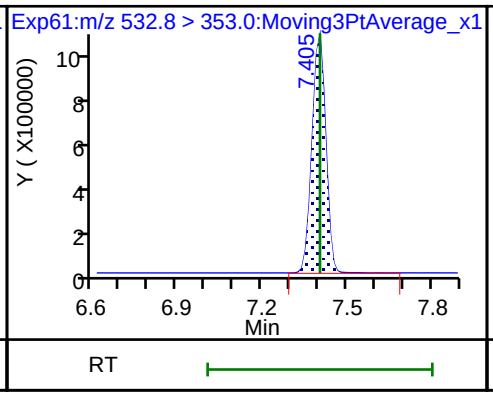
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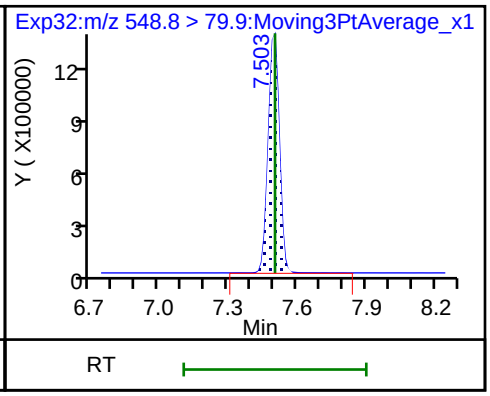
61 9ClFOS



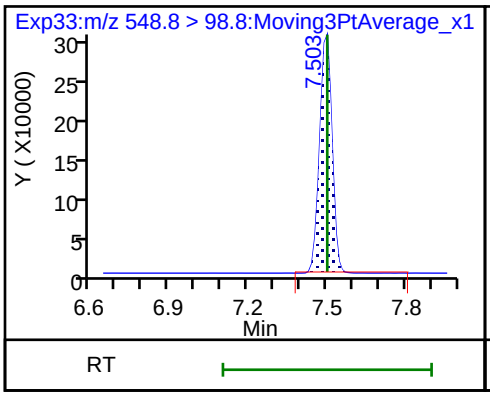
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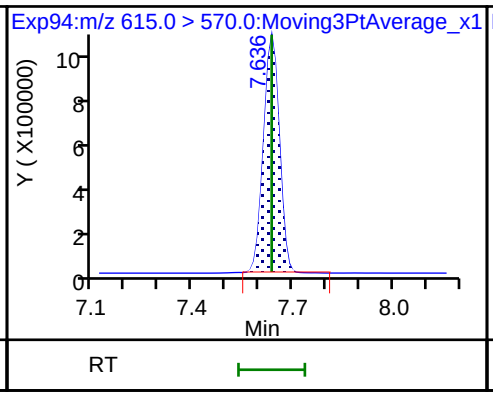
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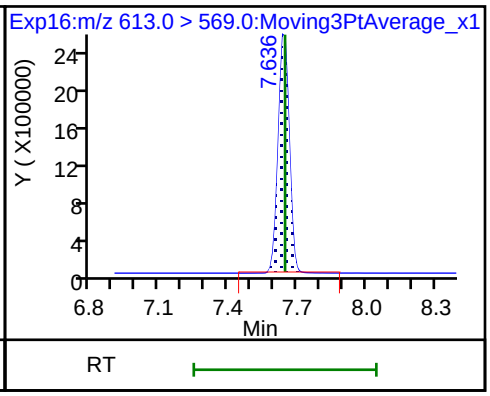
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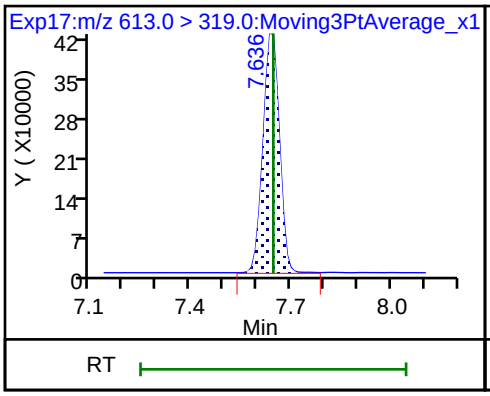
D 63 13C2 PFDoA



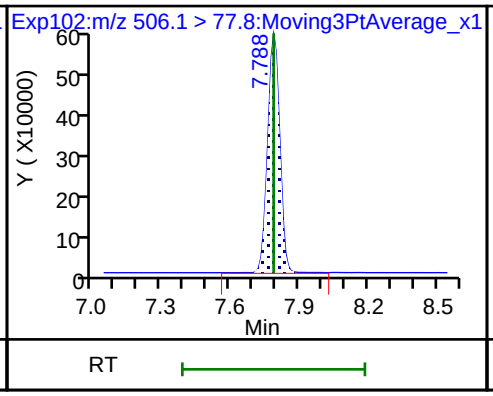
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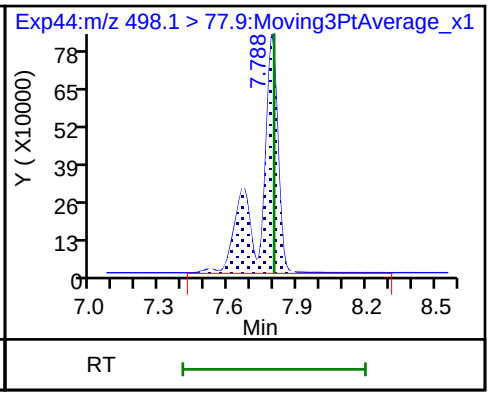
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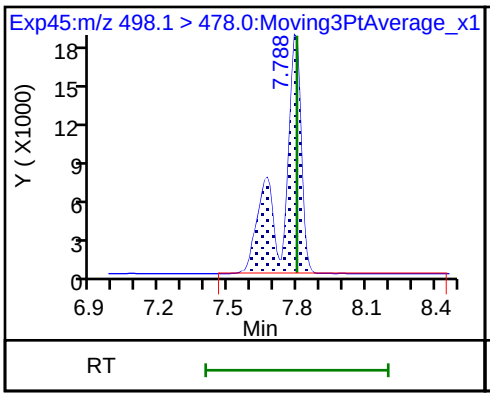
D 65 13C8 FOSA



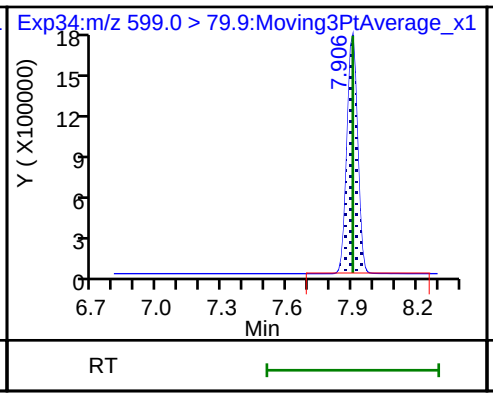
66 PFOSA



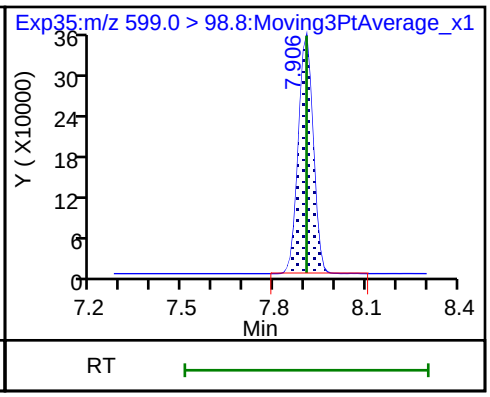
66 PFOSA



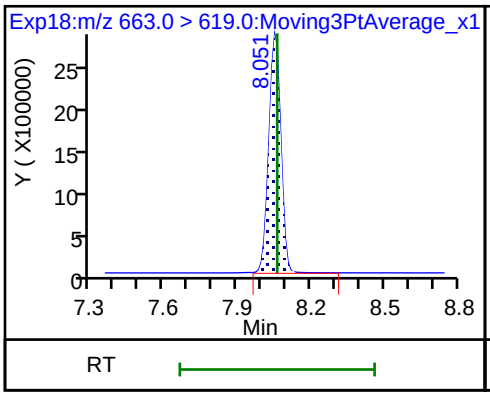
67 PFDS



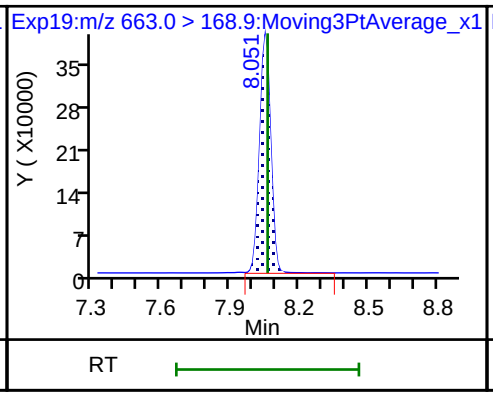
67 PFDS



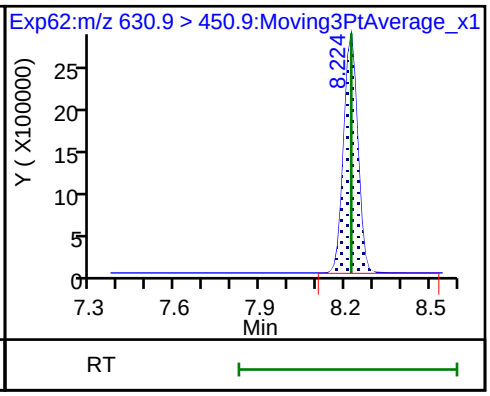
68 PFTrDA



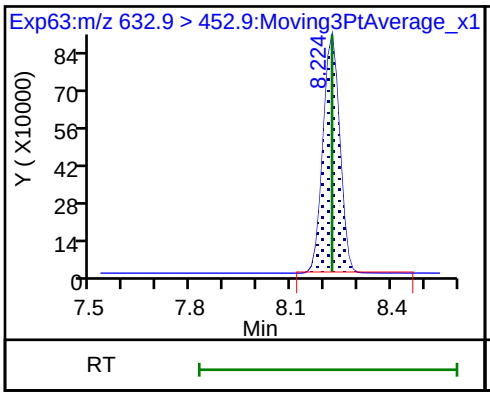
68 PFTrDA



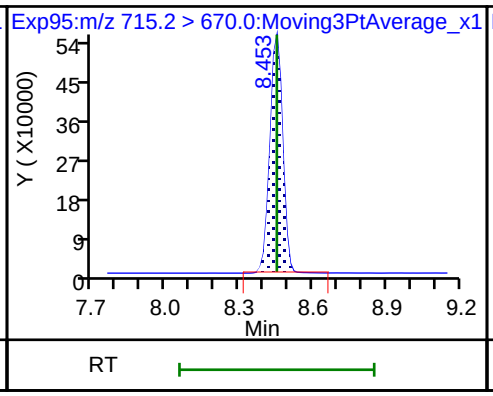
69 11ClFOS



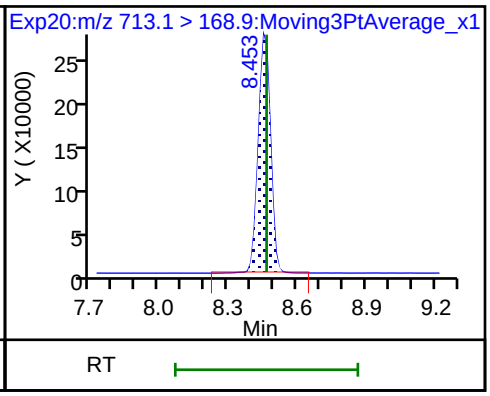
69 11ClFOS



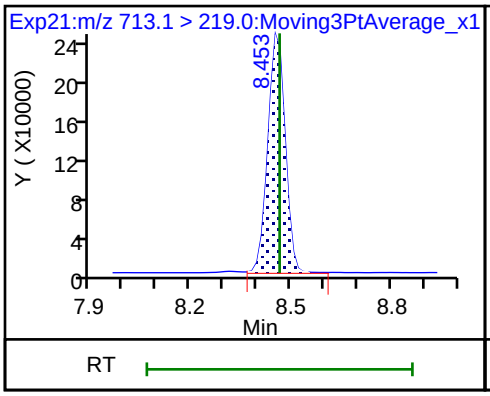
D 70 13C2 PFTeDA



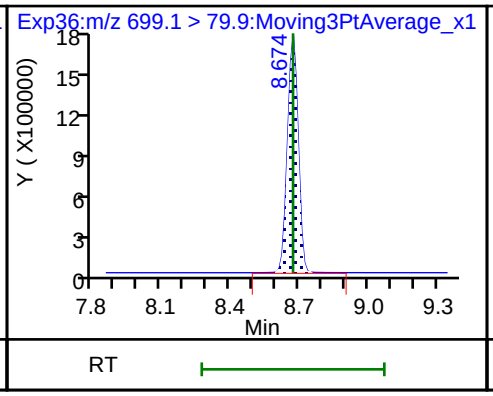
71 PFTeDA



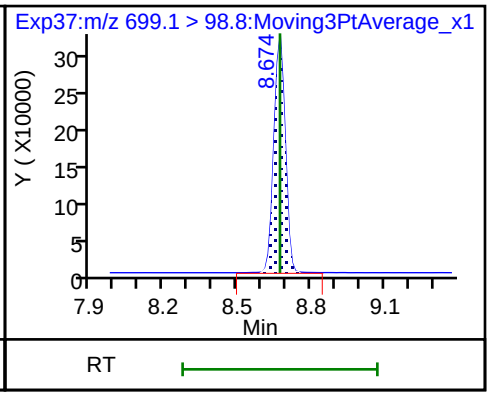
71 PFTeDA



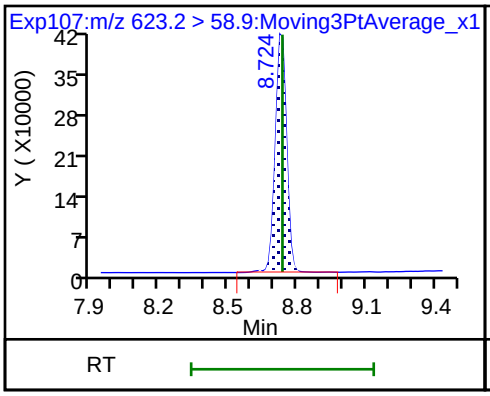
72 PFDoS



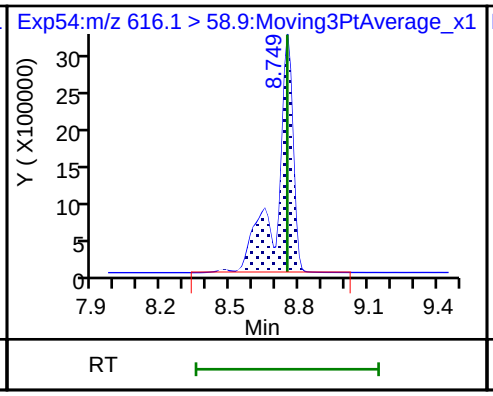
72 PFDoS



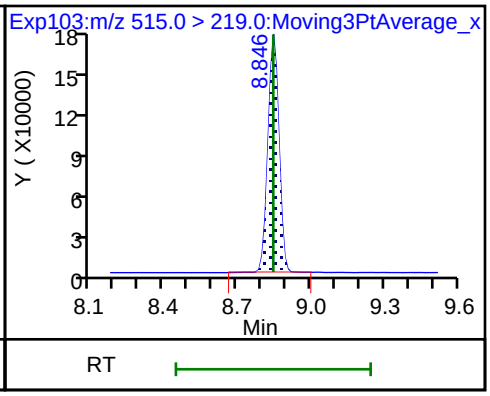
D 73 d7-N-Me-FOSE



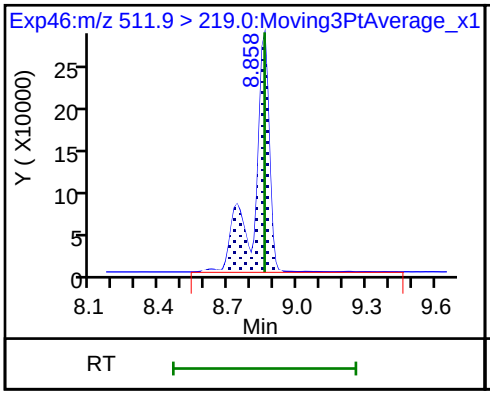
74 N-MeFOSE-M



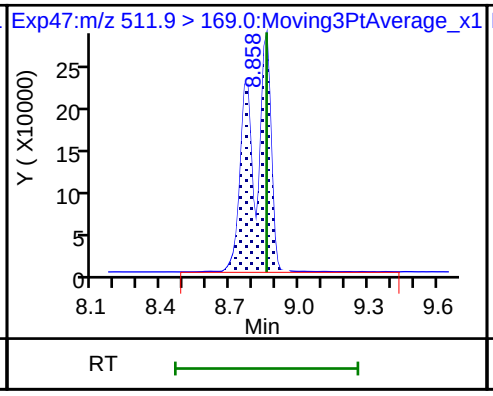
D 75 d3-NMePFOSA



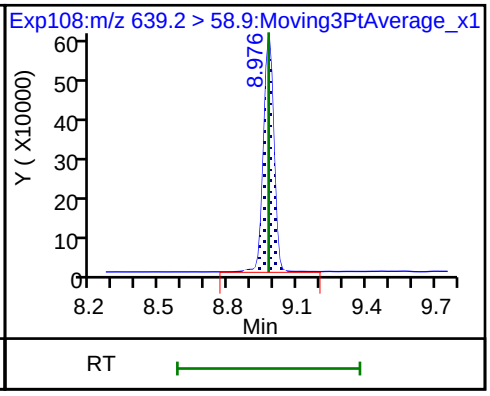
76 NMeFOSA



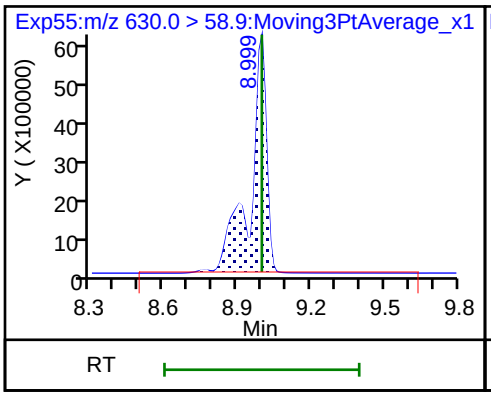
76 NMeFOSA



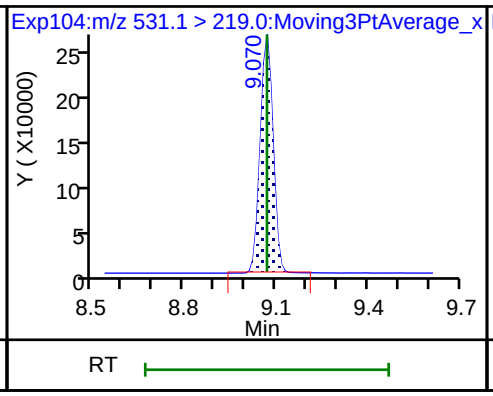
D 77 d9-N-EtFOSE



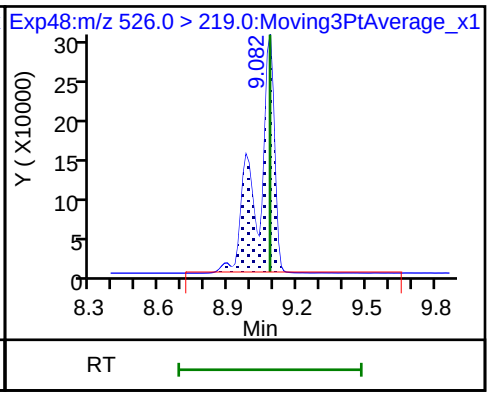
78 N-EtFOSE-M



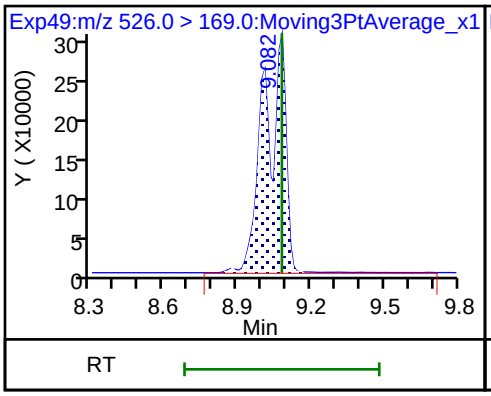
D 79 d5-NEtPFOSA



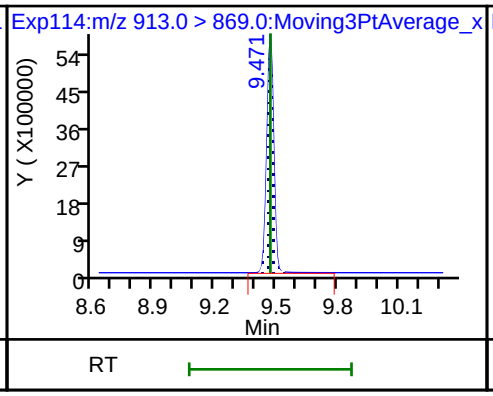
80 N-EtFOSA-M



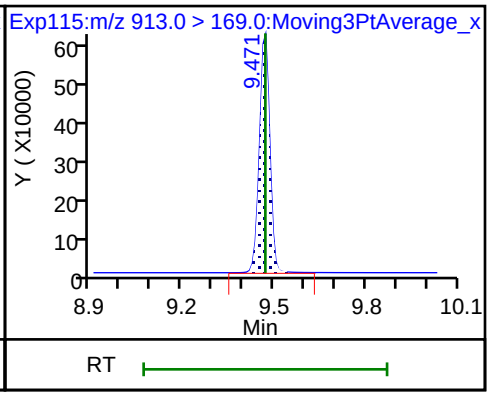
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-07.d
Lims ID: IC CAL 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 04-Feb-2026 13:52:32 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 7
Misc. Info.: 410-0174629-007 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 8
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:38 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 20:42:40
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.932	1.949	-0.017	0.477	2150484	2.00		100	1131	
2 Perfluoropropionic acid										
163.0 > 119.0	1.932	1.957	-0.025	1.000	50447050	50.4		101	16315	
D 3 13C4-PFBA										
216.8 > 171.9	4.043	4.058	-0.015	0.998	2589004	2.04		102	4646	
* 4 13C3PFBA										
216.0 > 172.0	4.051	4.065	-0.014		2174749	2.00			4637	
5 PFBA										
212.8 > 168.9	4.051	4.065	-0.014	1.002	2079813	19.1		95.5	2439	
6 PFMPA										
229.0 > 84.9	4.375	4.384	-0.009	0.929	15276979	10.0		99.9	9175	
7 3:3 FTCA										
241.0 > 177.0	4.384	4.402	-0.018	0.931	1116877	20.5	Target=1.05	102	5282	
241.0 > 117.0	4.384	4.402	-0.018	0.931	1054211		1.06(0.53-1.58)	102	3862	
D 8 13C5 PFPeA										
268.0 > 223.0	4.711	4.723	-0.012	0.910	2711588	2.03		101	4316	
9 PFPA										
263.0 > 219.0	4.711	4.735	-0.024	1.000	12242862	10.1		101	5981	
10 PFMBA										
279.0 > 84.9	4.866	4.885	-0.019	1.033	19047648	10.2		102	8976	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.987	5.008	-0.021	0.800	930611	4.42		94.1	4723	
12 4:2FTS										
327.1 > 307.0	4.998	5.008	-0.010	1.002	6373626	18.5	Target=1.61	98.7	14698	
327.1 > 80.9	4.998	5.008	-0.010	1.002	3946109		1.62(0.80-2.41)	98.7	5709	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.136	5.155	-0.019	0.992	6797319	10.1	Target=1.33	101	6087	
295.0 > 84.9	5.136	5.155	-0.019	0.992	5014999		1.36(0.67-2.00)	101	6547	
D 16 13C5 PFHxA										
318.0 > 273.0	5.175	5.185	-0.010	1.000	3192496	1.99		99.4	7282	
* 15 13C2 PFHxA										
315.1 > 270.0	5.175	5.185	-0.010		5357904	5.00			6092	
17 PFHxA										
313.0 > 269.0	5.186	5.196	-0.010	1.002	16731511	9.99	Target=16.27	99.9	8857	
313.0 > 118.9	5.186	5.196	-0.010	1.002	1007175		16.61(8.13-24.40)	99.9	3568	
18 5:3 FTCA										
341.0 > 237.1	5.259	5.281	-0.022	1.016	10176865	52.8	Target=1.06	106	3524	
341.0 > 217.0	5.259	5.281	-0.022	1.016	9800969		1.04(0.53-1.58)	106	2945	
D 20 13C3 PFBS										
302.1 > 79.9	5.314	5.325	-0.011	0.853	2134216	1.84		98.9	6493	
19 PFBS										
298.7 > 79.9	5.326	5.337	-0.011	1.002	10276193	8.98	Target=3.39	101	15601	
298.7 > 98.8	5.326	5.337	-0.011	1.002	3070724		3.35(1.70-5.09)	101	8924	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.359	5.370	-0.011	1.036	1918771	2.11		106	4017	
22 HFPO-DA										
284.9 > 168.9	5.371	5.382	-0.011	1.002	7676611	7.68	Target=1.73	102	6082	
284.9 > 184.9	5.371	5.382	-0.011	1.002	4176376		1.84(0.87-2.60)	102	6058	
23 FBSA										
298.0 > 78.0	5.393	5.405	-0.011	1.015	11458863	10.8		108	1291	
25 PFEESA										
314.8 > 134.9	5.563	5.574	-0.011	1.075	24695096	9.10	Target=10.20	102	16225	
314.8 > 82.9	5.563	5.574	-0.011	1.075	2509916		9.84(5.10-15.30)	102	6385	
D 27 13C4 PFHpA										
367.0 > 322.0	5.608	5.620	-0.012	1.084	3010502	2.03		102	6331	
28 PFHpA										
363.1 > 319.0	5.608	5.620	-0.012	1.000	17409359	10.3	Target=3.01	103	4665	
363.1 > 169.0	5.608	5.620	-0.012	1.000	5517656		3.16(1.50-4.51)	103	4194	
29 ADONA										
376.9 > 250.9	5.768	5.780	-0.012	1.076	31180440	8.96	Target=2.15	94.7	10155	
376.9 > 84.8	5.768	5.780	-0.012	1.076	15041589		2.07(1.08-3.22)	94.7	6392	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.802	5.814	-0.012	0.931	716059	3.93		82.5	2920	
31 PFPeS										
349.0 > 79.9	5.802	5.814	-0.012	0.931	11668433	9.31	Target=3.70	99.1	8244	
349.0 > 98.8	5.802	5.814	-0.012	0.931	3097662		3.77(1.85-5.54)	99.1	3845	
32 6:2FTS										
427.1 > 407.0	5.814	5.825	-0.011	1.002	5108178	20.3	Target=1.45	107	2091	
427.1 > 80.9	5.814	5.825	-0.011	1.002	3324075		1.54(0.72-2.17)	107	1546	
33 BTS										
280.0 > 147.0	5.974	5.985	-0.011	0.958	21701361	10.1		103	14385	
D 36 13C8 PFOA										
421.0 > 376.0	6.009	6.020	-0.011	1.000	3598631	1.98		99.0	5216	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.009	6.020	-0.011		5966756	5.00			6943	
34 PFOA										
413.0 > 369.0	6.020	6.032	-0.012	1.002	16222302	10.1	Target=2.52	101	1555	
413.0 > 169.0	6.020	6.032	-0.012	1.002	6399908		2.53(1.26-3.77)	101	5145	
37 7:3 FTCA										
441.0 > 316.9	6.079	6.091	-0.012	1.175	6095406	54.2	Target=0.53	108	2387	
441.0 > 336.9	6.079	6.091	-0.012	1.175	11025631		0.55(0.26-0.79)	108	3853	
D 38 13C3 PFHxS										
402.0 > 79.9	6.233	6.243	-0.010	1.000	1947126	1.85		97.6	4044	
* 39 18O2 PFHxS										
403.0 > 83.9	6.233	6.243	-0.010		1790638	1.90			4530	
40 PFHxS										
398.7 > 79.9	6.243	6.254	-0.011	1.002	8152071	8.94	Target=4.48	98.0	8098	
398.7 > 98.8	6.243	6.254	-0.011	1.002	1883141		4.33(2.24-6.72)	98.0	8339	
D 41 13C9 PFNA										
472.0 > 427.0	6.401	6.413	-0.012	1.000	3341544	1.99		99.5	5633	
43 PFNA										
463.0 > 419.0	6.413	6.424	-0.011	1.002	14608946	9.65	Target=2.90	96.5	4176	
463.0 > 219.0	6.413	6.424	-0.011	1.002	5043701		2.90(1.45-4.35)	96.5	2885	
* 42 13C5 PFNA										
468.0 > 423.0	6.401	6.424	-0.023		3414236	2.00			6477	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.588	6.600	-0.012	1.057	840271	4.65		96.8	2392	
45 8:2FTS										
527.1 > 507.0	6.588	6.600	-0.012	1.000	4395622	18.4	Target=1.40	95.8	10812	
527.1 > 80.9	6.588	6.600	-0.012	1.000	3147680		1.40(0.70-2.09)	95.8	5485	
46 PFECHS										
461.0 > 381.0	6.622	6.633	-0.011	1.062	17012258	9.45	Target=1.63	102	8484	
461.0 > 99.0	6.622	6.633	-0.011	1.062	10195981		1.67(0.81-2.44)	102	2131	
47 PFHpS										
449.0 > 79.9	6.665	6.676	-0.011	0.944	10210401	9.22	Target=4.66	96.6	7091	
449.0 > 98.8	6.665	6.676	-0.011	0.944	2284925		4.47(2.33-6.98)	96.6	7991	
48 FHxSA										
398.0 > 78.0	6.665	6.687	-0.022	1.069	16993147	10.4		104	3500	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.730	6.752	-0.022	0.953	1265512	5.12		102	1997	
50 NMeFOSAA										M
570.0 > 419.0	6.741	6.762	-0.021	1.002	2970032	10.3	Target=1.27	103	4717	M
570.0 > 483.0	6.741	6.762	-0.021	1.002	2289733		1.30(0.64-1.91)	103	3525	
D 52 13C6 PFDA										
519.0 > 474.0	6.804	6.814	-0.010	1.000	3266695	2.05		103	5451	
* 51 13C2 PFDA										
515.1 > 470.1	6.804	6.825	-0.021		2854337	2.00			5885	
53 PFDA										
512.9 > 469.0	6.814	6.825	-0.011	1.002	16170215	9.93	Target=6.58	99.3	7873	
512.9 > 219.0	6.814	6.825	-0.011	1.002	2435428		6.64(3.29-9.87)	99.3	4311	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.910	6.932	-0.022	0.978	1666064	5.35		107	1702	
55 NEtFOSAA										M
584.0 > 419.0	6.921	6.932	-0.011	1.002	3617862	9.52	Target=1.61	95.2	2212	M
584.0 > 526.0	6.921	6.932	-0.011	1.002	2257423		1.60(0.80-2.41)	95.2	25471	
D 56 13C8 PFOS										
507.0 > 79.9	7.064	7.084	-0.020	1.000	1977566	1.92		100	175	
* 57 13C4 PFOS										
502.8 > 79.9	7.064	7.084	-0.020		1420711	1.92			4579	
58 PFOS										
498.9 > 79.9	7.074	7.084	-0.010	1.001	11377134	9.48	Target=5.51	102	782	
498.9 > 98.8	7.074	7.084	-0.010	1.001	2066688		5.51(2.75-8.26)	102	10044	
D 59 13C7 PFUnA										
570.0 > 525.0	7.205	7.227	-0.022	1.059	3241872	2.04		102	8593	
60 PFUnA										
563.1 > 519.0	7.216	7.239	-0.023	1.002	14600421	10.1	Target=5.78	101	10099	
563.1 > 269.1	7.216	7.239	-0.023	1.002	2603720		5.61(2.89-8.67)	101	9233	
61 9ClFOS										
530.8 > 351.0	7.393	7.405	-0.012	1.047	20235102	9.33	Target=3.05	99.9	16289	
532.8 > 353.0	7.393	7.405	-0.012	1.047	6364347		3.18(1.52-4.57)	99.9	11043	
62 PFNS										
548.8 > 79.9	7.491	7.503	-0.012	1.061	8479910	9.35	Target=4.62	97.2	10365	
548.8 > 98.8	7.491	7.503	-0.012	1.061	1938895		4.37(2.31-6.93)	97.2	8925	
D 63 13C2 PFDoA										
615.0 > 570.0	7.625	7.636	-0.011	1.121	3061885	2.03		102	4087	
64 PFDoA										
613.0 > 569.0	7.625	7.647	-0.022	1.000	16339872	9.91	Target=6.26	99.1	8046	
613.0 > 319.0	7.625	7.647	-0.022	1.000	2618148		6.24(3.13-9.39)	99.1	5526	
D 65 13C8 FOSA										
506.1 > 77.8	7.777	7.788	-0.011	1.101	2217951	2.15		108	4024	
66 PFOSA										
498.1 > 77.9	7.777	7.799	-0.022	1.000	9344114	10.1	Target=42.30	101	12576	
498.1 > 478.0	7.777	7.799	-0.022	1.000	213123		43.84(21.15-63.45)	101	1117	
67 PFDS										
599.0 > 79.9	7.885	7.906	-0.021	1.116	10770560	9.37	Target=4.95	97.2	30576	
599.0 > 98.8	7.885	7.906	-0.021	1.116	2211993		4.87(2.48-7.43)	97.2	12916	
68 PFTrDA										
663.0 > 619.0	8.040	8.061	-0.021	0.954	17733269	9.38	Target=7.25	93.8	5493	
663.0 > 168.9	8.040	8.061	-0.021	0.954	2400897		7.39(3.63-10.88)	93.8	5438	
69 11ClFOS										
630.9 > 450.9	8.212	8.224	-0.012	1.163	18168169	9.58	Target=3.03	102	78049	
632.9 > 452.9	8.200	8.224	-0.024	1.161	6070673		2.99(1.51-4.54)	102	6550	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.425	8.452	-0.027	1.238	1923101	2.13		106	2541	
71 PFTeDA										
713.1 > 168.9	8.439	8.466	-0.027	1.002	2010291	9.67	Target=1.21	96.7	4231	
713.1 > 219.0	8.439	8.466	-0.027	1.002	1667449		1.21(0.61-1.82)	96.7	1717	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.649	8.673	-0.024	1.224	10562138	9.91	Target=5.37	102	14282	
699.1 > 98.8	8.649	8.673	-0.024	1.224	1988271		5.31(2.69-8.06)	102	9778	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.711	8.735	-0.024	1.233	1414352	5.38		108	422	
74 N-MeFOSE-M										
616.1 > 58.9	8.736	8.748	-0.012	1.003	31782943	50.3		101	3175	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.835	8.845	-0.010	1.251	534076	2.07		104	1786	
76 NMeFOSA										M
511.9 > 219.0	8.835	8.857	-0.022	1.000	2590610	10.4	Target=0.75	104	6575	
511.9 > 169.0	8.835	8.857	-0.022	1.000	3427259		0.76(0.37-1.12)	104	1678	M
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.964	8.975	-0.011	1.269	1861171	5.30		106	661	
78 N-EtFOSE-M										
630.0 > 58.9	8.976	8.998	-0.022	1.001	57106994	50.1		100	5479	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.047	9.069	-0.022	1.281	739142	2.10		105	2398	
80 N-EtFOSA-M										M
526.0 > 219.0	9.058	9.081	-0.023	1.001	3100680	9.96	Target=0.84	99.6	2141	M
526.0 > 169.0	9.058	9.081	-0.023	1.001	3734812		0.83(0.42-1.26)	99.6	1598	M
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.455	9.470	-0.015	1.122	26384980	9.78	Target=9.33	97.8	51081	
913.0 > 169.0	9.455	9.470	-0.015	1.122	2939356		8.98(4.66-13.99)	97.8	14022	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_CAL7_00039 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:39 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-07.d

Injection Date: 04-Feb-2026 13:52:32 Instrument ID: 30637

Lims ID: IC CAL 7

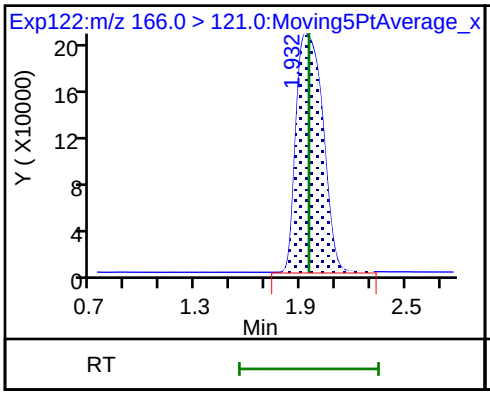
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 8 Worklist Smp#: 7

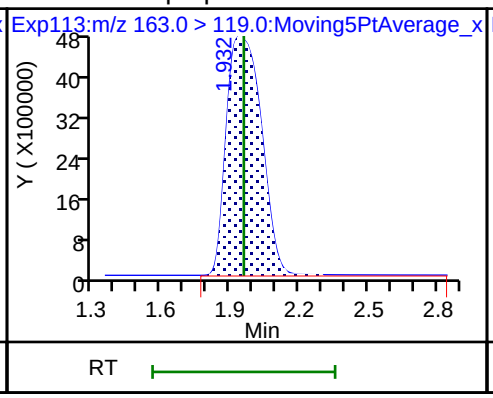
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

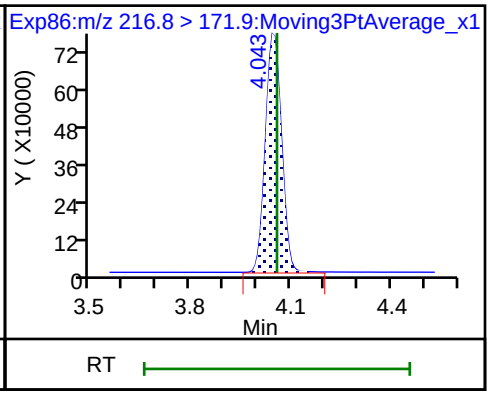
D 1 13C3PFPrA



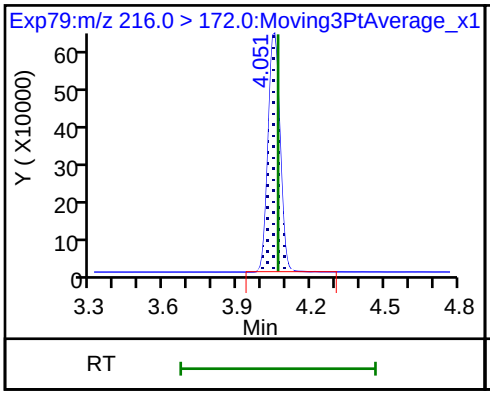
2 Perfluoropropionic acid



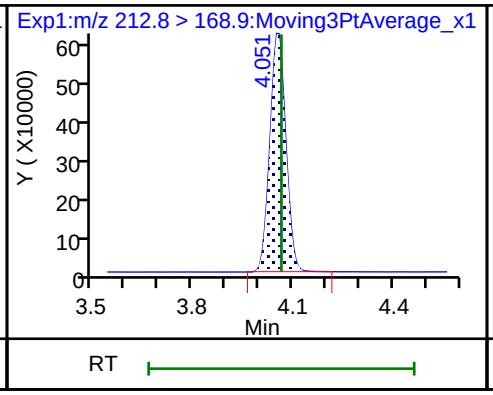
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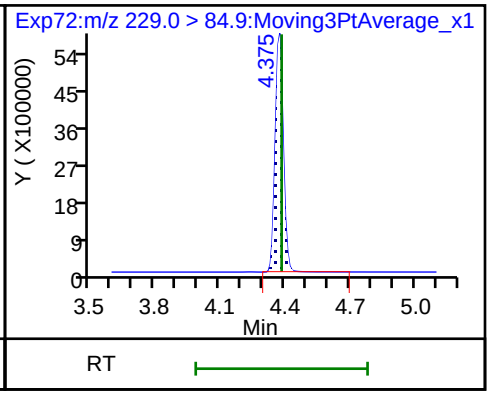
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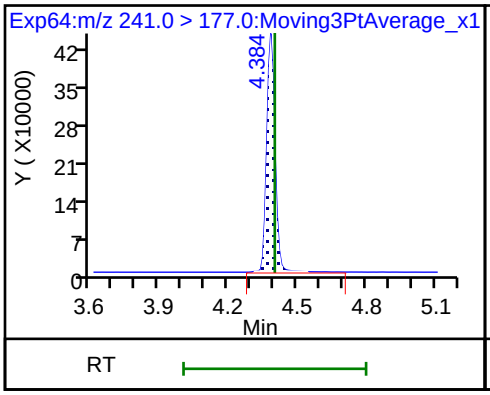
5 PFBA



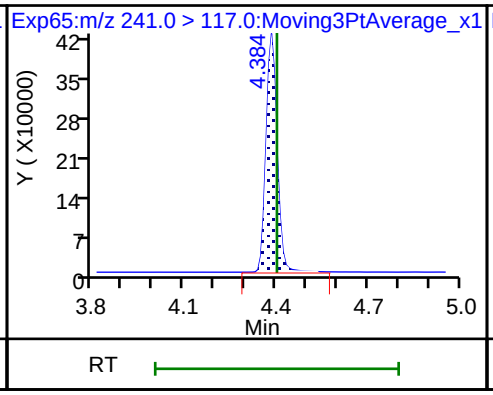
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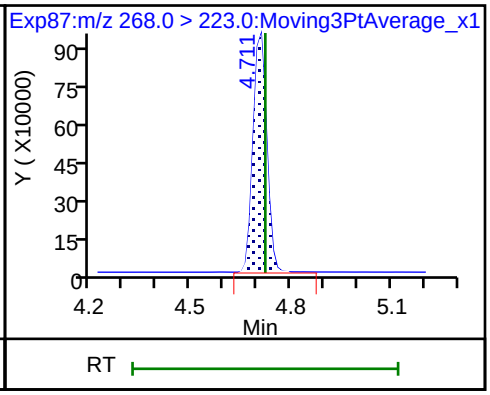
7 3:3 FTCA



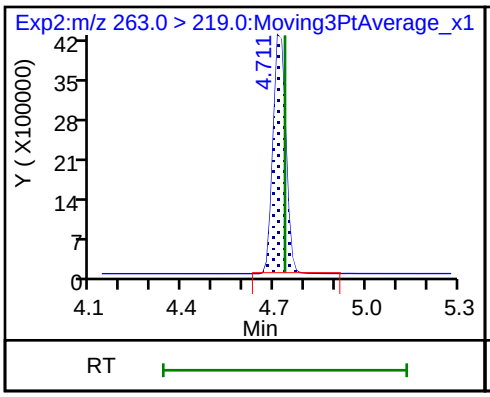
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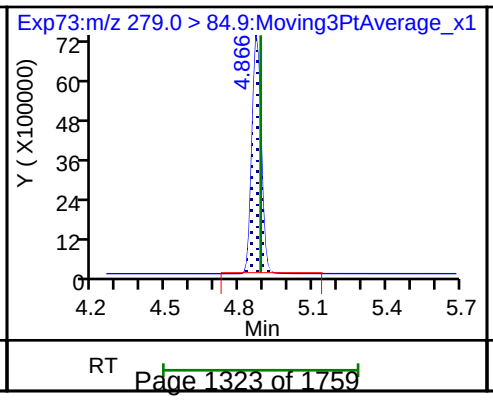
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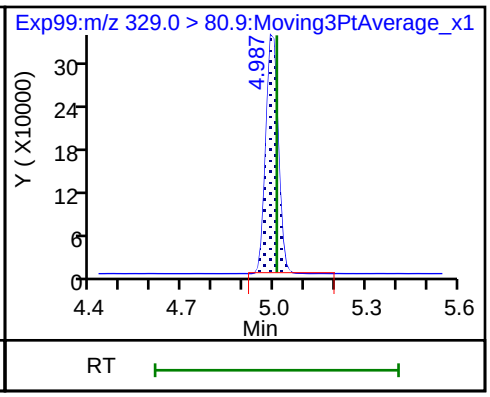
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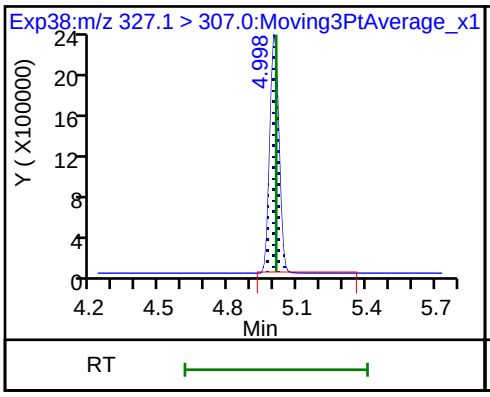
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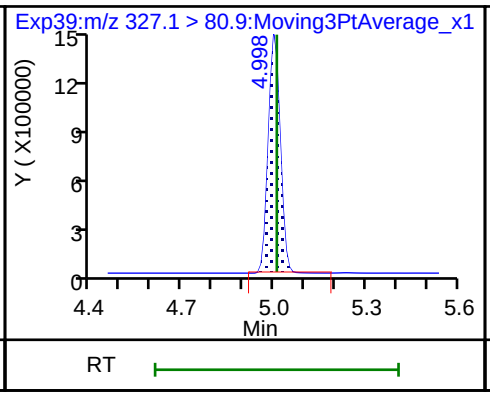
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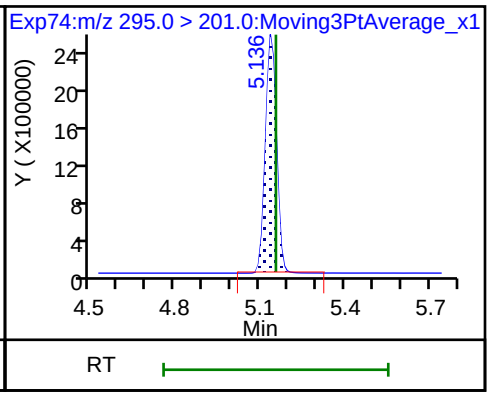
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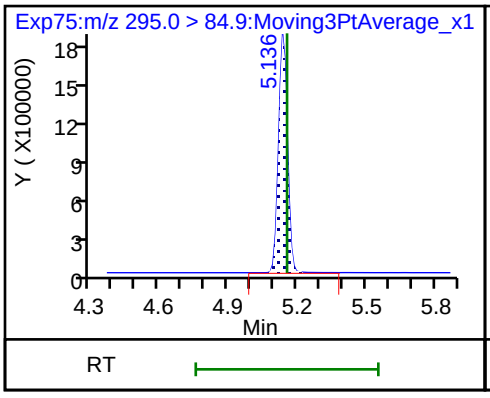
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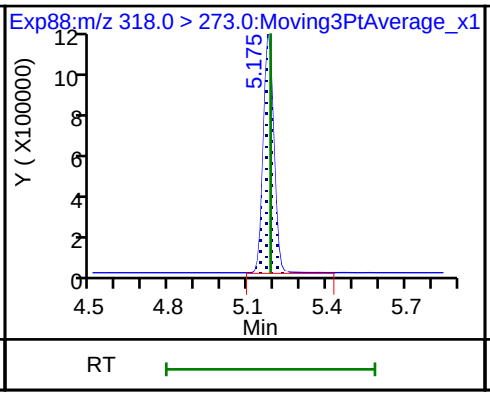
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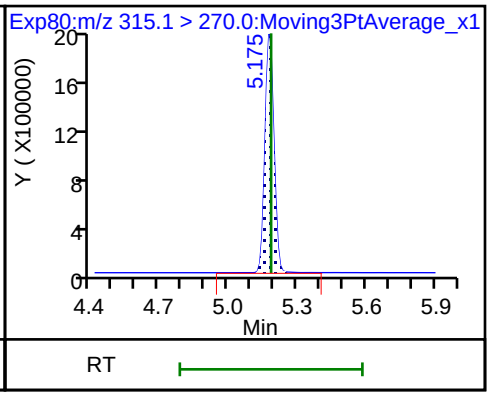
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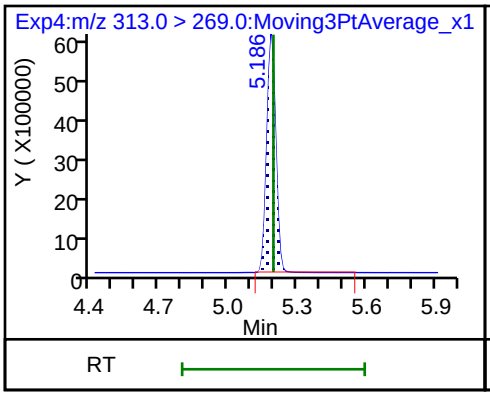
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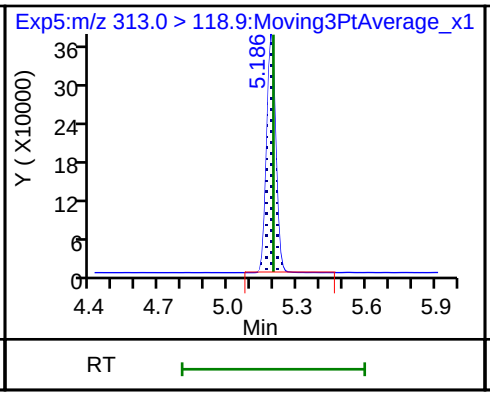
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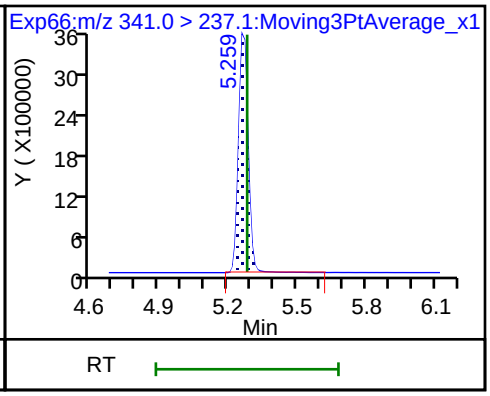
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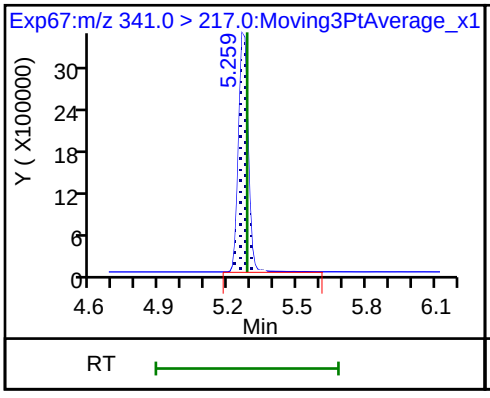
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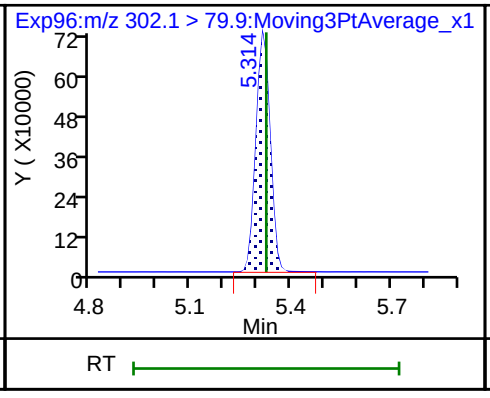
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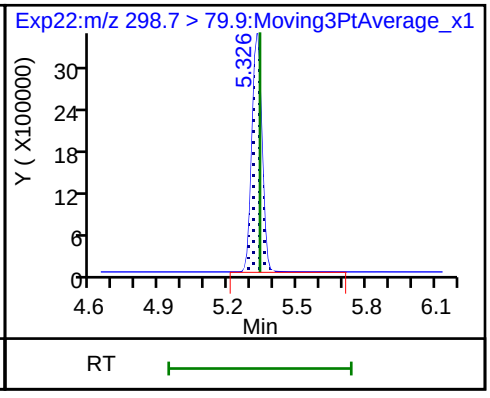
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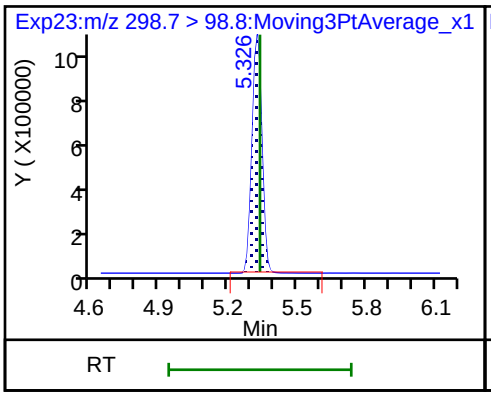
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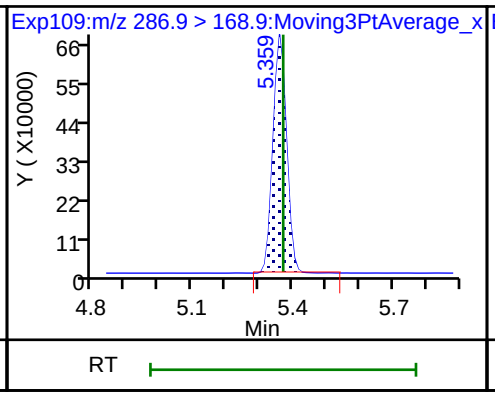
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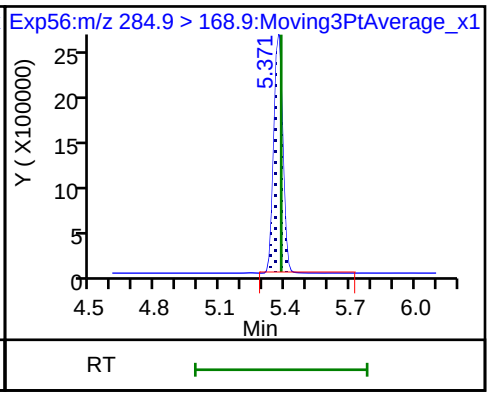
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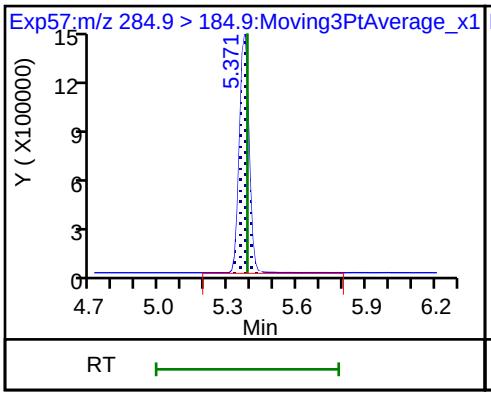
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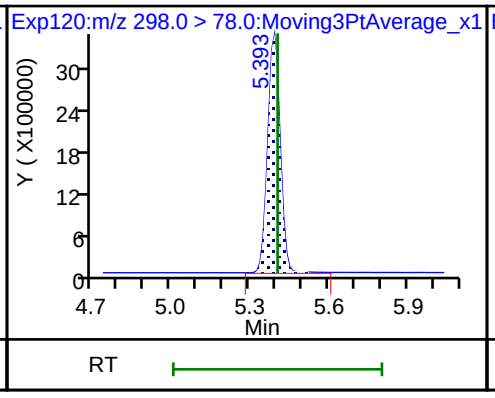
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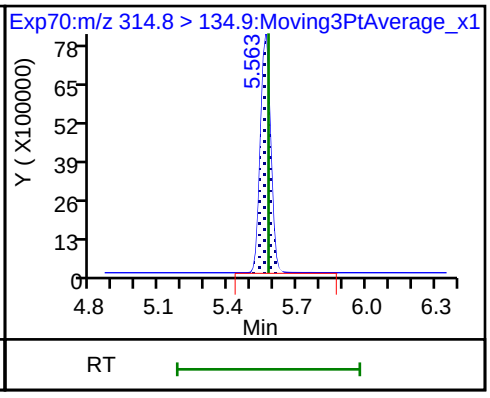
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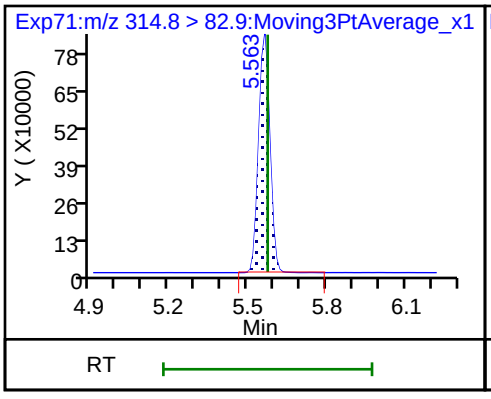
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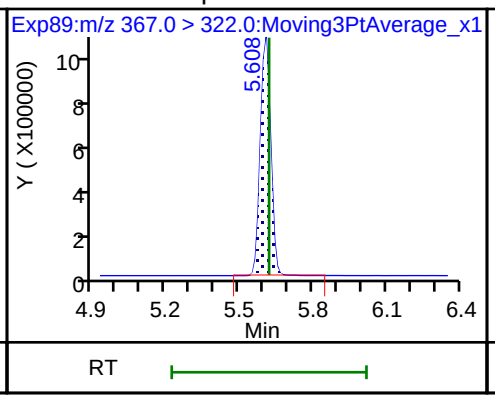
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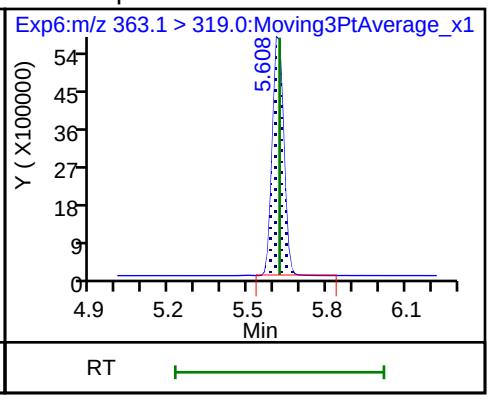
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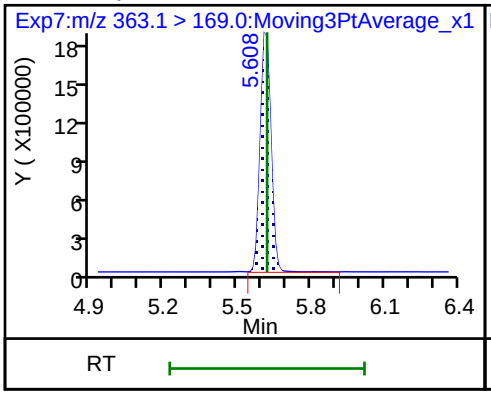
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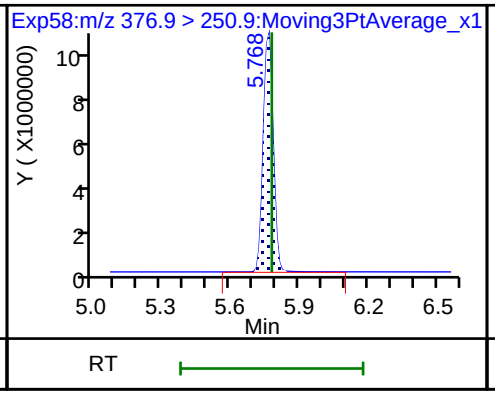
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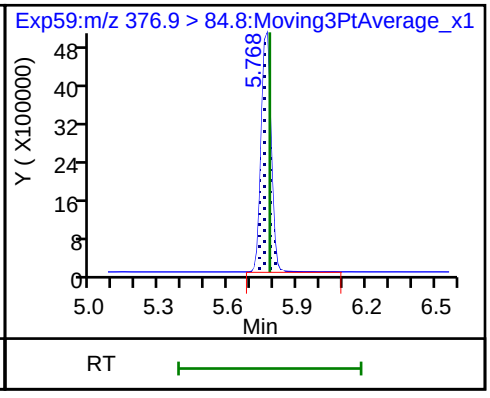
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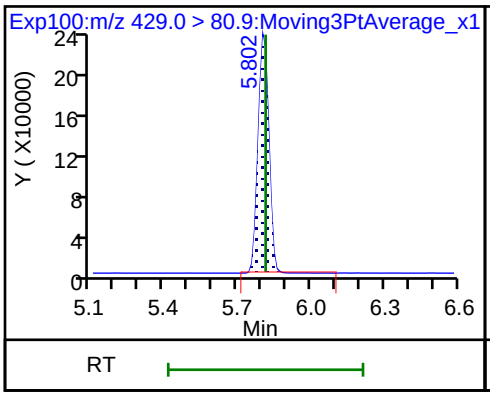
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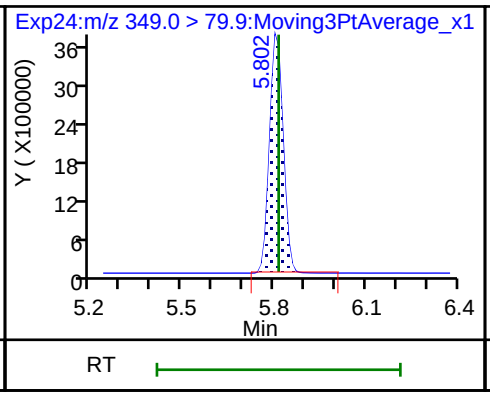
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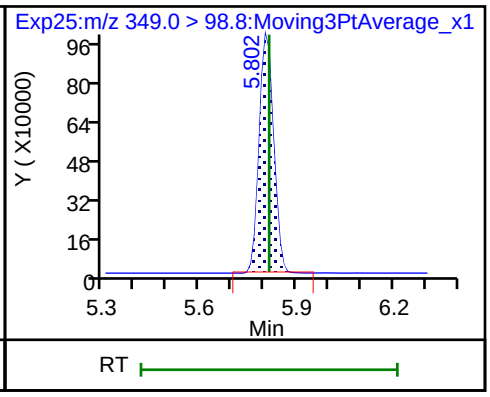
D 30 13C2-6:2FTS



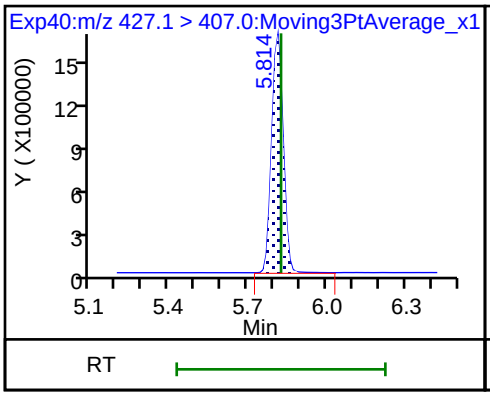
31 PFPeS



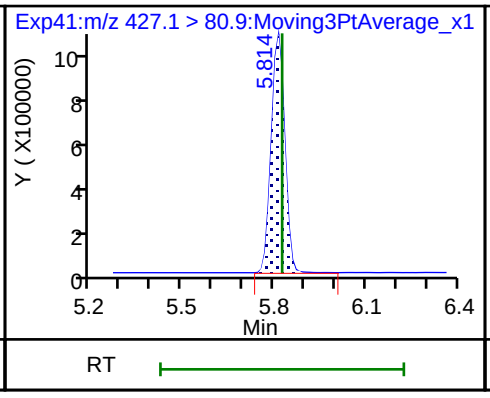
31 PFPeS



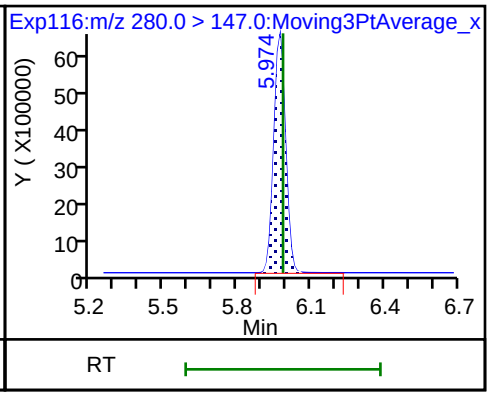
32 6:2FTS



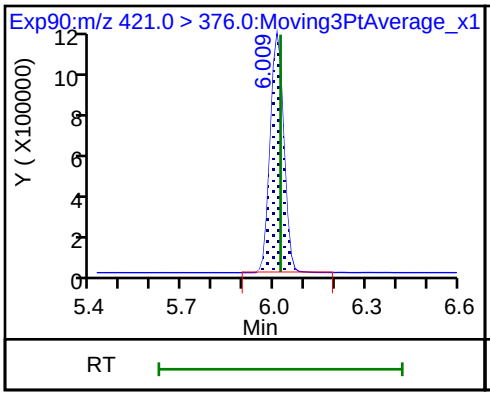
32 6:2FTS



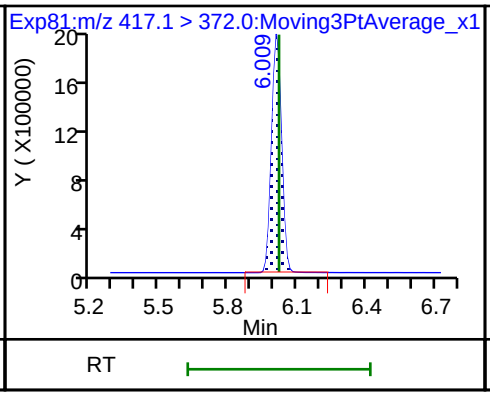
33 BTS



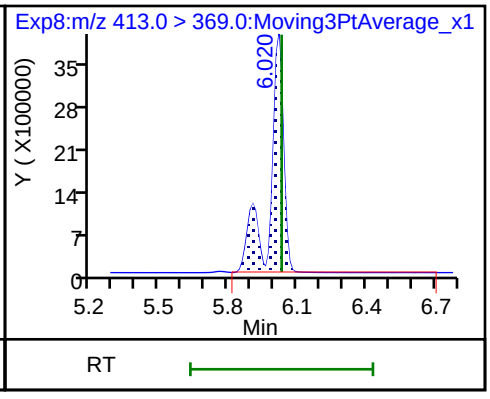
D 36 13C8 PFOA



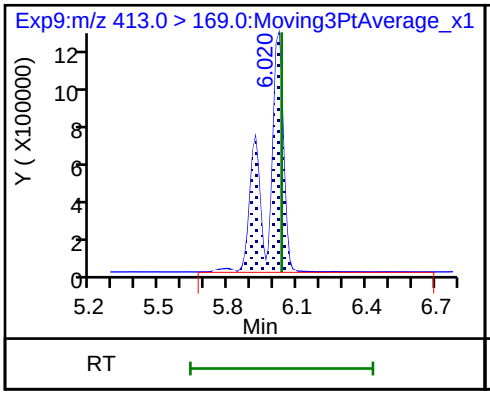
* 35 13C4 PFOA



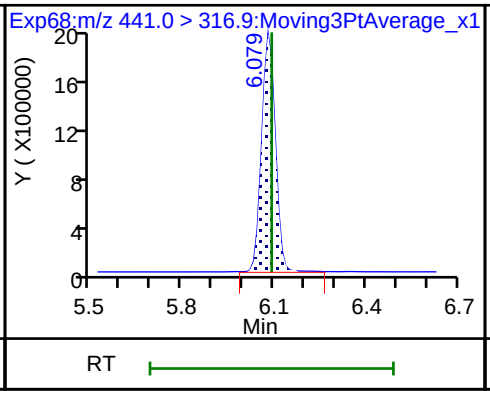
34 PFOA



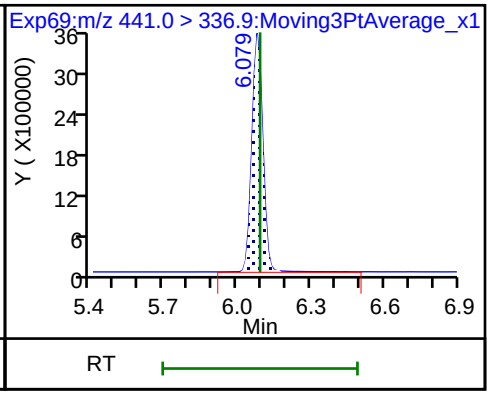
34 PFOA



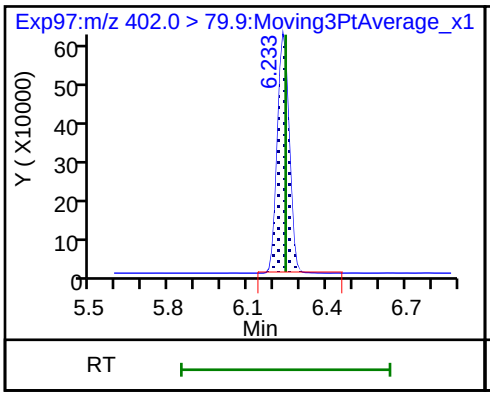
37 7:3 FTCA



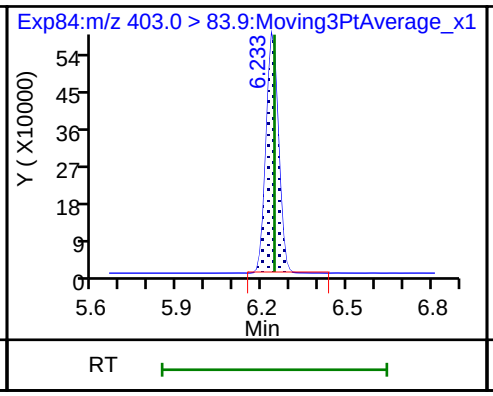
37 7:3 FTCA



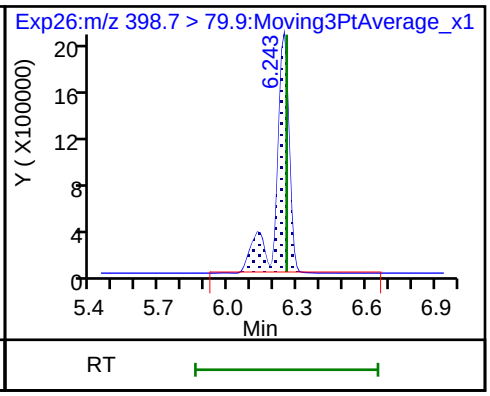
D 38 13C3 PFHxS



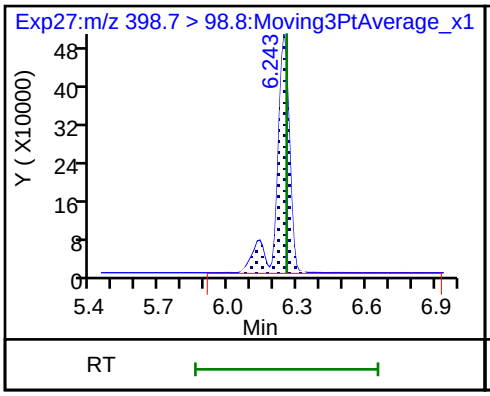
* 39 18O2 PFHxS



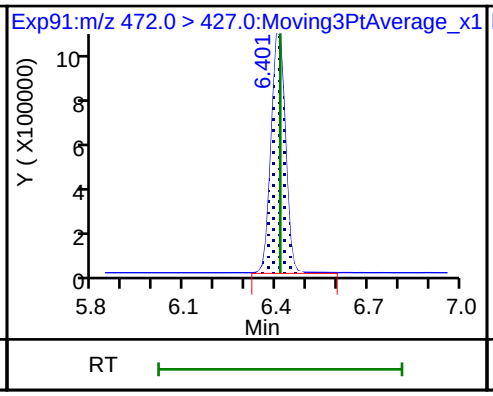
40 PFHxS



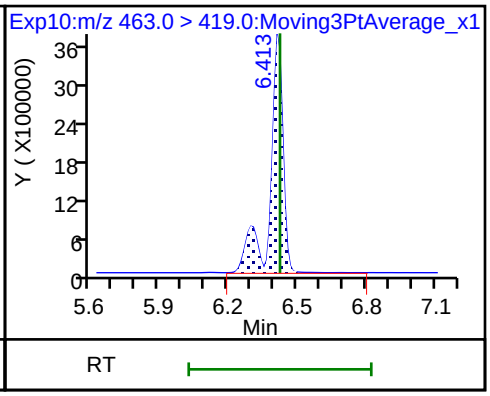
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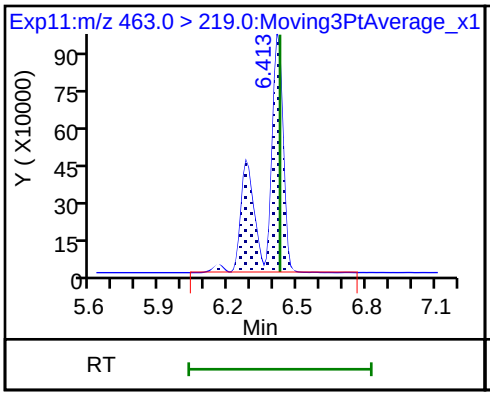
D 41 13C9 PFNA



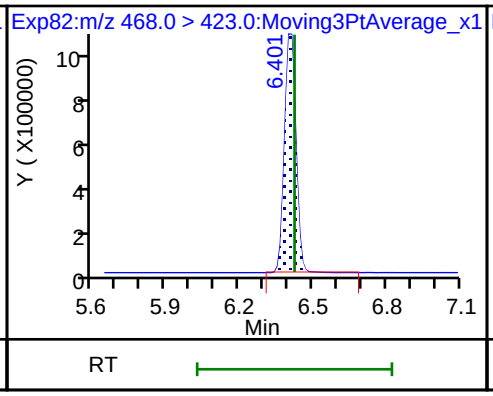
43 PFNA



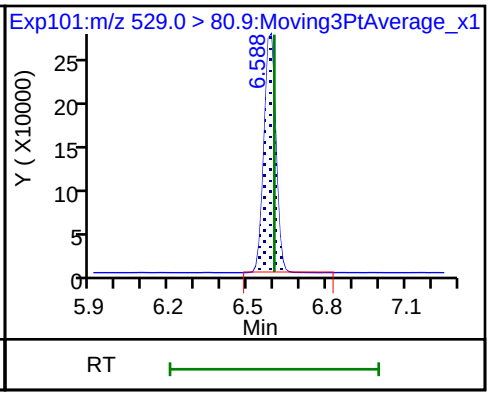
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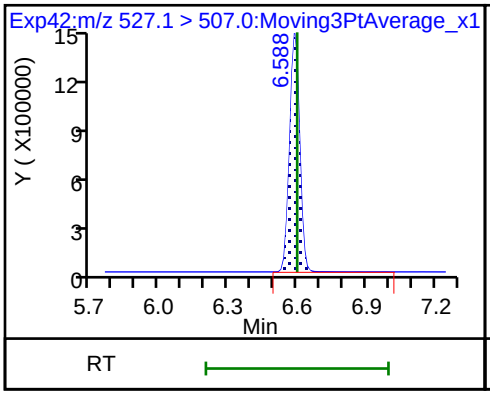
* 42 13C5 PFNA



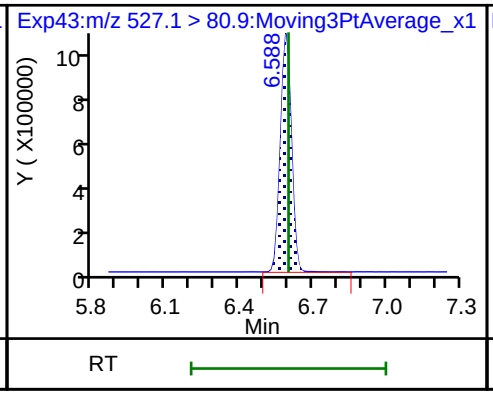
D 44 13C2-8:2FTS



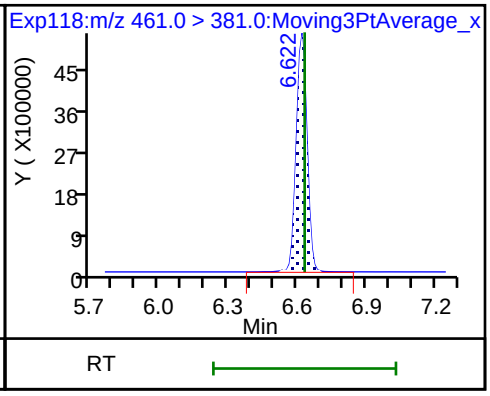
45 8:2FTS



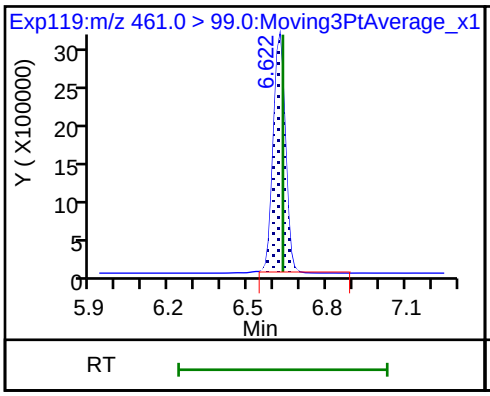
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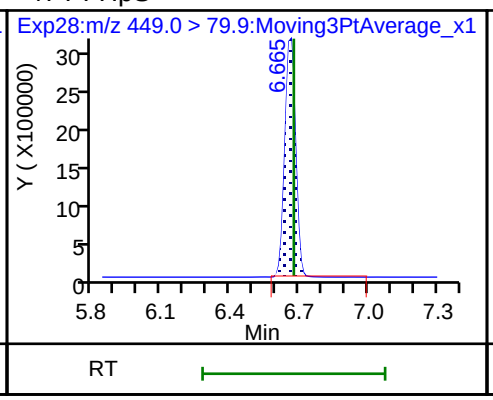
46 PFECHS



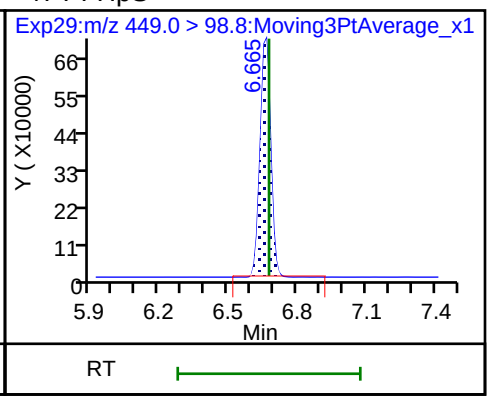
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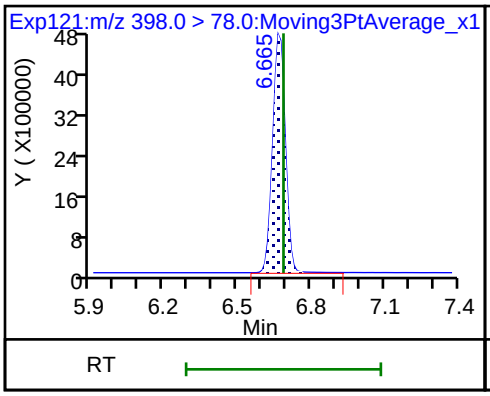
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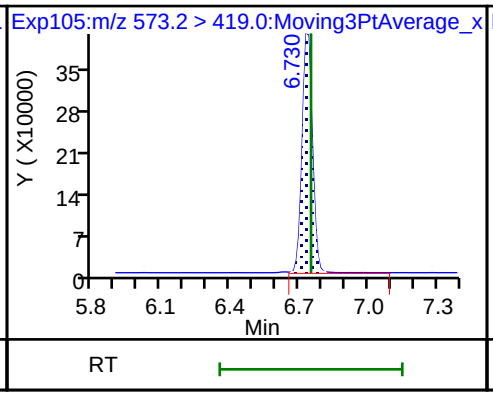
47 PFHpS



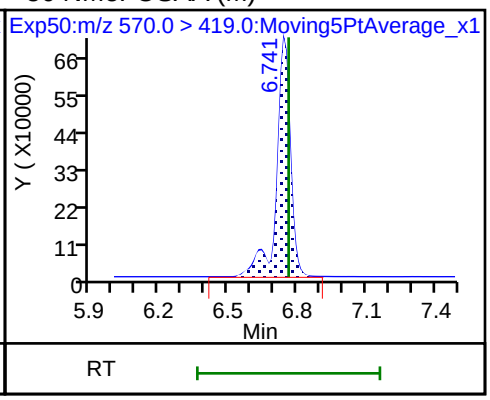
48 FHxSA



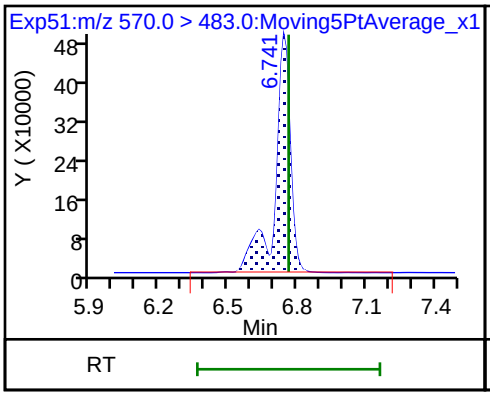
D 49 d3-NMeFOSAA



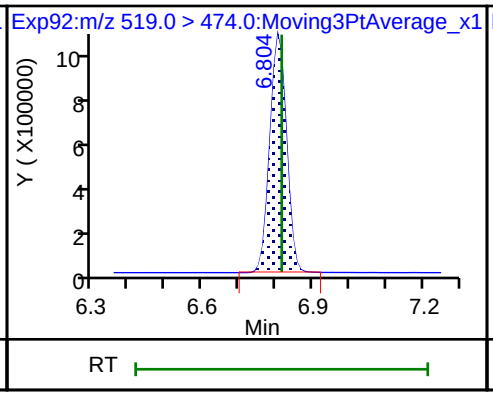
50 NMeFOSAA (M)



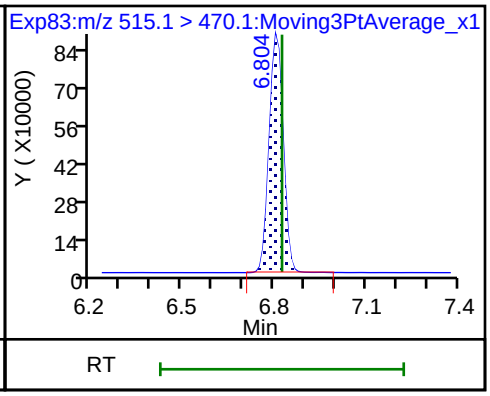
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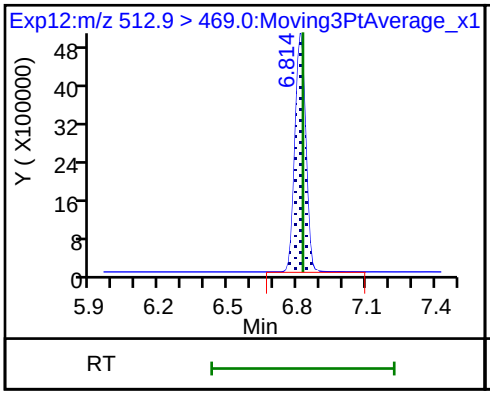
D 52 13C6 PFDA



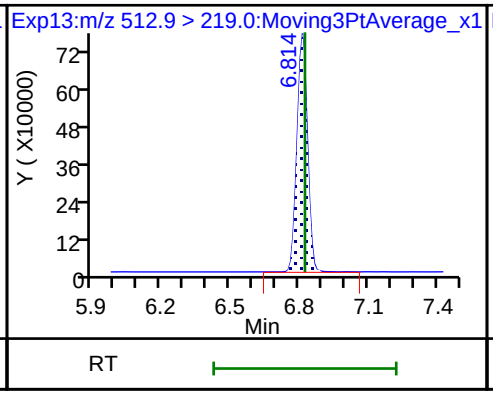
* 51 13C2 PFDA



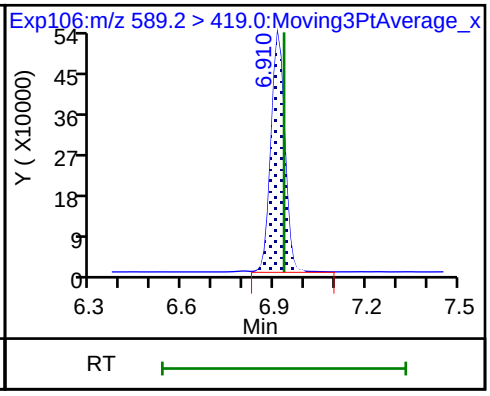
53 PFDA



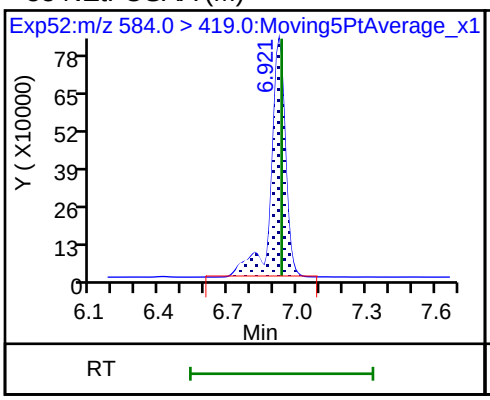
53 PFDA



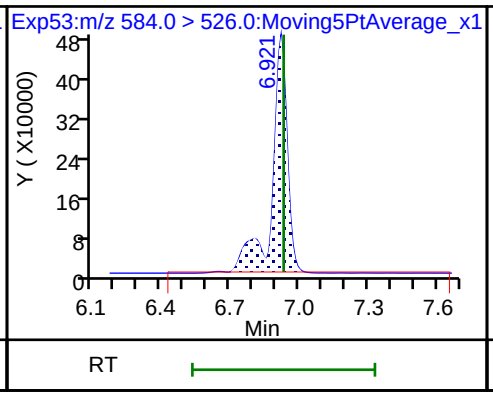
D 54 d5-NEtFOSAA



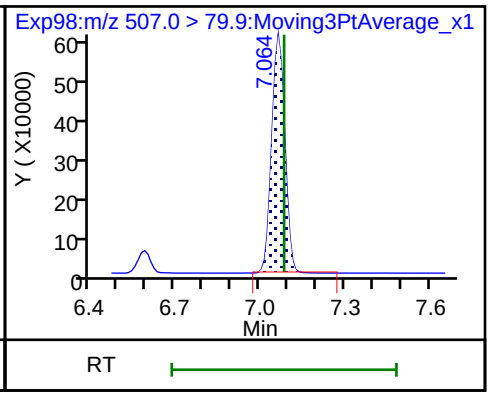
55 NEtFOSAA (M)



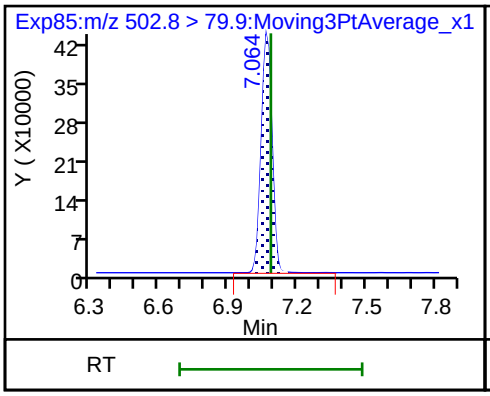
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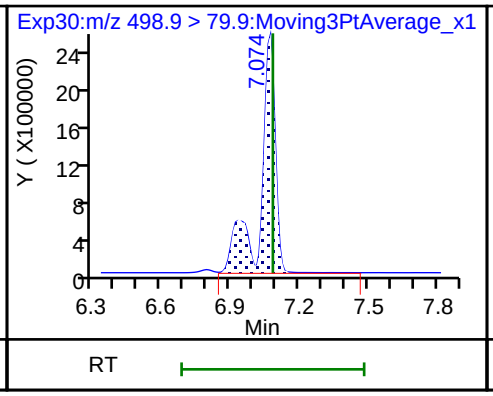
D 56 13C8 PFOS



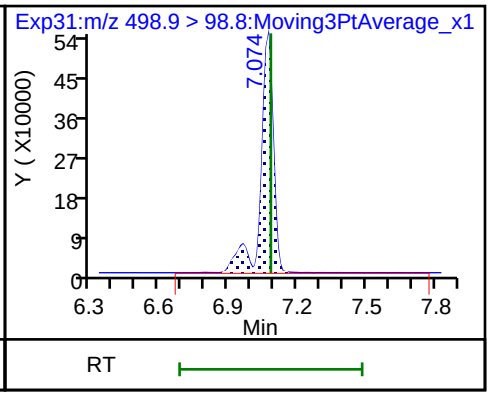
* 57 13C4 PFOS



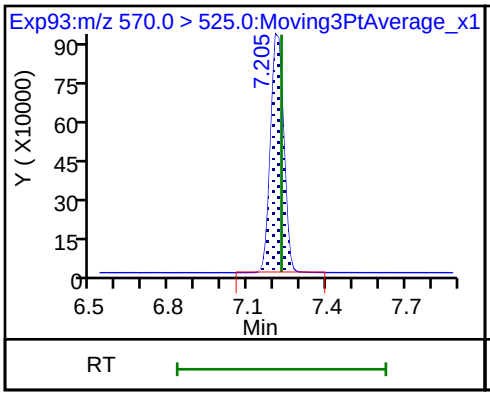
58 PFOS



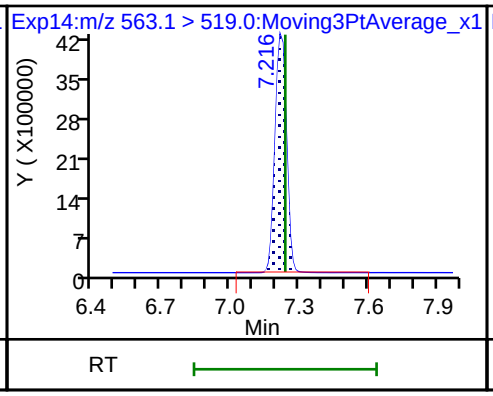
58 PFOS



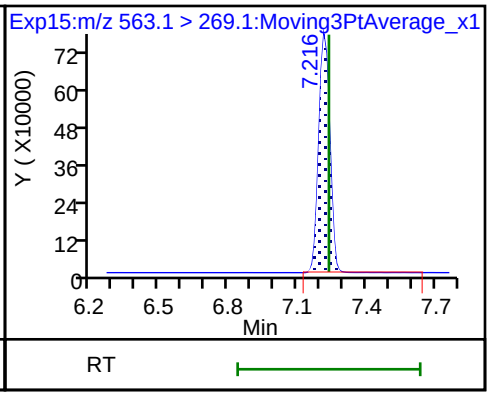
D 59 13C7 PFUnA



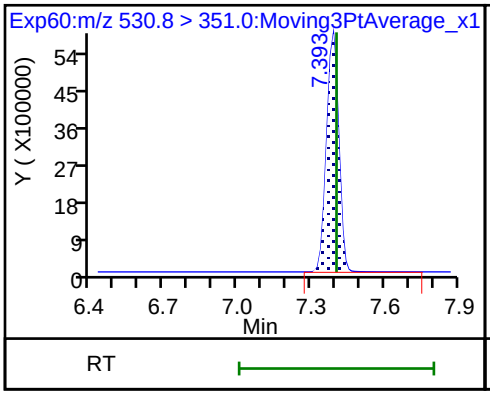
60 PFUnA



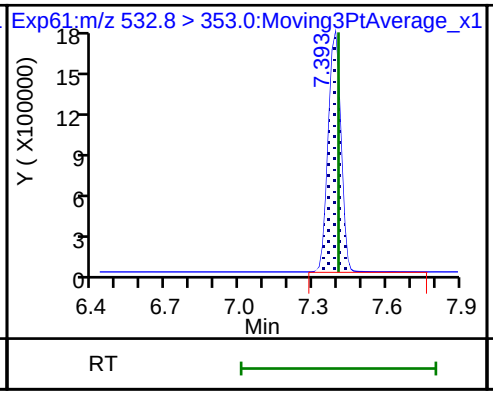
60 PFUnA



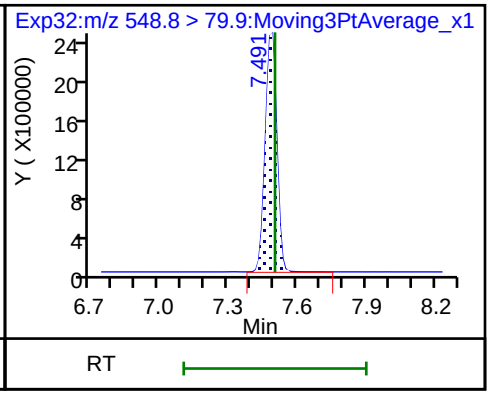
61 9ClFOS



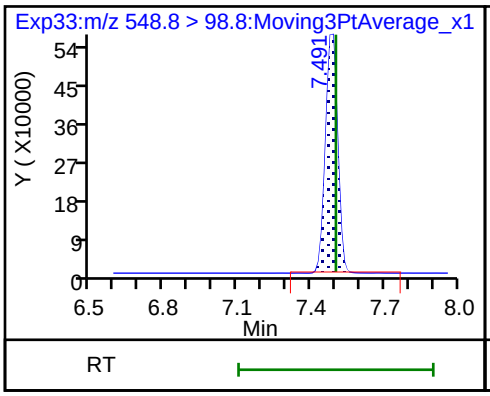
61 9ClFOS



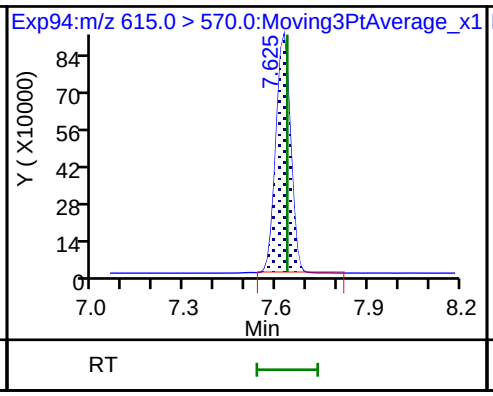
62 PFNS



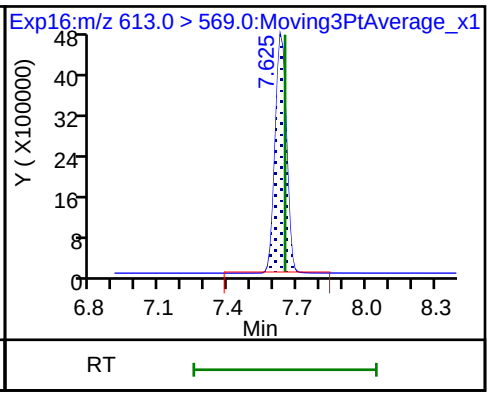
62 PFNS



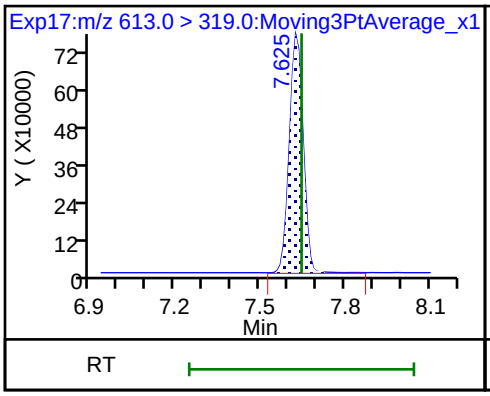
D 63 13C2 PFDoA



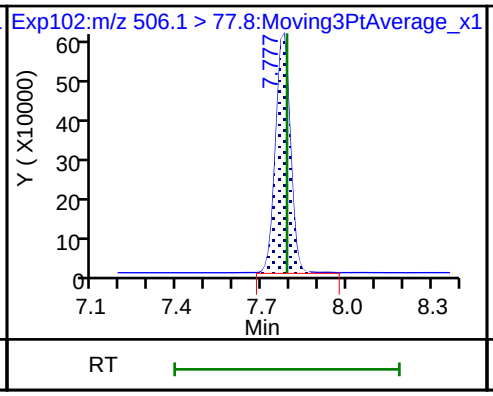
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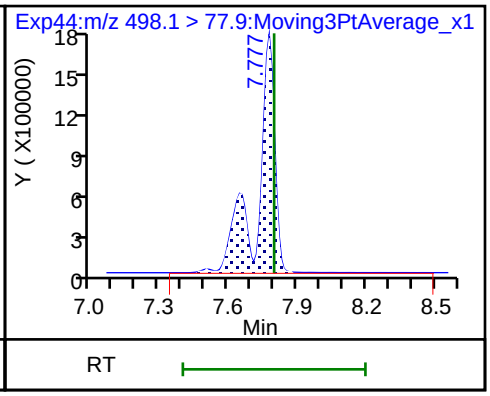
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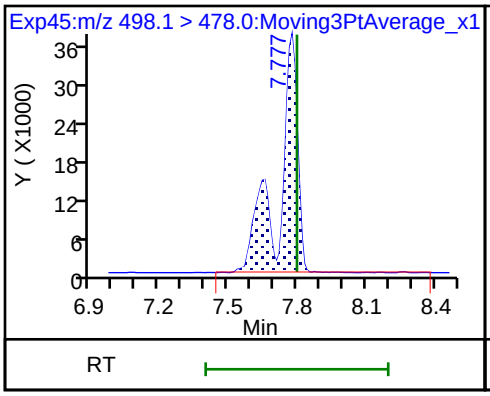
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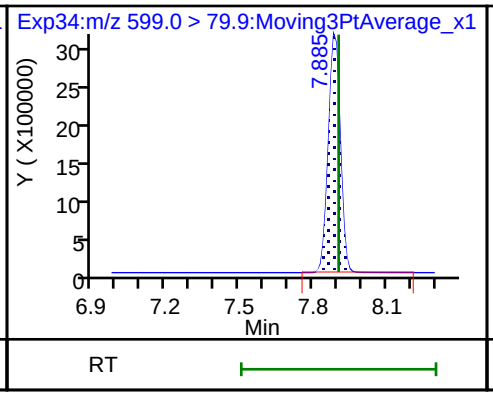
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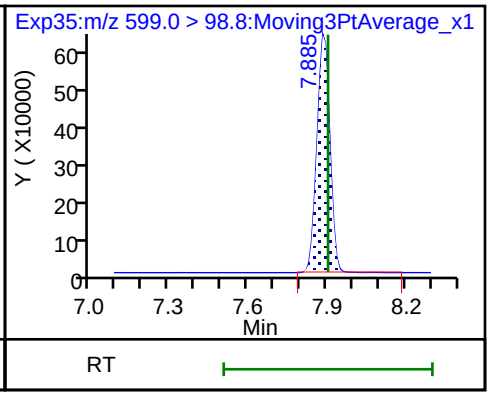
66 PFOSA



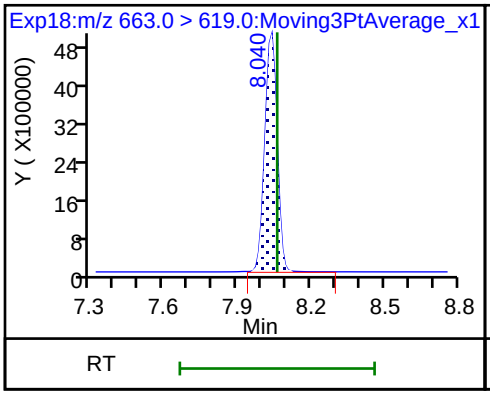
67 PFDS



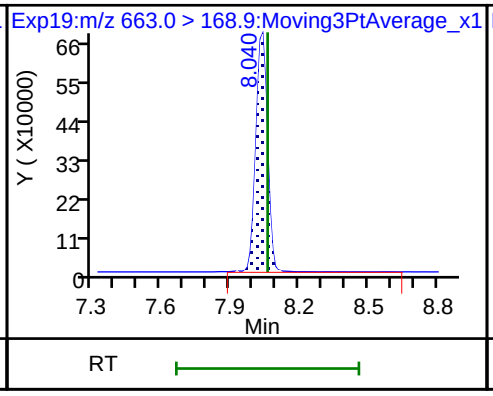
67 PFDS



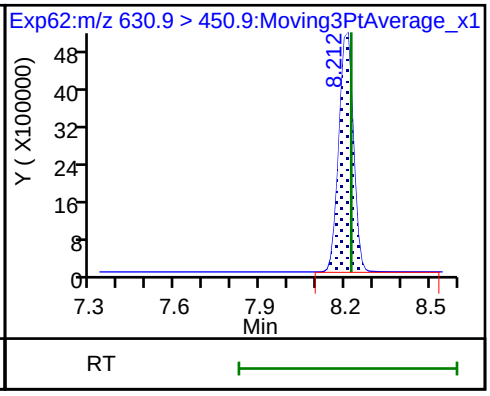
68 PFTrDA



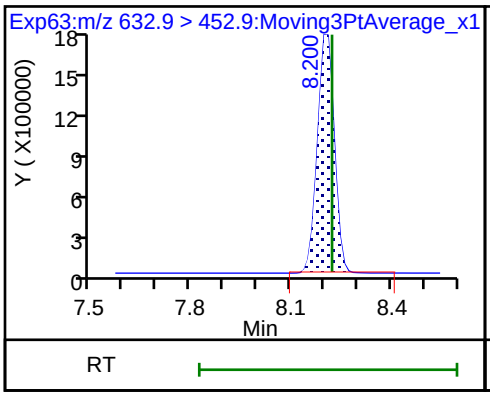
68 PFTrDA



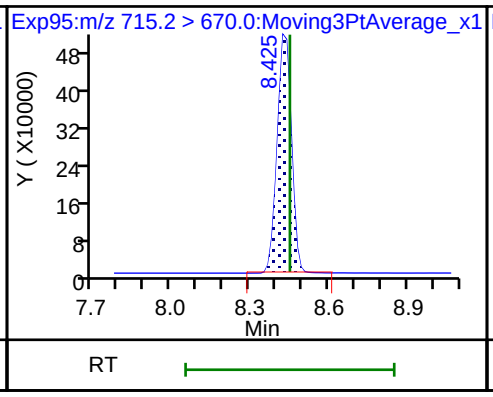
69 11ClFOS



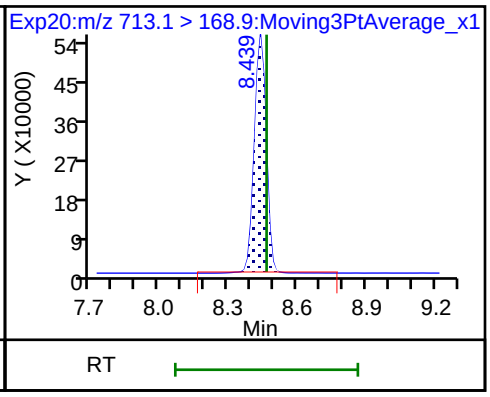
69 11ClFOS



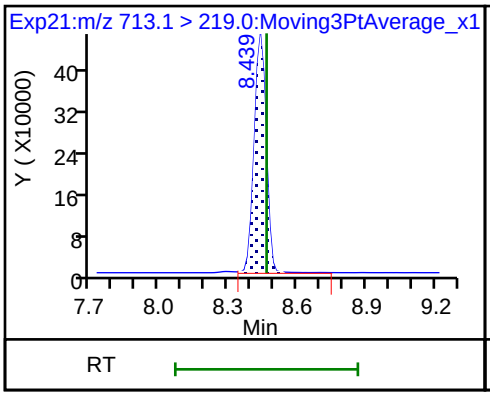
D 70 13C2 PFTeDA



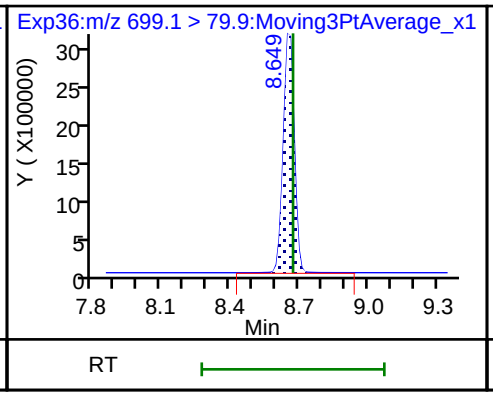
71 PFTeDA



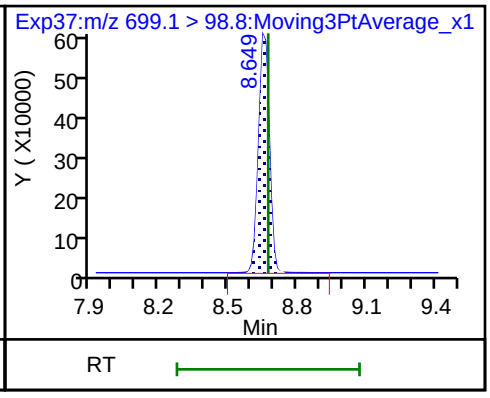
71 PFTeDA



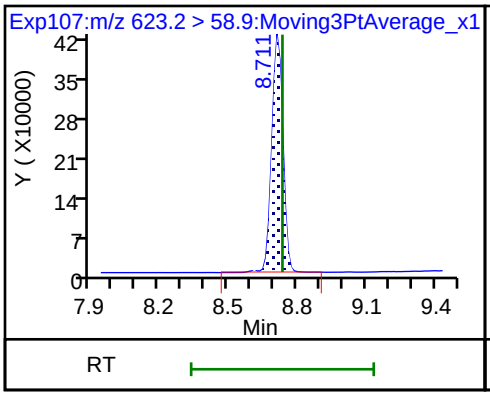
72 PFDoS



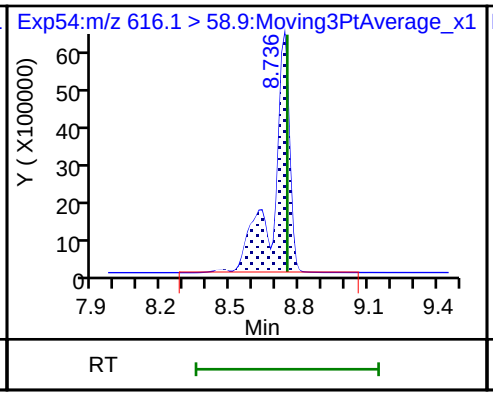
72 PFDoS



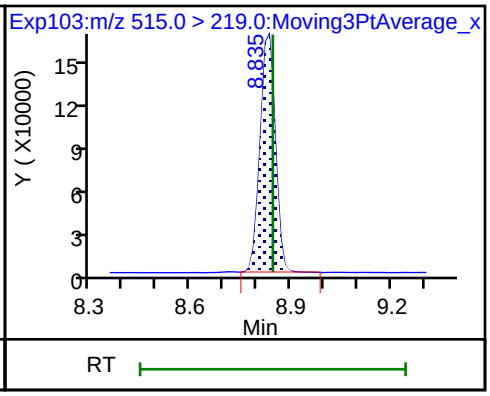
D 73 d7-N-Me-FOSE



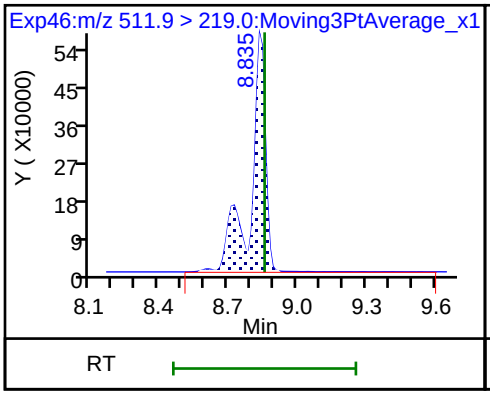
74 N-MeFOSE-M



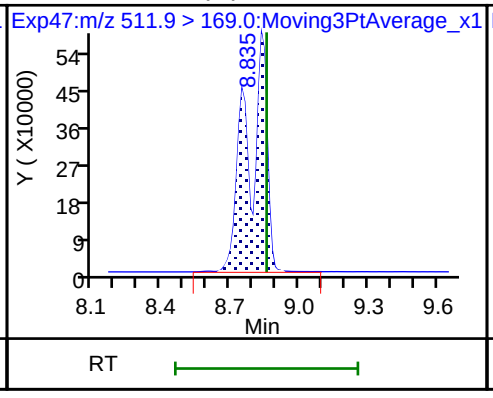
D 75 d3-NMePFOSA



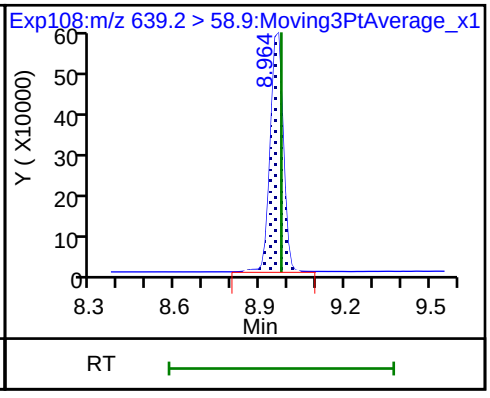
76 NMeFOSA



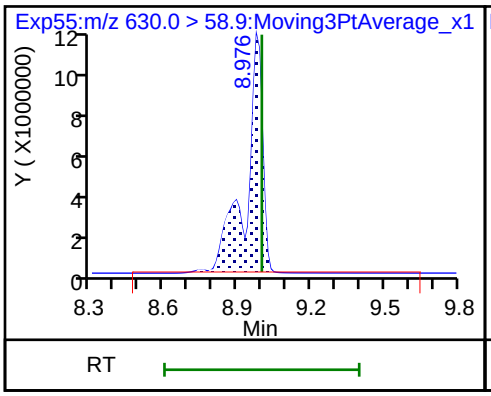
76 NMeFOSA (M)



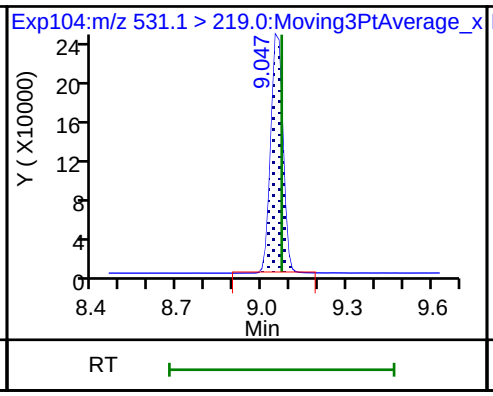
D 77 d9-N-EtFOSE



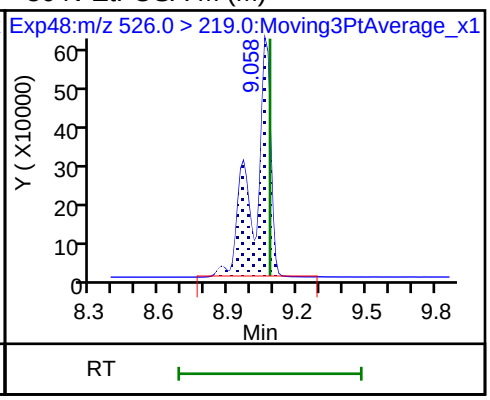
78 N-EtFOSE-M



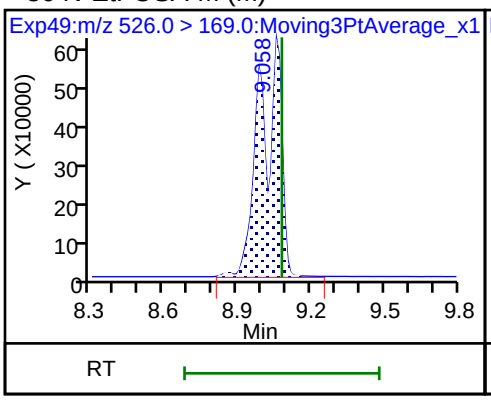
D 79 d5-NEtPFOSA



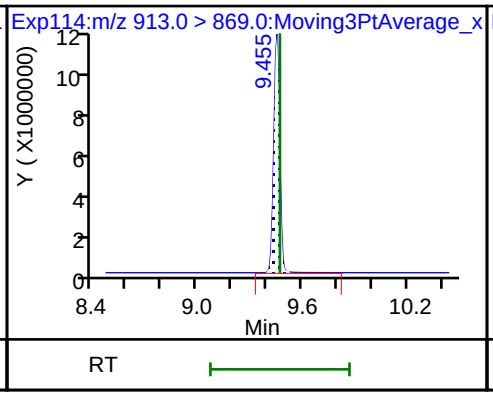
80 N-EtFOSA-M (M)



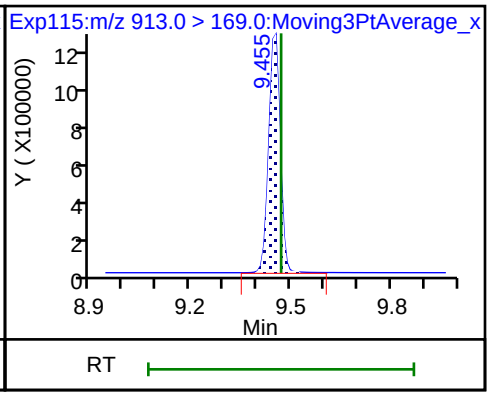
80 N-EtFOSA-M (M)



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

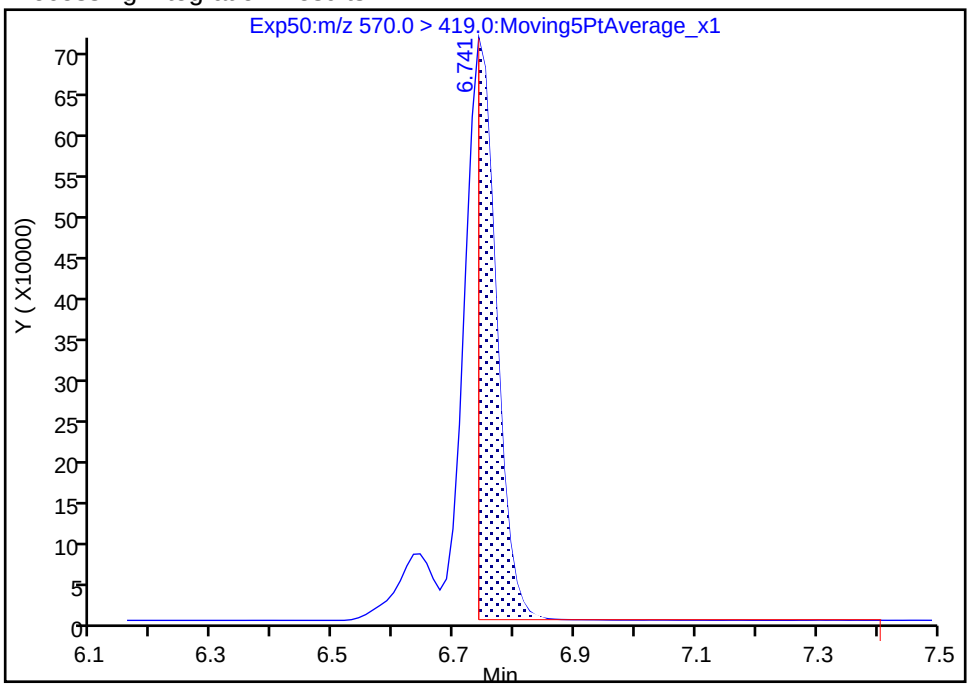
Data File:	\\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-07.d				
Injection Date:	04-Feb-2026 13:52:32	Instrument ID:	30637		
Lims ID:	IC CAL 7				
Client ID:					
Operator ID:	ETUS023_USR_INS00050	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	30637_1633Final	Limit Group:	LC - 1633 LVI- ICAL		
Column:		Detector	Sciex2 QQQ		

50 NMeFOSAA, CAS: 2355-31-9

Signal: 1

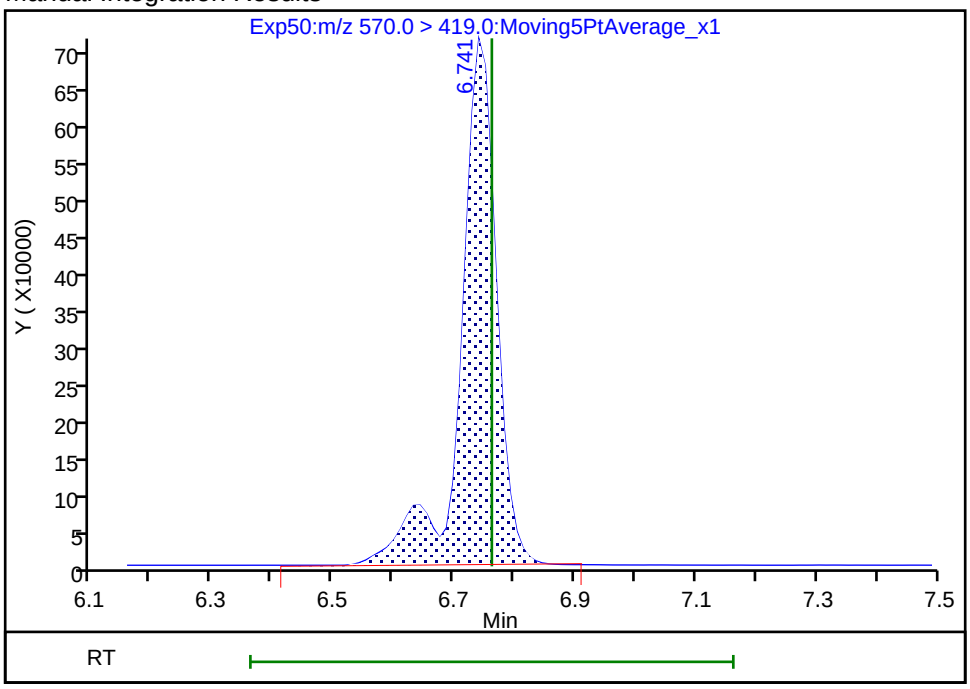
Processing Integration Results

RT: 6.74
Area: 1461613
Amount: 5.496035
Amount Units: ng/ml



Manual Integration Results

RT: 6.74
Area: 2970032
Amount: 10.330964
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:42:17 -05:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

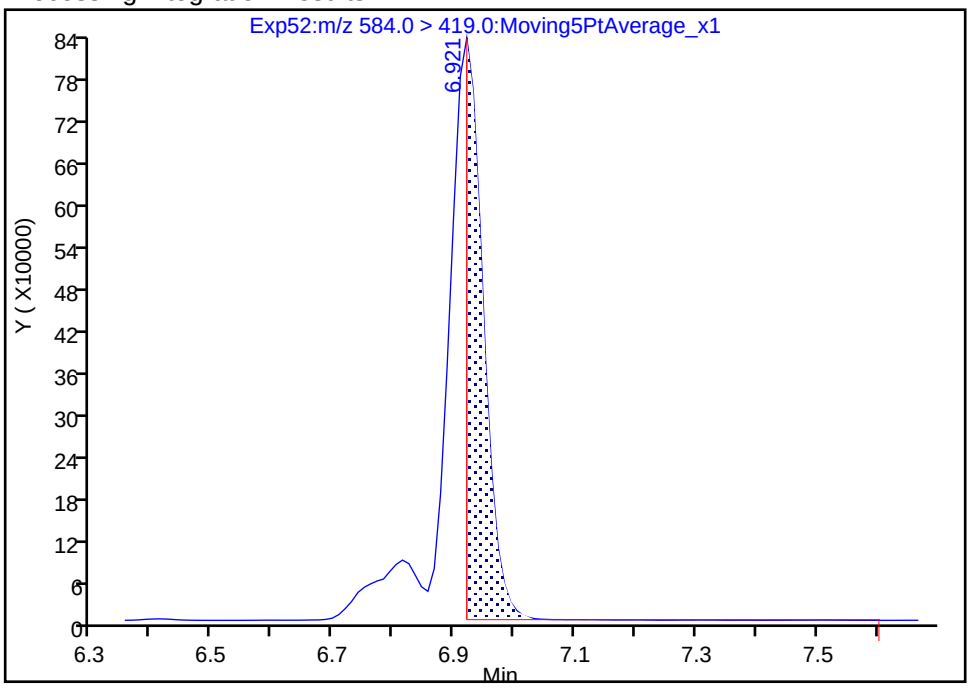
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Injection Date: 04-Feb-2026 13:52:32 Instrument ID: 30637
Lims ID: IC CAL 7
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

55 NEtFOSAA, CAS: 2991-50-6

Signal: 1

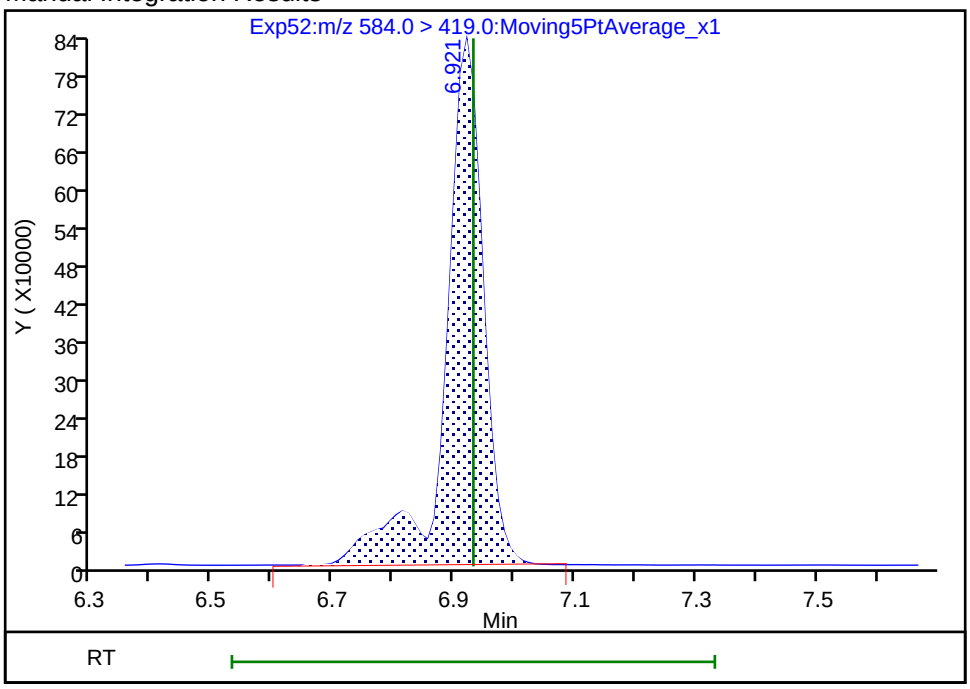
Processing Integration Results

RT: 6.92
Area: 1600986
Amount: 4.558027
Amount Units: ng/ml



Manual Integration Results

RT: 6.92
Area: 3617862
Amount: 9.519239
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:42:20 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

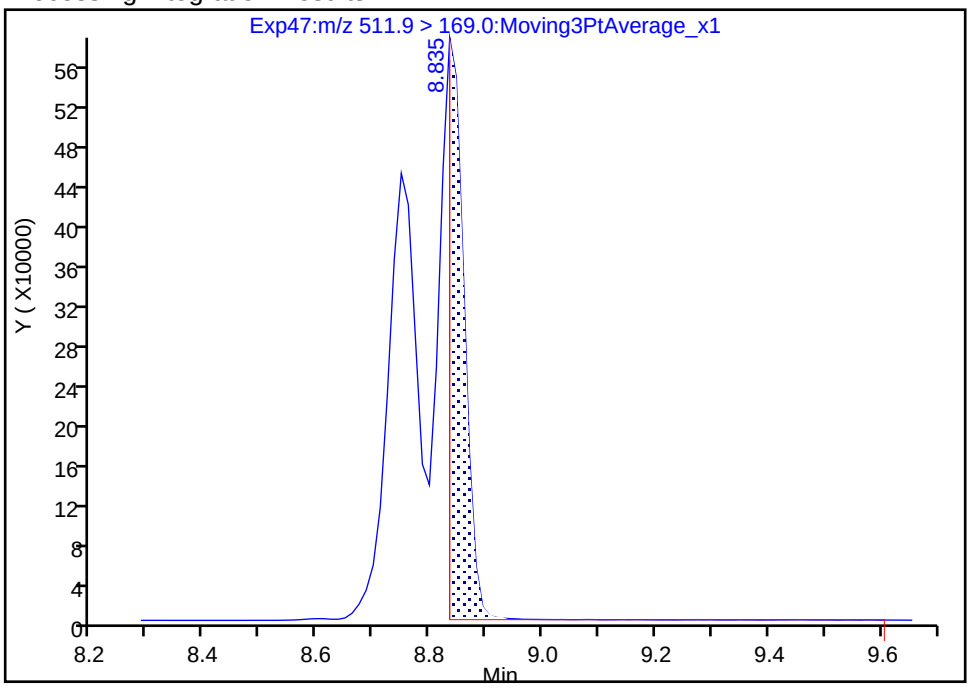
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Injection Date:	04-Feb-2026 13:52:32	Instrument ID:	30637		
Lims ID:	IC CAL 7				
Client ID:					
Operator ID:	ETUS023_USR_INS00050	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	30637_1633Final	Limit Group:	LC - 1633 LVI- ICAL		
Column:		Detector	Sciex2 QQQ		

76 NMeFOSA, CAS: 31506-32-8

Signal: 2

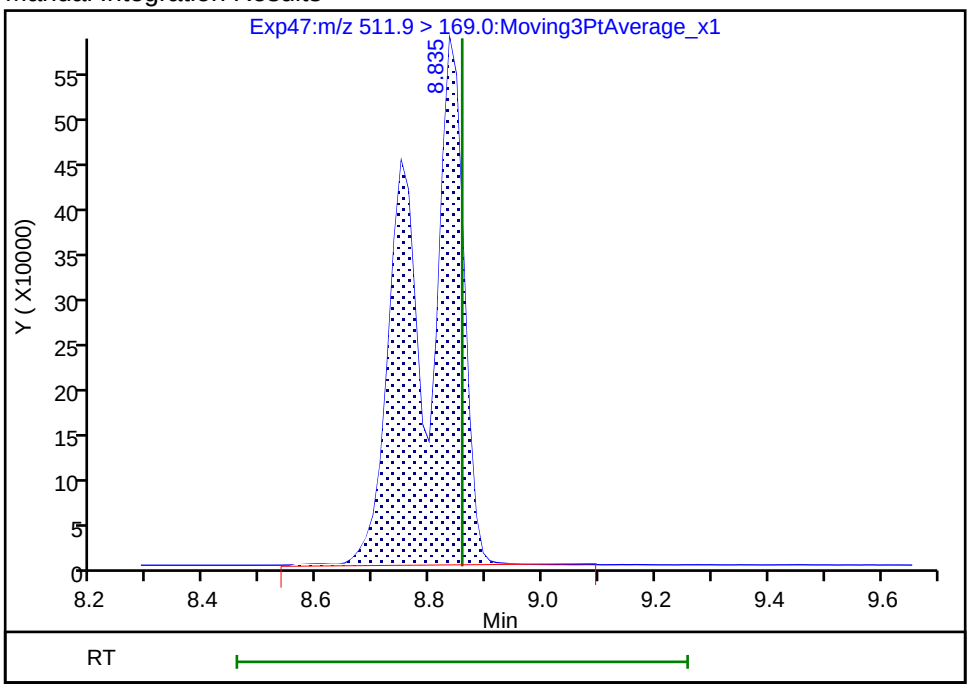
Processing Integration Results

RT: 8.83
Area: 1038189
Amount: 10.422491
Amount Units: ng/ml



Manual Integration Results

RT: 8.83
Area: 3427259
Amount: 10.422491
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:42:27 -05:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

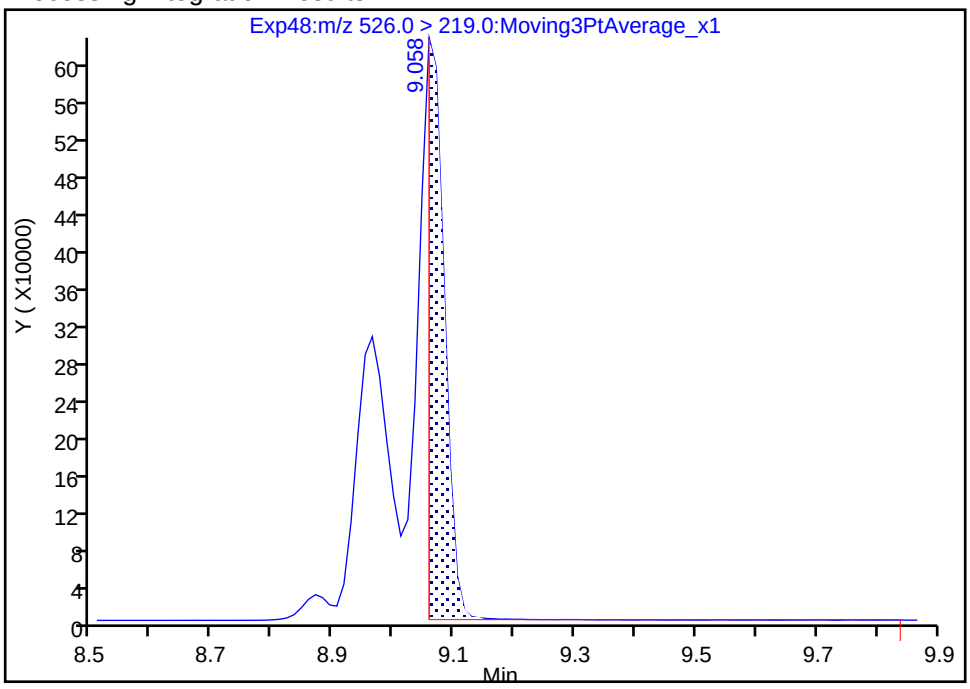
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-07.d
Injection Date: 04-Feb-2026 13:52:32 Instrument ID: 30637
Lims ID: IC CAL 7
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

80 N-EtFOSA-M, CAS: 4151-50-2

Signal: 1

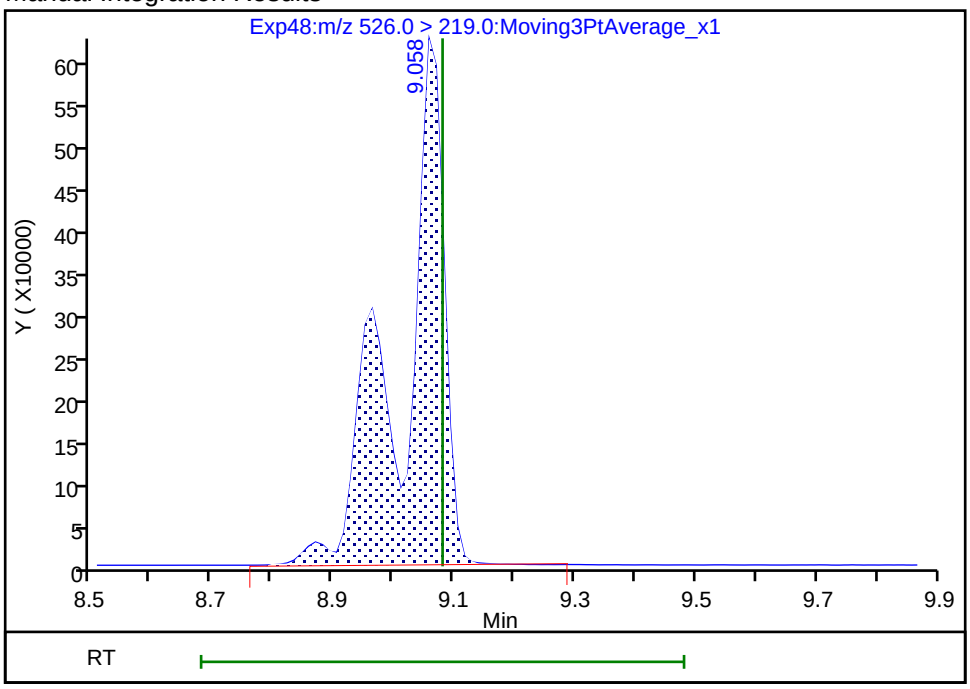
Processing Integration Results

RT: 9.06
Area: 1094145
Amount: 3.872546
Amount Units: ng/ml



Manual Integration Results

RT: 9.06
Area: 3100680
Amount: 9.963505
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:42:29 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

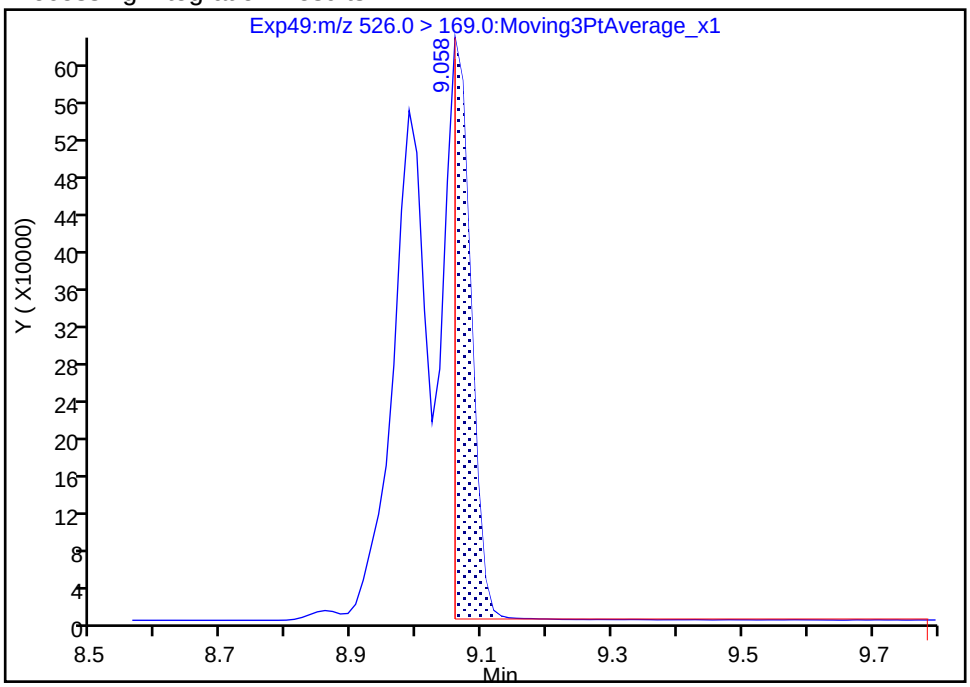
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-07.d
Injection Date: 04-Feb-2026 13:52:32 Instrument ID: 30637
Lims ID: IC CAL 7
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

80 N-EtFOSA-M, CAS: 4151-50-2

Signal: 2

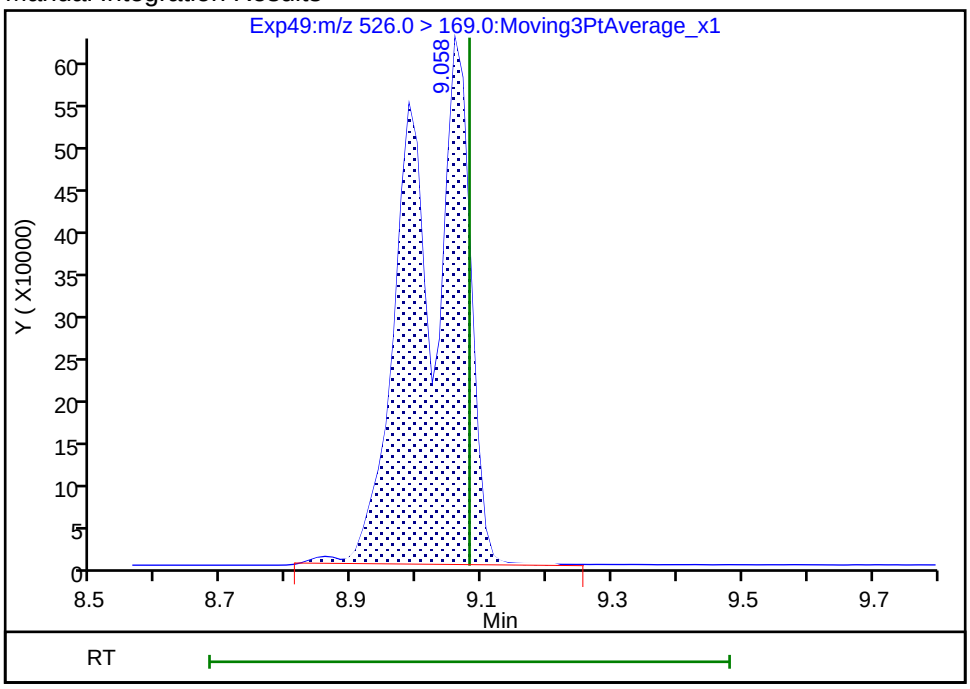
Processing Integration Results

RT: 9.06
Area: 1060884
Amount: 3.872546
Amount Units: ng/ml



Manual Integration Results

RT: 9.06
Area: 3734812
Amount: 9.963505
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:42:32 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d
Lims ID: IC CAL 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 04-Feb-2026 14:06:05 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: IC CAL 8
Misc. Info.: 410-0174629-008 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 9
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub5

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:43 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 20:43:20
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.932	1.949	-0.017	0.475	2428891	2.97		149	1299	
D 3 13C4-PFBA										
216.8 > 171.9	4.058	4.058	0.0	0.998	1889484	1.96		98.2	3596	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.065	0.0		1652675	2.00			3014	
5 PFBA										
212.8 > 168.9	4.072	4.065	0.007	1.004	9072619	114.2		114	8248	
D 8 13C5 PFPeA										
268.0 > 223.0	4.722	4.723	-0.001	0.909	2215556	1.79		89.6	4830	
9 PFPA										
263.0 > 219.0	4.735	4.735	0.0	1.003	49684892	50.2		100	9285	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.008	5.008	0.0	0.801	1102015	6.38		136	4919	
D 16 13C5 PFHxA										
318.0 > 273.0	5.185	5.185	0.0	0.998	2732412	1.84		92.1	4553	
* 15 13C2 PFHxA										
315.1 > 270.0	5.195	5.185	0.010		4949825	5.00			5296	
17 PFHxA										
313.0 > 269.0	5.195	5.196	-0.001	1.002	65922904	46.0	Target=16.27	91.9	8216	
313.0 > 118.9	5.195	5.196	-0.001	1.002	4126078		15.98(8.13-24.40)	91.9	4397	
D 20 13C3 PFBS										
302.1 > 79.9	5.325	5.325	0.0	0.852	1697503	1.79		95.9	6021	
19 PFBS										
298.7 > 79.9	5.337	5.337	0.0	1.002	38474416	42.3	Target=3.39	95.2	16681	
298.7 > 98.8	5.337	5.337	0.0	1.002	11402598		3.37(1.70-5.09)	95.2	10083	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.370	5.370	0.0	1.034	1939932	2.31		116	4176	
22 HFPO-DA										
284.9 > 168.9	5.382	5.382	0.0	1.002	45391383	44.9	Target=1.73	89.8	6293	
284.9 > 184.9	5.382	5.382	0.0	1.002	23941063		1.90(0.87-2.60)	89.8	8028	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.620	0.0	1.082	2438614	1.78		89.1	4946	
28 PFHpA										
363.1 > 319.0	5.631	5.620	0.011	1.002	64904861	47.6	Target=3.01	95.3	5986	
363.1 > 169.0	5.631	5.620	0.011	1.002	20810696		3.12(1.50-4.51)	95.3	4199	
29 ADONA										
376.9 > 250.9	5.779	5.780	-0.001	1.076	94644023	26.9	Target=2.15	75.8	15495	
376.9 > 84.8	5.779	5.780	-0.001	1.076	46259917		2.05(1.08-3.22)	75.8	5230	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.825	5.814	0.011	0.931	576738	3.86		81.0	2404	
31 PFPeS										
349.0 > 79.9	5.825	5.814	0.011	0.933	45802267	43.9	Target=3.70	93.4	11572	
349.0 > 98.8	5.825	5.814	0.011	0.933	12242136		3.74(1.85-5.54)	93.4	7482	
D 36 13C8 PFOA										
421.0 > 376.0	6.020	6.020	0.0	1.000	3193460	1.92		96.2	5295	
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		5448105	5.00			4632	
34 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	66945906	47.0	Target=2.52	94.1	1989	
413.0 > 169.0	6.032	6.032	0.0	1.002	28074386		2.38(1.26-3.77)	94.1	8800	
D 38 13C3 PFHxS										
402.0 > 79.9	6.243	6.243	0.0	0.998	1621214	1.88		99.1	3897	
* 39 18O2 PFHxS										
403.0 > 83.9	6.254	6.243	0.011		1468278	1.90			1591	
40 PFHxS										
398.7 > 79.9	6.254	6.254	0.0	1.002	33530576	44.1	Target=4.48	96.8	11237	
398.7 > 98.8	6.254	6.254	0.0	1.002	7440293		4.51(2.24-6.72)	96.8	10232	
D 41 13C9 PFNA										
472.0 > 427.0	6.424	6.413	0.011	1.000	2781281	1.96		98.0	4913	
43 PFNA										
463.0 > 419.0	6.424	6.424	0.0	1.000	61155596	48.5	Target=2.90	97.1	3965	
463.0 > 219.0	6.424	6.424	0.0	1.000	22046983		2.77(1.45-4.35)	97.1	4124	
* 42 13C5 PFNA										
468.0 > 423.0	6.424	6.424	0.0		2886085	2.00			5101	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.600	6.600	0.0	1.055	919371	6.20		129	2892	
47 PFHpS										
449.0 > 79.9	6.676	6.676	0.0	0.944	40389435	43.9	Target=4.66	91.9	7525	
449.0 > 98.8	6.676	6.676	0.0	0.944	8779605		4.60(2.33-6.98)	91.9	5348	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.751	6.752	-0.001	0.954	1318671	6.35		127	3024	
D 52 13C6 PFDA										
519.0 > 474.0	6.814	6.814	0.0	1.000	3500176	1.95		97.7	9552	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 51 13C2 PFDA										
515.1 > 470.1	6.814	6.825	-0.011		3208967	2.00			5642	
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.921	6.932	-0.011	0.978	1662771	6.36		127	4682	
D 56 13C8 PFOS										
507.0 > 79.9	7.074	7.084	-0.010	1.000	1644351	1.90		99.3	1210	
* 57 13C4 PFOS										
502.8 > 79.9	7.074	7.084	-0.010		1193753	1.92			4807	
58 PFOS										M
498.9 > 79.9	7.085	7.084	0.001	1.001	44900313	45.0	Target=5.51	96.8	9384	
498.9 > 98.8	7.085	7.084	0.001	1.001	7874263		5.70(2.75-8.26)	96.8	6464	M
D 59 13C7 PFUnA										
570.0 > 525.0	7.228	7.227	0.001	1.061	3541560	1.98		98.9	8202	
D 63 13C2 PFDoA										
615.0 > 570.0	7.636	7.636	0.0	1.121	3357304	1.98		99.1	3092	
D 65 13C8 FOSA										
506.1 > 77.8	7.788	7.788	0.0	1.101	2226720	2.57		129	5367	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.453	8.452	0.001	1.240	1978499	1.95		97.4	3138	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.724	8.735	-0.011	1.233	1425198	6.45		129	477	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.846	8.845	0.001	1.250	566382	2.62		131	2110	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.976	8.975	0.001	1.269	1906710	6.46		129	760	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.070	9.069	0.001	1.282	758996	2.57		129	2826	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_CAL8_00034 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 20:47:43 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Injection Date: 04-Feb-2026 14:06:05 Instrument ID: 30637

Lims ID: IC CAL 8

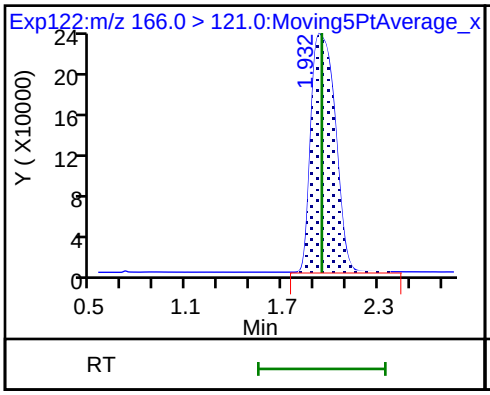
Client ID:

Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 9 Worklist Smp#: 8

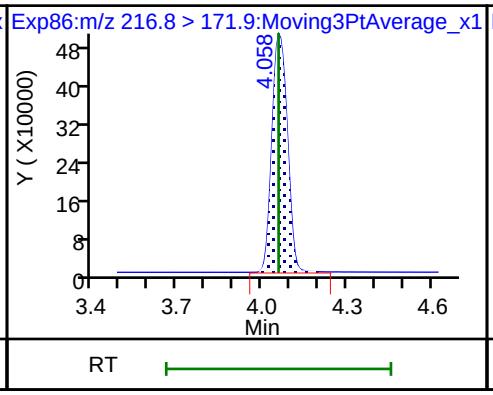
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

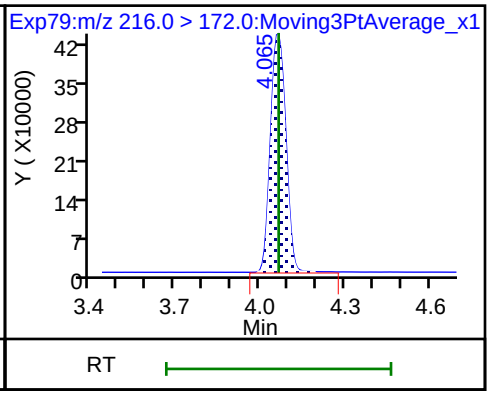
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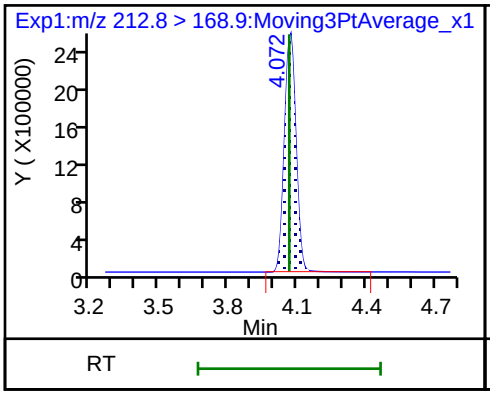
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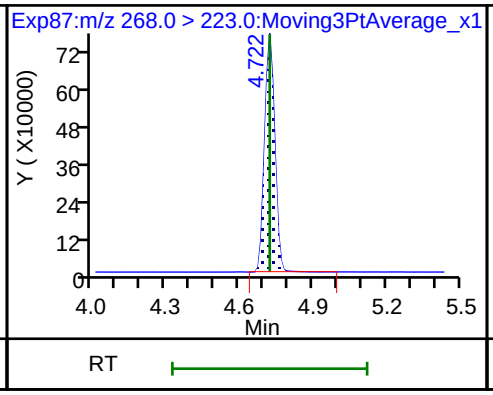
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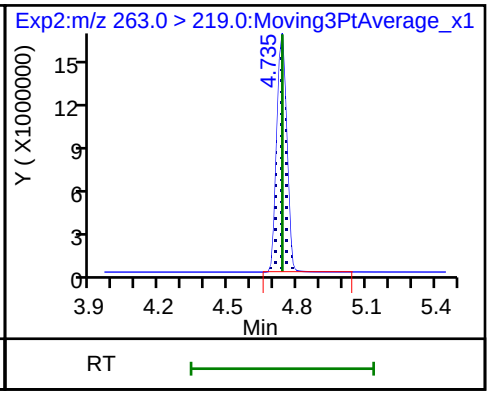
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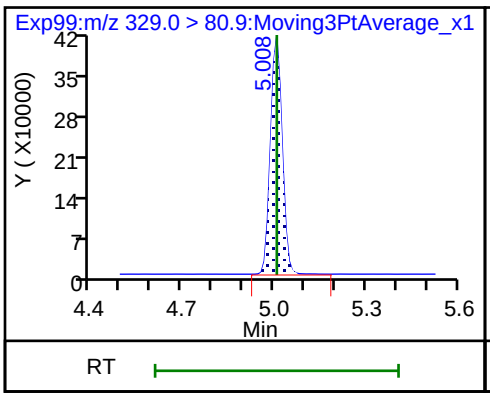
D 8 13C5 PFPeA



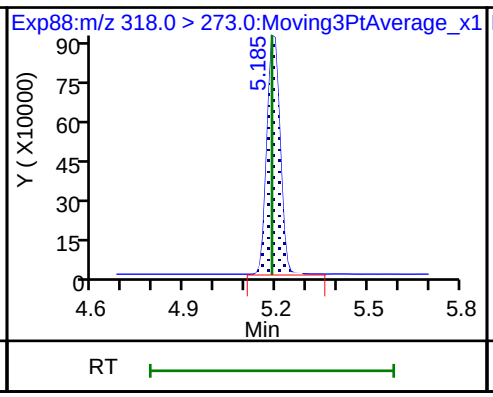
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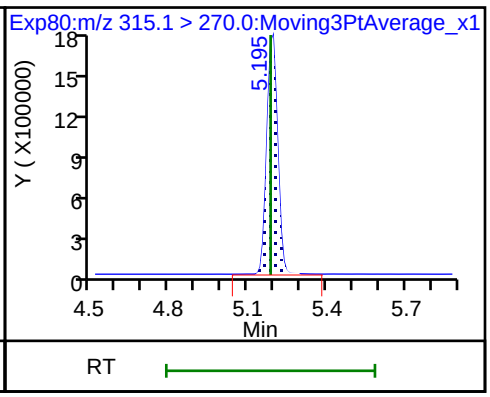
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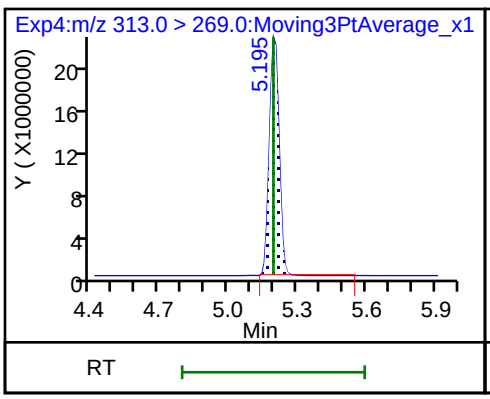
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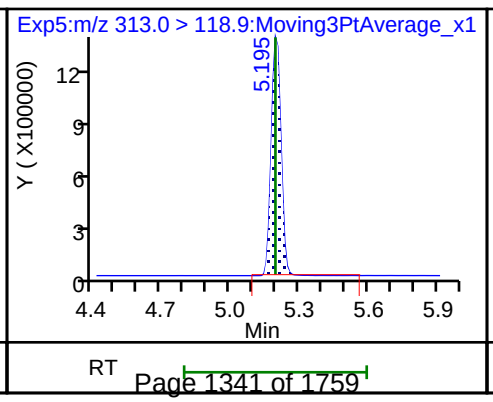
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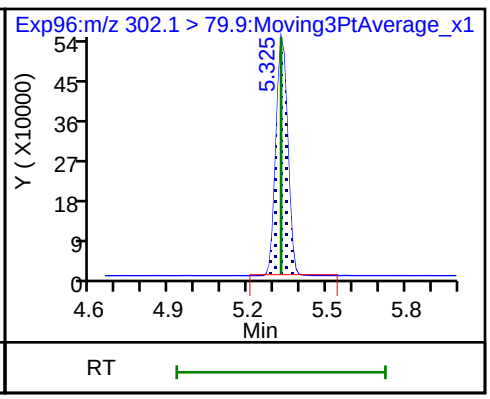
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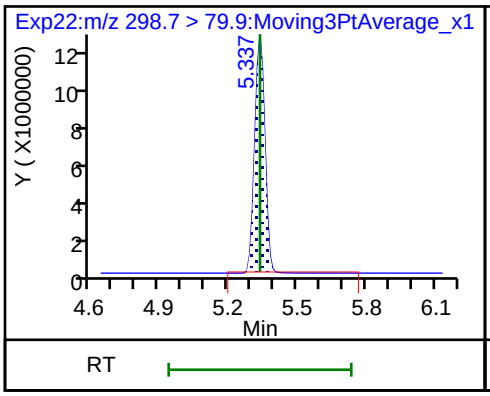
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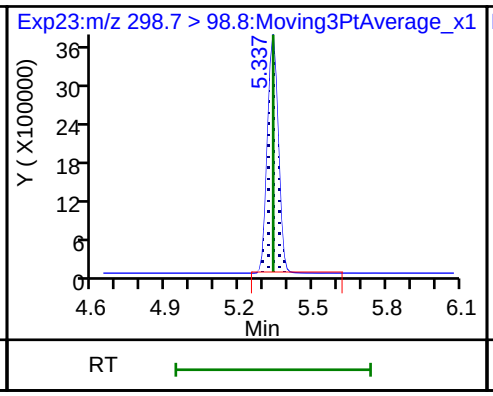
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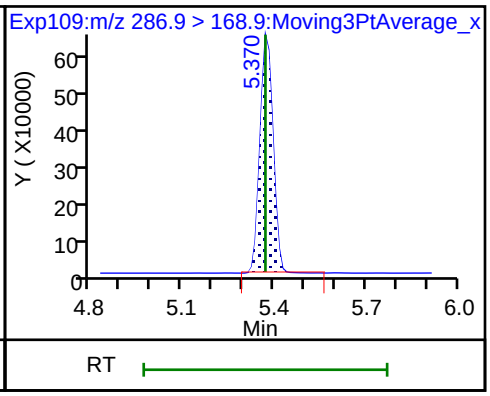
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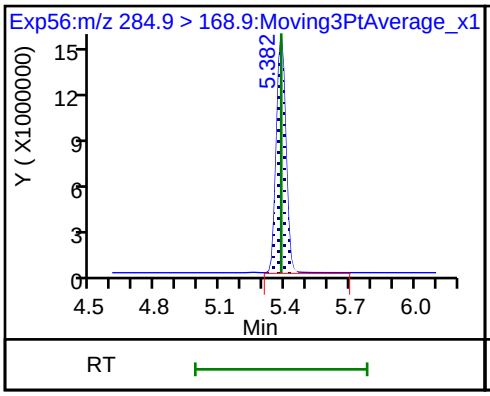
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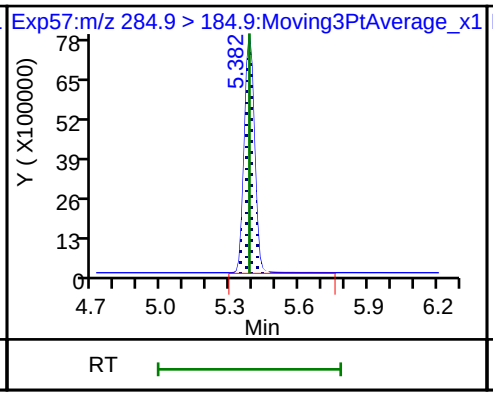
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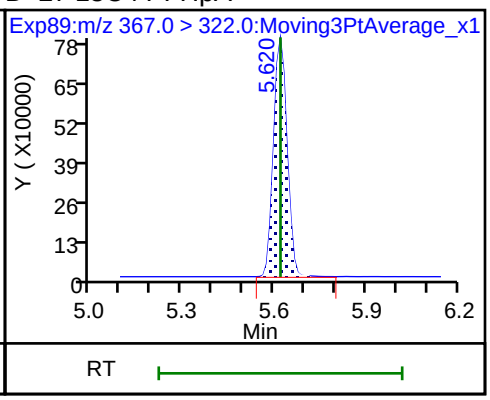
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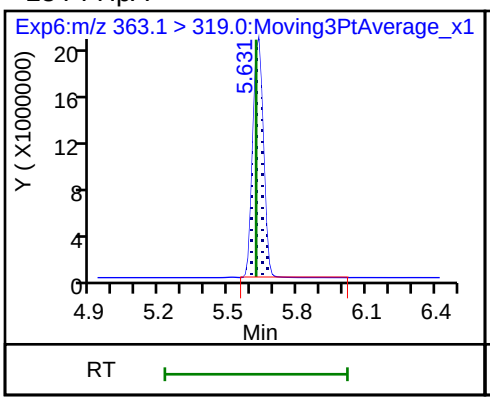
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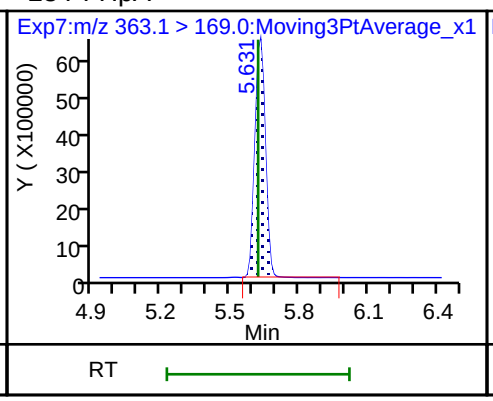
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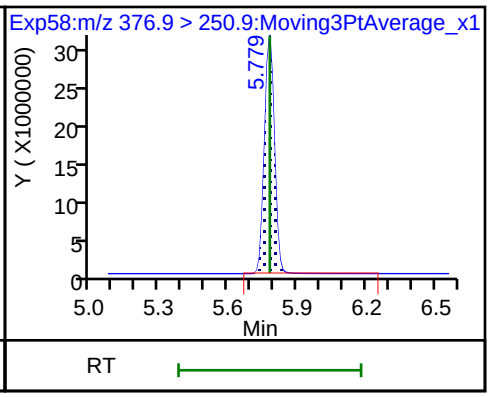
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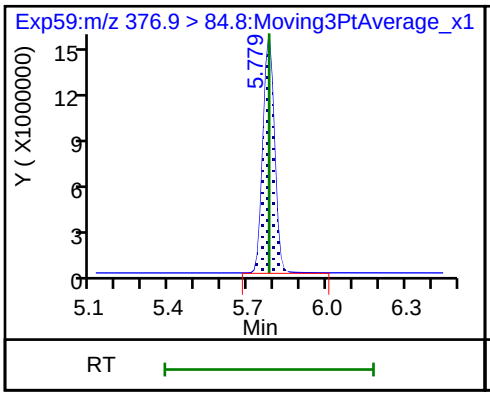
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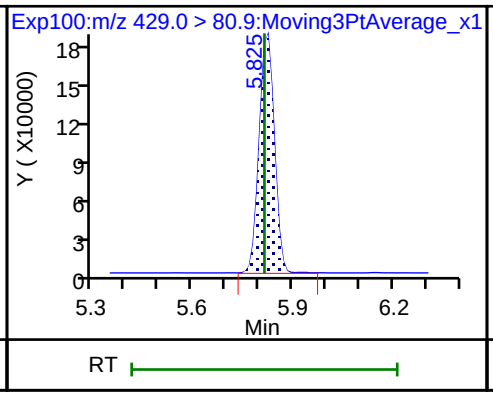
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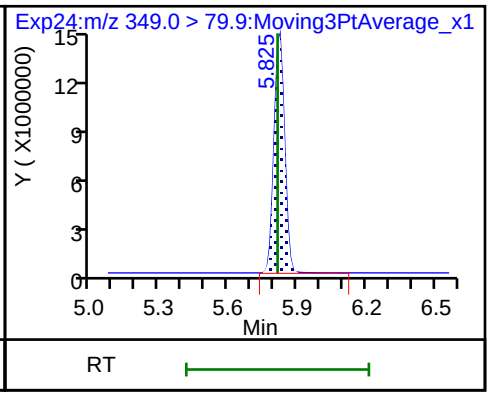
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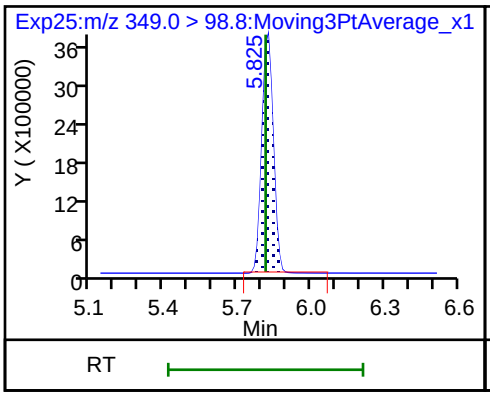
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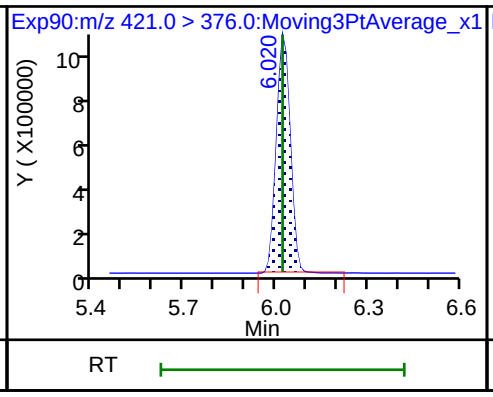
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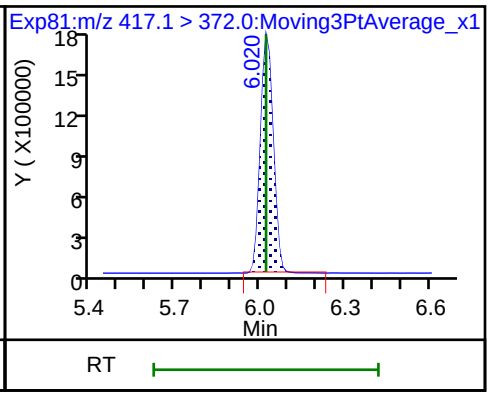
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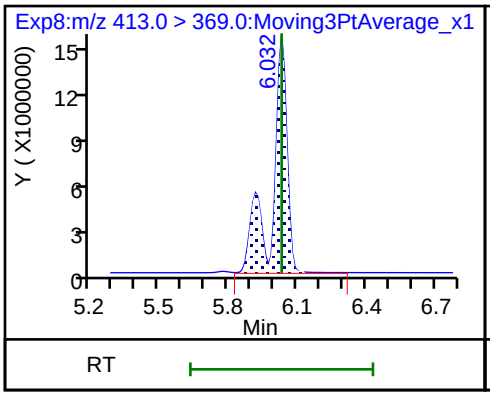
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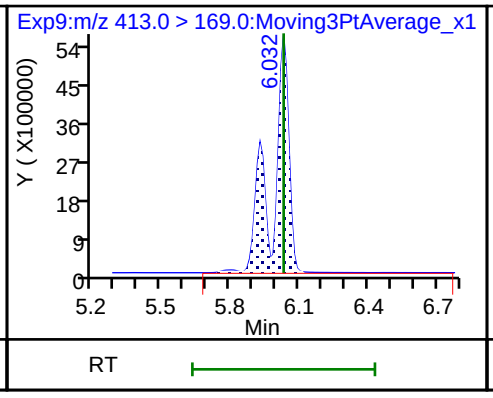
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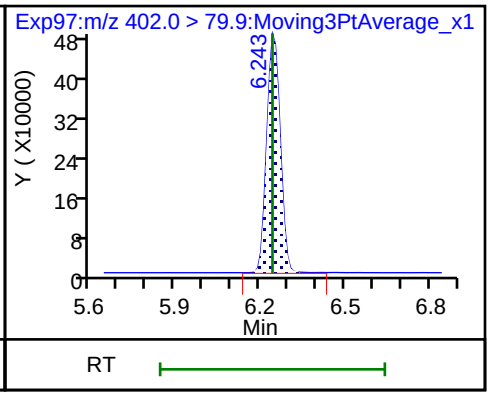
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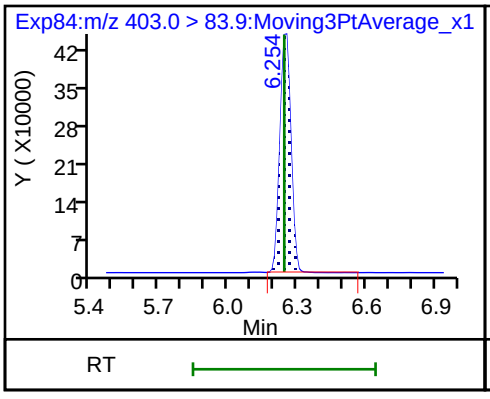
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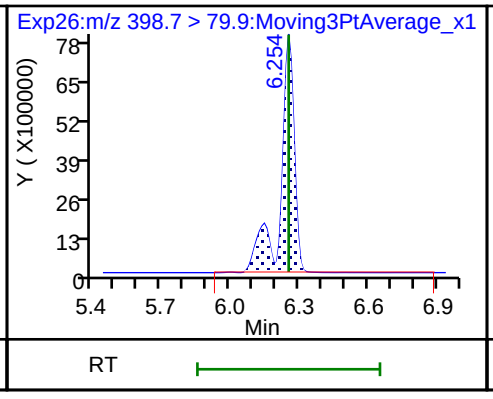
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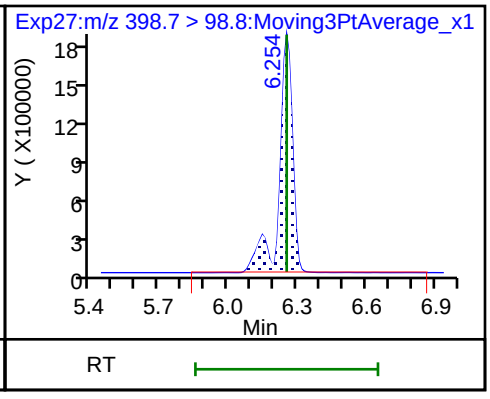
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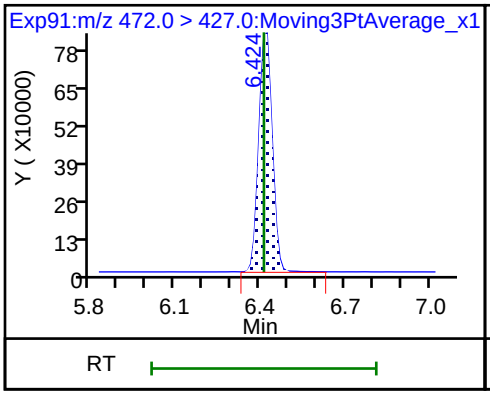
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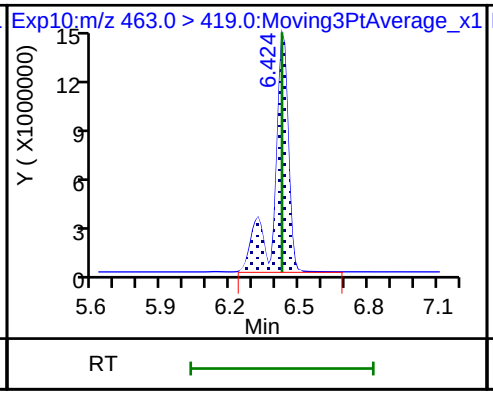
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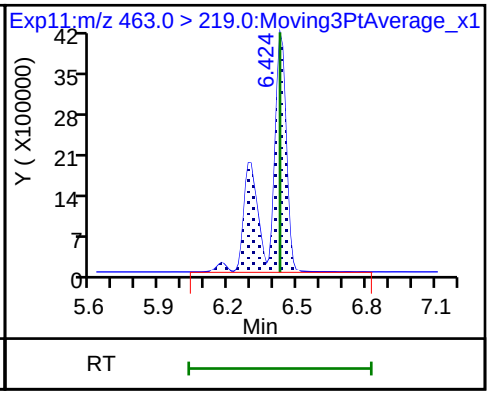
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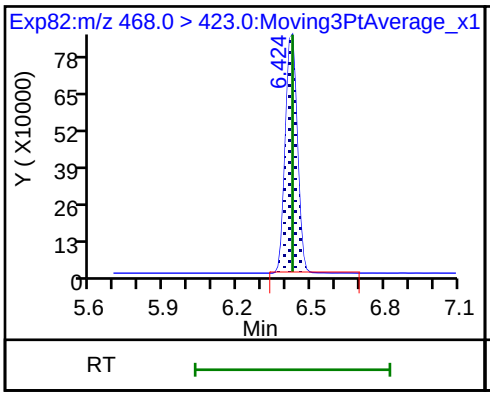
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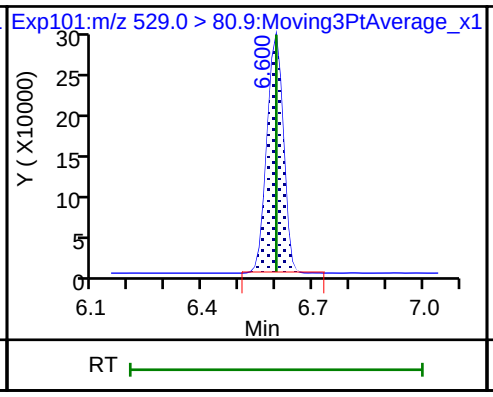
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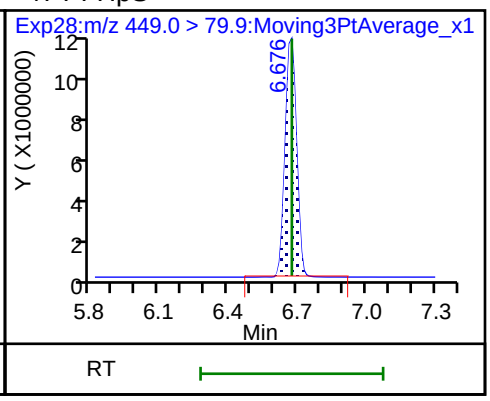
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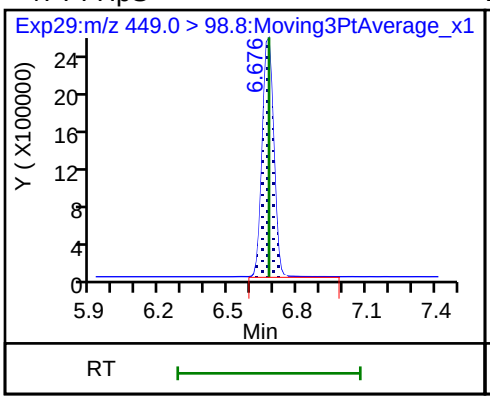
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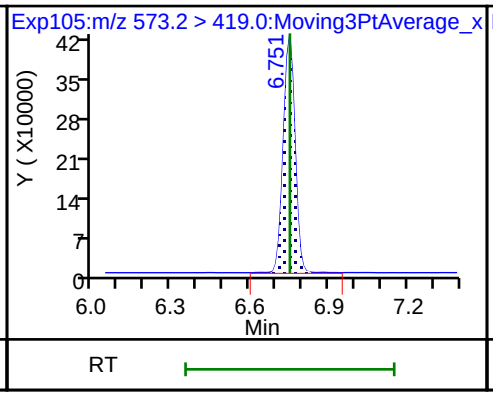
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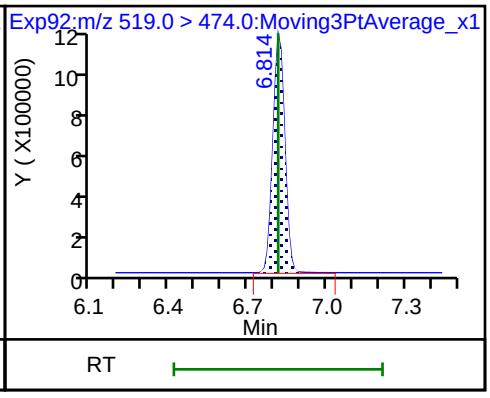
47 PFHpS



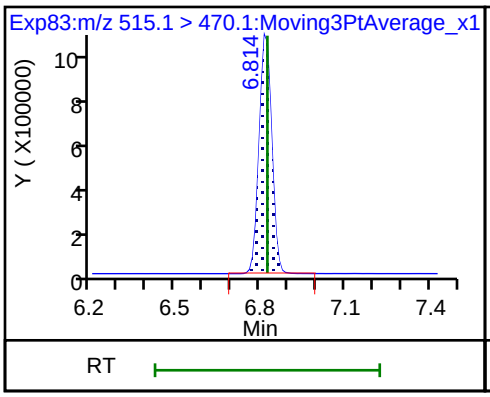
D 49 d3-NMeFOSAA



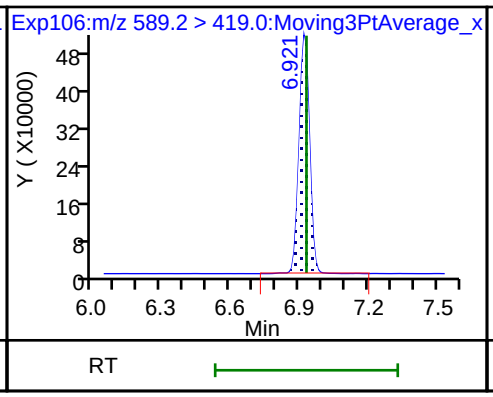
D 52 13C6 PFDA



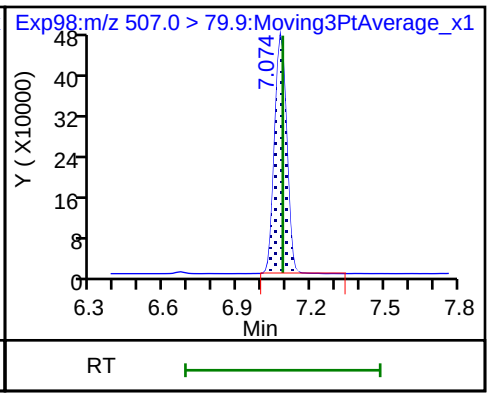
* 51 13C2 PFDA



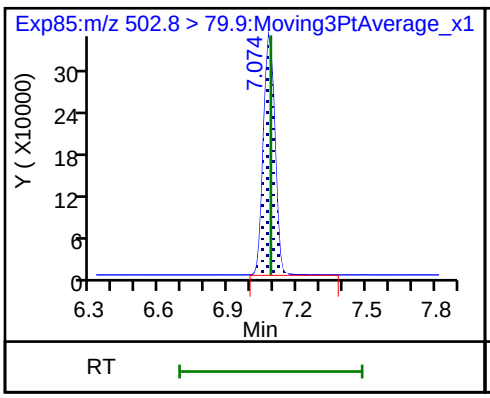
D 54 d5-NEtFOSAA



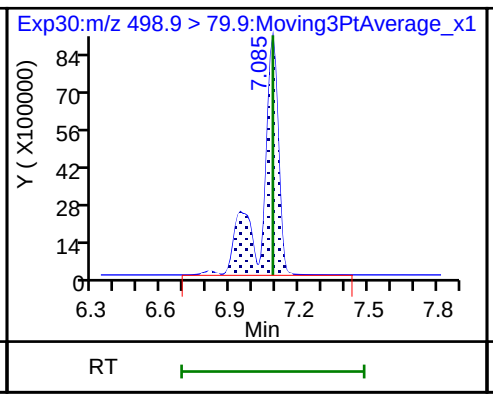
D 56 13C8 PFOS



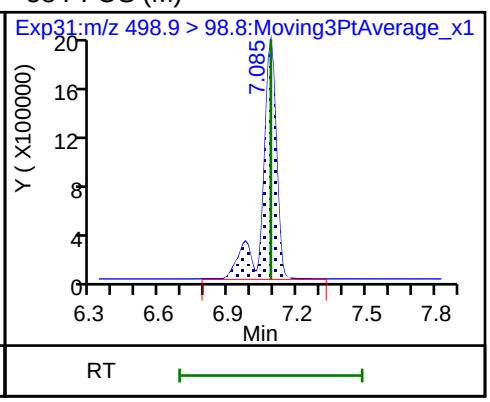
* 57 13C4 PFOS



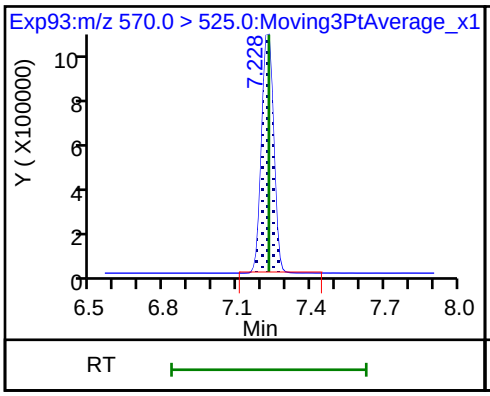
58 PFOS



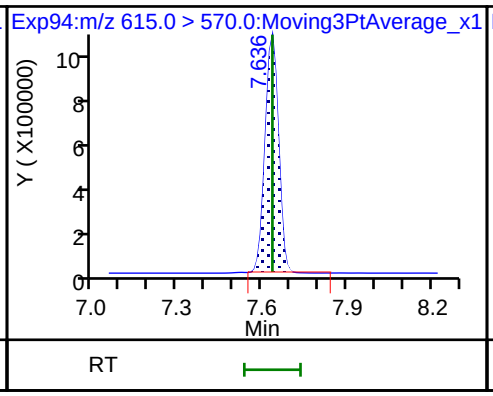
58 PFOS (M)



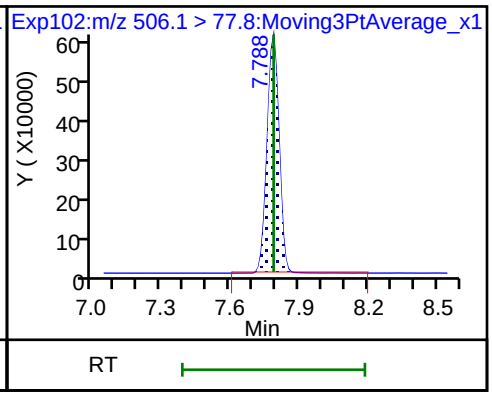
D 59 13C7 PFUnA



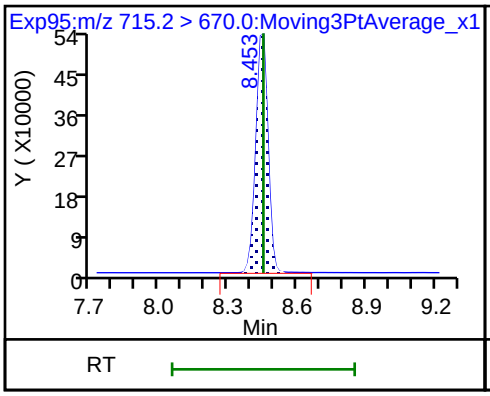
D 63 13C2 PFDoA



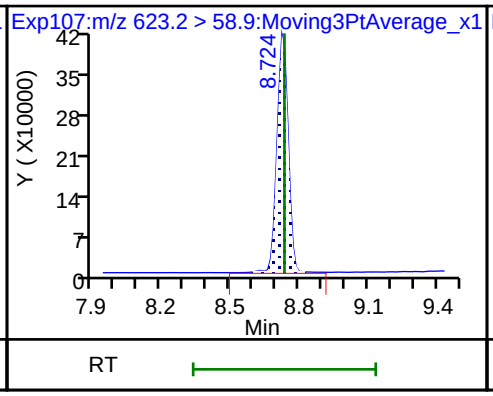
D 65 13C8 FOSA



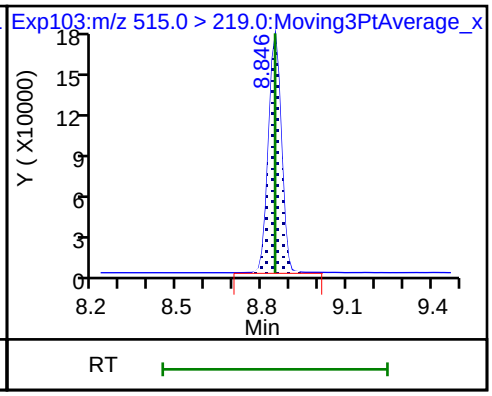
D 70 13C2 PFTeDA



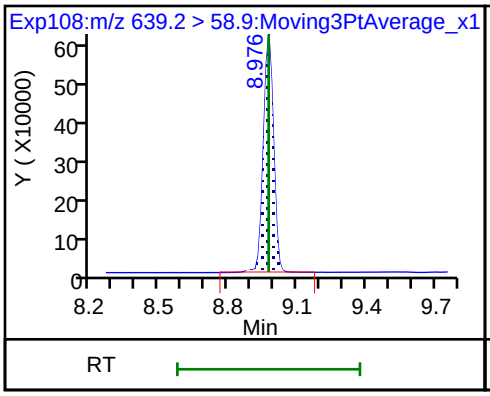
D 73 d7-N-Me-FOSE



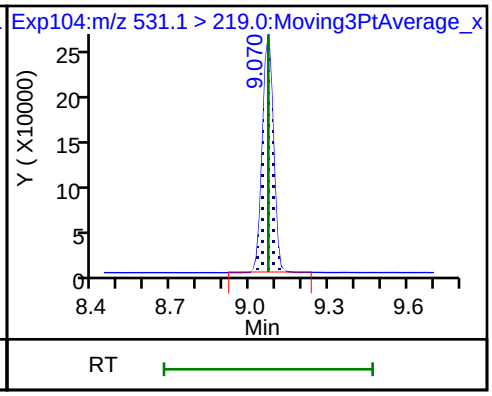
D 75 d3-NMePFOSA



D 77 d9-N-EtFOSE



D 79 d5-NEtPFOSA



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

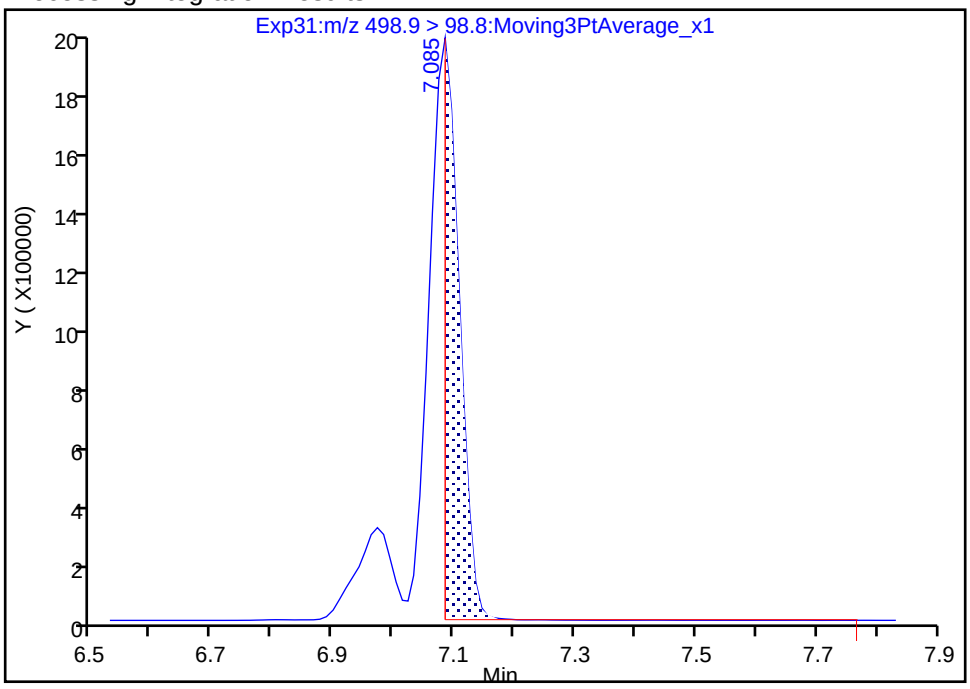
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d
Injection Date: 04-Feb-2026 14:06:05 Instrument ID: 30637
Lims ID: IC CAL 8
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

58 PFOS, CAS: 1763-23-1

Signal: 2

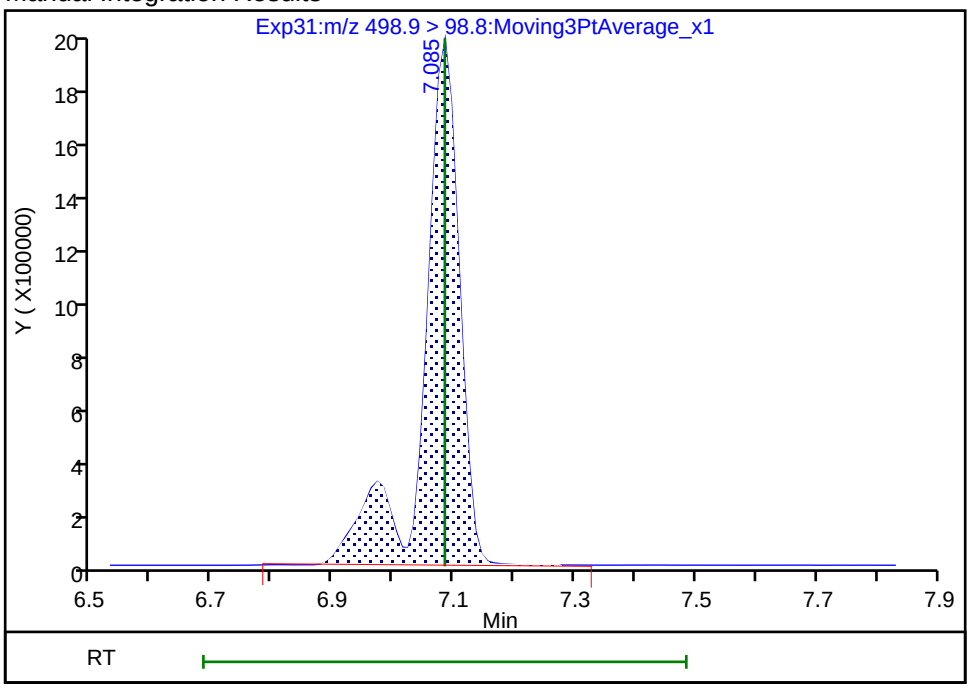
Processing Integration Results

RT: 7.08
Area: 3168469
Amount: 45.017449
Amount Units: ng/ml



Manual Integration Results

RT: 7.08
Area: 7874263
Amount: 45.017449
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:43:14 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Calibration / Perfluoropropionic acid

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

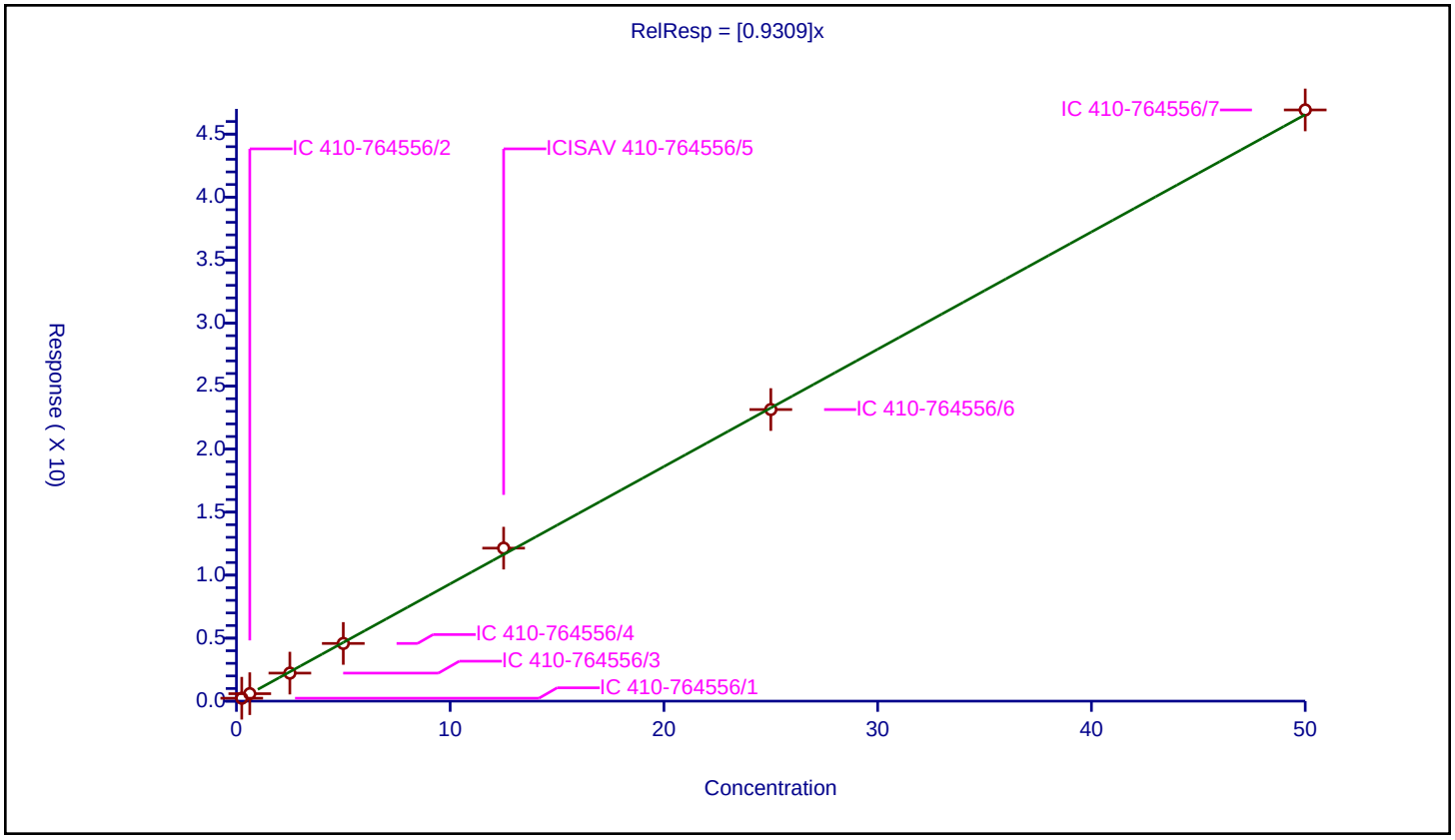
Curve Coefficients

Intercept:	0
Slope:	0.9309

Error Coefficients

Relative Standard Deviation:	2.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.25	0.231437	2.0	2404465.0	0.925748	Y
2	IC 410-764556/2	0.625	0.593389	2.0	2385495.0	0.949422	Y
3	IC 410-764556/3	2.5	2.223966	2.0	2361407.0	0.889586	Y
4	IC 410-764556/4	5.0	4.578921	2.0	2421052.0	0.915784	Y
5	ICISAV 410-764556/5	12.5	12.142661	2.0	2377927.0	0.971413	Y
6	IC 410-764556/6	25.0	23.141571	2.0	2379145.0	0.925663	Y
7	IC 410-764556/7	50.0	46.916927	2.0	2150484.0	0.938339	Y



Calibration / Perfluorobutanoic acid

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

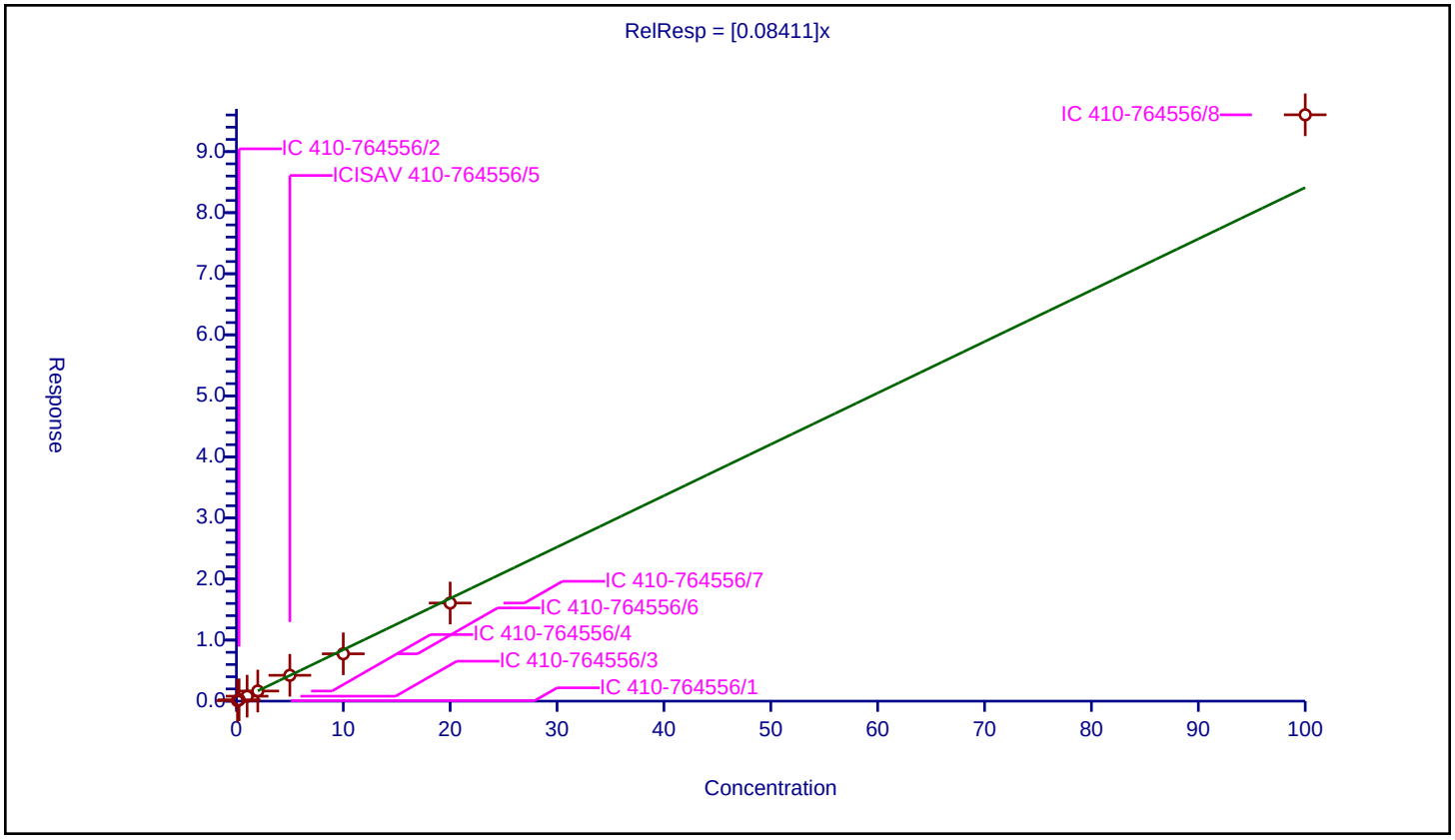
Curve Coefficients

Intercept:	0
Slope:	0.08411

Error Coefficients

Relative Standard Deviation:	6.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.1	0.008121	2.0	2813561.0	0.081214	Y
2	IC 410-764556/2	0.25	0.022186	2.0	2792290.0	0.088744	Y
3	IC 410-764556/3	1.0	0.081301	2.0	2769251.0	0.081301	Y
4	IC 410-764556/4	2.0	0.166106	2.0	2839817.0	0.083053	Y
5	ICISAV 410-764556/5	5.0	0.423507	2.0	2851606.0	0.084701	Y
6	IC 410-764556/6	10.0	0.775209	2.0	2819104.0	0.077521	Y
7	IC 410-764556/7	20.0	1.606651	2.0	2589004.0	0.080333	Y
8	IC 410-764556/8	100.0	9.603277	2.0	1889484.0	0.096033	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

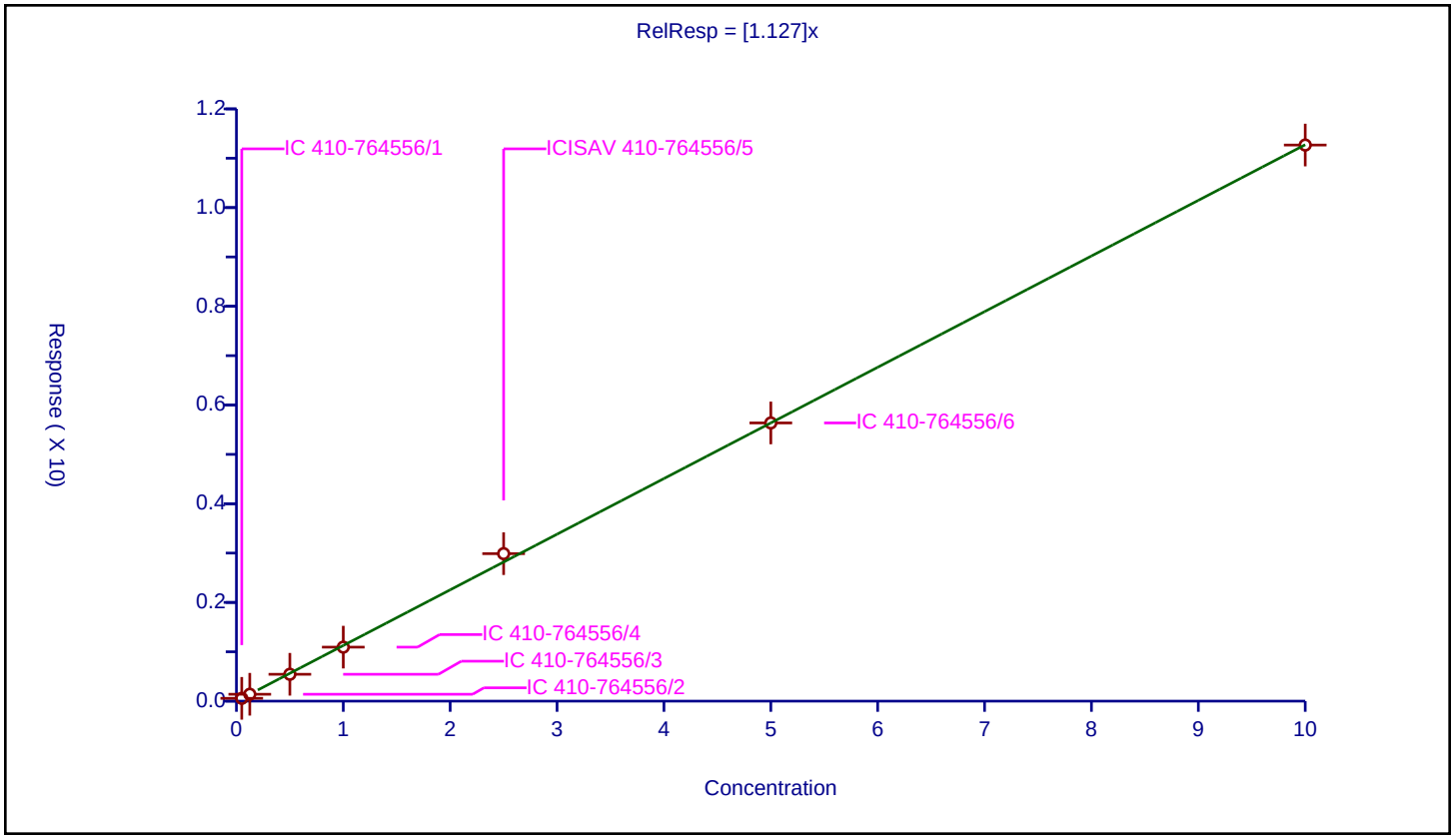
Curve Coefficients

Intercept:	0
Slope:	1.127

Error Coefficients

Relative Standard Deviation:	3.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.057118	2.0	2811222.0	1.14235	Y
2	IC 410-764556/2	0.125	0.139634	2.0	2853412.0	1.117068	Y
3	IC 410-764556/3	0.5	0.544489	2.0	2782928.0	1.088978	Y
4	IC 410-764556/4	1.0	1.093939	2.0	2953471.0	1.093939	Y
5	ICISAV 410-764556/5	2.5	2.988576	2.0	2848934.0	1.19543	Y
6	IC 410-764556/6	5.0	5.636695	2.0	2905594.0	1.127339	Y
7	IC 410-764556/7	10.0	11.26792	2.0	2711588.0	1.126792	Y



Calibration / 3:3 FTCA

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

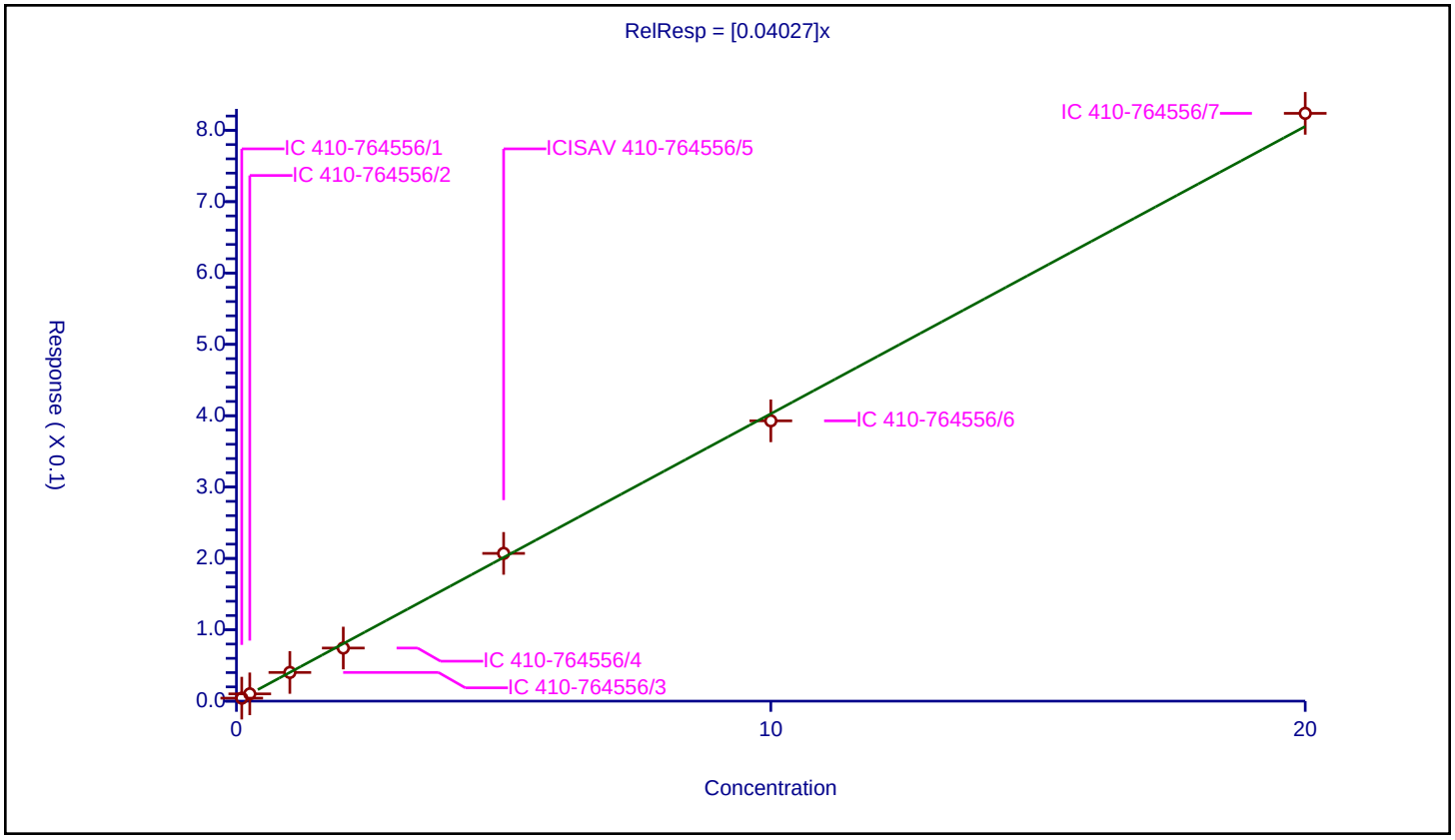
Curve Coefficients

Intercept:	0
Slope:	0.04027

Error Coefficients

Relative Standard Deviation:	3.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.1	0.00418	2.0	2811222.0	0.041804	Y
2	IC 410-764556/2	0.25	0.010201	2.0	2853412.0	0.040804	Y
3	IC 410-764556/3	1.0	0.040221	2.0	2782928.0	0.040221	Y
4	IC 410-764556/4	2.0	0.074414	2.0	2953471.0	0.037207	Y
5	ICISAV 410-764556/5	5.0	0.20706	2.0	2848934.0	0.041412	Y
6	IC 410-764556/6	10.0	0.392824	2.0	2905594.0	0.039282	Y
7	IC 410-764556/7	20.0	0.823781	2.0	2711588.0	0.041189	Y



Calibration / Perfluoropentanoic acid

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

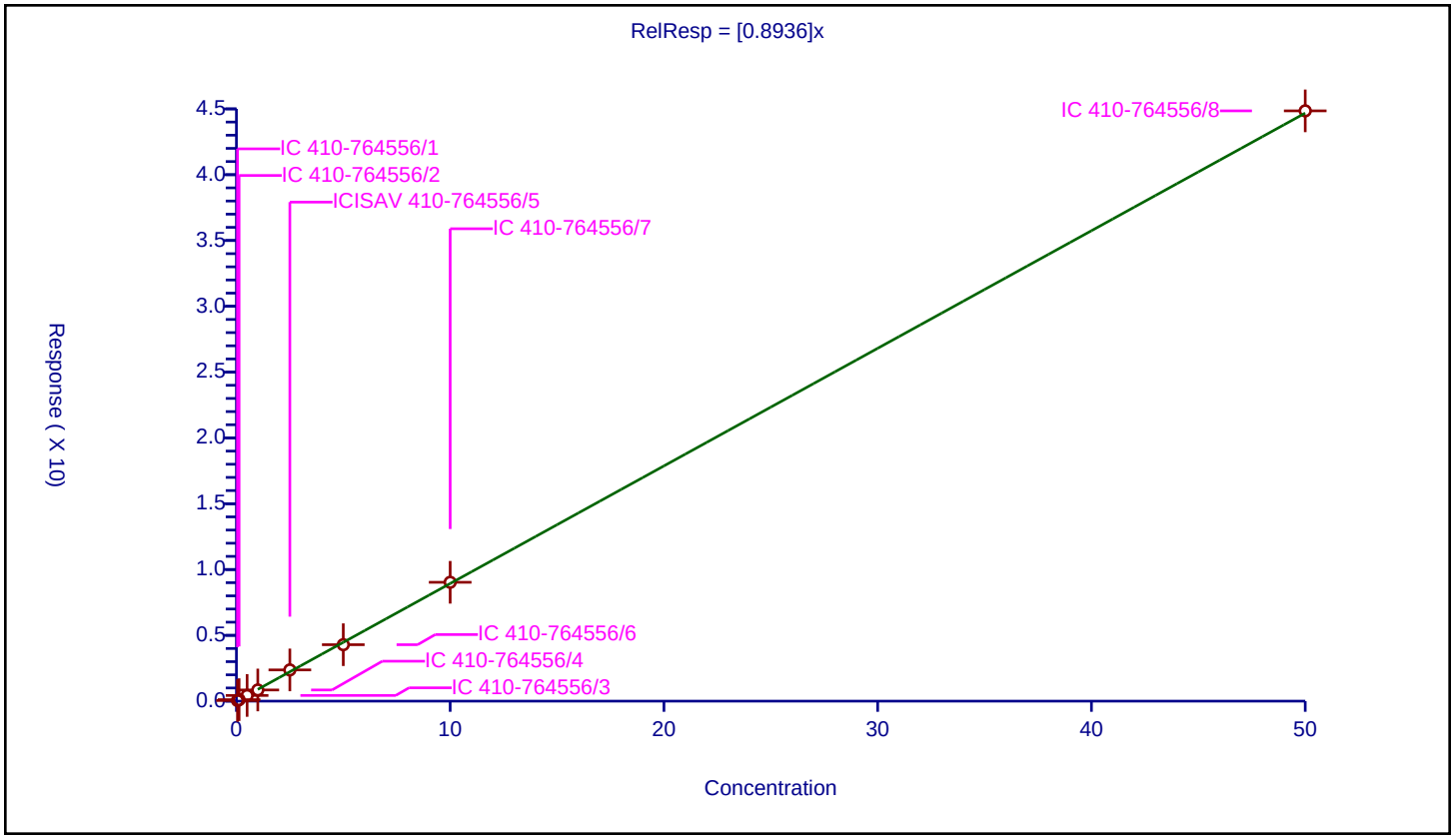
Curve Coefficients

Intercept:	0
Slope:	0.8936

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.046598	2.0	2811222.0	0.931951	Y
2	IC 410-764556/2	0.125	0.112235	2.0	2853412.0	0.897884	Y
3	IC 410-764556/3	0.5	0.432144	2.0	2782928.0	0.864288	Y
4	IC 410-764556/4	1.0	0.848052	2.0	2953471.0	0.848052	Y
5	ICISAV 410-764556/5	2.5	2.371941	2.0	2848934.0	0.948776	Y
6	IC 410-764556/6	5.0	4.289709	2.0	2905594.0	0.857942	Y
7	IC 410-764556/7	10.0	9.030031	2.0	2711588.0	0.903003	Y
8	IC 410-764556/8	50.0	44.850947	2.0	2215556.0	0.897019	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

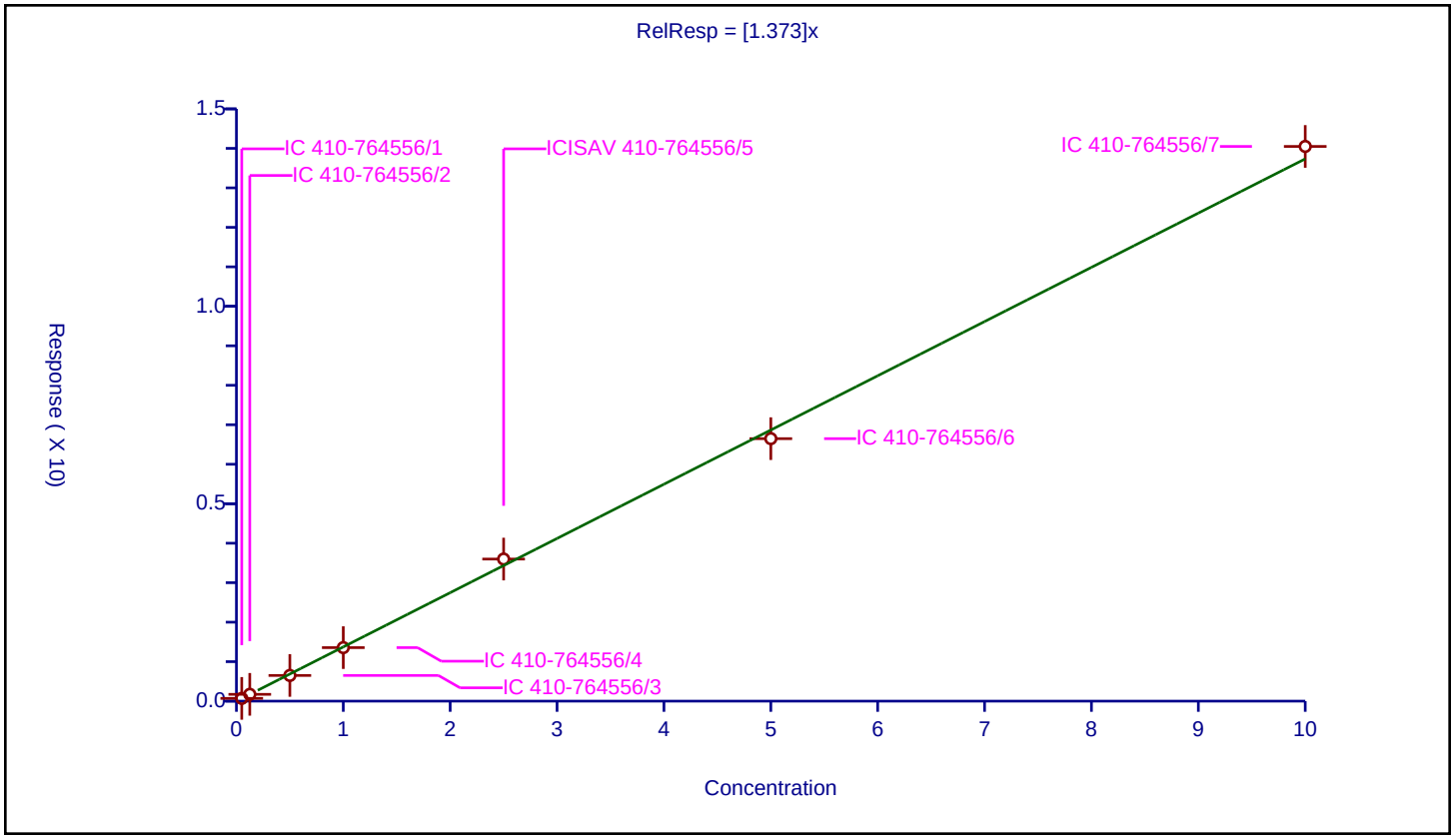
Curve Coefficients

Intercept:	0
Slope:	1.373

Error Coefficients

Relative Standard Deviation:	3.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.07009	2.0	2811222.0	1.401796	Y
2	IC 410-764556/2	0.125	0.172664	2.0	2853412.0	1.381313	Y
3	IC 410-764556/3	0.5	0.650641	2.0	2782928.0	1.301281	Y
4	IC 410-764556/4	1.0	1.355459	2.0	2953471.0	1.355459	Y
5	ICISAV 410-764556/5	2.5	3.598634	2.0	2848934.0	1.439453	Y
6	IC 410-764556/6	5.0	6.648309	2.0	2905594.0	1.329662	Y
7	IC 410-764556/7	10.0	14.049072	2.0	2711588.0	1.404907	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

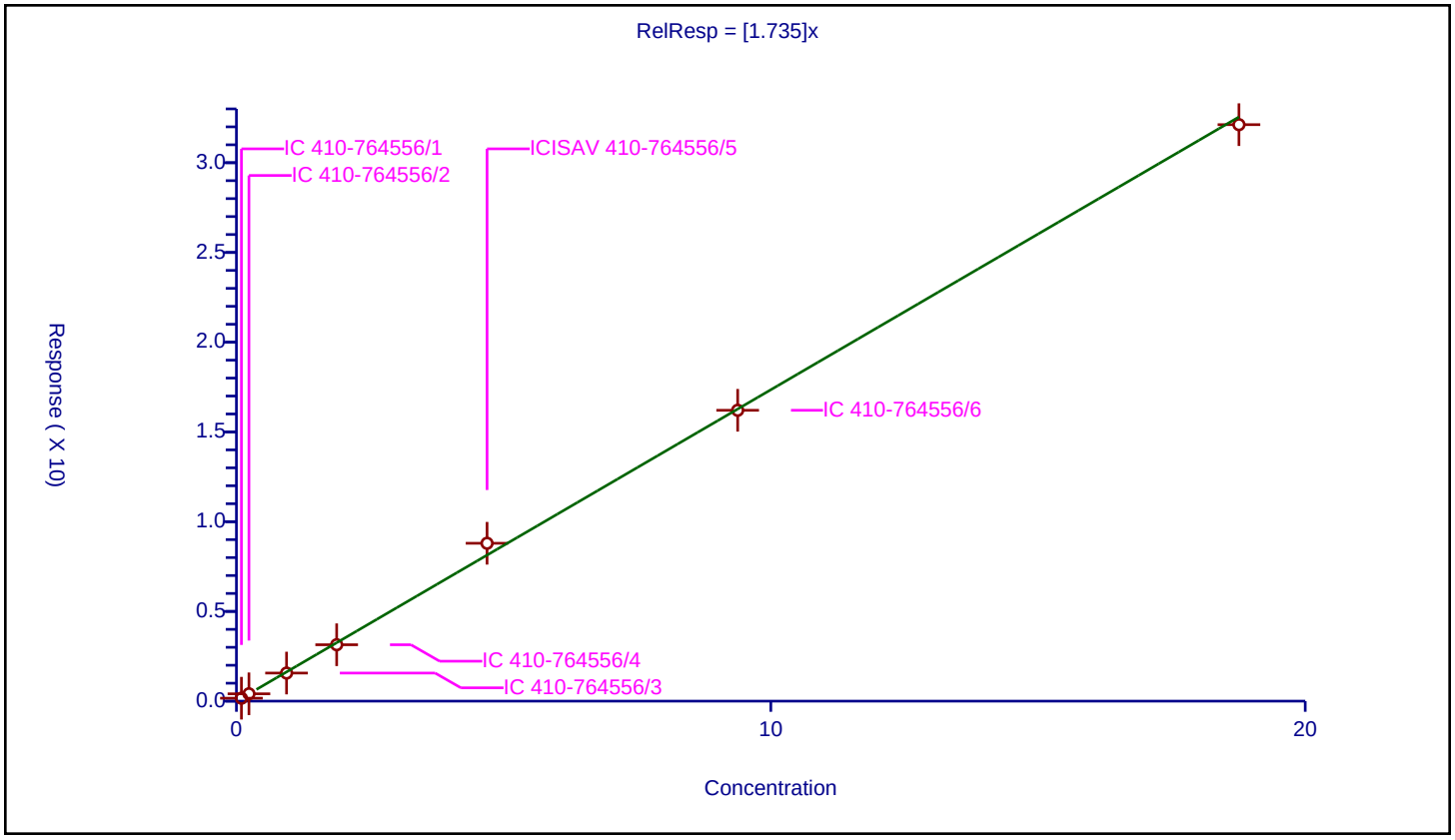
Curve Coefficients

Intercept:	0
Slope:	1.735

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0938	0.163788	4.69	1099055.0	1.746136	Y
2	IC 410-764556/2	0.2345	0.40828	4.69	1069012.0	1.741066	Y
3	IC 410-764556/3	0.938	1.564399	4.69	1063669.0	1.667803	Y
4	IC 410-764556/4	1.876	3.141812	4.69	1088469.0	1.67474	Y
5	ICISAV 410-764556/5	4.69	8.796572	4.69	1009443.0	1.875602	Y
6	IC 410-764556/6	9.38	16.206045	4.69	1005887.0	1.727723	Y
7	IC 410-764556/7	18.76	32.121161	4.69	930611.0	1.712215	Y



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

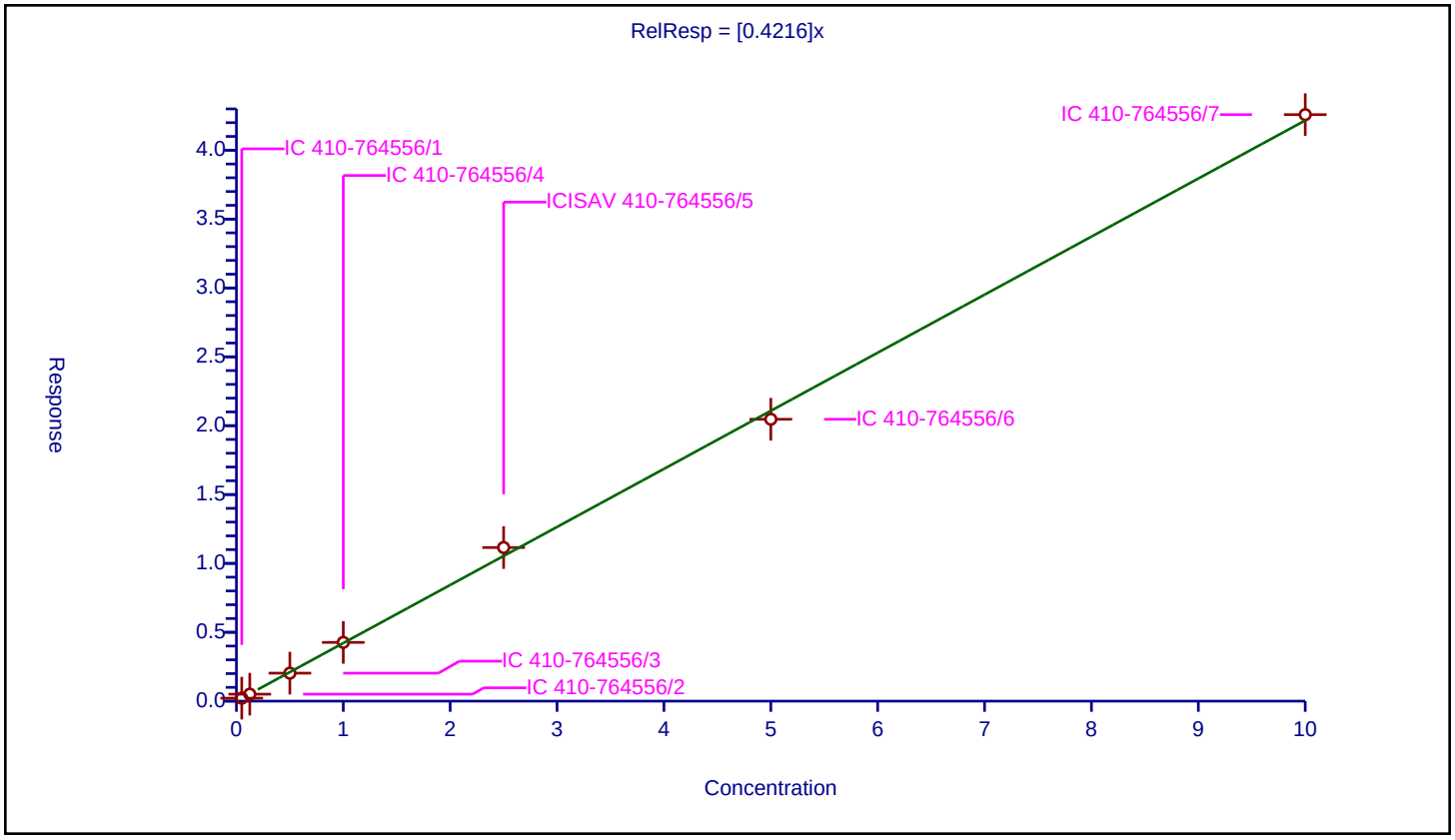
Curve Coefficients

Intercept:	0
Slope:	0.4216

Error Coefficients

Relative Standard Deviation:	3.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.021626	2.0	3521818.0	0.432527	Y
2	IC 410-764556/2	0.125	0.050583	2.0	3383840.0	0.404662	Y
3	IC 410-764556/3	0.5	0.203209	2.0	3409886.0	0.406418	Y
4	IC 410-764556/4	1.0	0.426401	2.0	3417973.0	0.426401	Y
5	ICISAV 410-764556/5	2.5	1.1152	2.0	3387343.0	0.44608	Y
6	IC 410-764556/6	5.0	2.046544	2.0	3449060.0	0.409309	Y
7	IC 410-764556/7	10.0	4.25831	2.0	3192496.0	0.425831	Y



Calibration / Perfluorohexanoic acid

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

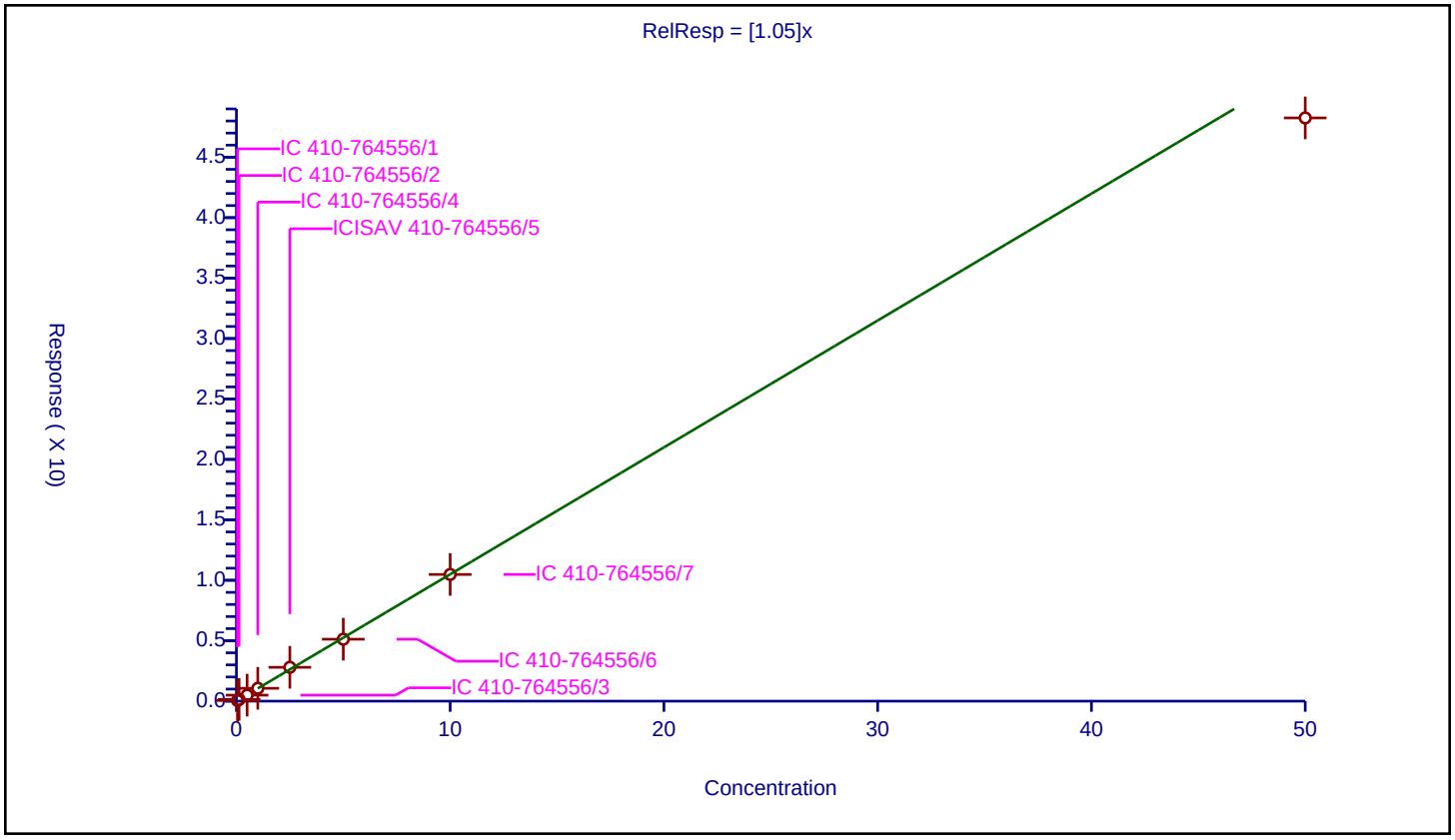
Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.053877	2.0	3521818.0	1.077546	Y
2	IC 410-764556/2	0.125	0.138015	2.0	3383840.0	1.104118	Y
3	IC 410-764556/3	0.5	0.497722	2.0	3409886.0	0.995443	Y
4	IC 410-764556/4	1.0	1.06303	2.0	3417973.0	1.06303	Y
5	ICISAV 410-764556/5	2.5	2.798899	2.0	3387343.0	1.11956	Y
6	IC 410-764556/6	5.0	5.123559	2.0	3449060.0	1.024712	Y
7	IC 410-764556/7	10.0	10.481774	2.0	3192496.0	1.048177	Y
8	IC 410-764556/8	50.0	48.252536	2.0	2732412.0	0.965051	Y



Calibration / 5:3 FTCA

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

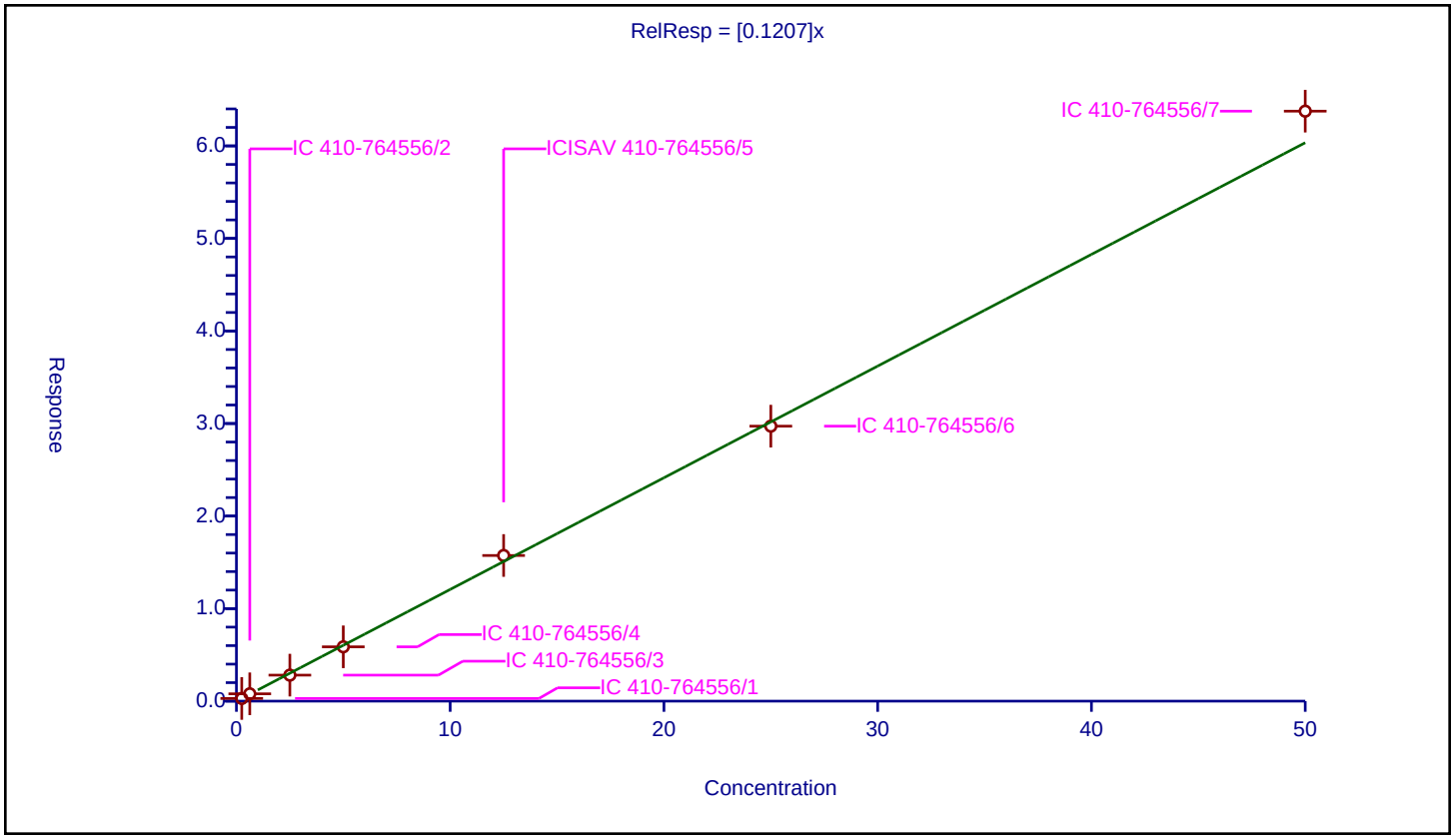
Curve Coefficients

Intercept:	0
Slope:	0.1207

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.25	0.02896	2.0	3521818.0	0.11584	Y
2	IC 410-764556/2	0.625	0.079293	2.0	3383840.0	0.126869	Y
3	IC 410-764556/3	2.5	0.281117	2.0	3409886.0	0.112447	Y
4	IC 410-764556/4	5.0	0.586916	2.0	3417973.0	0.117383	Y
5	ICISAV 410-764556/5	12.5	1.573936	2.0	3387343.0	0.125915	Y
6	IC 410-764556/6	25.0	2.971411	2.0	3449060.0	0.118856	Y
7	IC 410-764556/7	50.0	6.375491	2.0	3192496.0	0.12751	Y



Calibration / Perfluorobutanesulfonic acid

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

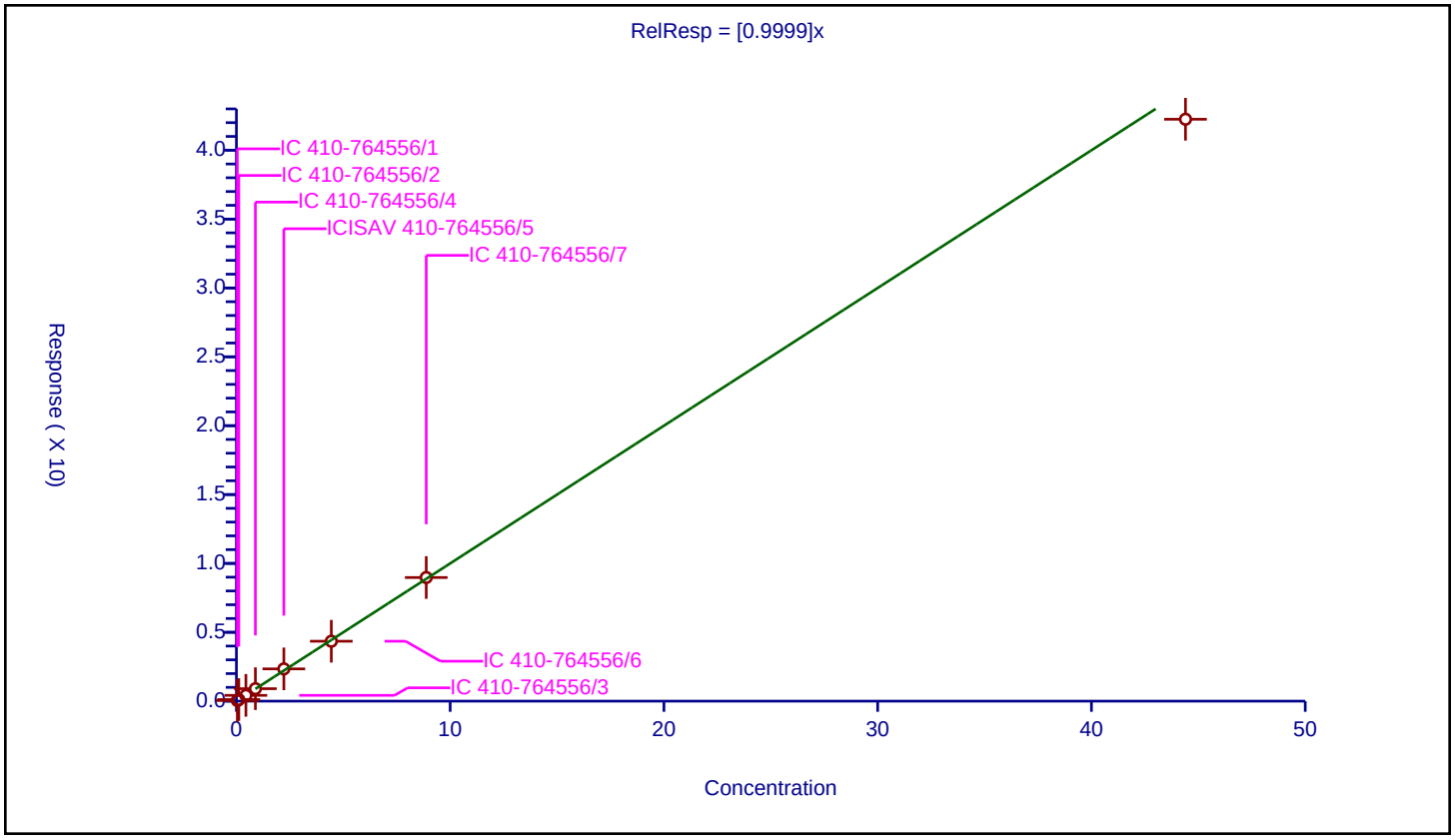
Curve Coefficients

Intercept:	0
Slope:	0.9999

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0444	0.044476	1.864	2307320.0	1.001715	Y
2	IC 410-764556/2	0.111	0.114892	1.864	2295982.0	1.035061	Y
3	IC 410-764556/3	0.444	0.420968	1.864	2332830.0	0.948126	Y
4	IC 410-764556/4	0.888	0.903688	1.864	2347484.0	1.017666	Y
5	ICISAV 410-764556/5	2.22	2.341998	1.864	2268156.0	1.054954	Y
6	IC 410-764556/6	4.44	4.349248	1.864	2263940.0	0.97956	Y
7	IC 410-764556/7	8.88	8.97511	1.864	2134216.0	1.010711	Y
8	IC 410-764556/8	44.4	42.248121	1.864	1697503.0	0.951534	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

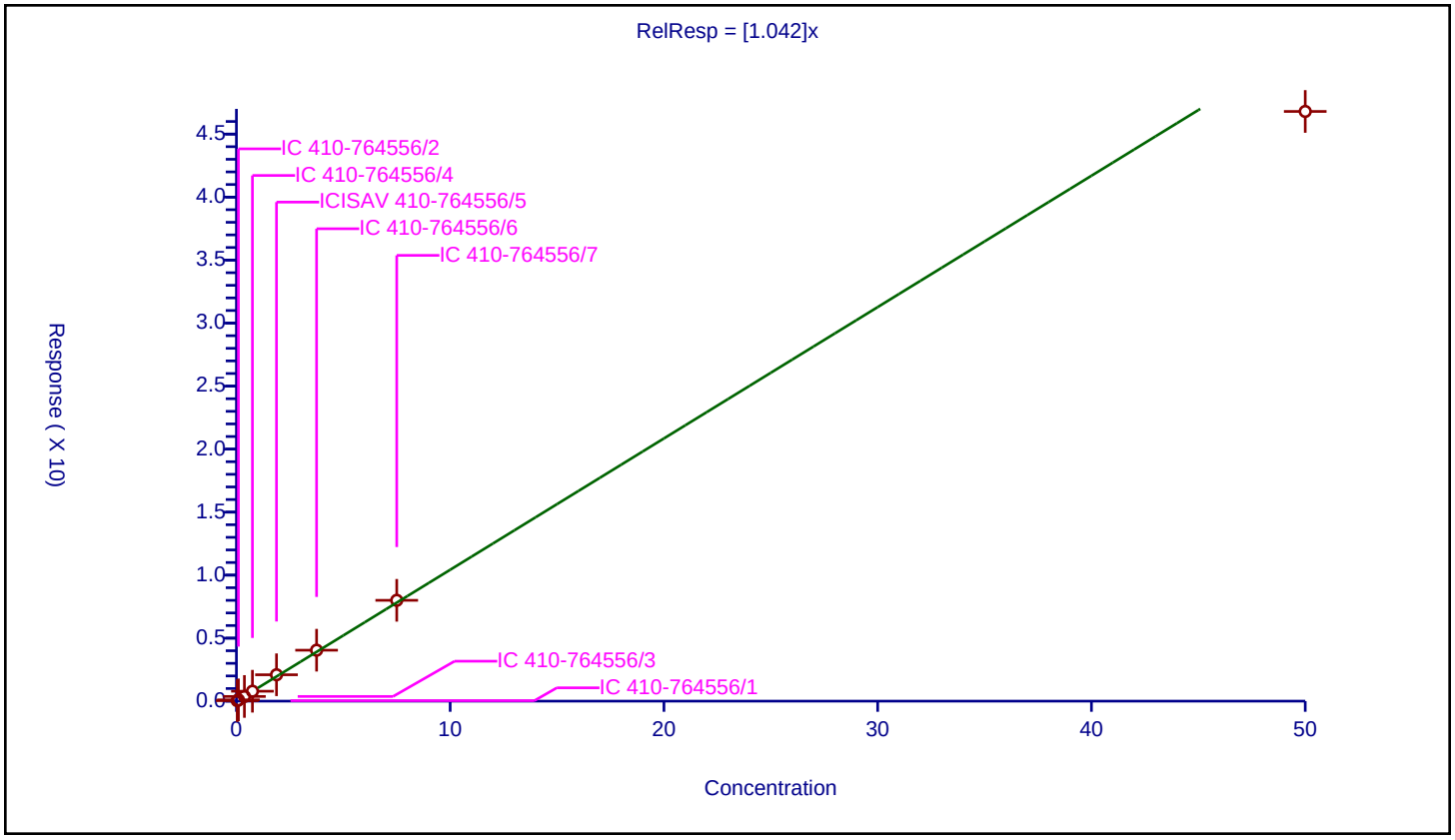
Curve Coefficients

Intercept:	0
Slope:	1.042

Error Coefficients

Relative Standard Deviation:	5.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0375	0.038517	2.0	1868799.0	1.027112	Y
2	IC 410-764556/2	0.09375	0.101074	2.0	1783433.0	1.078118	Y
3	IC 410-764556/3	0.375	0.370655	2.0	1731113.0	0.988414	Y
4	IC 410-764556/4	0.75	0.786321	2.0	1904641.0	1.048429	Y
5	ICISAV 410-764556/5	1.875	2.092825	2.0	1852407.0	1.116173	Y
6	IC 410-764556/6	3.75	4.042113	2.0	1939124.0	1.077897	Y
7	IC 410-764556/7	7.5	8.001592	2.0	1918771.0	1.066879	Y
8	IC 410-764556/8	50.0	46.796881	2.0	1939932.0	0.935938	Y



Calibration / FBSA

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

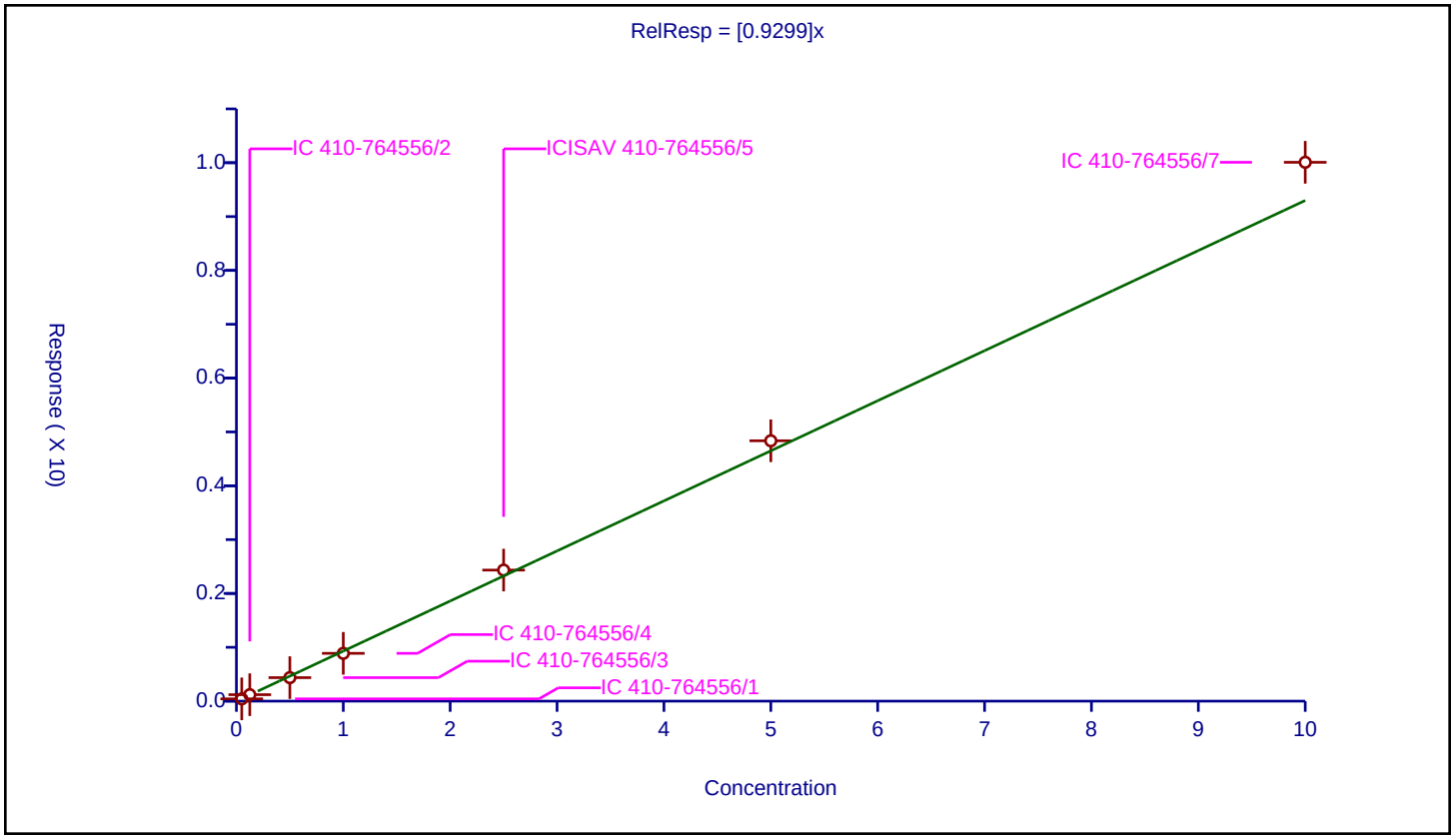
Curve Coefficients

Intercept:	0
Slope:	0.9299

Error Coefficients

Relative Standard Deviation:	6.3

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.042418	1.864	2307320.0	0.84837	Y
2	IC 410-764556/2	0.125	0.119797	1.864	2295982.0	0.958376	Y
3	IC 410-764556/3	0.5	0.436538	1.864	2332830.0	0.873076	Y
4	IC 410-764556/4	1.0	0.887646	1.864	2347484.0	0.887646	Y
5	ICISAV 410-764556/5	2.5	2.434057	1.864	2268156.0	0.973623	Y
6	IC 410-764556/6	5.0	4.835519	1.864	2263940.0	0.967104	Y
7	IC 410-764556/7	10.0	10.008041	1.864	2134216.0	1.000804	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

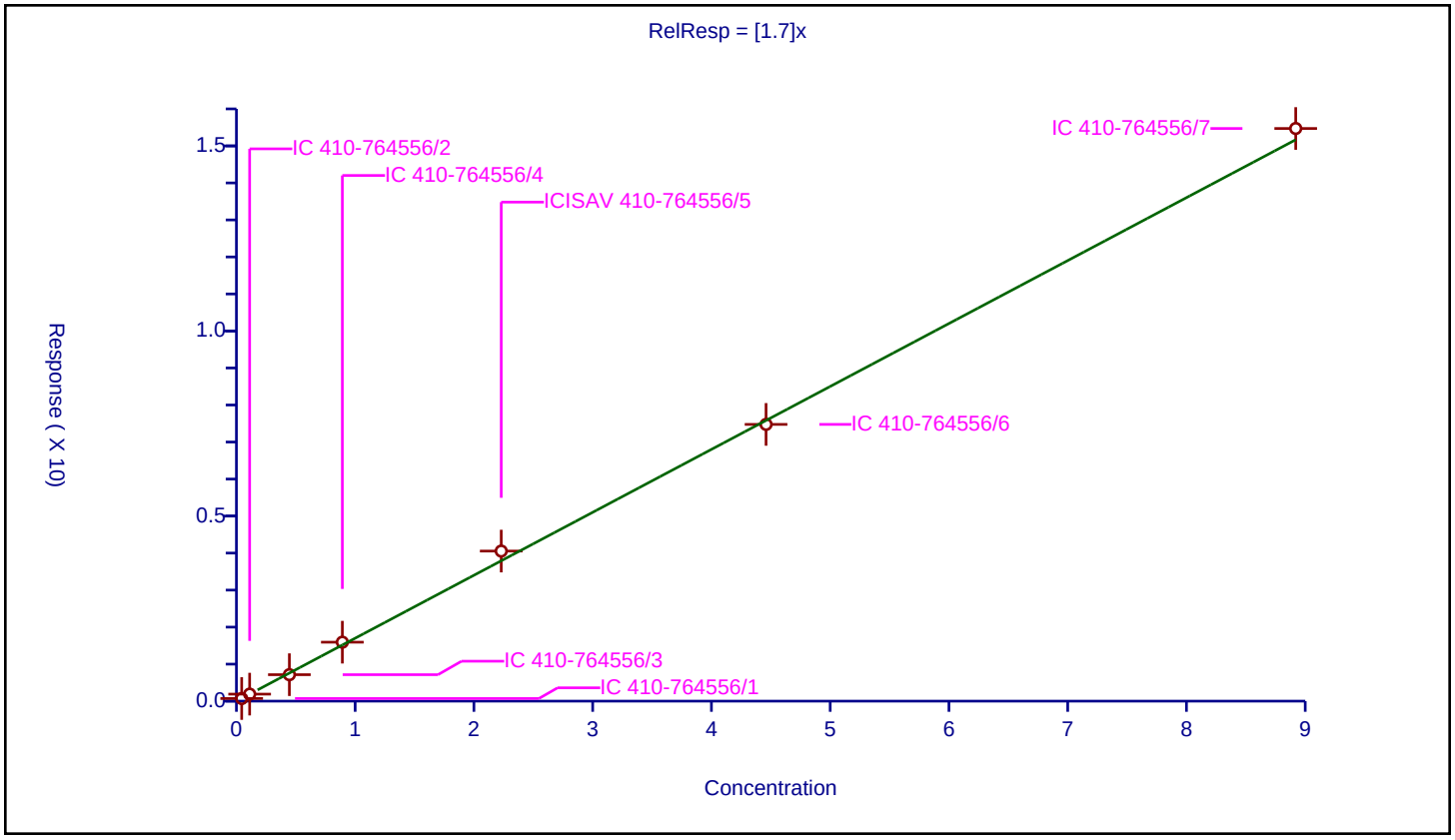
Curve Coefficients

Intercept:	0
Slope:	1.7

Error Coefficients

Relative Standard Deviation:	5.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0446	0.070637	2.0	3521818.0	1.583798	Y
2	IC 410-764556/2	0.1115	0.189771	2.0	3383840.0	1.70198	Y
3	IC 410-764556/3	0.446	0.714546	2.0	3409886.0	1.602122	Y
4	IC 410-764556/4	0.892	1.592371	2.0	3417973.0	1.785169	Y
5	ICISAV 410-764556/5	2.23	4.054499	2.0	3387343.0	1.818161	Y
6	IC 410-764556/6	4.46	7.476195	2.0	3449060.0	1.676277	Y
7	IC 410-764556/7	8.92	15.470714	2.0	3192496.0	1.734385	Y



Calibration / Perfluoroheptanoic acid

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

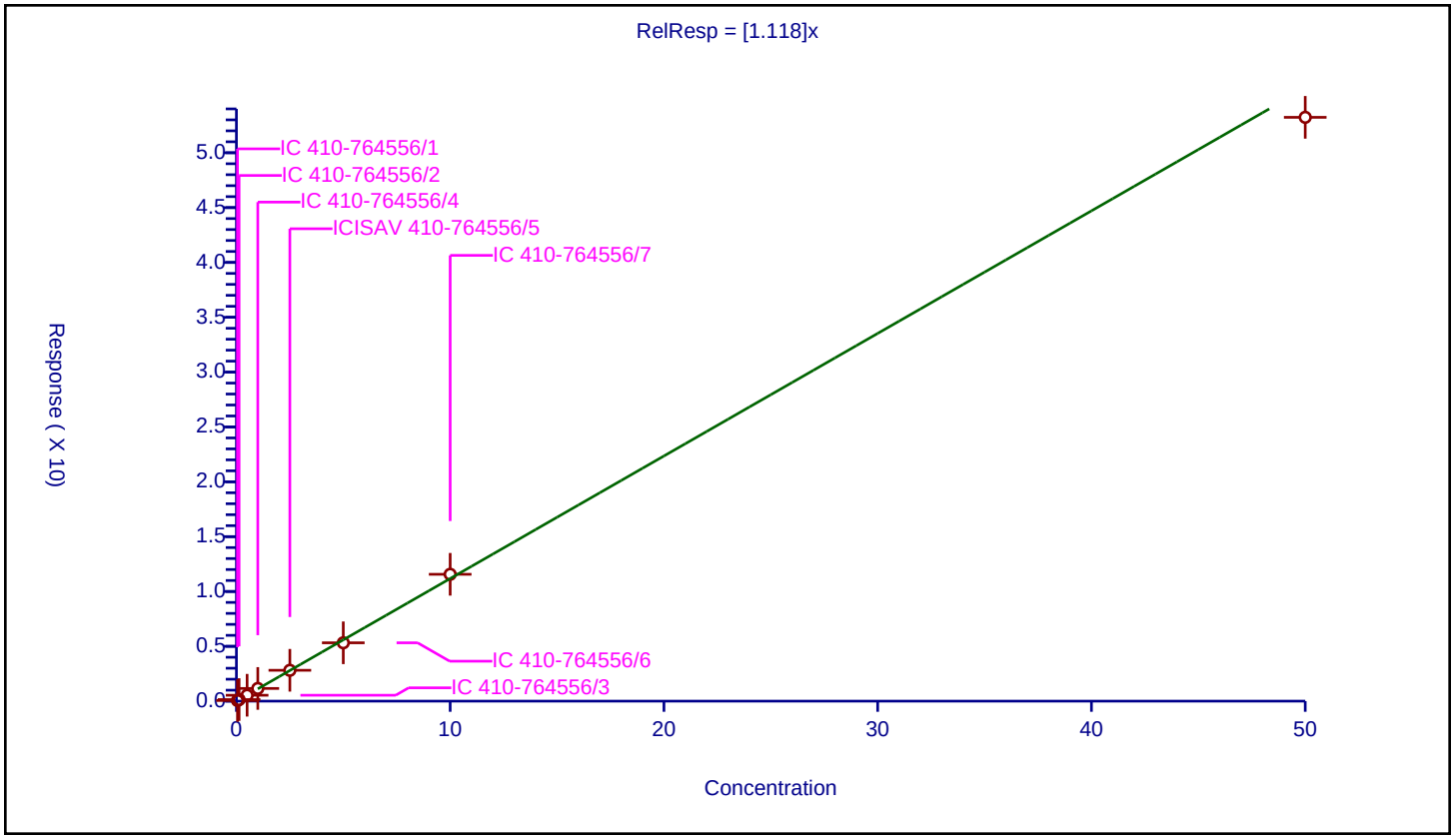
Curve Coefficients

Intercept:	0
Slope:	1.118

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.057974	2.0	3226019.0	1.159485	Y
2	IC 410-764556/2	0.125	0.142503	2.0	3058741.0	1.140025	Y
3	IC 410-764556/3	0.5	0.537196	2.0	3121010.0	1.074392	Y
4	IC 410-764556/4	1.0	1.157017	2.0	3102581.0	1.157017	Y
5	ICISAV 410-764556/5	2.5	2.812119	2.0	3218249.0	1.124847	Y
6	IC 410-764556/6	5.0	5.319437	2.0	3266964.0	1.063887	Y
7	IC 410-764556/7	10.0	11.565751	2.0	3010502.0	1.156575	Y
8	IC 410-764556/8	50.0	53.230943	2.0	2438614.0	1.064619	Y



Calibration / DONA

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

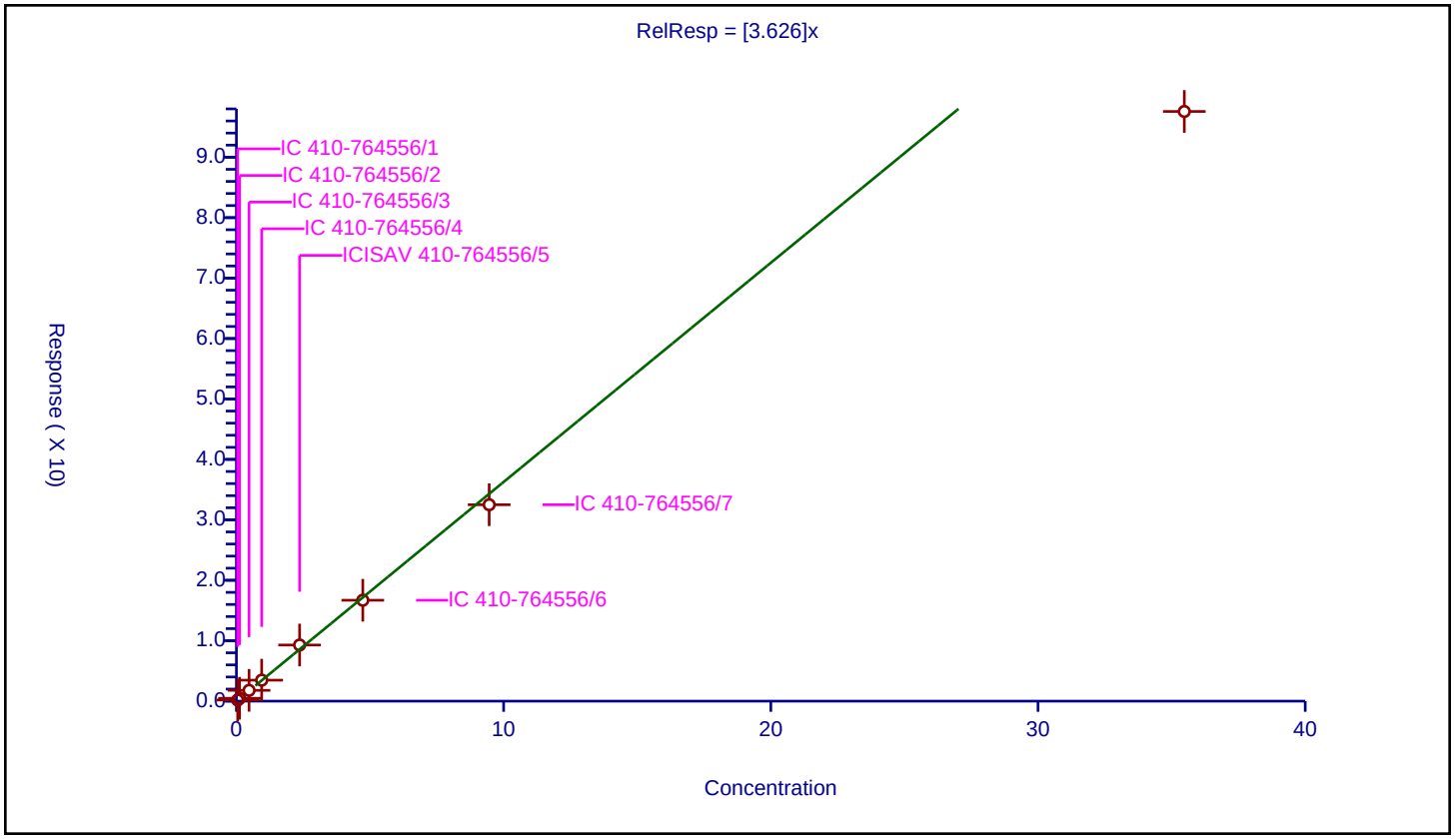
Curve Coefficients

Intercept:	0
Slope:	3.626

Error Coefficients

Relative Standard Deviation:	11.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0473	0.184413	2.0	1868799.0	3.898786	Y
2	IC 410-764556/2	0.11825	0.475716	2.0	1783433.0	4.02297	Y
3	IC 410-764556/3	0.473	1.786733	2.0	1731113.0	3.777447	Y
4	IC 410-764556/4	0.946	3.472199	2.0	1904641.0	3.6704	Y
5	ICISAV 410-764556/5	2.365	9.286726	2.0	1852407.0	3.926734	Y
6	IC 410-764556/6	4.73	16.694797	2.0	1939124.0	3.529555	Y
7	IC 410-764556/7	9.46	32.500429	2.0	1918771.0	3.435563	Y
8	IC 410-764556/8	35.475	97.574578	2.0	1939932.0	2.750517	Y



Calibration / Perfluoropentanesulfonic acid

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

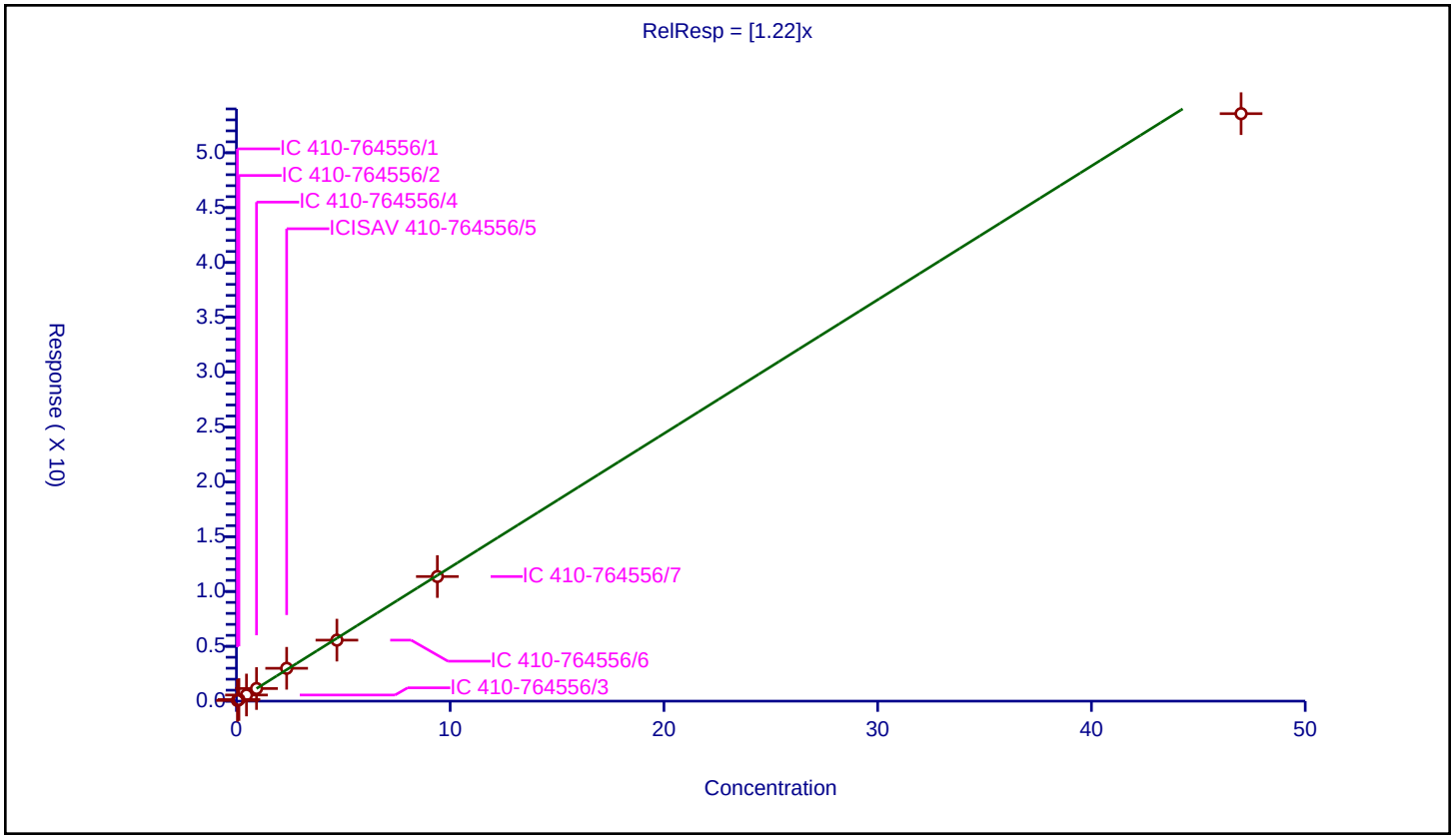
Curve Coefficients

Intercept:	0
Slope:	1.22

Error Coefficients

Relative Standard Deviation:	4.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.047	0.061734	1.896	2084720.0	1.313494	Y
2	IC 410-764556/2	0.1175	0.144069	1.896	2146864.0	1.226118	Y
3	IC 410-764556/3	0.47	0.558657	1.896	2119976.0	1.188633	Y
4	IC 410-764556/4	0.94	1.150832	1.896	2155662.0	1.224289	Y
5	ICISAV 410-764556/5	2.35	2.994259	1.896	2123659.0	1.274153	Y
6	IC 410-764556/6	4.7	5.56345	1.896	2105440.0	1.183713	Y
7	IC 410-764556/7	9.4	11.362053	1.896	1947126.0	1.208729	Y
8	IC 410-764556/8	47.0	53.565475	1.896	1621214.0	1.139691	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

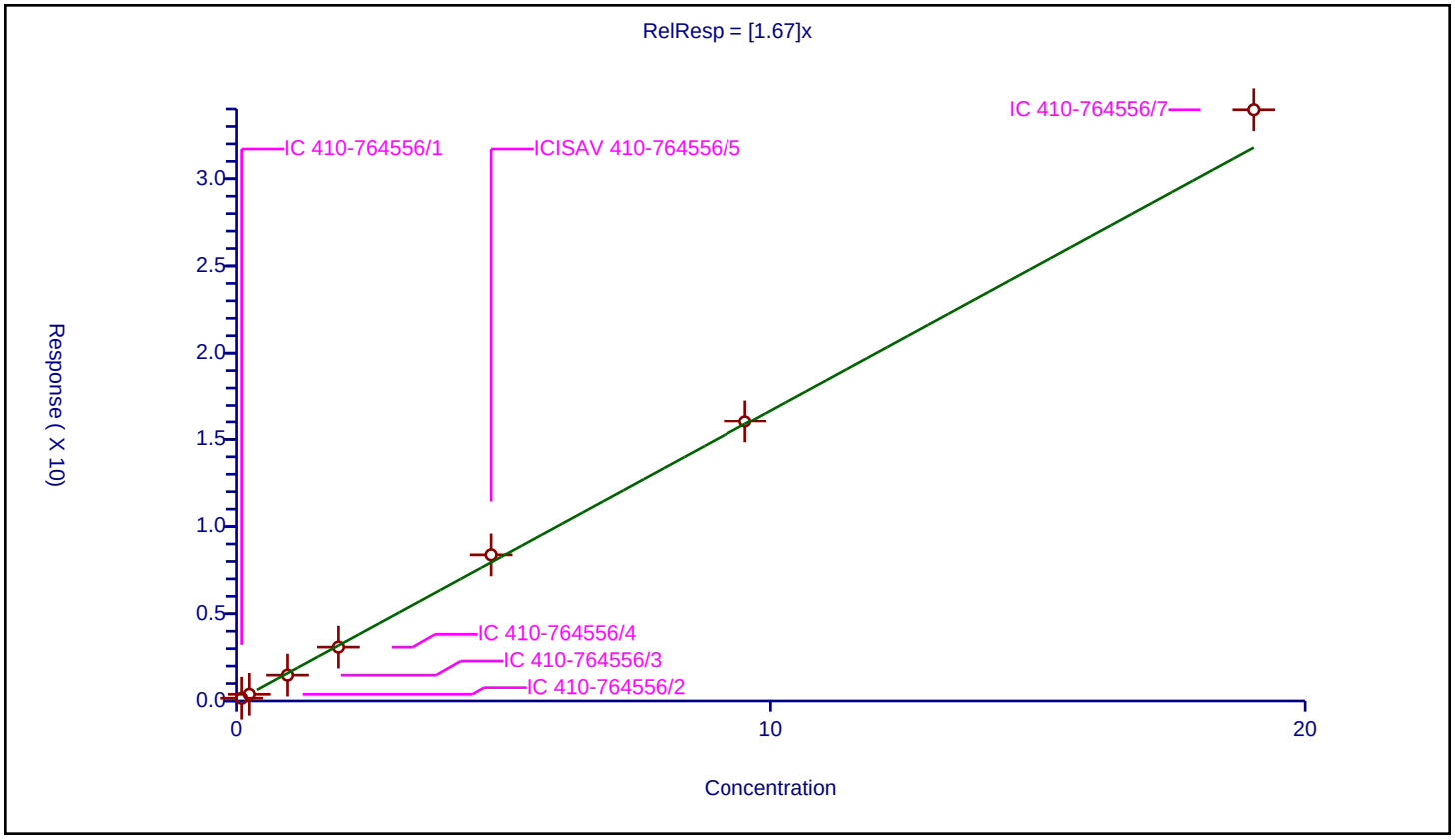
Curve Coefficients

Intercept:	0
Slope:	1.67

Error Coefficients

Relative Standard Deviation:	4.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0952	0.158963	4.76	997560.0	1.669774	Y
2	IC 410-764556/2	0.238	0.38241	4.76	976821.0	1.606763	Y
3	IC 410-764556/3	0.952	1.482587	4.76	974200.0	1.557339	Y
4	IC 410-764556/4	1.904	3.090117	4.76	987085.0	1.622961	Y
5	ICISAV 410-764556/5	4.76	8.379866	4.76	890984.0	1.760476	Y
6	IC 410-764556/6	9.52	16.05837	4.76	846456.0	1.686804	Y
7	IC 410-764556/7	19.04	33.956598	4.76	716059.0	1.783435	Y



Calibration / bis(trifluoromethane)sulfonimide

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

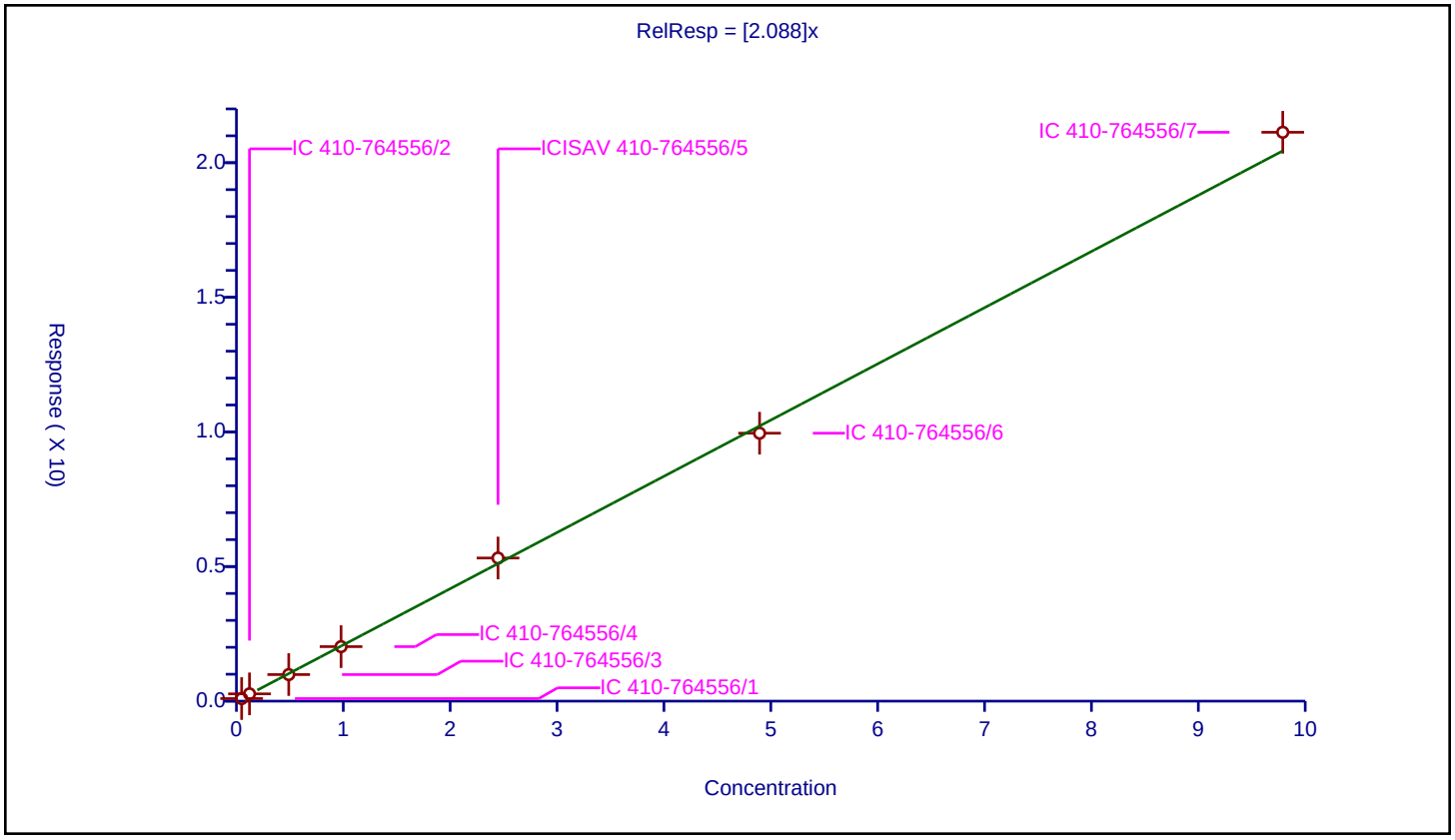
Curve Coefficients

Intercept:	0
Slope:	2.088

Error Coefficients

Relative Standard Deviation:	4.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.04895	0.095909	1.896	2084720.0	1.959319	Y
2	IC 410-764556/2	0.122375	0.27027	1.896	2146864.0	2.208539	Y
3	IC 410-764556/3	0.4895	0.986714	1.896	2119976.0	2.015758	Y
4	IC 410-764556/4	0.979	2.024662	1.896	2155662.0	2.068092	Y
5	ICISAV 410-764556/5	2.4475	5.316027	1.896	2123659.0	2.172023	Y
6	IC 410-764556/6	4.895	9.95341	1.896	2105440.0	2.033383	Y
7	IC 410-764556/7	9.79	21.131545	1.896	1947126.0	2.158483	Y



Calibration / Perfluorooctanoic acid

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

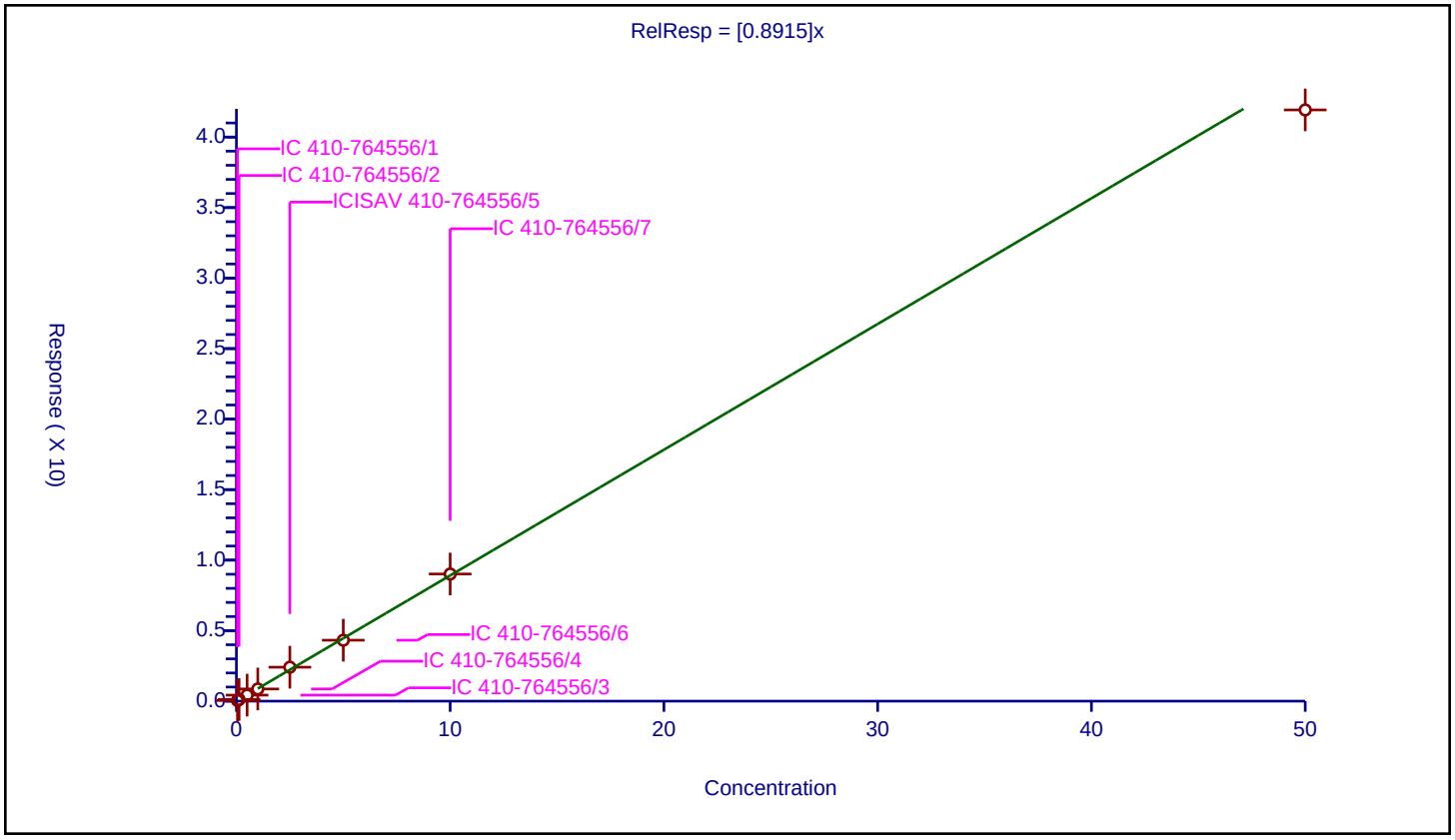
Curve Coefficients

Intercept:	0
Slope:	0.8915

Error Coefficients

Relative Standard Deviation:	4.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.046432	2.0	3790965.0	0.92864	Y
2	IC 410-764556/2	0.125	0.114374	2.0	3809899.0	0.914993	Y
3	IC 410-764556/3	0.5	0.427913	2.0	3728374.0	0.855825	Y
4	IC 410-764556/4	1.0	0.864997	2.0	3918443.0	0.864997	Y
5	ICISAV 410-764556/5	2.5	2.407341	2.0	3716986.0	0.962937	Y
6	IC 410-764556/6	5.0	4.321697	2.0	3830053.0	0.864339	Y
7	IC 410-764556/7	10.0	9.015819	2.0	3598631.0	0.901582	Y
8	IC 410-764556/8	50.0	41.926879	2.0	3193460.0	0.838538	Y



Calibration / 7:3 FTCA

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

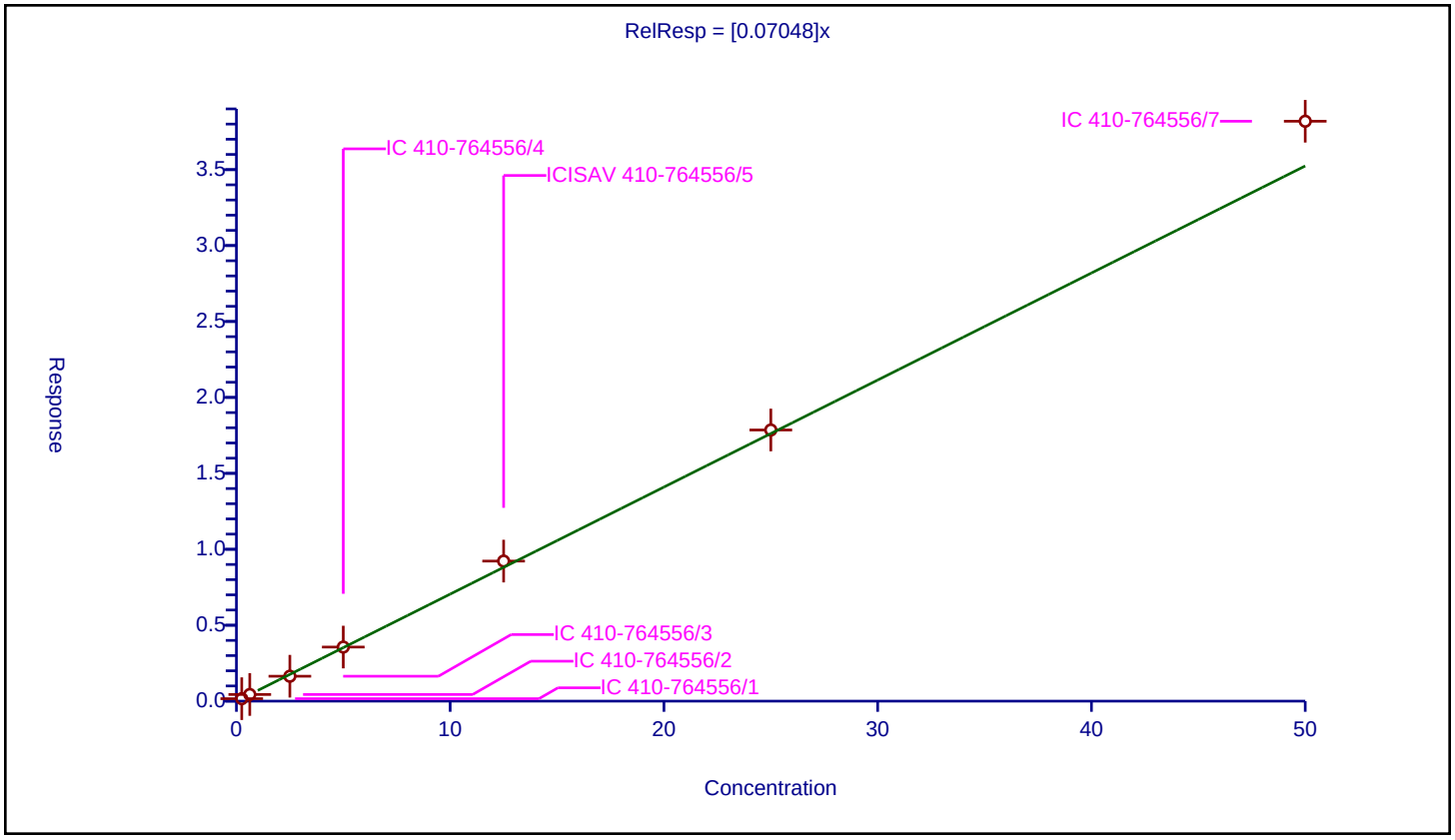
Curve Coefficients

Intercept:	0
Slope:	0.07048

Error Coefficients

Relative Standard Deviation:	5.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.25	0.016218	2.0	3521818.0	0.064873	Y
2	IC 410-764556/2	0.625	0.043819	2.0	3383840.0	0.07011	Y
3	IC 410-764556/3	2.5	0.163996	2.0	3409886.0	0.065598	Y
4	IC 410-764556/4	5.0	0.356083	2.0	3417973.0	0.071217	Y
5	ICISAV 410-764556/5	12.5	0.922264	2.0	3387343.0	0.073781	Y
6	IC 410-764556/6	25.0	1.785524	2.0	3449060.0	0.071421	Y
7	IC 410-764556/7	50.0	3.818583	2.0	3192496.0	0.076372	Y



Calibration / Perfluorohexanesulfonic acid

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

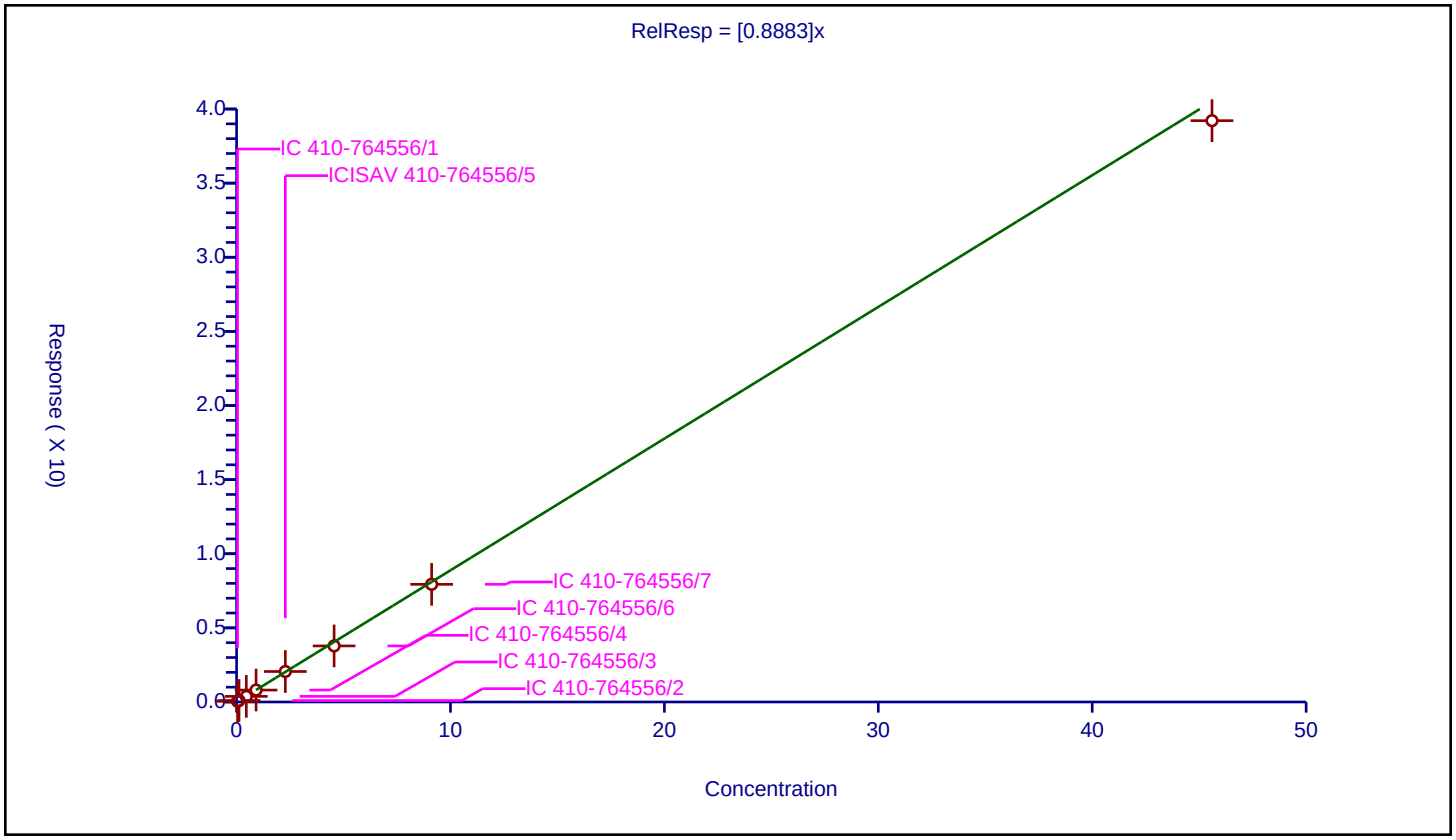
Curve Coefficients

Intercept:	0
Slope:	0.8883

Error Coefficients

Relative Standard Deviation:	8.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0456	0.048177	1.896	2084720.0	1.056506	Y
2	IC 410-764556/2	0.114	0.099856	1.896	2146864.0	0.875929	Y
3	IC 410-764556/3	0.456	0.378047	1.896	2119976.0	0.82905	Y
4	IC 410-764556/4	0.912	0.804693	1.896	2155662.0	0.882339	Y
5	ICISAV 410-764556/5	2.28	2.057641	1.896	2123659.0	0.902474	Y
6	IC 410-764556/6	4.56	3.78248	1.896	2105440.0	0.829491	Y
7	IC 410-764556/7	9.12	7.938021	1.896	1947126.0	0.870397	Y
8	IC 410-764556/8	45.6	39.213807	1.896	1621214.0	0.859952	Y



Calibration / Perfluorononanoic acid

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

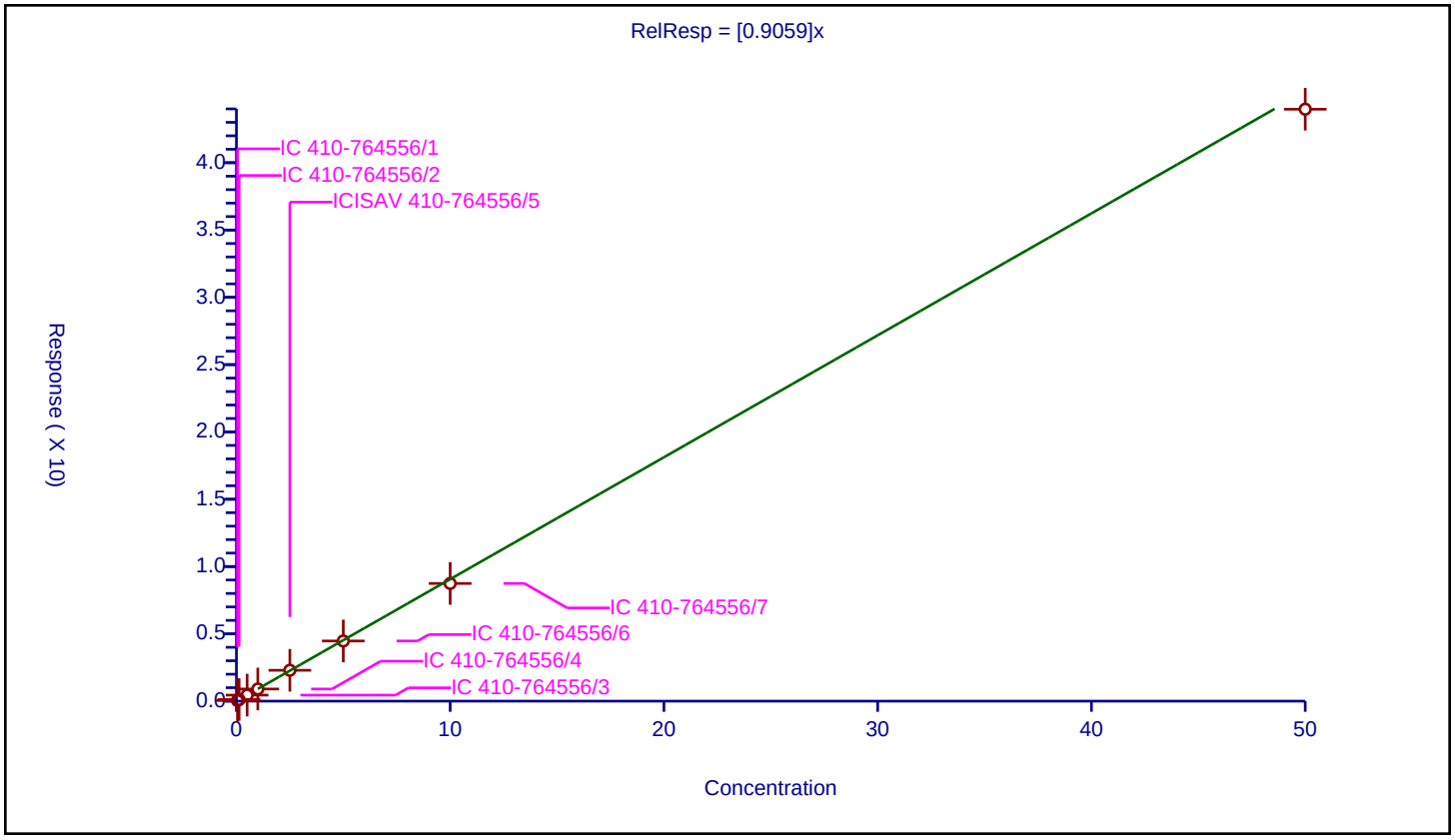
Curve Coefficients

Intercept:	0
Slope:	0.9059

Error Coefficients

Relative Standard Deviation:	2.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.047288	2.0	3448822.0	0.945761	Y
2	IC 410-764556/2	0.125	0.117362	2.0	3293182.0	0.9389	Y
3	IC 410-764556/3	0.5	0.448417	2.0	3239170.0	0.896833	Y
4	IC 410-764556/4	1.0	0.901294	2.0	3477073.0	0.901294	Y
5	ICISAV 410-764556/5	2.5	2.292693	2.0	3411148.0	0.917077	Y
6	IC 410-764556/6	5.0	4.468438	2.0	3491927.0	0.893688	Y
7	IC 410-764556/7	10.0	8.74383	2.0	3341544.0	0.874383	Y
8	IC 410-764556/8	50.0	43.976568	2.0	2781281.0	0.879531	Y



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

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

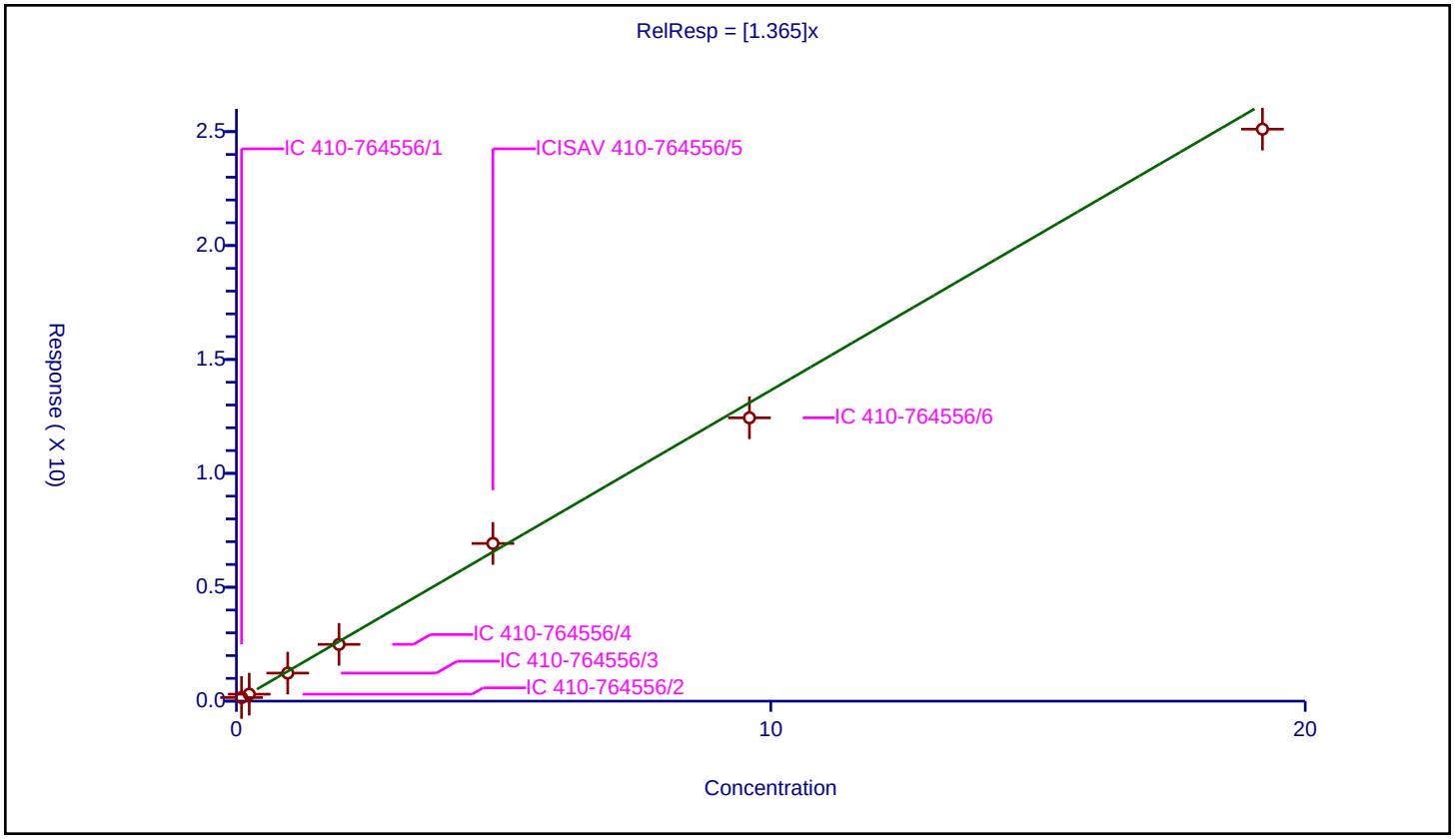
Curve Coefficients

Intercept:	0
Slope:	1.365

Error Coefficients

Relative Standard Deviation:	10.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.096	0.158604	4.8	893033.0	1.652123	Y
2	IC 410-764556/2	0.24	0.30559	4.8	951674.0	1.273293	Y
3	IC 410-764556/3	0.96	1.232078	4.8	930514.0	1.283414	Y
4	IC 410-764556/4	1.92	2.49228	4.8	954482.0	1.298063	Y
5	ICISAV 410-764556/5	4.8	6.922695	4.8	929267.0	1.442228	Y
6	IC 410-764556/6	9.6	12.437652	4.8	879675.0	1.295589	Y
7	IC 410-764556/7	19.2	25.109739	4.8	840271.0	1.307799	Y



Calibration / PFECHS

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

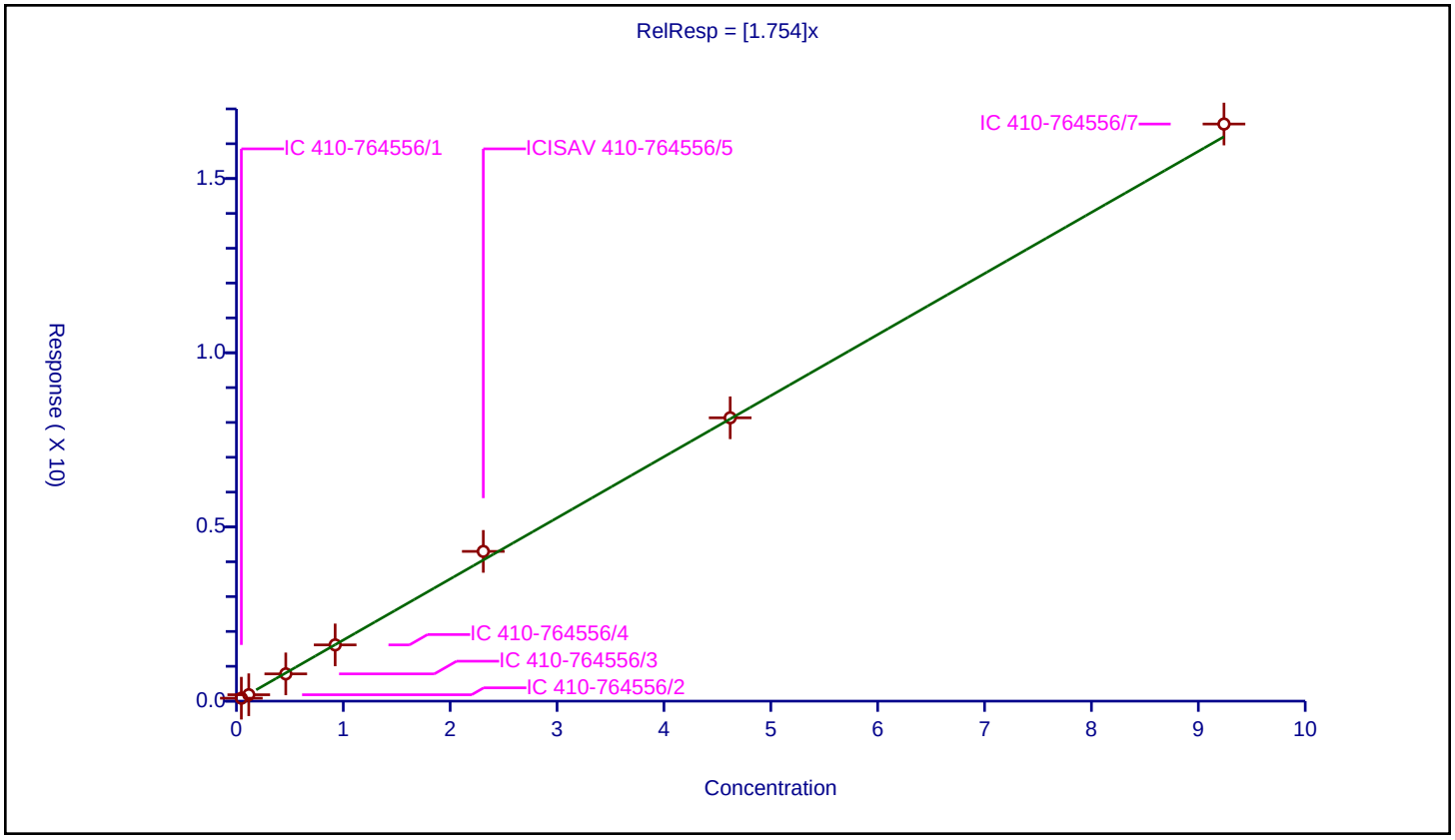
Curve Coefficients

Intercept:	0
Slope:	1.754

Error Coefficients

Relative Standard Deviation:	5.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0462	0.084452	1.896	2084720.0	1.827965	Y
2	IC 410-764556/2	0.1155	0.183837	1.896	2146864.0	1.591663	Y
3	IC 410-764556/3	0.462	0.782614	1.896	2119976.0	1.69397	Y
4	IC 410-764556/4	0.924	1.614154	1.896	2155662.0	1.746919	Y
5	ICISAV 410-764556/5	2.31	4.298372	1.896	2123659.0	1.860767	Y
6	IC 410-764556/6	4.62	8.133342	1.896	2105440.0	1.760464	Y
7	IC 410-764556/7	9.24	16.565564	1.896	1947126.0	1.79281	Y



Calibration / FHxSA

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

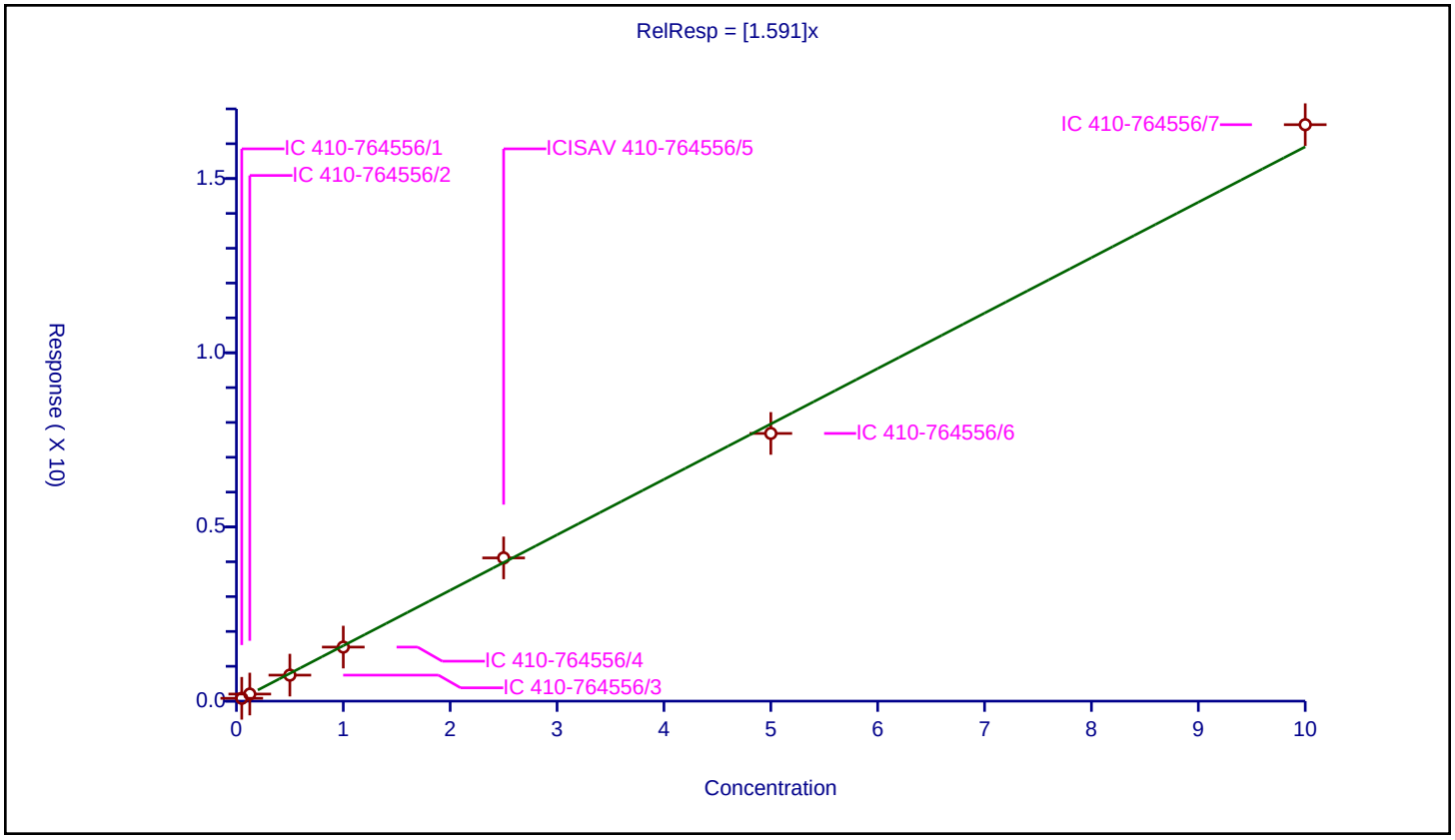
Curve Coefficients

Intercept:	0
Slope:	1.591

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.081451	1.896	2084720.0	1.629015	Y
2	IC 410-764556/2	0.125	0.203546	1.896	2146864.0	1.628371	Y
3	IC 410-764556/3	0.5	0.746674	1.896	2119976.0	1.493348	Y
4	IC 410-764556/4	1.0	1.551757	1.896	2155662.0	1.551757	Y
5	ICISAV 410-764556/5	2.5	4.111177	1.896	2123659.0	1.644471	Y
6	IC 410-764556/6	5.0	7.684287	1.896	2105440.0	1.536857	Y
7	IC 410-764556/7	10.0	16.546955	1.896	1947126.0	1.654696	Y



Calibration / Perfluoroheptanesulfonic acid

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

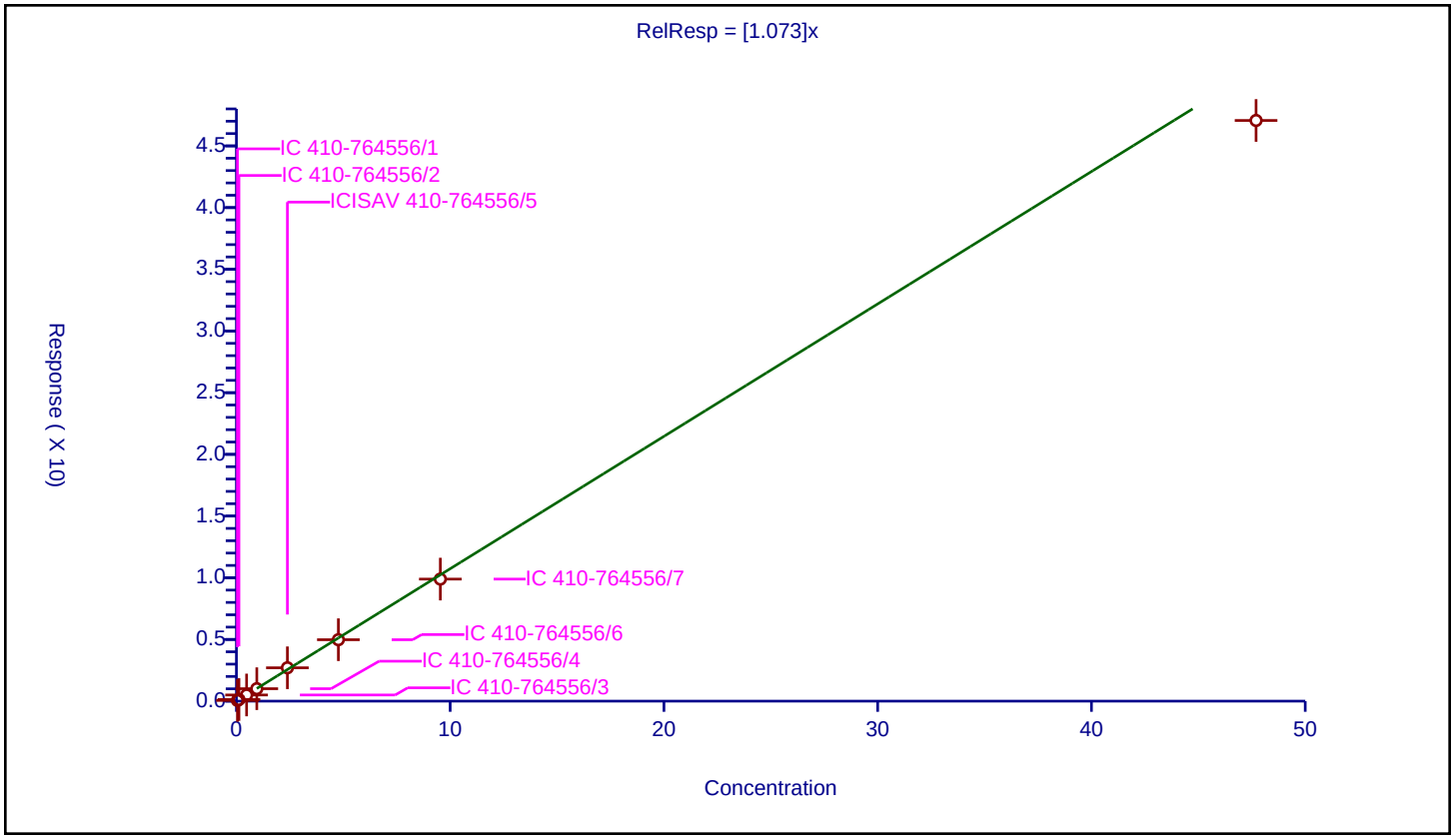
Curve Coefficients

Intercept:	0
Slope:	1.073

Error Coefficients

Relative Standard Deviation:	5.6

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0477	0.056124	1.916	2124710.0	1.176612	Y
2	IC 410-764556/2	0.11925	0.1313	1.916	2175112.0	1.101045	Y
3	IC 410-764556/3	0.477	0.49985	1.916	2176934.0	1.047904	Y
4	IC 410-764556/4	0.954	1.009244	1.916	2188935.0	1.057908	Y
5	ICISAV 410-764556/5	2.385	2.703398	1.916	2120134.0	1.1335	Y
6	IC 410-764556/6	4.77	4.978451	1.916	2114928.0	1.0437	Y
7	IC 410-764556/7	9.54	9.892529	1.916	1977566.0	1.036953	Y
8	IC 410-764556/8	47.7	47.061824	1.916	1644351.0	0.986621	Y



Calibration / N-methylperfluorooctanesulfonamidoacetic acid

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

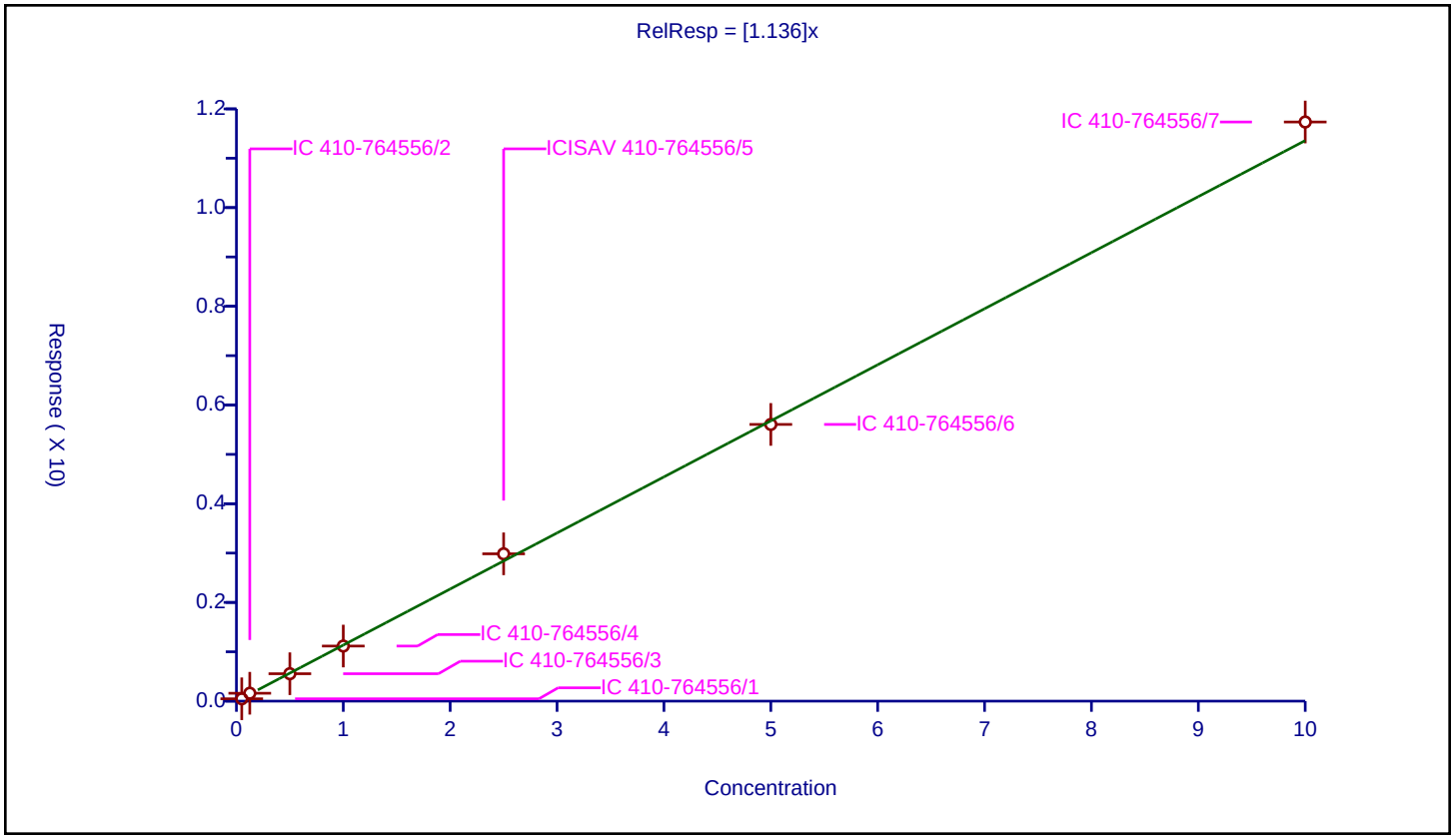
Curve Coefficients

Intercept:	0
Slope:	1.136

Error Coefficients

Relative Standard Deviation:	8.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.047671	5.0	1326795.0	0.953425	Y
2	IC 410-764556/2	0.125	0.160081	5.0	1298653.0	1.28065	Y
3	IC 410-764556/3	0.5	0.555832	5.0	1315335.0	1.111664	Y
4	IC 410-764556/4	1.0	1.116508	5.0	1373837.0	1.116508	Y
5	ICISAV 410-764556/5	2.5	2.984846	5.0	1362633.0	1.193938	Y
6	IC 410-764556/6	5.0	5.606847	5.0	1365788.0	1.121369	Y
7	IC 410-764556/7	10.0	11.734507	5.0	1265512.0	1.173451	Y



Calibration / Perfluorodecanoic acid

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

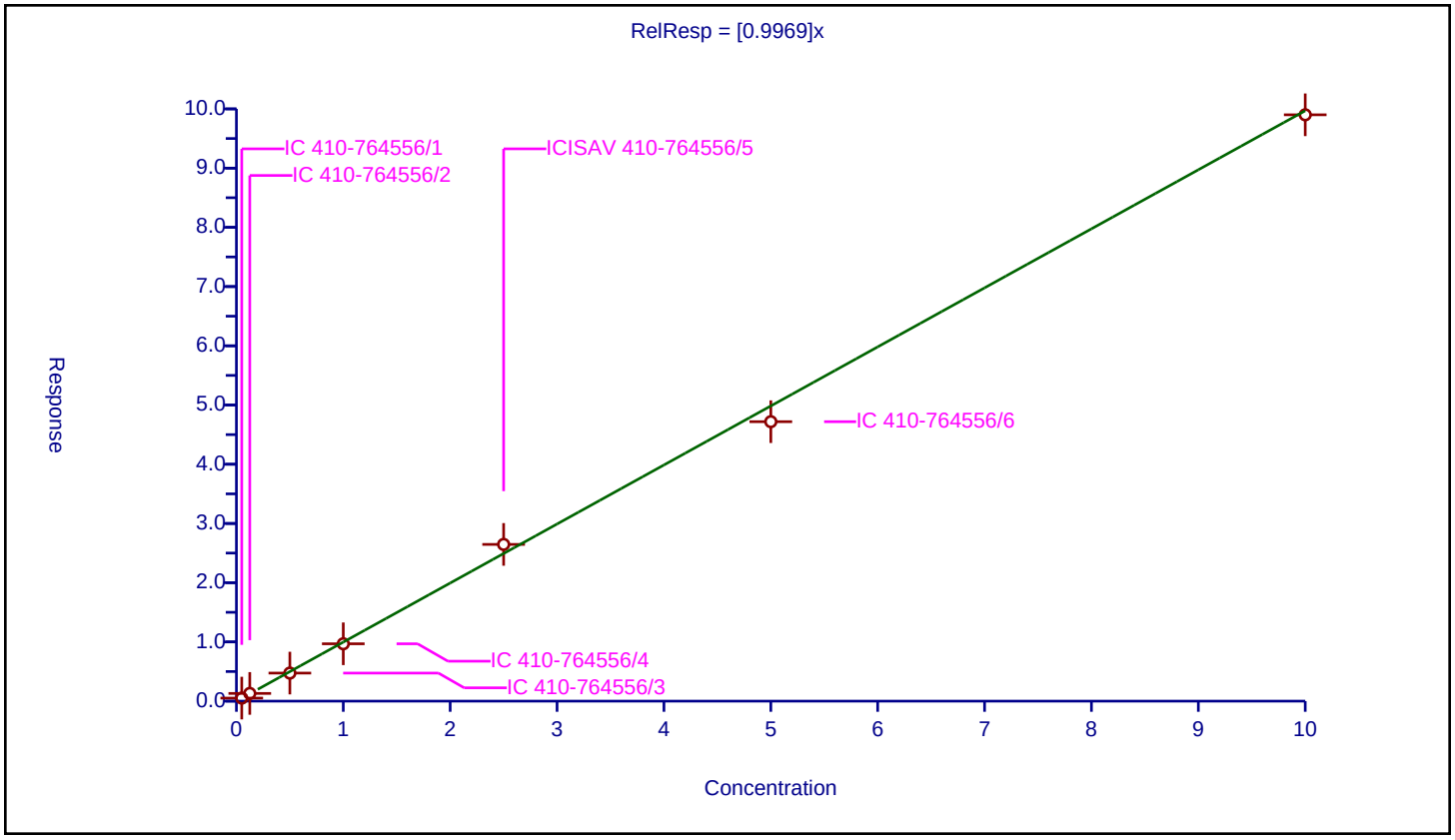
Curve Coefficients

Intercept:	0
Slope:	0.9969

Error Coefficients

Relative Standard Deviation:	4.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.051364	2.0	3487233.0	1.027279	Y
2	IC 410-764556/2	0.125	0.130354	2.0	3489794.0	1.042835	Y
3	IC 410-764556/3	0.5	0.473784	2.0	3516485.0	0.947568	Y
4	IC 410-764556/4	1.0	0.968264	2.0	3653105.0	0.968264	Y
5	ICISAV 410-764556/5	2.5	2.646139	2.0	3611812.0	1.058456	Y
6	IC 410-764556/6	5.0	4.718491	2.0	3588002.0	0.943698	Y
7	IC 410-764556/7	10.0	9.900046	2.0	3266695.0	0.990005	Y



Calibration / N-ethylperfluorooctanesulfonamidoacetic acid

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

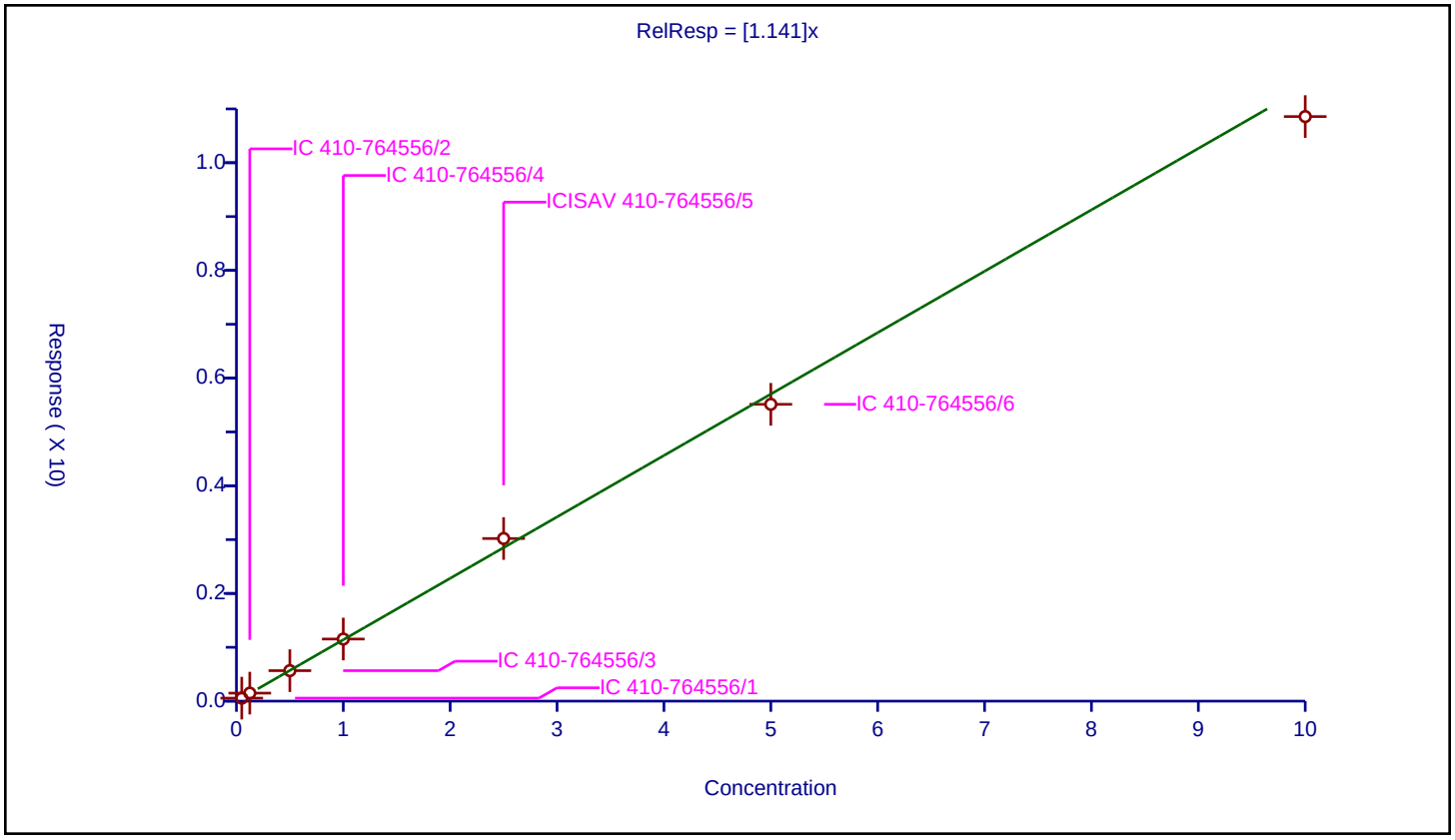
Curve Coefficients

Intercept:	0
Slope:	1.141

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.055606	5.0	1643529.0	1.112119	Y
2	IC 410-764556/2	0.125	0.148674	5.0	1672312.0	1.189395	Y
3	IC 410-764556/3	0.5	0.566387	5.0	1675737.0	1.132773	Y
4	IC 410-764556/4	1.0	1.153403	5.0	1708388.0	1.153403	Y
5	ICISAV 410-764556/5	2.5	3.020105	5.0	1680203.0	1.208042	Y
6	IC 410-764556/6	5.0	5.513094	5.0	1672462.0	1.102619	Y
7	IC 410-764556/7	10.0	10.857512	5.0	1666064.0	1.085751	Y



Calibration / Perfluorooctanesulfonic acid

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

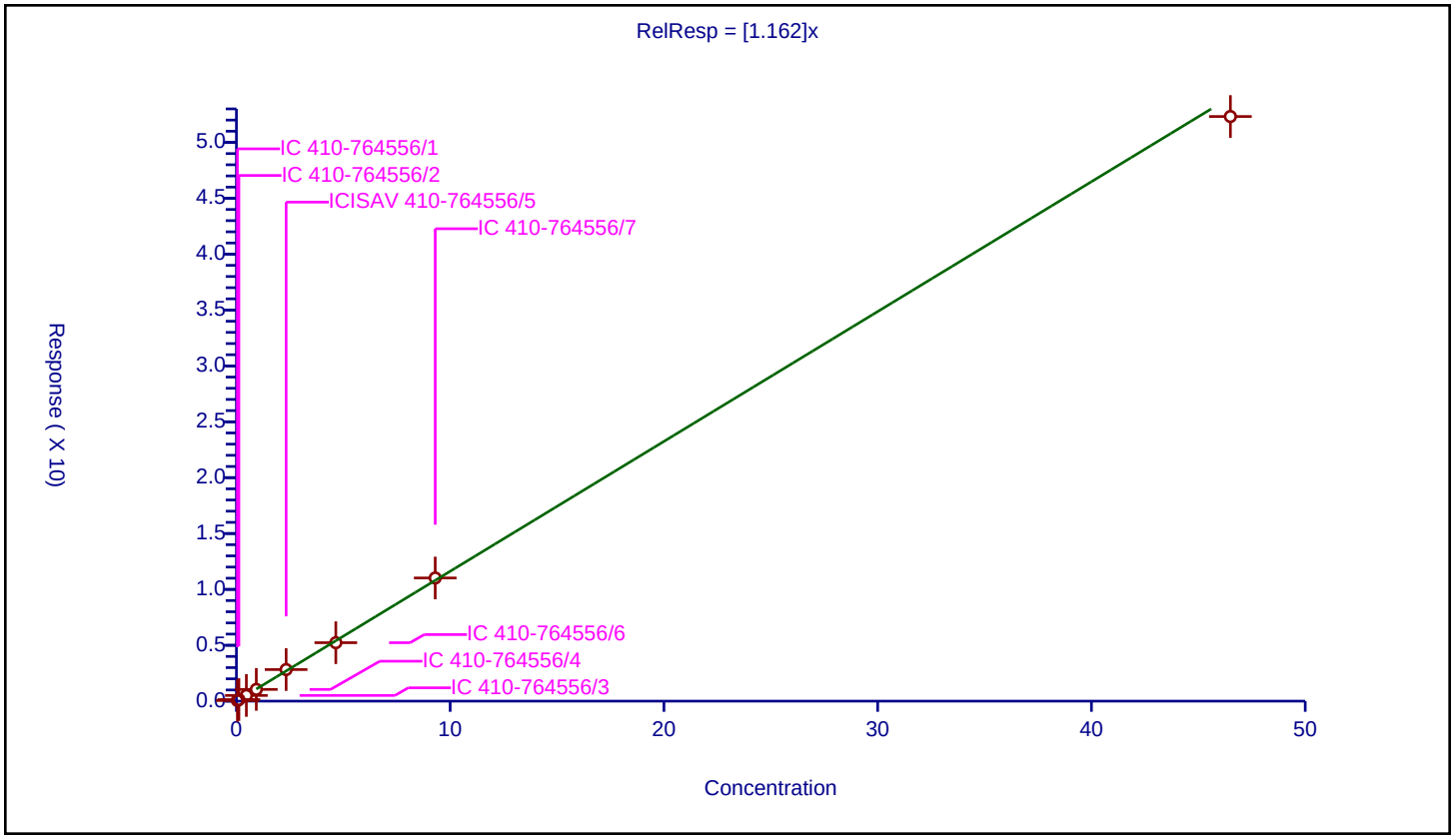
Curve Coefficients

Intercept:	0
Slope:	1.162

Error Coefficients

Relative Standard Deviation:	4.2

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0465	0.056664	1.916	2124710.0	1.218573	Y
2	IC 410-764556/2	0.11625	0.139974	1.916	2175112.0	1.204074	Y
3	IC 410-764556/3	0.465	0.509672	1.916	2176934.0	1.09607	Y
4	IC 410-764556/4	0.93	1.049237	1.916	2188935.0	1.128212	Y
5	ICISAV 410-764556/5	2.325	2.825415	1.916	2120134.0	1.215232	Y
6	IC 410-764556/6	4.65	5.230402	1.916	2114928.0	1.124818	Y
7	IC 410-764556/7	9.3	11.022939	1.916	1977566.0	1.185262	Y
8	IC 410-764556/8	46.5	52.317905	1.916	1644351.0	1.125116	Y



Calibration / Perfluoroundecanoic acid

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

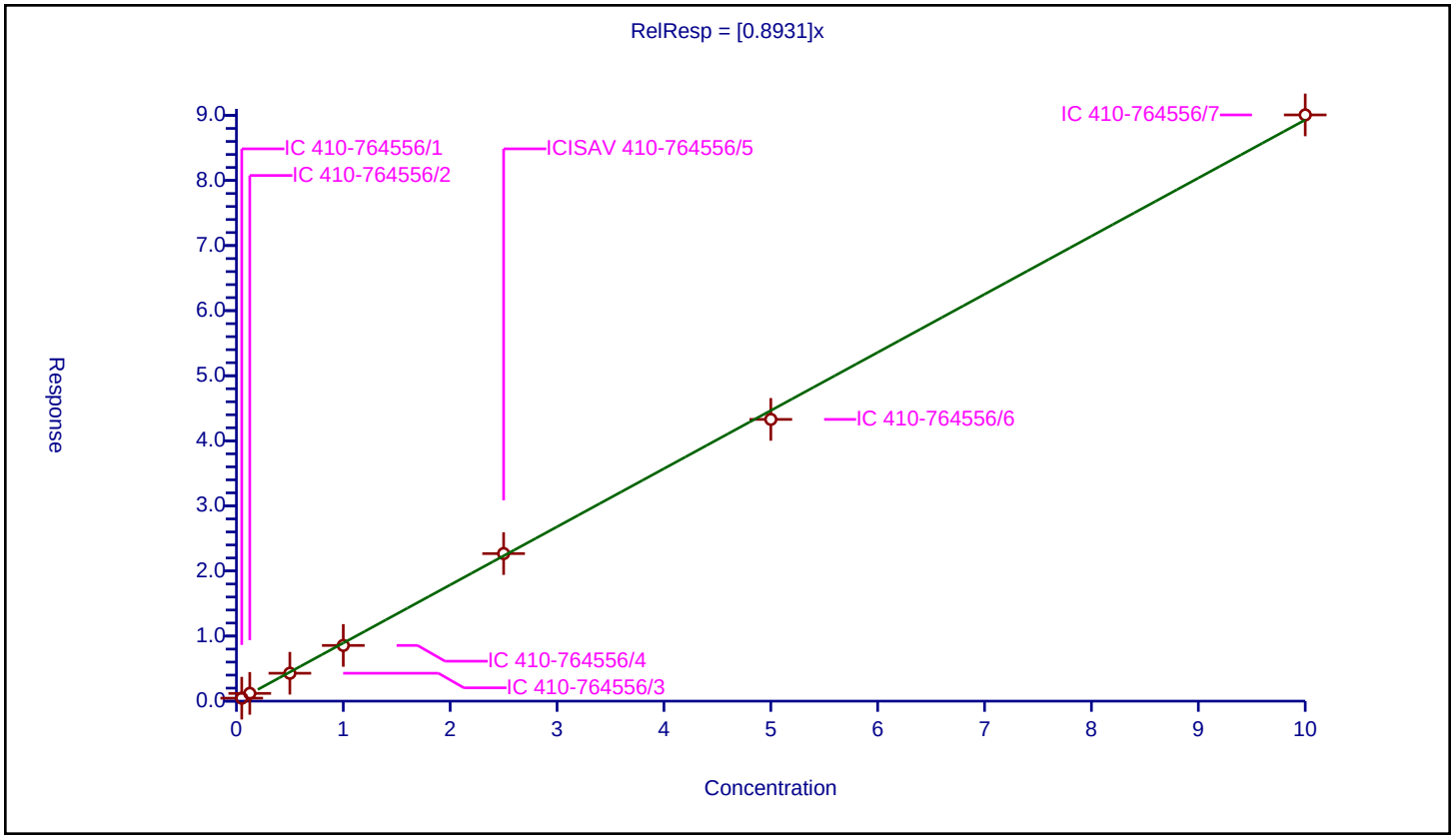
Curve Coefficients

Intercept:	0
Slope:	0.8931

Error Coefficients

Relative Standard Deviation:	4.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.045586	2.0	3598805.0	0.911714	Y
2	IC 410-764556/2	0.125	0.119183	2.0	3523165.0	0.953465	Y
3	IC 410-764556/3	0.5	0.428555	2.0	3494584.0	0.857109	Y
4	IC 410-764556/4	1.0	0.855848	2.0	3594207.0	0.855848	Y
5	ICISAV 410-764556/5	2.5	2.26721	2.0	3592995.0	0.906884	Y
6	IC 410-764556/6	5.0	4.329187	2.0	3493112.0	0.865837	Y
7	IC 410-764556/7	10.0	9.007401	2.0	3241872.0	0.90074	Y



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

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

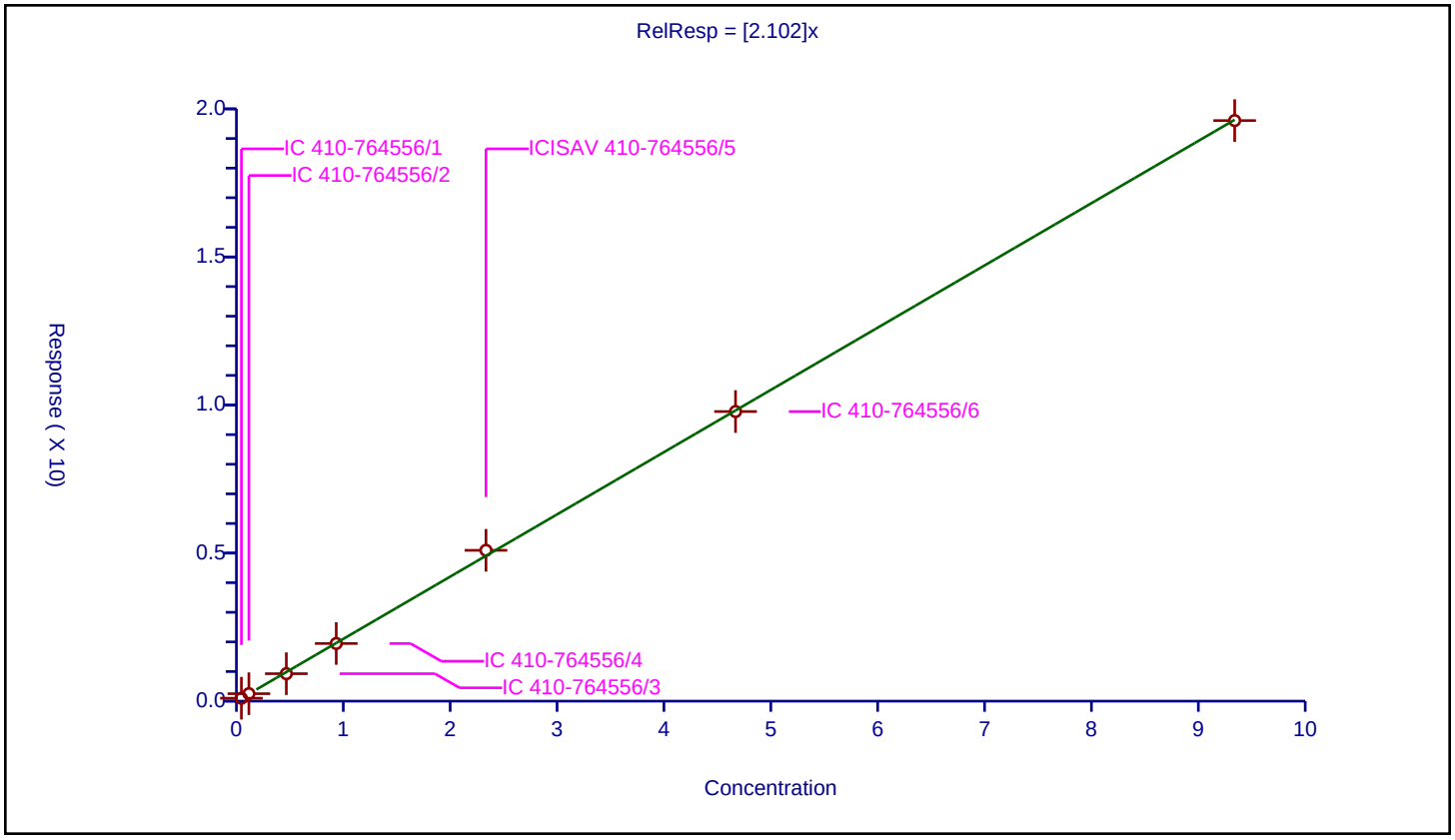
Curve Coefficients

Intercept:	0
Slope:	2.102

Error Coefficients

Relative Standard Deviation:	3.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0467	0.098837	1.916	2124710.0	2.116418	Y
2	IC 410-764556/2	0.11675	0.251498	1.916	2175112.0	2.154162	Y
3	IC 410-764556/3	0.467	0.926503	1.916	2176934.0	1.983947	Y
4	IC 410-764556/4	0.934	1.947013	1.916	2188935.0	2.084597	Y
5	ICISAV 410-764556/5	2.335	5.093073	1.916	2120134.0	2.181188	Y
6	IC 410-764556/6	4.67	9.779822	1.916	2114928.0	2.09418	Y
7	IC 410-764556/7	9.34	19.605139	1.916	1977566.0	2.099051	Y



Calibration / Perfluorononanesulfonic acid

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

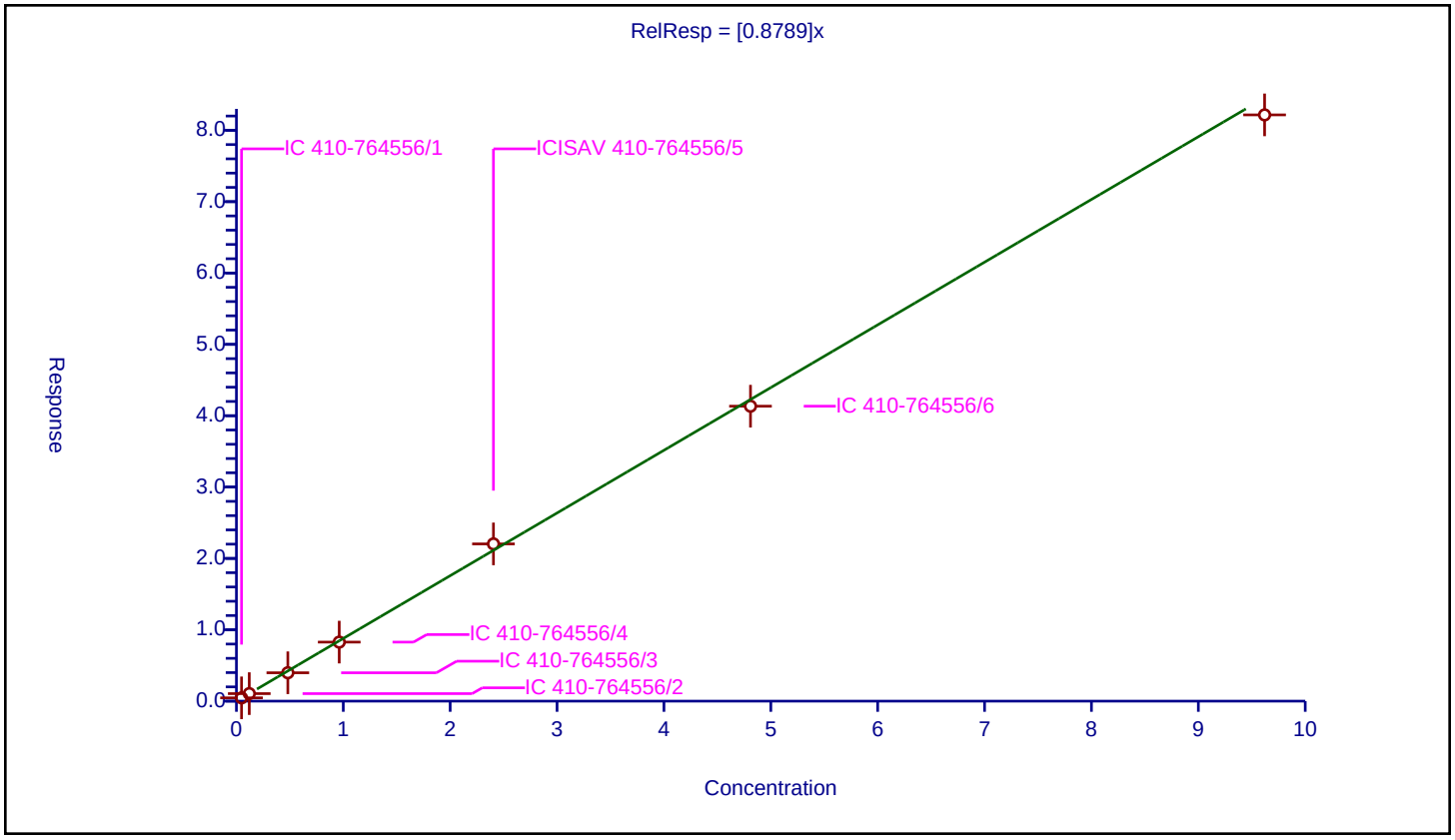
Curve Coefficients

Intercept:	0
Slope:	0.8789

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0481	0.046045	1.916	2124710.0	0.957282	Y
2	IC 410-764556/2	0.12025	0.105551	1.916	2175112.0	0.877761	Y
3	IC 410-764556/3	0.481	0.397889	1.916	2176934.0	0.827212	Y
4	IC 410-764556/4	0.962	0.827269	1.916	2188935.0	0.859947	Y
5	ICISAV 410-764556/5	2.405	2.203667	1.916	2120134.0	0.916285	Y
6	IC 410-764556/6	4.81	4.133822	1.916	2114928.0	0.859423	Y
7	IC 410-764556/7	9.62	8.215912	1.916	1977566.0	0.854045	Y



Calibration / Perfluorododecanoic acid

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

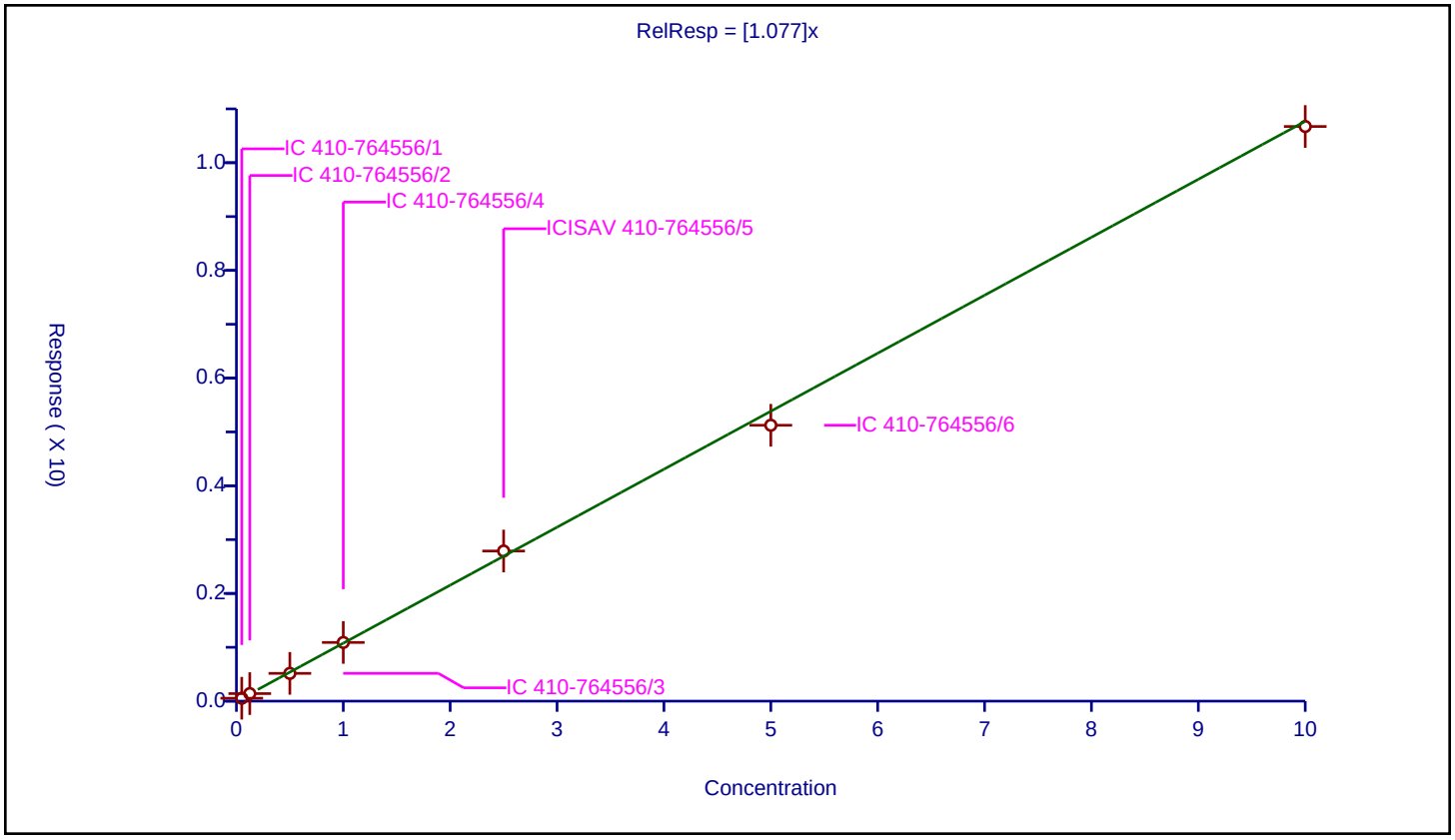
Curve Coefficients

Intercept:	0
Slope:	1.077

Error Coefficients

Relative Standard Deviation:	3.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.054365	2.0	3334069.0	1.087308	Y
2	IC 410-764556/2	0.125	0.140317	2.0	3337451.0	1.122538	Y
3	IC 410-764556/3	0.5	0.515663	2.0	3369863.0	1.031326	Y
4	IC 410-764556/4	1.0	1.089823	2.0	3362788.0	1.089823	Y
5	ICISAV 410-764556/5	2.5	2.78813	2.0	3355712.0	1.115252	Y
6	IC 410-764556/6	5.0	5.124207	2.0	3413285.0	1.024841	Y
7	IC 410-764556/7	10.0	10.67308	2.0	3061885.0	1.067308	Y



Calibration / Perfluorooctanesulfonamide

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

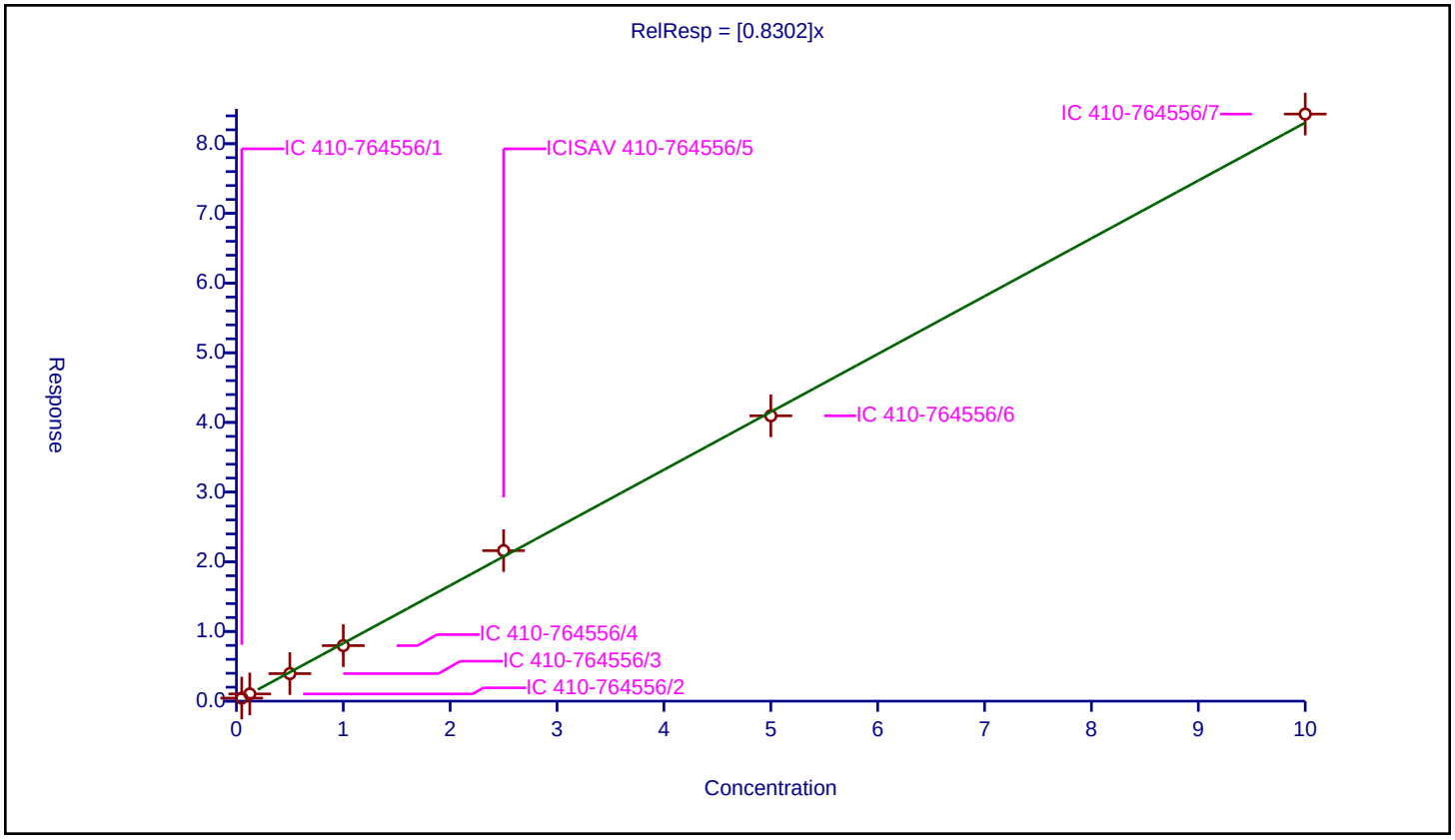
Curve Coefficients

Intercept:	0
Slope:	0.8302

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.043601	2.0	2176631.0	0.872027	Y
2	IC 410-764556/2	0.125	0.103369	2.0	2273126.0	0.826949	Y
3	IC 410-764556/3	0.5	0.39495	2.0	2227311.0	0.7899	Y
4	IC 410-764556/4	1.0	0.796821	2.0	2280300.0	0.796821	Y
5	ICISAV 410-764556/5	2.5	2.159801	2.0	2170696.0	0.863921	Y
6	IC 410-764556/6	5.0	4.095255	2.0	2167746.0	0.819051	Y
7	IC 410-764556/7	10.0	8.425898	2.0	2217951.0	0.84259	Y



Calibration / Perfluorodecanesulfonic acid

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

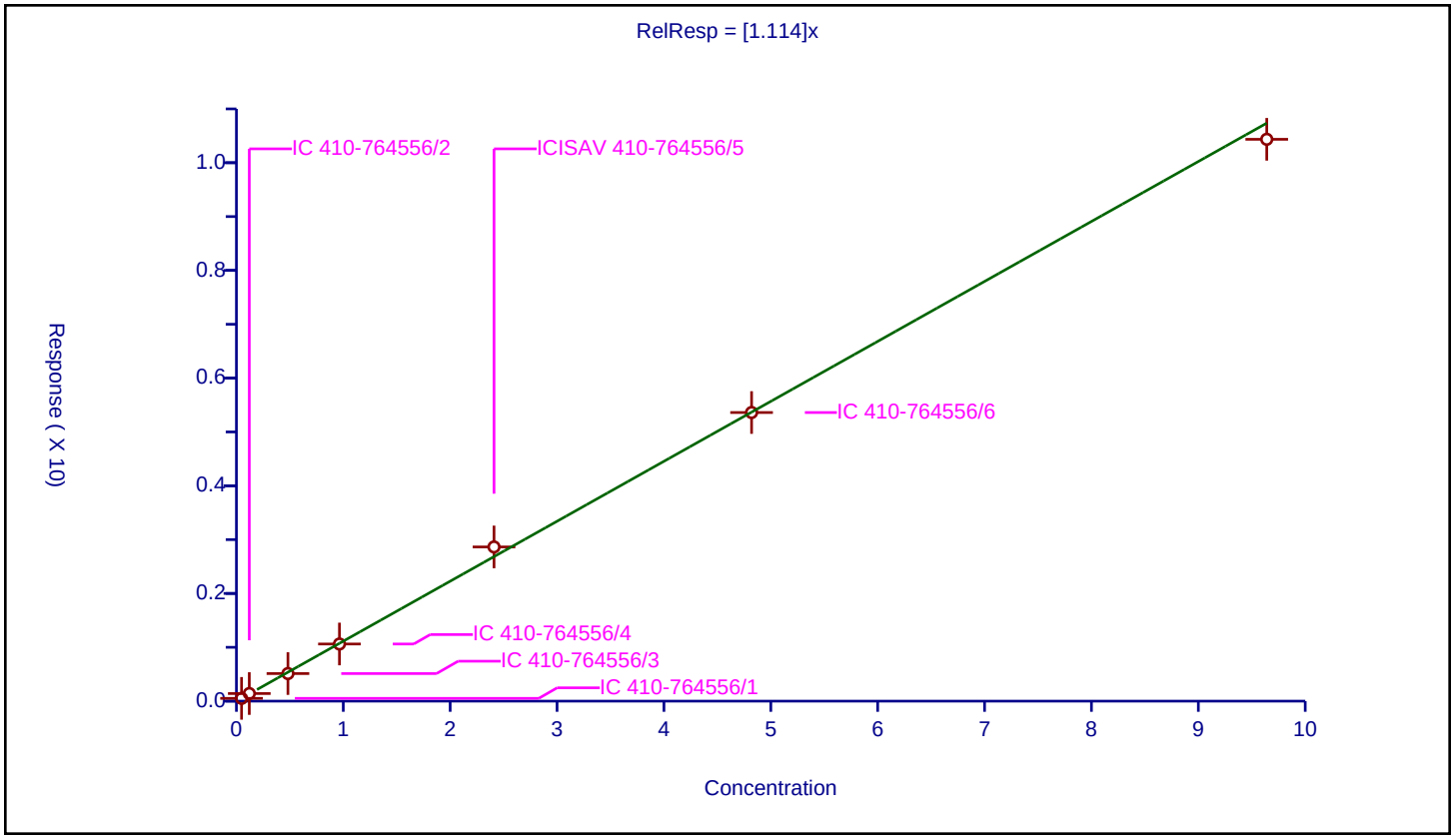
Curve Coefficients

Intercept:	0
Slope:	1.114

Error Coefficients

Relative Standard Deviation:	4.4

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0482	0.051837	1.916	2124710.0	1.075464	Y
2	IC 410-764556/2	0.1205	0.141356	1.916	2175112.0	1.173076	Y
3	IC 410-764556/3	0.482	0.512324	1.916	2176934.0	1.062913	Y
4	IC 410-764556/4	0.964	1.061248	1.916	2188935.0	1.100879	Y
5	ICISAV 410-764556/5	2.41	2.864173	1.916	2120134.0	1.188454	Y
6	IC 410-764556/6	4.82	5.360469	1.916	2114928.0	1.112131	Y
7	IC 410-764556/7	9.64	10.435249	1.916	1977566.0	1.082495	Y



Calibration / Perfluorotridecanoic acid

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

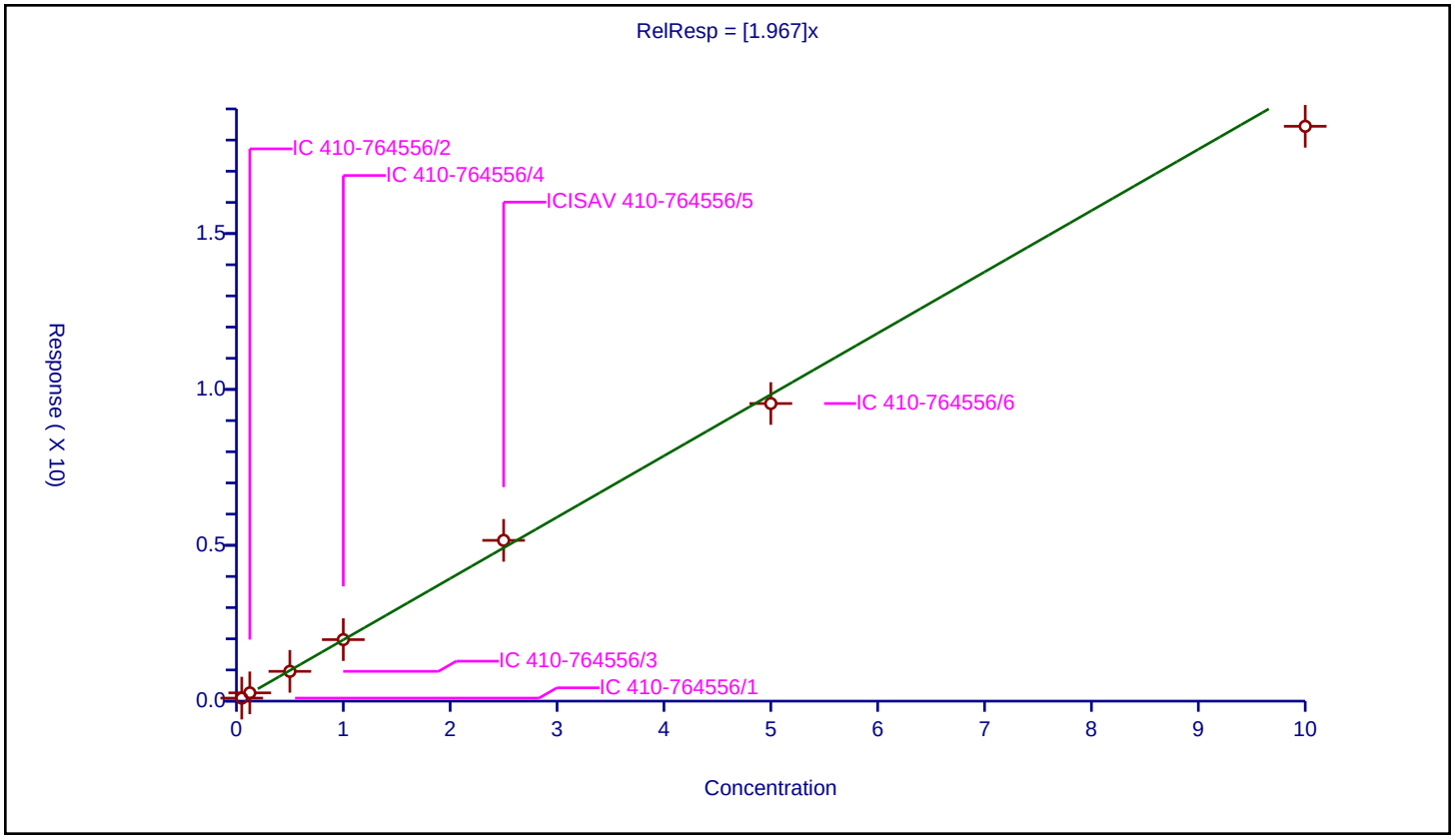
Curve Coefficients

Intercept:	0
Slope:	1.967

Error Coefficients

Relative Standard Deviation:	4.9

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.097123	2.0	2004319.0	1.942465	Y
2	IC 410-764556/2	0.125	0.265546	2.0	1914175.0	2.12437	Y
3	IC 410-764556/3	0.5	0.95585	2.0	2001140.0	1.9117	Y
4	IC 410-764556/4	1.0	1.973225	2.0	2037964.0	1.973225	Y
5	ICISAV 410-764556/5	2.5	5.158128	2.0	2042629.0	2.063251	Y
6	IC 410-764556/6	5.0	9.548111	2.0	2031559.0	1.909622	Y
7	IC 410-764556/7	10.0	18.442369	2.0	1923101.0	1.844237	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

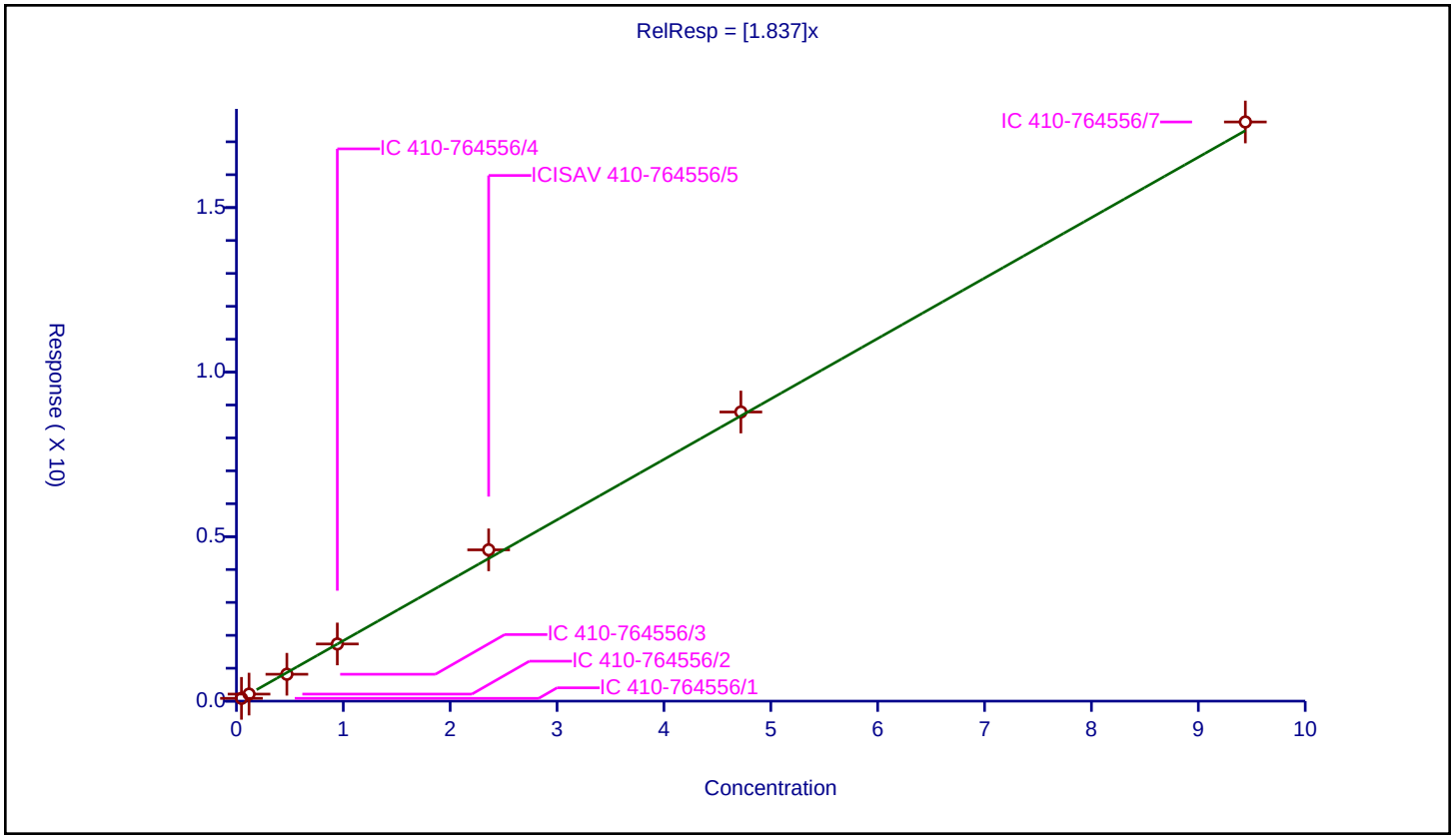
Curve Coefficients

Intercept:	0
Slope:	1.837

Error Coefficients

Relative Standard Deviation:	3.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0472	0.084843	1.916	2124710.0	1.797522	Y
2	IC 410-764556/2	0.118	0.214117	1.916	2175112.0	1.814549	Y
3	IC 410-764556/3	0.472	0.816871	1.916	2176934.0	1.730659	Y
4	IC 410-764556/4	0.944	1.737377	1.916	2188935.0	1.840442	Y
5	ICISAV 410-764556/5	2.36	4.598108	1.916	2120134.0	1.948351	Y
6	IC 410-764556/6	4.72	8.787428	1.916	2114928.0	1.861743	Y
7	IC 410-764556/7	9.44	17.602554	1.916	1977566.0	1.864677	Y



Calibration / Perfluorotetradecanoic acid

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

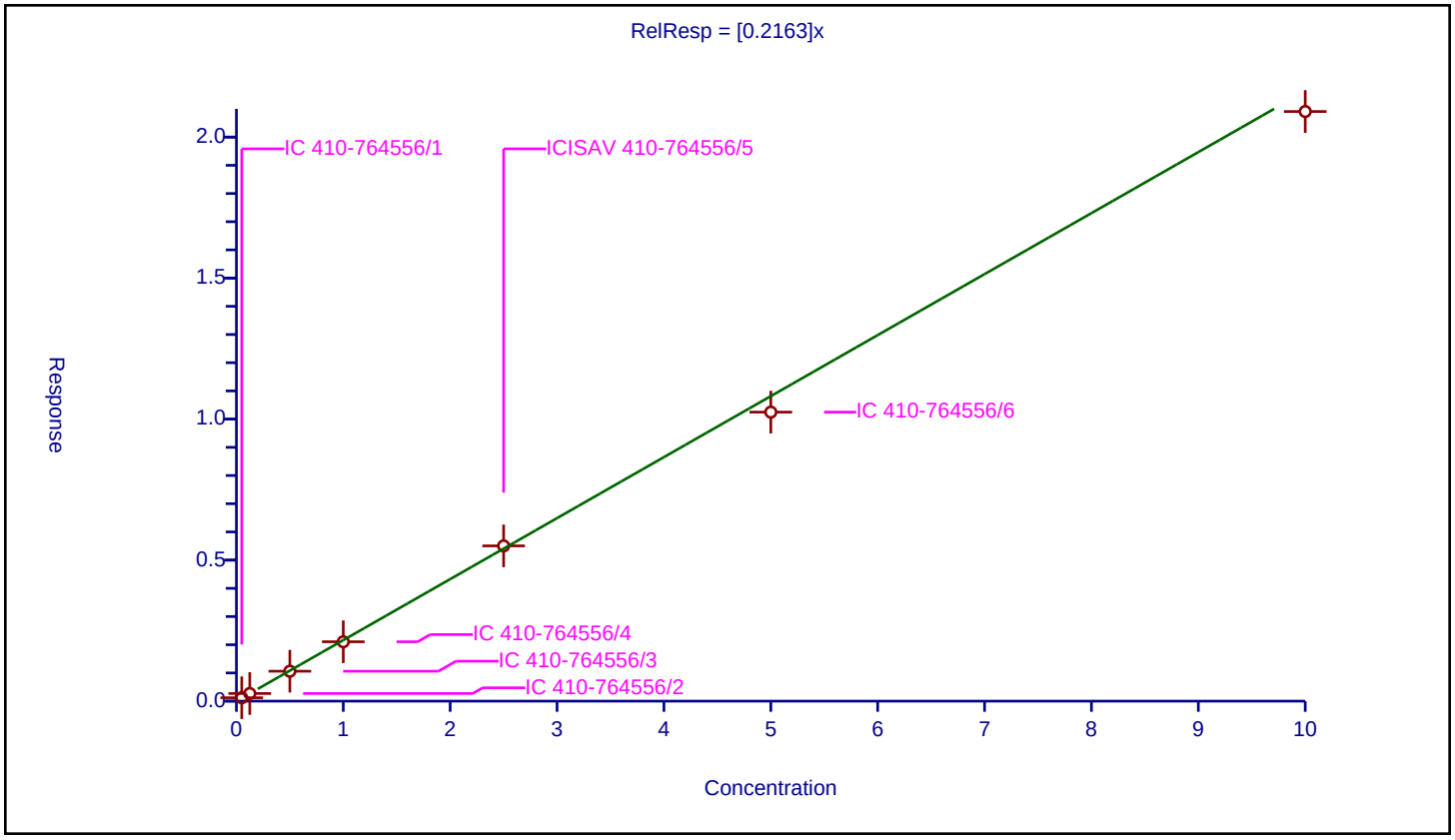
Curve Coefficients

Intercept:	0
Slope:	0.2163

Error Coefficients

Relative Standard Deviation:	5.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.012044	2.0	2004319.0	0.24088	Y
2	IC 410-764556/2	0.125	0.027021	2.0	1914175.0	0.216164	Y
3	IC 410-764556/3	0.5	0.106113	2.0	2001140.0	0.212225	Y
4	IC 410-764556/4	1.0	0.210585	2.0	2037964.0	0.210585	Y
5	ICISAV 410-764556/5	2.5	0.55053	2.0	2042629.0	0.220212	Y
6	IC 410-764556/6	5.0	1.024792	2.0	2031559.0	0.204958	Y
7	IC 410-764556/7	10.0	2.090676	2.0	1923101.0	0.209068	Y



Calibration / Perfluorododecanesulfonic acid (PFDoS)

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

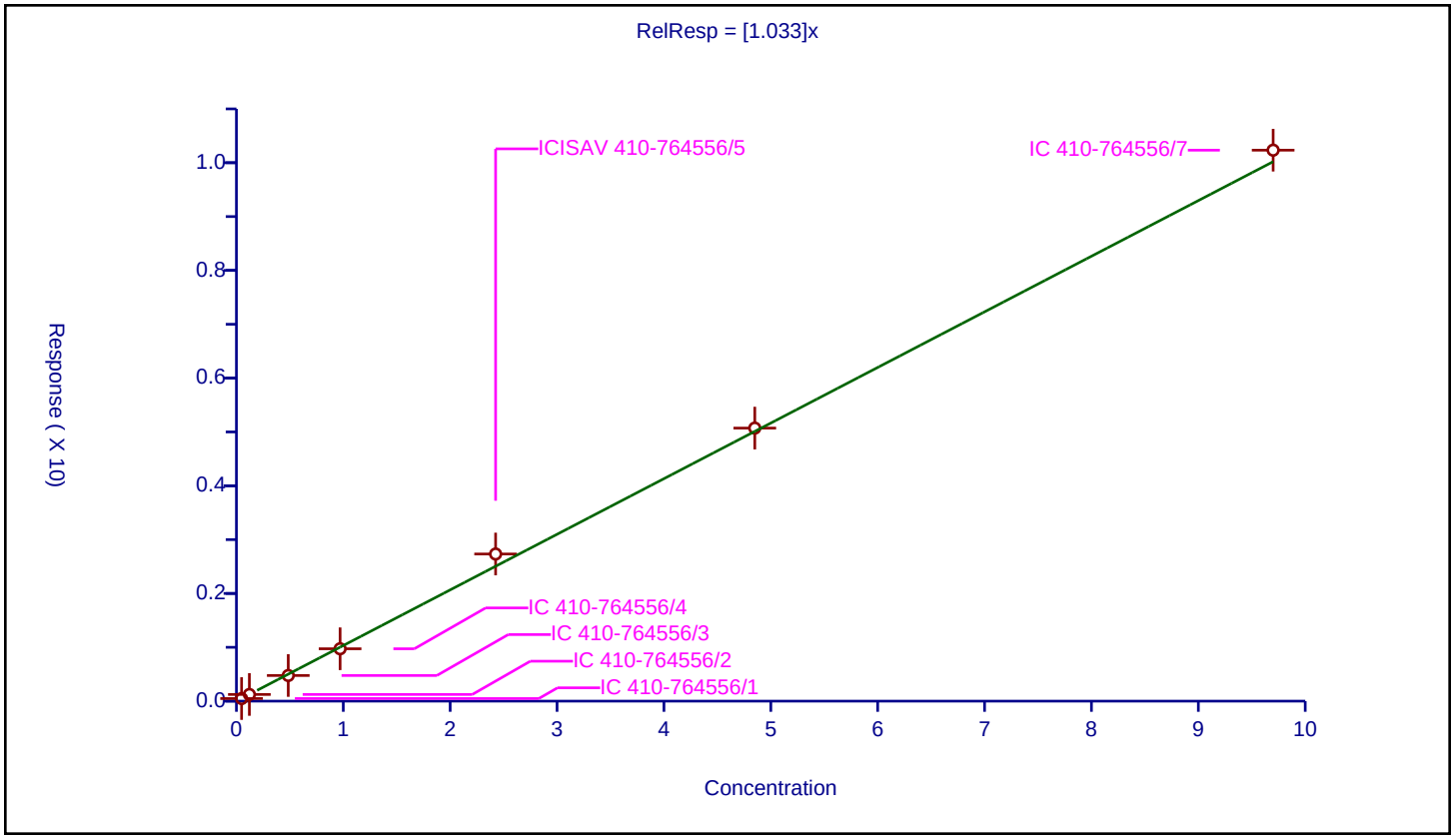
Curve Coefficients

Intercept:	0
Slope:	1.033

Error Coefficients

Relative Standard Deviation:	4.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.0485	0.048375	1.916	2124710.0	0.997432	Y
2	IC 410-764556/2	0.12125	0.123861	1.916	2175112.0	1.021531	Y
3	IC 410-764556/3	0.485	0.476019	1.916	2176934.0	0.981483	Y
4	IC 410-764556/4	0.97	0.972588	1.916	2188935.0	1.002668	Y
5	ICISAV 410-764556/5	2.425	2.732708	1.916	2120134.0	1.12689	Y
6	IC 410-764556/6	4.85	5.071313	1.916	2114928.0	1.045632	Y
7	IC 410-764556/7	9.7	10.233315	1.916	1977566.0	1.054981	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

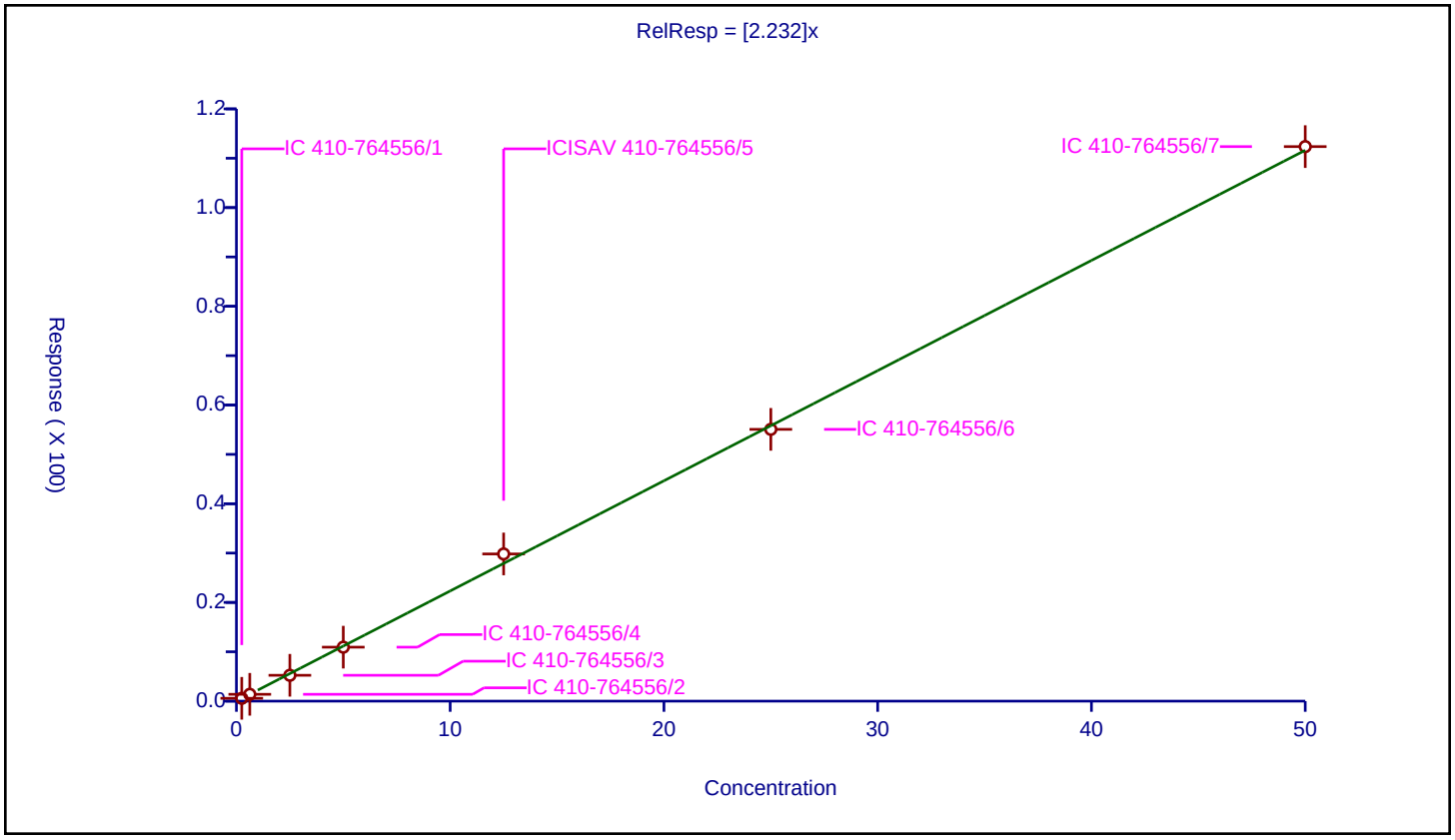
Curve Coefficients

Intercept:	0
Slope:	2.232

Error Coefficients

Relative Standard Deviation:	4.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.25	0.57273	5.0	1406351.0	2.290922	Y
2	IC 410-764556/2	0.625	1.385371	5.0	1444350.0	2.216593	Y
3	IC 410-764556/3	2.5	5.239499	5.0	1407753.0	2.095799	Y
4	IC 410-764556/4	5.0	10.934904	5.0	1434773.0	2.186981	Y
5	ICISAV 410-764556/5	12.5	29.824182	5.0	1375399.0	2.385935	Y
6	IC 410-764556/6	25.0	55.067205	5.0	1422442.0	2.202688	Y
7	IC 410-764556/7	50.0	112.358674	5.0	1414352.0	2.247173	Y



Calibration / NMeFOSA

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

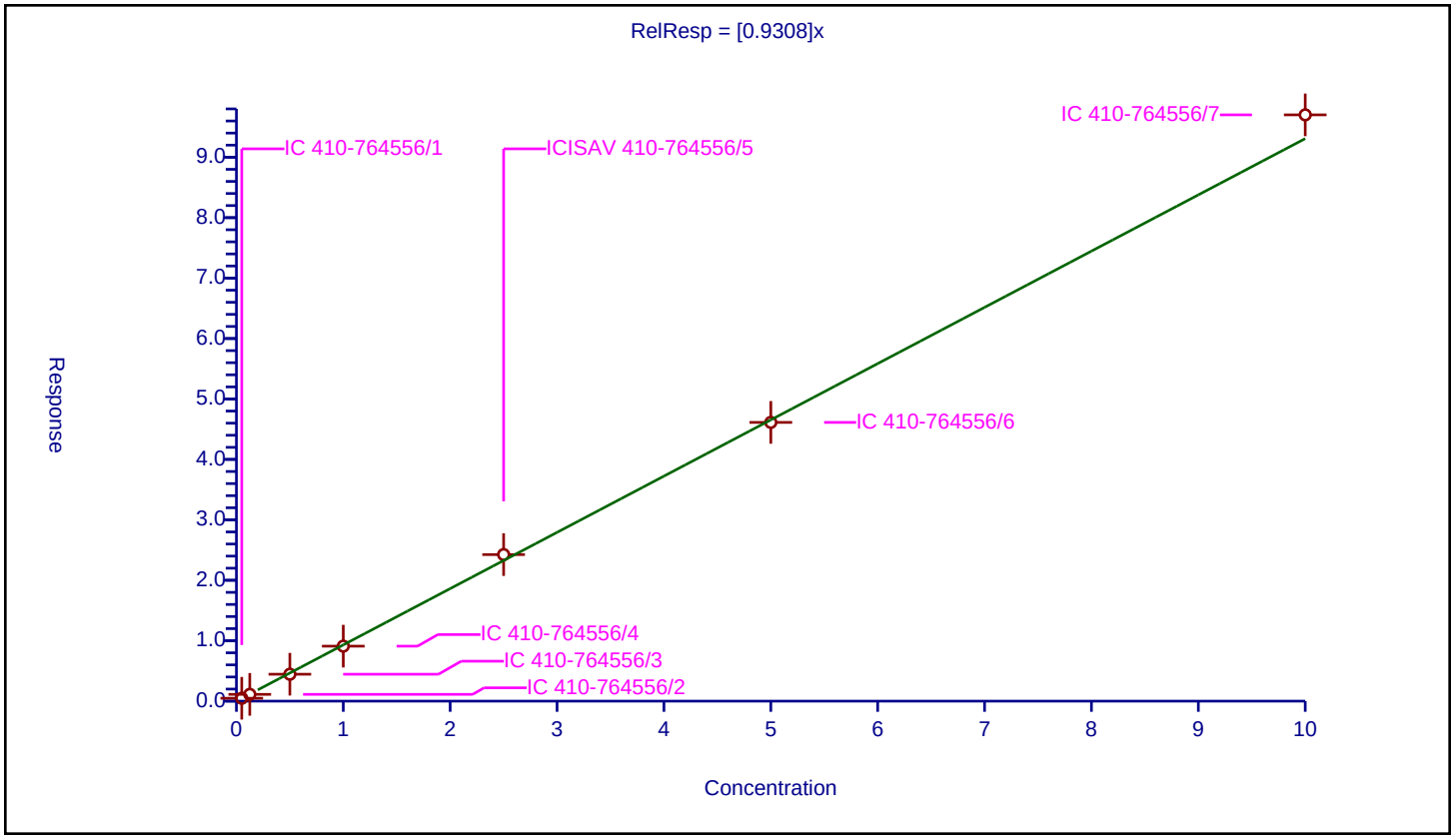
Curve Coefficients

Intercept:	0
Slope:	0.9308

Error Coefficients

Relative Standard Deviation:	3.7

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.047819	2.0	550622.0	0.956373	Y
2	IC 410-764556/2	0.125	0.112083	2.0	571311.0	0.89666	Y
3	IC 410-764556/3	0.5	0.445139	2.0	557561.0	0.890277	Y
4	IC 410-764556/4	1.0	0.909677	2.0	568694.0	0.909677	Y
5	ICISAV 410-764556/5	2.5	2.425112	2.0	548015.0	0.970045	Y
6	IC 410-764556/6	5.0	4.612274	2.0	550094.0	0.922455	Y
7	IC 410-764556/7	10.0	9.701278	2.0	534076.0	0.970128	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

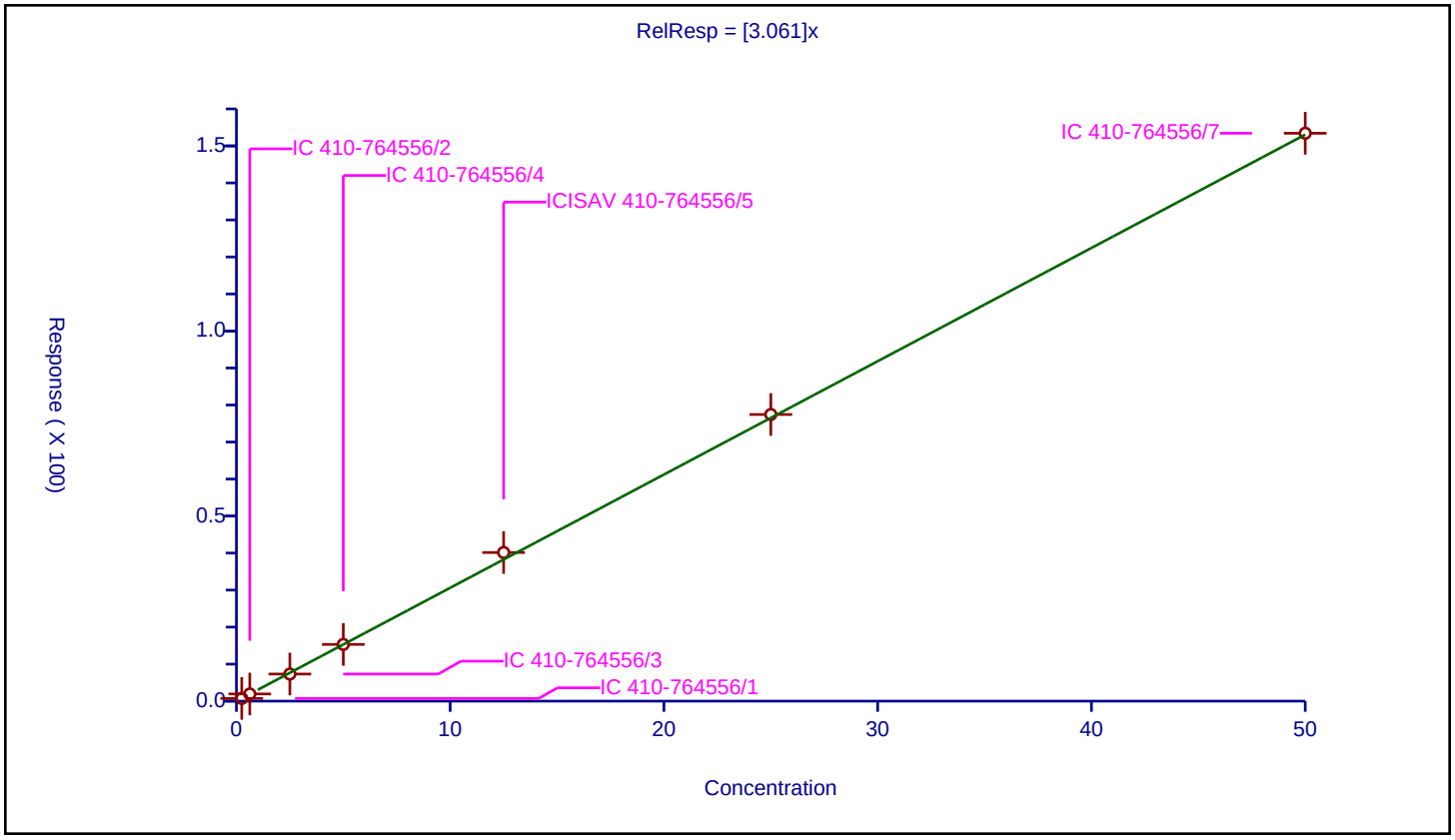
Curve Coefficients

Intercept:	0
Slope:	3.061

Error Coefficients

Relative Standard Deviation:	3.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.25	0.738427	5.0	1882907.0	2.953709	Y
2	IC 410-764556/2	0.625	1.937629	5.0	1926824.0	3.100206	Y
3	IC 410-764556/3	2.5	7.32472	5.0	1883741.0	2.929888	Y
4	IC 410-764556/4	5.0	15.324671	5.0	1936697.0	3.064934	Y
5	ICISAV 410-764556/5	12.5	40.15187	5.0	1867355.0	3.21215	Y
6	IC 410-764556/6	25.0	77.440398	5.0	1880046.0	3.097616	Y
7	IC 410-764556/7	50.0	153.416838	5.0	1861171.0	3.068337	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

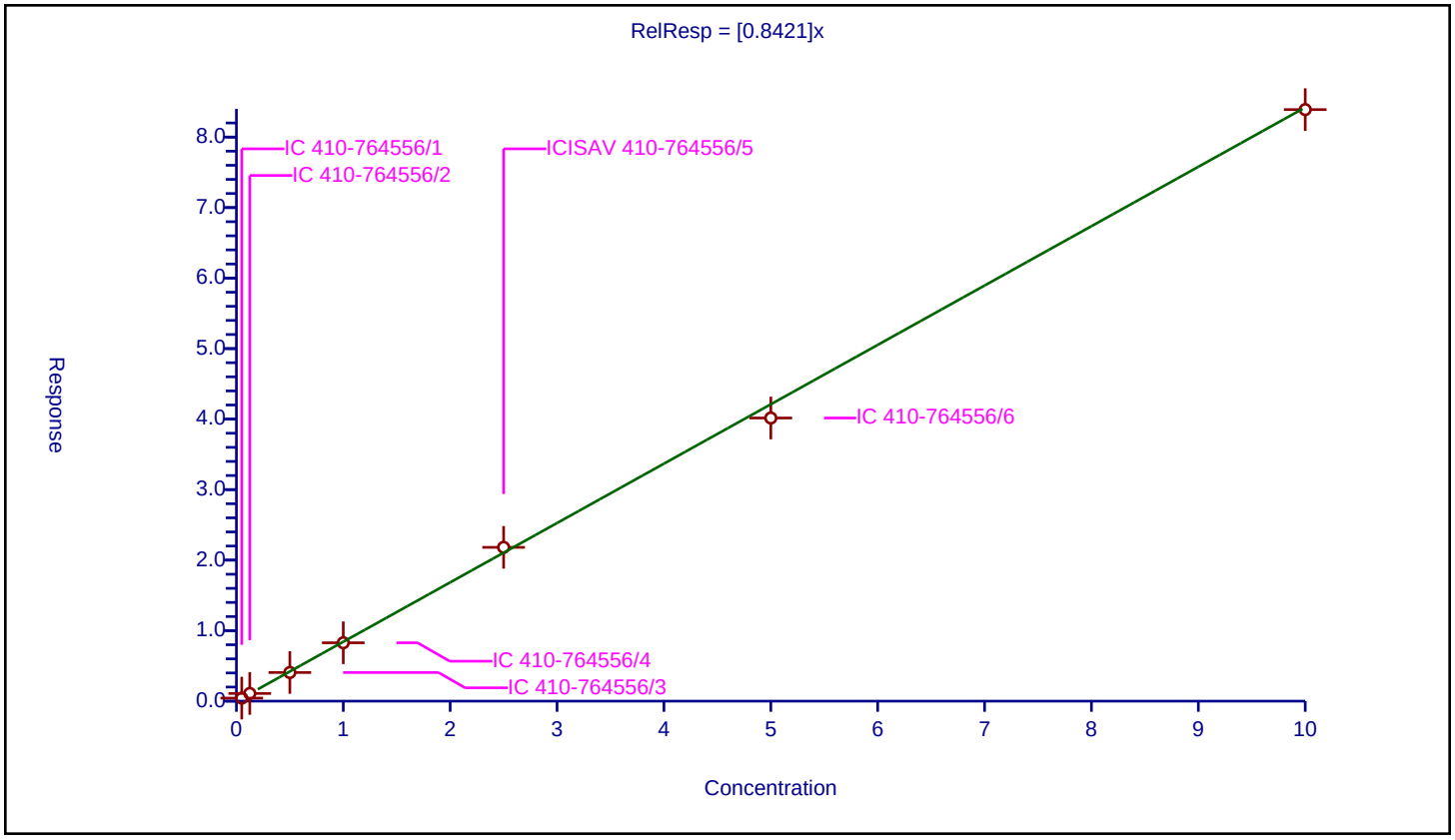
Curve Coefficients

Intercept:	0
Slope:	0.8421

Error Coefficients

Relative Standard Deviation:	3.5

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.043402	2.0	762181.0	0.868035	Y
2	IC 410-764556/2	0.125	0.10894	2.0	783203.0	0.871519	Y
3	IC 410-764556/3	0.5	0.406133	2.0	748268.0	0.812265	Y
4	IC 410-764556/4	1.0	0.827959	2.0	760190.0	0.827959	Y
5	ICISAV 410-764556/5	2.5	2.181348	2.0	741041.0	0.872539	Y
6	IC 410-764556/6	5.0	4.015806	2.0	758837.0	0.803161	Y
7	IC 410-764556/7	10.0	8.389944	2.0	739142.0	0.838994	Y



Calibration / Perfluorooctadecanoic acid

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

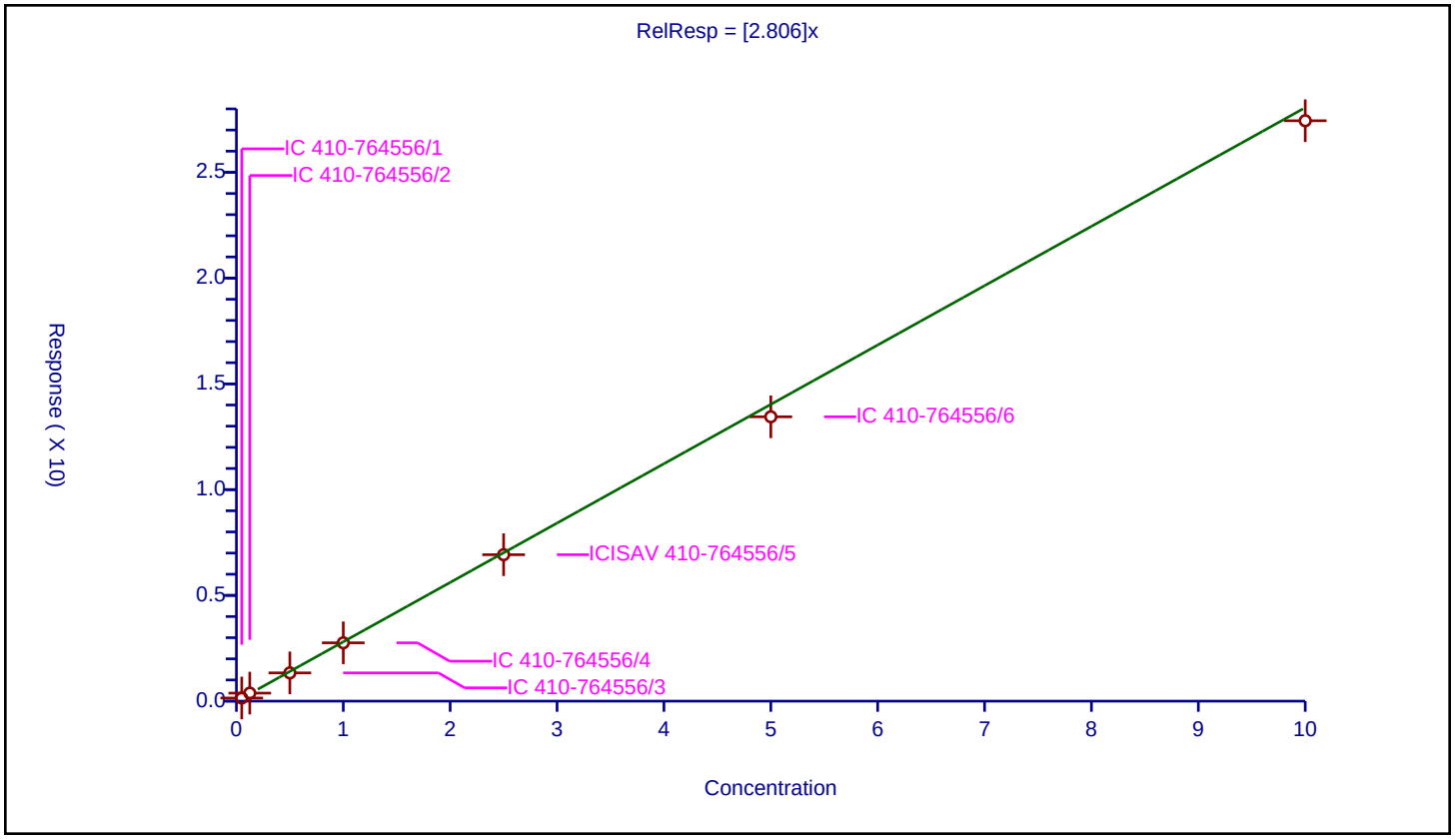
Curve Coefficients

Intercept:	0
Slope:	2.806

Error Coefficients

Relative Standard Deviation:	5.1

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-764556/1	0.05	0.148459	2.0	2004319.0	2.969188	Y
2	IC 410-764556/2	0.125	0.38014	2.0	1914175.0	3.041118	Y
3	IC 410-764556/3	0.5	1.335972	2.0	2001140.0	2.671945	Y
4	IC 410-764556/4	1.0	2.757524	2.0	2037964.0	2.757524	Y
5	ICISAV 410-764556/5	2.5	6.922803	2.0	2042629.0	2.769121	Y
6	IC 410-764556/6	5.0	13.443397	2.0	2031559.0	2.688679	Y
7	IC 410-764556/7	10.0	27.440036	2.0	1923101.0	2.744004	Y



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-769782/10 Calibration Date: 02/16/2026 22:24

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB16CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9147	0.8051		2.20	2.50	-12.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.9159	0.8919		4.87	5.00	-3.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.006	1.037		2.58	2.50	3.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0516	0.0505		6.12	6.25	-2.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.148	1.127		2.45	2.50	-2.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.347	1.281		2.38	2.50	-5.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.837	1.966		5.01	4.69	7.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.2742	0.2585		2.36	2.50	-6.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7455	0.8003		1.34	1.25	7.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.0993	0.1088		34.2	31.3	10.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8933	0.9035		1.12	1.11	1.0	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.083	1.165		5.38	5.00	8.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.7106	0.7283		2.56	2.50	2.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.424	2.606		2.40	2.23	8.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.7017	0.5948		1.06	1.25	-15.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.440	3.929		5.40	4.73	14.0	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	1.847	1.708		4.40	4.76	-8.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.132	1.210		1.26	1.18	7.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	1.846	1.737		4.61	4.90	-6.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.5266	0.5134		1.22	1.25	-3.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0507	0.0555		34.2	31.3	9.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.7603	0.7107		1.07	1.14	-7.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9091	0.9416		1.29	1.25	4.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.671	1.592		4.57	4.80	-5.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	0.2286	0.2057		2.08	2.31	-10.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.256	1.279		1.21	1.19	2.0	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.9827	1.012		1.29	1.25	3.0	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.5562	0.5260		1.18	1.25	-5.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-769782/10 Calibration Date: 02/16/2026 22:24

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB16CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorohexanesulfonamide (FHxSA)	AveID	1.331	1.228		2.31	2.50	-8.0	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8818	0.9013		1.28	1.25	2.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.379	1.351		1.14	1.16	-2.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.5442	0.5591		1.28	1.25	3.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.843	2.897		4.75	4.67	2.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8608	0.8804		1.23	1.20	2.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.6892	0.6756		1.23	1.25	-2.0	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.136	1.141		1.26	1.26	0.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.079	1.090		1.22	1.21	1.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	0.8500	0.8139		1.20	1.25	-4.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.789	1.820		4.80	4.72	2.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.1157	0.1061		1.15	1.25	-8.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.109	1.035		1.13	1.21	-7.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.679	2.579		12.1	12.5	-4.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.8894	0.9304		1.31	1.25	5.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.105	2.948		11.9	12.5	-5.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8535	0.8722		1.28	1.25	2.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	L2ID		0.7109		2.47	2.50	-1.0	30.0
13C3-PFPrA	Ave	0.6934	0.6978		2.01	2.00	1.0	30.0
13C4 PFBA	Ave	0.9840	0.9545		1.94	2.00	-3.0	30.0
13C5 PFPeA	Ave	0.8870	0.9210		2.08	2.00	4.0	30.0
13C2 4:2 FTS	Ave	0.2700	0.2477		4.30	4.69	-8.0	30.0
13C5 PFHxA	Ave	1.089	1.084		1.99	2.00	0.0	30.0
13C3 PFBS	Ave	1.289	1.203		1.74	1.86	-7.0	30.0
13C3 HFPO-DA	Ave	0.7090	0.6562		1.85	2.00	-7.0	30.0
13C4 PFHpA	Ave	1.065	1.223		2.30	2.00	15.0	30.0
13C2 6:2 FTS	Ave	0.2246	0.2195		4.65	4.76	-2.0	30.0
13C8 PFOA	Ave	0.9583	1.024		2.14	2.00	7.0	30.0
13C3 PFHxS	Ave	1.092	1.043		1.81	1.90	-4.0	30.0
13C9 PFNA	Ave	1.000	0.8913		1.78	2.00	-11.0	30.0
13C2 8:2 FTS	Ave	0.2313	0.2182		4.53	4.80	-6.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-769782/10 Calibration Date: 02/16/2026 22:24

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB16CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMeFOSAA	Ave	0.4784	0.4776		4.99	5.00	0.0	30.0
13C6 PFDA	Ave	0.9949	0.9630		1.94	2.00	-3.0	30.0
d5-NEtFOSAA	Ave	0.4379	0.4195		4.79	5.00	-4.0	30.0
13C8 PFOS	Ave	1.111	1.104		1.90	1.92	-1.0	30.0
13C7 PFUnA	Ave	1.040	1.010		1.94	2.00	-3.0	30.0
13C2 PFDoA	Ave	1.039	0.9545		1.84	2.00	-8.0	30.0
13C8 FOSA	Ave	1.187	1.181		1.99	2.00	0.0	30.0
13C2 PFTeDA	Ave	0.9547	0.8588		1.80	2.00	-10.0	30.0
d7-N-MeFOSE-M	Ave	0.0786	0.0740		4.71	5.00	-6.0	30.0
d3-NMePFOSA	Ave	0.3445	0.3411		1.98	2.00	-1.0	30.0
d9-N-EtFOSE-M	Ave	0.0897	0.0966		5.38	5.00	8.0	30.0
d5-NEtPFOSA	Ave	0.4203	0.4183		1.99	2.00	0.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-10.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 16-Feb-2026 22:24:23 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: Plate: 1 Rack: 1 410-0175852-010
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist:

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 07:51:21 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:44:14
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.159	2.133	0.026	1.004	1097886	2.20			4804	
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.133	0.017	0.497	1090927	2.01		101	2322	
3 PFBA										
212.80 > 168.90	4.316	4.302	0.014	0.998	3327699	4.87			30749	
D 4 13C4-PFBA										
216.80 > 171.90	4.323	4.309	0.014	1.000	1492352	1.94		97.0	8522	
* 5 13C3PFBA										
216.00 > 172.00	4.323	4.309	0.014		1563437	2.00			3408	
6 PFMPA										
229.00 > 84.90	4.630	4.622	0.008	0.933	2067088	2.58			3686	
7 3:3 FTCA										
241.00 > 177.00	4.640	4.631	0.009	0.934	251624	6.12	Target=1.15		1187	
241.00 > 117.00	4.640	4.631	0.009	0.934	217166		1.16(0.57-1.72)		1682	
D 8 13C5 PFPeA										
268.30 > 223.00	4.965	4.959	0.006	0.915	1594291	2.08		104	4545	
9 PFPA										
263.00 > 219.00	4.965	4.959	0.006	1.000	2245407	2.45			3076	
10 PFMBA										
279.00 > 85.10	5.122	5.107	0.015	1.032	2553431	2.38			5224	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.239	5.235	0.004	0.804	939335	4.30		91.8	4310	
12 4:2FTS										
327.10 > 307.00	5.239	5.235	0.004	1.000	1844754	5.01	Target=1.67		7018	
327.10 > 80.90	5.239	5.235	0.004	1.000	993800		1.86(0.84-2.51)		910	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.390	5.386	0.004	0.993	606535	2.36	Target=1.43		2026	
295.00 > 84.90	5.390	5.386	0.004	0.993	407109		1.49(0.71-2.14)		2408	
* 16 13C2 PFHxA										
315.10 > 270.00	5.428	5.424	0.004		4327576	5.00			20224	
D 15 13C5 PFHxA										
318.00 > 273.00	5.428	5.424	0.004	1.000	1877037	1.99		99.6	4330	
17 PFHxA										
313.00 > 269.00	5.437	5.424	0.013	1.002	938852	1.34	Target=9.36		2644	
313.00 > 118.90	5.428	5.424	0.004	1.000	91913		10.21(4.68-14.05)		399	
18 5:3 FTCA										
341.00 > 237.10	5.518	5.503	0.015	1.017	3190392	34.2	Target=0.64		2486	
341.00 > 217.00	5.518	5.503	0.015	1.017	4790445		0.67(0.32-0.97)		6720	
D 19 13C3 PFBS										
302.10 > 79.90	5.576	5.561	0.015	0.856	1813514	1.74		93.3	3694	
20 PFBS										
298.70 > 79.90	5.576	5.561	0.015	1.000	975770	1.12	Target=3.13		4288	
298.70 > 98.80	5.576	5.561	0.015	1.000	309370		3.15(1.56-4.69)		1806	
23 HFPO-DA										
284.90 > 168.90	5.622	5.607	0.015	1.000	3308118	5.38	Target=2.49		5133	
284.90 > 184.90	5.622	5.607	0.015	1.000	1458618		2.27(1.24-3.73)		3326	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.622	5.607	0.015	1.036	1135916	1.85		92.6	4239	
21 FBSA										
297.90 > 78.00	5.668	5.665	0.003	1.017	1771425	2.56			3294	
26 PFEESA										
314.80 > 134.90	5.810	5.807	0.003	1.070	5453496	2.40	Target=11.82		10248	
314.80 > 82.90	5.810	5.807	0.003	1.070	431885		12.63(5.91-17.73)		2084	
D 28 13C4 PFHpA										
367.10 > 322.00	5.867	5.851	0.016	1.081	2117545	2.30		115	4285	
27 PFHpA										
363.10 > 319.00	5.855	5.851	0.004	0.998	787162	1.06	Target=1.51		2550	
363.10 > 169.00	5.855	5.851	0.004	0.998	505528		1.56(0.75-2.26)		1395	
29 ADONA										
376.90 > 250.90	6.021	6.007	0.014	1.071	10544191	5.40	Target=2.22		7306	
376.90 > 84.80	6.021	6.007	0.014	1.071	4691336		2.25(1.11-3.33)		5319	
30 PFPeS										
349.10 > 79.90	6.062	6.049	0.013	0.930	1198577	1.26	Target=3.28		4011	
349.10 > 98.90	6.062	6.049	0.013	0.930	385738		3.11(1.64-4.91)		1626	
31 6:2FTS										
427.10 > 407.00	6.062	6.059	0.003	1.000	1440731	4.40	Target=1.56		3456	
427.10 > 80.90	6.062	6.059	0.003	1.000	943937		1.53(0.78-2.35)		2247	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.062	6.059	0.003	0.930	844582	4.65		97.7	3226	
33 BTS										
280.00 > 147.00	6.234	6.220	0.014	0.957	7167339	4.61			7024	
* 34 13C4 PFOA										
417.10 > 372.00	6.282	6.269	0.013		5846369	5.00			4096	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.282	6.269	0.013	1.000	2395245	2.14		107	6411	
36 PFOA										
413.00 > 369.00	6.282	6.269	0.013	1.000	769457	1.22	Target=1.59		758	
413.00 > 169.00	6.272	6.269	0.003	0.998	497570		1.55(0.80-2.39)		696	
37 7:3 FTCA										
441.00 > 316.90	6.422	6.407	0.015	1.183	1626894	34.2	Target=0.24		2037	
441.00 > 336.90	6.422	6.407	0.015	1.183	6402971		0.25(0.12-0.36)		5805	
40 PFHxS										
398.70 > 79.90	6.517	6.512	0.005	1.000	683374	1.07	Target=3.08		1494	
398.70 > 98.90	6.527	6.512	0.015	1.002	205953		3.32(1.54-4.62)		235	
D 38 13C3 PFHxS										
402.10 > 79.90	6.517	6.512	0.005	1.000	1598470	1.81		95.5	4052	
* 39 18O2 PFHxS										
403.00 > 83.90	6.517	6.512	0.005		1532773	1.90			4864	
D 41 13C9 PFNA										
472.10 > 427.00	6.689	6.684	0.005	1.000	1737196	1.78		89.1	2872	
* 42 13C5 PFNA										
468.00 > 423.00	6.689	6.684	0.005		1949113	2.00			2902	
43 PFNA										
463.00 > 419.00	6.689	6.694	-0.005	1.000	1021502	1.29	Target=1.95		1193	
463.00 > 219.00	6.699	6.694	0.005	1.001	478419		2.14(0.97-2.92)		494	
45 8:2FTS										
527.10 > 507.00	6.881	6.868	0.013	1.001	1347812	4.57	Target=1.86		1936	
527.10 > 80.80	6.881	6.868	0.013	1.001	725790		1.86(0.93-2.79)		2282	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.873	6.868	0.005	1.055	846758	4.53		94.4	2618	
46 PFECHS										
461.00 > 381.00	6.918	6.914	0.004	1.062	400507	2.08	Target=0.18		1841	
461.00 > 99.00	6.918	6.914	0.004	1.062	2359521		0.17(0.09-0.27)		2826	
47 PFHpS										
449.00 > 79.90	6.949	6.945	0.004	0.942	1152648	1.21	Target=3.60		4703	
449.00 > 98.80	6.960	6.945	0.015	0.943	297524		3.87(1.80-5.40)		2317	
50 NMeFOSAA										
570.10 > 419.00	7.051	7.037	0.014	1.001	414485	1.29	Target=1.80		1195	
570.10 > 483.00	7.051	7.037	0.014	1.001	232428		1.78(0.90-2.71)		385	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.041	7.037	0.004	0.954	1638639	4.99		99.8	5146	
53 PFDA										
512.90 > 469.00	7.110	7.107	0.004	1.000	649919	1.18	Target=2.75		2681	
512.90 > 219.00	7.110	7.107	0.004	1.000	231018		2.81(1.37-4.12)		1076	
* 51 13C2 PFDA										
515.10 > 470.10	7.110	7.107	0.004		2053002	2.00			4722	
D 52 13C6 PFDA										
519.10 > 474.10	7.110	7.107	0.004	1.000	1977015	1.94		96.8	3414	
48 FHxSA										
397.90 > 78.00	7.138	7.126	0.012	1.095	2587873	2.31			1785	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.232	7.219	0.013	0.980	1439215	4.79		95.8	1926	
55 NEtFOSAA										
584.20 > 419.10	7.241	7.238	0.003	1.001	324688	1.28	Target=1.26		680	
584.20 > 526.00	7.241	7.238	0.003	1.001	253493		1.28(0.63-1.89)		444	
* 57 13C4 PFOS										
502.80 > 79.90	7.377	7.373	0.004		1314652	1.92			5066	
D 56 13C8 PFOS										
507.10 > 79.90	7.377	7.373	0.004	1.000	1451507	1.90		99.4	4152	
58 PFOS										
498.90 > 79.90	7.377	7.373	0.004	1.000	1186971	1.14	Target=4.39		1935	
498.90 > 98.80	7.377	7.373	0.004	1.000	261497		4.54(2.19-6.58)		550	
D 59 13C7 PFUnA										
570.00 > 525.10	7.528	7.506	0.022	1.059	2073756	1.94		97.2	5133	
60 PFUnA										
563.10 > 519.00	7.519	7.515	0.004	0.999	724615	1.28	Target=3.76		3502	
563.10 > 269.10	7.528	7.515	0.013	1.000	177325		4.09(1.88-5.63)		1419	
61 9ClFOS										
530.80 > 351.00	7.698	7.686	0.012	1.043	10236567	4.75	Target=3.06		5299	
532.80 > 353.00	7.698	7.686	0.012	1.043	3423843		2.99(1.53-4.59)		6907	
62 PFNS										
548.80 > 79.90	7.791	7.788	0.003	1.056	800396	1.23	Target=3.67		3327	
548.80 > 98.80	7.798	7.788	0.010	1.057	221898		3.61(1.83-5.50)		1315	
D 81 PFDoA										
615.10 > 570.00	7.938	7.935	0.003	1.117	1959566	1.84		91.8	6414	
63 PFDoA										
613.10 > 569.00	7.938	7.935	0.003		827439	1.23	Target=4.73		3982	
613.10 > 319.00	7.938	7.935	0.003		186518		4.44(2.36-7.09)		2469	
D 65 13C8 FOSA										
506.10 > 77.80	8.159	8.155	0.004	1.106	1621255	1.99		99.5	5534	
64 PFOSA										
498.10 > 77.90	8.159	8.155	0.004	1.000	1160901	1.26	Target=41.75		1912	
498.10 > 478.00	8.168	8.155	0.013	1.001	24562		47.26(20.87-62.62)		65.6	
66 PFDS										
599.00 > 79.90	8.200	8.196	0.004	1.112	995307	1.22	Target=3.69		5689	
599.00 > 98.80	8.200	8.196	0.004	1.112	264858		3.76(1.84-5.53)		1657	
67 PFTrDA										
663.00 > 619.00	8.347	8.345	0.002	0.955	946820	1.20	Target=5.83		5306	
663.00 > 168.90	8.347	8.345	0.002	0.955	153273		6.18(2.91-8.74)		1616	
68 11ClFOS										
630.90 > 450.90	8.516	8.504	0.012	1.154	6501738	4.80	Target=3.21		2916	
632.90 > 452.90	8.516	8.504	0.012	1.154	2106367		3.09(1.60-4.81)		6928	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.739	8.722	0.017	1.229	1763079	1.80		90.0	2188	
69 PFTeDA										
713.10 > 168.90	8.724	8.722	0.002	0.998	116867	1.15	Target=0.83		789	
713.10 > 219.00	8.739	8.722	0.017	1.000	124192		0.94(0.41-1.24)		515	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.918	8.917	0.001	1.209	949175	1.13	Target=4.20		2237	
699.10 > 98.80	8.918	8.917	0.001	1.209	238265		3.98(2.10-6.30)		1874	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.961	8.945	0.016	1.215	253773	4.71		94.1	734	
73 N-MeFOSE-M										
616.10 > 58.90	8.975	8.974	0.001	1.002	1638082	12.0			6164	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.071	9.057	0.014	1.230	468117	1.98		99.0	2174	
74 NMeFOSA										
511.90 > 219.00	9.071	9.057	0.014	1.000	272325	1.31	Target=0.68		1258	
511.90 > 169.00	9.071	9.057	0.014	1.000	396604		0.69(0.34-1.03)		1098	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.177	9.176	0.001	1.244	331318	5.38		108	760	
77 N-EtFOSE-M										
630.00 > 58.90	9.190	9.189	0.001	1.001	2449491	11.9			7615	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.266	9.252	0.014	1.256	574049	1.99		99.5	3019	
79 N-EtFOSA-M										
526.00 > 219.00	9.266	9.265	0.001	1.000	313547	1.28	Target=0.85		1500	
526.00 > 169.00	9.266	9.265	0.001	1.000	363897		0.86(0.43-1.28)		1183	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.646	9.645	0.001	1.104	1566754	2.47	Target=16.56		38604	
913.00 > 169.00	9.636	9.645	-0.009	1.103	97681		16.04(8.28-24.84)		4646	

QC Flag Legend

Processing Flags

Reagents:

1633_125_ICV_00034 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 07:51:25 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-10.d

Injection Date: 16-Feb-2026 22:24:23 Instrument ID: 30577

Lims ID: ICV

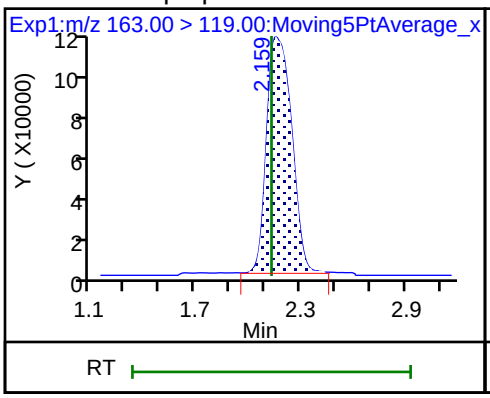
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 10 Worklist Smp#: 10

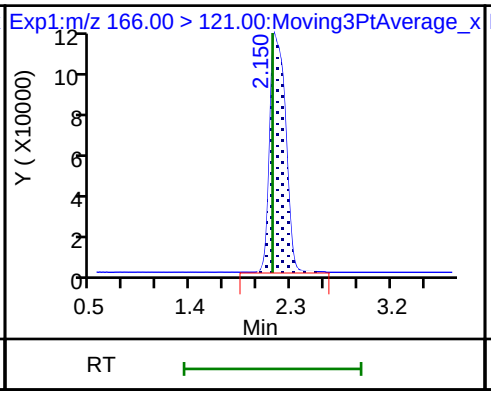
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

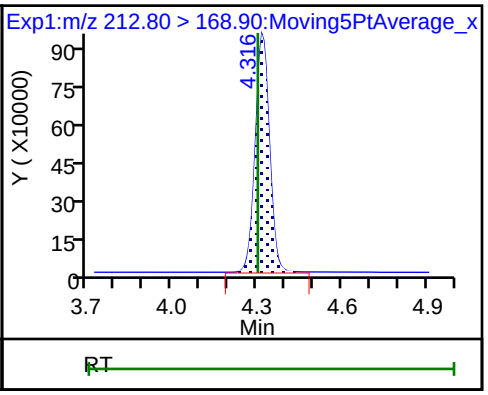
2 Perfluoropropionic acid



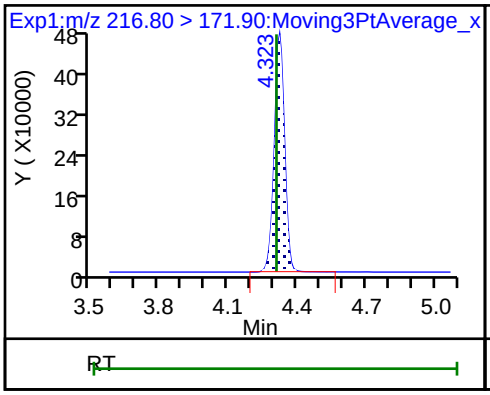
D 1 13C3PFPrA



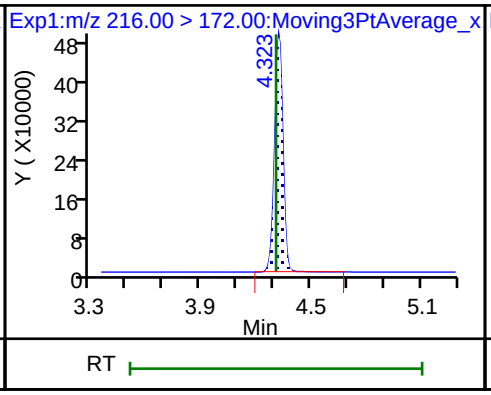
3 PFBA



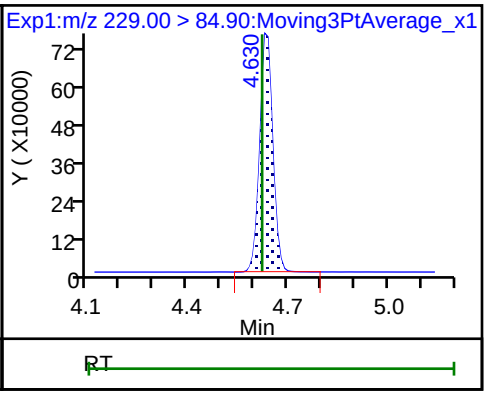
D 4 13C4-PFBA



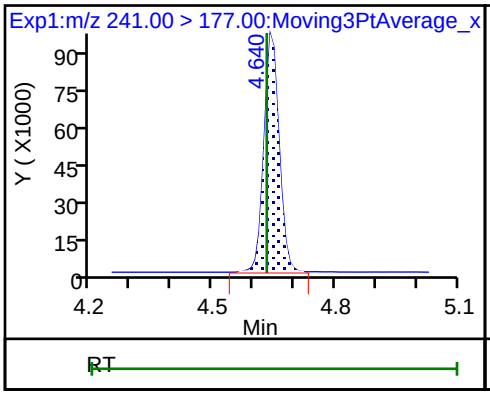
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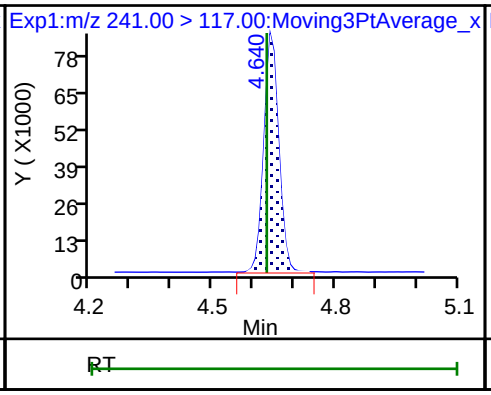
6 PFMPA



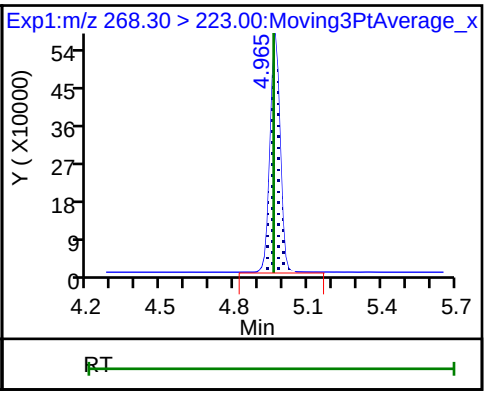
7 3:3 FTCA



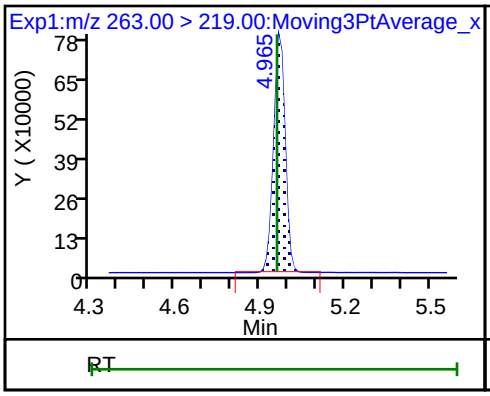
7 3:3 FTCA



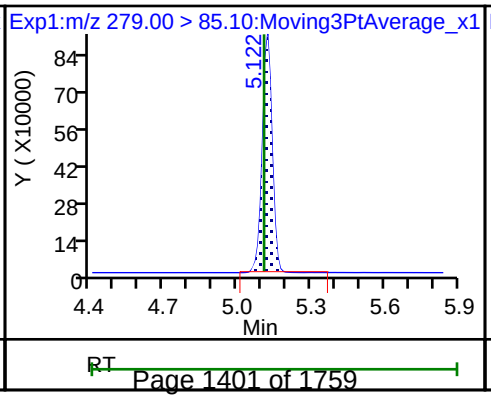
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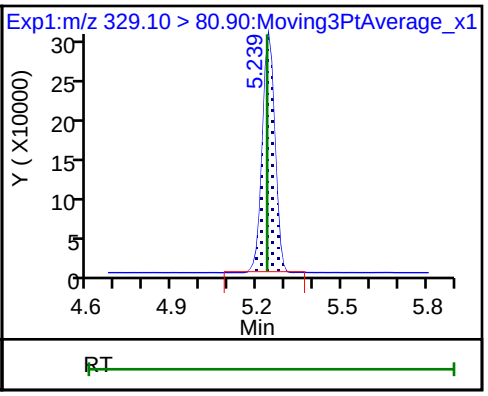
9 PFPA



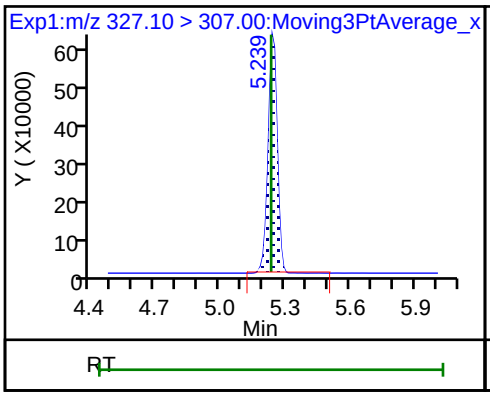
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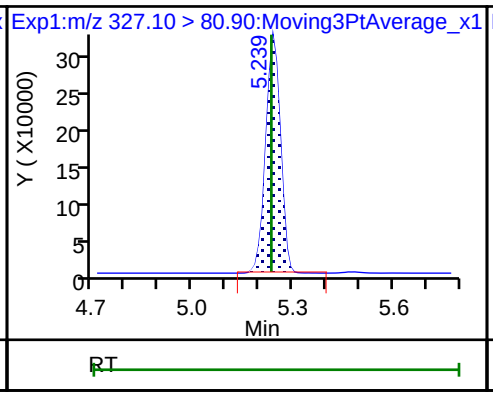
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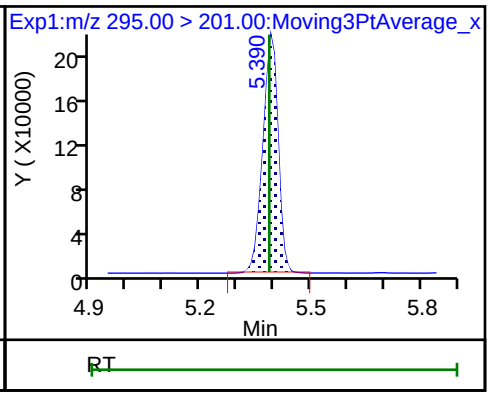
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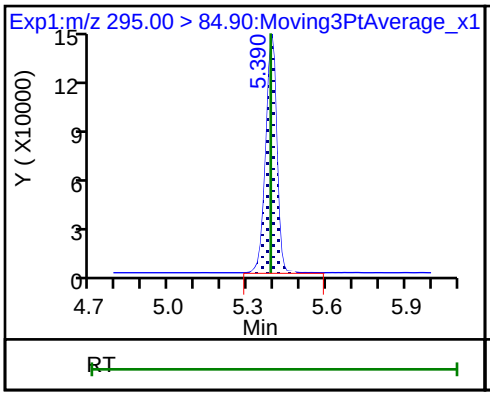
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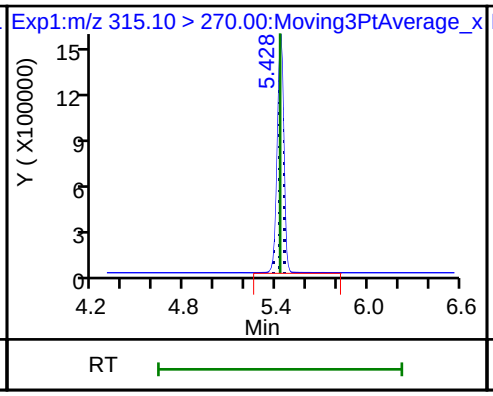
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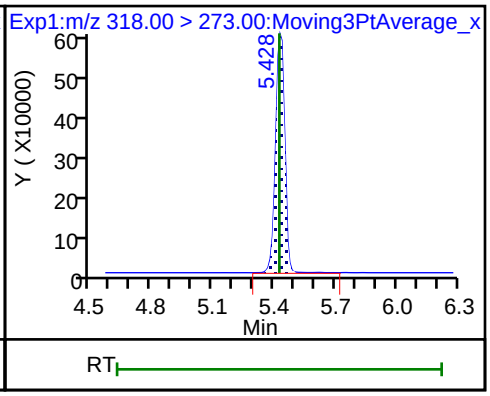
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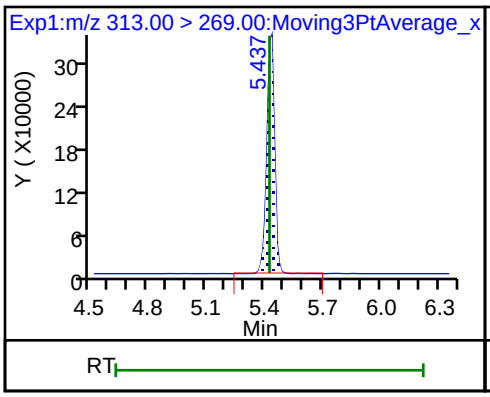
* 16 13C2 PFHxA



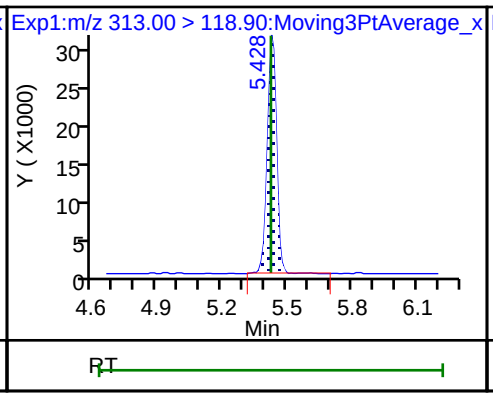
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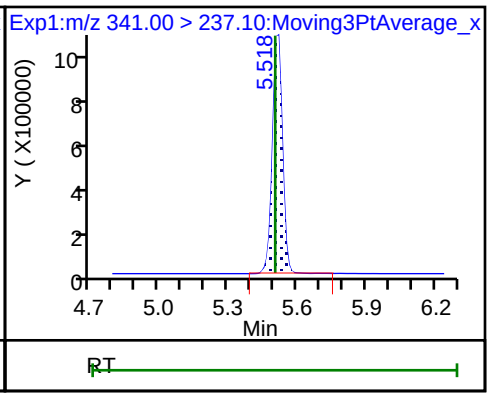
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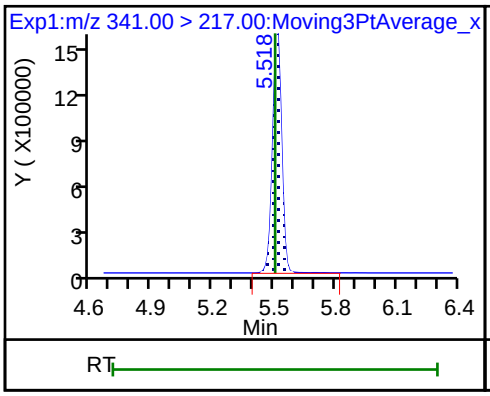
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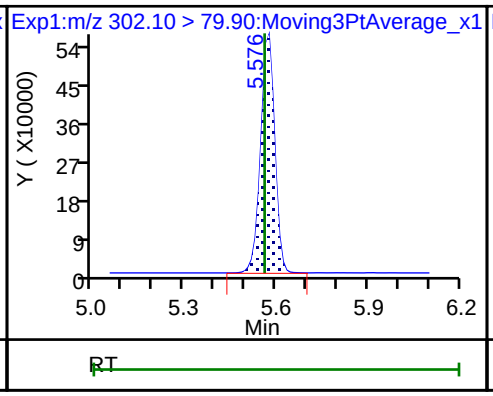
18 5:3 FTCA



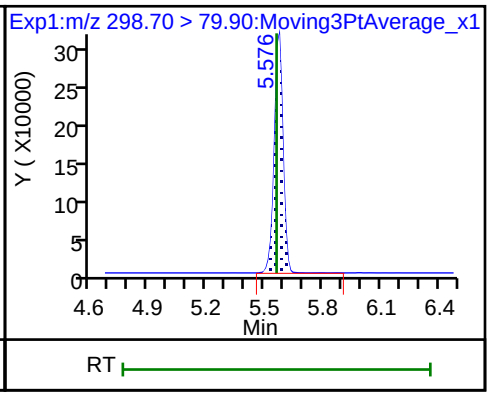
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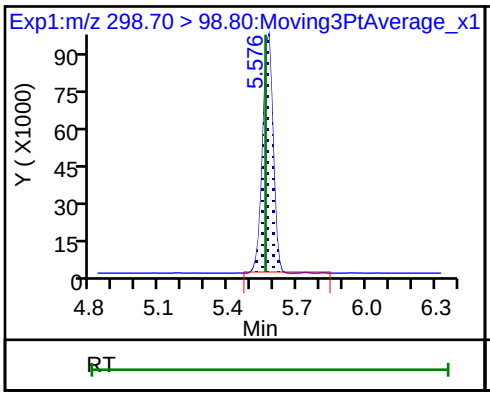
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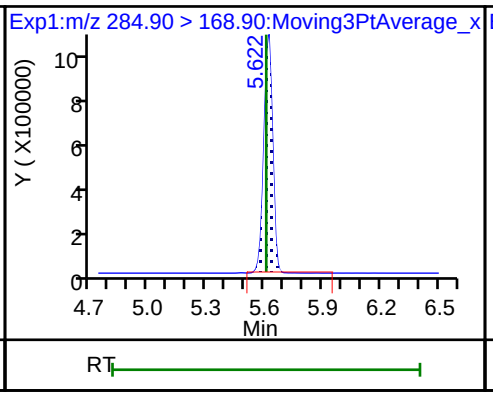
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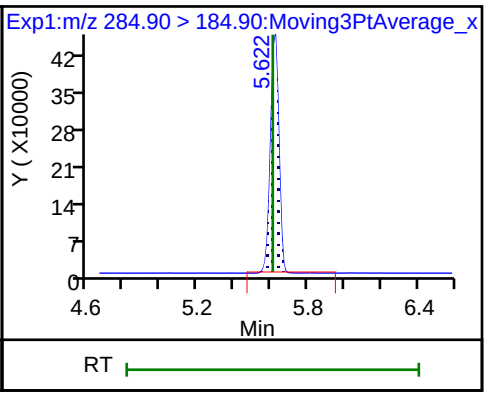
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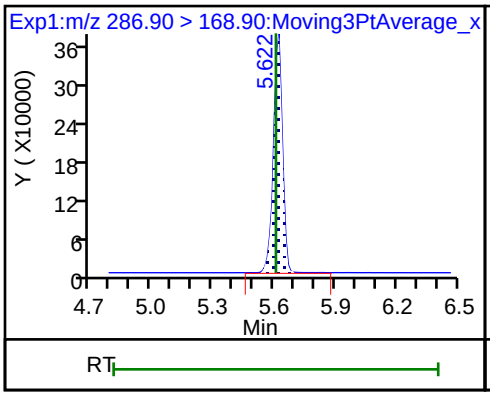
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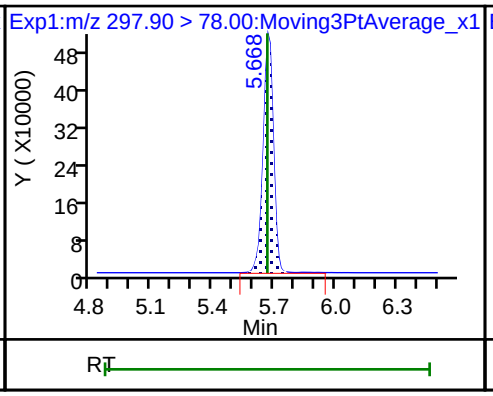
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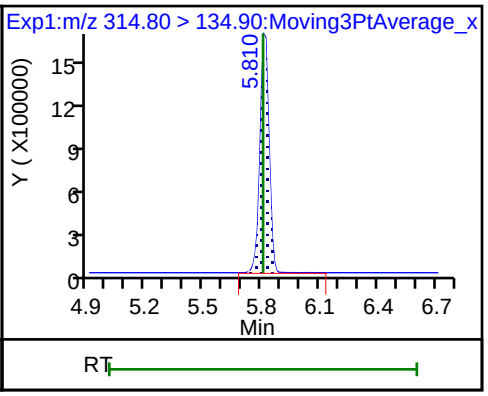
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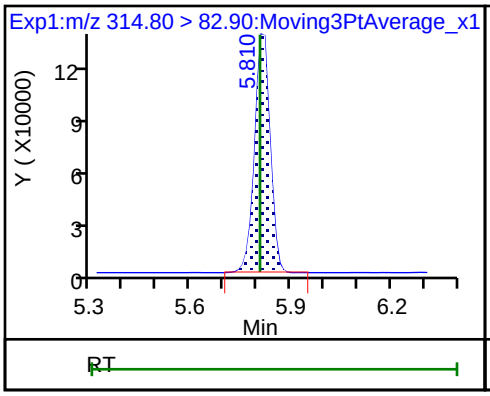
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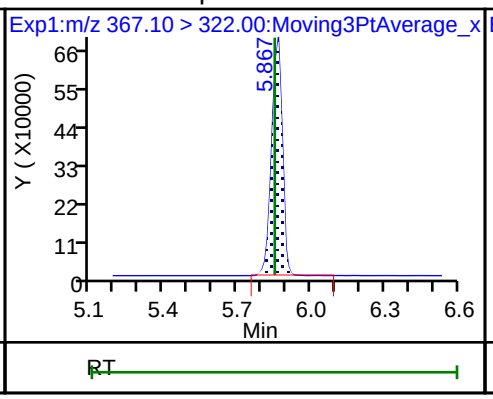
26 PFEESA



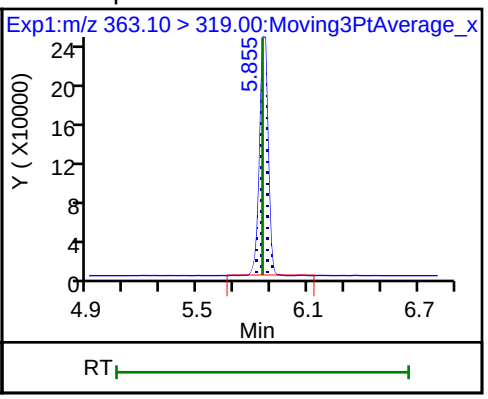
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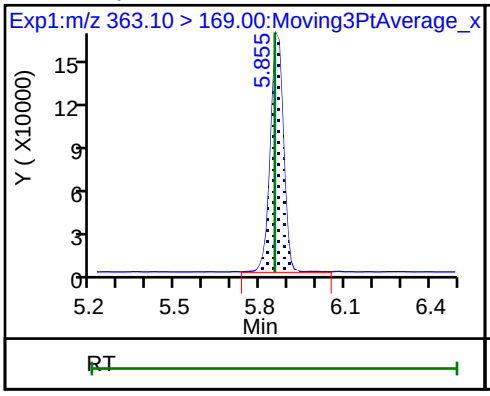
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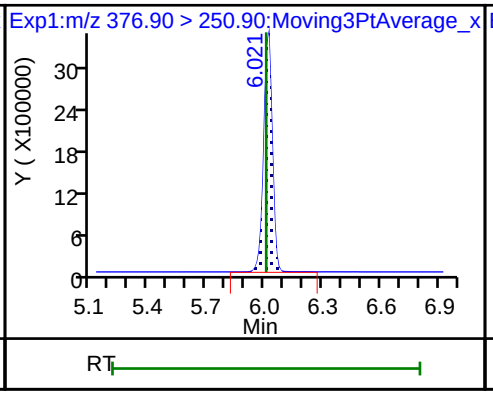
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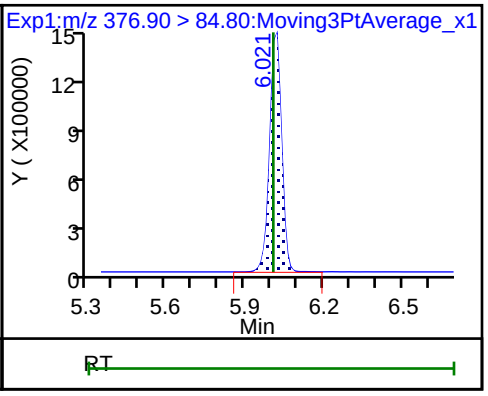
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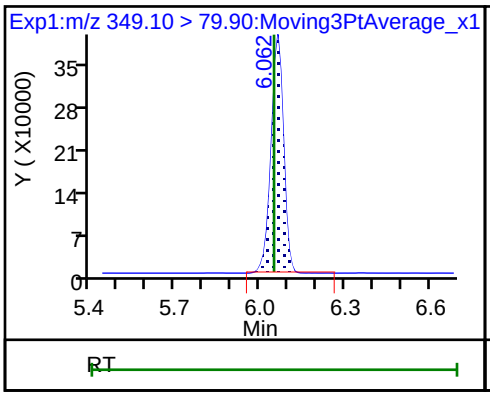
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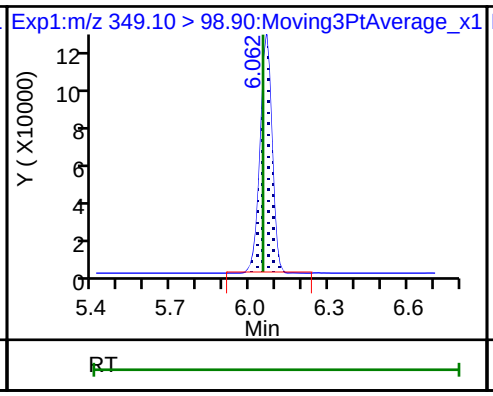
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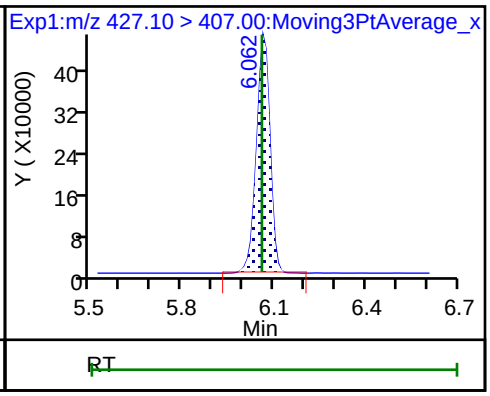
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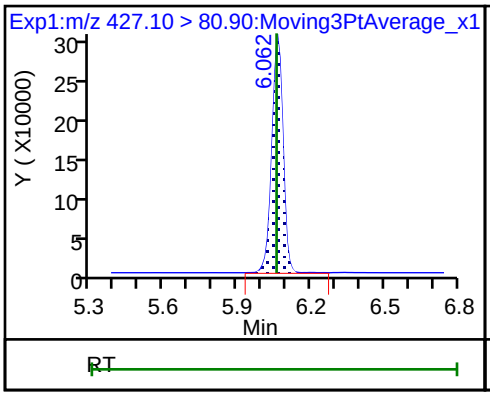
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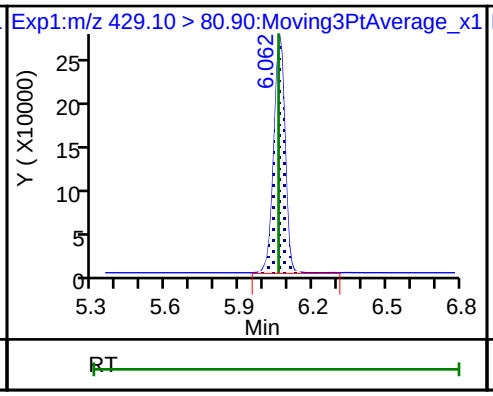
31 6:2FTS



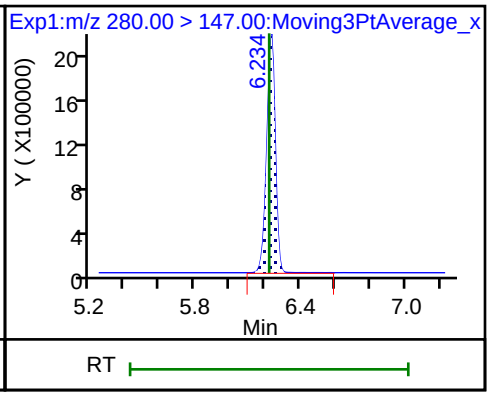
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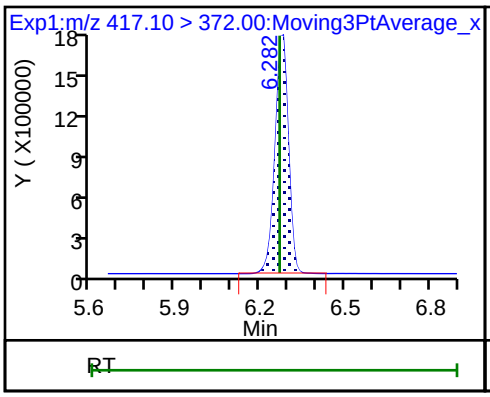
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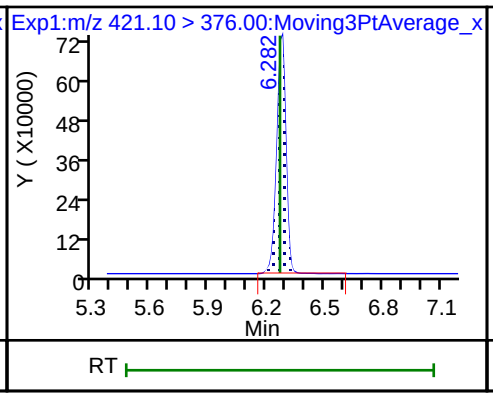
33 BTS



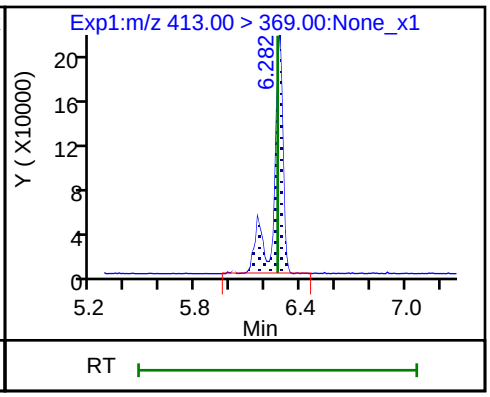
* 34 13C4 PFOA



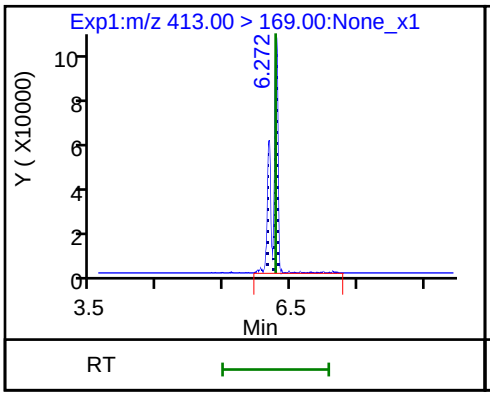
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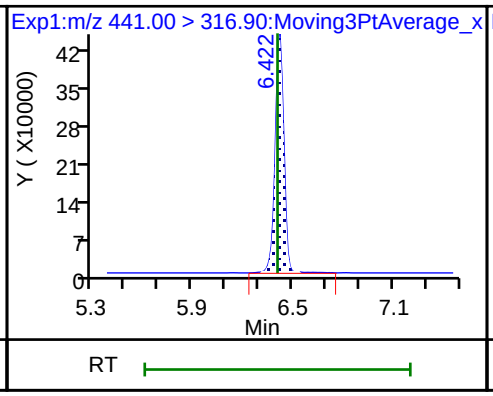
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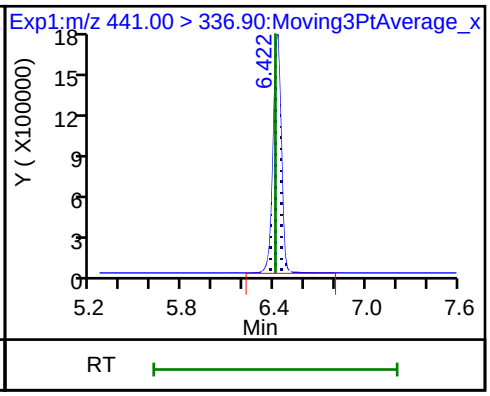
36 PFOA



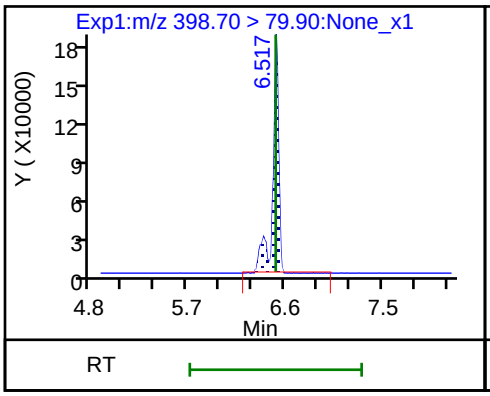
37 7:3 FTCA



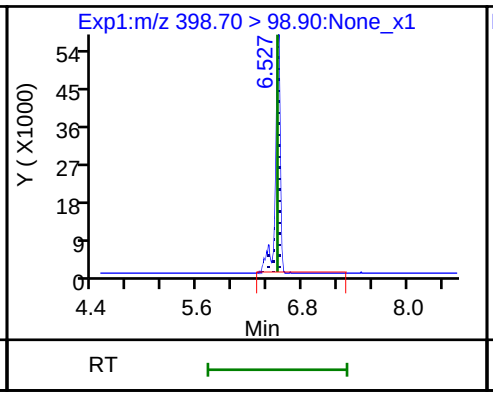
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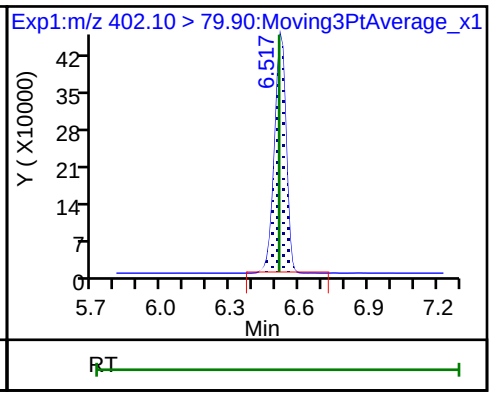
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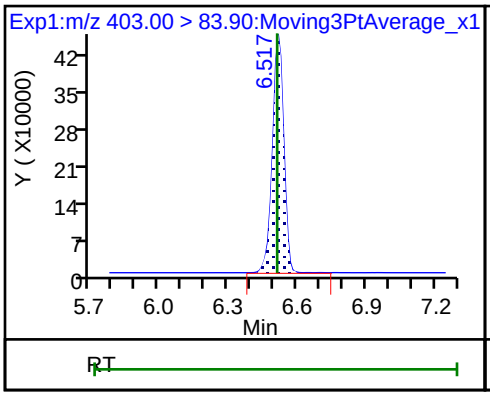
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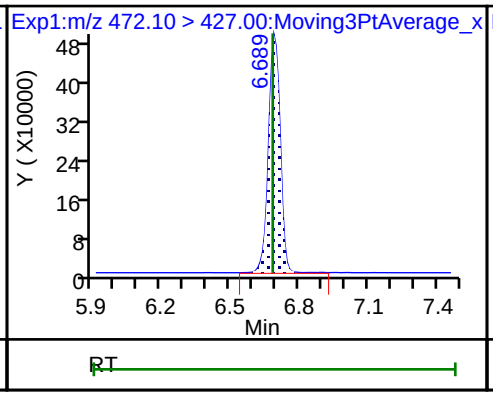
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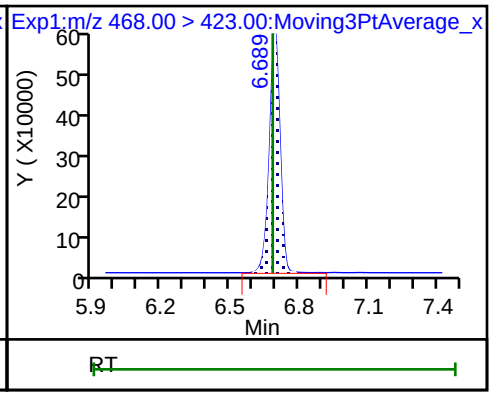
* 39 18O2 PFHxS



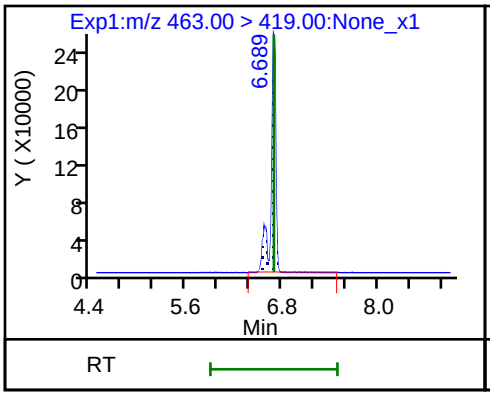
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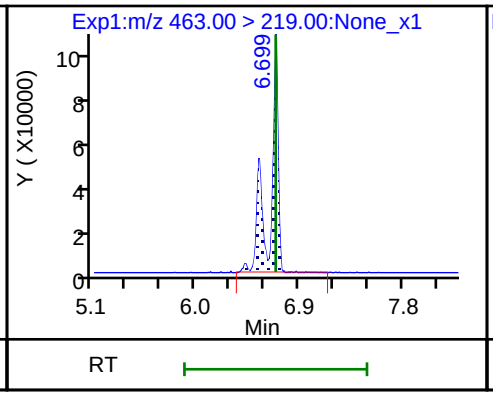
* 42 13C5 PFNA



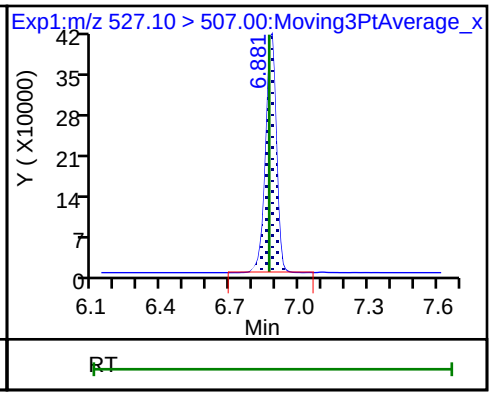
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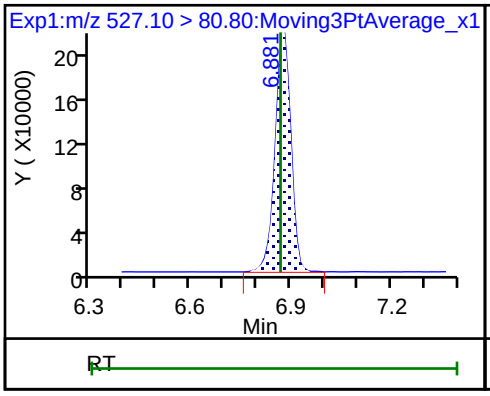
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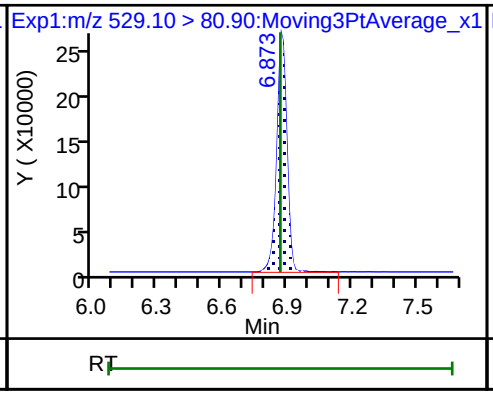
45 8:2FTS



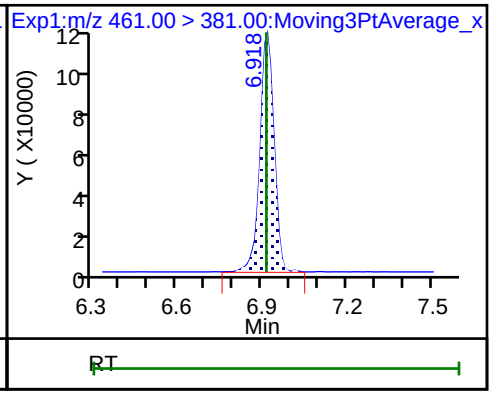
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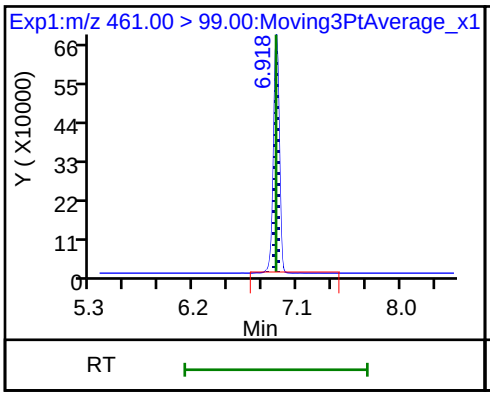
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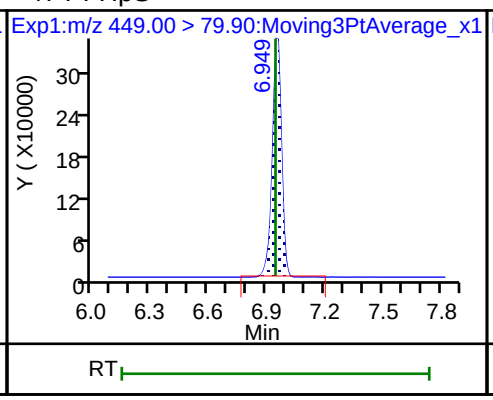
46 PFECHS



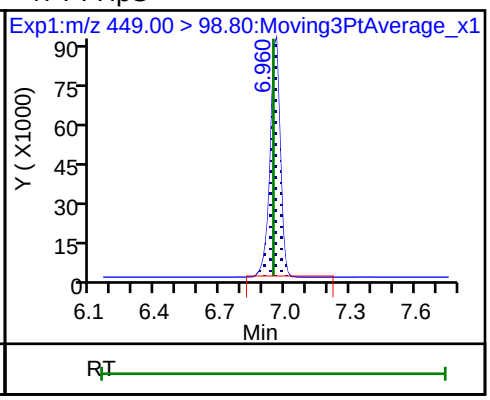
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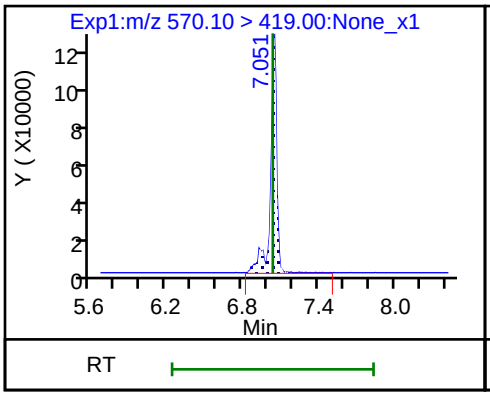
47 PFHpS



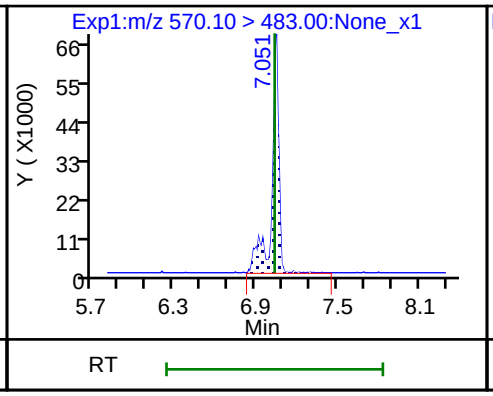
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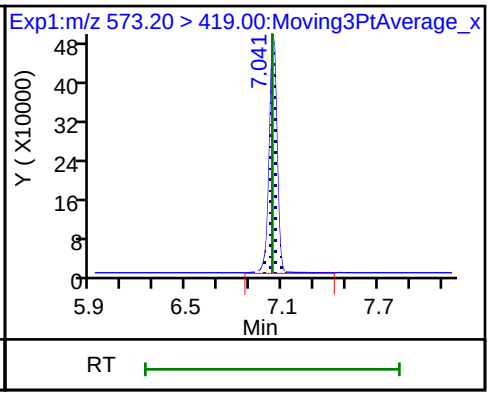
50 NMeFOSAA



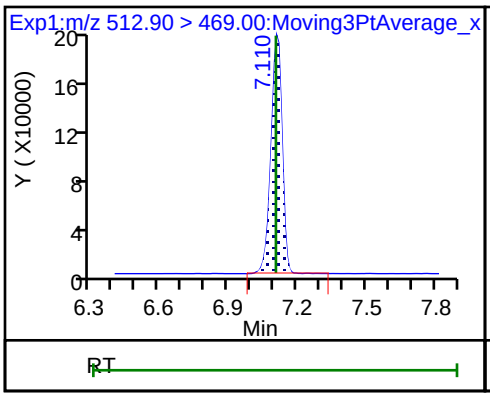
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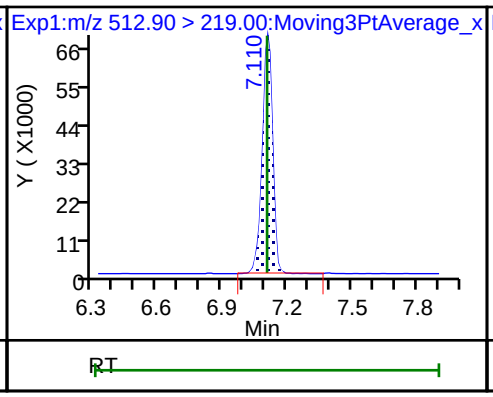
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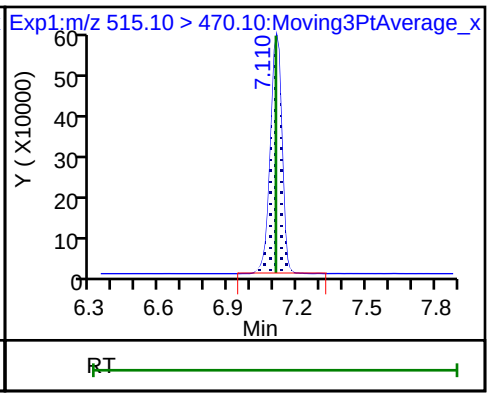
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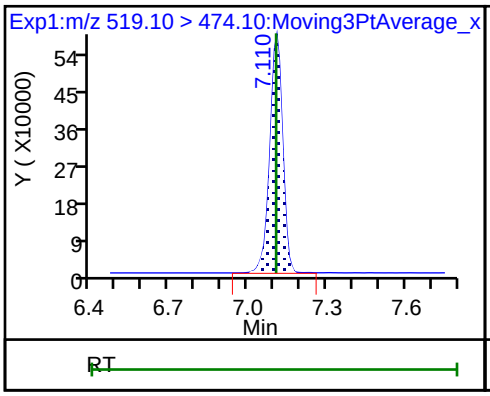
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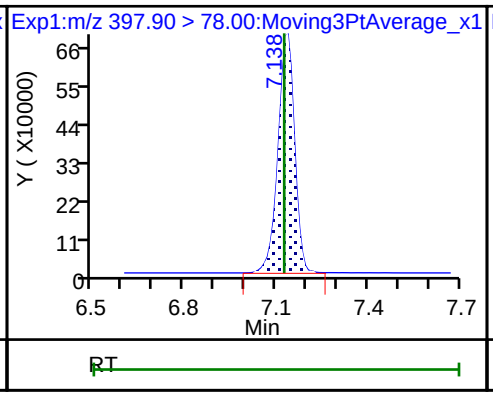
* 51 13C2 PFDA



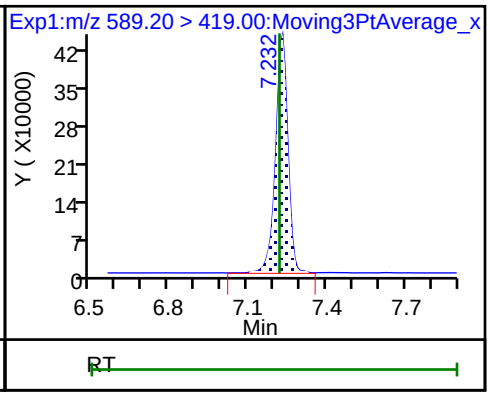
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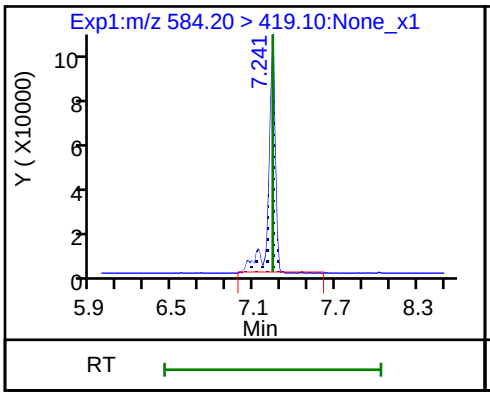
48 FHxSA



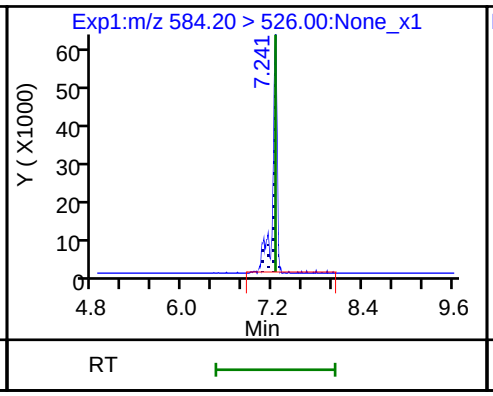
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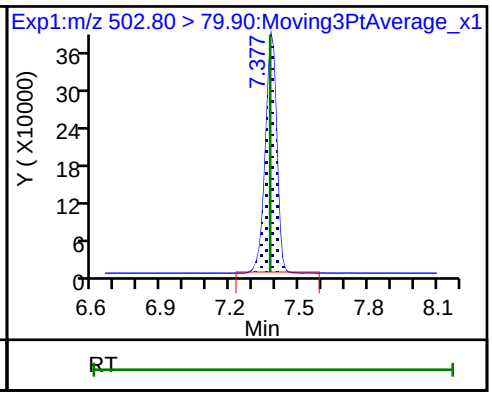
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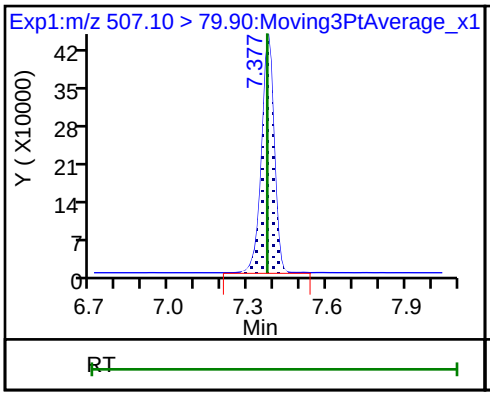
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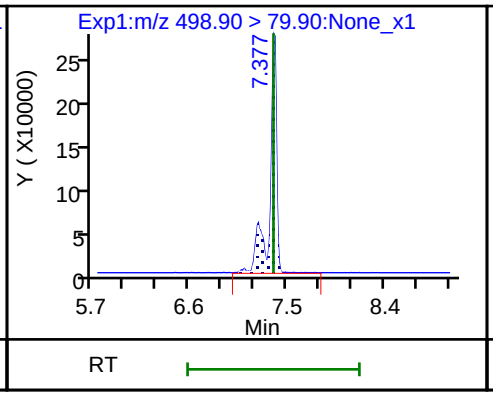
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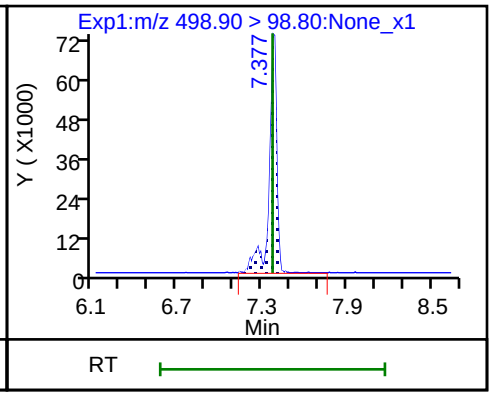
D 56 13C8 PFOS



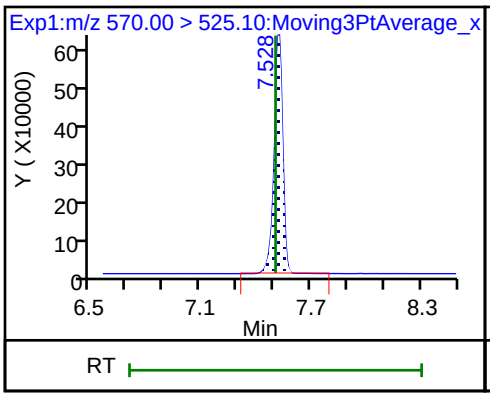
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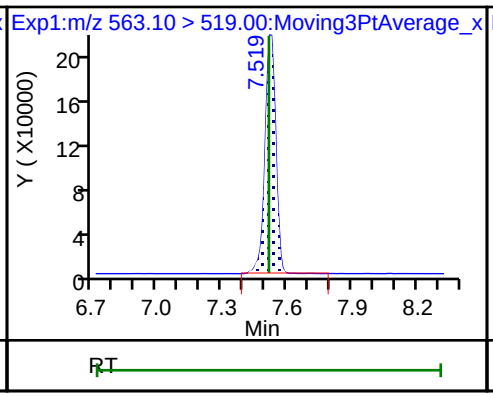
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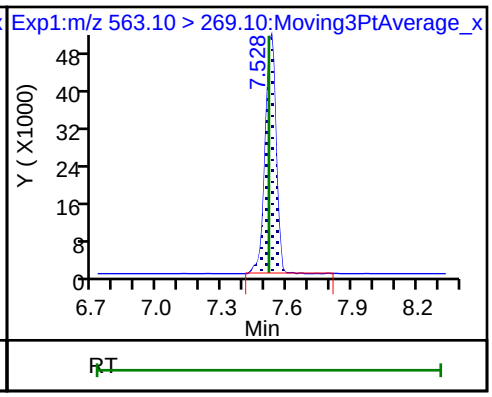
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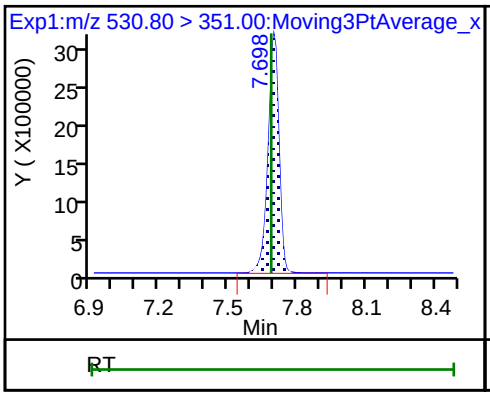
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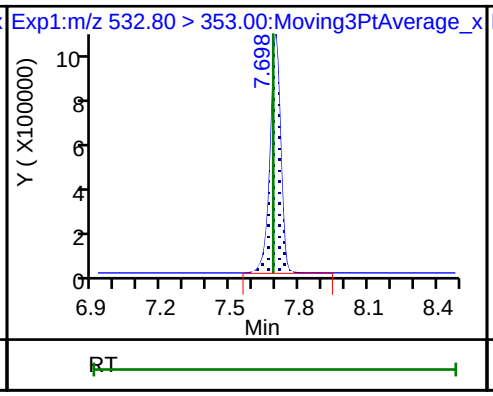
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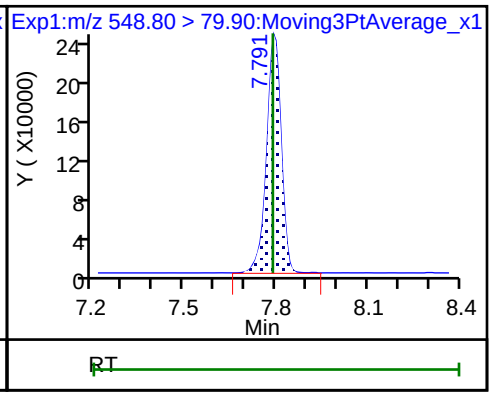
61 9ClFOS



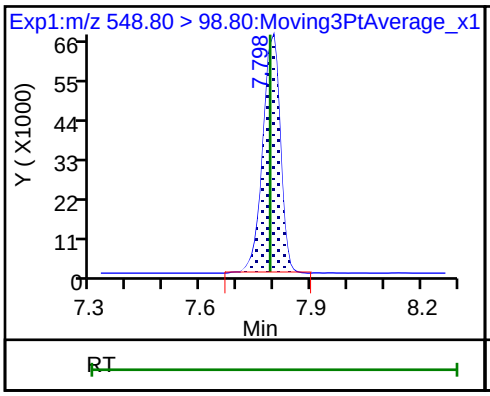
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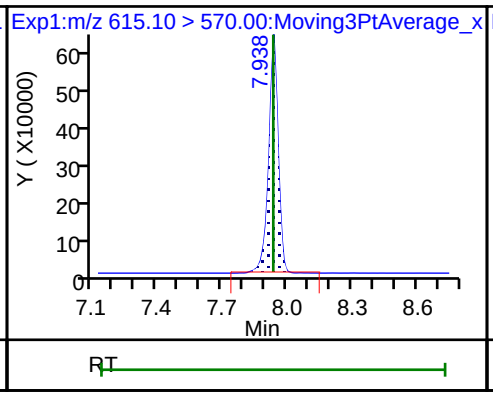
62 PFNS



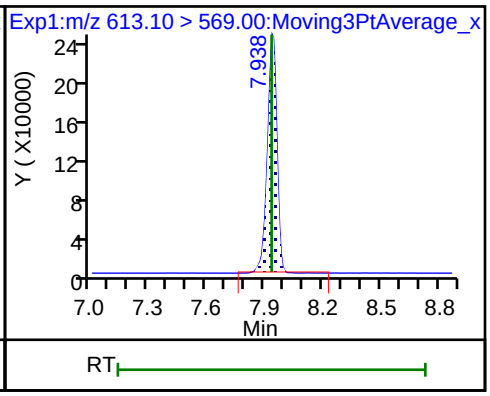
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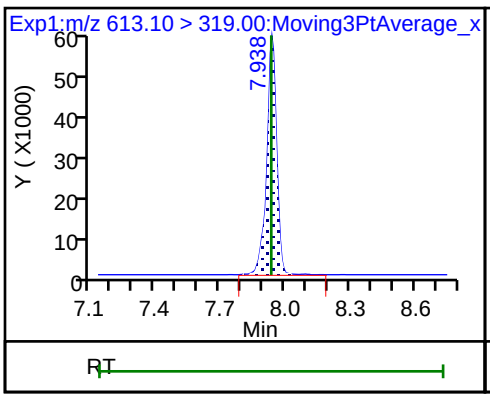
D 81 PFDoA



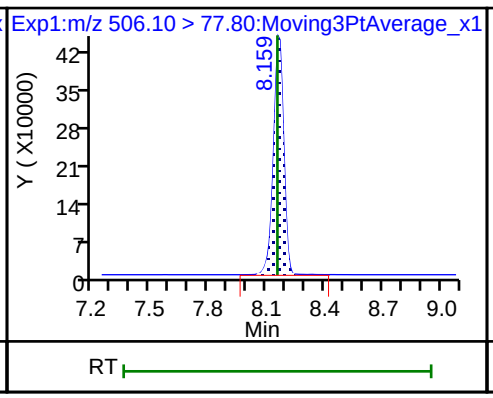
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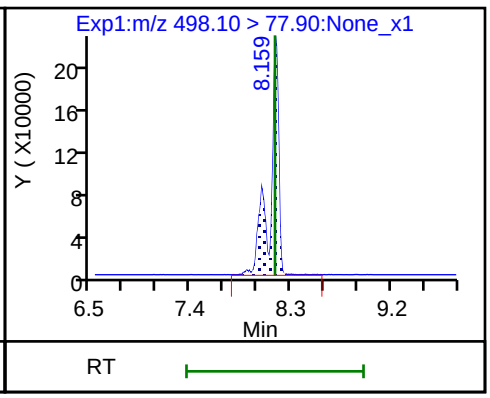
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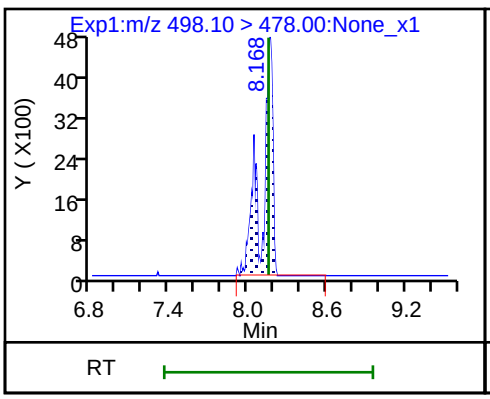
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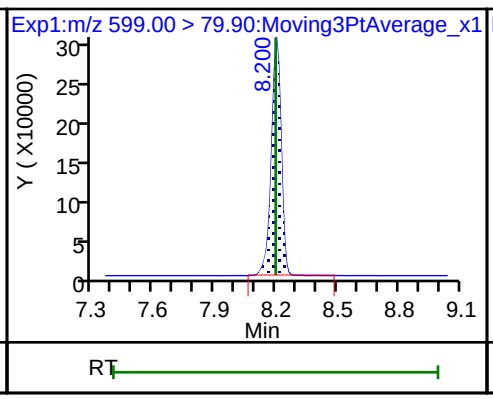
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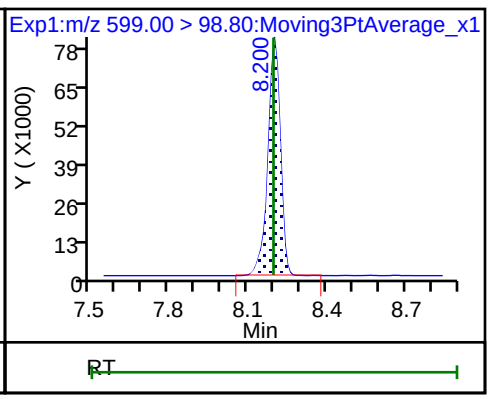
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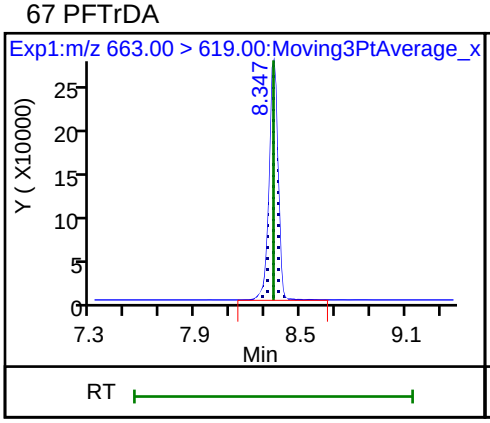
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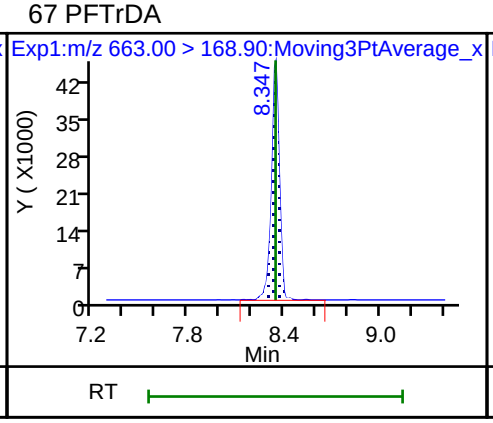
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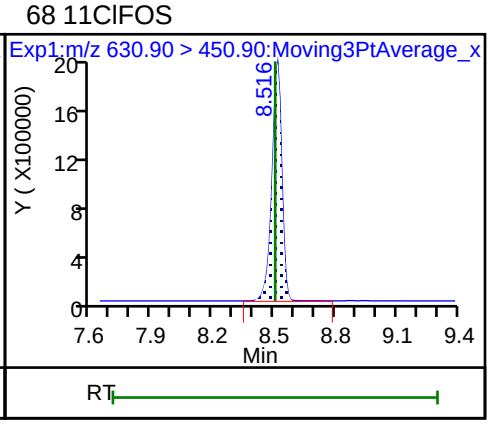
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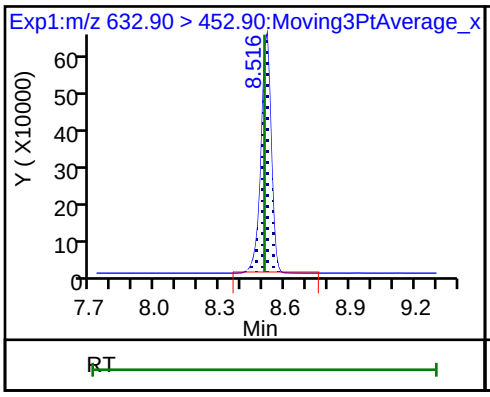
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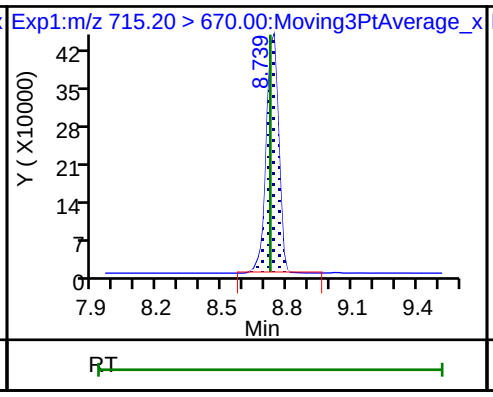
68 11ClFOS



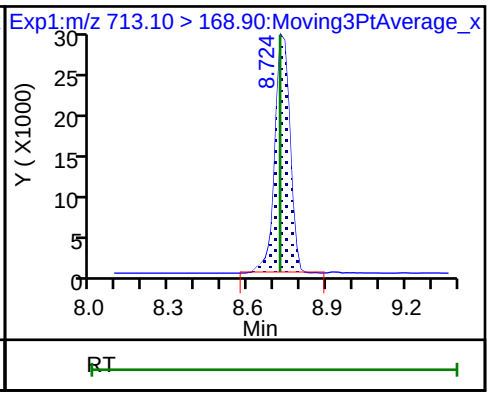
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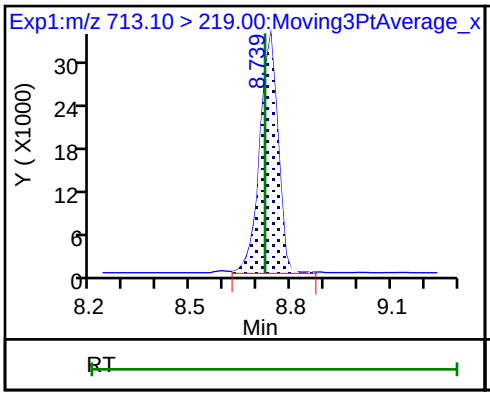
D 70 13C2 PFTeDA



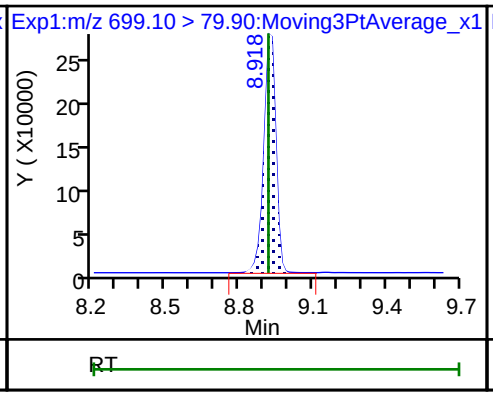
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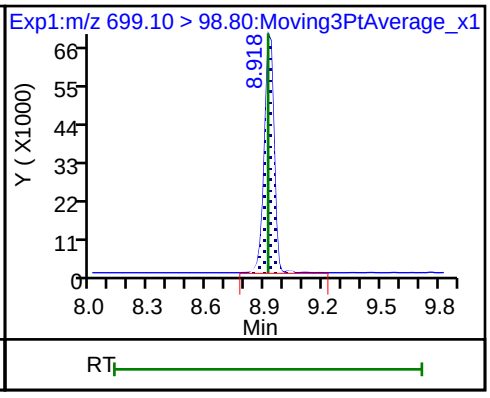
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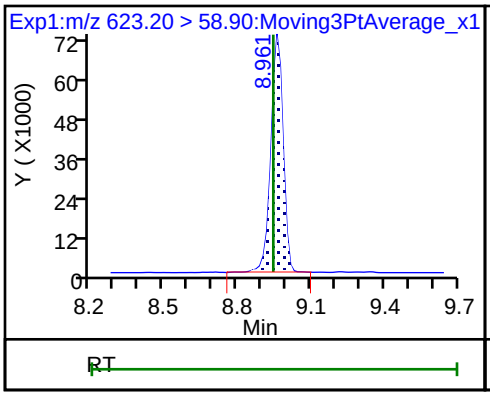
71 PFDoS



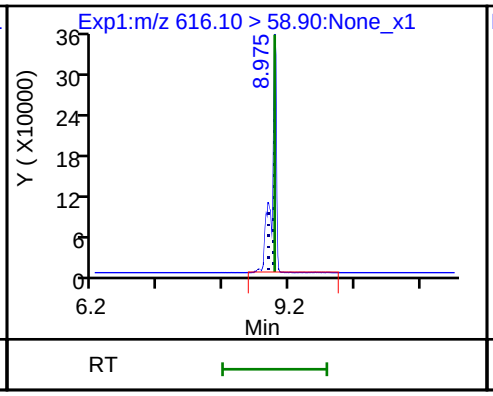
71 PFDoS



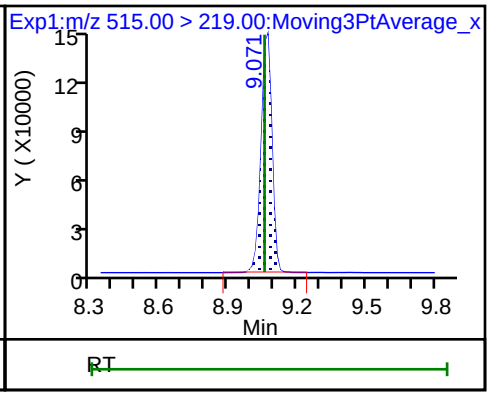
D 72 d7-N-Me-FOSE



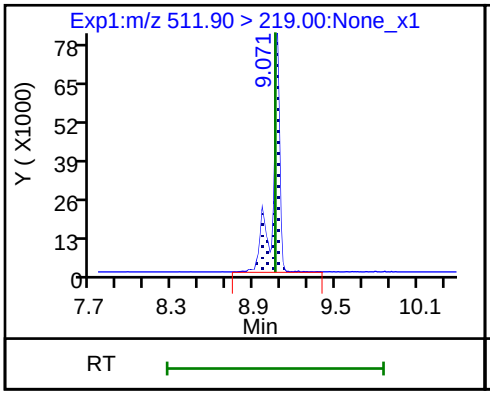
73 N-MeFOSE-M



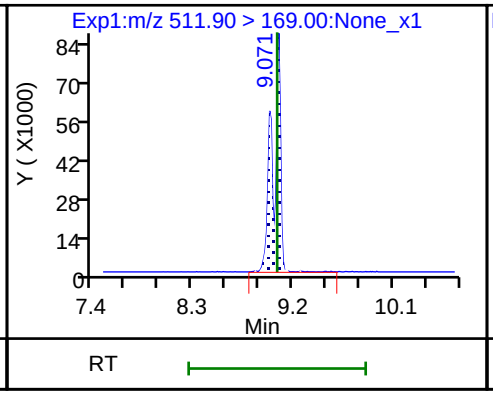
D 75 d3-NMePFOSA



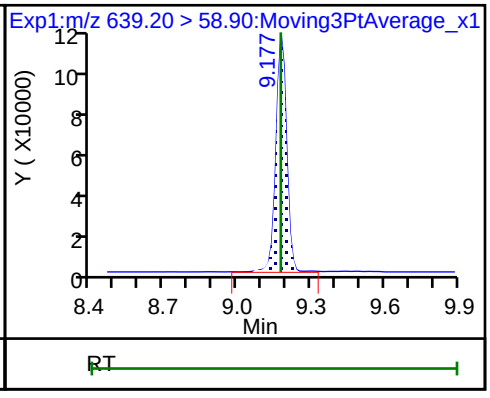
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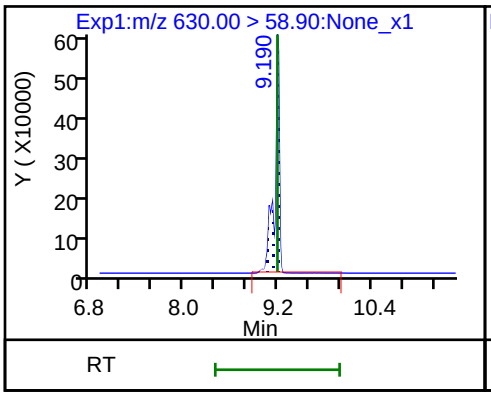
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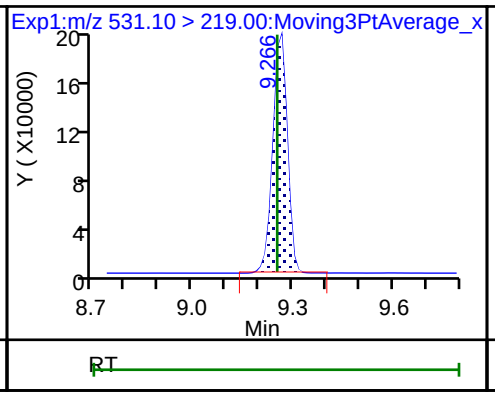
D 76 d9-N-EtFOSE



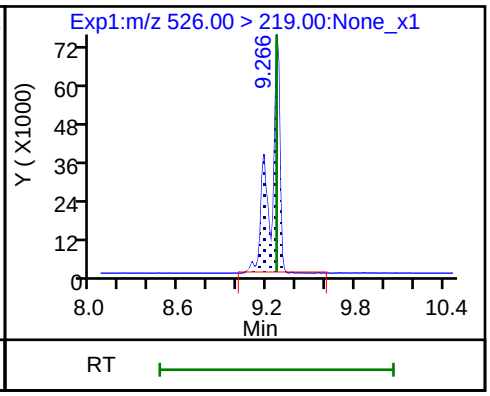
77 N-EtFOSE-M



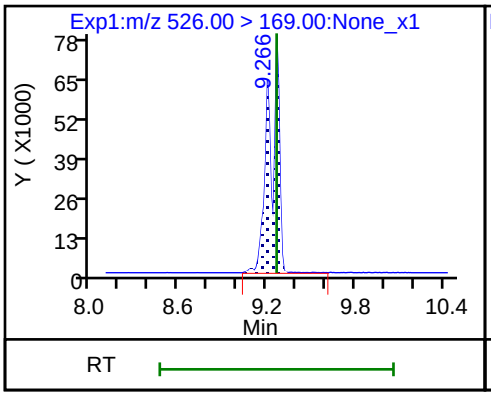
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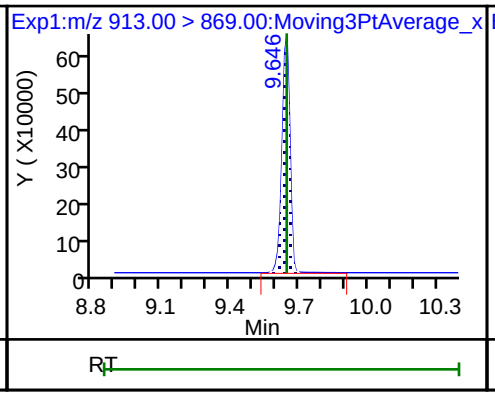
79 N-EtFOSA-M



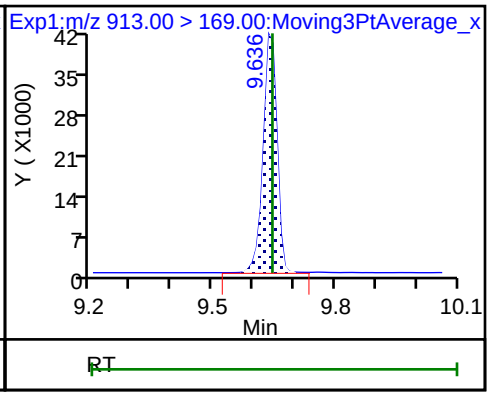
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-770716/1 Calibration Date: 02/18/2026 09:44

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26Feb18-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9147	0.9444		0.258	0.250	3.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.9159	0.9420		0.103	0.100	3.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.006	1.092		0.0543	0.0500	9.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0516	0.0531		0.103	0.100	3.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.148	1.321		0.0575	0.0500	15.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.347	1.375		0.0510	0.0500	2.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.837	1.865		0.0952	0.0938	2.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.2742	0.2865		0.0523	0.0500	5.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7455	0.7969		0.0534	0.0500	7.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.0993	0.1188		0.299	0.250	20.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8933	0.8973		0.0446	0.0444	0.0	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.083	1.224		0.0424	0.0375	13.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.7106	0.7910		0.0557	0.0500	11.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.424	2.369		0.0436	0.0446	-2.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.7017	0.9028		0.0643	0.0500	29.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.440	3.539		0.0487	0.0473	3.0	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	1.847	2.007		0.103	0.0952	9.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.132	1.277		0.0530	0.0470	13.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	1.846	1.803		0.0478	0.0490	-2.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.5266	0.5604		0.0532	0.0500	6.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0507	0.0416		0.205	0.250	-18.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.7603	0.8063		0.0484	0.0456	6.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9091	0.9006		0.0495	0.0500	-1.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.671	1.793		0.103	0.0960	7.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	0.2286	0.2358		0.0477	0.0462	3.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.256	1.269		0.0482	0.0477	1.0	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.9827	0.8339		0.0424	0.0500	-15.0	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.5562	0.6627		0.0596	0.0500	19.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-770716/1 Calibration Date: 02/18/2026 09:44

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26Feb18-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorohexanesulfonamide (FHxSA)	AveID	1.331	1.298		0.0488	0.0500	-2.0	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8818	0.7532		0.0427	0.0500	-15.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.379	1.432		0.0483	0.0465	4.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.5442	0.5773		0.0530	0.0500	6.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.843	3.007		0.0494	0.0467	6.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8608	0.8114		0.0453	0.0481	-6.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.6892	0.7813		0.0567	0.0500	13.0	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.136	1.122		0.0494	0.0500	-1.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.079	1.162		0.0519	0.0482	8.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	0.8500	0.9061		0.0533	0.0500	7.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.789	1.762		0.0465	0.0472	-2.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.1157	0.1325		0.0572	0.0500	14.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.109	1.105		0.0483	0.0485	0.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.679	2.849		0.266	0.250	6.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.8894	0.9110		0.0512	0.0500	2.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.105	3.096		0.249	0.250	0.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8535	0.8540		0.0500	0.0500	0.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	L2ID		0.6436		0.0240	0.0500	-52.0*	30.0
13C3-PFPrA	Ave	0.6934	0.7358		2.12	2.00	6.0	30.0
13C4 PFBA	Ave	0.9840	0.9940		2.02	2.00	1.0	30.0
13C5 PFPeA	Ave	0.8870	0.8266		1.86	2.00	-7.0	30.0
13C2 4:2 FTS	Ave	0.2700	0.2364		4.11	4.69	-12.0	30.0
13C5 PFHxA	Ave	1.089	1.076		1.98	2.00	-1.0	30.0
13C3 PFBS	Ave	1.289	1.153		1.67	1.86	-11.0	30.0
13C3 HFPO-DA	Ave	0.7090	0.6602		1.86	2.00	-7.0	30.0
13C4 PFHpA	Ave	1.065	1.013		1.90	2.00	-5.0	30.0
13C2 6:2 FTS	Ave	0.2246	0.2017		4.28	4.76	-10.0	30.0
13C8 PFOA	Ave	0.9583	0.9118		1.90	2.00	-5.0	30.0
13C3 PFHxS	Ave	1.092	1.040		1.81	1.90	-5.0	30.0
13C9 PFNA	Ave	1.000	1.028		2.06	2.00	3.0	30.0
13C2 8:2 FTS	Ave	0.2313	0.1828		3.79	4.80	-21.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-770716/1 Calibration Date: 02/18/2026 09:44

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26Feb18-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMeFOSAA	Ave	0.4784	0.4919		5.14	5.00	3.0	30.0
13C6 PFDA	Ave	0.9949	1.012		2.04	2.00	2.0	30.0
d5-NEtFOSAA	Ave	0.4379	0.4401		5.03	5.00	0.0	30.0
13C8 PFOS	Ave	1.111	1.087		1.87	1.92	-2.0	30.0
13C7 PFUnA	Ave	1.040	1.090		2.10	2.00	5.0	30.0
13C2 PFDoA	Ave	1.039	1.035		1.99	2.00	0.0	30.0
13C8 FOSA	Ave	1.187	1.226		2.07	2.00	3.0	30.0
13C2 PFTeDA	Ave	0.9547	0.8590		1.80	2.00	-10.0	30.0
d7-N-MeFOSE-M	Ave	0.0786	0.0854		5.43	5.00	9.0	30.0
d3-NMePFOSA	Ave	0.3445	0.3477		2.02	2.00	1.0	30.0
d9-N-EtFOSE-M	Ave	0.0897	0.0979		5.46	5.00	9.0	30.0
d5-NEtPFOSA	Ave	0.4203	0.4297		2.05	2.00	2.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-01.d
Lims ID: CCVO 1_CAL1
Client ID:
Sample Type: CCVO
Inject. Date: 18-Feb-2026 09:44:37 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCVO 1_CAL1
Misc. Info.: Plate: 1 Rack: 1
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 18-Feb-2026 14:30:15 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1628

First Level Reviewer: DX7G Date: 18-Feb-2026 11:34:39
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.158	2.133	0.025	1.004	125555	0.2581		103	498	
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.133	0.017	0.500	1063547	2.12		106	2211	
3 PFBA										
212.80 > 168.90	4.294	4.302	-0.008	0.998	67669	0.1029		103	784	
D 4 13C4-PFBA										
216.80 > 171.90	4.302	4.309	-0.007	1.000	1436665	2.02		101	4295	
* 5 13C3PFBA										
216.00 > 172.00	4.302	4.309	-0.007		1445382	2.00			2669	
6 PFMPA										
229.00 > 84.90	4.613	4.622	-0.009	0.932	39347	0.0543		109	307	
7 3:3 FTCA										
241.00 > 177.00	4.622	4.631	-0.009	0.934	3826	0.1029	Target=1.15	103	120	
241.00 > 117.00	4.622	4.631	-0.009	0.934	3030		1.26(0.57-1.72)		33.7	
D 8 13C5 PFPeA										
268.30 > 223.00	4.948	4.959	-0.011	0.915	1441049	1.86		93.2	3016	
9 PFPA										
263.00 > 219.00	4.948	4.959	-0.011	1.000	47577	0.0575		115	131	
10 PFMBA										
279.00 > 85.10	5.097	5.107	-0.010	1.030	49550	0.0510		102	502	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.224	5.235	-0.011	0.805	816845	4.11		87.6	4667	
12 4:2FTS										
327.10 > 307.00	5.224	5.235	-0.011	1.000	30474	0.0952	Target=1.67	102	323	
327.10 > 80.90	5.224	5.235	-0.011	1.000	19546		1.56(0.84-2.51)		29.6	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.364	5.386	-0.022	0.992	13442	0.0523	Target=1.43	105	86.6	
295.00 > 84.90	5.364	5.386	-0.022	0.992	8636		1.56(0.71-2.14)		49.7	
* 16 13C2 PFHxA										
315.10 > 270.00	5.406	5.424	-0.018		4358447	5.00			8202	
D 15 13C5 PFHxA										
318.00 > 273.00	5.406	5.424	-0.018	1.000	1876548	1.98		98.9	6614	
17 PFHxA										
313.00 > 269.00	5.406	5.424	-0.018	1.000	37384	0.0534	Target=9.36	107	128	
313.00 > 118.90	5.424	5.424	0.0	1.003	3675		10.17(4.68-14.05)		19.5	
18 5:3 FTCA										
341.00 > 237.10	5.493	5.503	-0.010	1.016	27859	0.2990	Target=0.64	120	243	
341.00 > 217.00	5.493	5.503	-0.010	1.016	36578		0.76(0.32-0.97)		131	
D 19 13C3 PFBS										
302.10 > 79.90	5.550	5.561	-0.011	0.855	1584116	1.67		89.5	7063	
20 PFBS										
298.70 > 79.90	5.550	5.561	-0.011	1.000	33857	0.0446	Target=3.13	100	218	
298.70 > 98.80	5.550	5.561	-0.011	1.000	11216		3.02(1.56-4.69)		41.9	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.596	5.607	-0.011	1.035	1151007	1.86		93.1	2983	
23 HFPO-DA										
284.90 > 168.90	5.596	5.607	-0.011	1.000	26405	0.0424	Target=2.49	113	117	
284.90 > 184.90	5.596	5.607	-0.011	1.000	11288		2.34(1.24-3.73)		60.8	
21 FBSA										
297.90 > 78.00	5.654	5.665	-0.011	1.019	33612	0.0557		111	156	
26 PFEESA										
314.80 > 134.90	5.784	5.807	-0.023	1.070	99143	0.0436	Target=11.82	97.8	496	
314.80 > 82.90	5.796	5.807	-0.011	1.072	8456		11.72(5.91-17.73)		68.9	
D 28 13C4 PFHpA										
367.10 > 322.00	5.840	5.851	-0.011	1.080	1765676	1.90		95.1	5014	
27 PFHpA										
363.10 > 319.00	5.829	5.851	-0.022	0.998	39850	0.0643	Target=1.51	129	169	
363.10 > 169.00	5.840	5.851	-0.011	1.000	19819		2.01(0.75-2.26)		115	
29 ADONA										
376.90 > 250.90	5.997	6.007	-0.010	1.072	96332	0.0487	Target=2.22	103	699	
376.90 > 84.80	5.987	6.007	-0.020	1.070	46030		2.09(1.11-3.33)		13494	
30 PFPeS										
349.10 > 79.90	6.038	6.049	-0.011	0.931	45987	0.0530	Target=3.28	113	201	
349.10 > 98.90	6.028	6.049	-0.021	0.929	14340		3.21(1.64-4.91)		91.4	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.038	6.059	-0.021	0.931	707427	4.28		89.8	3436	
31 6:2FTS										
427.10 > 407.00	6.038	6.059	-0.021	1.000	28403	0.1035	Target=1.56	109	8884	
427.10 > 80.90	6.038	6.059	-0.021	1.000	16881		1.68(0.78-2.35)		75.0	
33 BTS										
280.00 > 147.00	6.200	6.220	-0.020	0.955	67615	0.0478		97.7	188	
* 34 13C4 PFOA										
417.10 > 372.00	6.250	6.269	-0.019		5998217	5.00			4402	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.250	6.269	-0.019	1.000	2187719	1.90		95.2	5574	
36 PFOA										
413.00 > 369.00	6.250	6.269	-0.019	1.000	30652	0.0532	Target=1.59	106	37.7	
413.00 > 169.00	6.250	6.269	-0.019	1.000	22007		1.39(0.80-2.39)		22.1	
37 7:3 FTCA										
441.00 > 316.90	6.407	6.407	0.0	1.185	9758	0.2051	Target=0.24	82.0	2897	
441.00 > 336.90	6.407	6.407	0.0	1.185	44776		0.22(0.12-0.36)		285	
40 PFHxS										
398.70 > 79.90	6.489	6.512	-0.023	1.000	28167	0.0484	Target=3.08	106	47.6	
398.70 > 98.90	6.501	6.512	-0.011	1.002	10474		2.69(1.54-4.62)		20.9	
D 38 13C3 PFHxS										
402.10 > 79.90	6.489	6.512	-0.023	1.000	1452516	1.81		95.2	3456	
* 39 18O2 PFHxS										
403.00 > 83.90	6.489	6.512	-0.023		1397012	1.90			8662	
* 42 13C5 PFNA										
468.00 > 423.00	6.664	6.684	-0.020		1832537	2.00			2992	
D 41 13C9 PFNA										
472.10 > 427.00	6.664	6.684	-0.020	1.000	1884008	2.06		103	3381	
43 PFNA										
463.00 > 419.00	6.674	6.694	-0.020	1.001	42420	0.0495	Target=1.95	99.1	49.0	
463.00 > 219.00	6.664	6.694	-0.030	1.000	19194		2.21(0.97-2.92)		28.5	
45 8:2FTS										
527.10 > 507.00	6.851	6.868	-0.017	1.000	23185	0.1030	Target=1.86	107	7914	
527.10 > 80.80	6.851	6.868	-0.017	1.000	11530		2.01(0.93-2.79)		51.7	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.851	6.868	-0.017	1.056	646451	3.79		79.0	1434	
46 PFECHS										
461.00 > 381.00	6.886	6.914	-0.028	1.061	8345	0.0477	Target=0.18	103	58.2	
461.00 > 99.00	6.886	6.914	-0.028	1.061	42761		0.20(0.09-0.27)		317	
47 PFHpS										
449.00 > 79.90	6.925	6.945	-0.020	0.943	39236	0.0482	Target=3.60	101	117	
449.00 > 98.80	6.925	6.945	-0.020	0.943	11284		3.48(1.80-5.40)		96.0	
50 NMeFOSAA										
570.10 > 419.00	7.017	7.037	-0.020	1.000	12233	0.0424	Target=1.80	84.9	18.5	
570.10 > 483.00	7.017	7.037	-0.020	1.000	8241		1.48(0.90-2.71)		12.7	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.017	7.037	-0.020	0.955	1467019	5.14		103	2971	
53 PFDA										
512.90 > 469.00	7.077	7.107	-0.029	1.000	29896	0.0596	Target=2.75	119	127	
512.90 > 219.00	7.087	7.107	-0.019	1.001	8020		3.73(1.37-4.12)		2239	
* 51 13C2 PFDA										
515.10 > 470.10	7.077	7.107	-0.029		1782772	2.00			4430	
D 52 13C6 PFDA										
519.10 > 474.10	7.077	7.107	-0.029	1.000	1804582	2.03		102	2459	
48 FHxSA										
397.90 > 78.00	7.126	7.126	0.0	1.098	49723	0.0488		97.5	319	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.201	7.219	-0.018	0.980	1312584	5.02		100	2062	
55 NEtFOSAA										
584.20 > 419.10	7.201	7.238	-0.037	1.000	9887	0.0427	Target=1.26	85.4	21.0	
584.20 > 526.00	7.219	7.238	-0.019	1.003	8621		1.15(0.63-1.89)		19.2	
* 57 13C4 PFOS										
502.80 > 79.90	7.352	7.373	-0.021		1142896	1.92			2817	
D 56 13C8 PFOS										
507.10 > 79.90	7.341	7.373	-0.032	0.999	1242423	1.87		97.8	4585	
58 PFOS										
498.90 > 79.90	7.352	7.373	-0.021	1.001	43187	0.0483	Target=4.39	104	74.5	
498.90 > 98.80	7.363	7.373	-0.010	1.003	9057		4.77(2.19-6.58)		25.0	
D 59 13C7 PFUnA										
570.00 > 525.10	7.497	7.506	-0.009	1.059	1943031	2.10		105	5232	
60 PFUnA										
563.10 > 519.00	7.497	7.515	-0.018	1.000	28045	0.0530	Target=3.76	106	214	
563.10 > 269.10	7.488	7.515	-0.027	0.999	7868		3.56(1.88-5.63)		69.6	
61 9ClFOS										
530.80 > 351.00	7.669	7.686	-0.017	1.045	91056	0.0494	Target=3.06	106	565	
532.80 > 353.00	7.660	7.686	-0.026	1.044	29485		3.09(1.53-4.59)		380	
62 PFNS										
548.80 > 79.90	7.758	7.788	-0.030	1.057	25307	0.0453	Target=3.67	94.3	301	
548.80 > 98.80	7.758	7.788	-0.030	1.057	7096		3.57(1.83-5.50)		97.4	
D 81 PFDoA										
615.10 > 570.00	7.903	7.935	-0.032	1.117	1844894	1.99		99.6	4800	
63 PFDoA										
613.10 > 569.00	7.903	7.935	-0.032		36035	0.0567	Target=4.73	113	234	
613.10 > 319.00	7.903	7.935	-0.032		6589		5.47(2.36-7.09)		53.9	
D 65 13C8 FOSA										
506.10 > 77.80	8.145	8.155	-0.010	1.108	1462787	2.07		103	2479	
64 PFOSA										M
498.10 > 77.90	8.145	8.155	-0.010	1.000	41038	0.0494	Target=41.75	98.7	79.8	M
498.10 > 478.00	8.145	8.155	-0.010	1.000	891		46.06(20.87-62.62)		2.3	M
66 PFDS										
599.00 > 79.90	8.164	8.196	-0.032	1.112	36333	0.0519	Target=3.69	108	310	
599.00 > 98.80	8.154	8.196	-0.042	1.111	9308		3.90(1.84-5.53)		126	
67 PFTrDA										
663.00 > 619.00	8.309	8.345	-0.036	0.957	38242	0.0533	Target=5.83	107	149	
663.00 > 168.90	8.309	8.345	-0.036	0.957	5178		7.39(2.91-8.74)		38.8	
68 11ClFOS										
630.90 > 450.90	8.470	8.504	-0.034	1.152	53914	0.0465	Target=3.21	98.5	516	
632.90 > 452.90	8.470	8.504	-0.034	1.152	18763		2.87(1.60-4.81)		276	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.684	8.722	-0.038	1.227	1531484	1.80		90.0	4476	
69 PFTeDA										
713.10 > 168.90	8.684	8.722	-0.038	1.000	5072	0.0572	Target=0.83	114	56.7	
713.10 > 219.00	8.694	8.722	-0.028	1.001	4848		1.05(0.41-1.24)		43.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.887	8.917	-0.030	1.211	34750	0.0483	Target=4.20	99.7	248	
699.10 > 98.80	8.872	8.917	-0.045	1.209	7249		4.79(2.10-6.30)		82.3	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.944	8.945	-0.001	1.217	254589	5.43		109	852	
73 N-MeFOSE-M										
616.10 > 58.90	8.958	8.974	-0.016	1.002	36271	0.2659		106	64.1	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.055	9.057	-0.002	1.232	414748	2.02		101	2339	
74 NMeFOSA										
511.90 > 219.00	9.055	9.057	-0.002	1.000	9446	0.0512	Target=0.68	102	51.4	
511.90 > 169.00	9.069	9.057	0.012	1.001	14135		0.67(0.34-1.03)		51.6	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.162	9.176	-0.014	1.246	291889	5.46		109	454	
77 N-EtFOSE-M										
630.00 > 58.90	9.187	9.189	-0.002	1.003	45188	0.2493		99.7	86.4	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.251	9.252	-0.001	1.258	512585	2.04		102	1941	
79 N-EtFOSA-M										
526.00 > 219.00	9.251	9.265	-0.014	1.000	10944	0.0500	Target=0.85	100	46.2	
526.00 > 169.00	9.251	9.265	-0.014	1.000	12620		0.87(0.43-1.28)		60.8	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.572	9.645	-0.073	1.102	24642	0.0240	Target=16.56	48.0	735	
913.00 > 169.00	9.572	9.645	-0.073	1.102	1296		19.01(8.28-24.84)		100	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_CAL1_00080 Amount Added: 1.00 Units: mL

Report Date: 18-Feb-2026 14:30:18 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-01.d

Injection Date: 18-Feb-2026 09:44:37 Instrument ID: 30577

Lims ID: CCVO 1_CAL1

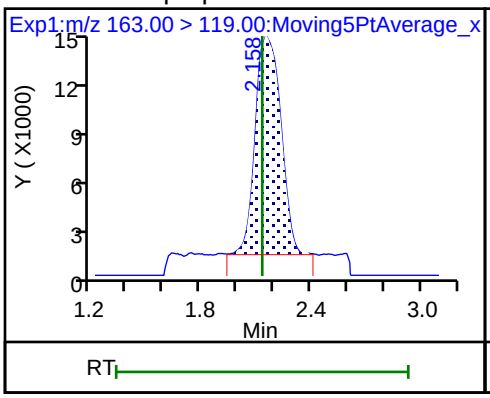
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Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 2 Worklist Smp#: 1

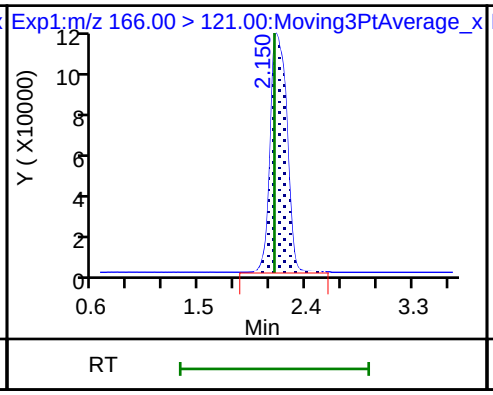
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

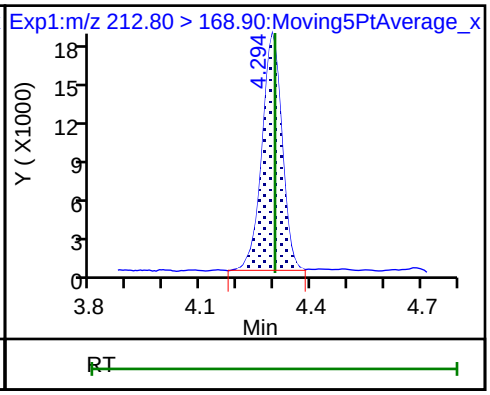
2 Perfluoropropionic acid



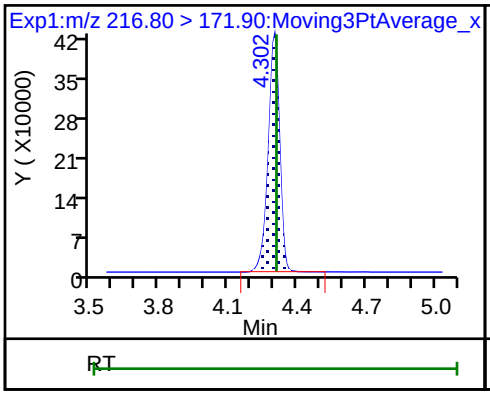
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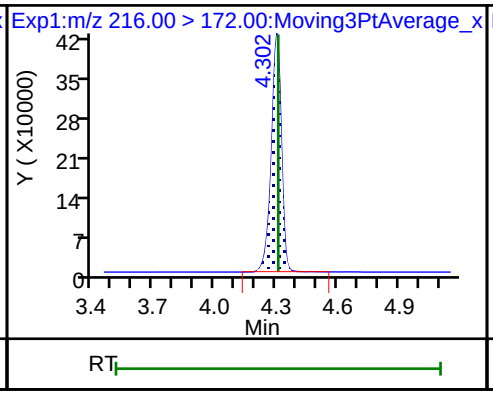
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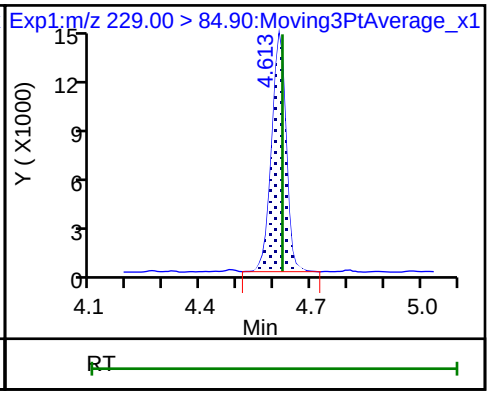
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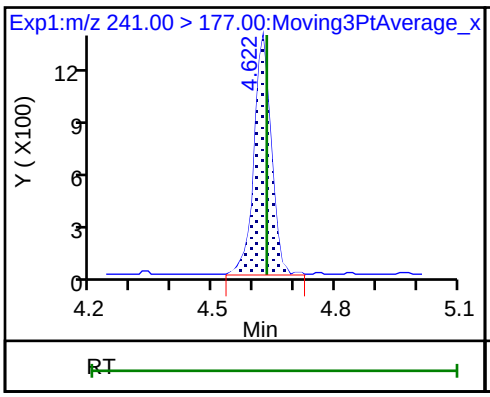
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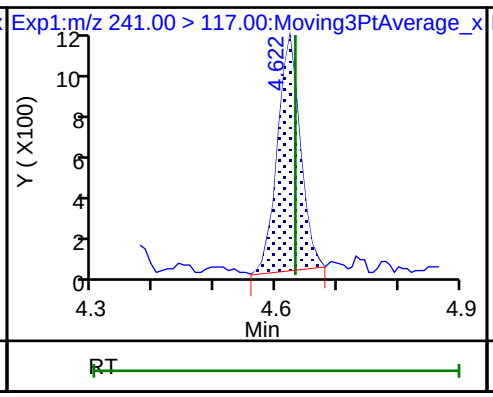
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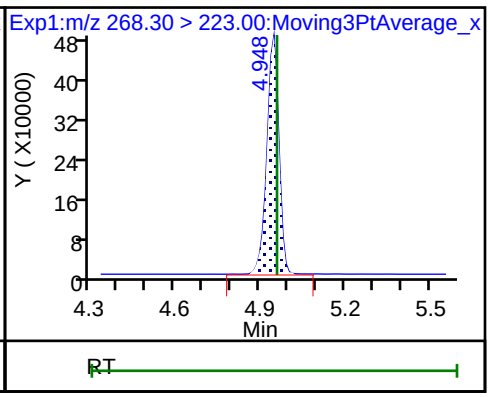
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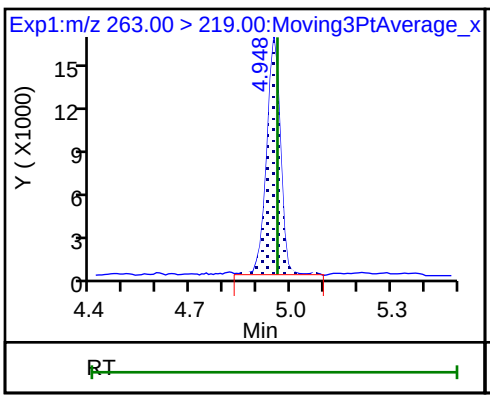
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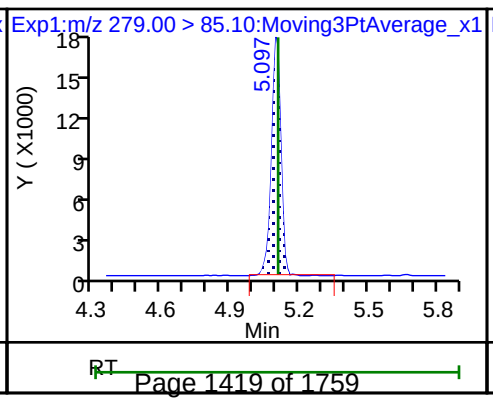
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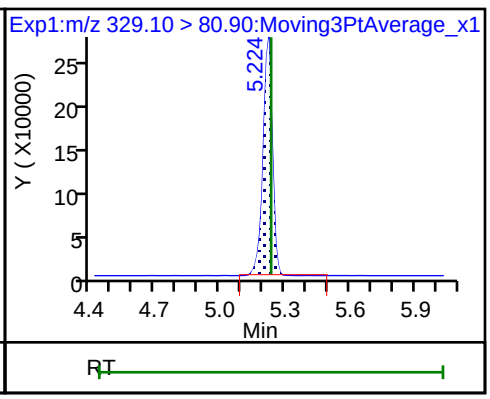
9 PFPA



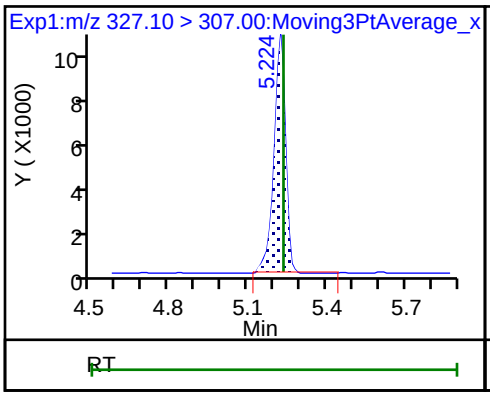
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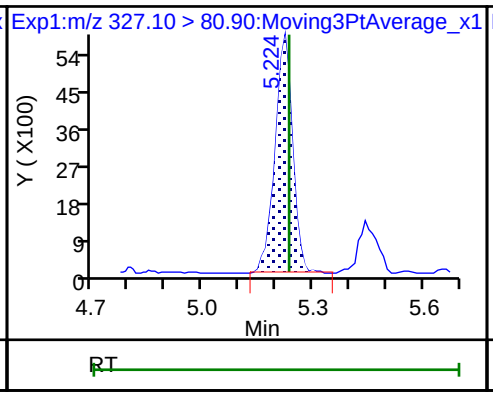
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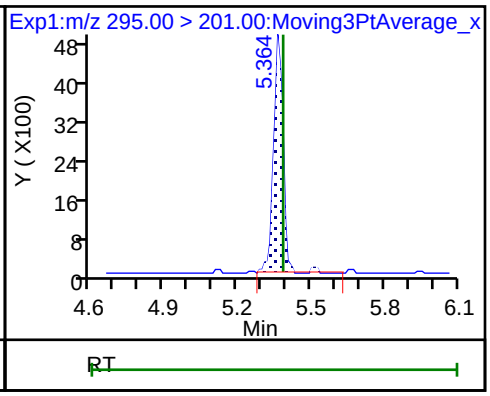
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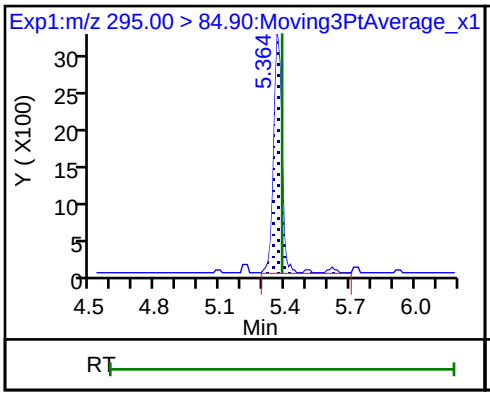
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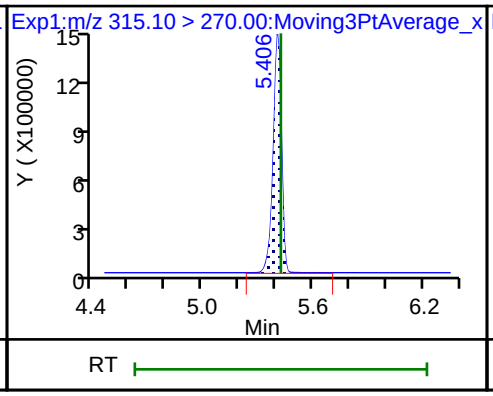
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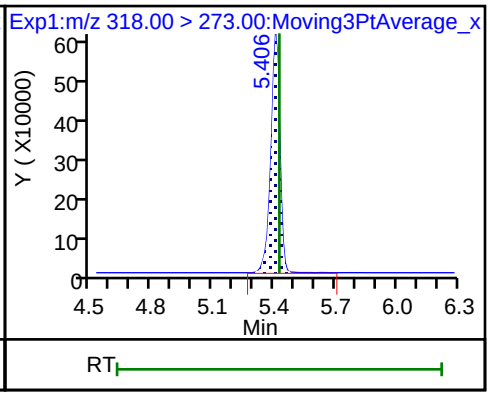
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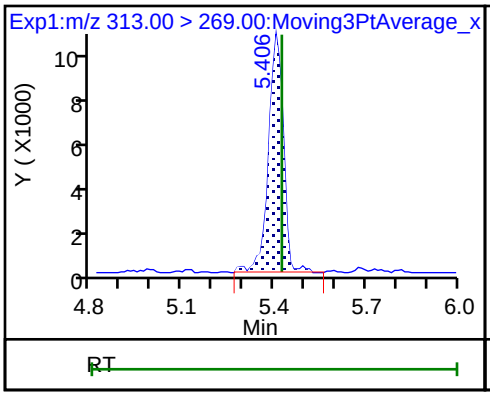
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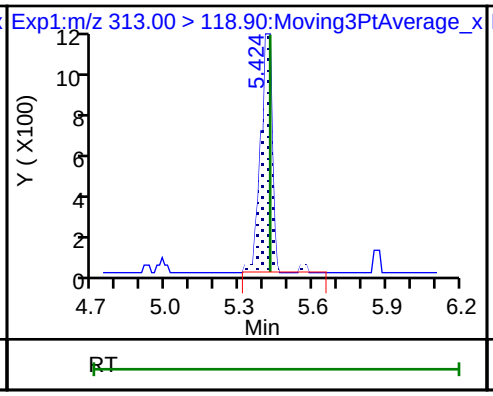
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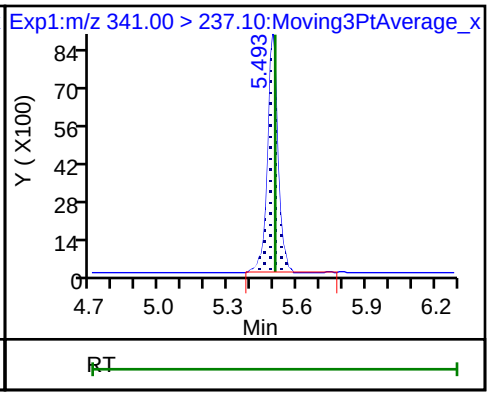
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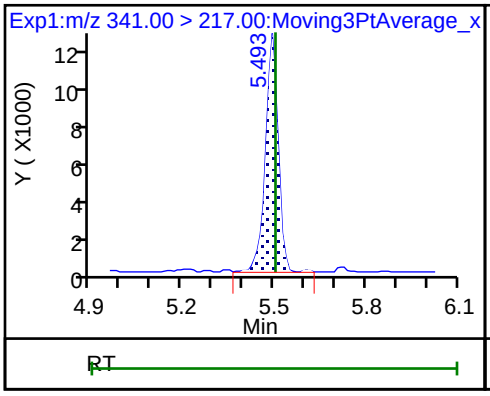
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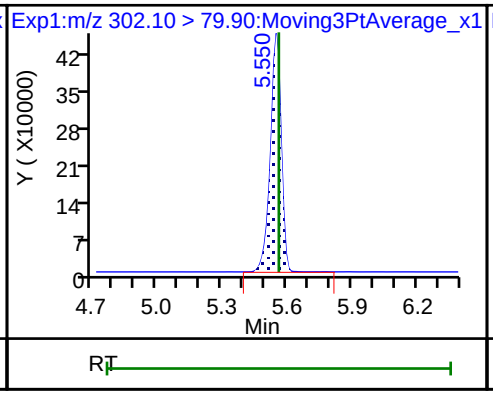
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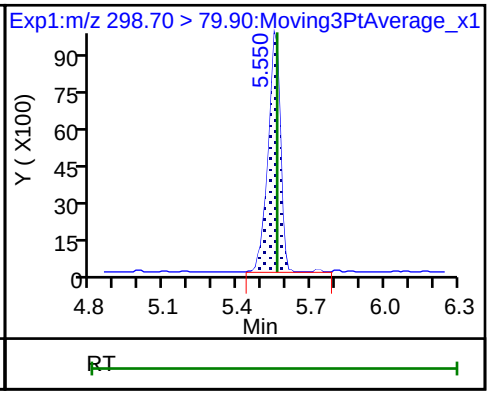
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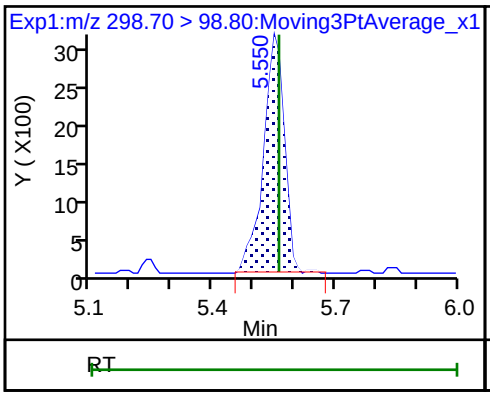
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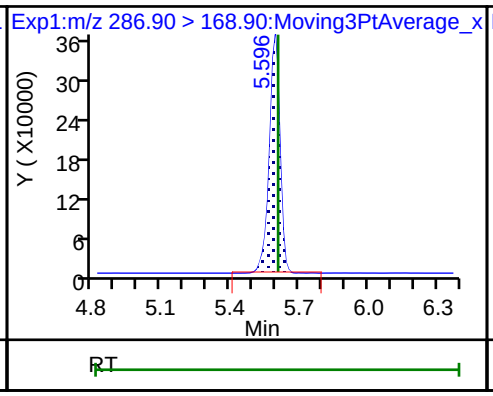
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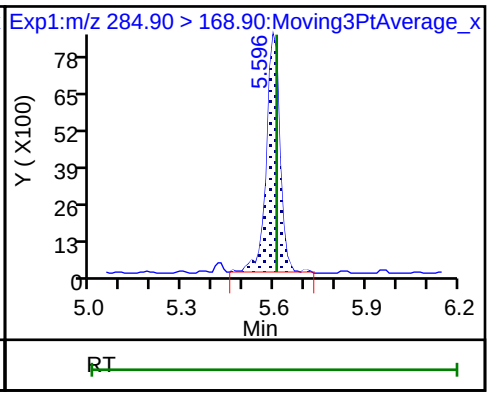
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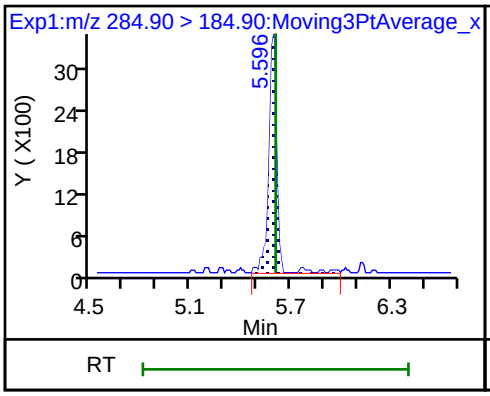
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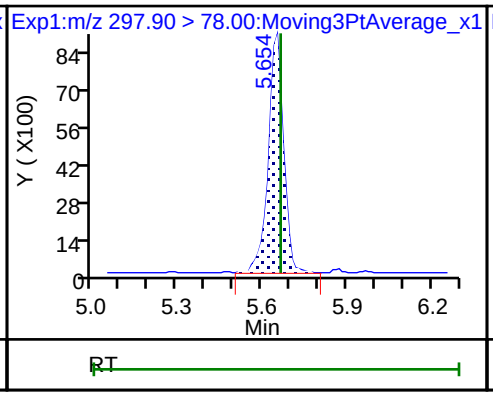
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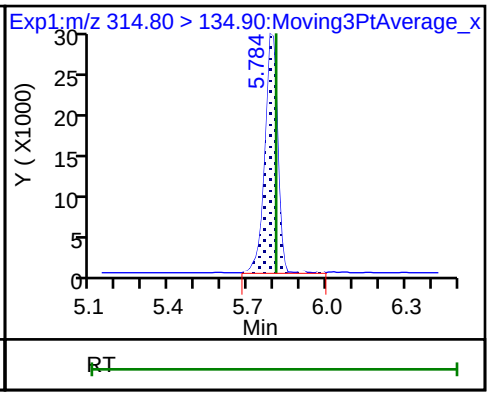
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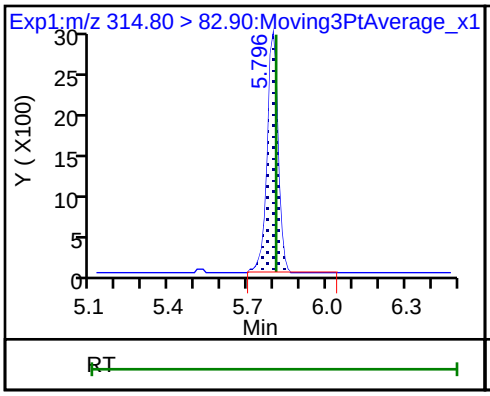
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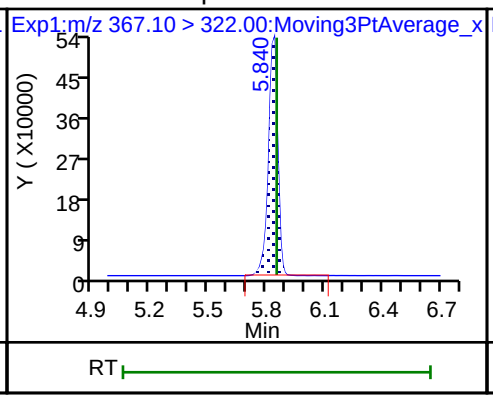
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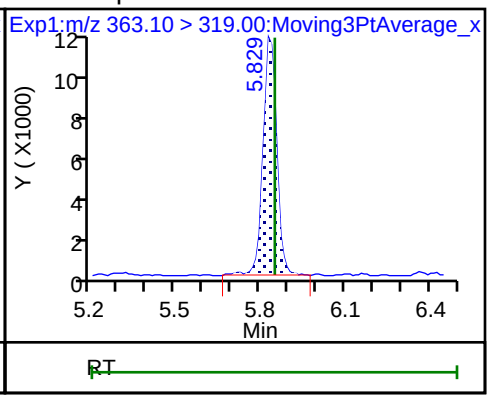
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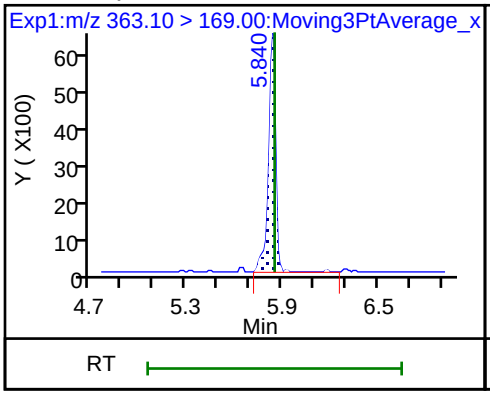
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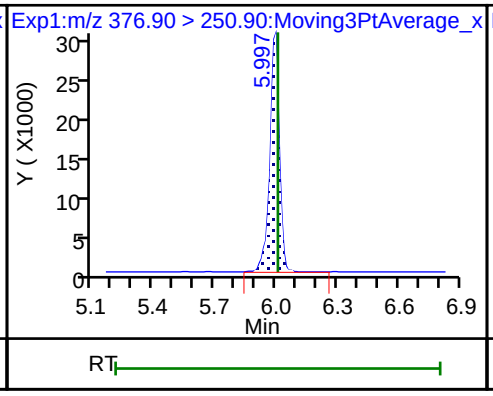
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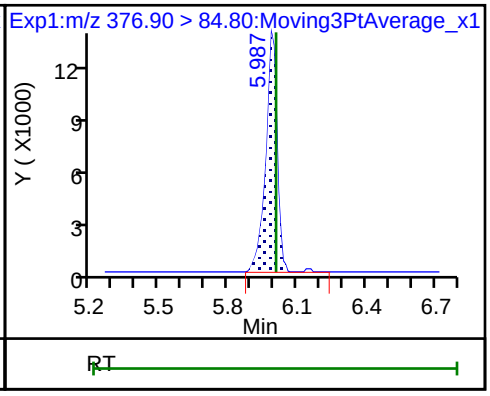
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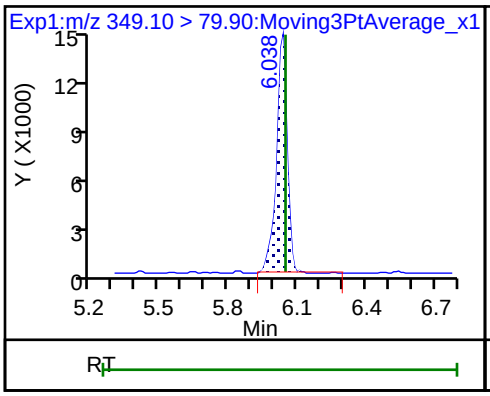
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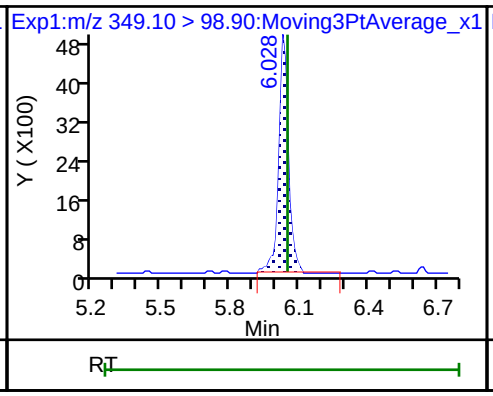
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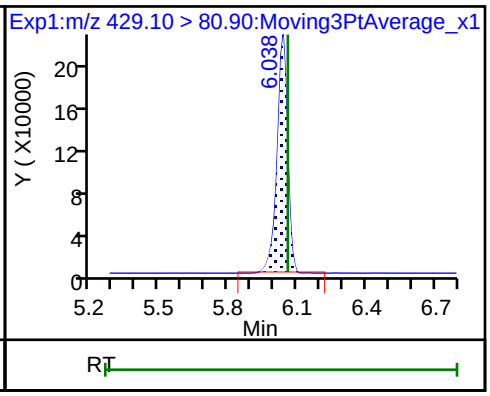
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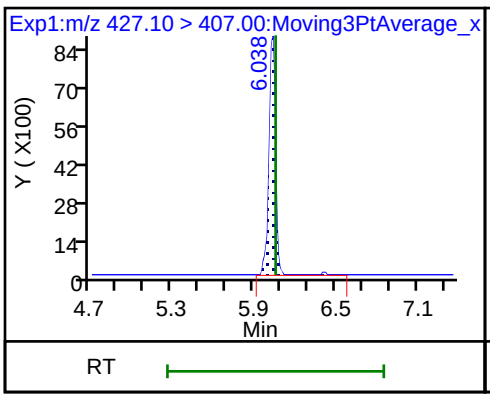
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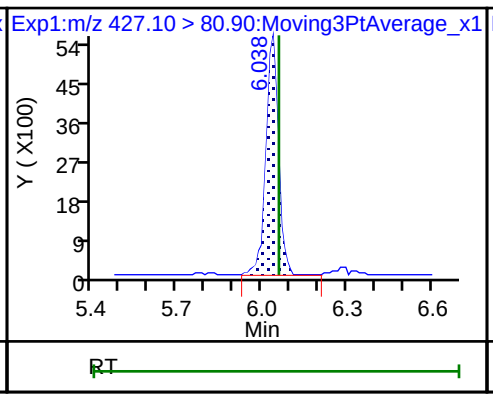
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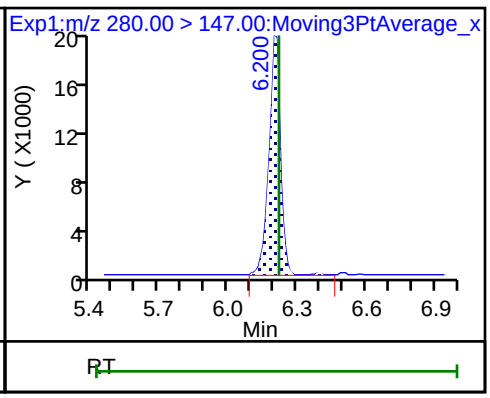
31 6:2FTS



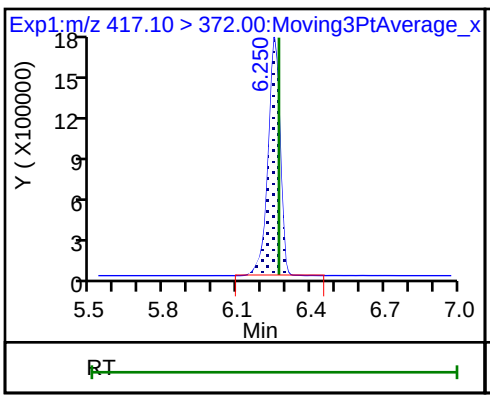
31 6:2FTS



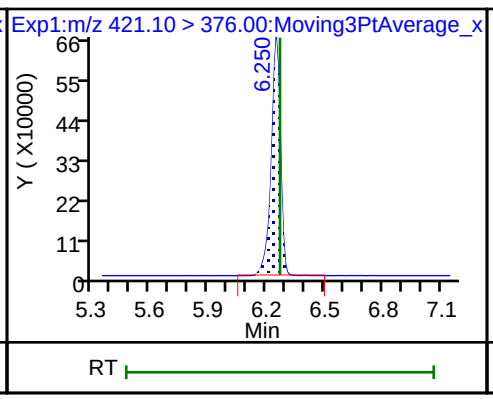
33 BTS



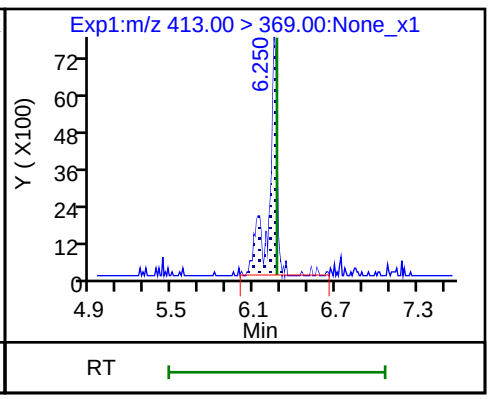
* 34 13C4 PFOA



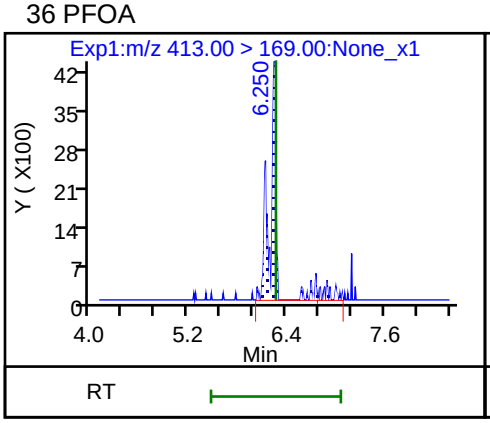
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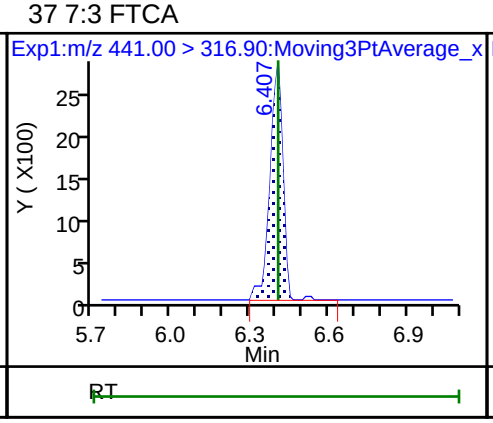
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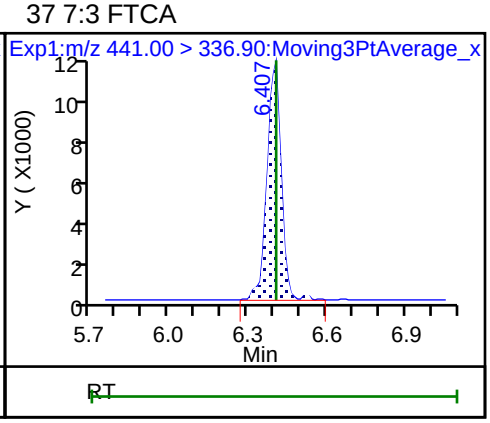
36 PFOA



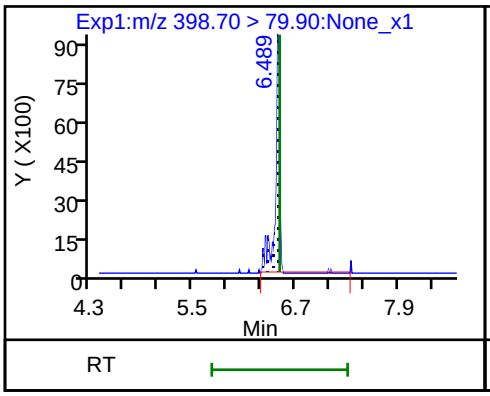
37 7:3 FTCA



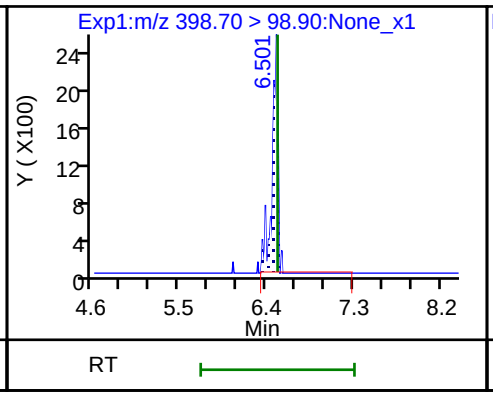
37 7:3 FTCA



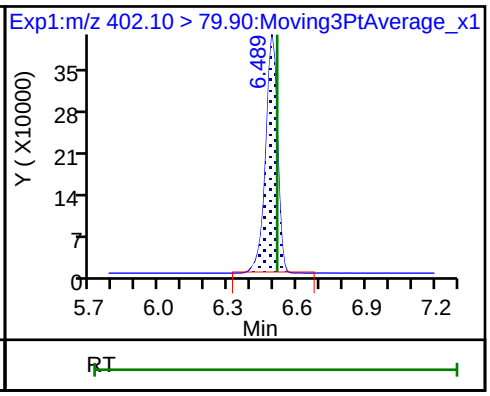
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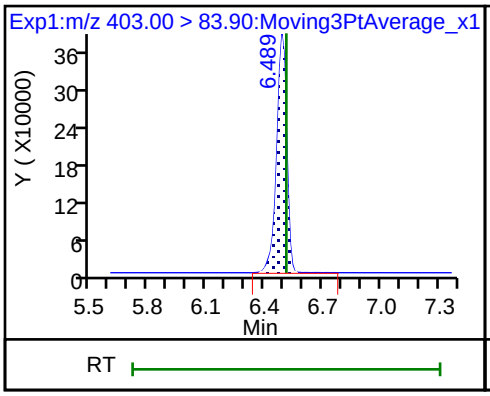
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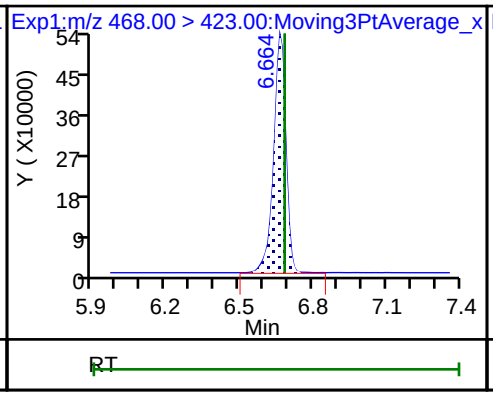
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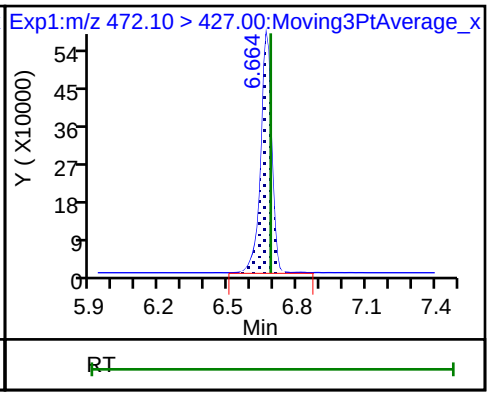
* 39 18O2 PFHxS



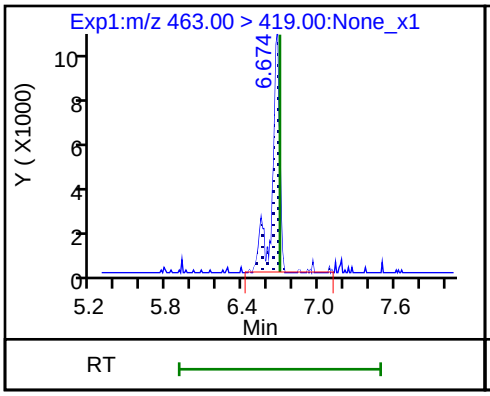
* 42 13C5 PFNA



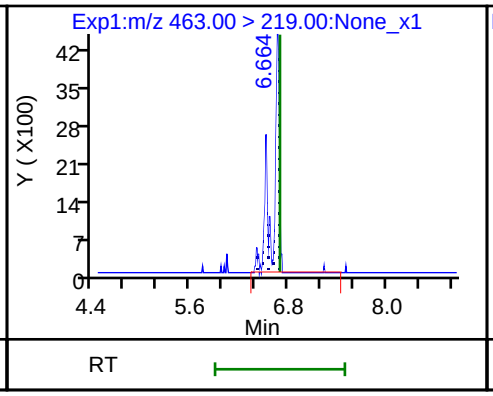
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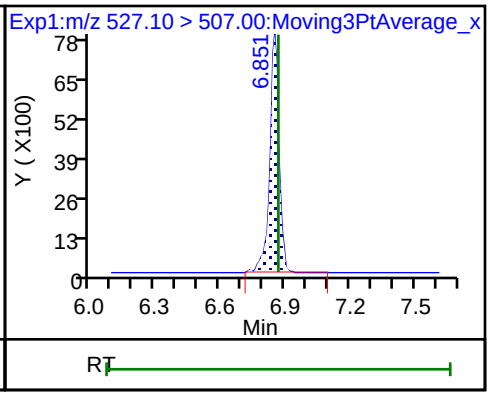
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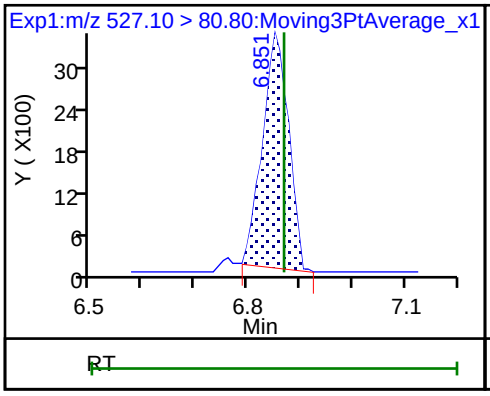
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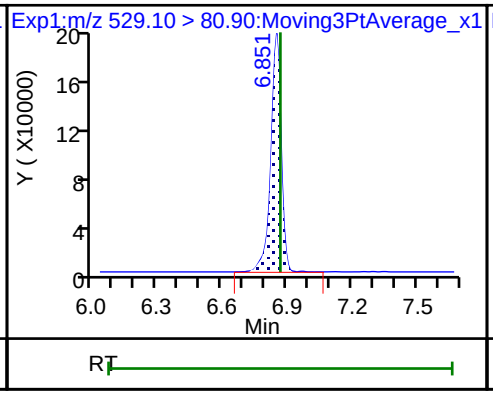
45 8:2FTS



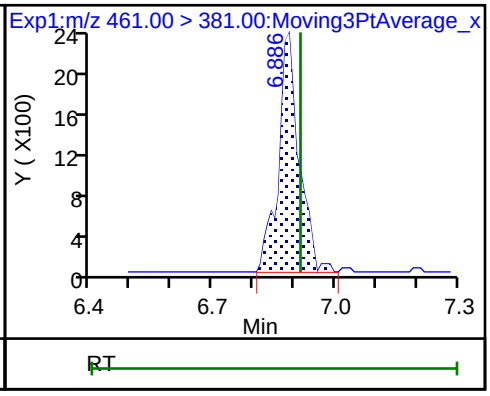
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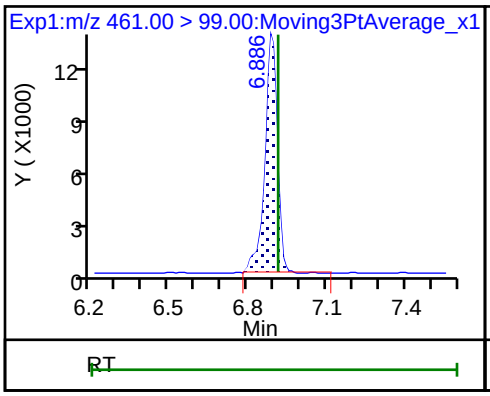
D 44 13C2-8:2FTS



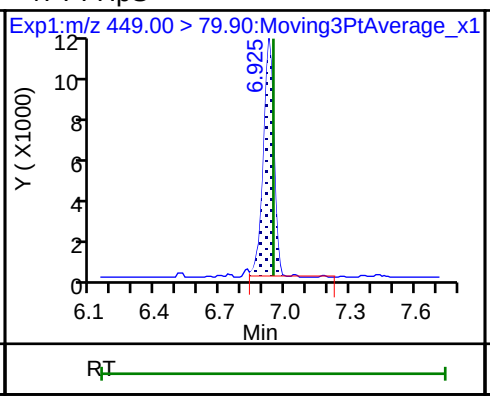
46 PFECHS



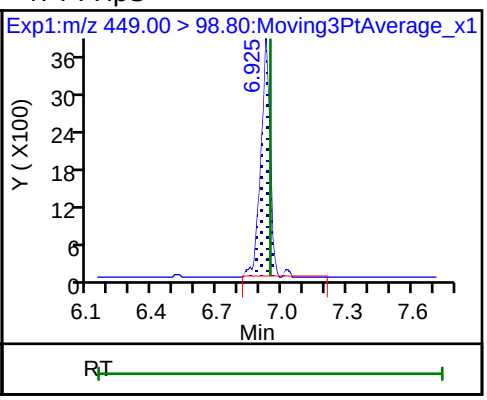
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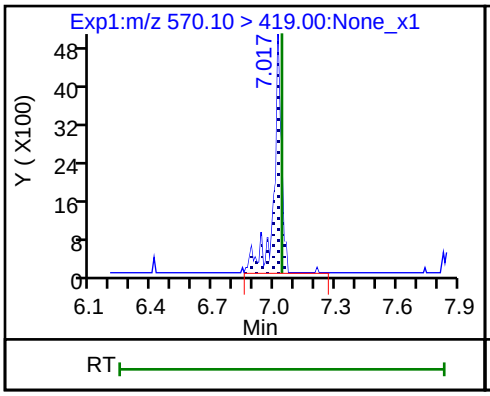
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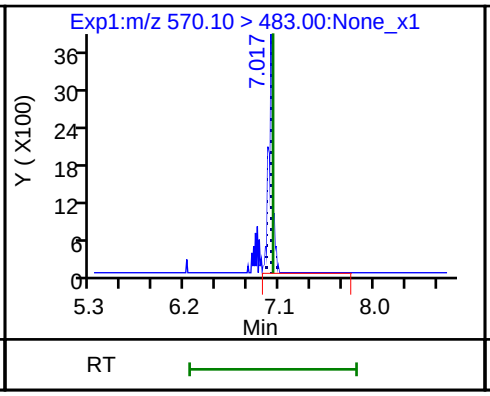
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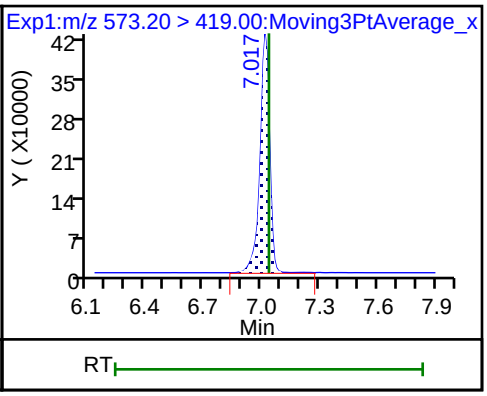
50 NMeFOSAA



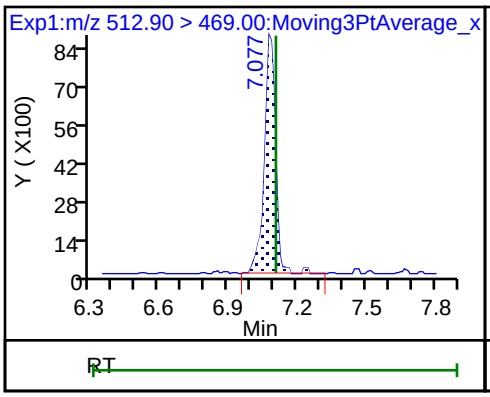
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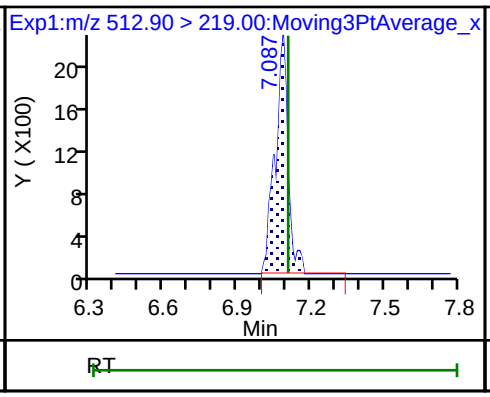
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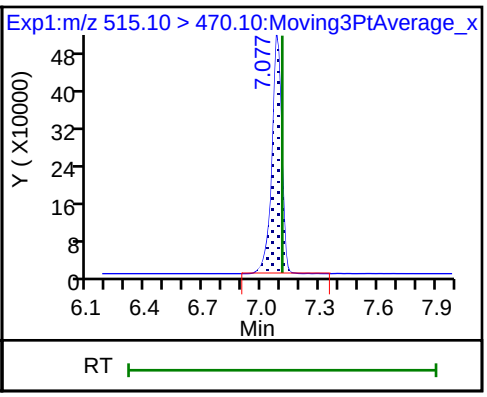
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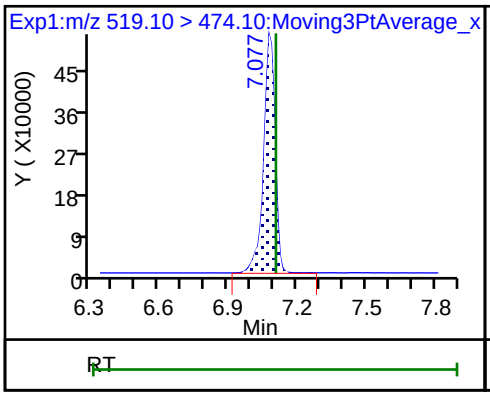
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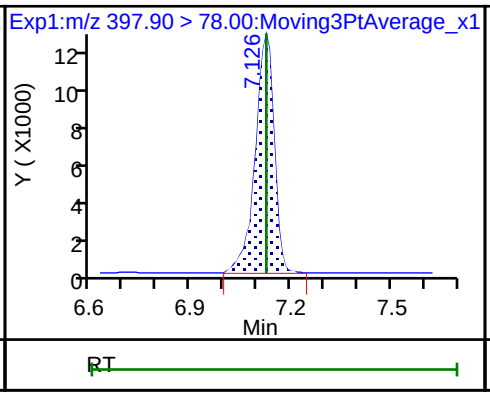
* 51 13C2 PFDA



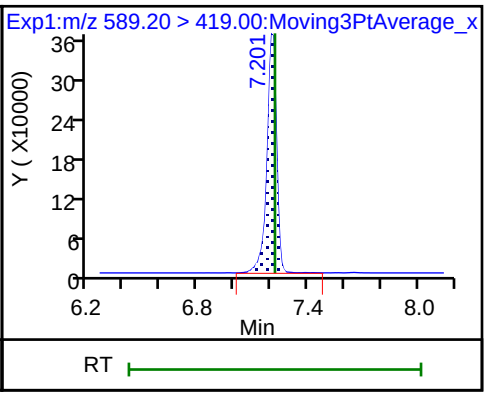
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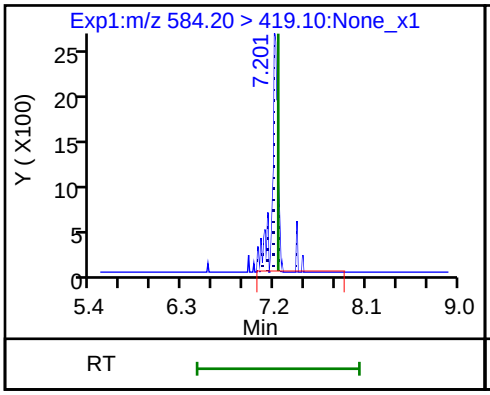
48 FHxSA



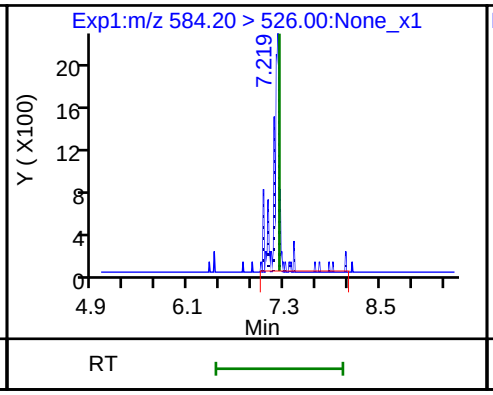
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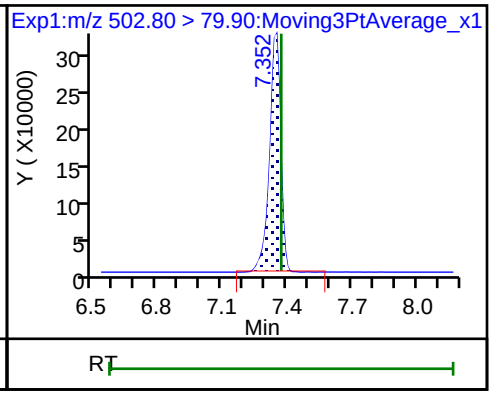
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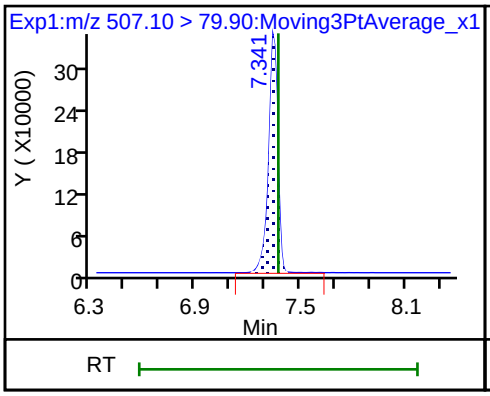
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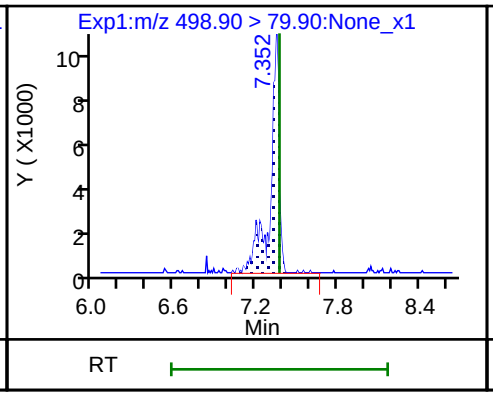
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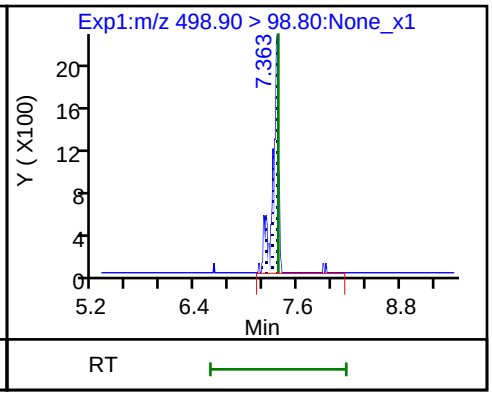
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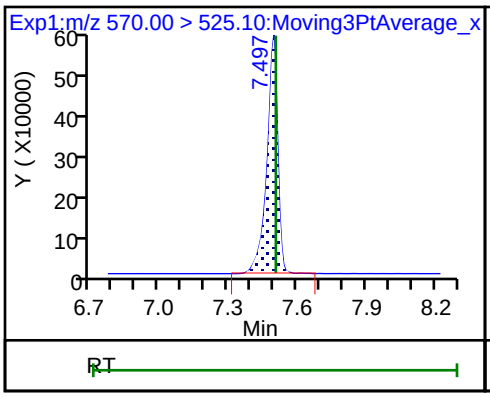
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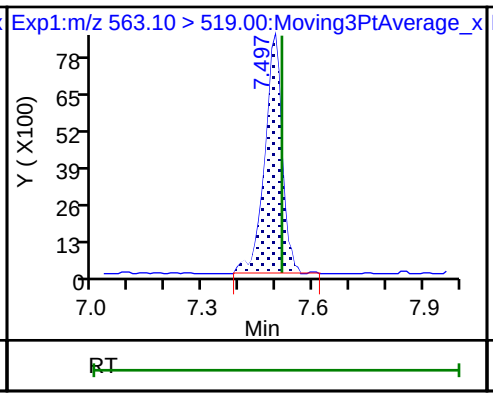
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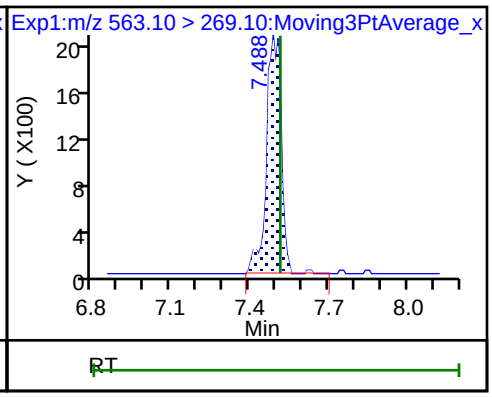
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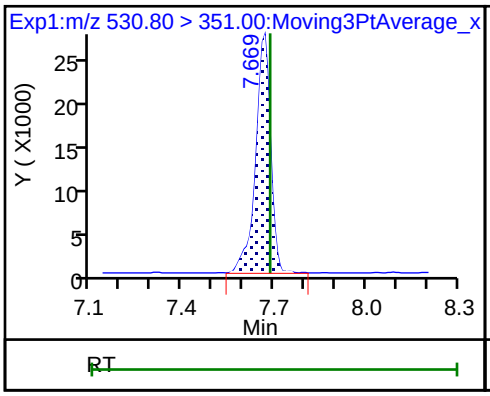
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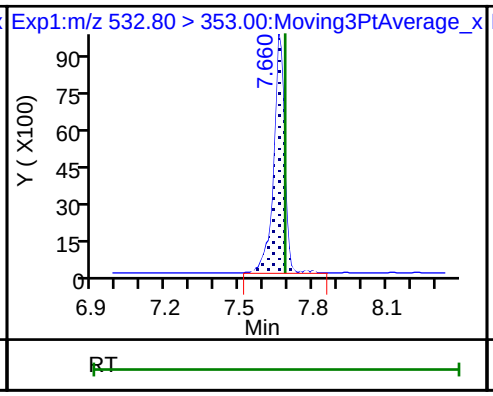
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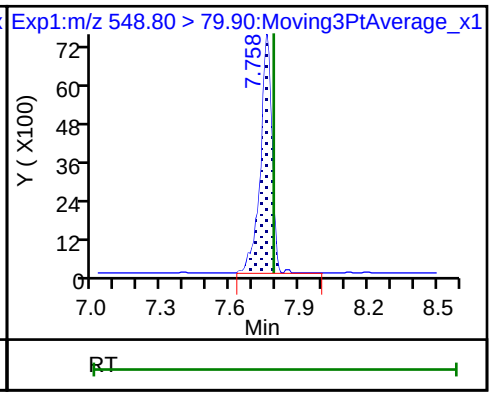
61 9ClFOS



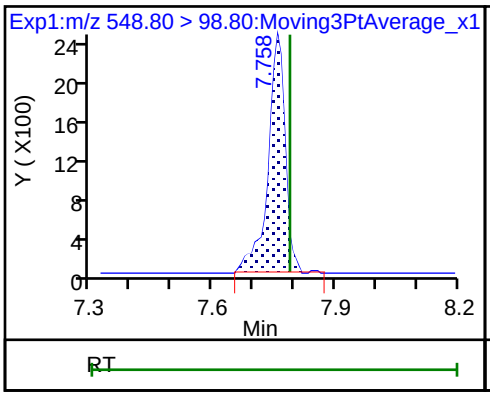
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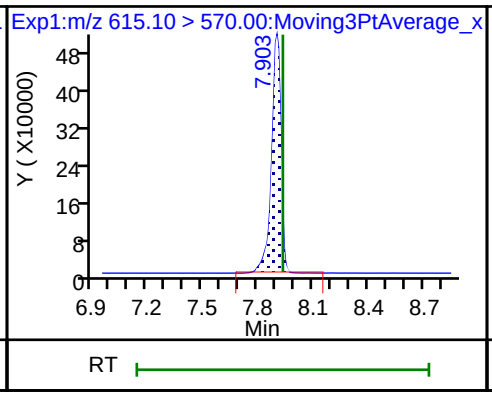
62 PFNS



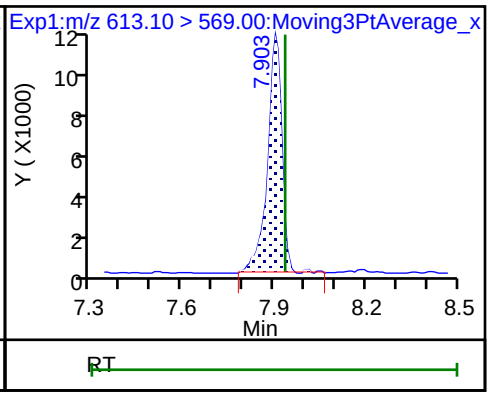
62 PFNS



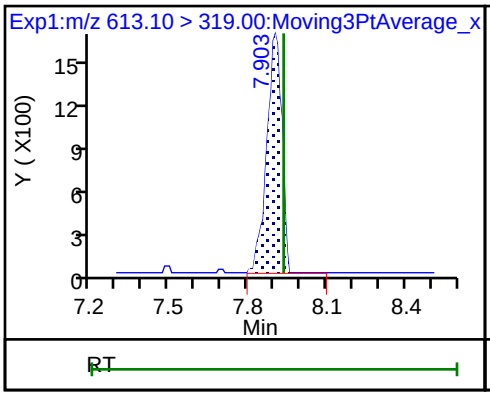
D 81 PFDoA



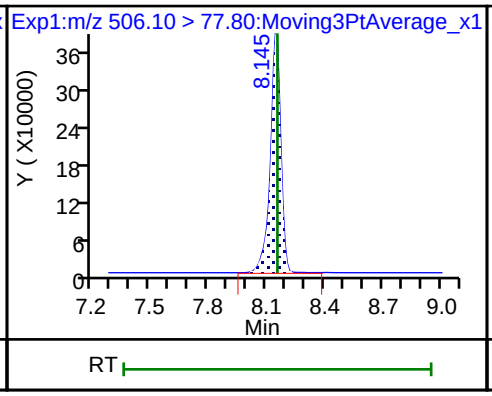
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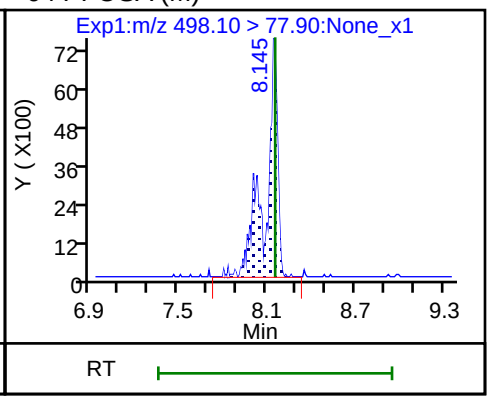
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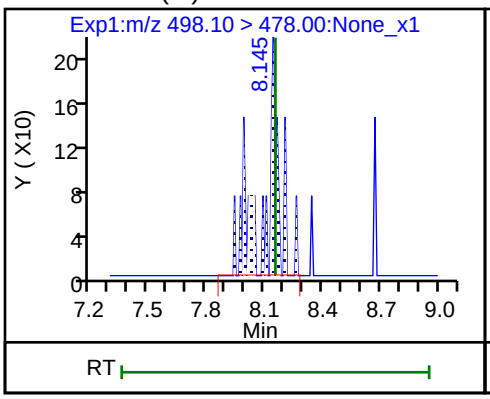
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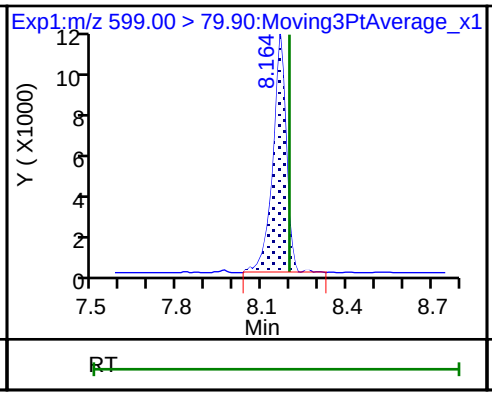
64 PFOSA (M)



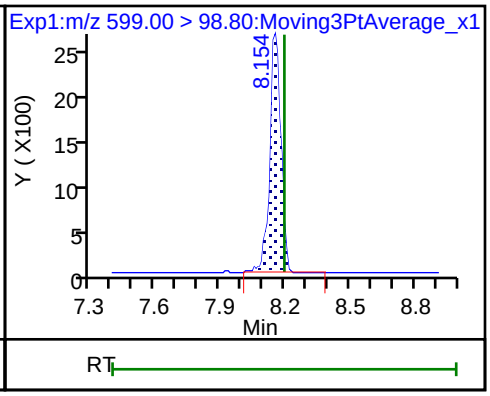
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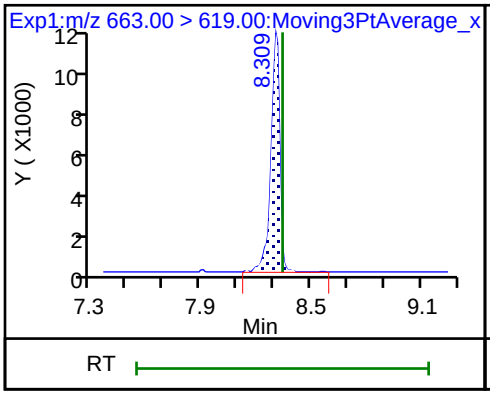
66 PFDS



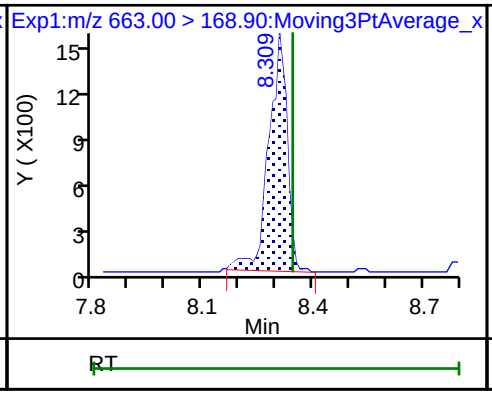
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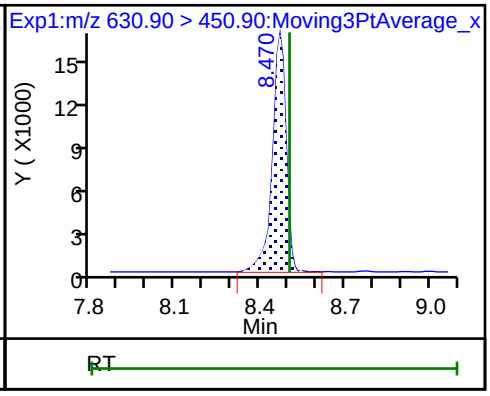
67 PFTrDA



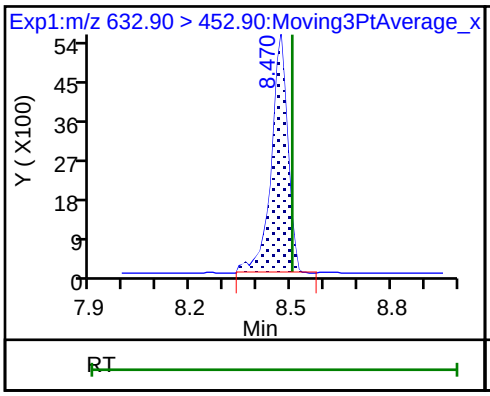
67 PFTrDA



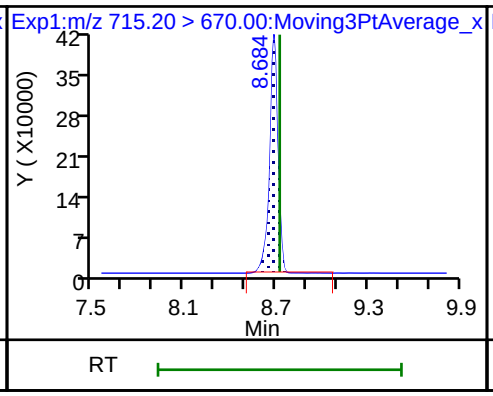
68 11ClFOS



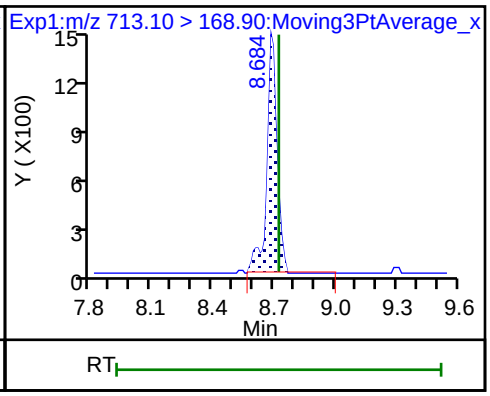
68 11ClFOS



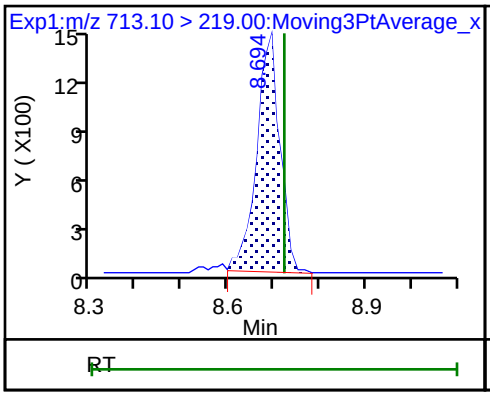
D 70 13C2 PFTeDA



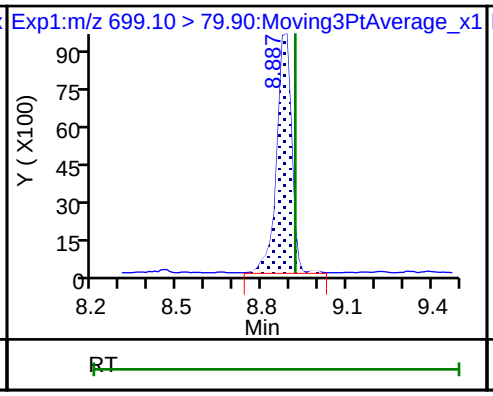
69 PFTeDA



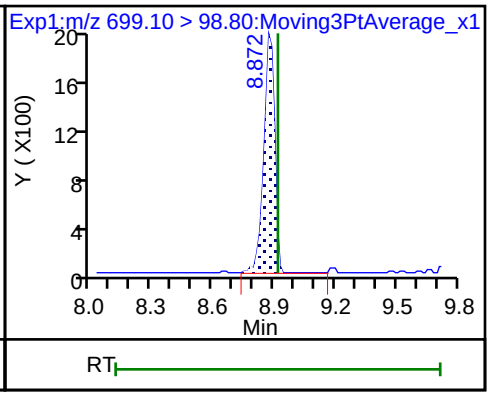
69 PFTeDA



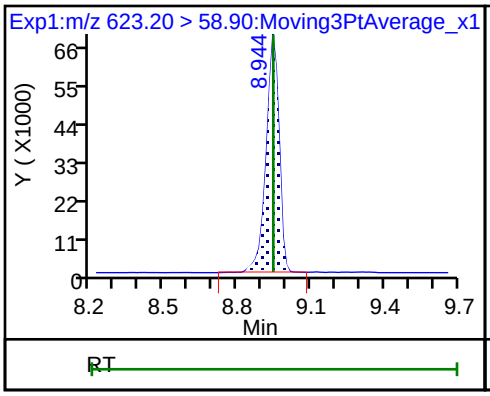
71 PFDoS



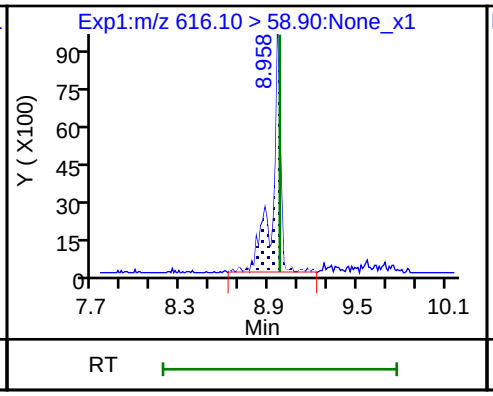
71 PFDoS



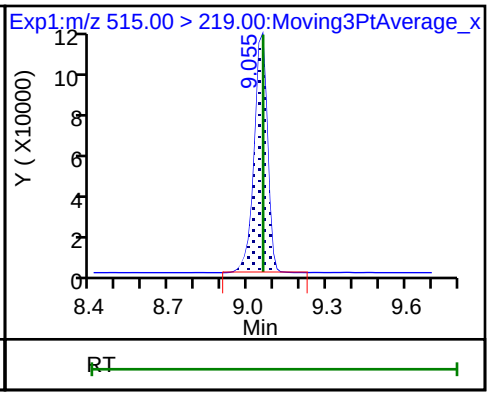
D 72 d7-N-Me-FOSE



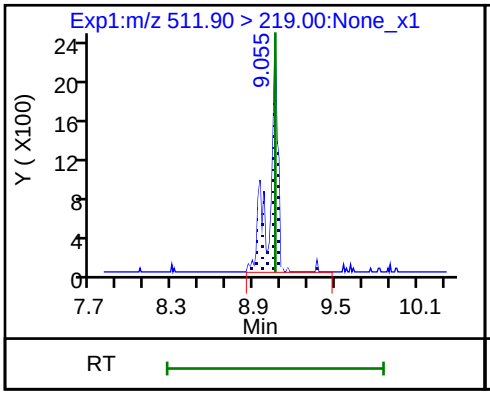
73 N-MeFOSE-M



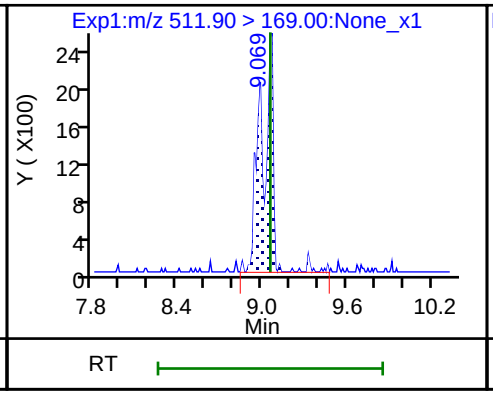
D 75 d3-NMePFOSA



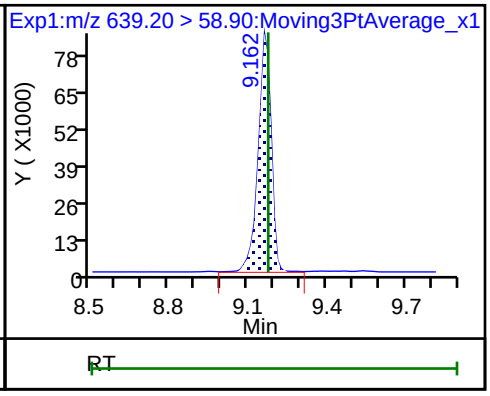
74 NMeFOSA



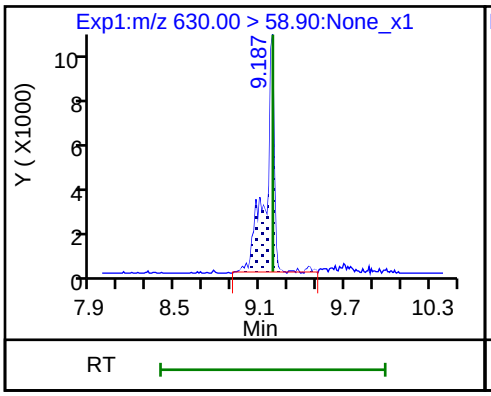
74 NMeFOSA



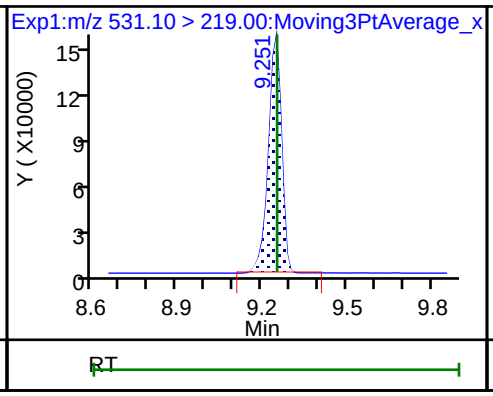
D 76 d9-N-EtFOSE



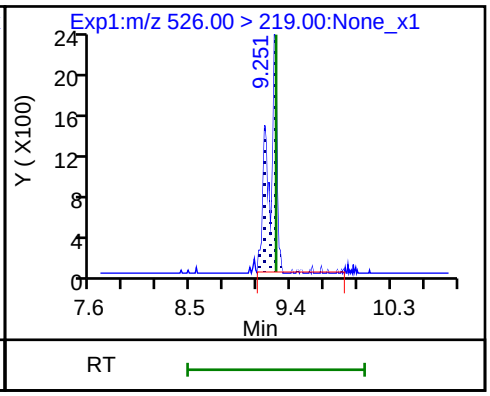
77 N-EtFOSE-M



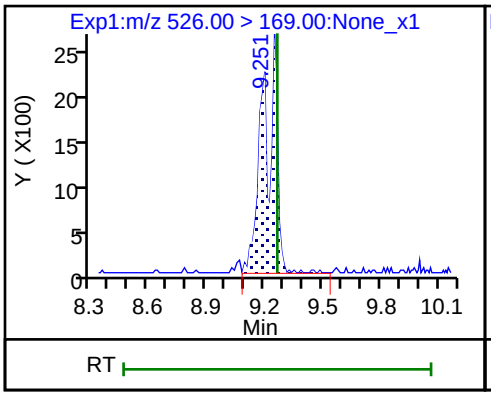
D 78 d5-NEtPFOSA



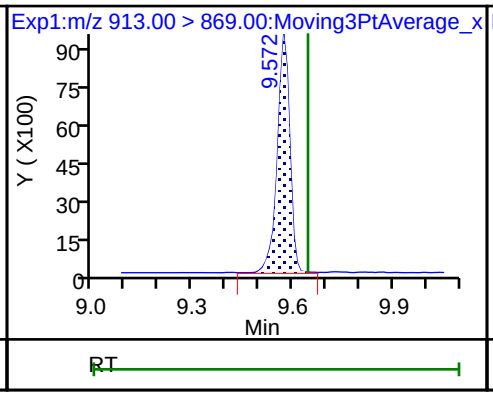
79 N-EtFOSA-M



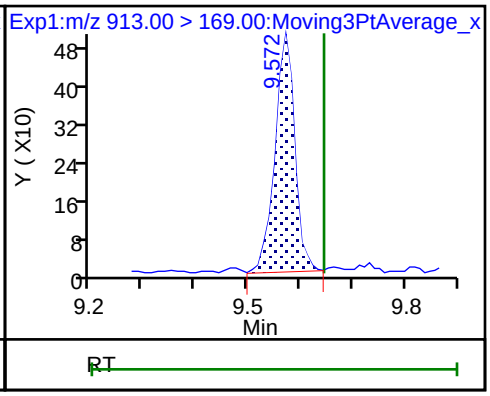
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

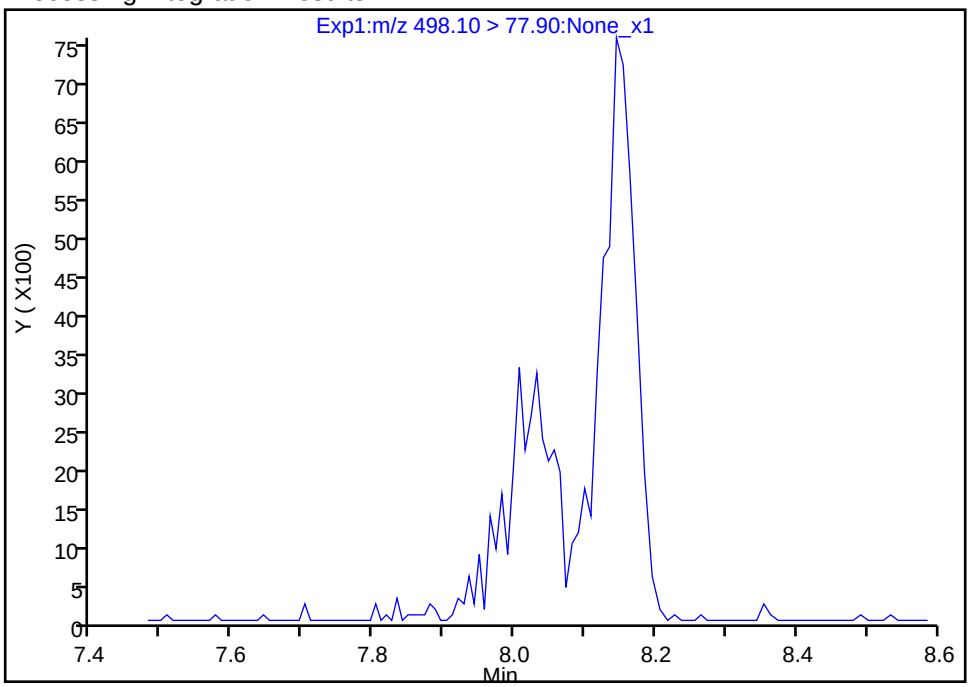
Data File:	\\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-01.d				
Injection Date:	18-Feb-2026 09:44:37	Instrument ID:	30577		
Lims ID:	CCVO 1_CAL1				
Client ID:					
Operator ID:	ETUS023_USR_INS00009	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30577-1633-125	Limit Group:	LC - 1633 LVI- ICAL		
Column:		Detector	EXP1		

64 PFOSA, CAS: 754-91-6

Signal: 1

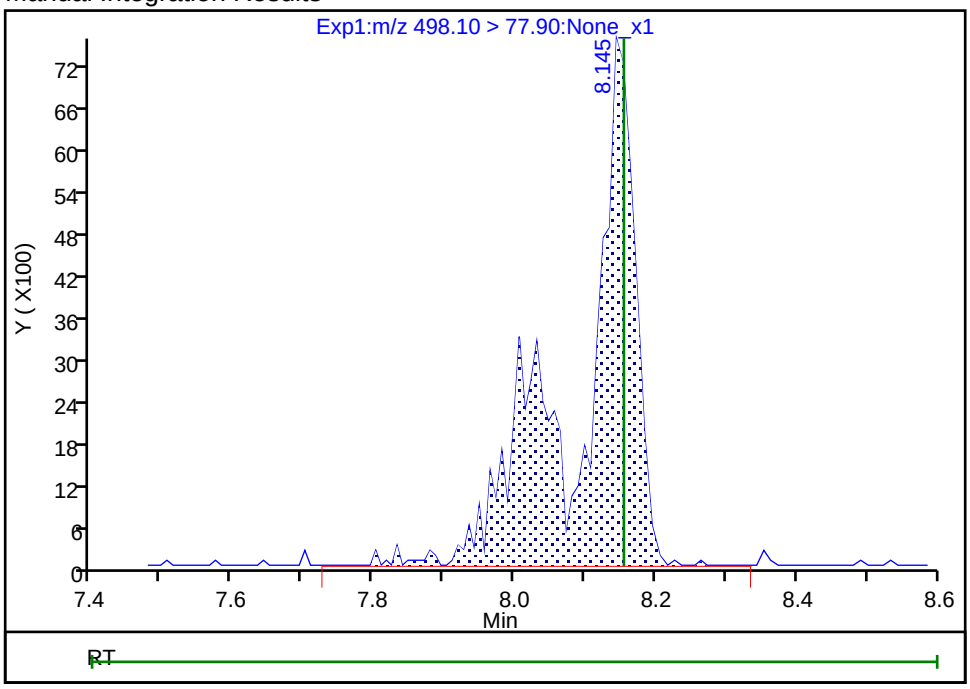
Not Detected
Expected RT: 8.16

Processing Integration Results



Manual Integration Results

RT: 8.14
Area: 41038
Amount: 0.049373
Amount Units: ng/ml



Reviewer: DX7G, 18-Feb-2026 10:42:59 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

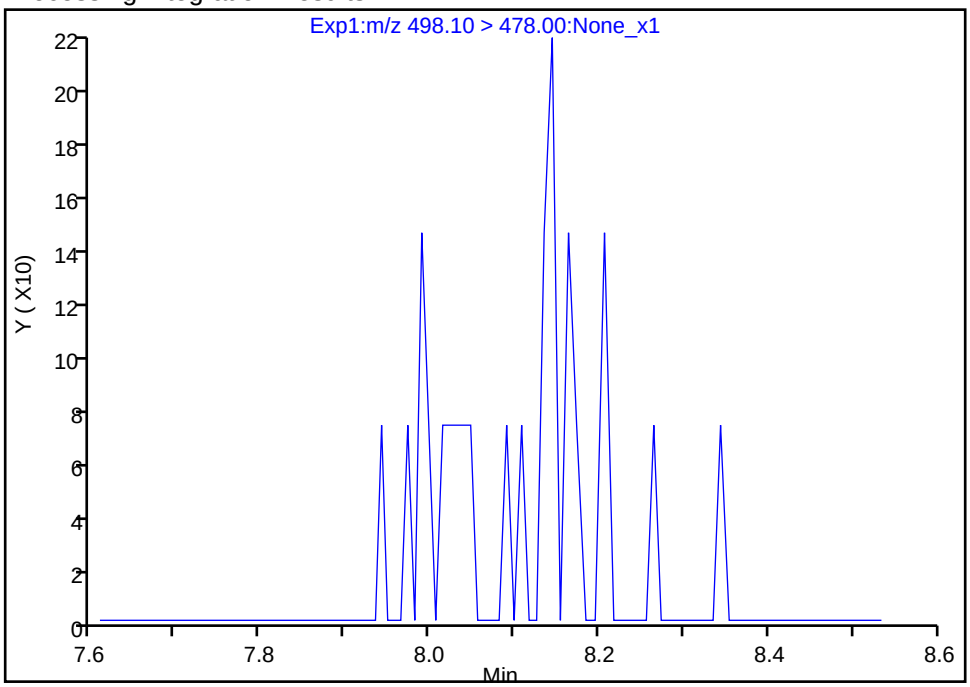
Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-01.d
Injection Date: 18-Feb-2026 09:44:37 Instrument ID: 30577
Lims ID: CCVO 1_CAL1
Client ID:
Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL
Column: Detector EXP1

64 PFOSA, CAS: 754-91-6

Signal: 2

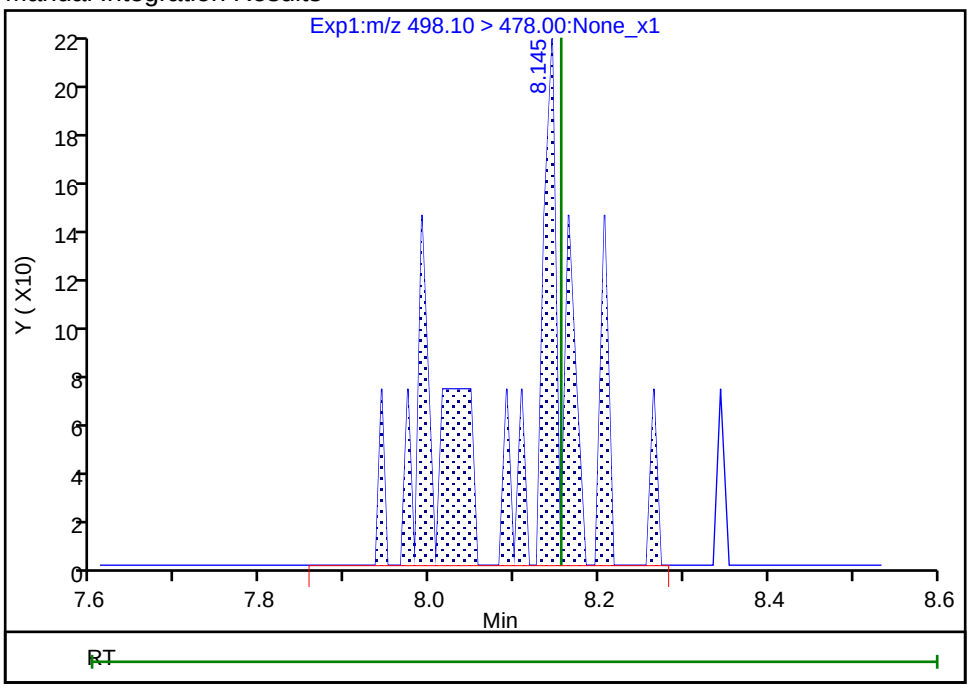
Not Detected
Expected RT: 8.16

Processing Integration Results



Manual Integration Results

RT: 8.14
Area: 891
Amount: 0.049373
Amount Units: ng/ml



Reviewer: DX7G, 18-Feb-2026 10:43:07 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/75 Calibration Date: 02/19/2026 02:43

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-65.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9147	0.8743		4.78	5.00	-4.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.9159	0.8709		1.90	2.00	-5.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.006	0.9253		0.920	1.00	-8.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0516	0.0444		1.72	2.00	-14.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.148	1.067		0.929	1.00	-7.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.347	1.211		0.899	1.00	-10.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.837	1.717		1.75	1.88	-7.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.2742	0.2287		0.834	1.00	-17.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7455	0.7324		0.982	1.00	-2.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.0993	0.0918		4.62	5.00	-8.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8933	0.8115		0.807	0.888	-9.0	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.083	1.030		0.713	0.750	-5.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.7106	0.6567		0.924	1.00	-8.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.424	1.962		0.722	0.892	-19.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.7017	0.7472		1.07	1.00	6.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.440	3.354		0.922	0.946	-3.0	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	1.847	1.825		1.88	1.90	-1.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.132	1.104		0.917	0.940	-2.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	1.846	1.704		0.904	0.979	-8.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.5266	0.4946		0.939	1.00	-6.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0507	0.0433		4.27	5.00	-15.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.7603	0.6979		0.837	0.912	-8.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9091	0.8622		0.948	1.00	-5.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.671	1.686		1.94	1.92	1.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	0.2286	0.2079		0.840	0.924	-9.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.256	1.128		0.857	0.954	-10.0	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.9827	0.9328		0.949	1.00	-5.0	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.5562	0.5008		0.900	1.00	-10.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/75 Calibration Date: 02/19/2026 02:43

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-65.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorohexanesulfonamide (FHxSA)	AveID	1.331	1.228		0.922	1.00	-8.0	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8818	0.8229		0.933	1.00	-7.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.379	1.198		0.808	0.930	-13.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.5442	0.5621		1.03	1.00	3.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.843	2.421		0.795	0.934	-15.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8608	0.6829		0.763	0.962	-21.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.6892	0.7021		1.02	1.00	2.0	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.136	1.077		0.947	1.00	-5.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.079	0.8945		0.799	0.964	-17.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	0.8500	0.8637		1.02	1.00	2.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.789	1.579		0.833	0.944	-12.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.1157	0.1039		0.898	1.00	-10.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.109	0.9055		0.792	0.970	-18.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.679	2.473		4.62	5.00	-8.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.8894	0.8502		0.956	1.00	-4.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.105	2.942		4.74	5.00	-5.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8535	0.7952		0.932	1.00	-7.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	L2ID		0.5681		0.772	1.00	-23.0	30.0
13C3-PFPrA	Ave	0.6934	0.6895		1.99	2.00	-1.0	30.0
13C4 PFBA	Ave	0.9840	0.9850		2.00	2.00	0.0	30.0
13C5 PFPeA	Ave	0.8870	0.8807		1.99	2.00	-1.0	30.0
13C2 4:2 FTS	Ave	0.2700	0.2280		3.96	4.69	-16.0	30.0
13C5 PFHxA	Ave	1.089	1.100		2.02	2.00	1.0	30.0
13C3 PFBS	Ave	1.289	1.285		1.86	1.86	0.0	30.0
13C3 HFPO-DA	Ave	0.7090	0.6764		1.91	2.00	-5.0	30.0
13C4 PFHpA	Ave	1.065	1.027		1.93	2.00	-4.0	30.0
13C2 6:2 FTS	Ave	0.2246	0.1923		4.08	4.76	-14.0	30.0
13C8 PFOA	Ave	0.9583	0.9790		2.04	2.00	2.0	30.0
13C3 PFHxS	Ave	1.092	1.065		1.85	1.90	-2.0	30.0
13C9 PFNA	Ave	1.000	0.9736		1.95	2.00	-3.0	30.0
13C2 8:2 FTS	Ave	0.2313	0.1909		3.96	4.80	-17.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/75 Calibration Date: 02/19/2026 02:43

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-65.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMeFOSAA	Ave	0.4784	0.5105		5.34	5.00	7.0	30.0
13C6 PFDA	Ave	0.9949	0.9654		1.94	2.00	-3.0	30.0
d5-NEtFOSAA	Ave	0.4379	0.4554		5.20	5.00	4.0	30.0
13C8 PFOS	Ave	1.111	1.237		2.13	1.92	11.0	30.0
13C7 PFUnA	Ave	1.040	0.996		1.92	2.00	-4.0	30.0
13C2 PFDoA	Ave	1.039	0.9478		1.82	2.00	-9.0	30.0
13C8 FOSA	Ave	1.187	1.105		1.86	2.00	-7.0	30.0
13C2 PFTeDA	Ave	0.9547	0.9460		1.98	2.00	-1.0	30.0
d7-N-MeFOSE-M	Ave	0.0786	0.0754		4.80	5.00	-4.0	30.0
d3-NMePFOSA	Ave	0.3445	0.3561		2.07	2.00	3.0	30.0
d9-N-EtFOSE-M	Ave	0.0897	0.0895		4.99	5.00	0.0	30.0
d5-NEtPFOSA	Ave	0.4203	0.4065		1.94	2.00	-3.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-65.d
Lims ID: CCV 6_CAL 4
Client ID:
Sample Type: CCV
Inject. Date: 19-Feb-2026 02:43:57 ALS Bottle#: 5 Worklist Smp#: 75
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCV 2_CAL4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:33:16 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:30:48
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.184	2.133	0.051	1.004	2487111	4.78		95.6	10521	
D 1 13C3PFPrA										
166.00 > 121.00	2.175	2.133	0.042	0.504	1137832	1.99		99.4	2253	
3 PFBA										
212.80 > 168.90	4.310	4.302	0.008	0.998	1415632	1.90		95.1	14163	
D 4 13C4-PFBA										
216.80 > 171.90	4.317	4.309	0.008	1.000	1625430	2.00		100	52041	
* 5 13C3PFBA										
216.00 > 172.00	4.317	4.309	0.008		1650198	2.00			3184	
6 PFMPA										
229.00 > 84.90	4.623	4.622	0.001	0.933	781113	0.9197		92.0	2273	
7 3:3 FTCA										
241.00 > 177.00	4.632	4.631	0.001	0.935	74997	1.72	Target=1.15	86.1	1767	
241.00 > 117.00	4.632	4.631	0.001	0.935	63945		1.17(0.57-1.72)		620	
D 8 13C5 PFPeA										
268.30 > 223.00	4.953	4.959	-0.006	0.914	1688297	1.99		99.3	7355	
9 PFPA										
263.00 > 219.00	4.964	4.959	0.005	1.002	900576	0.9290		92.9	1657	
10 PFMBA										
279.00 > 85.10	5.111	5.107	0.004	1.032	1022630	0.8992		89.9	2690	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.239	5.235	0.003	0.807	899356	3.96		84.5	3440	
12 4:2FTS										
327.10 > 307.00	5.228	5.235	-0.007	0.998	617558	1.75	Target=1.67	93.4	4909	
327.10 > 80.90	5.239	5.235	0.003	1.000	371328		1.66(0.84-2.51)		574	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.379	5.386	-0.007	0.993	241012	0.8341	Target=1.43	83.4	725	
295.00 > 84.90	5.379	5.386	-0.007	0.993	158359		1.52(0.71-2.14)		703	
* 16 13C2 PFHxA										
315.10 > 270.00	5.419	5.424	-0.005		4792336	5.00			4776	
D 15 13C5 PFHxA										
318.00 > 273.00	5.419	5.424	-0.005	1.000	2107844	2.02		101	3004	
17 PFHxA										
313.00 > 269.00	5.419	5.424	-0.005	1.000	771848	0.9824	Target=9.36	98.2	2158	
313.00 > 118.90	5.419	5.424	-0.005	1.000	81801		9.44(4.68-14.05)		518	
18 5:3 FTCA										
341.00 > 237.10	5.507	5.503	0.004	1.016	483579	4.62	Target=0.64	92.4	3009	
341.00 > 217.00	5.507	5.503	0.004	1.016	721146		0.67(0.32-0.97)		1131	
D 19 13C3 PFBS										
302.10 > 79.90	5.553	5.561	-0.008	0.855	2014747	1.86		99.7	10335	
20 PFBS										
298.70 > 79.90	5.553	5.561	-0.008	1.000	778844	0.8066	Target=3.13	90.8	2748	
298.70 > 98.80	5.553	5.561	-0.008	1.000	253772		3.07(1.56-4.69)		1889	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.600	5.607	-0.007	1.033	1296672	1.91		95.4	5063	
23 HFPO-DA										
284.90 > 168.90	5.600	5.607	-0.007	1.000	500947	0.7135	Target=2.49	95.1	3237	
284.90 > 184.90	5.611	5.607	0.004	1.002	200738		2.50(1.24-3.73)		991	
21 FBSA										
297.90 > 78.00	5.657	5.665	-0.008	1.019	709813	0.9241		92.4	1273	
26 PFEESA										
314.80 > 134.90	5.799	5.807	-0.008	1.070	1844168	0.7220	Target=11.82	80.9	6413	
314.80 > 82.90	5.799	5.807	-0.008	1.070	169501		10.88(5.91-17.73)		758	
D 28 13C4 PFHpA										
367.10 > 322.00	5.844	5.851	-0.007	1.078	1968085	1.93		96.4	6309	
27 PFHpA										
363.10 > 319.00	5.844	5.851	-0.007	1.000	735251	1.06	Target=1.51	106	1908	
363.10 > 169.00	5.844	5.851	-0.007	1.000	414868		1.77(0.75-2.26)		2298	
29 ADONA										
376.90 > 250.90	6.001	6.007	-0.006	1.072	2056994	0.9222	Target=2.22	97.5	4594	
376.90 > 84.80	6.001	6.007	-0.006	1.072	955487		2.15(1.11-3.33)		3895	
30 PFPeS										
349.10 > 79.90	6.042	6.049	-0.007	0.930	930095	0.9171	Target=3.28	97.6	2746	
349.10 > 98.90	6.042	6.049	-0.007	0.930	292232		3.18(1.64-4.91)		1979	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.042	6.059	-0.017	0.930	769752	4.08		85.6	2655	
31 6:2FTS										
427.10 > 407.00	6.042	6.059	-0.017	1.000	562018	1.88	Target=1.56	98.9	1676	
427.10 > 80.90	6.042	6.059	-0.017	1.000	347764		1.62(0.78-2.35)		1035	
33 BTS										
280.00 > 147.00	6.204	6.220	-0.016	0.955	1494751	0.9039		92.3	2799	
* 34 13C4 PFOA										
417.10 > 372.00	6.254	6.269	-0.015		6620736	5.00			4867	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.254	6.269	-0.015	1.000	2592712	2.04		102	4360	
36 PFOA										
413.00 > 369.00	6.263	6.269	-0.006	1.002	641188	0.9392	Target=1.59	93.9	782	
413.00 > 169.00	6.263	6.269	-0.006	1.002	405232		1.58(0.80-2.39)		409	
37 7:3 FTCA										
441.00 > 316.90	6.411	6.407	0.004	1.183	228352	4.27	Target=0.24	85.5	691	
441.00 > 336.90	6.411	6.407	0.004	1.183	930439		0.25(0.12-0.36)		1846	
D 38 13C3 PFHxS										
402.10 > 79.90	6.494	6.512	-0.018	1.000	1698947	1.85		97.6	3506	
* 39 18O2 PFHxS										
403.00 > 83.90	6.494	6.512	-0.018		1594526	1.90			4864	
40 PFHxS										
398.70 > 79.90	6.494	6.512	-0.018	1.000	570336	0.8372	Target=3.08	91.8	748	
398.70 > 98.90	6.494	6.512	-0.018	1.000	181128		3.15(1.54-4.62)		408	
* 42 13C5 PFNA										
468.00 > 423.00	6.669	6.684	-0.015		1996734	2.00			4053	
D 41 13C9 PFNA										
472.10 > 427.00	6.669	6.684	-0.015	1.000	1944063	1.95		97.3	4497	
43 PFNA										
463.00 > 419.00	6.679	6.694	-0.015	1.001	838089	0.9484	Target=1.95	94.8	1029	
463.00 > 219.00	6.679	6.694	-0.015	1.001	377080		2.22(0.97-2.92)		658	
45 8:2FTS										
527.10 > 507.00	6.856	6.868	-0.012	1.000	519539	1.94	Target=1.86	101	1628	
527.10 > 80.80	6.856	6.868	-0.012	1.000	267422		1.94(0.93-2.79)		1110	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.856	6.868	-0.012	1.056	770512	3.96		82.5	2863	
46 PFECHS										
461.00 > 381.00	6.892	6.914	-0.022	1.061	172103	0.8403	Target=0.18	90.9	795	
461.00 > 99.00	6.892	6.914	-0.022	1.061	1035375		0.17(0.09-0.27)		5637	
47 PFHpS										
449.00 > 79.90	6.931	6.945	-0.014	0.943	904664	0.8566	Target=3.60	89.8	3937	
449.00 > 98.80	6.931	6.945	-0.014	0.943	267304		3.38(1.80-5.40)		1966	
50 NMeFOSAA										
570.10 > 419.00	7.033	7.037	-0.004	1.001	323657	0.9492	Target=1.80	94.9	464	
570.10 > 483.00	7.023	7.037	-0.014	1.000	186758		1.73(0.90-2.71)		323	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.023	7.037	-0.014	0.956	1734885	5.33		107	2159	
D 52 13C6 PFDA										
519.10 > 474.10	7.083	7.107	-0.023	1.000	1895440	1.94		97.0	4688	
53 PFDA										
512.90 > 469.00	7.083	7.107	-0.023	1.000	474608	0.9004	Target=2.75	90.0	2113	
512.90 > 219.00	7.083	7.107	-0.023	1.000	173510		2.74(1.37-4.12)		950	
* 51 13C2 PFDA										
515.10 > 470.10	7.083	7.107	-0.023		1963453	2.00			3567	
48 FHxSA										
397.90 > 78.00	7.131	7.126	0.005	1.098	1100049	0.9224		92.2	2971	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.207	7.219	-0.012	0.981	1547797	5.20		104	2741	
55 NEtFOSAA										
584.20 > 419.10	7.216	7.238	-0.022	1.001	254746	0.9332	Target=1.26	93.3	409	
584.20 > 526.00	7.216	7.238	-0.022	1.001	198451		1.28(0.63-1.89)		342	
* 57 13C4 PFOS										
502.80 > 79.90	7.348	7.373	-0.025		1302297	1.92			3569	
D 56 13C8 PFOS										
507.10 > 79.90	7.348	7.373	-0.025	1.000	1610685	2.13		111	3481	
58 PFOS										
498.90 > 79.90	7.348	7.373	-0.025	1.000	936616	0.8080	Target=4.39	86.9	2166	
498.90 > 98.80	7.348	7.373	-0.025	1.000	207662		4.51(2.19-6.58)		460	
D 59 13C7 PFUnA										
570.00 > 525.10	7.495	7.506	-0.011	1.058	1954630	1.92		95.8	3929	
60 PFUnA										
563.10 > 519.00	7.495	7.515	-0.020	1.000	549370	1.03	Target=3.76	103	2676	
563.10 > 269.10	7.495	7.515	-0.020	1.000	141429		3.88(1.88-5.63)		1357	
61 9ClFOS										
530.80 > 351.00	7.667	7.686	-0.019	1.043	1901232	0.7954	Target=3.06	85.2	3718	
532.80 > 353.00	7.667	7.686	-0.019	1.043	582951		3.26(1.53-4.59)		3242	
62 PFNS										
548.80 > 79.90	7.756	7.788	-0.032	1.056	552253	0.7632	Target=3.67	79.3	2882	
548.80 > 98.80	7.756	7.788	-0.032	1.056	146476		3.77(1.83-5.50)		1152	
D 81 PFDoA										
615.10 > 570.00	7.901	7.935	-0.034	1.116	1860971	1.82		91.2	3067	
63 PFDoA										
613.10 > 569.00	7.901	7.935	-0.034		653257	1.02	Target=4.73	102	3122	
613.10 > 319.00	7.901	7.935	-0.034		139140		4.69(2.36-7.09)		710	
D 65 13C8 FOSA										
506.10 > 77.80	8.162	8.155	0.007	1.111	1501473	1.86		93.1	14300	
64 PFOSA										
498.10 > 77.90	8.152	8.155	-0.003	0.999	808360	0.9475	Target=41.75	94.7	1139	
498.10 > 478.00	8.162	8.155	0.007	1.000	20665		39.12(20.87-62.62)		36.0	
66 PFDS										
599.00 > 79.90	8.162	8.196	-0.034	1.111	724919	0.7993	Target=3.69	82.9	2271	
599.00 > 98.80	8.162	8.196	-0.034	1.111	191880		3.78(1.84-5.53)		897	
67 PFTrDA										
663.00 > 619.00	8.299	8.345	-0.046	0.956	802905	1.02	Target=5.83	102	3074	
663.00 > 168.90	8.299	8.345	-0.046	0.956	122859		6.54(2.91-8.74)		940	
68 11ClFOS										
630.90 > 450.90	8.469	8.504	-0.035	1.153	1252897	0.8332	Target=3.21	88.3	6140	
632.90 > 452.90	8.469	8.504	-0.035	1.153	390555		3.21(1.60-4.81)		1848	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.683	8.722	-0.039	1.226	1857390	1.98		99.1	4180	
69 PFTeDA										
713.10 > 168.90	8.683	8.722	-0.039	1.000	96508	0.8982	Target=0.83	89.8	782	
713.10 > 219.00	8.683	8.722	-0.039	1.000	103407		0.93(0.41-1.24)		472	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.871	8.917	-0.046	1.207	738402	0.7923	Target=4.20	81.7	3366	
699.10 > 98.80	8.871	8.917	-0.046	1.207	187502		3.94(2.10-6.30)		2210	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.957	8.945	0.012	1.219	256329	4.80		96.0	807	
73 N-MeFOSE-M										
616.10 > 58.90	8.971	8.974	-0.003	1.002	633997	4.62		92.3	748	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.054	9.057	-0.003	1.232	484022	2.07		103	2295	
74 NMeFOSA										
511.90 > 219.00	9.068	9.057	0.011	1.001	205756	0.9559	Target=0.68	95.6	868	
511.90 > 169.00	9.068	9.057	0.011	1.001	293213		0.70(0.34-1.03)		743	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.174	9.176	-0.002	1.249	304318	4.99		99.8	744	
77 N-EtFOSE-M										
630.00 > 58.90	9.186	9.189	-0.003	1.001	895322	4.74		94.8	2639	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.250	9.252	-0.002	1.259	552599	1.93		96.7	2020	
79 N-EtFOSA-M										
526.00 > 219.00	9.263	9.265	-0.002	1.001	219722	0.9318	Target=0.85	93.2	1120	
526.00 > 169.00	9.263	9.265	-0.002	1.001	262538		0.84(0.43-1.28)		998	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.550	9.645	-0.095	1.100	527633	0.7721	Target=16.56	77.2	14642	
913.00 > 169.00	9.550	9.645	-0.095	1.100	31830		16.58(8.28-24.84)		1986	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL4_00083 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 12:33:20 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-65.d

Injection Date: 19-Feb-2026 02:43:57 Instrument ID: 30577

Lims ID: CCV 6_CAL 4

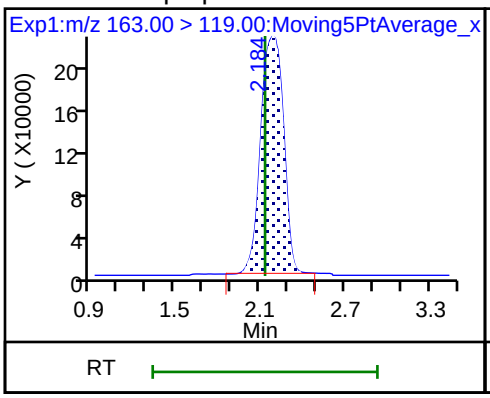
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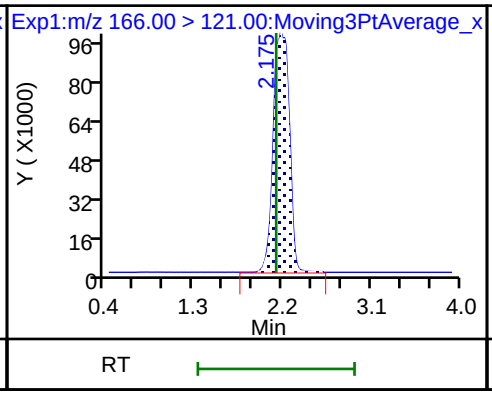
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Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

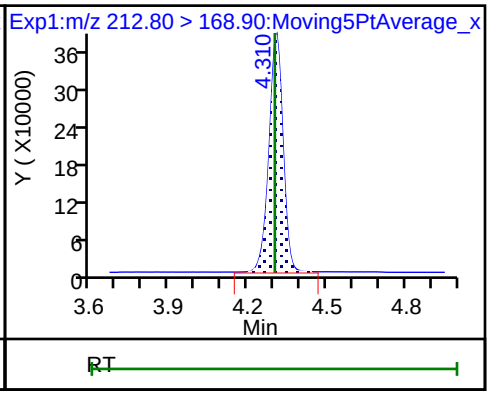
2 Perfluoropropionic acid



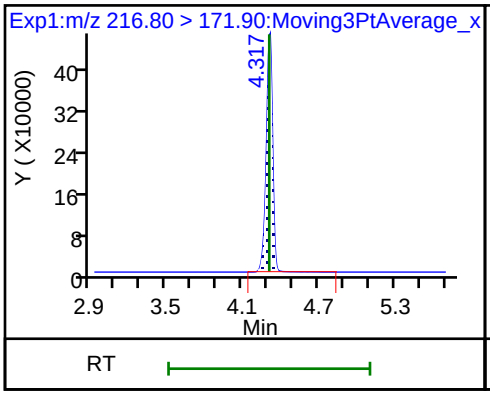
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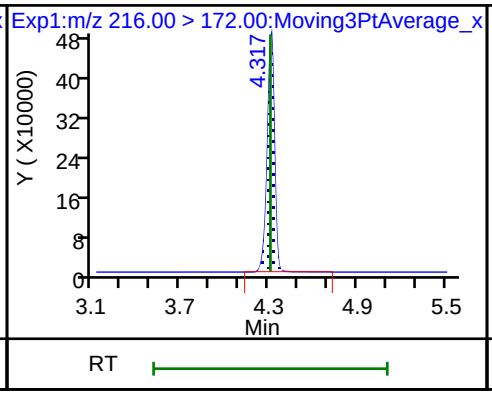
3 PFBA



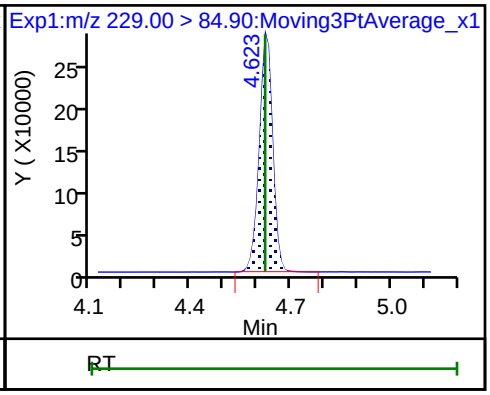
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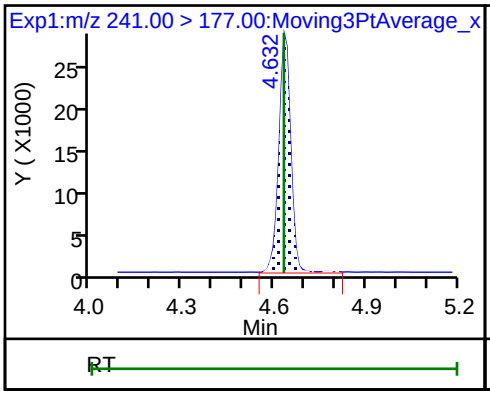
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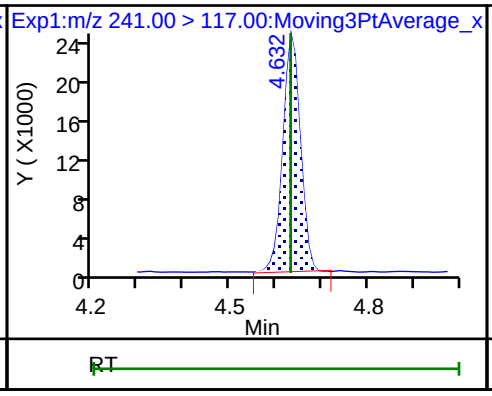
6 PFMPA



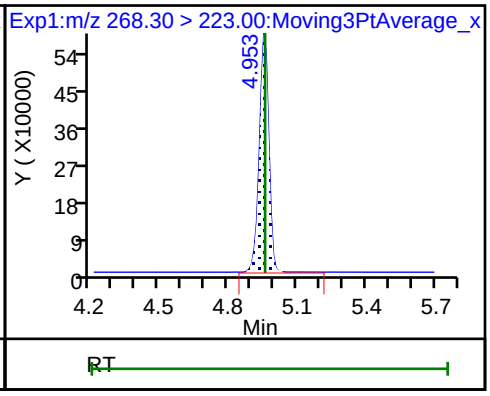
7 3:3 FTCA



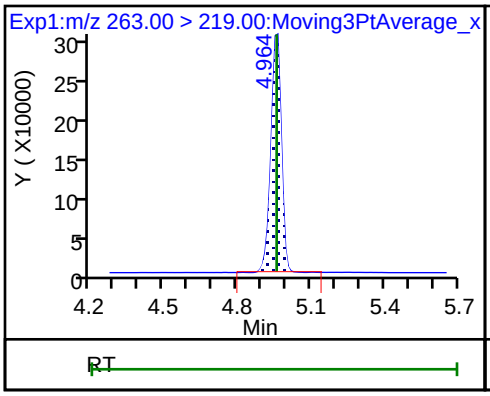
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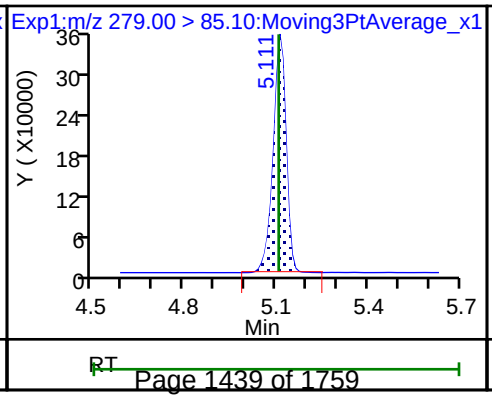
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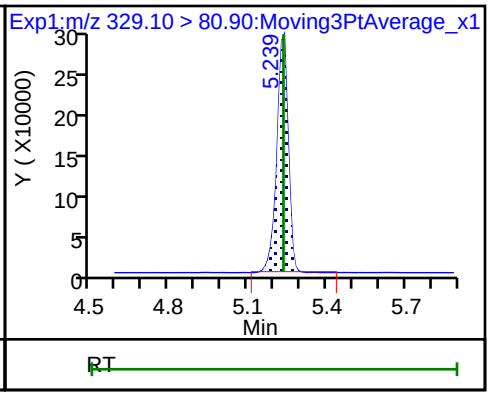
9 PFPA



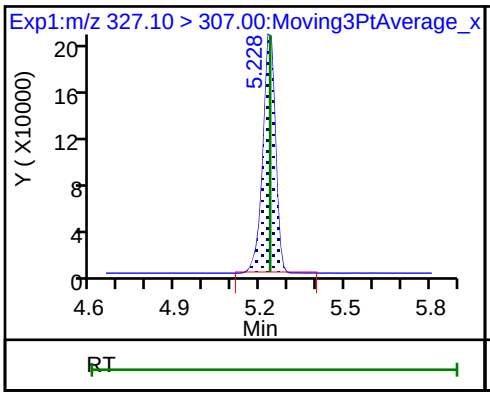
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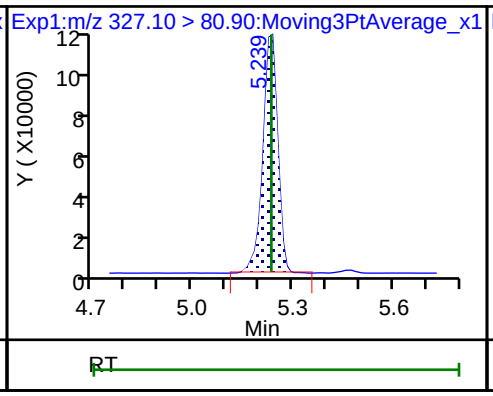
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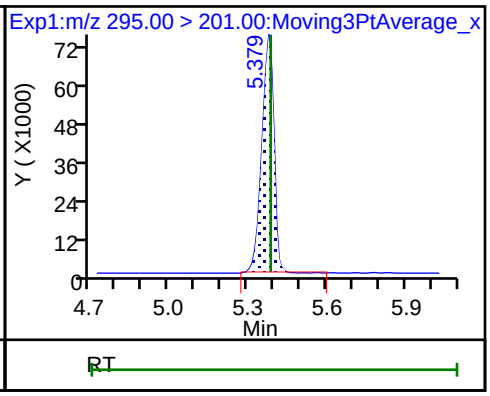
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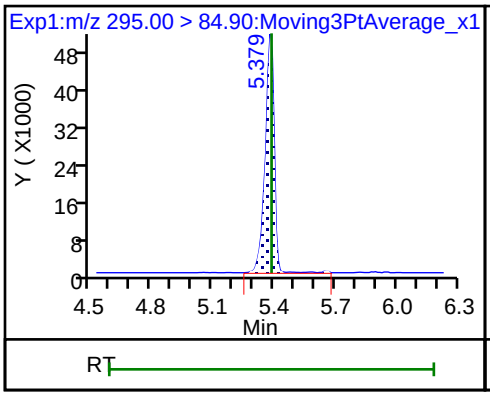
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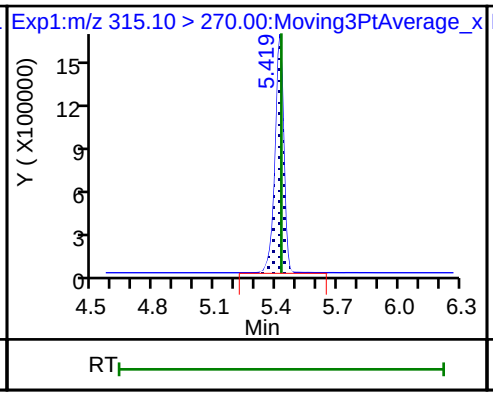
14 NFDHA



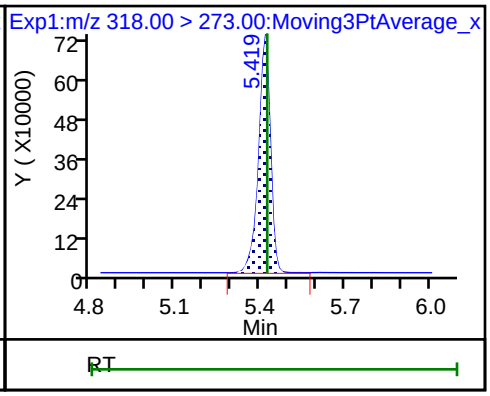
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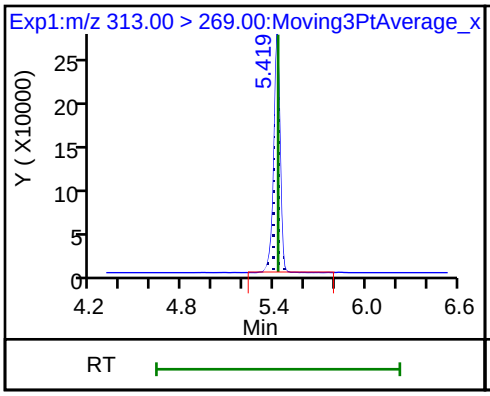
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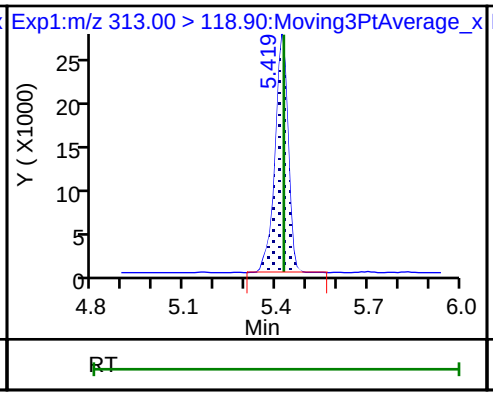
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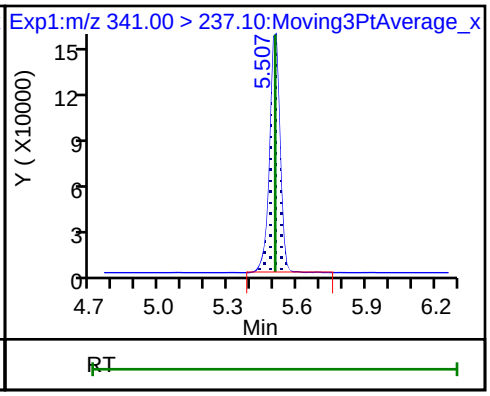
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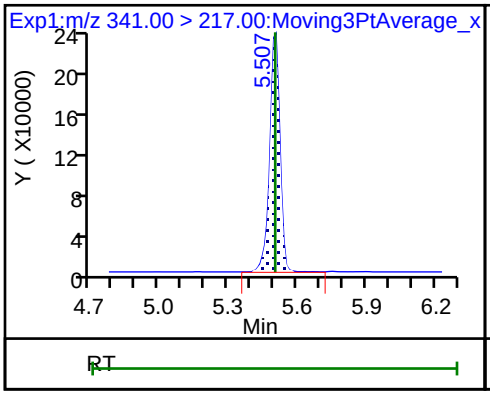
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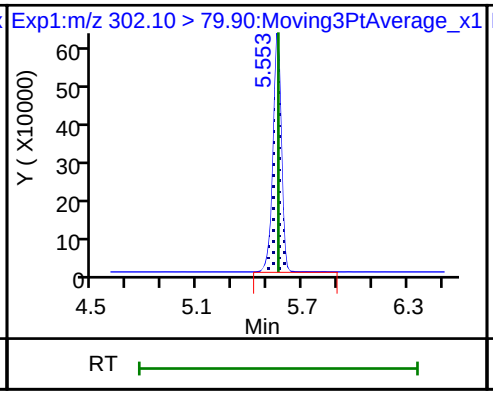
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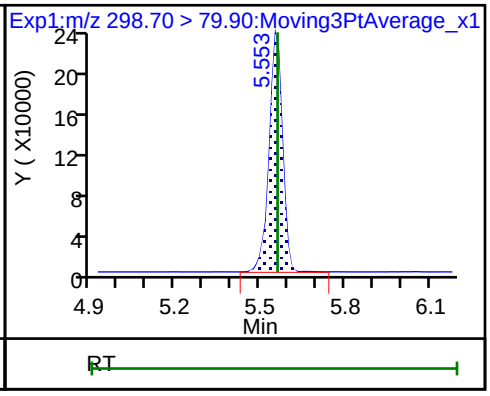
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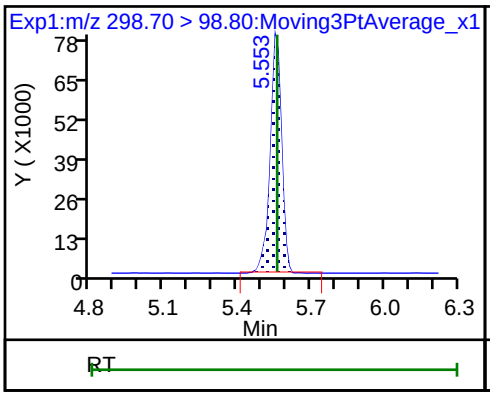
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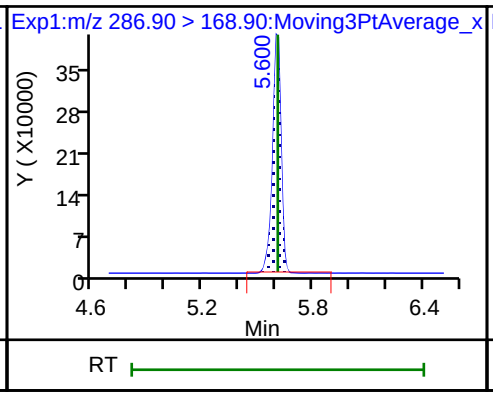
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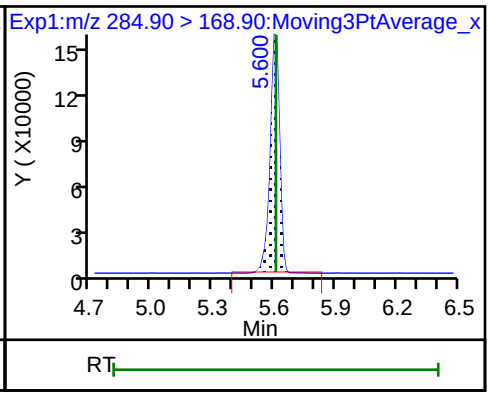
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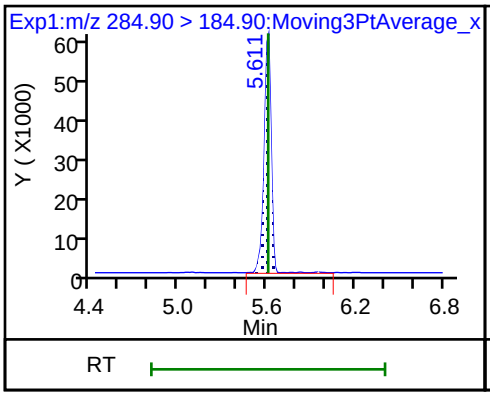
D 22 13C3 HFPO-DA



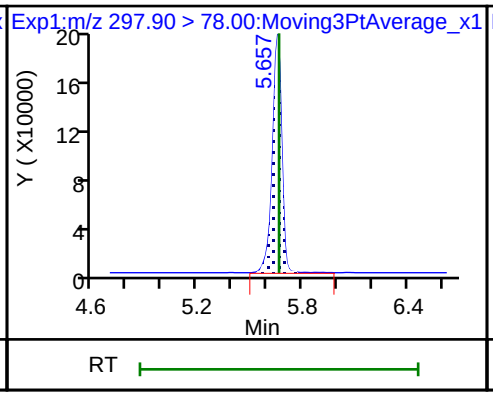
23 HFPO-DA



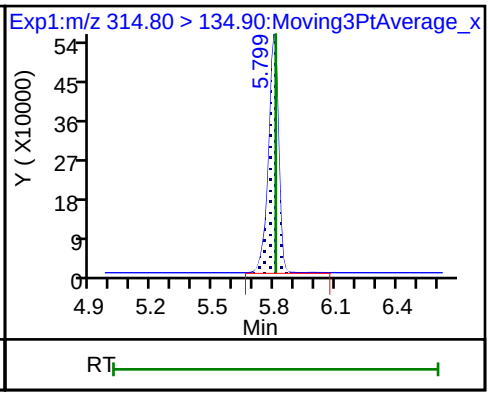
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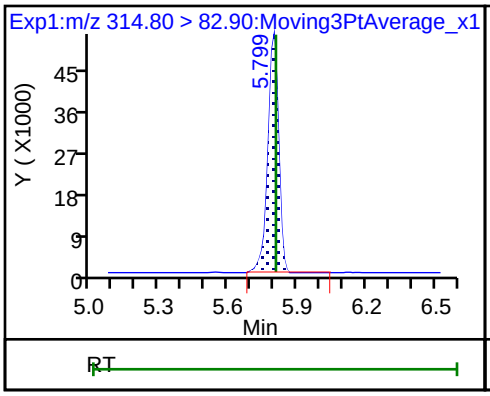
21 FBSA



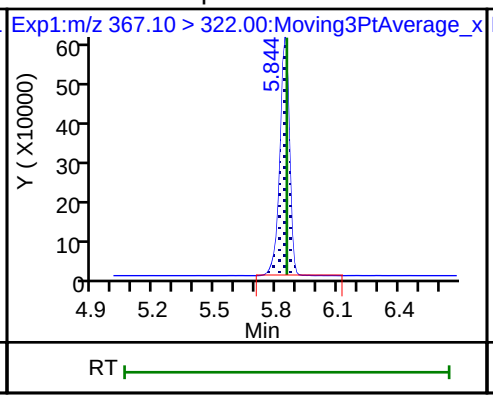
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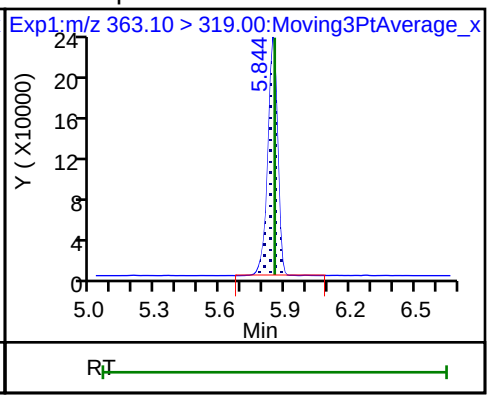
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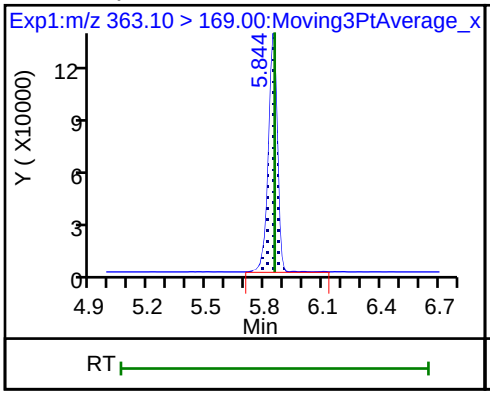
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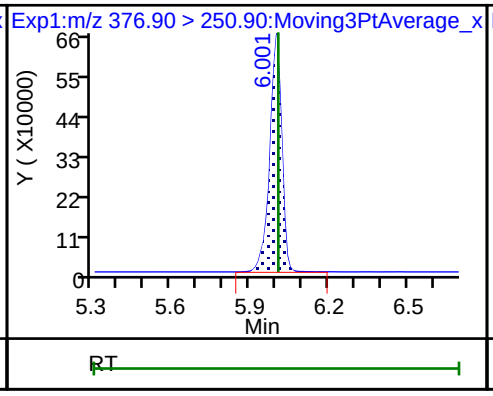
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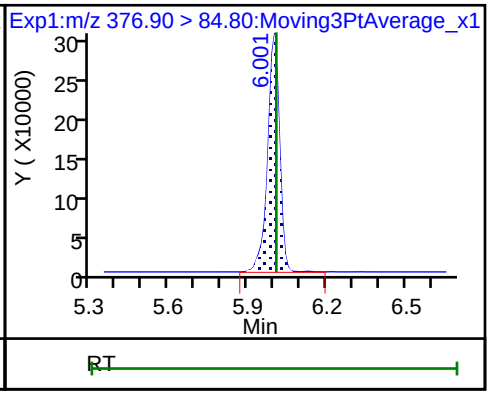
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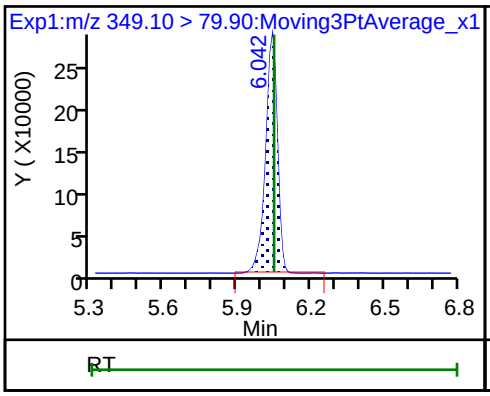
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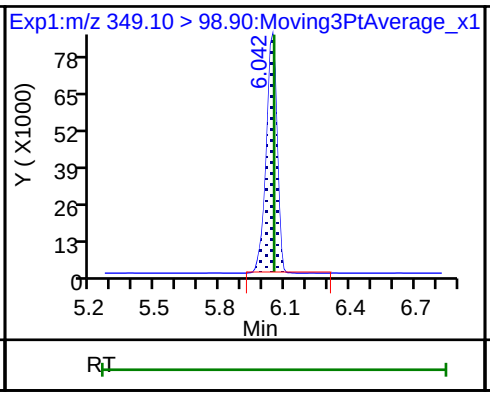
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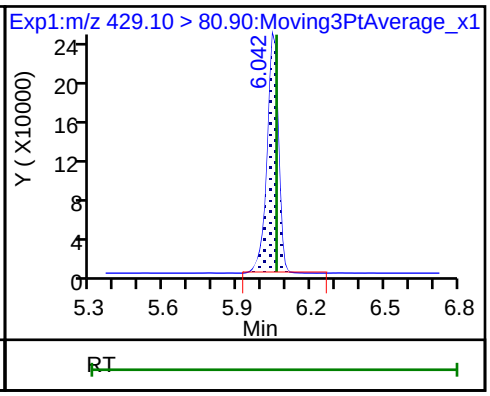
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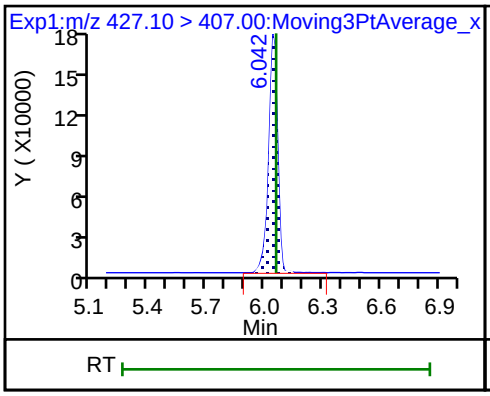
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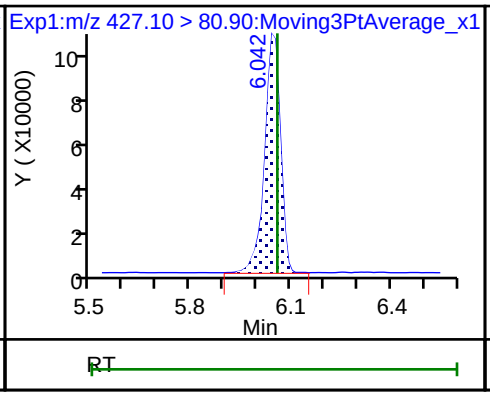
D 32 13C2-6:2FTS



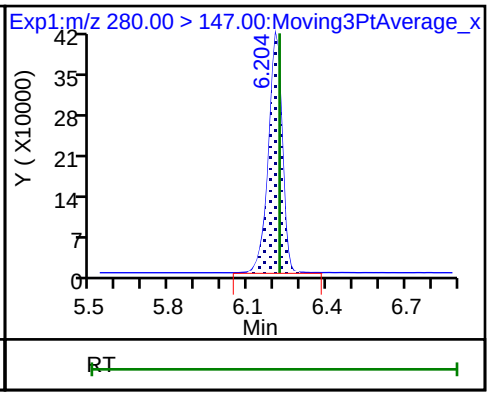
31 6:2FTS



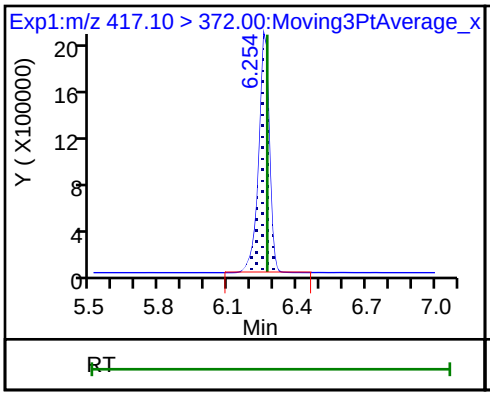
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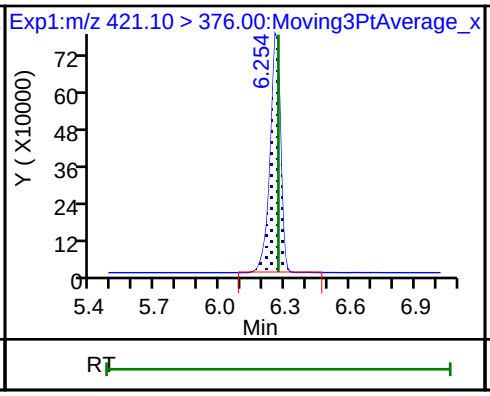
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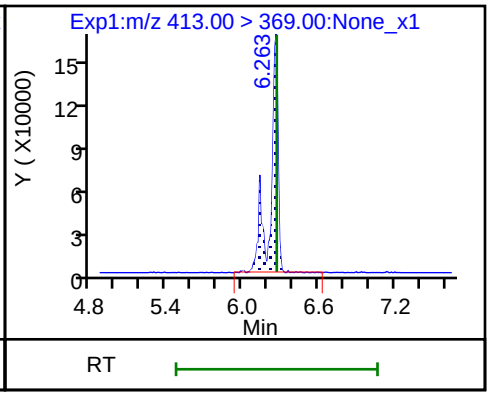
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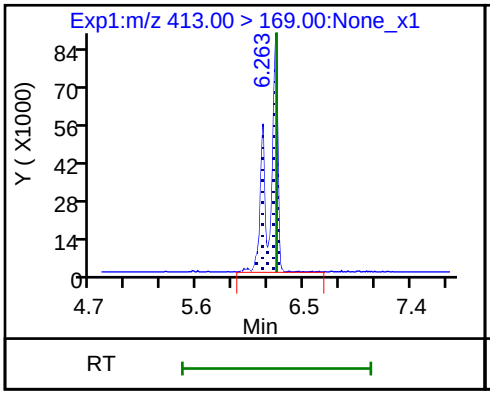
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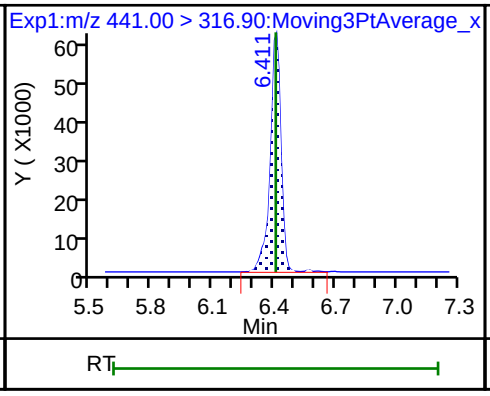
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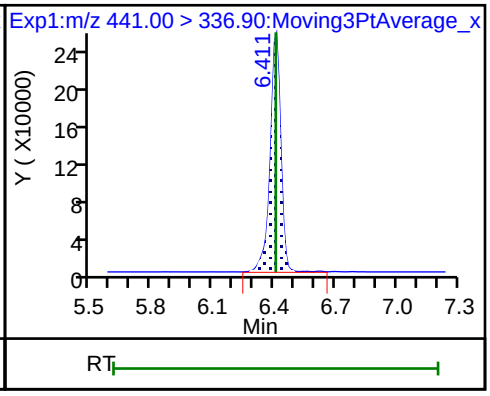
36 PFOA



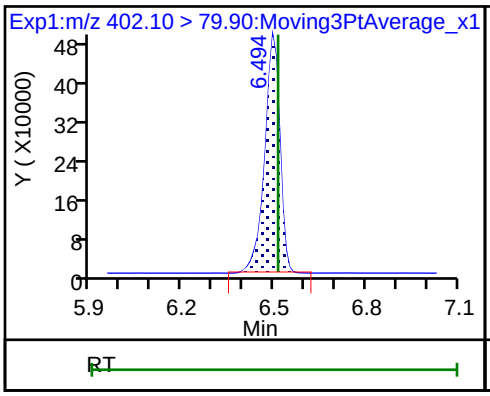
37 7:3 FTCA



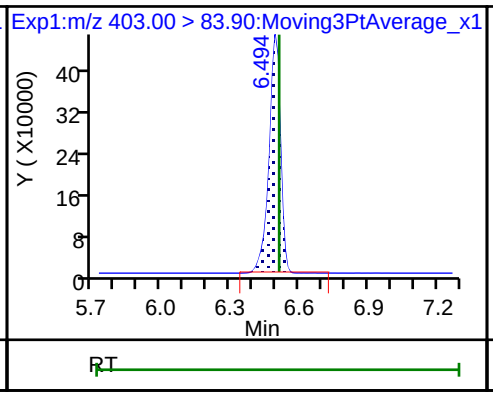
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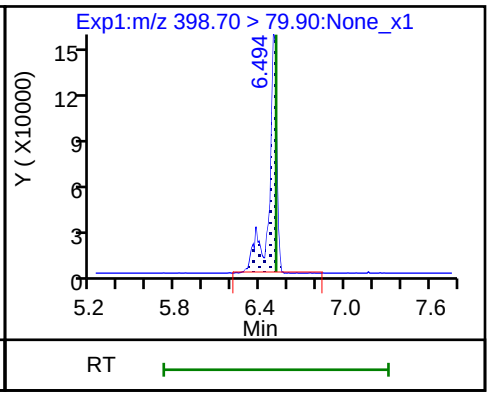
D 38 13C3 PFHxS



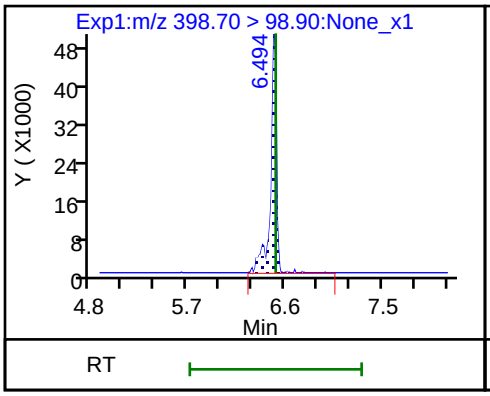
* 39 18O2 PFHxS



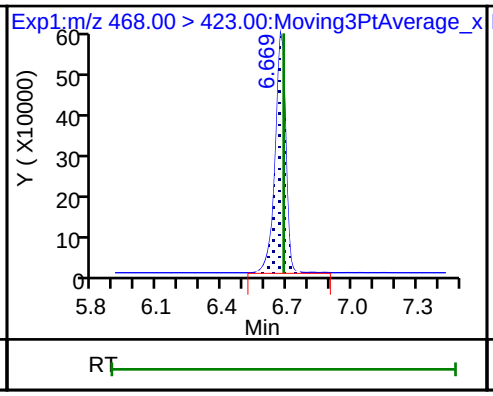
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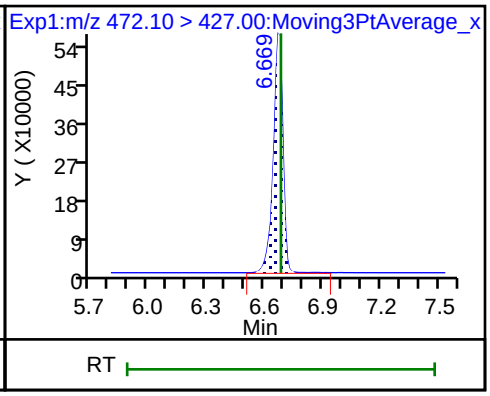
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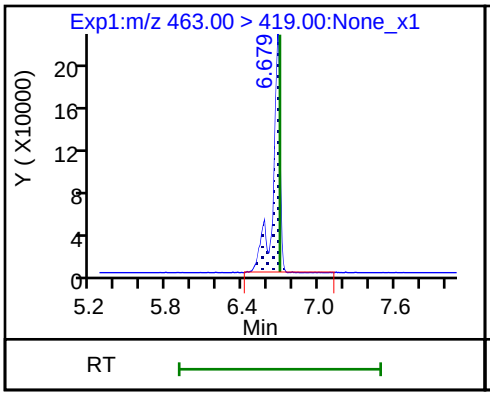
* 42 13C5 PFNA



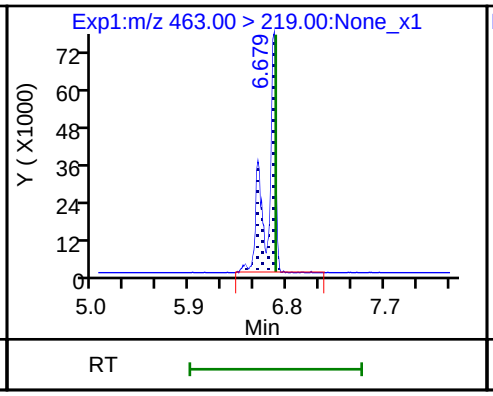
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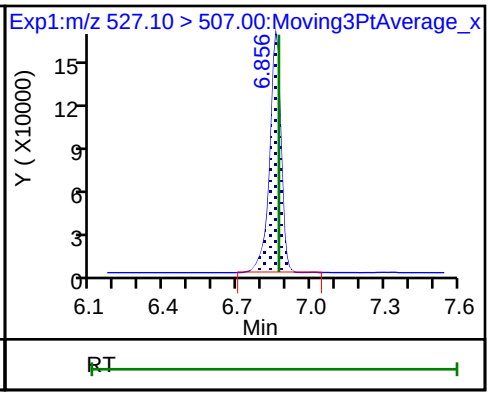
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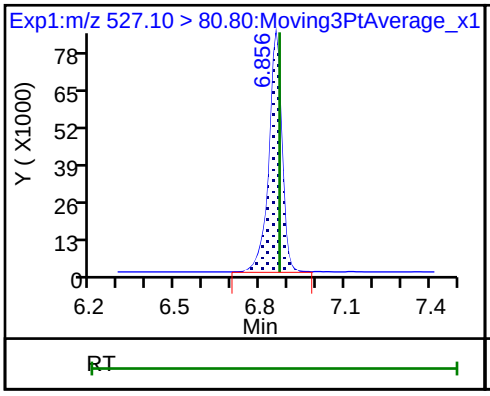
43 PFNA



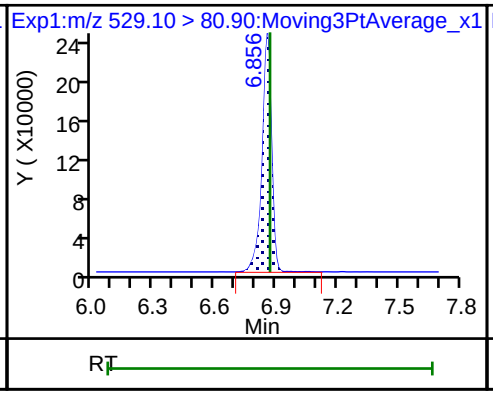
45 8:2FTS



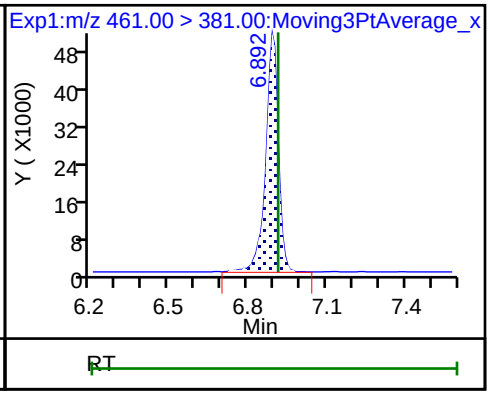
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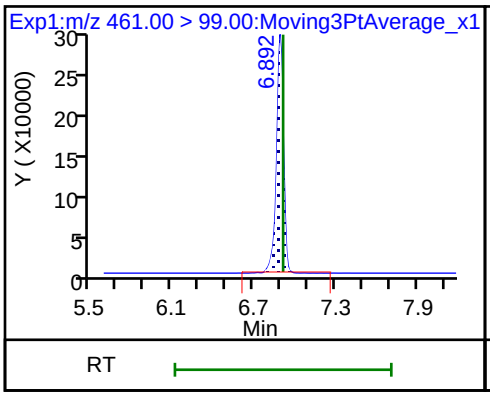
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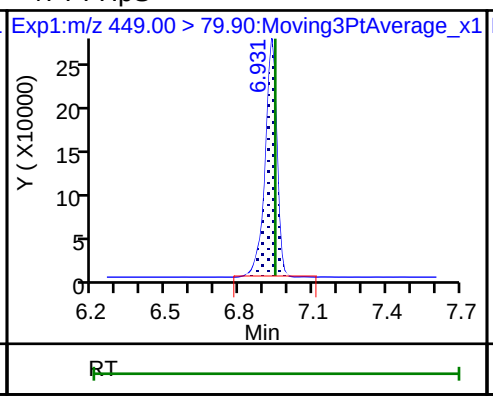
46 PFECHS



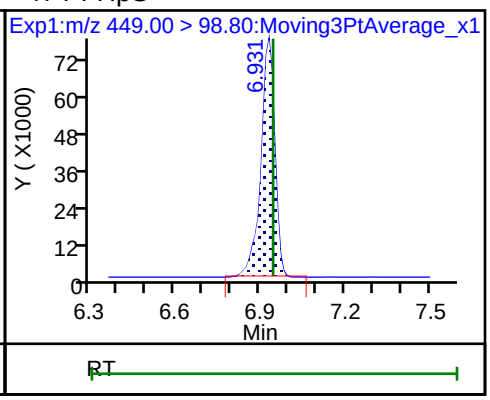
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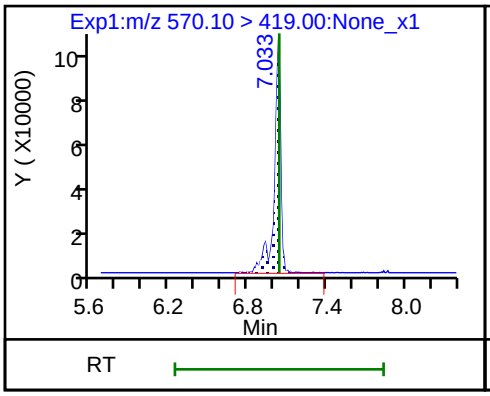
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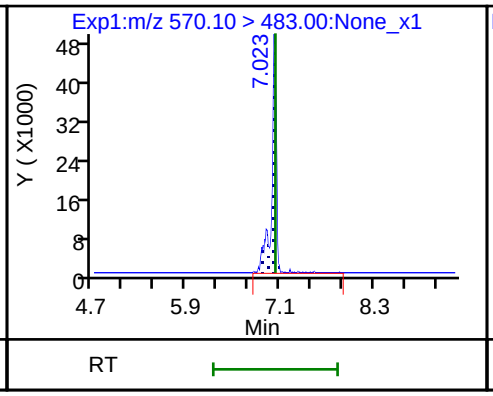
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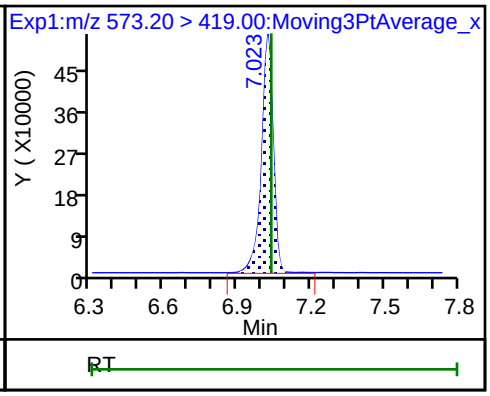
50 NMeFOSAA



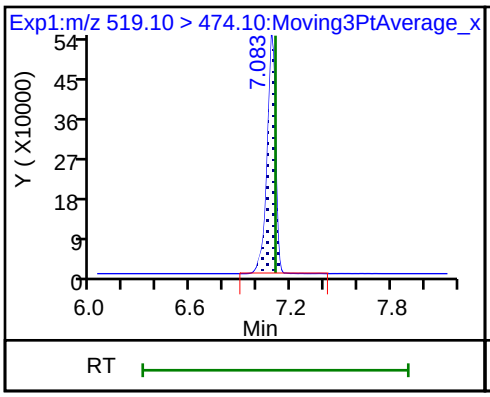
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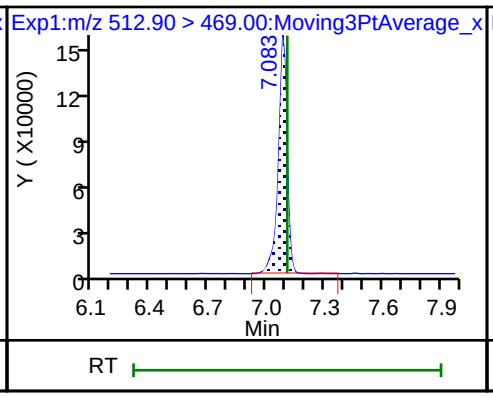
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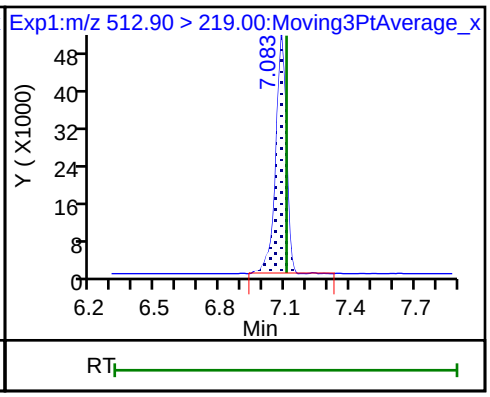
D 52 13C6 PFDA



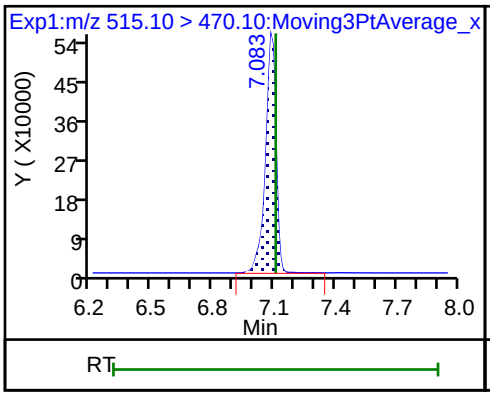
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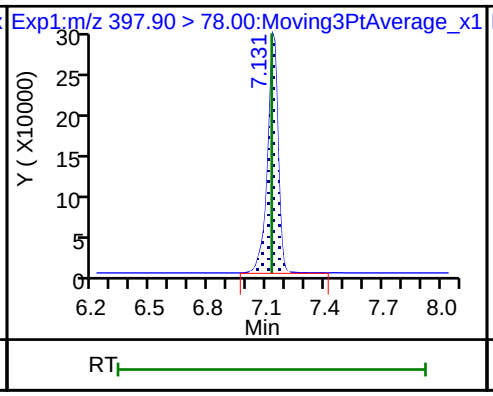
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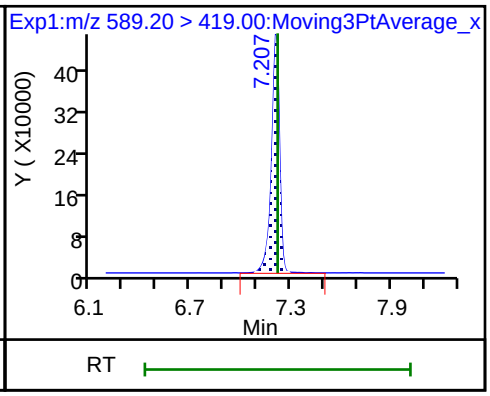
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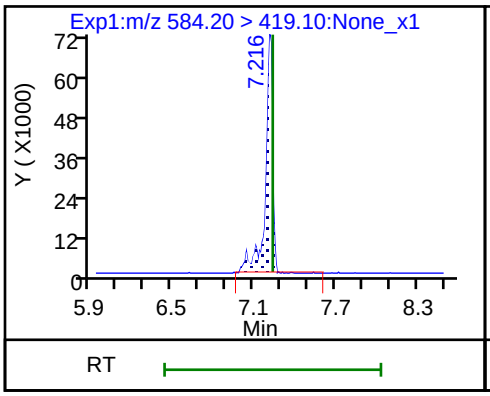
48 FHxSA



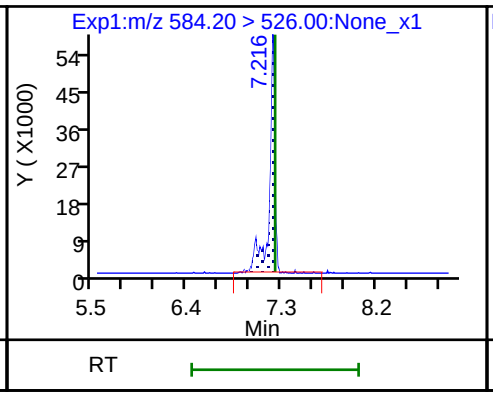
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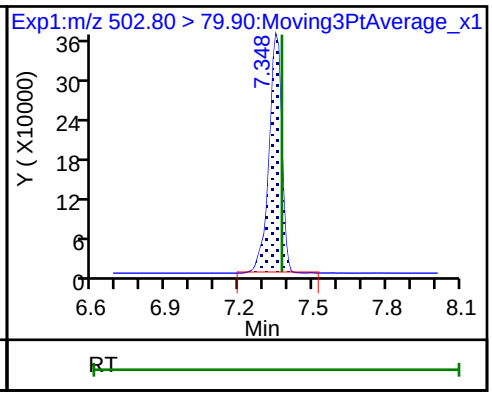
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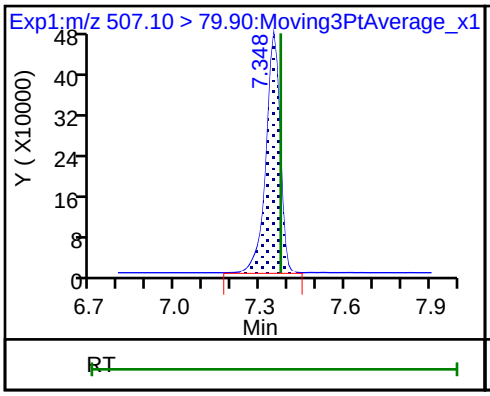
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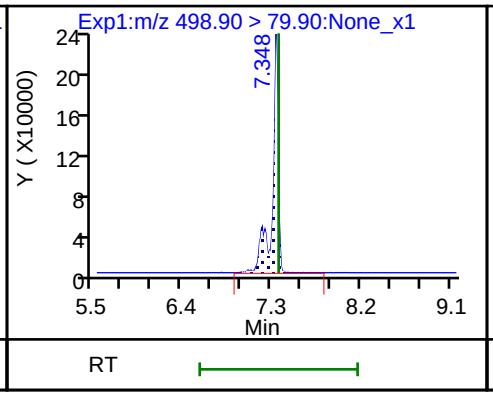
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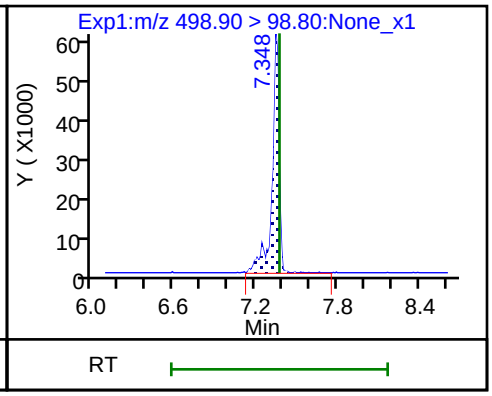
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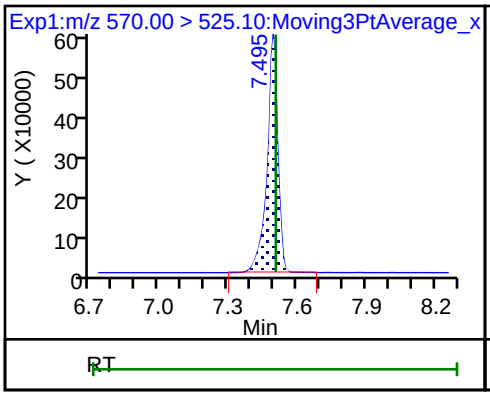
58 PFOS



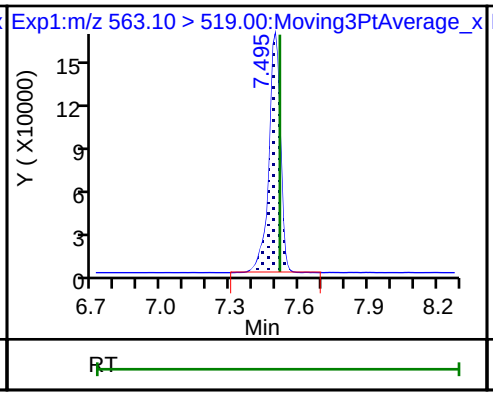
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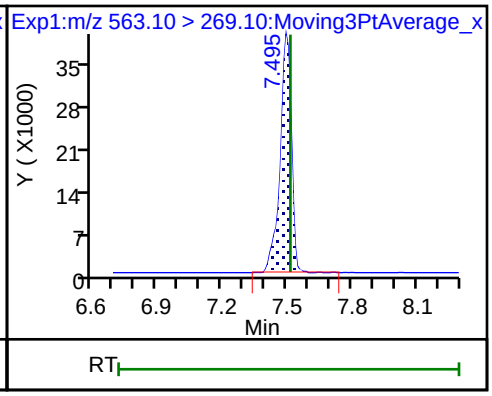
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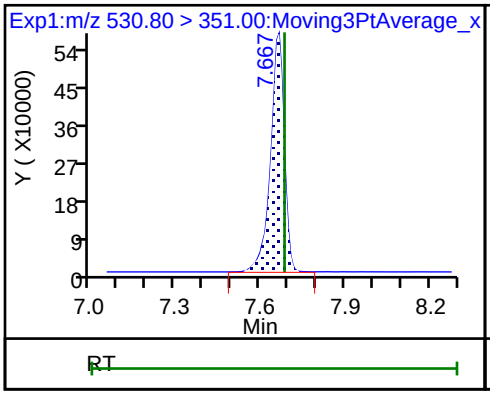
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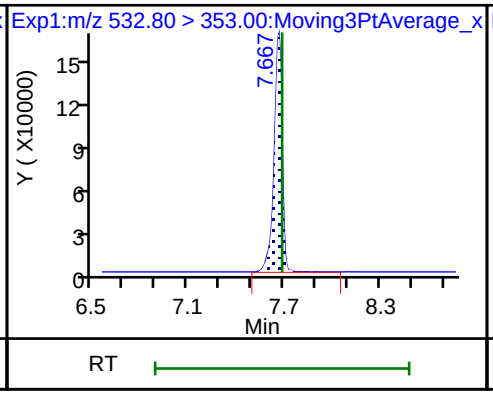
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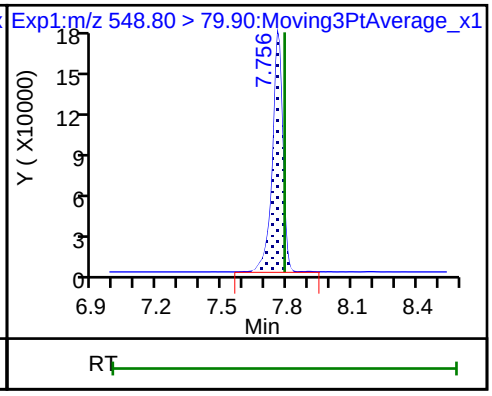
61 9ClFOS



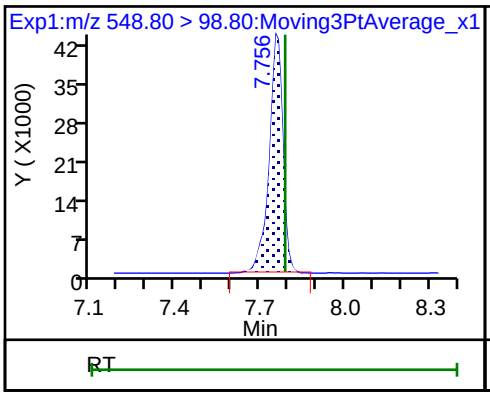
61 9ClFOS



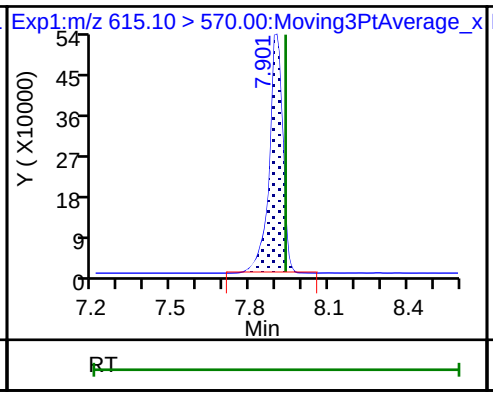
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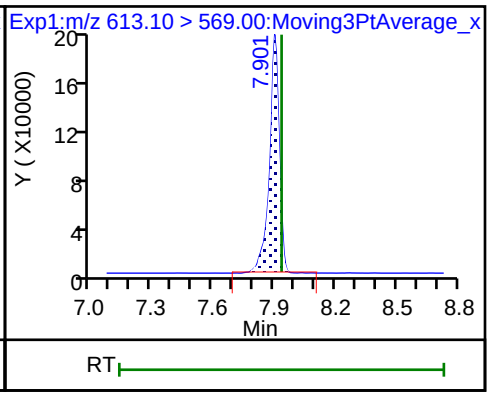
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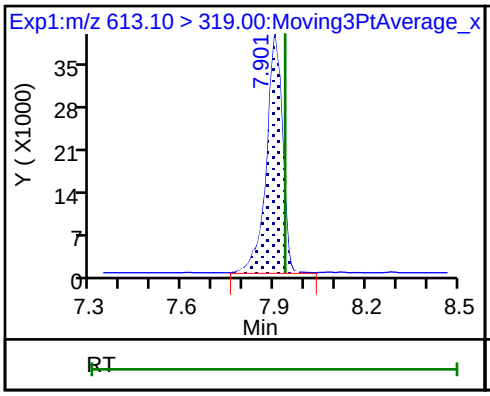
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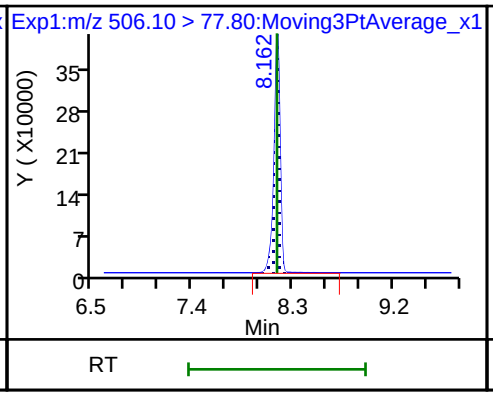
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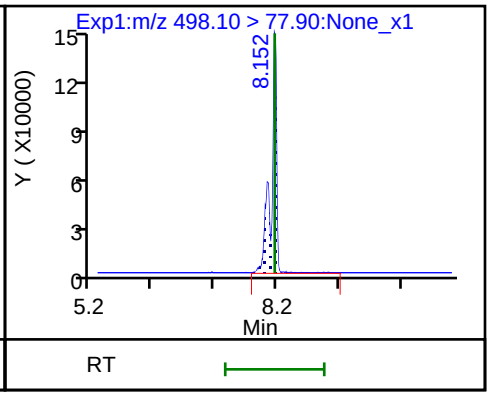
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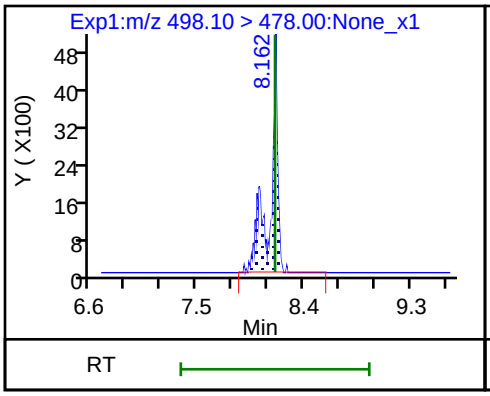
D 65 13C8 FOSA



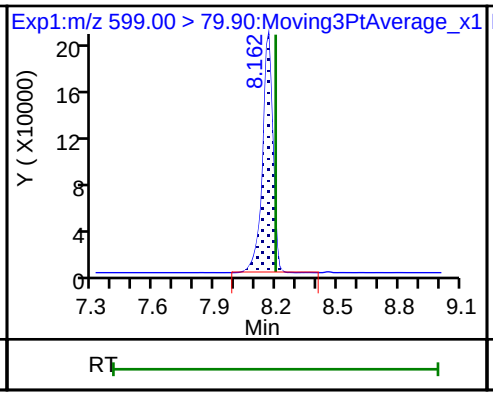
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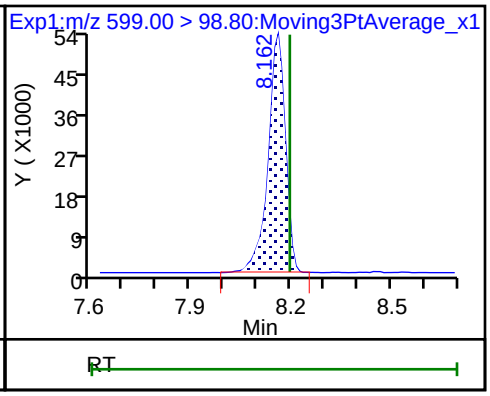
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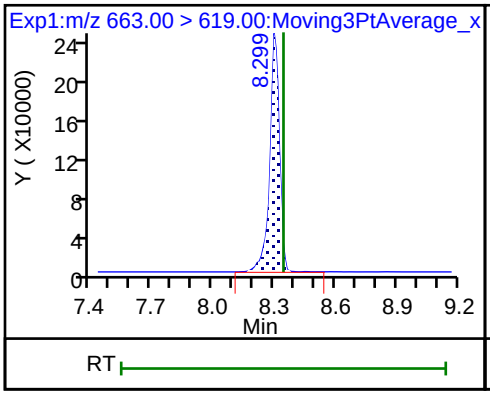
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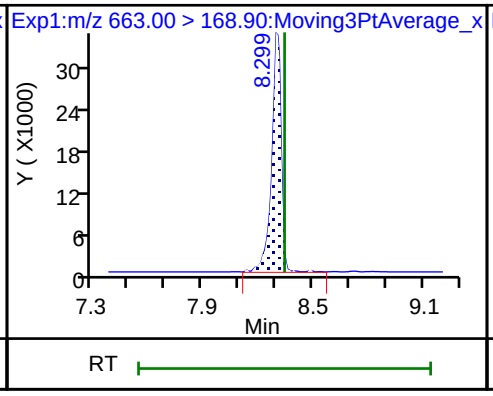
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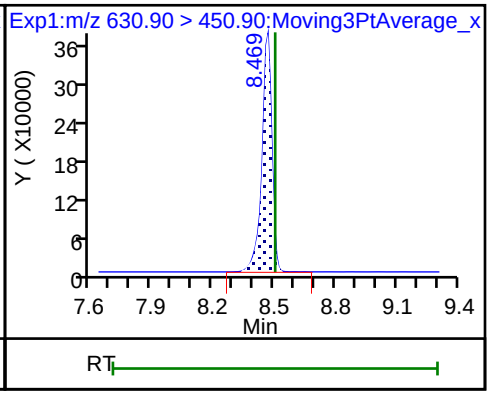
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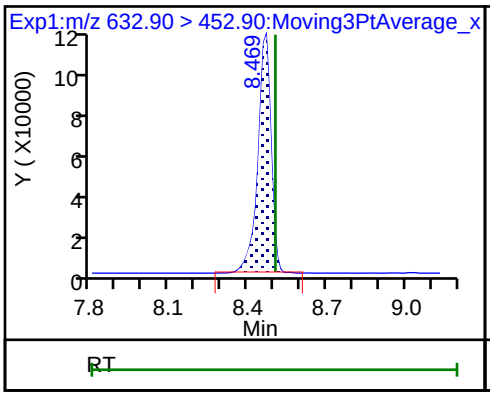
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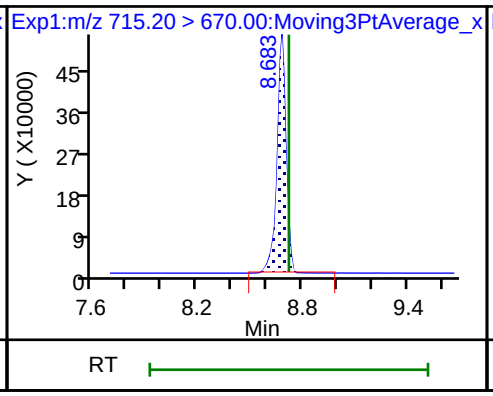
68 11ClFOS



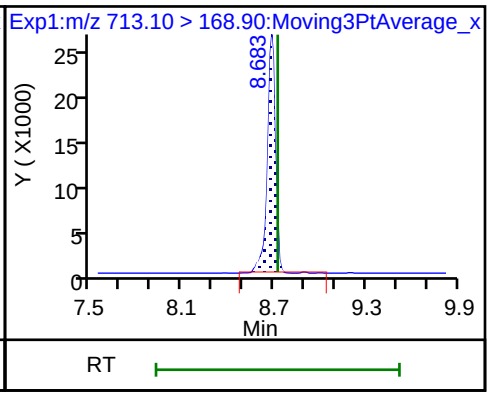
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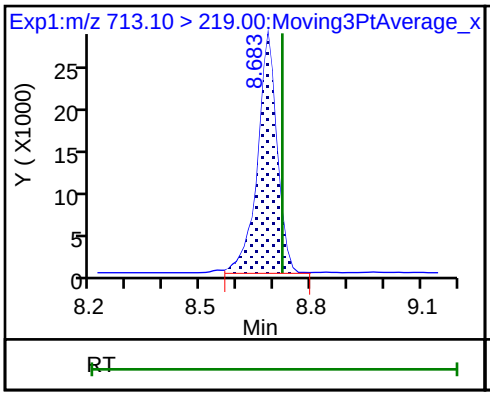
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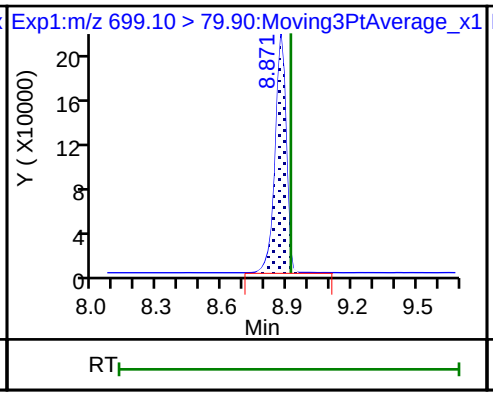
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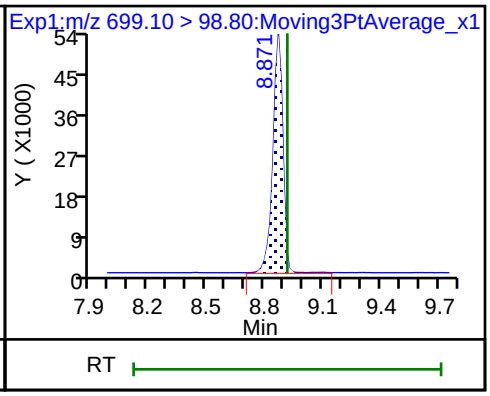
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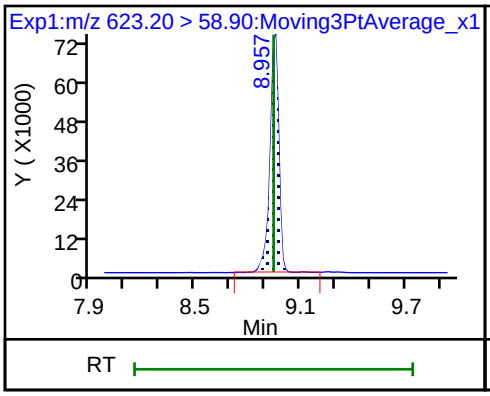
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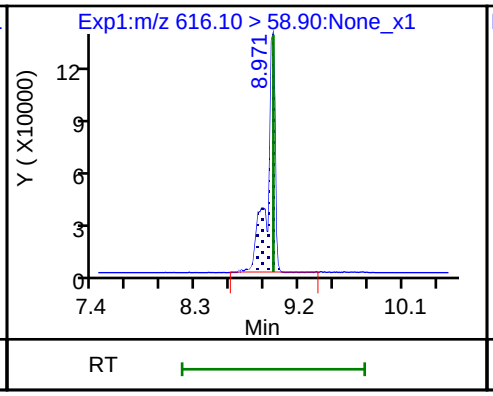
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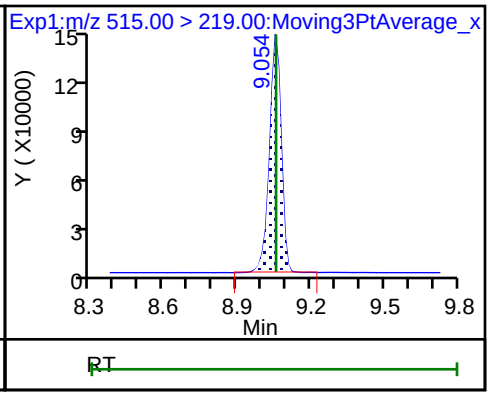
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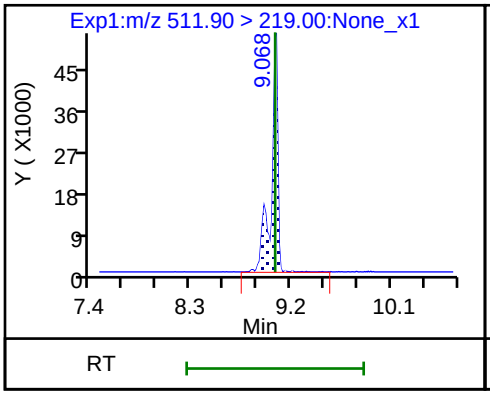
73 N-MeFOSE-M



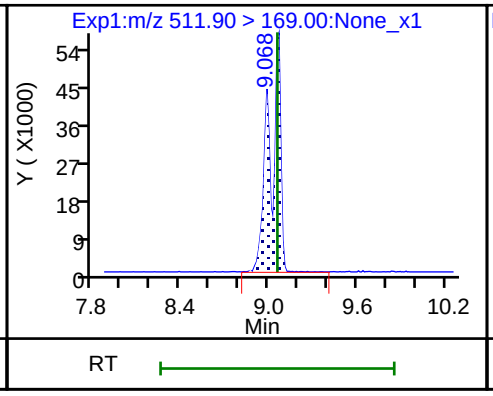
D 75 d3-NMePFOSA



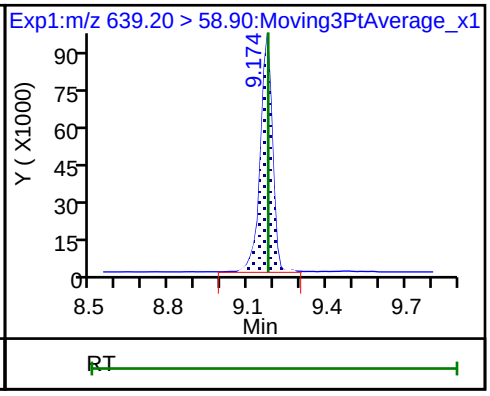
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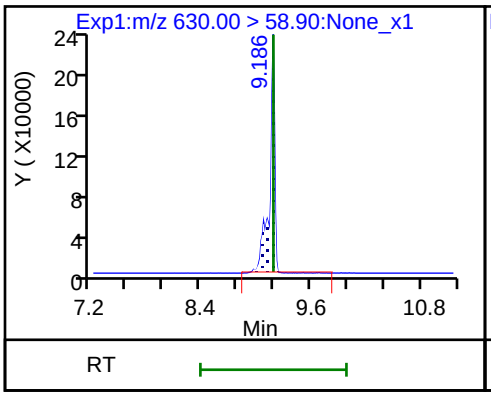
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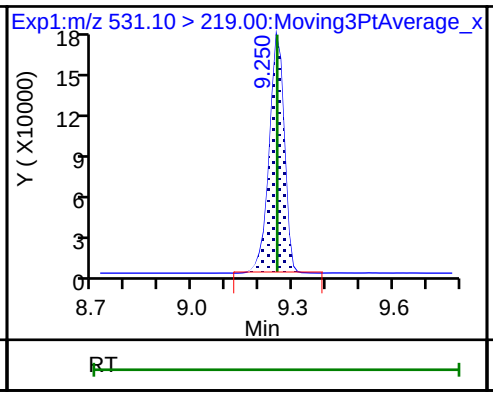
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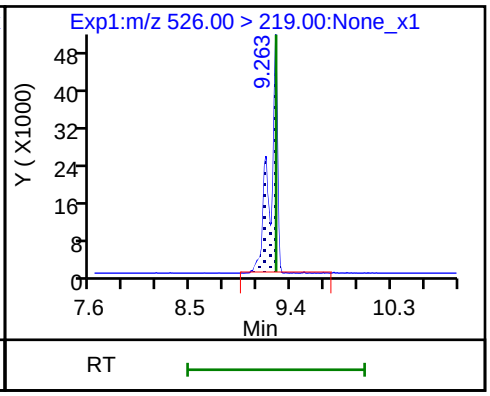
77 N-EtFOSE-M



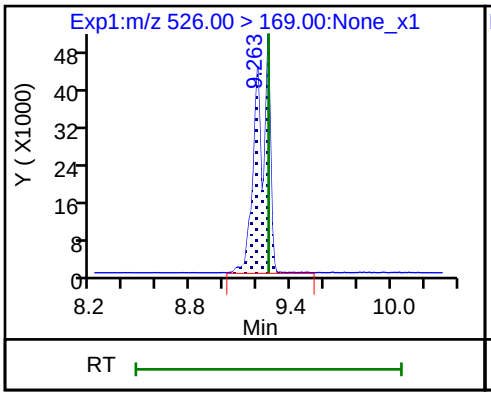
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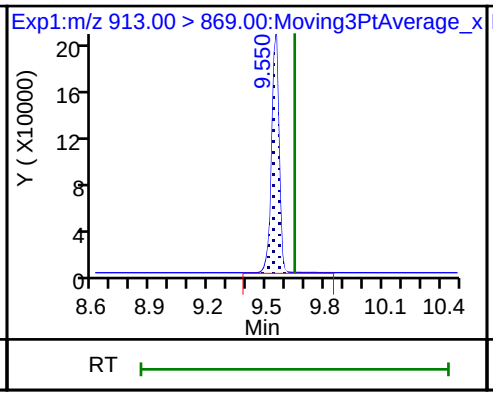
79 N-EtFOSA-M



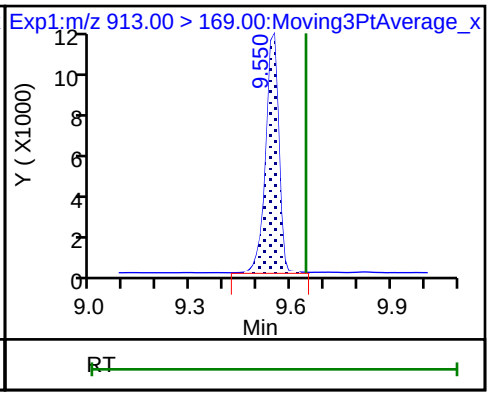
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/77 Calibration Date: 02/19/2026 05:27

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-77.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9147	0.8797		4.81	5.00	-4.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.9159	0.8997		1.97	2.00	-2.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0516	0.0442		1.71	2.00	-14.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.006	0.9641		0.958	1.00	-4.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	1.148	1.124		0.978	1.00	-2.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.347	1.269		0.942	1.00	-6.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.837	1.797		1.84	1.88	-2.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.2742	0.2896		1.06	1.00	6.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	0.7455	0.7257		0.973	1.00	-3.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.0993	0.0904		4.55	5.00	-9.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8933	0.7747		0.770	0.888	-13.0	30.0
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	AveID	1.083	1.050		0.727	0.750	-3.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.7106	0.6432		0.905	1.00	-9.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	2.424	2.023		0.744	0.892	-17.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.7017	0.7376		1.05	1.00	5.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.440	3.366		0.926	0.946	-2.0	30.0
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	AveID	1.847	1.762		1.82	1.90	-5.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.132	1.135		0.943	0.940	0.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	1.846	1.861		0.987	0.979	1.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.5266	0.5213		0.990	1.00	-1.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0507	0.0444		4.38	5.00	-12.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.7603	0.7108		0.853	0.912	-7.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9091	0.8177		0.899	1.00	-10.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.671	1.701		1.95	1.92	2.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	0.2286	0.2456		0.993	0.924	7.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.256	1.297		0.985	0.954	3.0	30.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.9827	0.9220		0.938	1.00	-6.0	30.0
Perfluorodecanoic acid (PFDA)	AveID	0.5562	0.4845		0.871	1.00	-13.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/77 Calibration Date: 02/19/2026 05:27

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-77.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorohexanesulfonamide (FHxSA)	AveID	1.331	1.261		0.947	1.00	-5.0	30.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8818	0.8416		0.954	1.00	-5.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.379	1.255		0.847	0.930	-9.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.5442	0.5708		1.05	1.00	5.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.843	2.647		0.870	0.934	-7.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8608	0.7982		0.892	0.962	-7.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	0.6892	0.7324		1.06	1.00	6.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.079	0.9749		0.871	0.964	-10.0	30.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.136	1.091		0.960	1.00	-4.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	0.8500	0.6826		0.803	1.00	-20.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.789	1.631		0.861	0.944	-9.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.1157	0.0861		0.744	1.00	-26.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.109	0.9823		0.859	0.970	-11.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.679	2.495		4.66	5.00	-7.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.8894	0.8675		0.975	1.00	-2.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.105	2.768		4.46	5.00	-11.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8535	0.7822		0.916	1.00	-8.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	L2ID		0.4619		0.624	1.00	-38.0*	30.0
13C3-PFPrA	Ave	0.6934	0.6890		1.99	2.00	-1.0	30.0
13C4 PFBA	Ave	0.9840	0.9795		1.99	2.00	0.0	30.0
13C5 PFPeA	Ave	0.8870	1.008		2.27	2.00	14.0	30.0
13C2 4:2 FTS	Ave	0.2700	0.2820		4.90	4.69	4.0	30.0
13C5 PFHxA	Ave	1.089	1.253		2.30	2.00	15.0	30.0
13C3 PFBS	Ave	1.289	1.509		2.18	1.86	17.0	30.0
13C3 HFPO-DA	Ave	0.7090	0.8211		2.32	2.00	16.0	30.0
13C4 PFHpA	Ave	1.065	1.137		2.13	2.00	7.0	30.0
13C2 6:2 FTS	Ave	0.2246	0.2406		5.10	4.76	7.0	30.0
13C8 PFOA	Ave	0.9583	0.999		2.08	2.00	4.0	30.0
13C3 PFHxS	Ave	1.092	1.155		2.01	1.90	6.0	30.0
13C9 PFNA	Ave	1.000	1.002		2.00	2.00	0.0	30.0
13C2 8:2 FTS	Ave	0.2313	0.1998		4.15	4.80	-14.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-770716/77 Calibration Date: 02/19/2026 05:27

Instrument ID: 30577 Calib Start Date: 02/16/2026 20:22

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/16/2026 21:57

Lab File ID: 26FEB18JO-77.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
d3-NMeFOSAA	Ave	0.4784	0.5067		5.30	5.00	6.0	30.0
13C6 PFDA	Ave	0.9949	1.072		2.16	2.00	8.0	30.0
d5-NEtFOSAA	Ave	0.4379	0.4589		5.24	5.00	5.0	30.0
13C8 PFOS	Ave	1.111	1.149		1.98	1.92	3.0	30.0
13C7 PFUnA	Ave	1.040	0.9406		1.81	2.00	-10.0	30.0
13C2 PFDoA	Ave	1.039	0.9469		1.82	2.00	-9.0	30.0
13C8 FOSA	Ave	1.187	1.104		1.86	2.00	-7.0	30.0
13C2 PFTeDA	Ave	0.9547	1.041		2.18	2.00	9.0	30.0
d7-N-MeFOSE-M	Ave	0.0786	0.0833		5.30	5.00	6.0	30.0
d3-NMePFOSA	Ave	0.3445	0.3294		1.91	2.00	-4.0	30.0
d9-N-EtFOSE-M	Ave	0.0897	0.0985		5.49	5.00	10.0	30.0
d5-NEtPFOSA	Ave	0.4203	0.4137		1.97	2.00	-2.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-77.d
Lims ID: CCV 7_CAL 4
Client ID:
Sample Type: CCV
Inject. Date: 19-Feb-2026 05:27:00 ALS Bottle#: 5 Worklist Smp#: 77
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCV 2_CAL4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577
Sublist: chrom-30577-1633-125*sub12

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 11:13:49 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 10:58:49
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.167	2.133	0.034	1.000	2395339	4.81		96.2	14569	
D 1 13C3PFPrA										
166.00 > 121.00	2.167	2.133	0.034	0.499	1089112	1.99		99.4	2133	
3 PFBA										
212.80 > 168.90	4.340	4.302	0.038	1.000	1393114	1.96		98.2	17081	
D 4 13C4-PFBA										
216.80 > 171.90	4.340	4.309	0.031	1.000	1548386	1.99		99.5	20543	
* 5 13C3PFBA										
216.00 > 172.00	4.340	4.309	0.031		1580801	2.00			3248	
6 PFMPA										
229.00 > 84.90	4.661	4.622	0.039	0.935	787152	0.9583		95.8	2454	
7 3:3 FTCA										
241.00 > 177.00	4.661	4.631	0.030	0.935	72235	1.71	Target=1.15	85.7	1404	
241.00 > 117.00	4.661	4.631	0.030	0.935	63549		1.14(0.57-1.72)		506	
D 8 13C5 PFPeA										
268.30 > 223.00	4.986	4.959	0.027	0.914	1632866	2.27		114	3455	
9 PFPA										
263.00 > 219.00	4.986	4.959	0.027	1.000	917367	0.9784		97.8	2059	
10 PFMBA										
279.00 > 85.10	5.152	5.107	0.045	1.033	1036267	0.9422		94.2	3933	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.271	5.235	0.036	0.807	950769	4.90		104	5180	
12 4:2FTS										
327.10 > 307.00	5.271	5.235	0.036	1.000	683397	1.83	Target=1.67	97.8	4461	
327.10 > 80.90	5.271	5.235	0.036	1.000	389060		1.76(0.84-2.51)		511	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.419	5.386	0.033	0.993	293726	1.06	Target=1.43	106	2812	
295.00 > 84.90	5.419	5.386	0.033	0.993	164824		1.78(0.71-2.14)		750	
* 16 13C2 PFHxA										
315.10 > 270.00	5.457	5.424	0.033		4048269	5.00			6111	
D 15 13C5 PFHxA										
318.00 > 273.00	5.457	5.424	0.033	1.000	2028414	2.30		115	8084	
17 PFHxA										
313.00 > 269.00	5.457	5.424	0.033	1.000	736033	0.9735	Target=9.36	97.3	2062	
313.00 > 118.90	5.457	5.424	0.033	1.000	75050		9.81(4.68-14.05)		397	
18 5:3 FTCA										
341.00 > 237.10	5.542	5.503	0.039	1.016	458449	4.55	Target=0.64	91.0	1440	
341.00 > 217.00	5.542	5.503	0.039	1.016	665581		0.69(0.32-0.97)		2427	
D 19 13C3 PFBS										
302.10 > 79.90	5.600	5.561	0.039	0.858	2022563	2.18		117	8273	
20 PFBS										
298.70 > 79.90	5.600	5.561	0.039	1.000	746477	0.7701	Target=3.13	86.7	2787	
298.70 > 98.80	5.600	5.561	0.039	1.000	242731		3.08(1.56-4.69)		1845	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.646	5.607	0.039	1.035	1329612	2.32		116	3285	
23 HFPO-DA										
284.90 > 168.90	5.646	5.607	0.039	1.000	523385	0.7269	Target=2.49	96.9	1763	
284.90 > 184.90	5.646	5.607	0.039	1.000	199945		2.62(1.24-3.73)		1235	
21 FBSA										
297.90 > 78.00	5.690	5.665	0.025	1.016	697891	0.9051		90.5	1421	
26 PFEESA										
314.80 > 134.90	5.832	5.807	0.025	1.069	1829913	0.7445	Target=11.82	83.5	6995	
314.80 > 82.90	5.832	5.807	0.025	1.069	163765		11.17(5.91-17.73)		871	
D 28 13C4 PFHpA										
367.10 > 322.00	5.888	5.851	0.037	1.079	1840764	2.13		107	3886	
27 PFHpA										
363.10 > 319.00	5.888	5.851	0.037	1.000	678862	1.05	Target=1.51	105	2550	
363.10 > 169.00	5.888	5.851	0.037	1.000	381296		1.78(0.75-2.26)		1387	
29 ADONA										
376.90 > 250.90	6.042	6.007	0.035	1.070	2117115	0.9257	Target=2.22	97.9	3415	
376.90 > 84.80	6.042	6.007	0.035	1.070	924658		2.29(1.11-3.33)		4630	
30 PFPeS										
349.10 > 79.90	6.083	6.049	0.034	0.930	886288	0.9427	Target=3.28	100	3192	
349.10 > 98.90	6.083	6.049	0.034	0.930	283593		3.13(1.64-4.91)		1456	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.083	6.059	0.024	0.932	823301	5.10		107	3298	
31 6:2FTS										
427.10 > 407.00	6.083	6.059	0.024	1.000	580199	1.82	Target=1.56	95.4	2471	
427.10 > 80.90	6.083	6.059	0.024	1.000	367399		1.58(0.78-2.35)		2581	
33 BTS										
280.00 > 147.00	6.244	6.220	0.024	0.955	1513072	0.9870		101	5114	
* 34 13C4 PFOA										
417.10 > 372.00	6.292	6.269	0.023		6502671	5.00			7324	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.292	6.269	0.023	1.000	2597342	2.08		104	3559	
36 PFOA										
413.00 > 369.00	6.292	6.269	0.023	1.000	677000	0.9899	Target=1.59	99.0	664	
413.00 > 169.00	6.292	6.269	0.023	1.000	398767		1.70(0.80-2.39)		493	
37 7:3 FTCA										
441.00 > 316.90	6.446	6.407	0.039	1.181	225266	4.38	Target=0.24	87.6	916	
441.00 > 336.90	6.446	6.407	0.039	1.181	878026		0.26(0.12-0.36)		3453	
D 38 13C3 PFHxS										
402.10 > 79.90	6.539	6.512	0.027	1.002	1574908	2.01		106	4095	
* 39 18O2 PFHxS										
403.00 > 83.90	6.528	6.512	0.016		1363075	1.90			4248	
40 PFHxS										
398.70 > 79.90	6.528	6.512	0.016	0.998	538449	0.8526	Target=3.08	93.5	1134	
398.70 > 98.90	6.528	6.512	0.016	0.998	169762		3.17(1.54-4.62)		384	
* 42 13C5 PFNA										
468.00 > 423.00	6.709	6.684	0.025		2010791	2.00			4082	
D 41 13C9 PFNA										
472.10 > 427.00	6.709	6.684	0.025	1.000	2015239	2.00		100	3725	
43 PFNA										
463.00 > 419.00	6.709	6.694	0.015	1.000	823894	0.8994	Target=1.95	89.9	1015	
463.00 > 219.00	6.709	6.694	0.015	1.000	373198		2.21(0.97-2.92)		523	
45 8:2FTS										
527.10 > 507.00	6.891	6.868	0.023	1.000	469103	1.95	Target=1.86	102	1457	
527.10 > 80.80	6.891	6.868	0.023	1.000	244249		1.92(0.93-2.79)		1656	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.891	6.868	0.023	1.056	689372	4.15		86.4	2227	
46 PFECHS										
461.00 > 381.00	6.919	6.914	0.005	1.058	188539	0.99	Target=0.18	107	1119	
461.00 > 99.00	6.929	6.914	0.015	1.060	976997		0.19(0.09-0.27)		5176	
47 PFHpS										
449.00 > 79.90	6.970	6.945	0.025	0.944	923301	0.9851	Target=3.60	103	4110	
449.00 > 98.80	6.960	6.945	0.015	0.942	233254		3.96(1.80-5.40)		1044	
50 NMeFOSAA										
570.10 > 419.00	7.061	7.037	0.024	1.000	303287	0.9382	Target=1.80	93.8	606	
570.10 > 483.00	7.051	7.037	0.014	0.999	174731		1.74(0.90-2.71)		180	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.061	7.037	0.024	0.956	1644697	5.30		106	2024	
D 52 13C6 PFDA										
519.10 > 474.10	7.120	7.107	0.014	1.000	2206473	2.15		108	9068	
53 PFDA										
512.90 > 469.00	7.120	7.107	0.014	1.000	534552	0.8711	Target=2.75	87.1	2527	
512.90 > 219.00	7.120	7.107	0.014	1.000	194628		2.75(1.37-4.12)		1583	
* 51 13C2 PFDA										
515.10 > 470.10	7.120	7.107	0.014		2058382	2.00			5933	
48 FHxSA										
397.90 > 78.00	7.167	7.126	0.041	1.096	1047449	0.9475		94.7	1962	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.241	7.219	0.022	0.980	1489567	5.24		105	2314	
55 NEtFOSAA										
584.20 > 419.10	7.251	7.238	0.013	1.001	250725	0.9544	Target=1.26	95.4	574	
584.20 > 526.00	7.251	7.238	0.013	1.001	185722		1.35(0.63-1.89)		345	
* 57 13C4 PFOS										
502.80 > 79.90	7.387	7.373	0.014		1243798	1.92			4679	
D 56 13C8 PFOS										
507.10 > 79.90	7.387	7.373	0.014	1.000	1429432	1.98		103	4320	
58 PFOS										
498.90 > 79.90	7.387	7.373	0.014	1.000	870907	0.8465	Target=4.39	91.0	2069	
498.90 > 98.80	7.377	7.373	0.004	0.999	198977		4.38(2.19-6.58)		298	
D 59 13C7 PFUnA										
570.00 > 525.10	7.528	7.506	0.022	1.057	1936040	1.81		90.5	2666	
60 PFUnA										
563.10 > 519.00	7.528	7.515	0.013	1.000	552546	1.05	Target=3.76	105	2367	
563.10 > 269.10	7.528	7.515	0.013	1.000	129690		4.26(1.88-5.63)		884	
61 9ClFOS										
530.80 > 351.00	7.698	7.686	0.012	1.042	1844600	0.8695	Target=3.06	93.1	8230	
532.80 > 353.00	7.698	7.686	0.012	1.042	604720		3.05(1.53-4.59)		2944	
62 PFNS										
548.80 > 79.90	7.791	7.788	0.003	1.055	572858	0.8920	Target=3.67	92.7	4035	
548.80 > 98.80	7.791	7.788	0.003	1.055	150587		3.80(1.83-5.50)		1068	
D 81 PFDoA										
615.10 > 570.00	7.938	7.935	0.003	1.115	1949061	1.82		91.1	4441	
63 PFDoA										
613.10 > 569.00	7.938	7.935	0.003		713774	1.06	Target=4.73	106	2728	
613.10 > 319.00	7.938	7.935	0.003		156949		4.55(2.36-7.09)		1095	
D 65 13C8 FOSA										
506.10 > 77.80	8.188	8.155	0.033	1.108	1432816	1.86		93.0	11067	
64 PFOSA										
498.10 > 77.90	8.199	8.155	0.044	1.001	781586	0.9600	Target=41.75	96.0	1342	
498.10 > 478.00	8.199	8.155	0.044	1.001	17437		44.82(20.87-62.62)		30.7	
66 PFDS										
599.00 > 79.90	8.199	8.196	0.003	1.110	701117	0.8710	Target=3.69	90.4	4584	
599.00 > 98.80	8.199	8.196	0.003	1.110	195674		3.58(1.84-5.53)		874	
67 PFTrDA										
663.00 > 619.00	8.347	8.345	0.002	0.957	698310	0.8031	Target=5.83	80.3	3427	
663.00 > 168.90	8.338	8.345	-0.007	0.956	119467		5.85(2.91-8.74)		1613	
68 11ClFOS										
630.90 > 450.90	8.506	8.504	0.002	1.151	1148696	0.8608	Target=3.21	91.2	3427	
632.90 > 452.90	8.506	8.504	0.002	1.151	374972		3.06(1.60-4.81)		5526	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.723	8.722	0.001	1.225	2143146	2.18		109	4023	
69 PFTeDA										
713.10 > 168.90	8.723	8.722	0.001	1.000	92285	0.7443	Target=0.83	74.4	1392	
713.10 > 219.00	8.723	8.722	0.001	1.000	108123		0.85(0.41-1.24)		724	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.904	8.917	-0.013	1.205	710867	0.8594	Target=4.20	88.6	4275	
699.10 > 98.80	8.904	8.917	-0.013	1.205	163480		4.35(2.10-6.30)		1778	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.989	8.945	0.044	1.217	270407	5.30		106	1004	
73 N-MeFOSE-M										
616.10 > 58.90	9.003	8.974	0.029	1.002	674703	4.66		93.1	1033	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.085	9.057	0.028	1.230	427676	1.91		95.6	2527	
74 NMeFOSA										
511.90 > 219.00	9.098	9.057	0.041	1.001	185500	0.9754	Target=0.68	97.5	778	
511.90 > 169.00	9.085	9.057	0.028	1.000	260042		0.71(0.34-1.03)		619	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.203	9.176	0.027	1.246	319716	5.49		110	847	
77 N-EtFOSE-M										
630.00 > 58.90	9.215	9.189	0.026	1.001	885004	4.46		89.2	2207	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.279	9.252	0.027	1.256	537098	1.97		98.4	2767	
79 N-EtFOSA-M										
526.00 > 219.00	9.292	9.265	0.027	1.001	210055	0.9165	Target=0.85	91.6	1112	
526.00 > 169.00	9.292	9.265	0.027	1.001	251372		0.84(0.43-1.28)		983	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.564	9.645	-0.081	1.096	495011	0.6238	Target=16.56	62.4	11882	
913.00 > 169.00	9.564	9.645	-0.081	1.096	31083		15.93(8.28-24.84)		2116	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL4_00083 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 11:13:54 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-77.d

Injection Date: 19-Feb-2026 05:27:00 Instrument ID: 30577

Lims ID: CCV 7_CAL 4

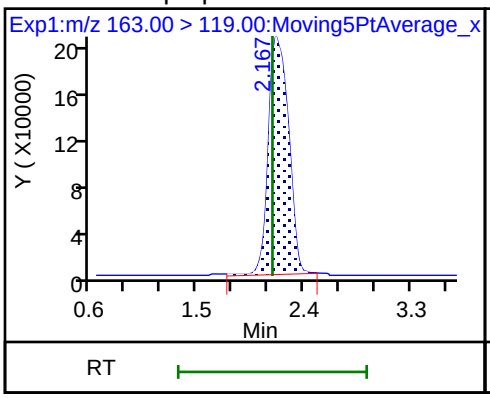
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 5 Worklist Smp#: 77

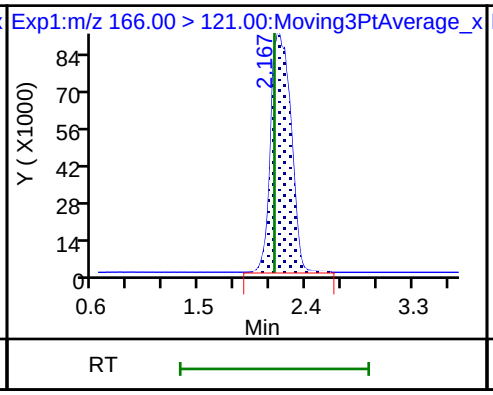
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

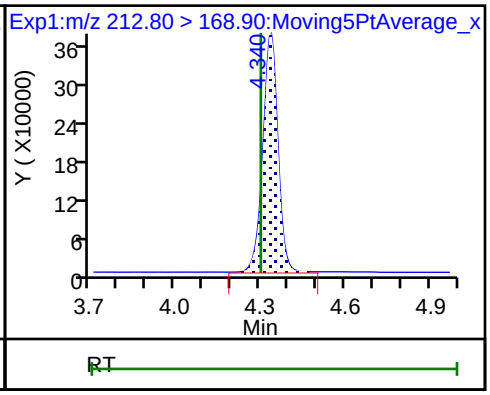
2 Perfluoropropionic acid



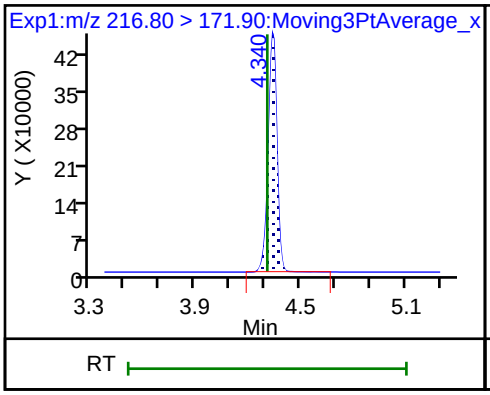
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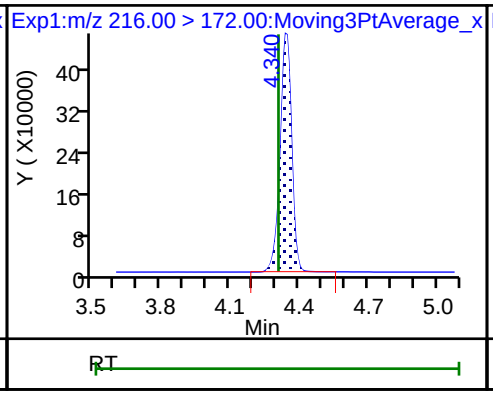
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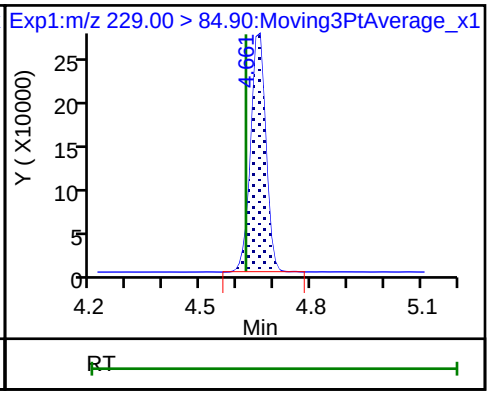
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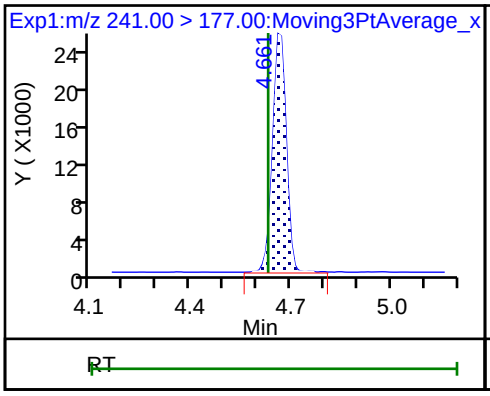
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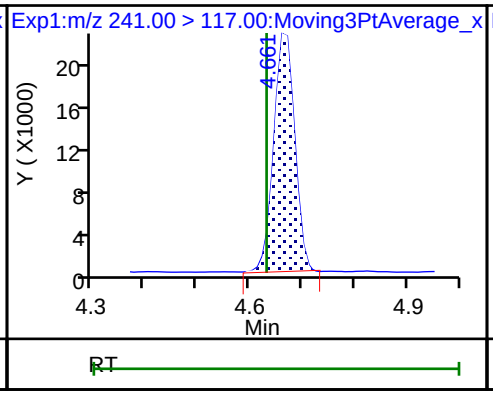
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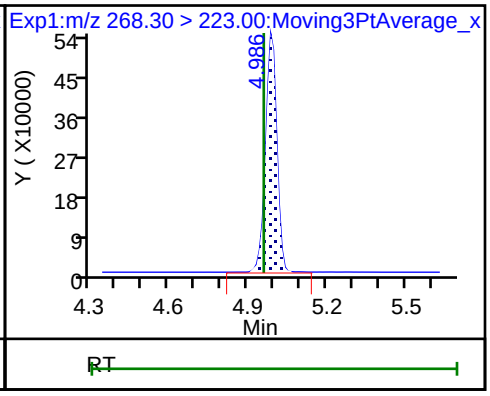
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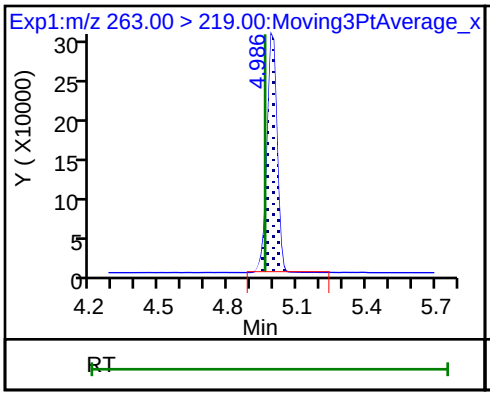
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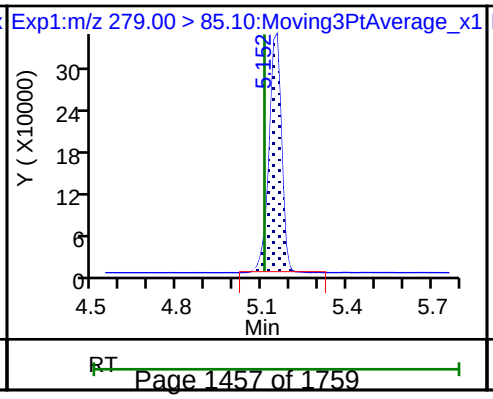
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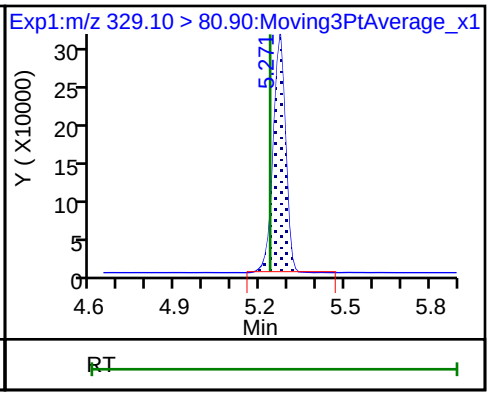
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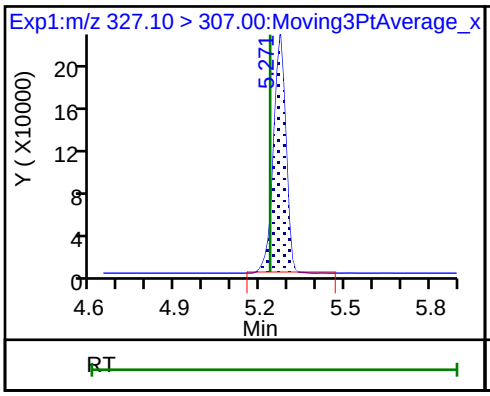
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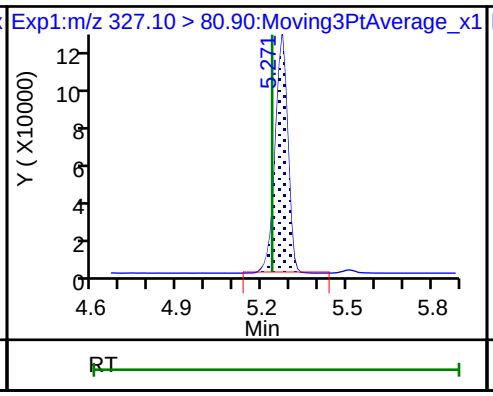
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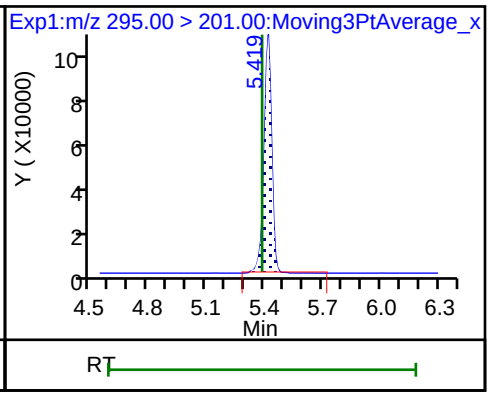
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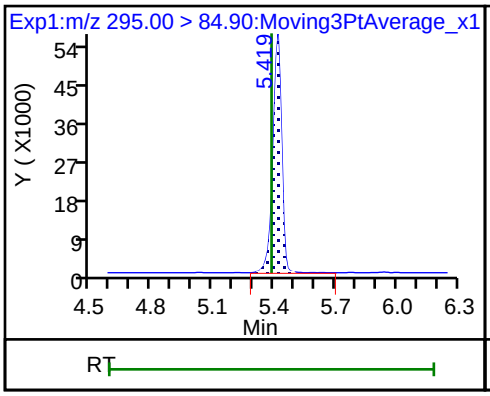
12 4:2FTS



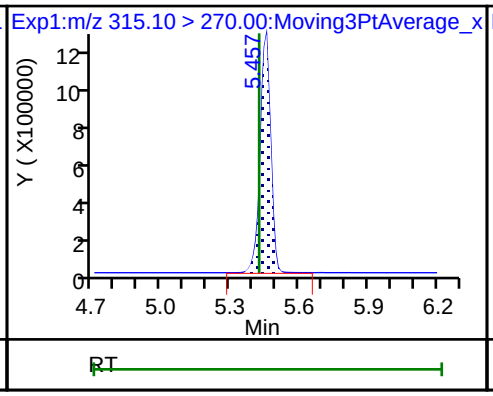
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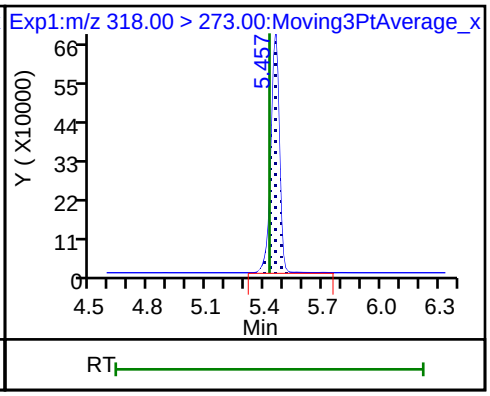
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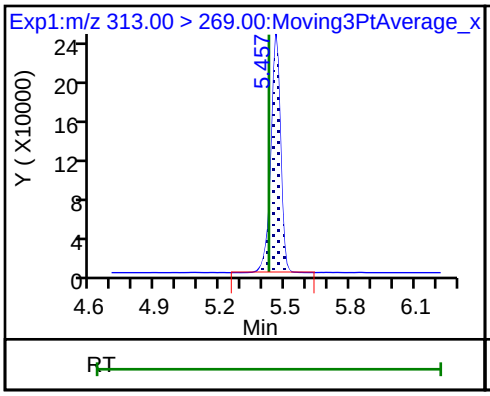
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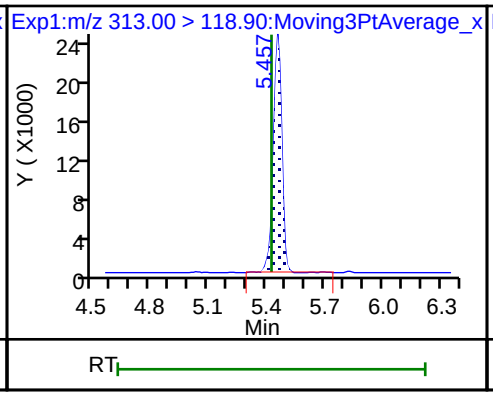
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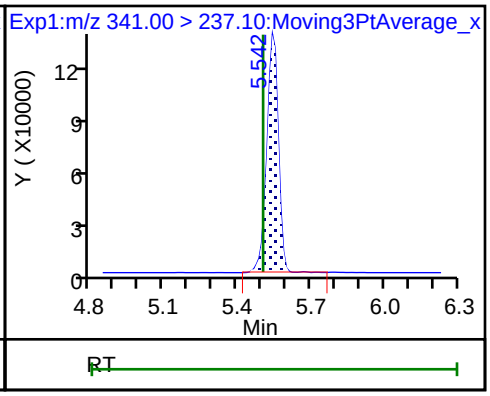
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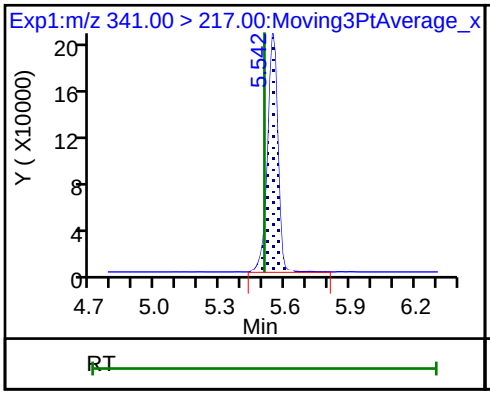
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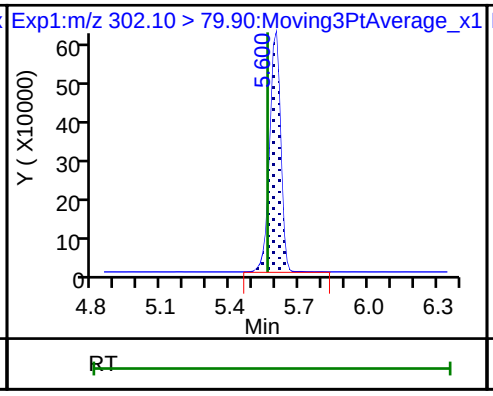
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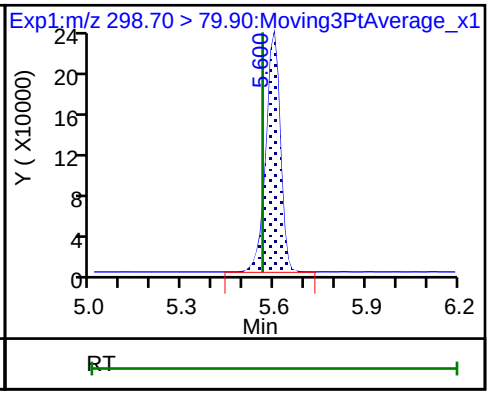
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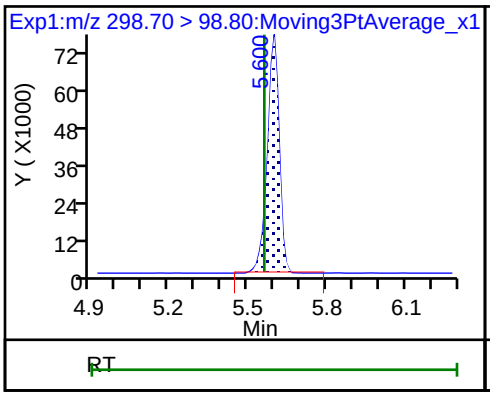
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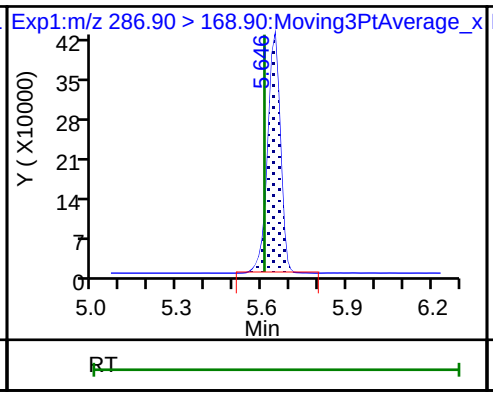
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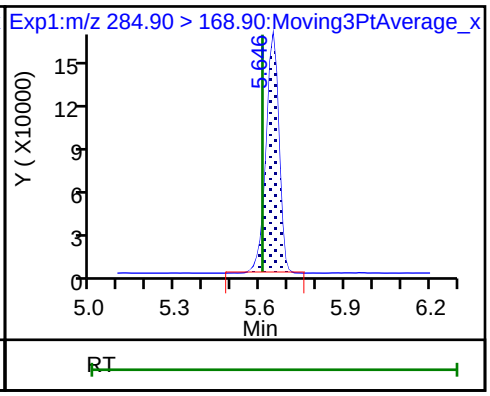
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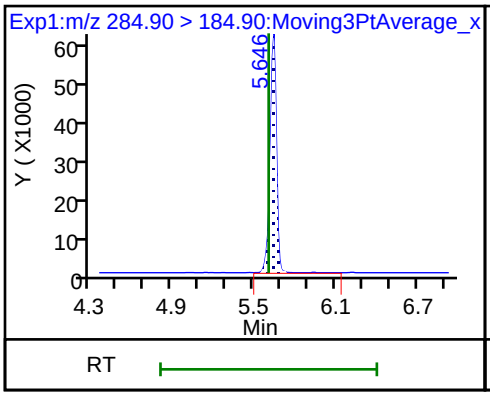
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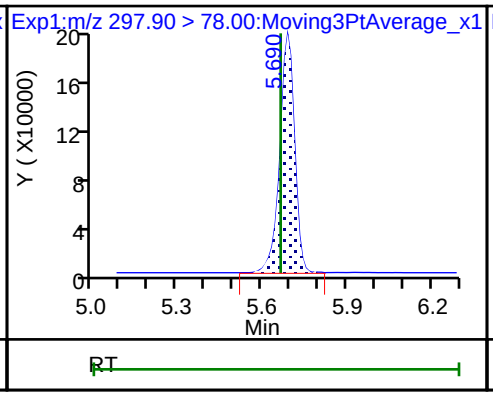
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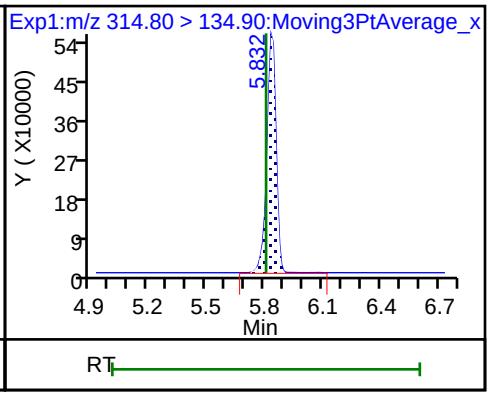
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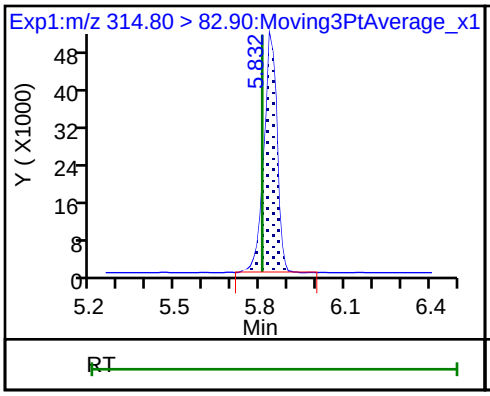
21 FBSA



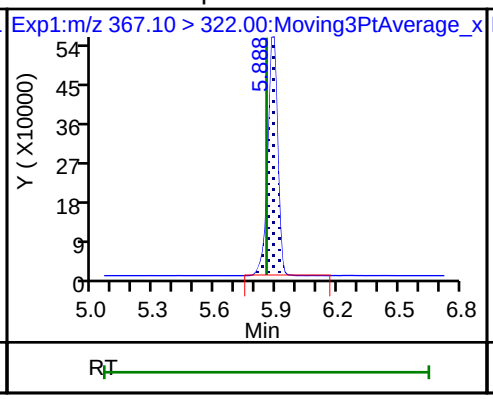
26 PFEESA



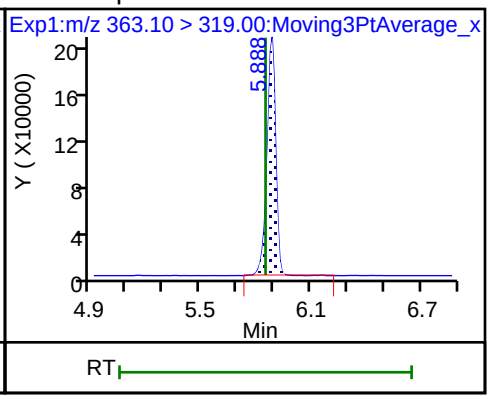
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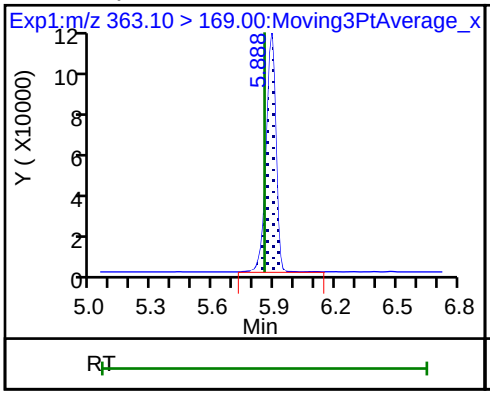
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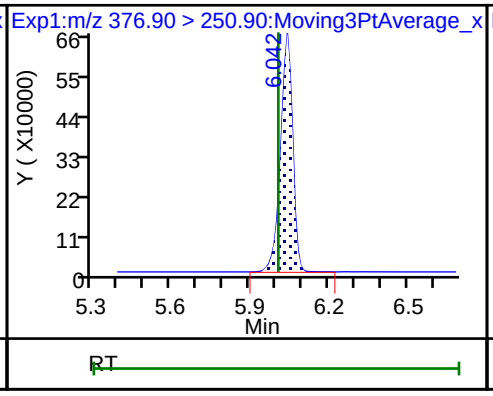
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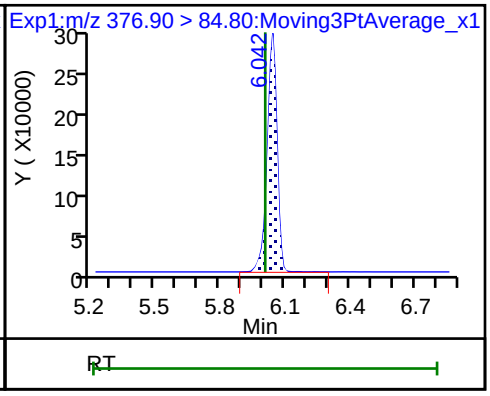
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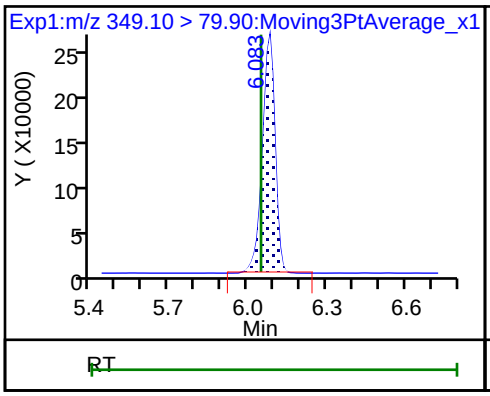
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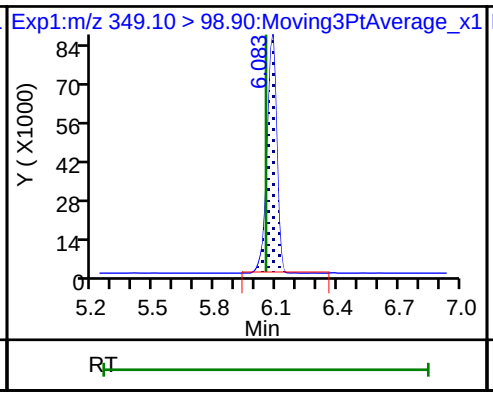
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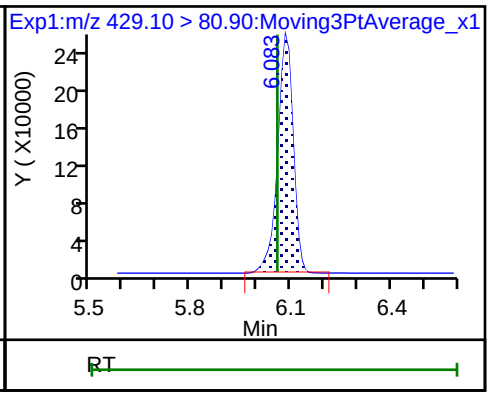
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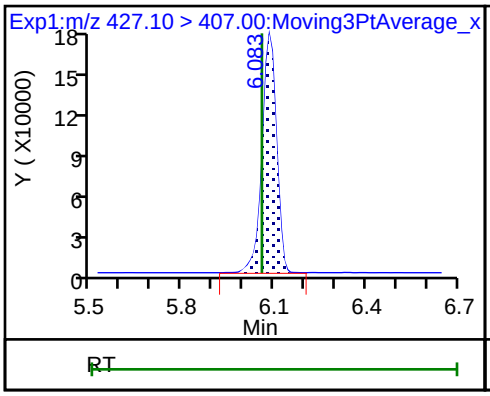
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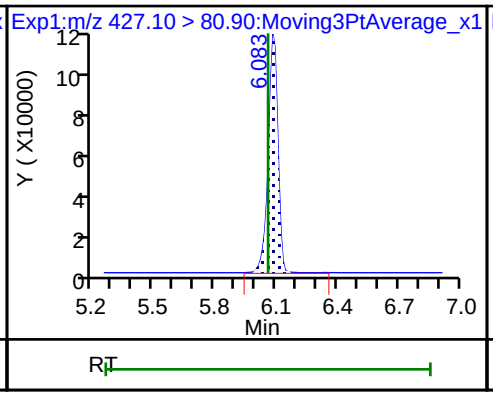
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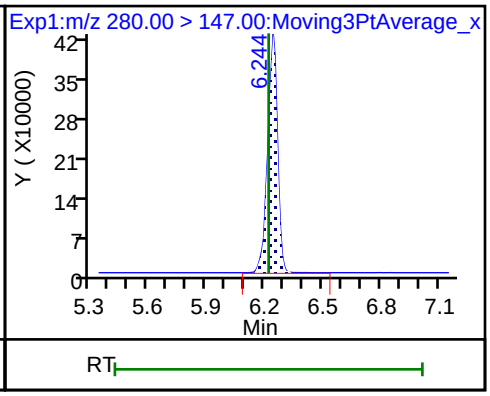
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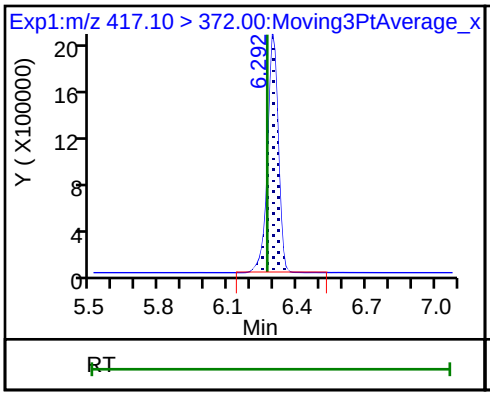
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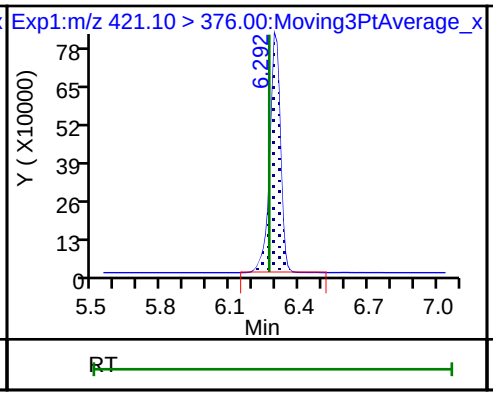
33 BTS



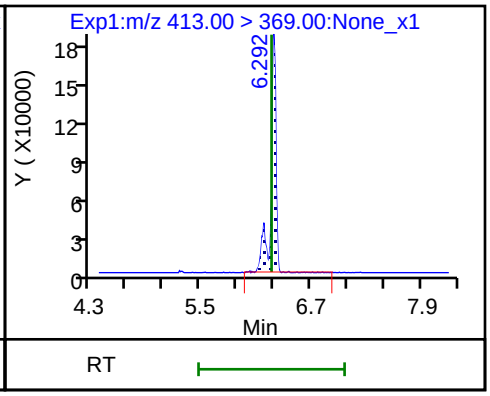
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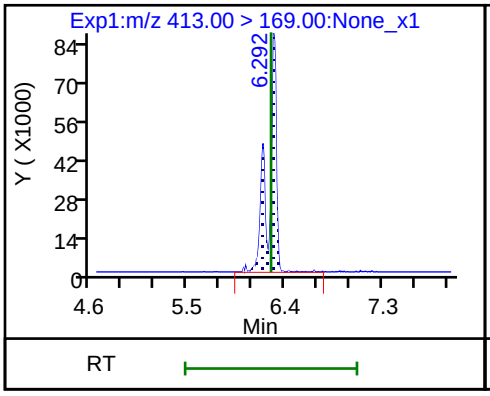
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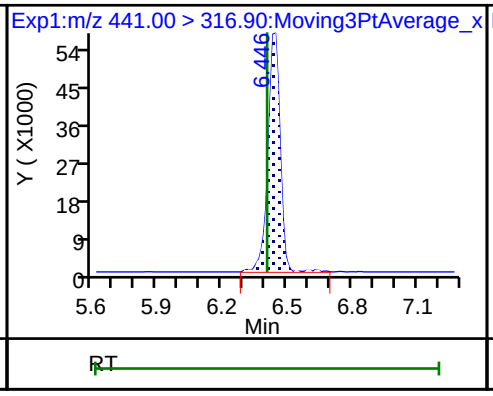
36 PFOA



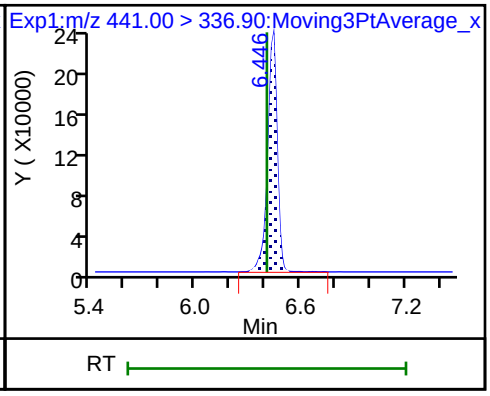
36 PFOA



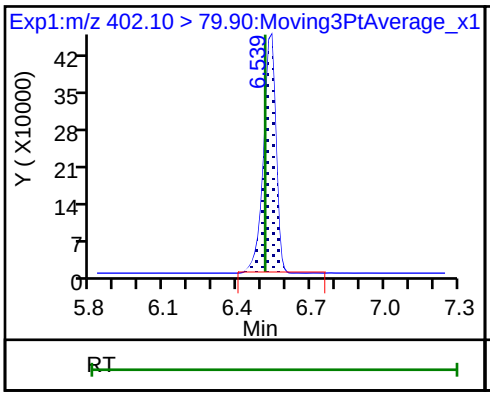
37 7:3 FTCA



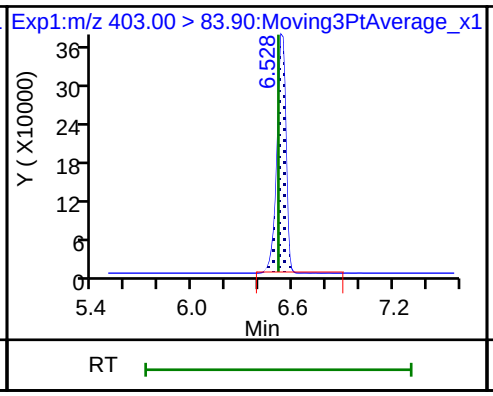
37 7:3 FTCA



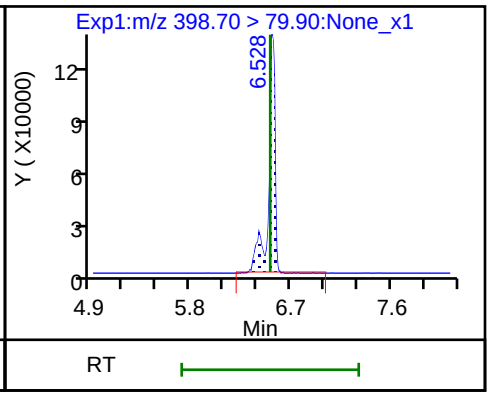
D 38 13C3 PFHxS



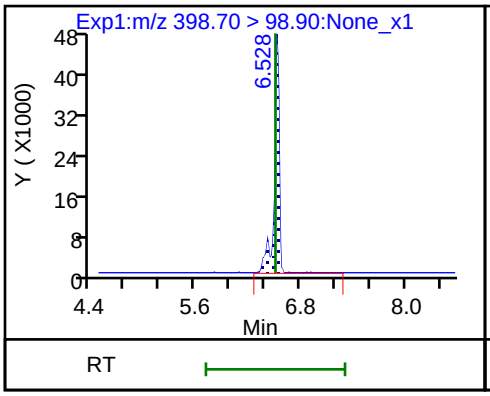
* 39 18O2 PFHxS



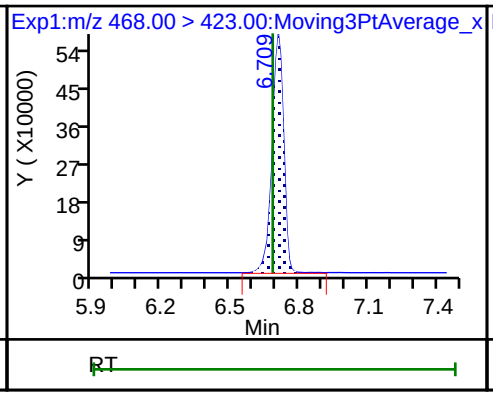
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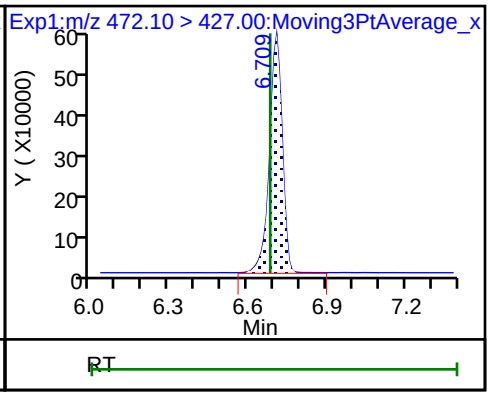
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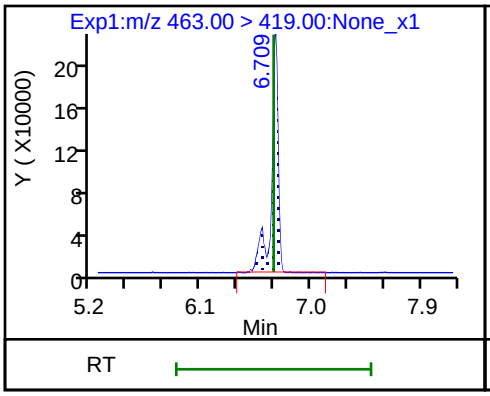
* 42 13C5 PFNA



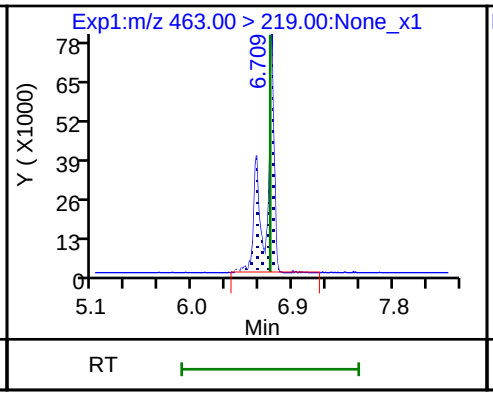
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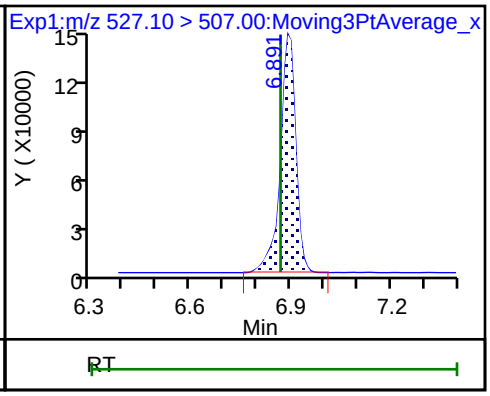
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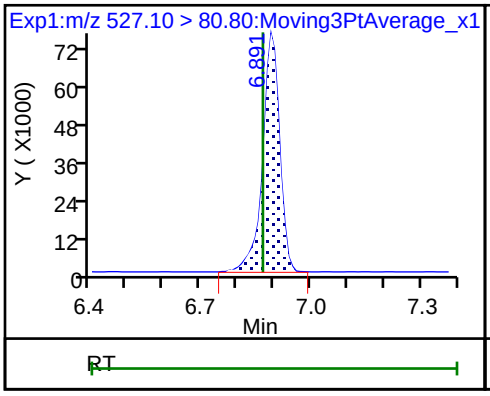
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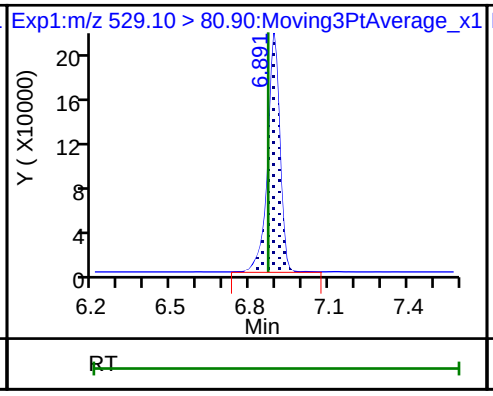
45 8:2FTS



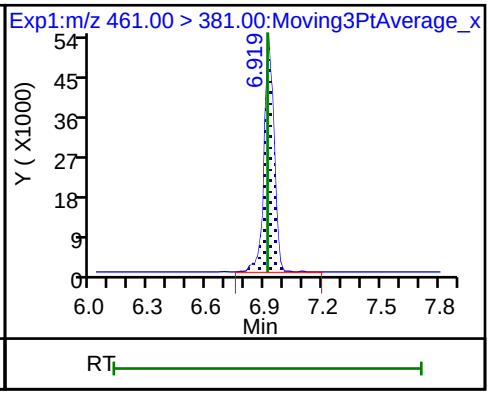
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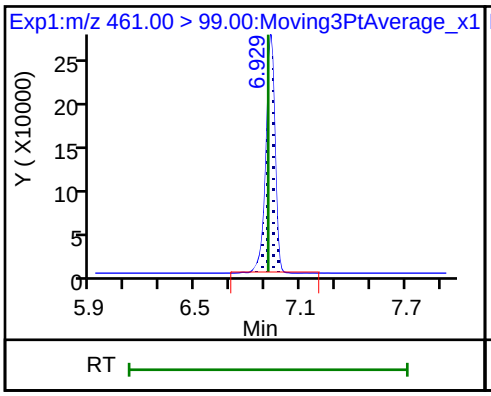
D 44 13C2-8:2FTS



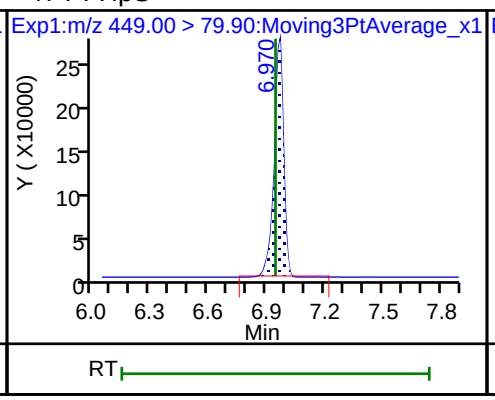
46 PFECHS



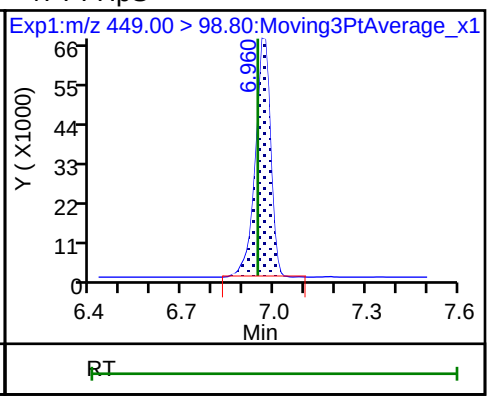
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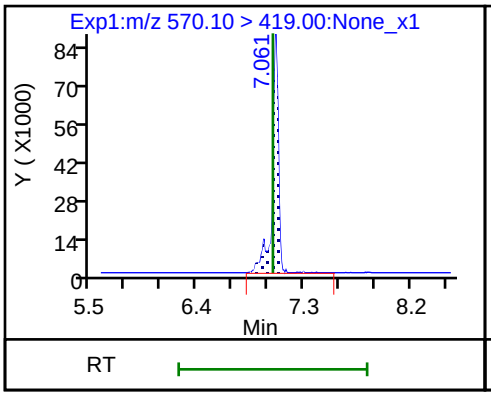
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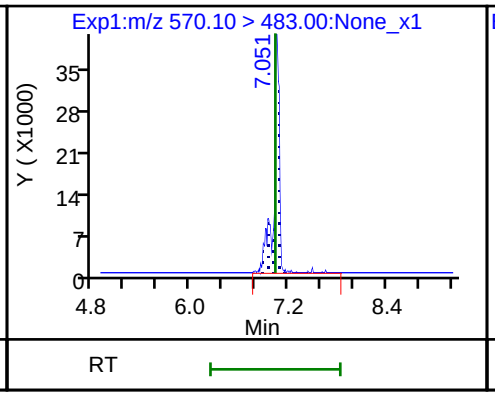
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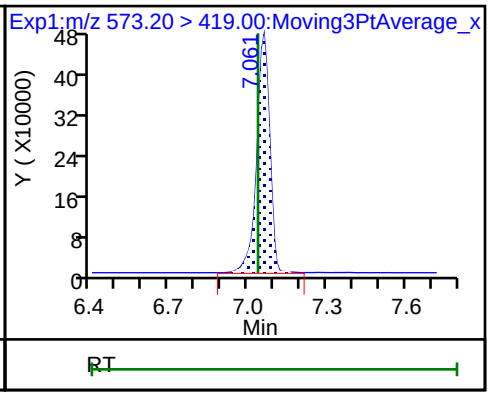
50 NMeFOSAA



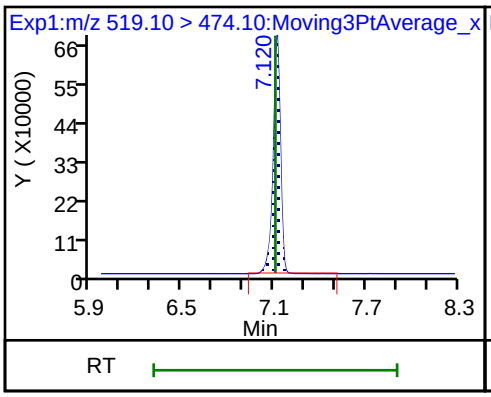
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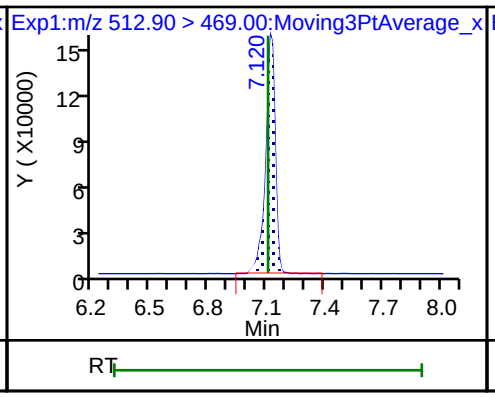
D 49 d3-NMeFOSAA



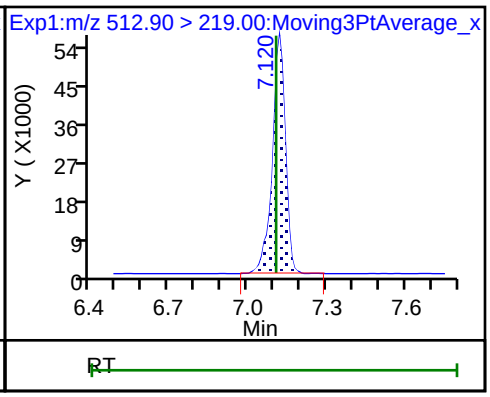
D 52 13C6 PFDA



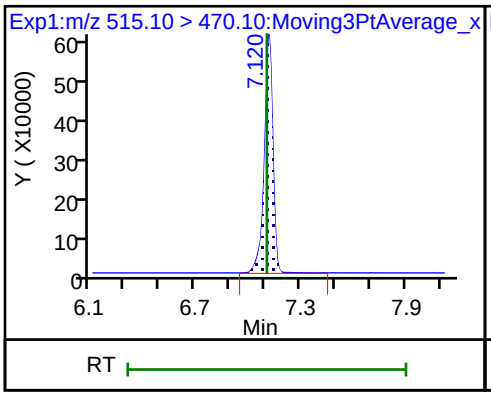
53 PFDA



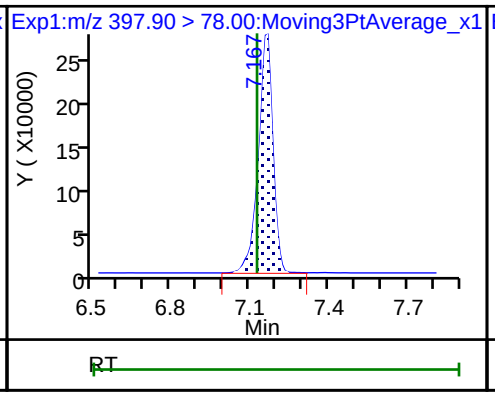
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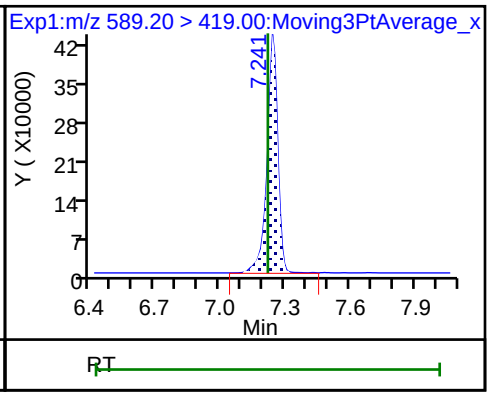
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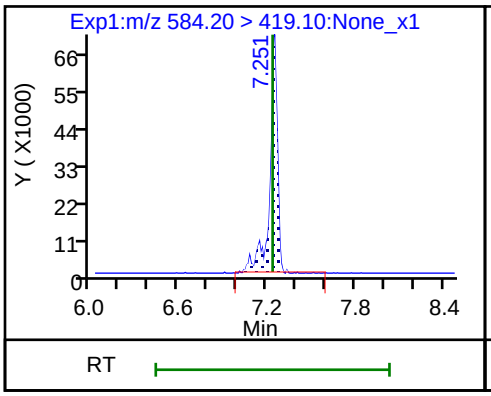
48 FHxSA



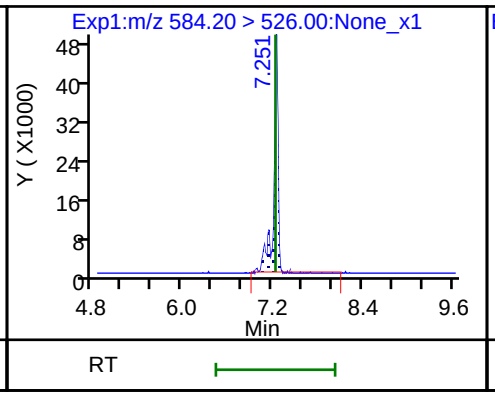
D 54 d5-NEtFOSAA



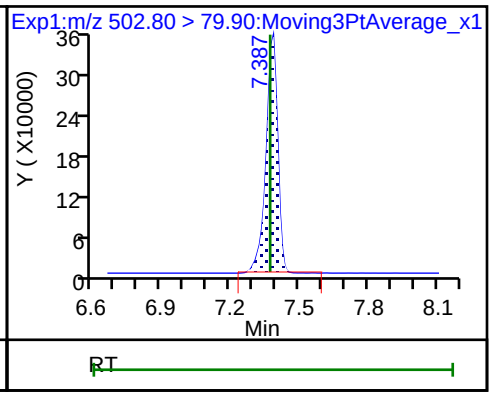
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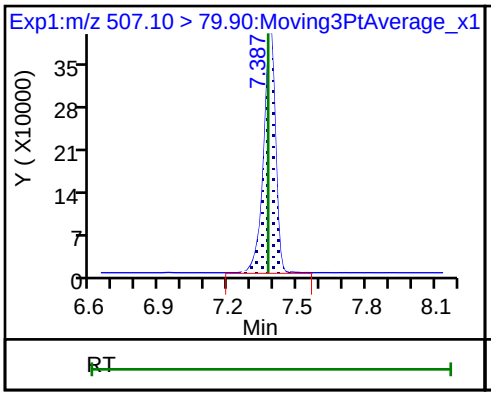
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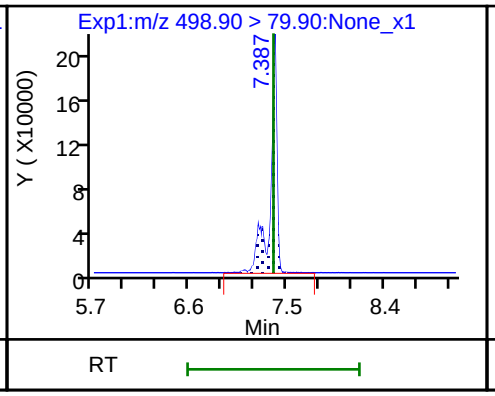
* 57 13C4 PFOS



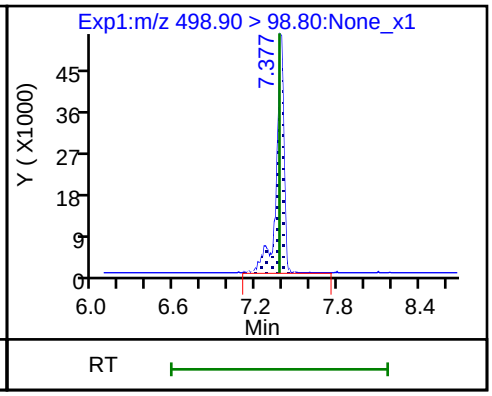
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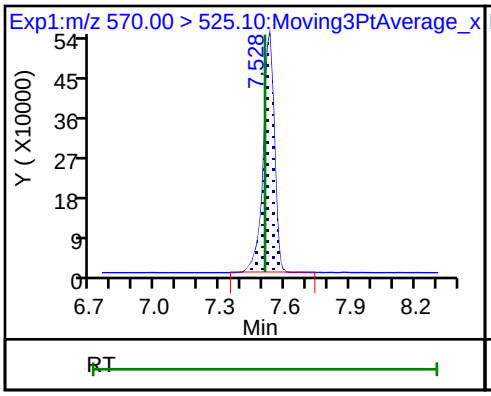
58 PFOS



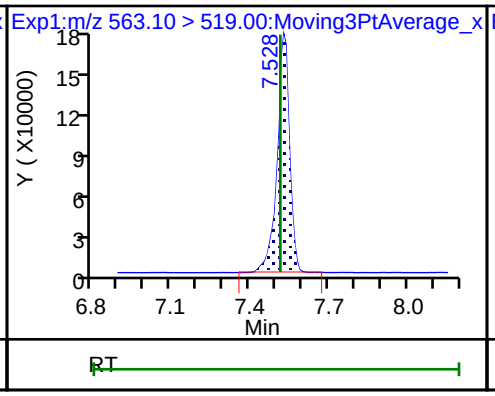
58 PFOS



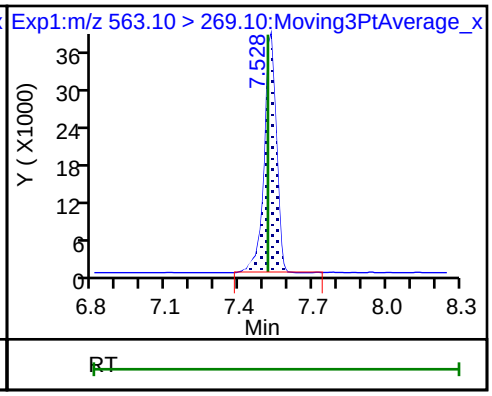
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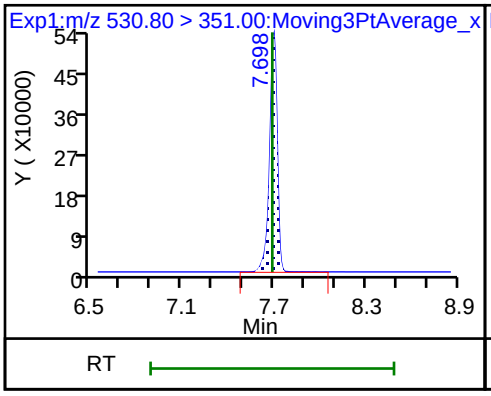
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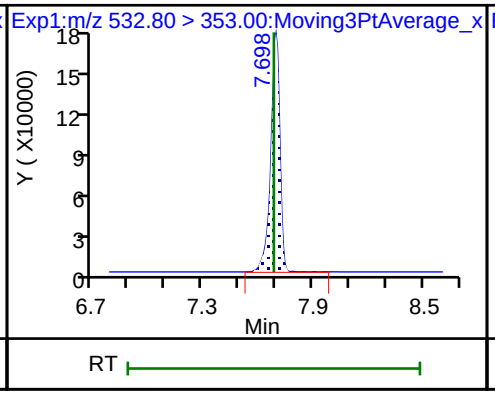
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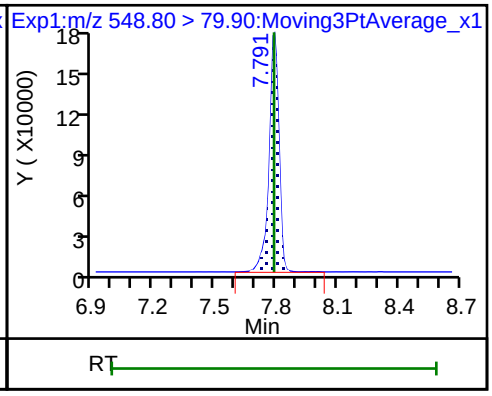
61 9ClFOS



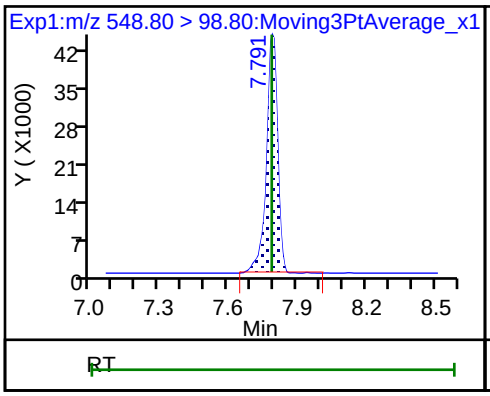
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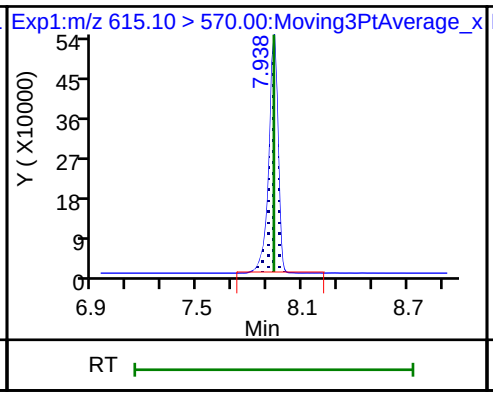
62 PFNS



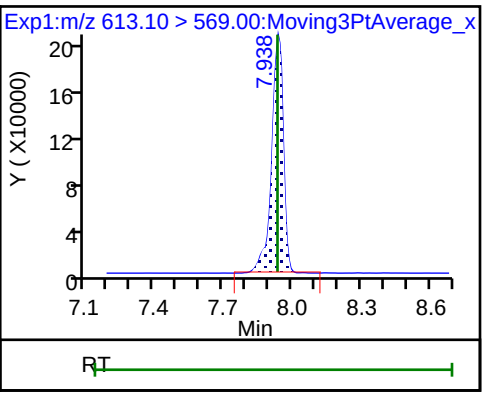
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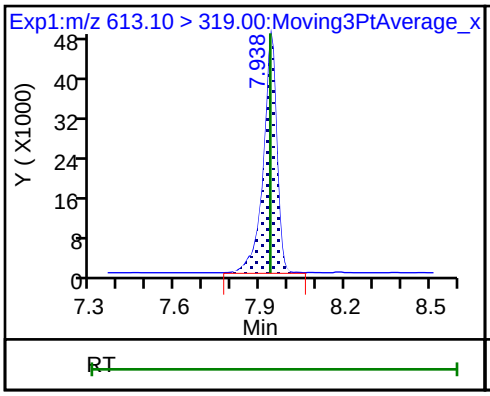
D 81 PFDoA



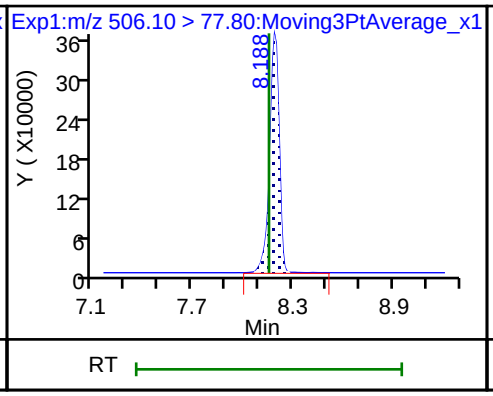
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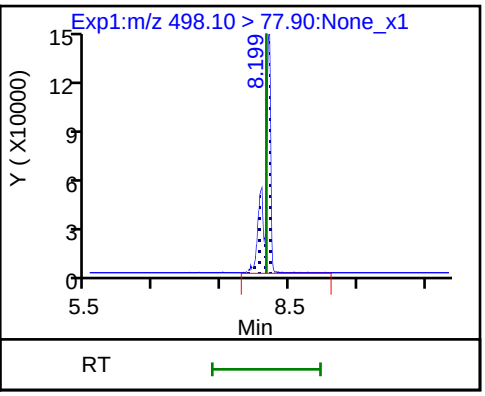
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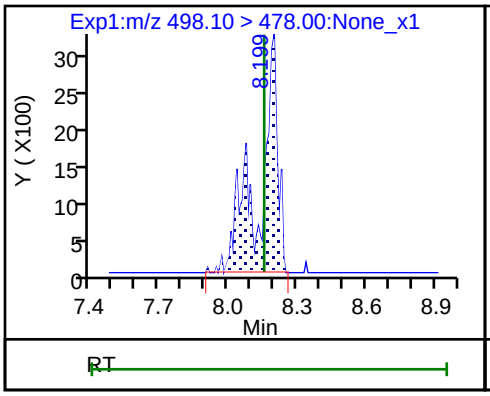
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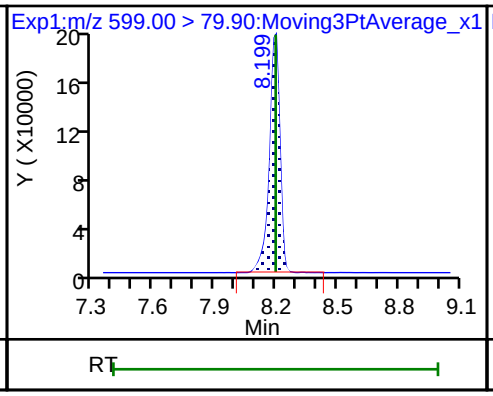
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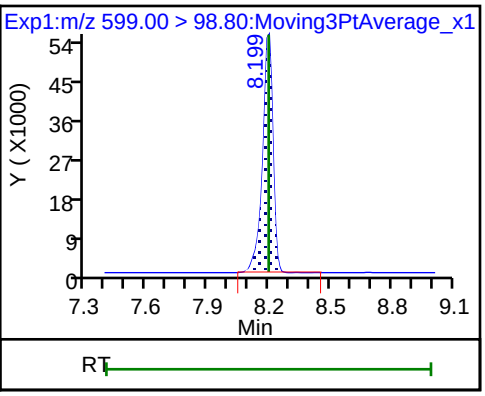
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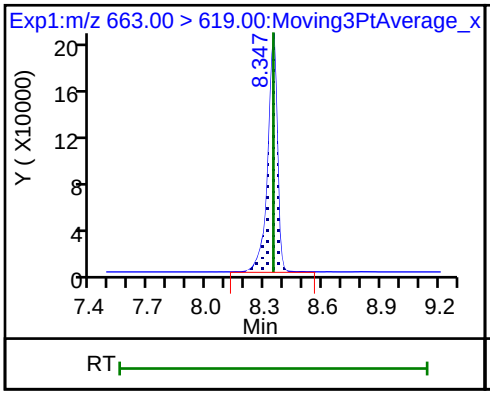
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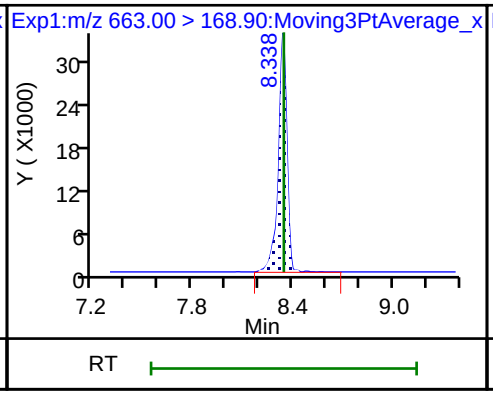
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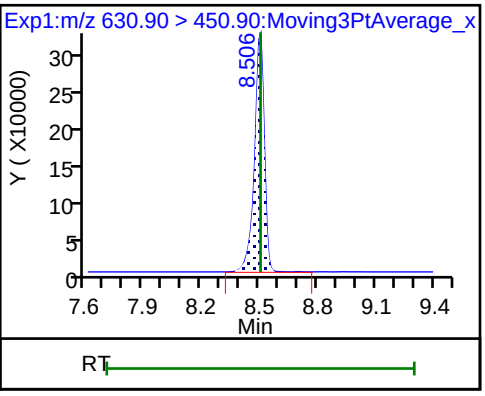
67 PFTrDA



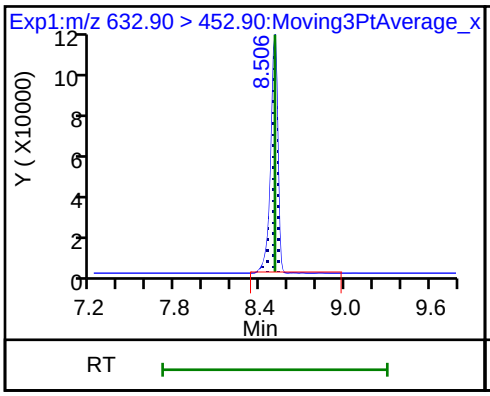
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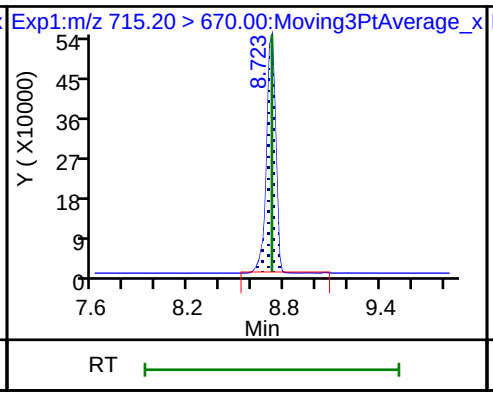
68 11ClFOS



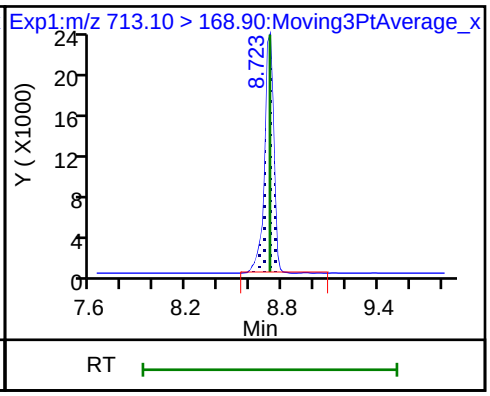
68 11ClFOS



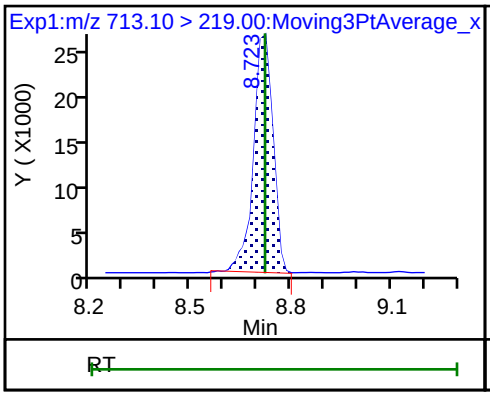
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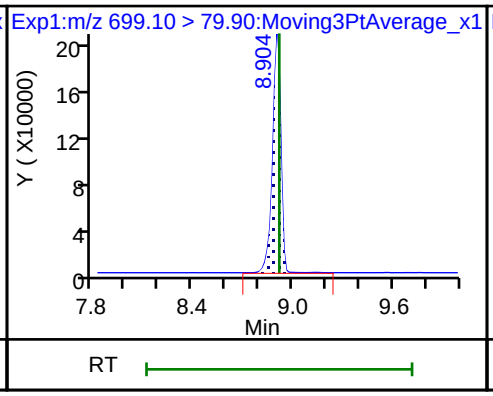
69 PFTeDA



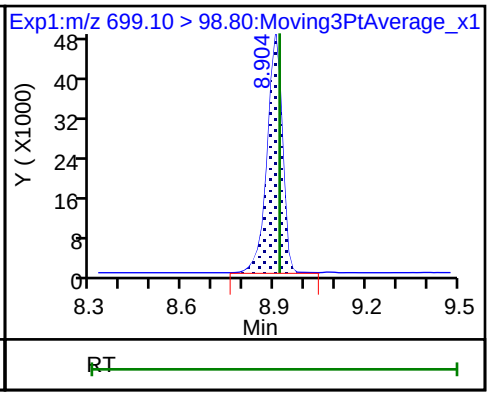
69 PFTeDA



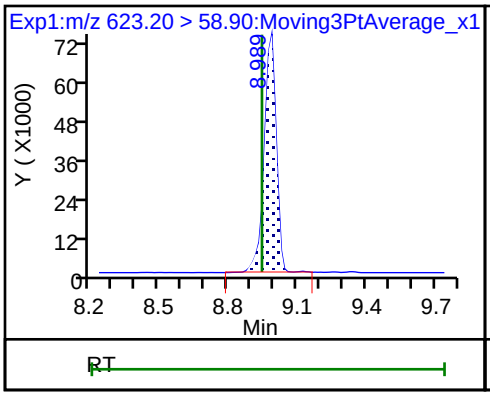
71 PFDoS



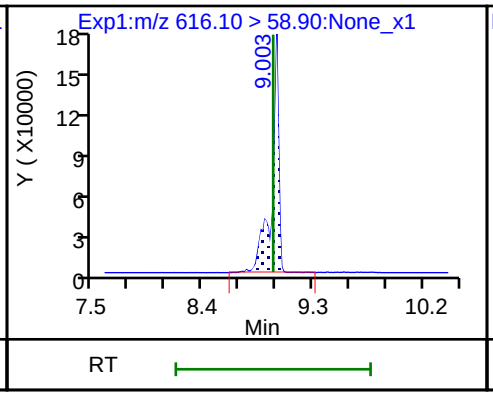
71 PFDoS



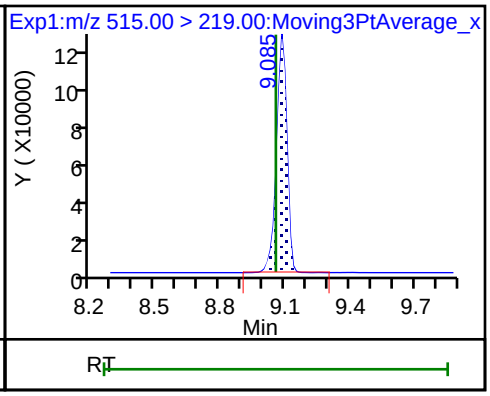
D 72 d7-N-Me-FOSE



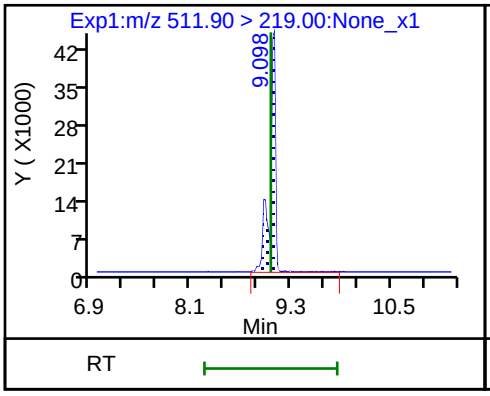
73 N-MeFOSE-M



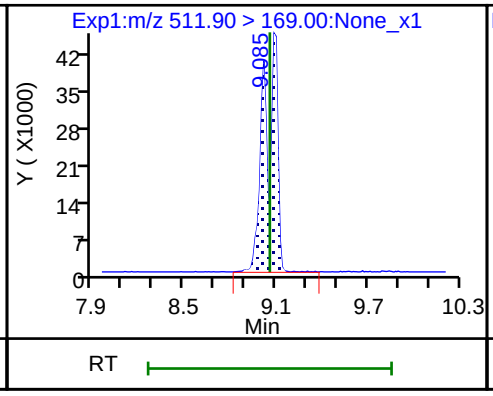
D 75 d3-NMePFOSA



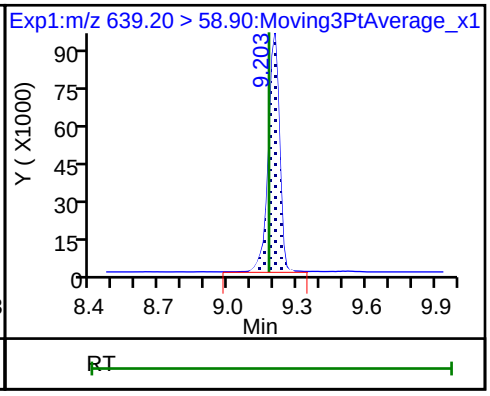
74 NMeFOSA



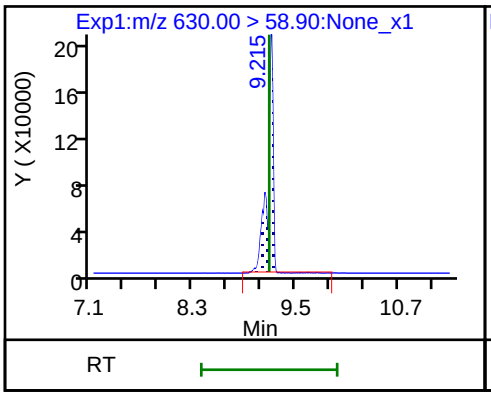
74 NMeFOSA



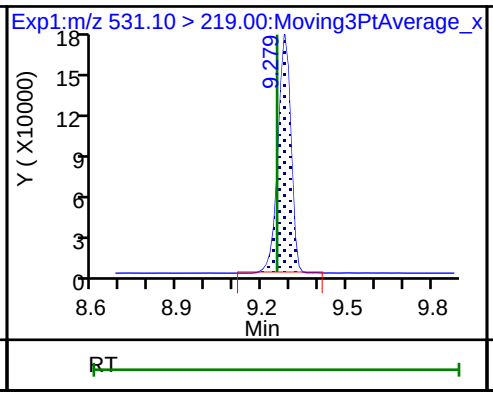
D 76 d9-N-EtFOSE



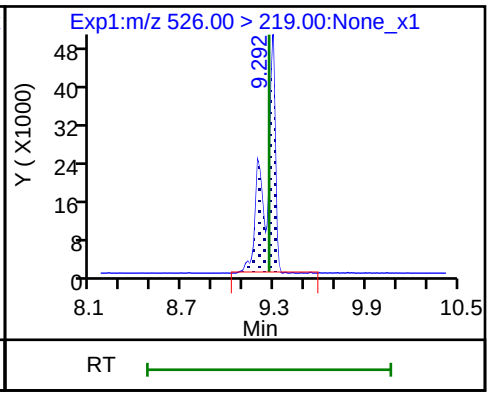
77 N-EtFOSE-M



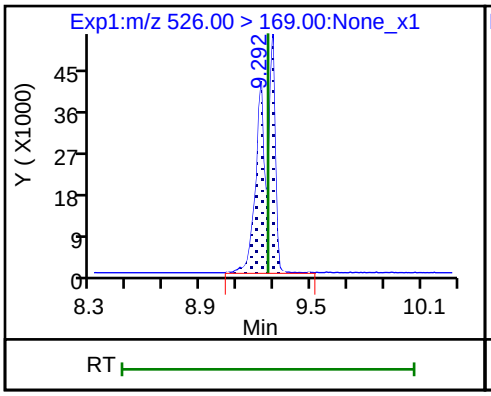
D 78 d5-NEtPFOSA



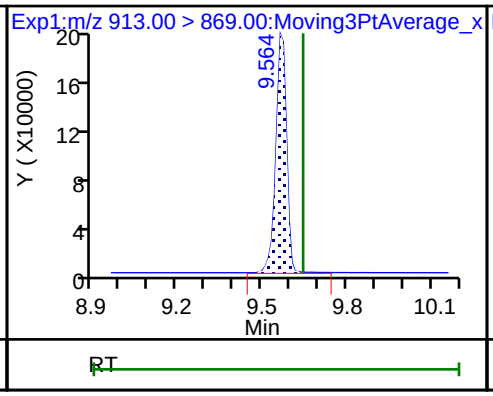
79 N-EtFOSA-M



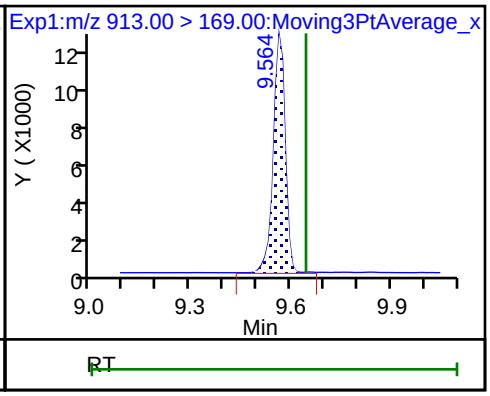
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-764556/10 Calibration Date: 02/04/2026 14:33

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB04CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9309	0.8288		2.23	2.50	-11.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.0841	0.0746		4.43	5.00	-11.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.127	1.165		2.58	2.50	3.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0403	0.0385		5.98	6.25	-4.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	0.8936	0.8996		2.52	2.50	1.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.373	1.364		2.48	2.50	-1.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.735	1.747		4.72	4.69	1.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.4216	0.4412		2.62	2.50	5.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	1.050	1.048		1.25	1.25	0.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1207	0.1166		30.2	31.3	-3.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.000	1.026		1.14	1.11	3.0	30.0
Hexafluoropropylene oxide dimer acid (HFPO DA)	AveID	1.042	1.069		5.13	5.00	3.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.9299	0.8787		2.36	2.50	-6.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	1.700	1.809		2.37	2.23	6.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.118	1.082		1.21	1.25	-3.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.626	3.516		4.58	4.73	-3.0	30.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	AveID	1.670	1.603		4.57	4.76	-4.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.220	1.197		1.15	1.18	-2.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	2.088	1.929		4.52	4.90	-8.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.8915	0.8582		1.21	1.25	-4.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0705	0.0721		32.0	31.3	2.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8883	0.8422		1.08	1.14	-5.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9059	0.8631		1.19	1.25	-5.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.365	1.278		4.50	4.80	-6.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	1.754	1.546		2.04	2.31	-12.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.073	1.016		1.13	1.19	-5.0	30.0
Perfluorohexanesulfonamide (FHxSA)	AveID	1.591	1.449		2.28	2.50	-9.0	30.0
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.136	1.109		1.22	1.25	-2.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-764556/10 Calibration Date: 02/04/2026 14:33

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB04CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorodecanoic acid (PFDA)	AveID	0.997	1.029		1.29	1.25	3.0	30.0
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	1.141	1.140		1.25	1.25	0.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.162	1.151		1.15	1.16	-1.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8931	0.8843		1.24	1.25	-1.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.102	2.085		4.63	4.67	-1.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8789	0.8831		1.21	1.20	0.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	1.077	1.098		1.27	1.25	2.0	30.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.8302	0.8112		1.23	1.26	-2.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.114	1.076		1.16	1.21	-3.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.967	1.926		1.22	1.25	-2.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.837	1.829		4.70	4.72	0.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.2163	0.2162		1.25	1.25	0.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.033	0.996		1.17	1.21	-4.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.232	2.137		12.0	12.5	-4.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9308	0.9369		1.26	1.25	1.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.061	3.152		12.9	12.5	3.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8421	0.8657		1.29	1.25	3.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	2.806	2.436		2.17	2.50	-13.0	30.0
13C3-PFPrA	Ave	0.9881	0.995		2.01	2.00	1.0	30.0
13C4 PFBA	Ave	1.165	1.140		1.96	2.00	-2.0	30.0
13C5 PFPeA	Ave	1.249	1.200		1.92	2.00	-4.0	30.0
M2-4:2 FTS	Ave	0.2232	0.2141		4.50	4.69	-4.0	30.0
13C5 PFHxA	Ave	1.499	1.437		1.92	2.00	-4.0	30.0
13C3 PFBS	Ave	1.226	1.222		1.86	1.86	0.0	30.0
13C3 HFPO-DA	Ave	0.8482	0.8364		1.97	2.00	-1.0	30.0
13C4 PFHpA	Ave	1.382	1.363		1.97	2.00	-1.0	30.0
M2-6:2 FTS	Ave	0.1931	0.1994		4.91	4.76	3.0	30.0
13C8 PFOA	Ave	1.523	1.493		1.96	2.00	-2.0	30.0
13C3 PFHxS	Ave	1.115	1.124		1.91	1.90	1.0	30.0
13C9 PFNA	Ave	0.9835	0.9648		1.96	2.00	-2.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: ICV 410-764556/10 Calibration Date: 02/04/2026 14:33

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB04CAL-10.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2 FTS	Ave	0.1915	0.1976		4.95	4.80	3.0	30.0
d3-NMeFOSAA	Ave	0.3332	0.3380		5.07	5.00	1.0	30.0
13C6 PFDA	Ave	1.116	1.057		1.89	2.00	-5.0	30.0
d5-NEtFOSAA	Ave	0.4196	0.4325		5.15	5.00	3.0	30.0
13C8 PFOS	Ave	1.388	1.399		1.93	1.92	1.0	30.0
13C7 PFUnA	Ave	1.115	1.087		1.95	2.00	-3.0	30.0
13C2 PFDoA	Ave	1.056	1.015		1.92	2.00	-4.0	30.0
13C8 FOSA	Ave	1.389	1.357		1.95	2.00	-2.0	30.0
13C2 PFTeDA	Ave	0.6332	0.6182		1.95	2.00	-2.0	30.0
d7-N-MeFOSE-M	Ave	0.3547	0.3571		5.03	5.00	1.0	30.0
d3-NMePFOSA	Ave	0.3472	0.3478		2.00	2.00	0.0	30.0
d9-N-EtFOSE-M	Ave	0.4740	0.4674		4.93	5.00	-1.0	30.0
d5-NEtPFOSA	Ave	0.4737	0.4693		1.98	2.00	-1.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-10.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 04-Feb-2026 14:33:10 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 410-0174629-010 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 10
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist:

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 11-Feb-2026 15:02:59 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1725

First Level Reviewer: RPU6 Date: 04-Feb-2026 20:44:24
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.940	1.949	-0.009	0.479	2327274	2.01		101	1411	
2 Perfluoropropionic acid										
163.0 > 119.0	1.932	1.957	-0.025	0.996	2411044	2.23			484	
D 3 13C4-PFBA										
216.8 > 171.9	4.050	4.058	-0.008	1.000	2666871	1.96		97.9	6051	
* 4 13C3PFBA										
216.0 > 172.0	4.050	4.065	-0.015		2338878	2.00			5367	
5 PFBA										
212.8 > 168.9	4.058	4.065	-0.007	1.002	497335	4.43			892	
6 PFMPA										
229.0 > 84.9	4.375	4.384	-0.009	0.929	3926949	2.58			6872	
7 3:3 FTCA										
241.0 > 177.0	4.393	4.402	-0.009	0.933	324767	5.98	Target=1.04		3357	
241.0 > 117.0	4.393	4.402	-0.009	0.933	314557		1.03(0.52-1.56)		1608	
D 8 13C5 PFPeA										
268.0 > 223.0	4.710	4.723	-0.013	0.908	2696724	1.92		96.1	4700	
9 PFPA										
263.0 > 219.0	4.722	4.735	-0.013	1.003	3032391	2.52			3423	
10 PFMBA										
279.0 > 84.9	4.876	4.885	-0.009	1.035	4598839	2.48			8645	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.997	5.008	-0.011	0.802	944084	4.50		95.9	4692	
12 4:2FTS										
327.1 > 307.0	5.008	5.008	0.0	1.002	1648015	4.72	Target=1.64		10658	
327.1 > 80.9	5.008	5.008	0.0	1.002	971562		1.70(0.82-2.46)		2471	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.145	5.155	-0.010	0.992	1780483	2.62	Target=1.37		4694	
295.0 > 84.9	5.145	5.155	-0.010	0.992	1318749		1.35(0.69-2.06)		4766	
D 15 13C5 PFHxA										
318.0 > 273.0	5.185	5.185	0.0	1.000	3228309	1.92		95.9	5438	
* 16 13C2 PFHxA										
315.1 > 270.0	5.185	5.185	0.0		5617518	5.00			8724	
17 PFHxA										
313.0 > 269.0	5.185	5.196	-0.011	1.000	2115459	1.25	Target=17.00		2483	
313.0 > 118.9	5.185	5.196	-0.011	1.000	129515		16.33(8.50-25.50)		802	
18 5:3 FTCA										
341.0 > 237.1	5.269	5.281	-0.012	1.016	5879111	30.2	Target=1.07		3765	
341.0 > 217.0	5.269	5.281	-0.012	1.016	5508426		1.07(0.53-1.60)		3095	
D 19 13C3 PFBS										
302.1 > 79.9	5.325	5.325	0.0	0.854	2142482	1.86		99.7	8479	
20 PFBS										
298.7 > 79.9	5.325	5.337	-0.012	1.000	1309244	1.14	Target=3.26		5397	
298.7 > 98.8	5.325	5.337	-0.012	1.000	382337		3.42(1.63-4.90)		2064	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.359	5.370	-0.011	1.034	1879339	1.97		98.6	3601	
22 HFPO-DA										
284.9 > 168.9	5.370	5.382	-0.012	1.002	5020608	5.13	Target=1.71		6886	
284.9 > 184.9	5.370	5.382	-0.012	1.002	2802012		1.79(0.86-2.57)		5549	
23 FBSA										
298.0 > 78.0	5.393	5.405	-0.011	1.013	2524954	2.36			1122	
25 PFEESA										
314.8 > 134.9	5.563	5.574	-0.011	1.073	6512741	2.37	Target=9.87		13606	
314.8 > 82.9	5.563	5.574	-0.011	1.073	657454		9.91(4.93-14.80)		3954	
D 27 13C4 PFHpA										
367.0 > 322.0	5.608	5.620	-0.012	1.082	3062896	1.97		98.6	6949	
28 PFHpA										
363.1 > 319.0	5.620	5.620	0.0	1.002	2070462	1.21	Target=3.06		2204	
363.1 > 169.0	5.620	5.620	0.0	1.002	669287		3.09(1.53-4.59)		1563	
29 ADONA										
376.9 > 250.9	5.768	5.780	-0.012	1.076	15612168	4.58	Target=2.15		13706	
376.9 > 84.8	5.768	5.780	-0.012	1.076	7663647		2.04(1.08-3.23)		6161	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.802	5.814	-0.012	0.931	892324	4.91		103	3525	
31 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.933	1486874	1.15	Target=3.62		4406	
349.0 > 98.8	5.802	5.814	-0.012	0.931	406108		3.66(1.81-5.42)		2064	
32 6:2FTS										
427.1 > 407.0	5.814	5.825	-0.011	1.002	1429086	4.57	Target=1.50		744	
427.1 > 80.9	5.814	5.825	-0.011	1.002	942454		1.52(0.75-2.25)		585	
33 BTS										
280.0 > 147.0	5.974	5.985	-0.011	0.958	9979794	4.52			9853	
D 34 13C8 PFOA										
421.0 > 376.0	6.009	6.020	-0.011	1.000	3658434	1.96		98.1	3579	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.009	6.020	-0.011		6124620	5.00			5003	
36 PFOA										
413.0 > 369.0	6.020	6.032	-0.012	1.002	1964677	1.20	Target=2.55		1131	
413.0 > 169.0	6.020	6.032	-0.012	1.002	783939		2.51(1.27-3.82)		1006	
37 7:3 FTCA										
441.0 > 316.9	6.079	6.091	-0.012	1.172	3637497	32.0	Target=0.54		2171	
441.0 > 336.9	6.079	6.091	-0.012	1.172	6670287		0.55(0.27-0.81)		2898	
D 38 13C3 PFHxS										
402.0 > 79.9	6.233	6.243	-0.010	1.000	2003552	1.91		101	5051	
* 39 18O2 PFHxS										
403.0 > 83.9	6.233	6.243	-0.010		1782663	1.90			7654	
40 PFHxS										
398.7 > 79.9	6.243	6.254	-0.011	1.002	1014995	1.08	Target=4.54		2940	
398.7 > 98.8	6.243	6.254	-0.011	1.002	243691		4.17(2.27-6.81)		926	
D 41 13C9 PFNA										
472.0 > 427.0	6.401	6.413	-0.012	1.000	3319220	1.96		98.1	5672	
42 PFNA										
463.0 > 419.0	6.413	6.424	-0.011	1.002	1789162	1.19	Target=2.78		2603	
463.0 > 219.0	6.413	6.424	-0.011	1.002	630461		2.84(1.39-4.17)		1053	
* 43 13C5 PFNA										
468.0 > 423.0	6.401	6.424	-0.023		3440248	2.00			6624	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.577	6.600	-0.023	1.055	891807	4.95		103	3148	
45 8:2FTS										
527.1 > 507.0	6.588	6.600	-0.012	1.002	1139988	4.50	Target=1.45		6507	
527.1 > 80.9	6.588	6.600	-0.012	1.002	820417		1.39(0.73-2.18)		2238	
46 PFECHS										
461.0 > 381.0	6.622	6.633	-0.011	1.062	3774072	2.04	Target=1.67		5411	
461.0 > 99.0	6.622	6.633	-0.011	1.062	2308101		1.64(0.84-2.51)		1637	
47 PFHpS										
449.0 > 79.9	6.655	6.676	-0.021	0.942	1303456	1.13	Target=4.71		2866	
449.0 > 98.8	6.655	6.676	-0.021	0.942	284348		4.58(2.36-7.07)		1663	
48 FHxSA										
398.0 > 78.0	6.665	6.687	-0.022	1.069	3826756	2.28			2066	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.730	6.752	-0.022	0.953	1303050	5.07		101	1805	
50 NMeFOSAA										
570.0 > 419.0	6.741	6.762	-0.021	1.002	361341	1.22	Target=1.26		8657	
570.0 > 483.0	6.741	6.762	-0.021	1.002	287899		1.26(0.63-1.89)		59950	
D 51 13C6 PFDA										
519.0 > 474.0	6.804	6.814	-0.010	1.000	3334292	1.89		94.7	4643	
* 52 13C2 PFDA										
515.1 > 470.1	6.804	6.825	-0.021		3153924	2.00			4088	
53 PFDA										
512.9 > 469.0	6.814	6.825	-0.011	1.002	2144603	1.29	Target=6.81		5460	
512.9 > 219.0	6.814	6.825	-0.011	1.002	328114		6.54(3.40-10.21)		818	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.910	6.932	-0.022	0.978	1667247	5.15		103	1998	
55 NEtFOSAA										
584.0 > 419.0	6.921	6.932	-0.011	1.002	475704	1.25	Target=1.64		2724	
584.0 > 526.0	6.921	6.932	-0.011	1.002	300945		1.58(0.82-2.45)		1112	
D 56 13C8 PFOS										
507.0 > 79.9	7.064	7.084	-0.020	1.000	2065963	1.93		101	524	
* 57 13C4 PFOS										
502.8 > 79.9	7.064	7.084	-0.020		1477153	1.92			5710	
58 PFOS										
498.9 > 79.9	7.074	7.084	-0.010	1.001	1439352	1.15	Target=5.55		688	
498.9 > 98.8	7.074	7.084	-0.010	1.001	255073		5.64(2.77-8.32)		1640	
D 59 13C7 PFUnA										
570.0 > 525.0	7.204	7.227	-0.023	1.059	3428737	1.95		97.5	6986	
60 PFUnA										
563.1 > 519.0	7.216	7.239	-0.023	1.002	1895015	1.24	Target=5.71		5196	
563.1 > 269.1	7.216	7.239	-0.023	1.002	332486		5.70(2.85-8.56)		1893	
61 9ClFOS										
530.8 > 351.0	7.393	7.405	-0.012	1.047	10487587	4.63	Target=3.10		7689	
532.8 > 353.0	7.393	7.405	-0.012	1.047	3416804		3.07(1.55-4.65)		18427	
62 PFNS										
548.8 > 79.9	7.491	7.503	-0.012	1.061	1142613	1.21	Target=4.40		5752	
548.8 > 98.8	7.479	7.503	-0.024	1.059	234679		4.87(2.20-6.60)		1481	
D 63 13C2 PFDoA										
615.0 > 570.0	7.625	7.636	-0.011	1.121	3200185	1.92		96.1	3250	
64 PFDoA										
613.0 > 569.0	7.625	7.647	-0.022	1.000	2195403	1.27	Target=6.25		6895	
613.0 > 319.0	7.625	7.647	-0.022	1.000	357753		6.14(3.12-9.37)		1967	
D 65 13C8 FOSA										
506.1 > 77.8	7.777	7.788	-0.011	1.101	2091987	1.95		97.7	4457	
66 PFOSA										
498.1 > 77.9	7.777	7.799	-0.022	1.000	1064941	1.23	Target=44.01		2775	
498.1 > 478.0	7.777	7.799	-0.022	1.000	24268		43.88(22.00-66.01)		176	
67 PFDS										
599.0 > 79.9	7.885	7.906	-0.021	1.116	1397835	1.16	Target=4.97		6486	
599.0 > 98.8	7.896	7.906	-0.010	1.118	286759		4.87(2.49-7.46)		2953	
68 PFTrDA										
663.0 > 619.0	8.040	8.061	-0.021	0.953	2347015	1.22	Target=7.34		4562	
663.0 > 168.9	8.040	8.061	-0.021	0.953	311502		7.53(3.67-11.01)		1414	
69 11ClFOS										M
630.9 > 450.9	8.212	8.224	-0.012	1.163	9300778	4.70	Target=3.07		6720	M
632.9 > 452.9	8.212	8.224	-0.012	1.163	2991532		3.11(1.54-4.61)		8211	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.439	8.452	-0.013	1.240	1949717	1.95		97.6	2148	
71 PFTeDA										
713.1 > 168.9	8.439	8.466	-0.027	1.000	263505	1.25	Target=1.18		2356	
713.1 > 219.0	8.439	8.466	-0.027	1.000	218183		1.21(0.59-1.77)		846	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.649	8.673	-0.024	1.224	1299198	1.17	Target=5.61		6323	
699.1 > 98.8	8.649	8.673	-0.024	1.224	244187		5.32(2.81-8.42)		2982	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.711	8.735	-0.024	1.233	1376385	5.03		101	429	
74 N-MeFOSE-M										
616.1 > 58.9	8.736	8.748	-0.012	1.003	7361417	12.0			1751	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.835	8.845	-0.010	1.251	536308	2.00		100	2453	
76 NMeFOSA										
511.9 > 219.0	8.835	8.857	-0.022	1.000	314163	1.26	Target=0.75		1353	
511.9 > 169.0	8.835	8.857	-0.022	1.000	423320		0.74(0.38-1.13)		1104	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.964	8.975	-0.011	1.269	1801854	4.93		98.6	581	
78 N-EtFOSE-M										
630.0 > 58.9	8.976	8.998	-0.022	1.001	14242466	12.9			3053	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.046	9.069	-0.023	1.281	723672	1.98		99.1	2496	
80 N-EtFOSA-M										
526.0 > 219.0	9.058	9.081	-0.023	1.001	392321	1.29	Target=0.82		1334	
526.0 > 169.0	9.058	9.081	-0.023	1.001	474556		0.83(0.41-1.23)		1344	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.454	9.470	-0.016	1.120	5936757	2.17	Target=9.64		27864	
913.0 > 169.0	9.446	9.470	-0.024	1.119	625132		9.50(4.82-14.45)		8550	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_ICV_00034 Amount Added: 200.00 Units: uL

Report Date: 11-Feb-2026 15:03:00 Chrom Revision: 2.3 08-Jan-2026 16:54:02

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-10.d

Injection Date: 04-Feb-2026 14:33:10 Instrument ID: 30637

Lims ID: ICV

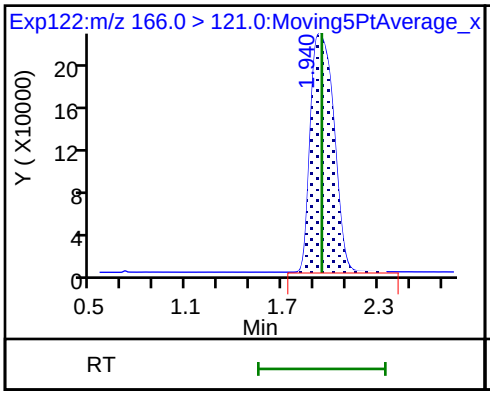
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 10 Worklist Smp#: 10

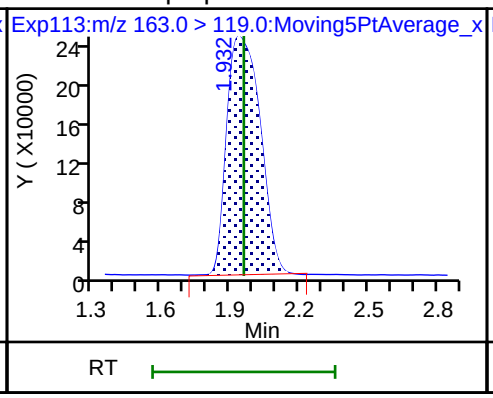
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

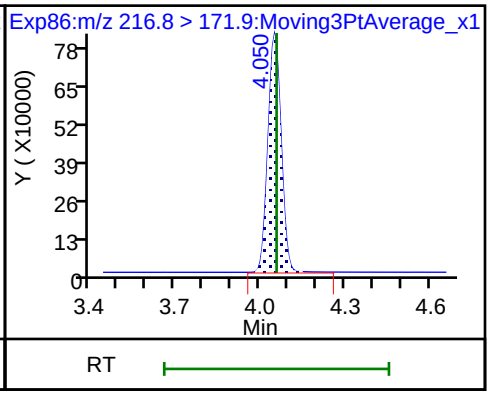
D 1 13C3PFPrA



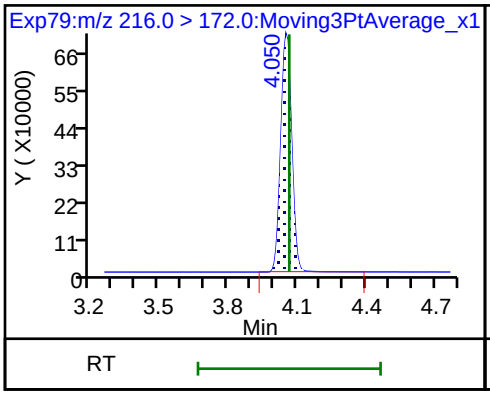
2 Perfluoropropionic acid



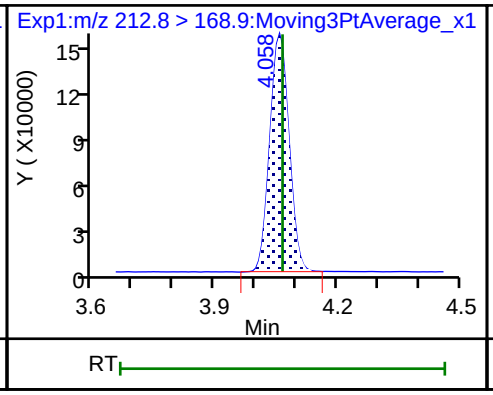
D 3 13C4-PFBA



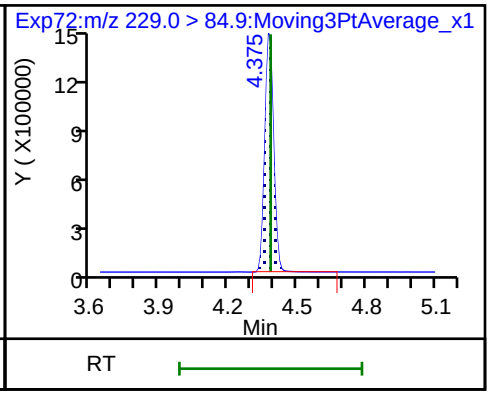
* 4 13C3PFBA



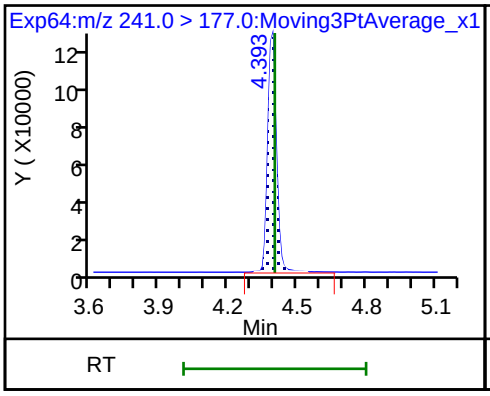
5 PFBA



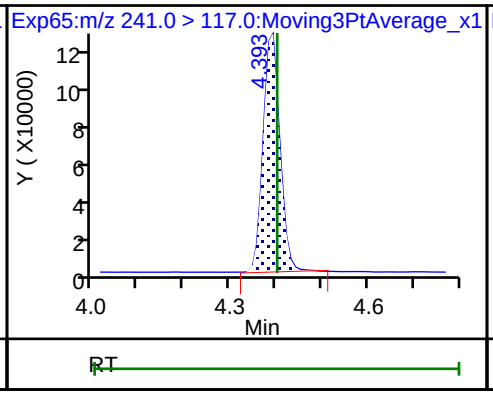
6 PFMPA



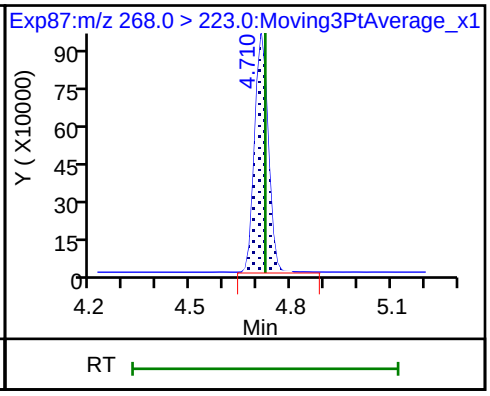
7 3:3 FTCA



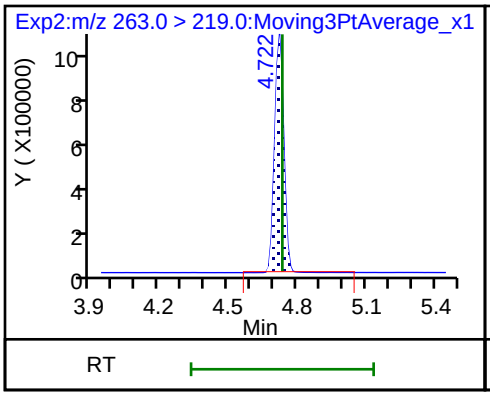
7 3:3 FTCA



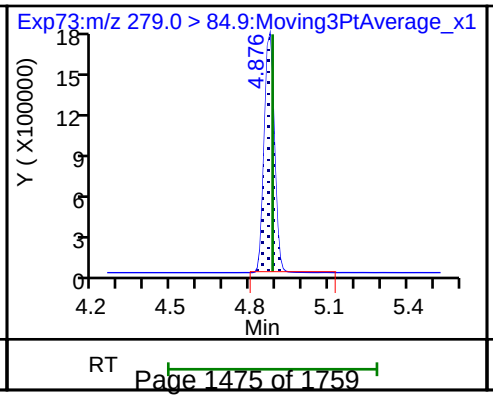
D 8 13C5 PFPeA



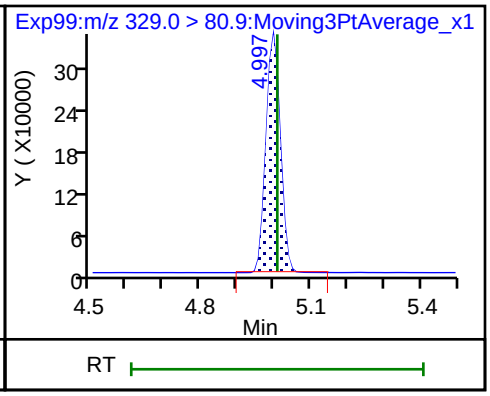
9 PFPA



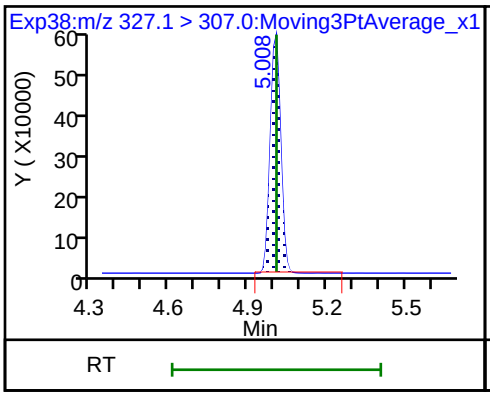
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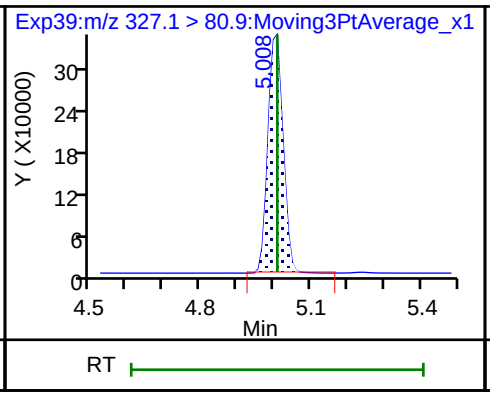
D 11 13C2-4:2FTS



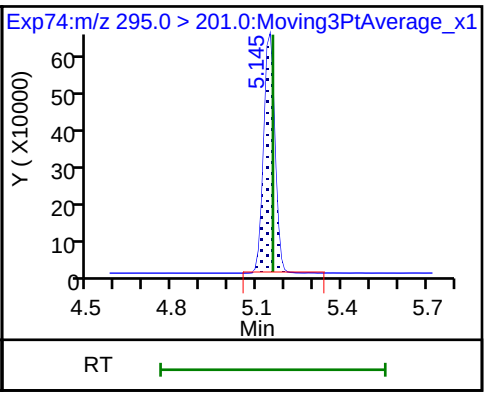
12 4:2FTS



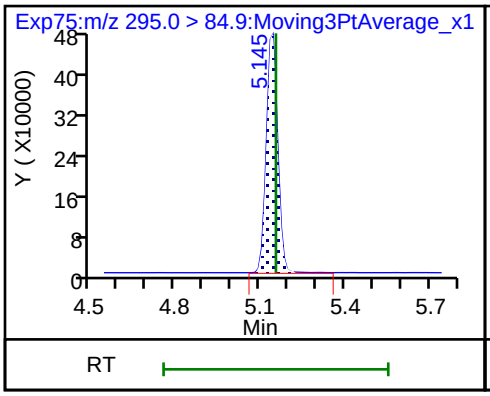
12 4:2FTS



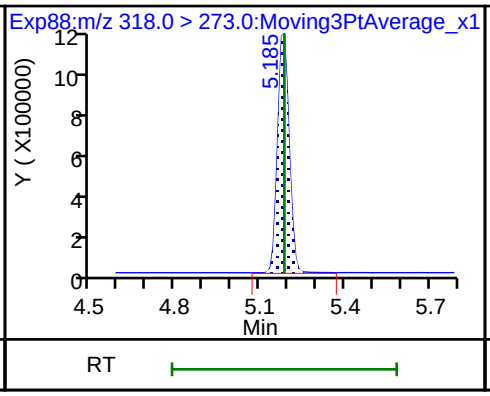
14 NFDHA



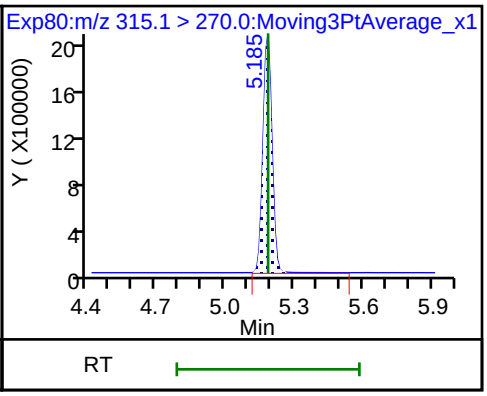
14 NFDHA



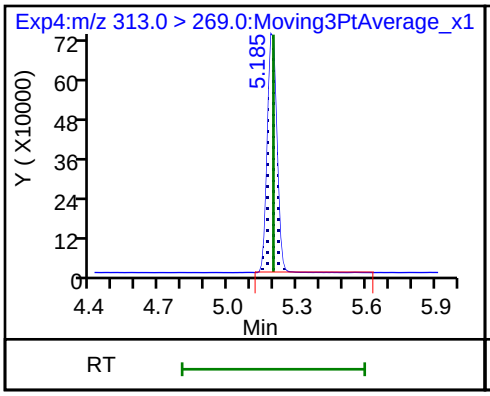
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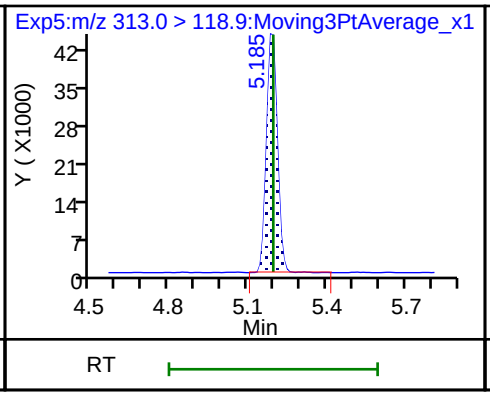
* 16 13C2 PFHxA



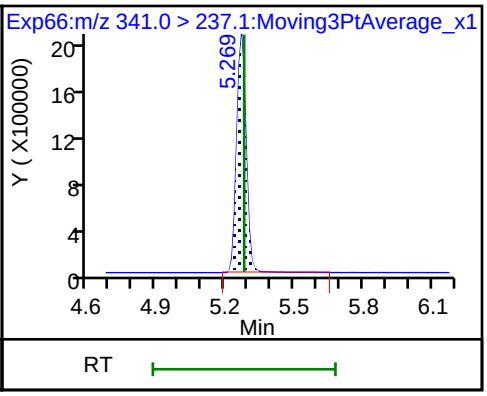
17 PFHxA



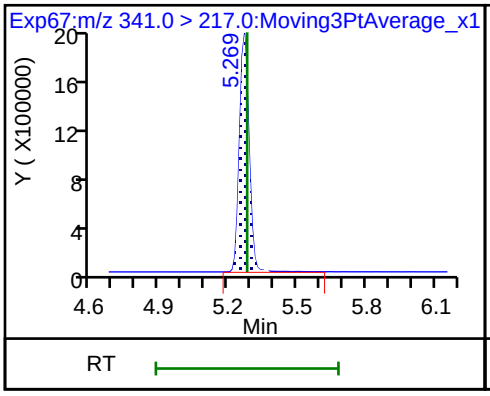
17 PFHxA



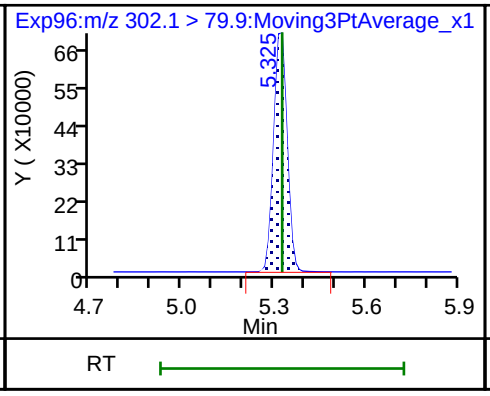
18 5:3 FTCA



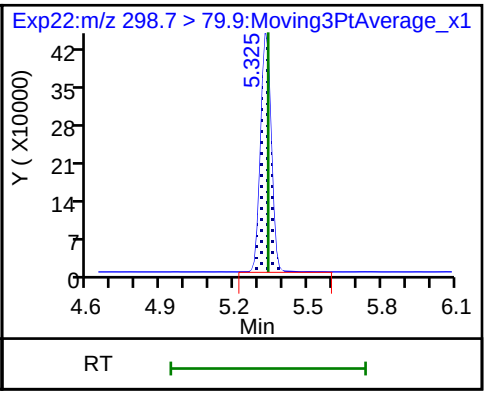
18 5:3 FTCA



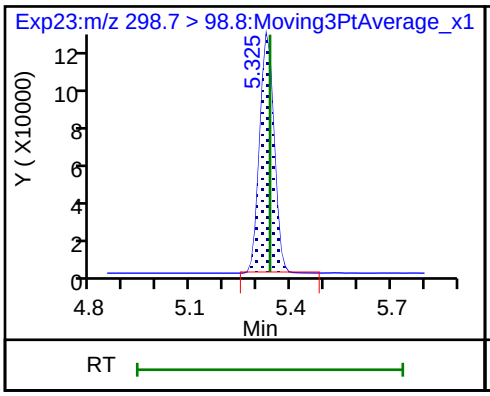
D 19 13C3 PFBS



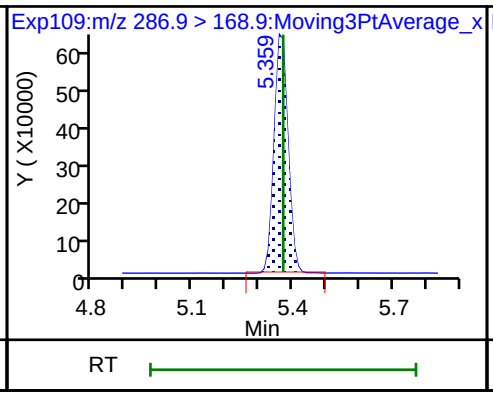
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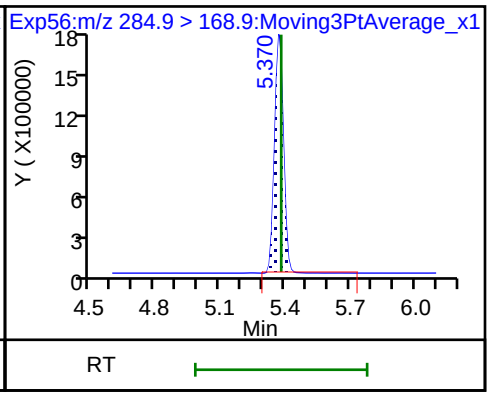
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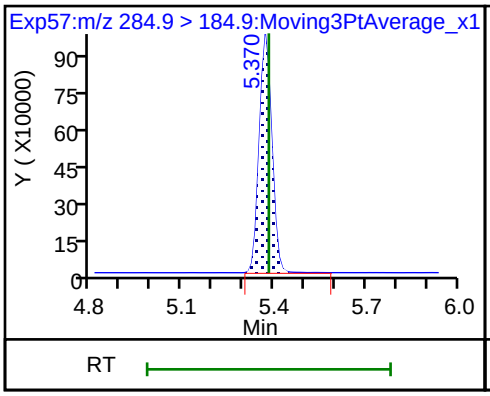
D 21 13C3 HFPO-DA



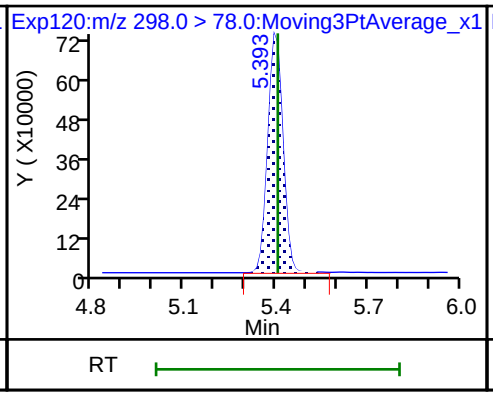
22 HFPO-DA



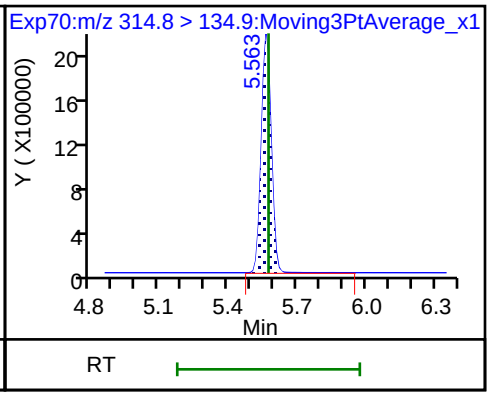
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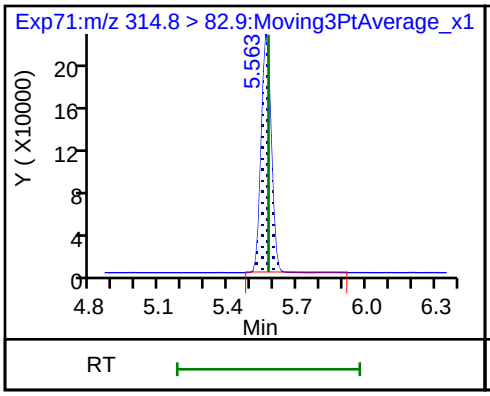
23 FBSA



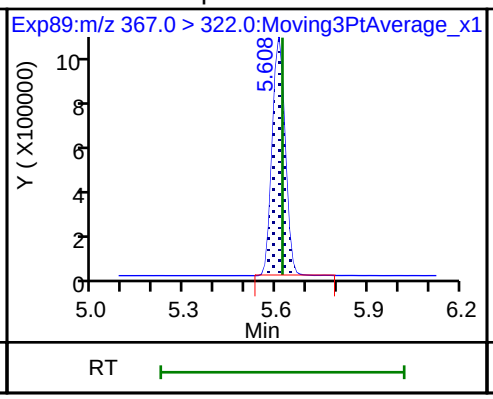
25 PFEESA



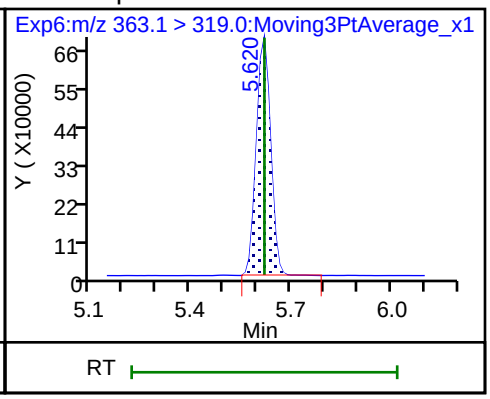
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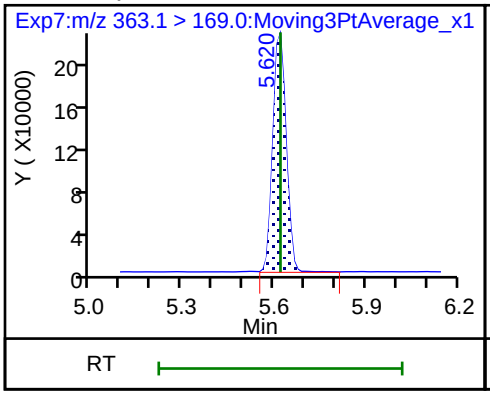
D 27 13C4 PFHpA



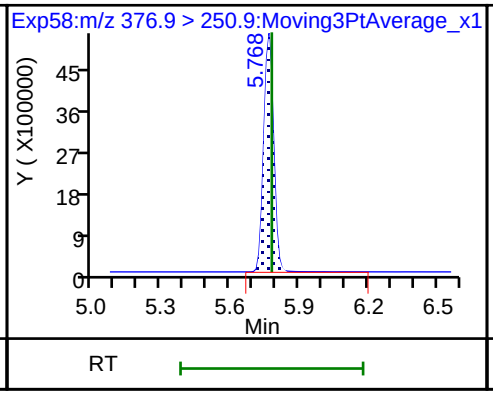
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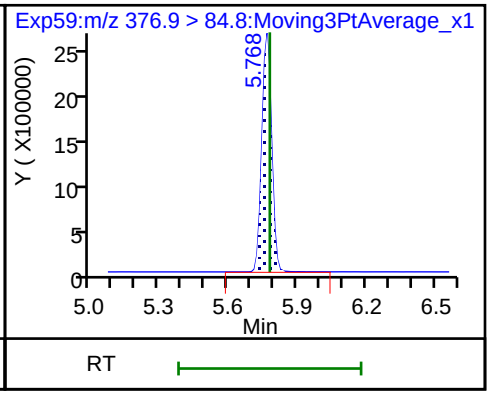
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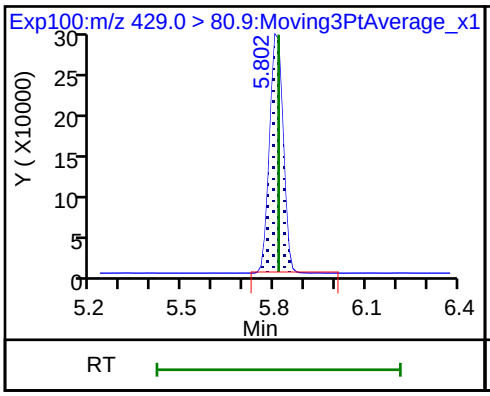
29 ADONA



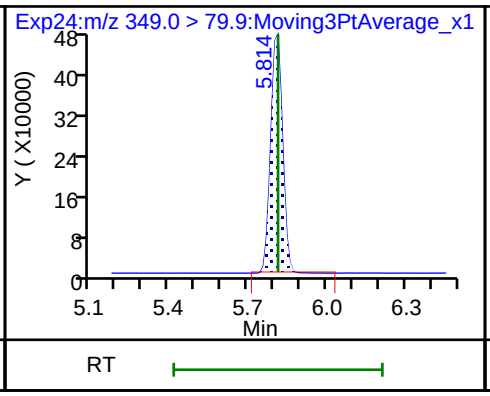
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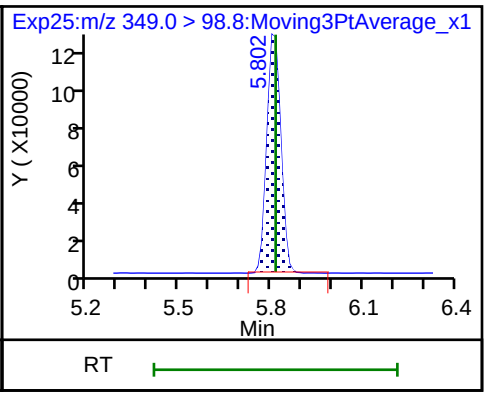
D 30 13C2-6:2FTS



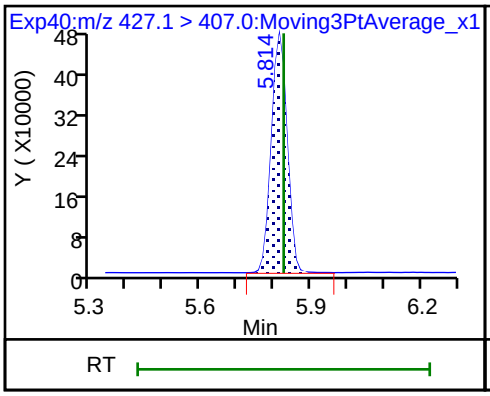
31 PFPeS



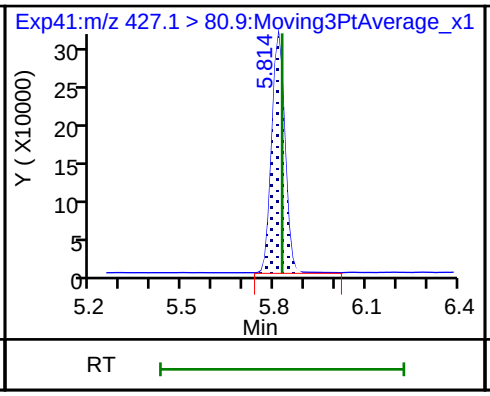
31 PFPeS



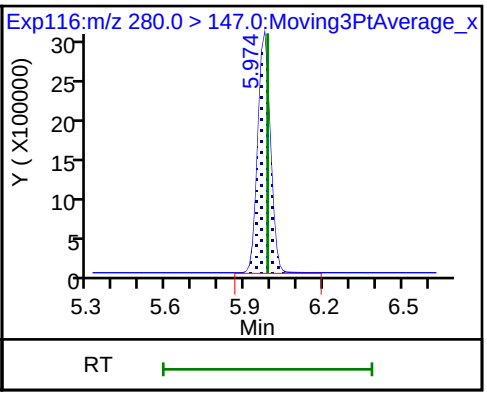
32 6:2FTS



32 6:2FTS



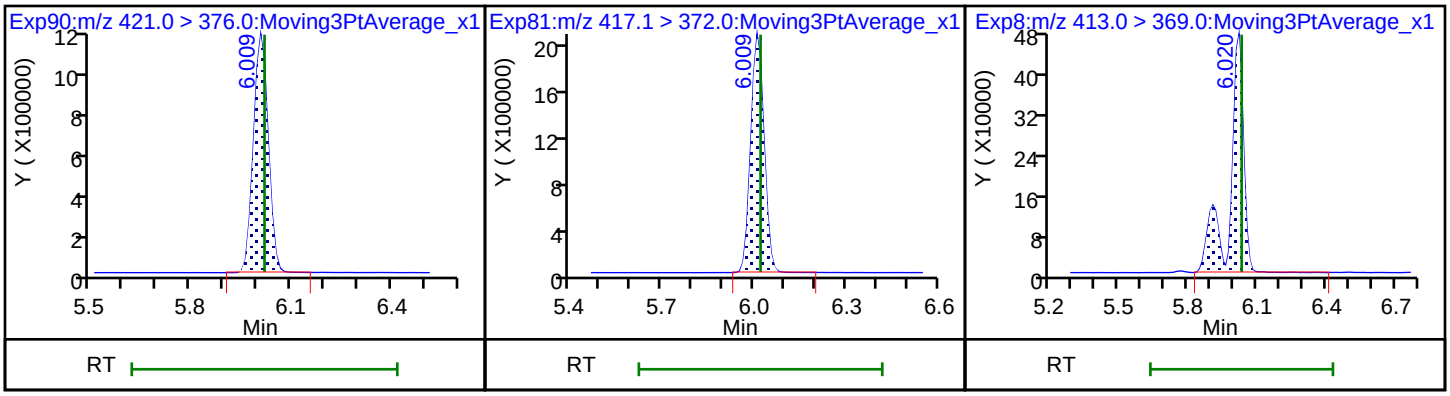
33 BTS



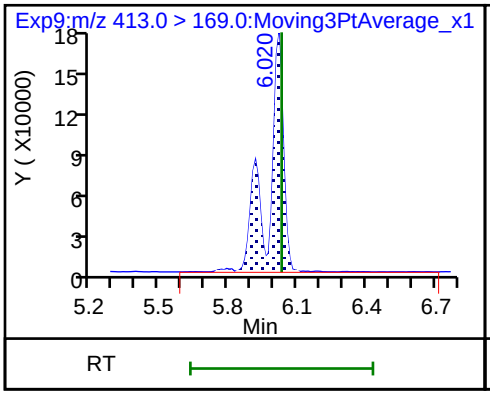
D 34 13C8 PFOA

* 35 13C4 PFOA

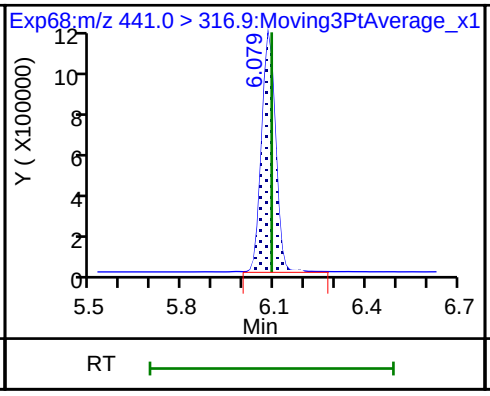
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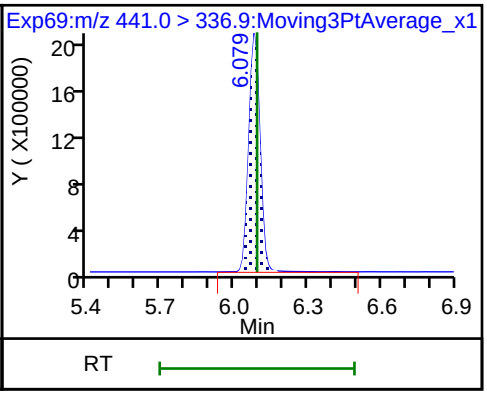
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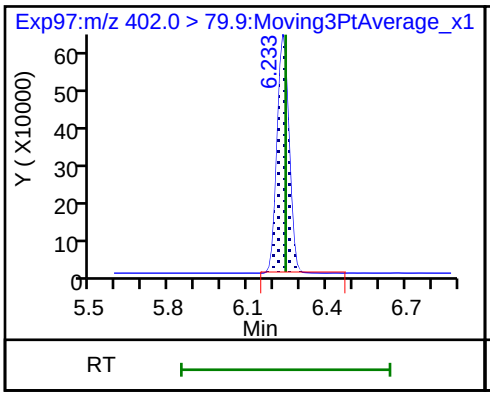
37 7:3 FTCA



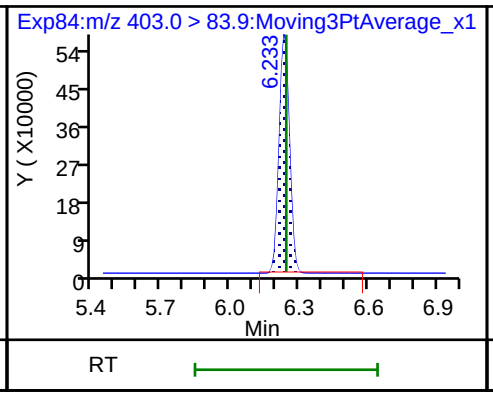
37 7:3 FTCA



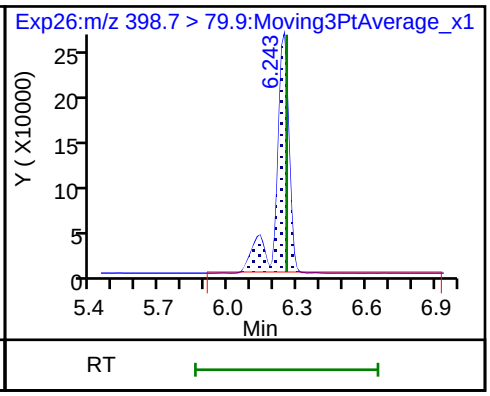
D 38 13C3 PFHxS



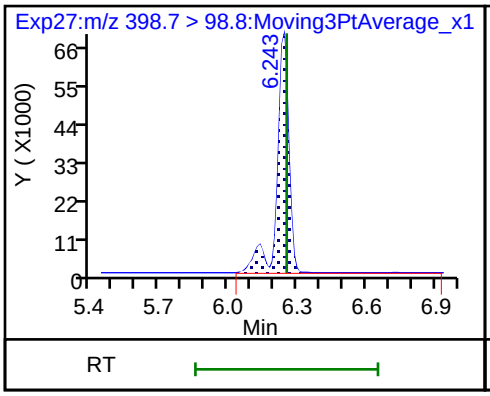
* 39 18O2 PFHxS



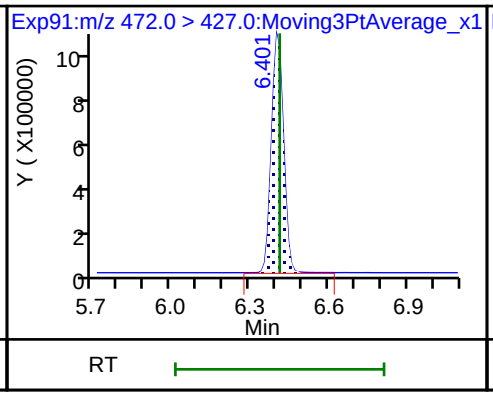
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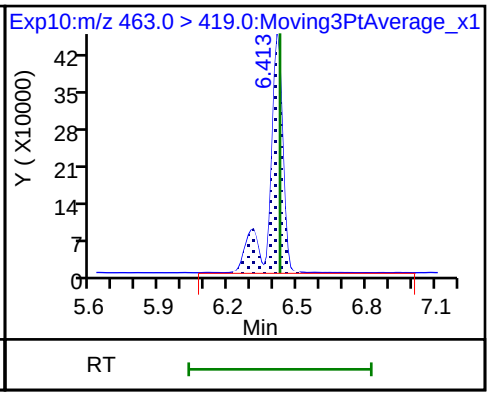
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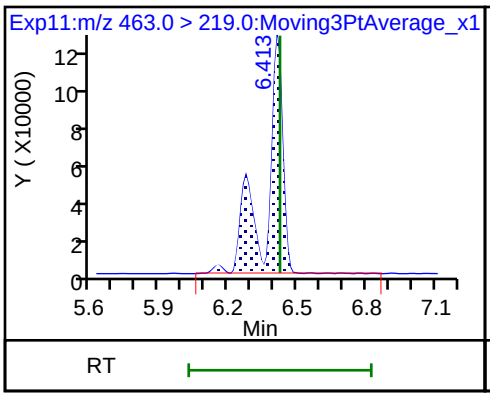
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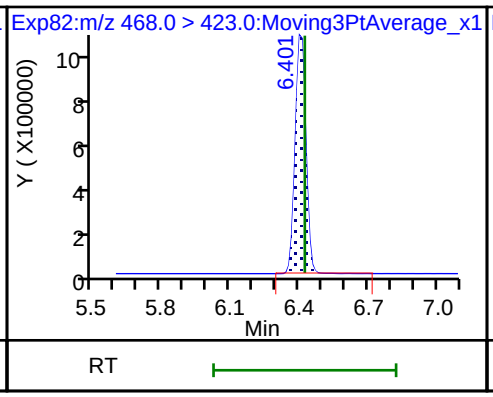
42 PFNA



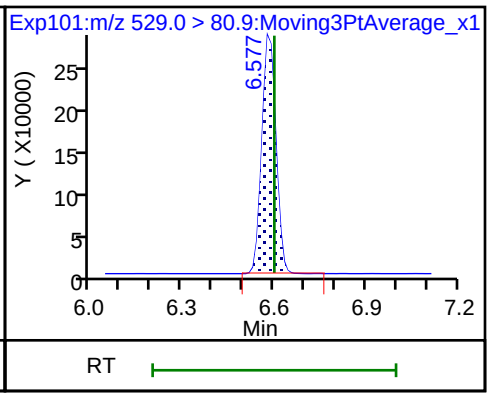
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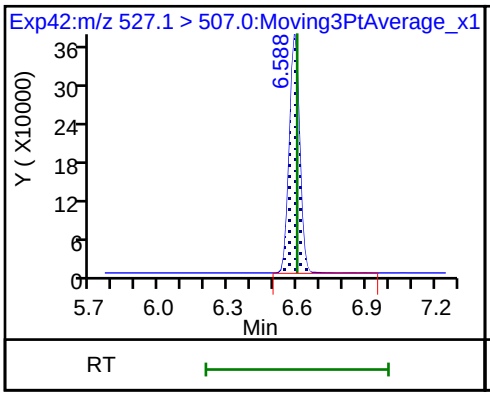
* 43 13C5 PFNA



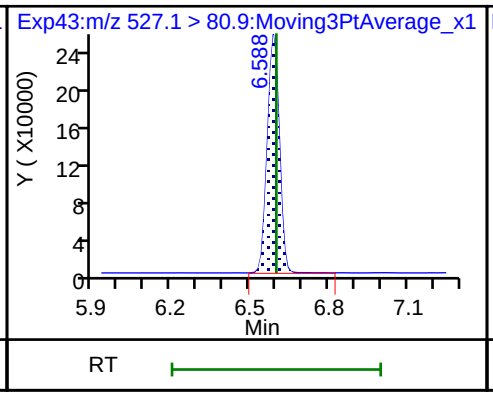
D 44 13C2-8:2FTS



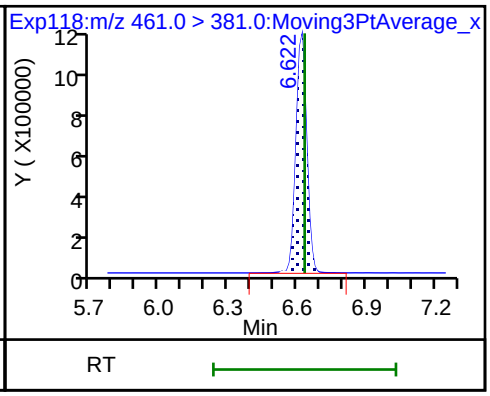
45 8:2FTS



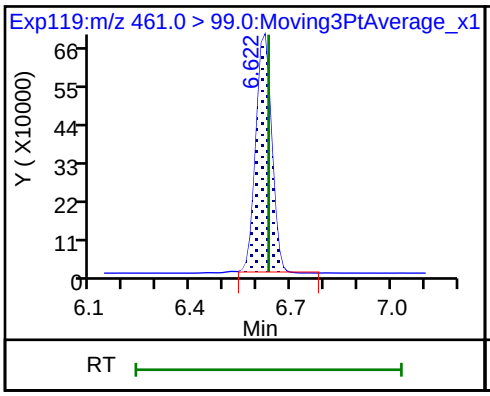
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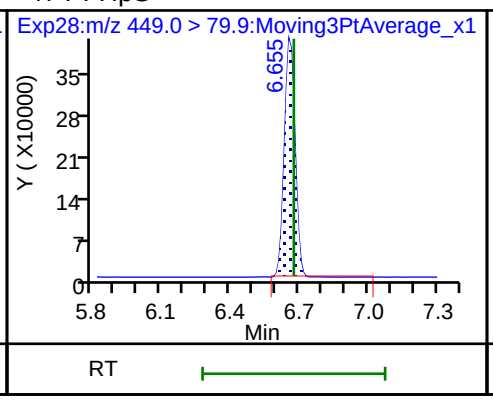
46 PFECHS



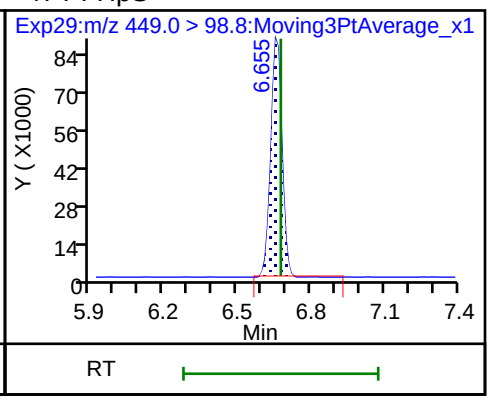
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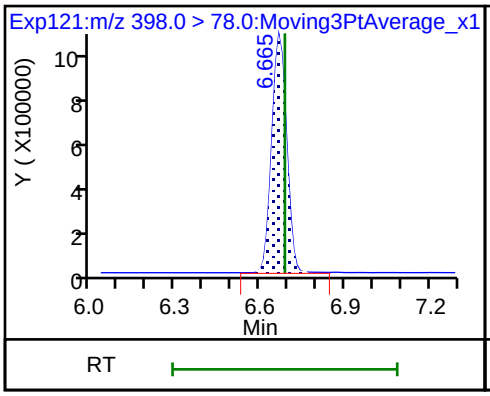
47 PFHpS



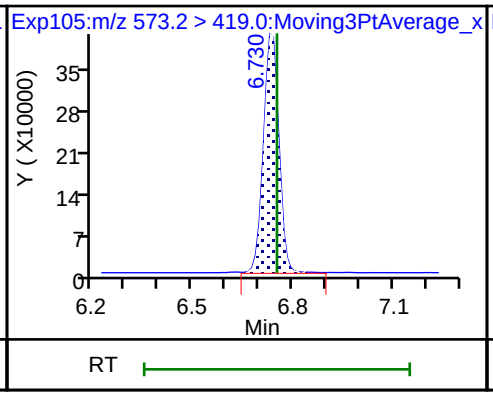
47 PFHpS



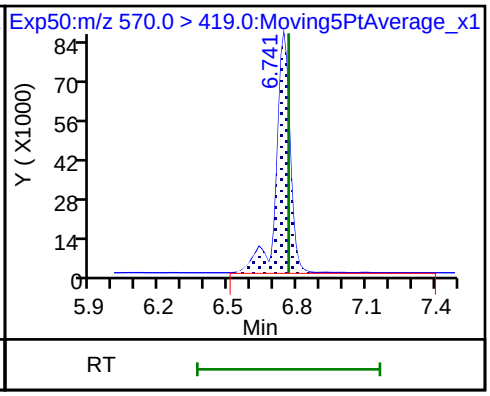
48 FHxSA



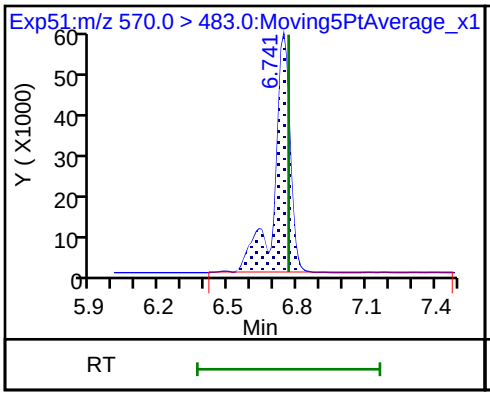
D 49 d3-NMeFOSAA



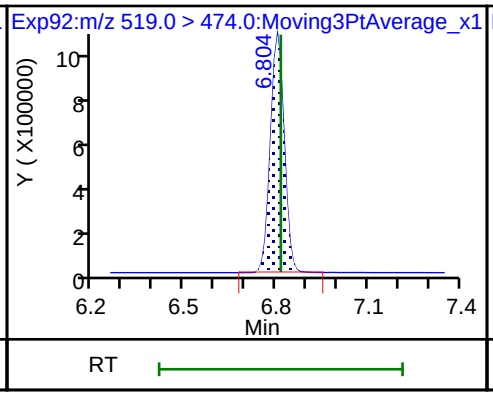
50 NMeFOSAA



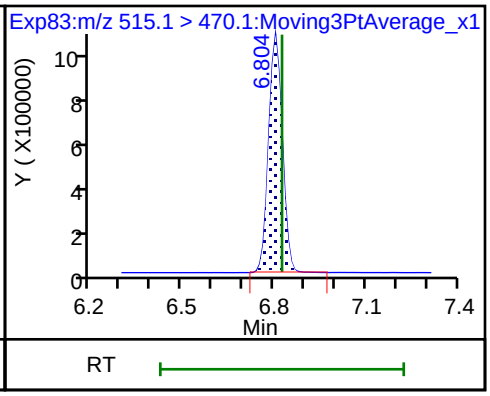
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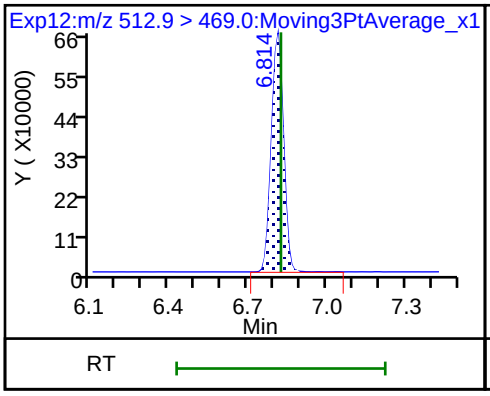
D 51 13C6 PFDA



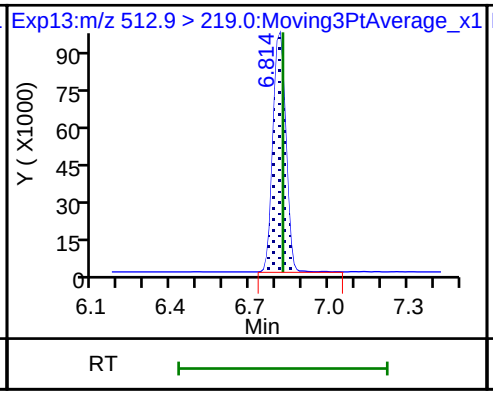
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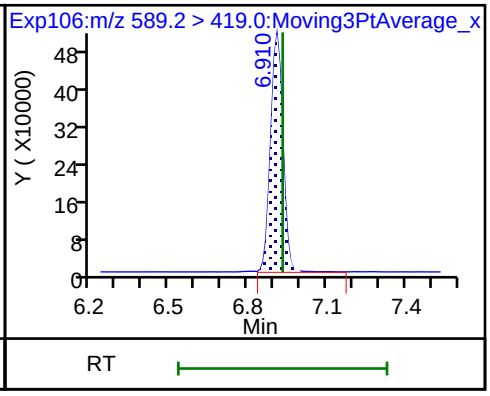
53 PFDA



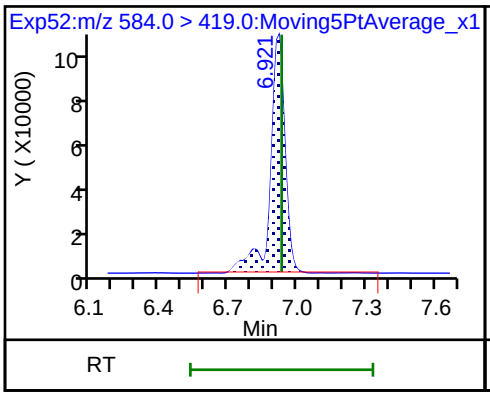
53 PFDA



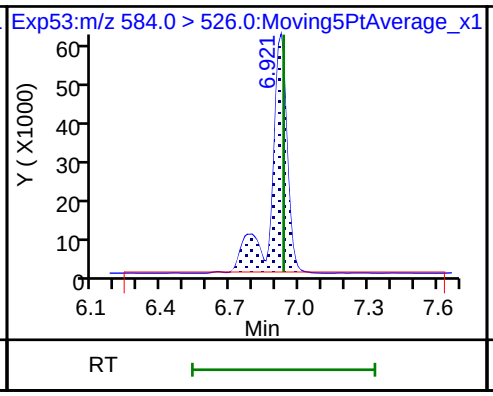
D 54 d5-NEtFOSAA



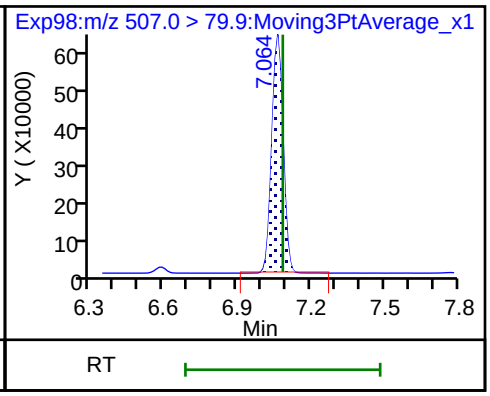
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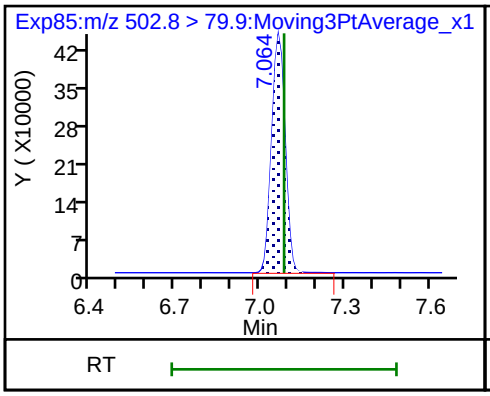
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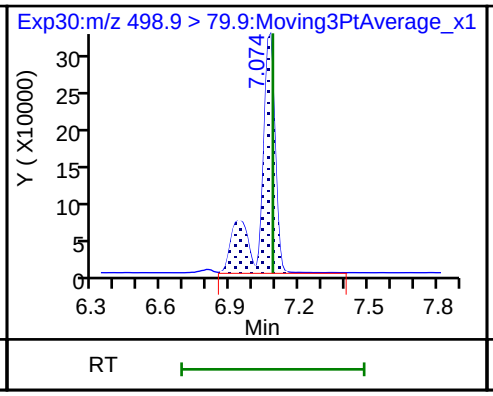
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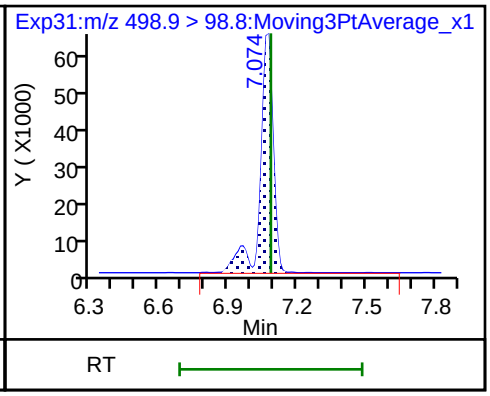
* 57 13C4 PFOS



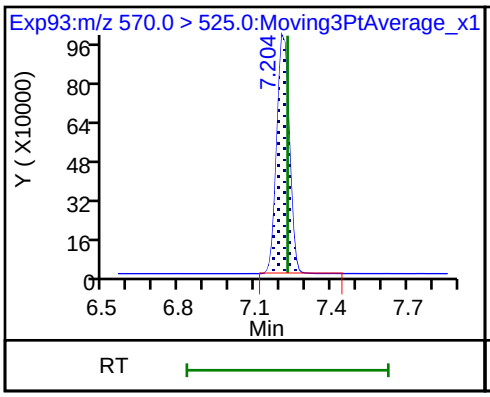
58 PFOS



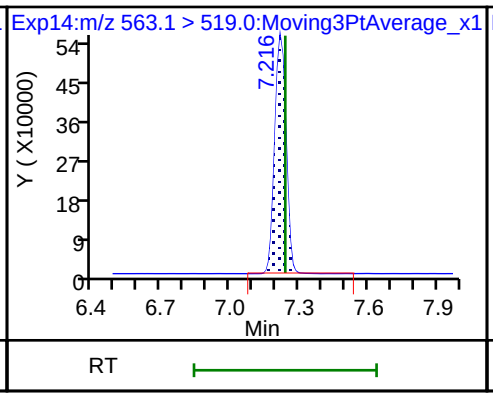
58 PFOS



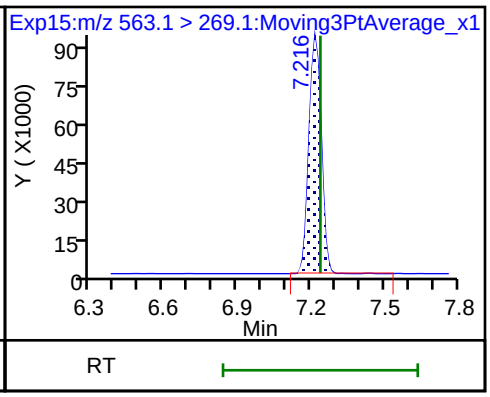
D 59 13C7 PFUnA



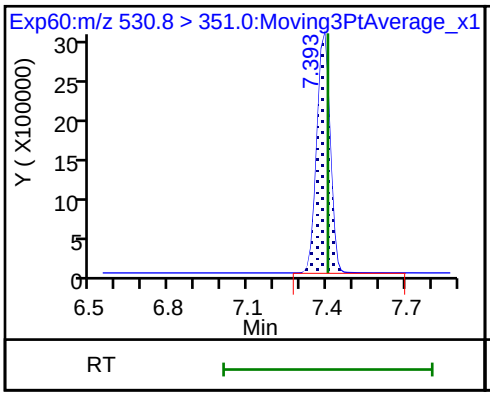
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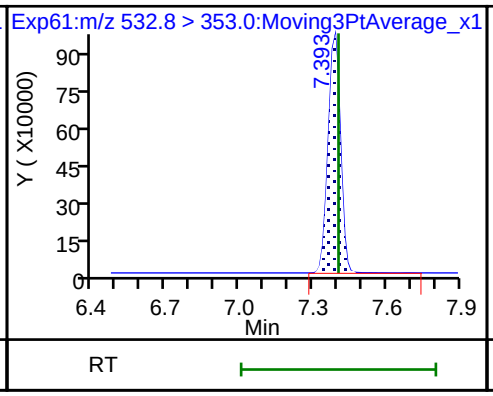
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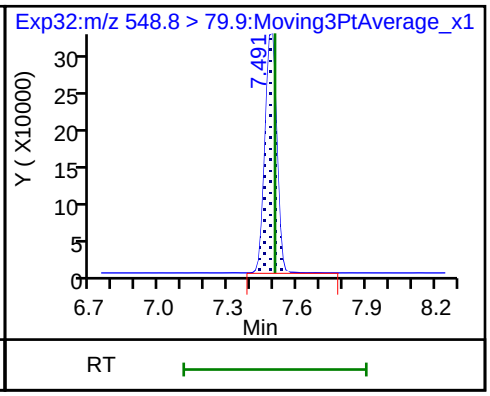
61 9ClFOS



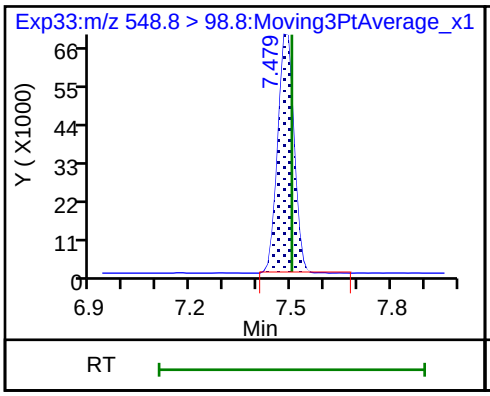
61 9ClFOS



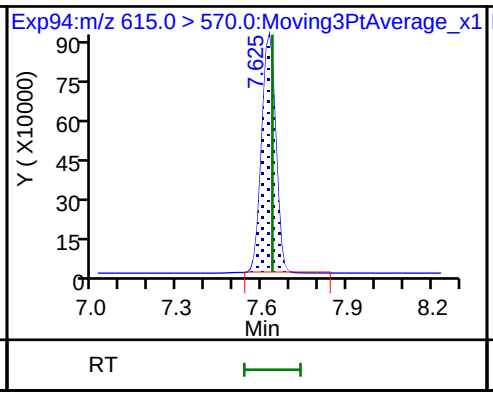
62 PFNS



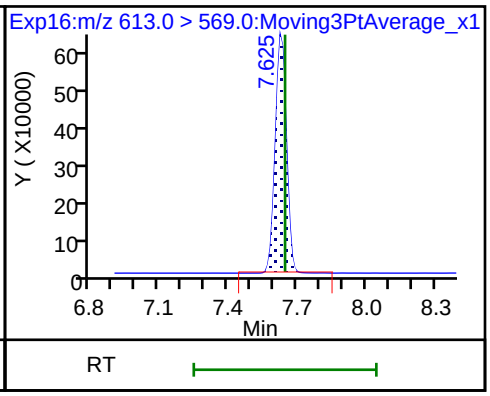
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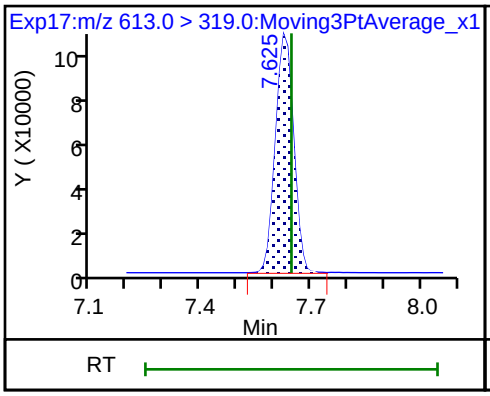
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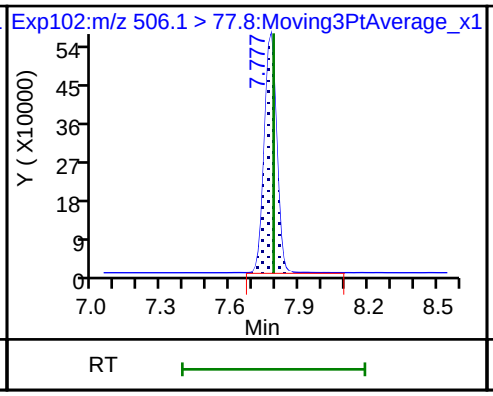
64 PFDoA



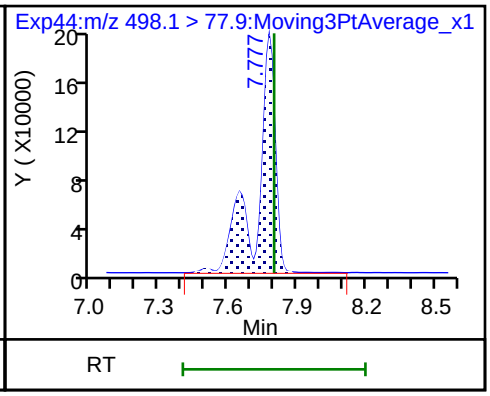
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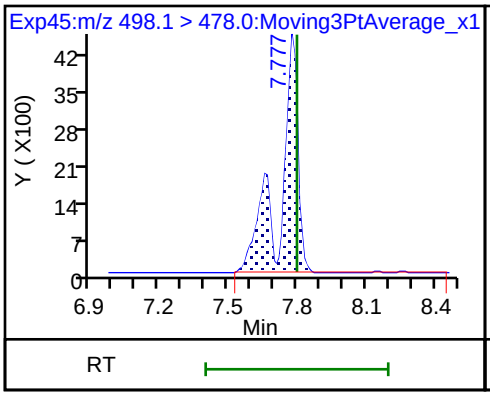
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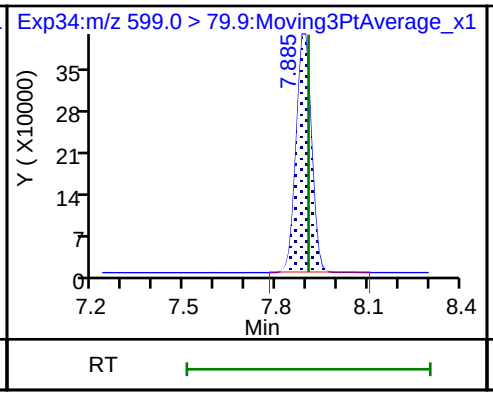
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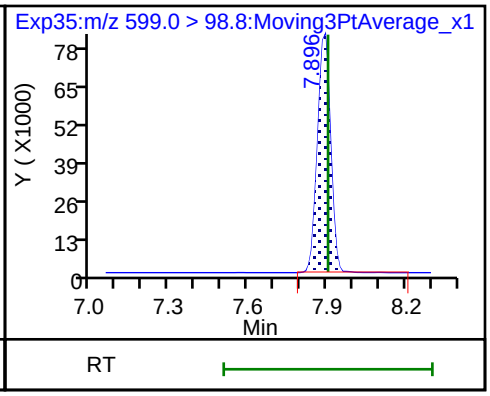
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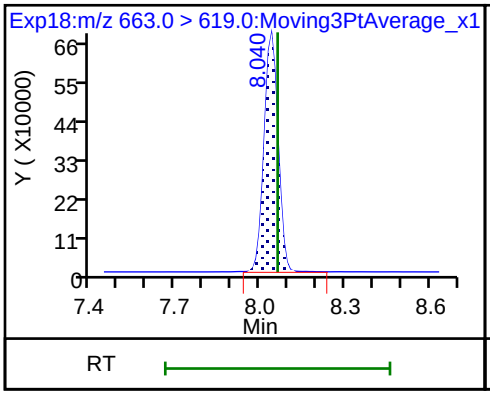
67 PFDS



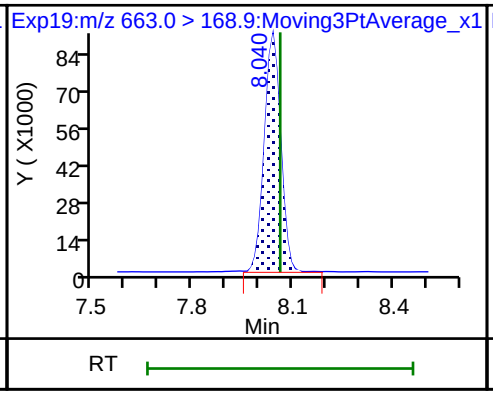
67 PFDS



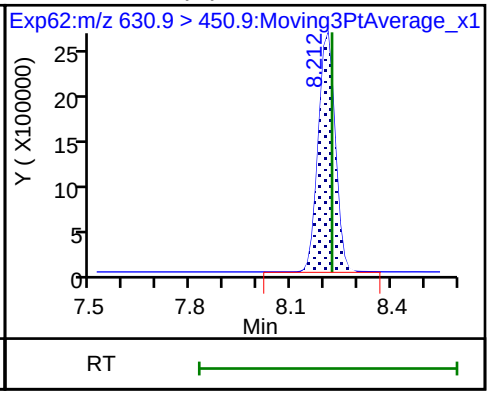
68 PFTrDA



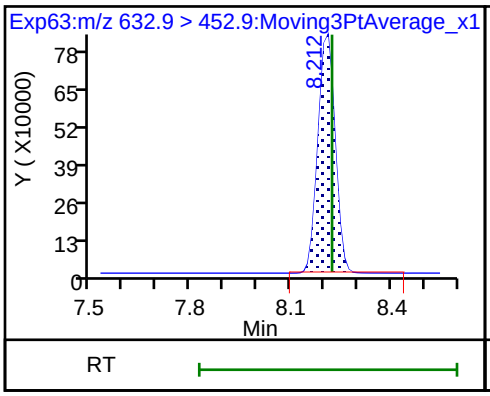
68 PFTrDA



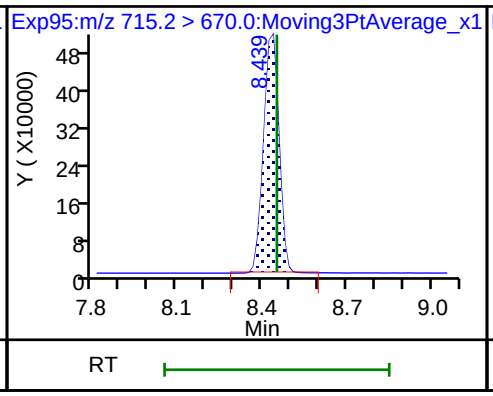
69 11ClFOS (M)



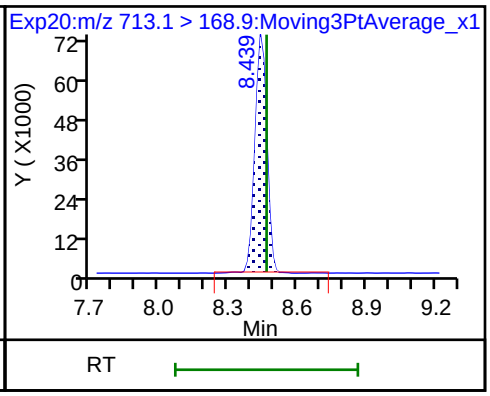
69 11ClFOS



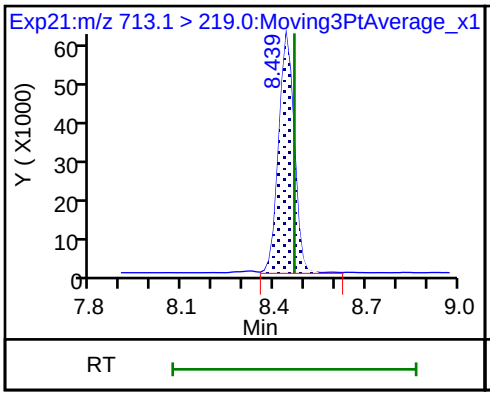
D 70 13C2 PFTeDA



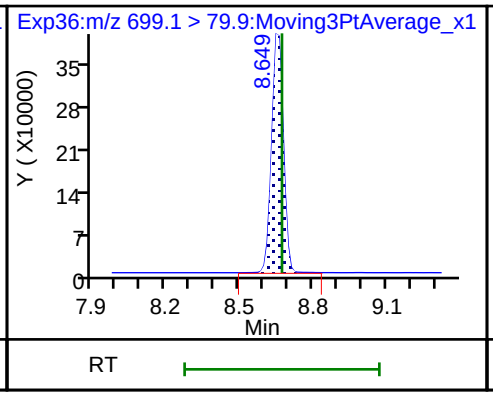
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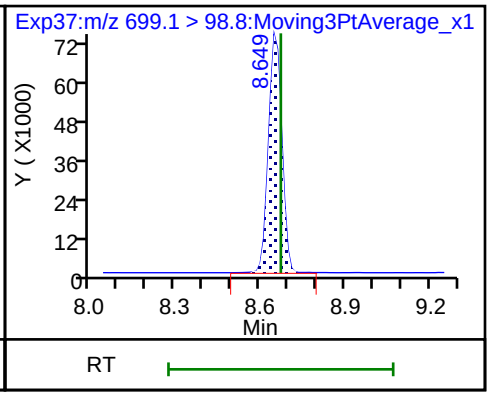
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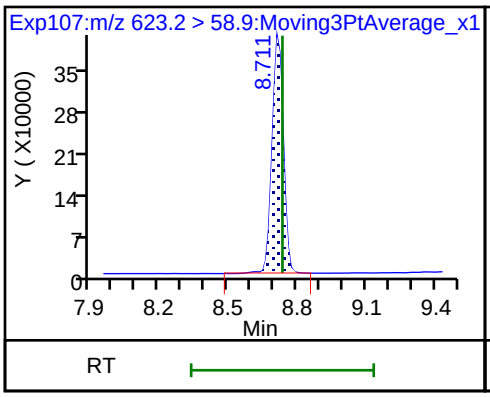
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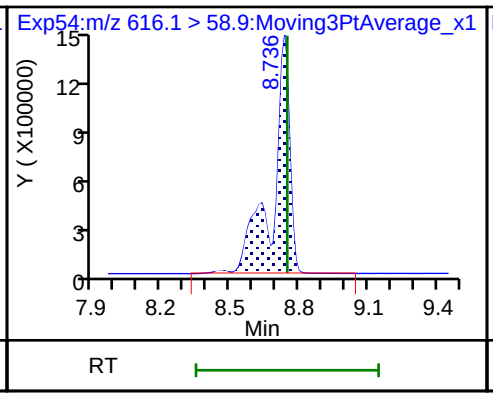
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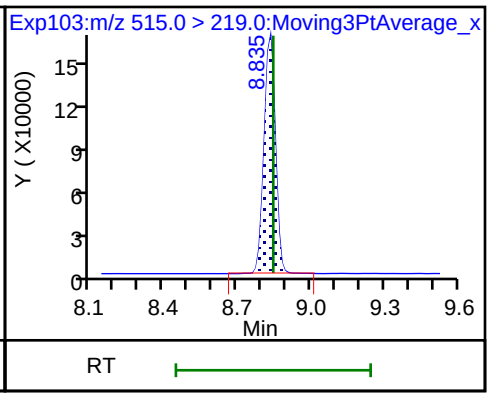
D 73 d7-N-Me-FOSE



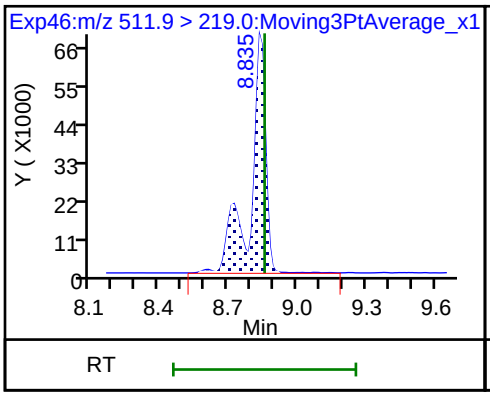
74 N-MeFOSE-M



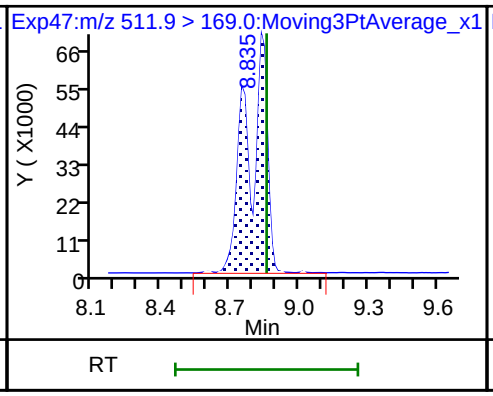
D 75 d3-NMePFOSA



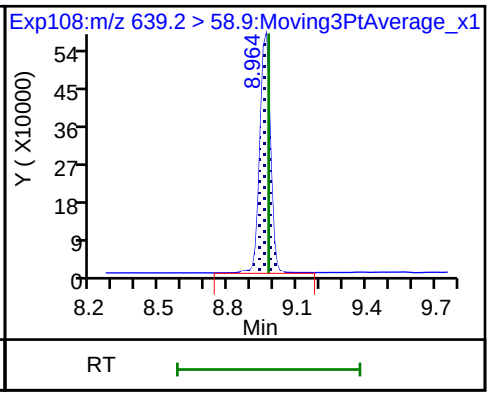
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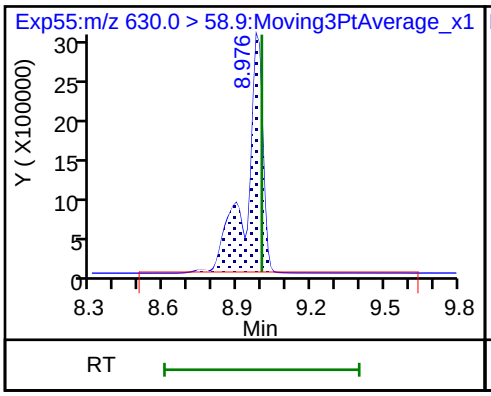
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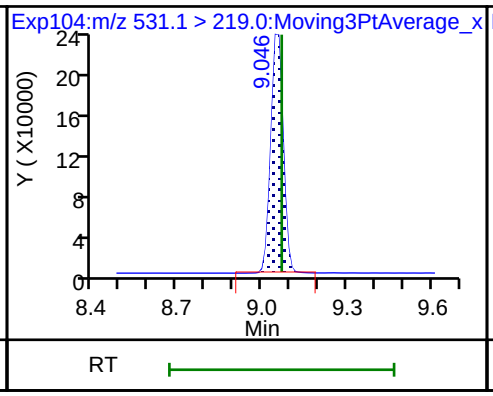
D 77 d9-N-EtFOSE



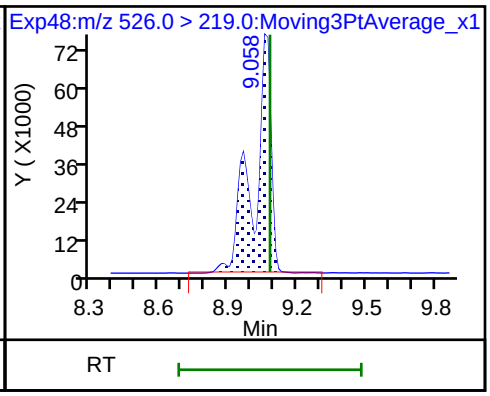
78 N-EtFOSE-M



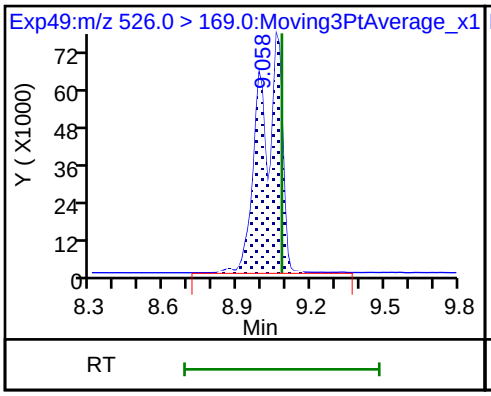
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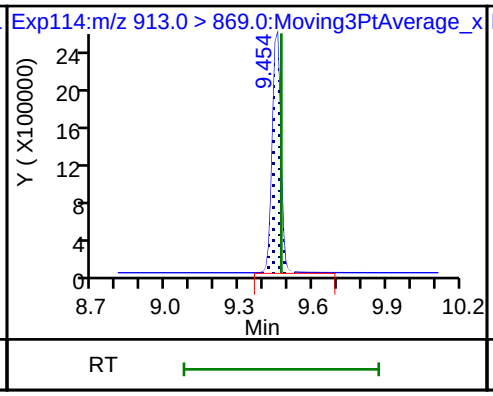
80 N-EtFOSA-M



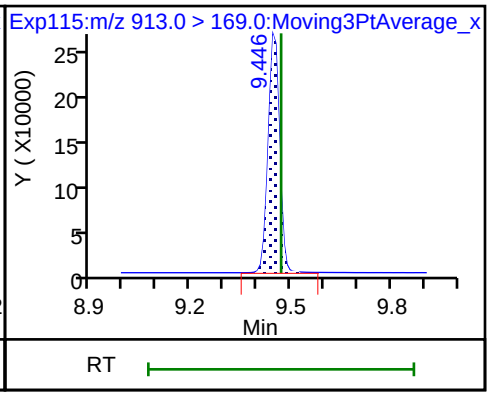
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

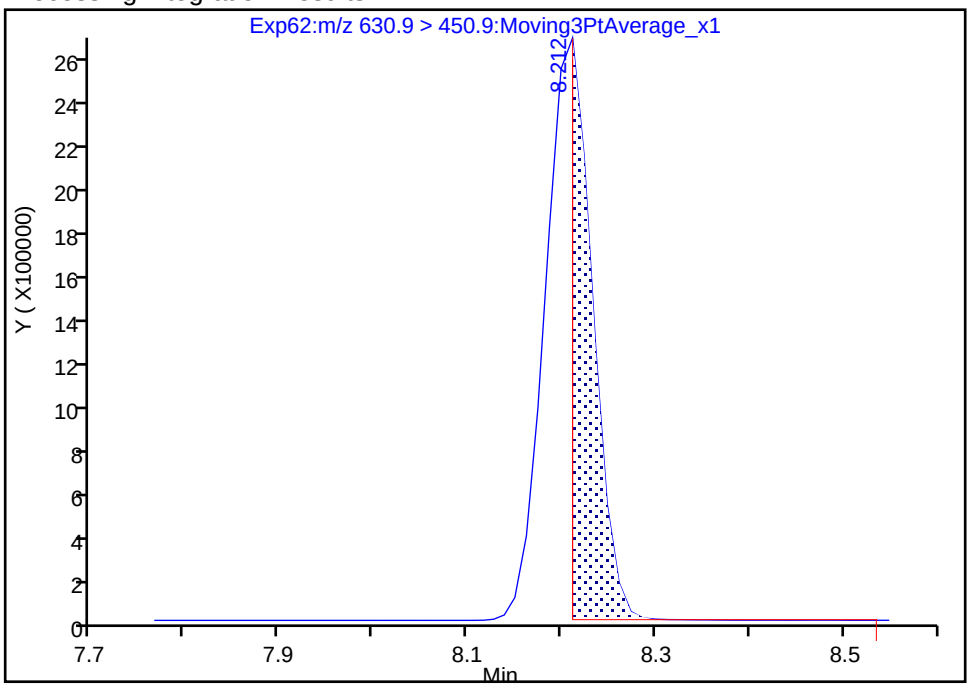
Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-10.d
Injection Date: 04-Feb-2026 14:33:10 Instrument ID: 30637
Lims ID: ICV
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

69 11ClFOS, CAS: 763051-92-9

Signal: 1

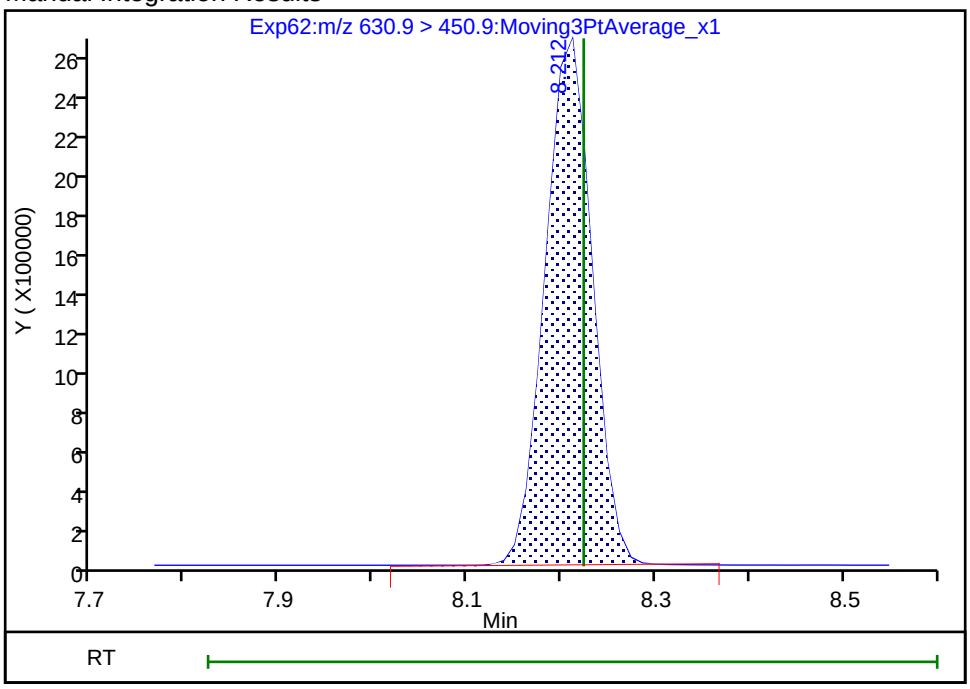
Processing Integration Results

RT: 8.21
Area: 4054866
Amount: 2.047274
Amount Units: ng/ml



Manual Integration Results

RT: 8.21
Area: 9300778
Amount: 4.695900
Amount Units: ng/ml



Reviewer: RPU6, 04-Feb-2026 20:44:20 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-771230/1 Calibration Date: 02/19/2026 09:12

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26Feb19a-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9309	0.9380		0.252	0.250	1.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.0841	0.0840		0.0998	0.100	0.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.127	1.149		0.0510	0.0500	2.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0403	0.0397		0.0985	0.100	-2.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	0.8936	0.8909		0.0498	0.0500	0.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.373	1.450		0.0528	0.0500	6.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.735	1.758		0.0950	0.0938	1.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.4216	0.4441		0.0527	0.0500	5.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	1.050	1.212		0.0578	0.0500	16.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1207	0.1377		0.285	0.250	14.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.000	0.999		0.0444	0.0444	0.0	30.0
Hexafluoropropylene oxide dimer acid (HFPO DA)	AveID	1.042	1.124		0.0404	0.0375	8.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.9299	0.9936		0.0534	0.0500	7.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	1.700	1.552		0.0407	0.0446	-9.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.118	1.149		0.0514	0.0500	3.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.626	3.785		0.0494	0.0473	4.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.220	1.235		0.0476	0.0470	1.0	30.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	AveID	1.670	1.798		0.103	0.0952	8.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	2.088	2.189		0.0513	0.0490	5.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.8915	0.9175		0.0515	0.0500	3.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0705	0.0797		0.283	0.250	13.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8883	0.9286		0.0477	0.0456	5.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9059	0.9528		0.0526	0.0500	5.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.365	1.228		0.0864	0.0960	-10.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	1.754	1.759		0.0464	0.0462	0.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.073	1.113		0.0495	0.0477	4.0	30.0
Perfluorohexanesulfonamide (FHxSA)	AveID	1.591	1.764		0.0554	0.0500	11.0	30.0
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.136	1.304		0.0574	0.0500	15.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-771230/1 Calibration Date: 02/19/2026 09:12

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26Feb19a-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorodecanoic acid (PFDA)	AveID	0.997	1.014		0.0508	0.0500	2.0	30.0
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	1.141	1.051		0.0461	0.0500	-8.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.162	1.252		0.0501	0.0465	8.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8931	0.8938		0.0500	0.0500	0.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.102	2.131		0.0473	0.0467	1.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8789	0.8365		0.0458	0.0481	-5.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	1.077	1.101		0.0511	0.0500	2.0	30.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.8302	0.8704		0.0524	0.0500	5.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.114	1.084		0.0469	0.0482	-3.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.967	1.645		0.0418	0.0500	-16.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.837	1.885		0.0484	0.0472	3.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.2163	0.2081		0.0481	0.0500	-4.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.033	1.024		0.0481	0.0485	-1.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.232	2.229		0.250	0.250	0.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9308	0.9436		0.0507	0.0500	1.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.061	3.284		0.268	0.250	7.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8421	0.8069		0.0479	0.0500	-4.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	2.806	1.643		0.0293	0.0500	-41.0*	30.0
13C3-PFPrA	Ave	0.9881	1.013		2.05	2.00	3.0	30.0
13C4 PFBA	Ave	1.165	1.137		1.95	2.00	-2.0	30.0
13C5 PFPeA	Ave	1.249	1.236		1.98	2.00	-1.0	30.0
M2-4:2 FTS	Ave	0.2232	0.2171		4.56	4.69	-3.0	30.0
13C5 PFHxA	Ave	1.499	1.496		2.00	2.00	0.0	30.0
13C3 PFBS	Ave	1.226	1.252		1.90	1.86	2.0	30.0
13C3 HFPO-DA	Ave	0.8482	0.7785		1.84	2.00	-8.0	30.0
13C4 PFHpA	Ave	1.382	1.410		2.04	2.00	2.0	30.0
M2-6:2 FTS	Ave	0.1931	0.1871		4.61	4.76	-3.0	30.0
13C8 PFOA	Ave	1.523	1.525		2.00	2.00	0.0	30.0
13C3 PFHxS	Ave	1.115	1.100		1.87	1.90	-1.0	30.0
13C9 PFNA	Ave	0.9835	0.9646		1.96	2.00	-2.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCVO 410-771230/1 Calibration Date: 02/19/2026 09:12

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26Feb19a-01.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2 FTS	Ave	0.1915	0.1852		4.64	4.80	-3.0	30.0
d3-NMeFOSAA	Ave	0.3332	0.3646		5.47	5.00	9.0	30.0
13C6 PFDA	Ave	1.116	1.070		1.92	2.00	-4.0	30.0
d5-NEtFOSAA	Ave	0.4196	0.4793		5.71	5.00	14.0	30.0
13C8 PFOS	Ave	1.388	1.441		1.99	1.92	4.0	30.0
13C7 PFUnA	Ave	1.115	1.136		2.04	2.00	2.0	30.0
13C2 PFDoA	Ave	1.056	1.063		2.01	2.00	1.0	30.0
13C8 FOSA	Ave	1.389	1.592		2.29	2.00	15.0	30.0
13C2 PFTeDA	Ave	0.6332	0.7613		2.41	2.00	20.0	30.0
d7-N-MeFOSE-M	Ave	0.3547	0.3979		5.61	5.00	12.0	30.0
d3-NMePFOSA	Ave	0.3472	0.4027		2.32	2.00	16.0	30.0
d9-N-EtFOSE-M	Ave	0.4740	0.5383		5.68	5.00	14.0	30.0
d5-NEtPFOSA	Ave	0.4737	0.5427		2.29	2.00	15.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26Feb19a-01.d
Lims ID: CCVO 1_CAL1
Client ID:
Sample Type: CCVO
Inject. Date: 19-Feb-2026 09:12:53 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CAL1
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 2
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub3

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 11:39:24 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1684

First Level Reviewer: M4QQ Date: 19-Feb-2026 09:34:03
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.983	1.983	0.0	0.485	2349958	2.05		103	1600	
2 Perfluoropropionic acid										
163.0 > 119.0	2.000	2.000	0.0	1.009	275518	0.2519		101	130	
D 3 13C4-PFBA										
216.8 > 171.9	4.087	4.087	0.0	1.000	2638058	1.95		97.6	7587	
* 4 13C3PFBA										
216.0 > 172.0	4.087	4.087	0.0		2320158	2.00			4960	
5 PFBA										
212.8 > 168.9	4.094	4.094	0.0	1.002	11078	0.0998		99.8	25.9	
6 PFMPA										
229.0 > 84.9	4.412	4.412	0.0	0.929	77854	0.0510		102	472	
7 3:3 FTCA										
241.0 > 177.0	4.422	4.422	0.0	0.932	5372	0.0985	Target=1.04	98.5	102	
241.0 > 117.0	4.432	4.422	0.010	0.934	5355		1.00(0.52-1.56)		38.7	
D 8 13C5 PFPeA										
268.0 > 223.0	4.747	4.747	0.0	0.912	2709506	1.98		99.0	5519	
9 PFPA										
263.0 > 219.0	4.747	4.747	0.0	1.000	60347	0.0498		99.7	118	
10 PFMBA										
279.0 > 84.9	4.895	4.895	0.0	1.031	98252	0.0528		106	865	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.018	5.018	0.0	0.805	921092	4.56		97.3	4079	
12 4:2FTS										
327.1 > 307.0	5.028	5.028	0.0	1.002	32388	0.0950	Target=1.64	101	298	
327.1 > 80.9	5.028	5.028	0.0	1.002	19113		1.69(0.82-2.46)		61.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.165	5.165	0.0	0.992	36419	0.0527	Target=1.37	105	197	
295.0 > 84.9	5.165	5.165	0.0	0.992	30045		1.21(0.69-2.06)		243	
D 15 13C5 PFHxA										
318.0 > 273.0	5.206	5.206	0.0	1.000	3280471	2.00		99.8	10356	
* 16 13C2 PFHxA										
315.1 > 270.0	5.206	5.206	0.0		5480574	5.00			11550	
17 PFHxA										
313.0 > 269.0	5.216	5.216	0.0	1.002	99433	0.0578	Target=17.00	116	227	
313.0 > 118.9	5.216	5.216	0.0	1.002	5378		18.49(8.50-25.50)		39.3	
18 5:3 FTCA										
341.0 > 237.1	5.303	5.303	0.0	1.019	56454	0.2852	Target=1.07	114	281	
341.0 > 217.0	5.303	5.303	0.0	1.019	54646		1.03(0.53-1.60)		95.7	
D 19 13C3 PFBS										
302.1 > 79.9	5.337	5.337	0.0	0.856	2111411	1.90		102	8548	
20 PFBS										
298.7 > 79.9	5.348	5.348	0.0	1.002	50242	0.0444	Target=3.26	99.9	381	
298.7 > 98.8	5.337	5.348	-0.011	1.000	17095		2.94(1.63-4.90)		104	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.381	5.381	0.0	1.034	1706642	1.84		91.8	4190	
22 HFPO-DA										
284.9 > 168.9	5.393	5.393	0.0	1.002	35975	0.0404	Target=1.71	108	152	
284.9 > 184.9	5.393	5.393	0.0	1.002	19725		1.82(0.86-2.57)		91.6	
23 FBSA										
298.0 > 78.0	5.427	5.427	0.0	1.017	56276	0.0534		107	269	
25 PFEESA										
314.8 > 134.9	5.574	5.574	0.0	1.071	113529	0.0407	Target=9.87	91.3	653	
314.8 > 82.9	5.574	5.574	0.0	1.071	11685		9.72(4.93-14.80)		66.6	
D 27 13C4 PFHpA										
367.0 > 322.0	5.631	5.631	0.0	1.082	3090352	2.04		102	5184	
28 PFHpA										
363.1 > 319.0	5.631	5.631	0.0	1.000	88734	0.0514	Target=3.06	103	224	
363.1 > 169.0	5.631	5.631	0.0	1.000	33290		2.67(1.53-4.59)		132	
29 ADONA										
376.9 > 250.9	5.779	5.779	0.0	1.074	152770	0.0494	Target=2.15	104	890	
376.9 > 84.8	5.779	5.779	0.0	1.074	72913		2.10(1.08-3.23)		395	
30 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.933	57781	0.0476	Target=3.62	101	245	
349.0 > 98.8	5.825	5.814	0.011	0.935	15082		3.83(1.81-5.42)		90.9	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.825	5.825	0.0	0.935	805392	4.61		96.9	3650	
32 6:2FTS										
427.1 > 407.0	5.825	5.825	0.0	1.000	28962	0.1025	Target=1.50	108	54.2	
427.1 > 80.9	5.837	5.825	0.012	1.002	17256		1.68(0.75-2.25)		40.6	
33 BTS										
280.0 > 147.0	5.974	5.974	0.0	0.958	106616	0.0513		105	515	
D 34 13C8 PFOA										
421.0 > 376.0	6.020	6.020	0.0	1.000	3573740	2.00		100	5758	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		5858419	5.00			6175	
36 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	81977	0.0515	Target=2.55	103	93.1	
413.0 > 169.0	6.032	6.032	0.0	1.002	38341		2.14(1.27-3.82)		66.4	
37 7:3 FTCA										
441.0 > 316.9	6.114	6.114	0.0	1.175	32689	0.2828	Target=0.54	113	127	
441.0 > 336.9	6.114	6.114	0.0	1.175	55308		0.59(0.27-0.81)		202	
D 38 13C3 PFHxS										
402.0 > 79.9	6.233	6.233	0.0	1.000	1886839	1.87		98.7	3487	
* 39 18O2 PFHxS										
403.0 > 83.9	6.233	6.233	0.0		1714828	1.90			6949	
40 PFHxS										
398.7 > 79.9	6.243	6.243	0.0	1.002	42141	0.0477	Target=4.54	105	163	
398.7 > 98.8	6.243	6.243	0.0	1.002	11767		3.58(2.27-6.81)		61.9	
D 41 13C9 PFNA										
472.0 > 427.0	6.413	6.413	0.0	1.000	3280604	1.96		98.1	5729	
* 42 13C5 PFNA										
468.0 > 423.0	6.413	6.413	0.0		3401009	2.00			9236	
43 PFNA										
463.0 > 419.0	6.424	6.424	0.0	1.002	78143	0.0526	Target=2.78	105	205	
463.0 > 219.0	6.424	6.424	0.0	1.002	27747		2.82(1.39-4.17)		56.0	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.588	6.588	0.0	1.057	803918	4.64		96.7	2150	
45 8:2FTS										
527.1 > 507.0	6.588	6.588	0.0	1.000	19740	0.0864	Target=1.45	90.0	62.7	
527.1 > 80.9	6.588	6.588	0.0	1.000	15523		1.27(0.73-2.18)		75.9	
46 PFECHS										
461.0 > 381.0	6.611	6.611	0.0	1.061	80893	0.0464	Target=1.67	100	389	
461.0 > 99.0	6.611	6.611	0.0	1.061	53862		1.50(0.84-2.51)		181	
47 PFHpS										
449.0 > 79.9	6.654	6.654	0.0	0.943	55126	0.0495	Target=4.71	104	159	
449.0 > 98.8	6.643	6.654	-0.011	0.942	15562		3.54(2.36-7.07)		4922	
48 FHxSA										
398.0 > 78.0	6.709	6.709	0.0	1.076	87785	0.0554		111	336	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.741	6.741	0.0	0.956	1314059	5.47		109	1987	
50 NMeFOSAA										
570.0 > 419.0	6.751	6.751	0.0	1.002	17135	0.0574	Target=1.26	115	3446	
570.0 > 483.0	6.751	6.751	0.0	1.002	12166		1.41(0.63-1.89)		2460	
D 51 13C6 PFDA										
519.0 > 474.0	6.804	6.804	0.0	1.000	3303933	1.92		95.8	5670	
* 52 13C2 PFDA										
515.1 > 470.1	6.804	6.804	0.0		3087393	2.00			3782	
53 PFDA										
512.9 > 469.0	6.804	6.804	0.0	1.000	83728	0.0508	Target=6.81	102	324	
512.9 > 219.0	6.814	6.804	0.010	1.002	12030		6.96(3.40-10.21)		47.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.921	6.921	0.0	0.981	1727802	5.71		114	2452	
55 NEtFOSAA										
584.0 > 419.0	6.921	6.921	0.0	1.000	18162	0.0461	Target=1.64	92.2	3936	
584.0 > 526.0	6.921	6.921	0.0	1.000	13355		1.36(0.82-2.45)		302	
D 56 13C8 PFOS										
507.0 > 79.9	7.053	7.053	0.0	1.000	1990146	1.99		104	3148	
* 57 13C4 PFOS										
502.8 > 79.9	7.053	7.053	0.0		1381238	1.92			4822	
58 PFOS										
498.9 > 79.9	7.053	7.053	0.0	1.000	60461	0.0501	Target=5.55	108	135	
498.9 > 98.8	7.053	7.053	0.0	1.000	11557		5.23(2.77-8.32)		74.5	
D 59 13C7 PFUnA										
570.0 > 525.0	7.195	7.195	0.0	1.057	3506088	2.04		102	9353	
60 PFUnA										
563.1 > 519.0	7.205	7.205	0.0	1.001	78347	0.0500	Target=5.71	100	566	
563.1 > 269.1	7.205	7.205	0.0	1.001	16324		4.80(2.85-8.56)		71.6	
61 9ClFOS										
530.8 > 351.0	7.367	7.367	0.0	1.044	103368	0.0473	Target=3.10	101	278	
532.8 > 353.0	7.367	7.367	0.0	1.044	32749		3.16(1.55-4.65)		140	
62 PFNS										
548.8 > 79.9	7.455	7.455	0.0	1.057	41794	0.0458	Target=4.40	95.2	368	
548.8 > 98.8	7.467	7.455	0.012	1.059	10450		4.00(2.20-6.60)		93.1	
D 63 13C2 PFDoA										
615.0 > 570.0	7.603	7.603	0.0	1.118	3280854	2.01		101	3791	
64 PFDoA										
613.0 > 569.0	7.603	7.603	0.0	1.000	90265	0.0511	Target=6.25	102	652	
613.0 > 319.0	7.603	7.603	0.0	1.000	14875		6.07(3.12-9.37)		127	
D 65 13C8 FOSA										
506.1 > 77.8	7.842	7.842	0.0	1.112	2295803	2.29		115	4867	
66 PFOSA										
498.1 > 77.9	7.842	7.842	0.0	1.000	49959	0.0524	Target=44.01	105	411	
498.1 > 478.0	7.842	7.842	0.0	1.000	1171		42.66(22.00-66.01)		7.0	
67 PFDS										
599.0 > 79.9	7.853	7.853	0.0	1.113	54255	0.0469	Target=4.97	97.3	454	
599.0 > 98.8	7.853	7.853	0.0	1.113	10210		5.31(2.49-7.46)		116	
68 PFTrDA										
663.0 > 619.0	8.007	8.007	0.0	0.955	96673	0.0418	Target=7.34	83.6	894	
663.0 > 168.9	7.996	8.007	-0.011	0.954	12308		7.85(3.67-11.01)		132	
69 11ClFOS										
630.9 > 450.9	8.150	8.150	0.0	1.156	92409	0.0484	Target=3.07	103	848	
632.9 > 452.9	8.150	8.150	0.0	1.156	30393		3.04(1.54-4.61)		336	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.382	8.382	0.0	1.232	2350455	2.40		120	2794	
71 PFTeDA										
713.1 > 168.9	8.397	8.397	0.0	1.002	12228	0.0481	Target=1.18	96.2	164	
713.1 > 219.0	8.382	8.397	-0.015	1.000	8599		1.42(0.59-1.77)		114	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.599	8.599	0.0	1.219	51591	0.0481	Target=5.61	99.1	363	
699.1 > 98.8	8.599	8.599	0.0	1.219	8528		6.05(2.81-8.42)		142	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.749	8.749	0.0	1.240	1434375	5.61		112	615	
74 N-MeFOSE-M										
616.1 > 58.9	8.761	8.761	0.0	1.001	159893	0.2497		99.9	83.6	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.858	8.858	0.0	1.256	580640	2.32		116	2456	
76 NMeFOSA										
511.9 > 219.0	8.870	8.870	0.0	1.001	13697	0.0507	Target=0.75	101	139	
511.9 > 169.0	8.870	8.870	0.0	1.001	17440		0.79(0.38-1.13)		151	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.988	8.988	0.0	1.274	1940182	5.68		114	645	
78 N-EtFOSE-M										
630.0 > 58.9	8.999	8.999	0.0	1.001	318543	0.2682		107	157	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.070	9.070	0.0	1.286	782391	2.29		115	2784	
80 N-EtFOSA-M										
526.0 > 219.0	9.082	9.082	0.0	1.001	15782	0.0479	Target=0.82	95.8	227	
526.0 > 169.0	9.082	9.082	0.0	1.001	20802		0.76(0.41-1.23)		162	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.308	9.308	0.0	1.110	96558	0.0293	Target=9.64	58.6	4097	
913.0 > 169.0	9.297	9.308	-0.011	1.109	9924		9.73(4.82-14.45)		514	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL1_00072 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 11:39:25 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26Feb19a-01.d

Injection Date: 19-Feb-2026 09:12:53 Instrument ID: 30637

Lims ID: CCVO 1_CAL1

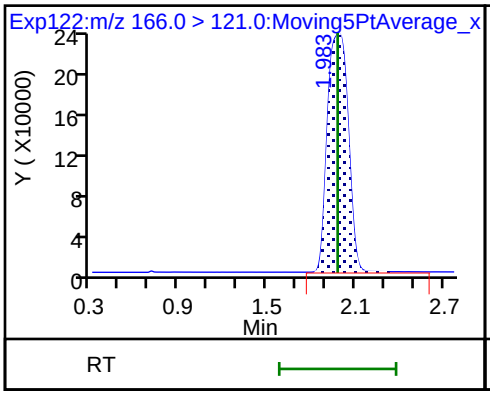
Client ID:

Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 2 Worklist Smp#: 1

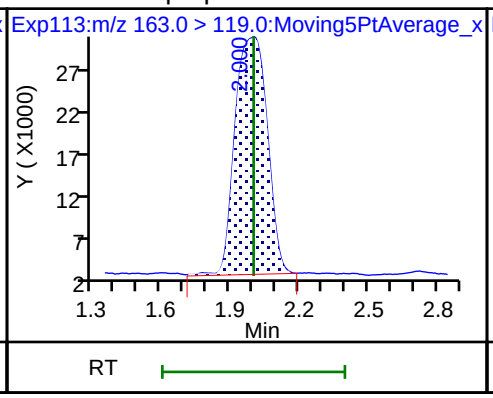
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

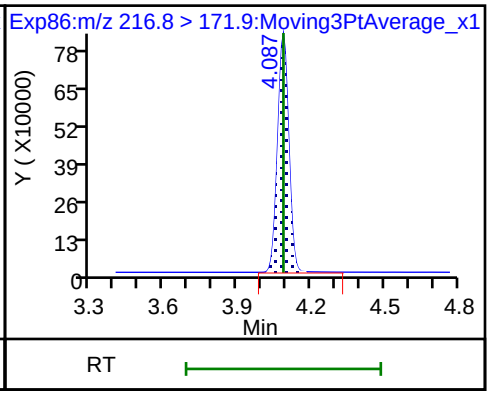
D 1 13C3PFPrA



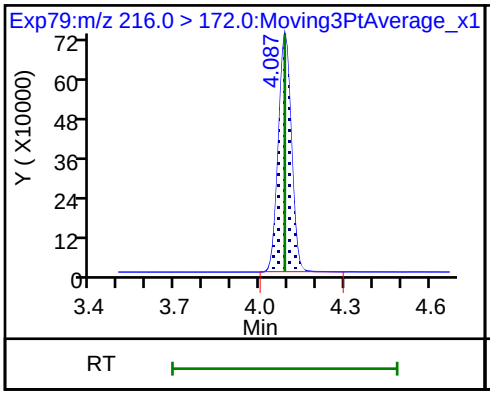
2 Perfluoropropionic acid



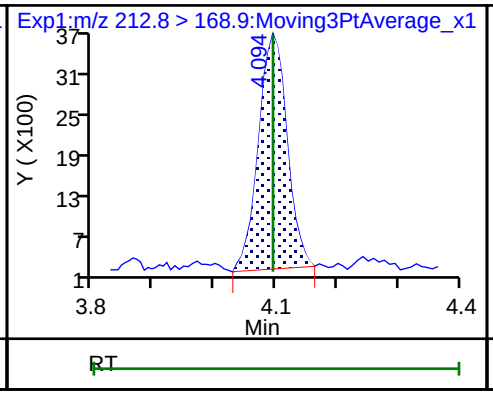
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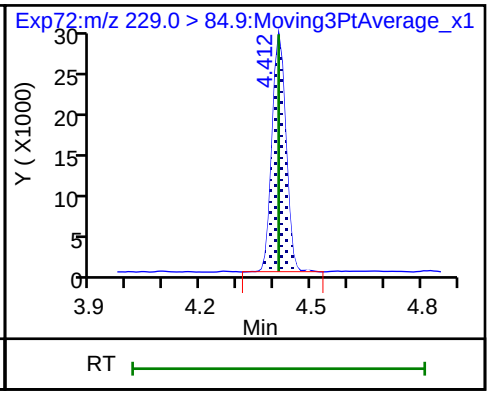
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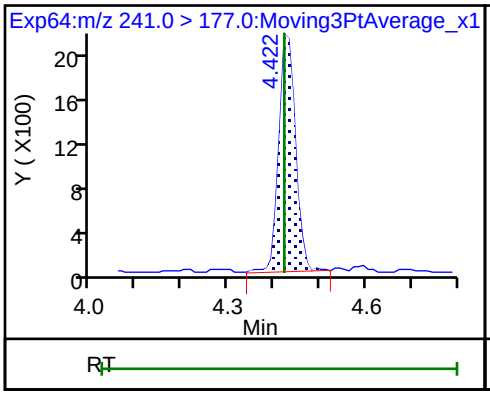
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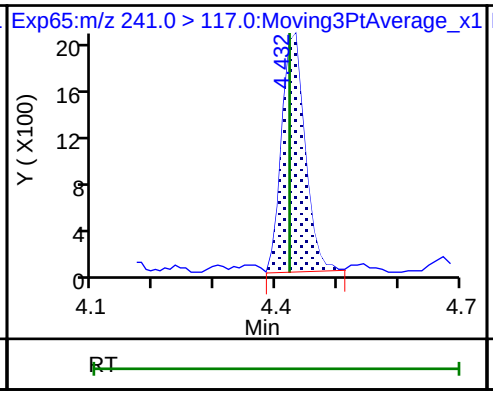
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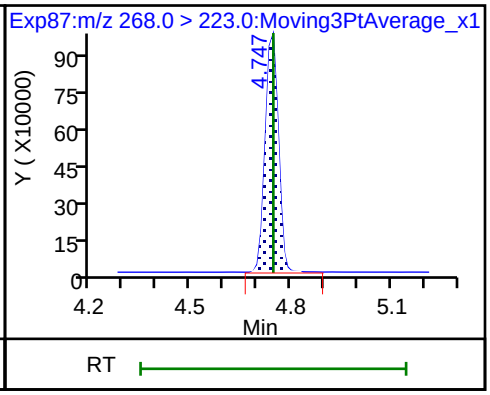
7 3:3 FTCA



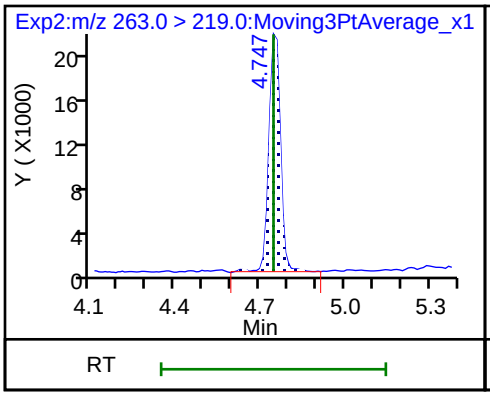
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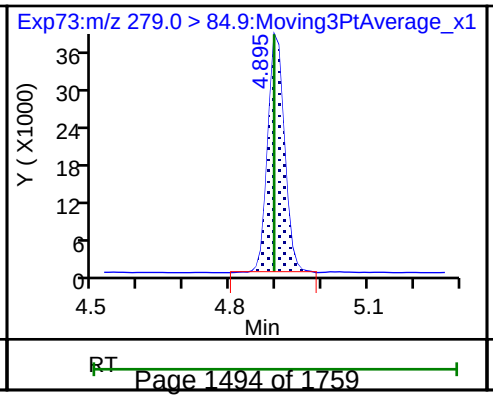
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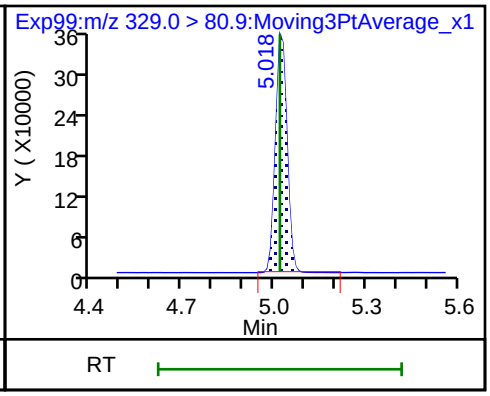
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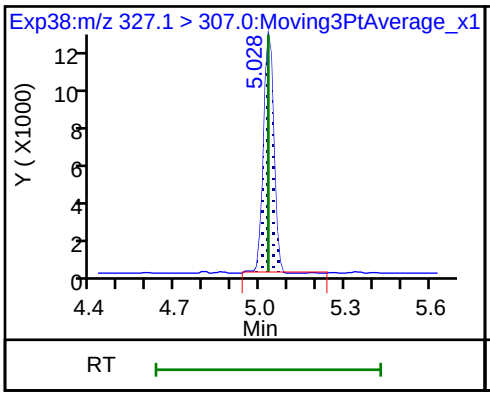
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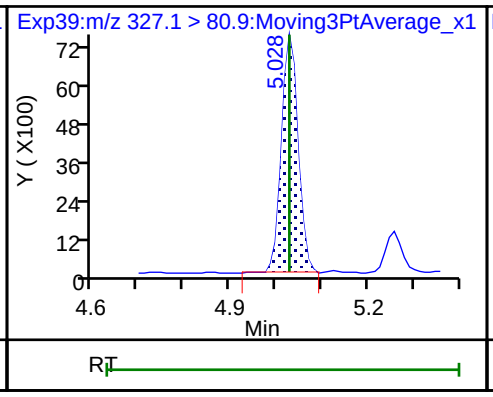
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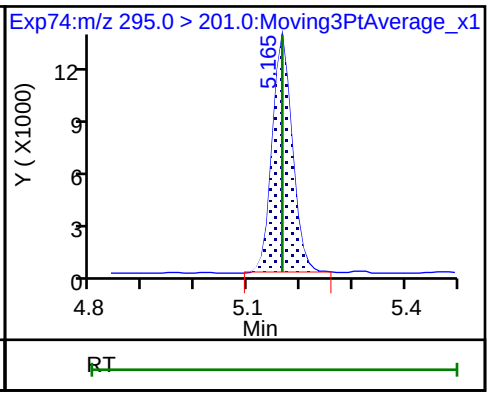
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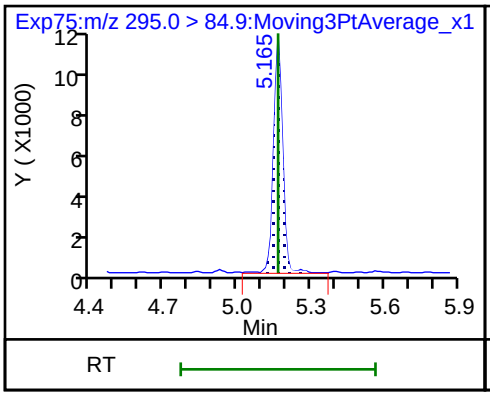
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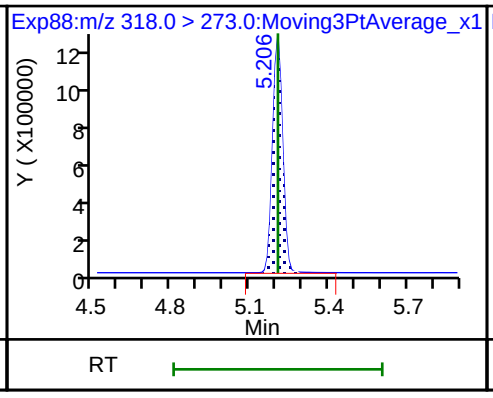
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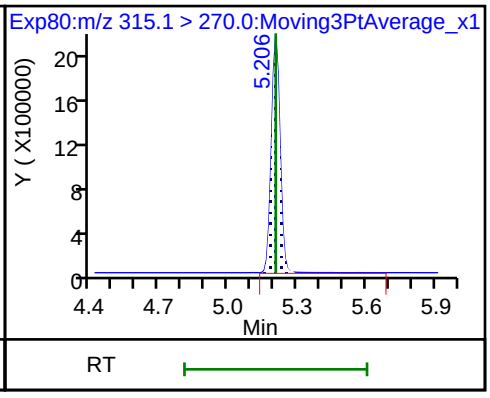
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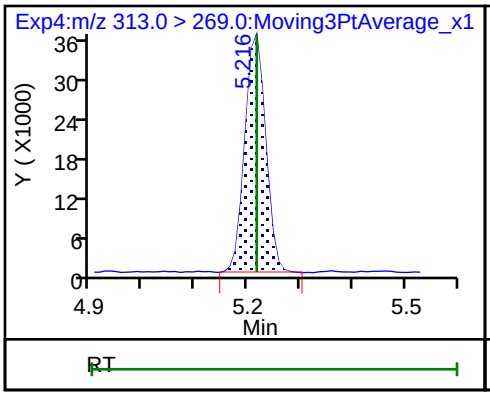
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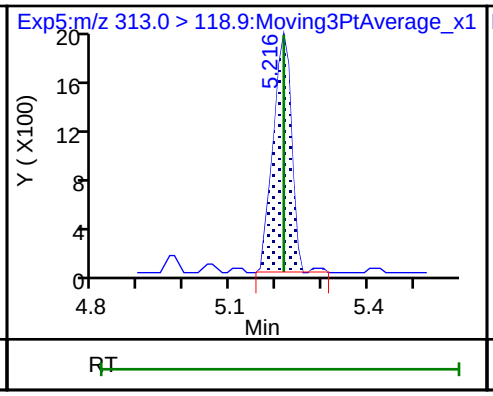
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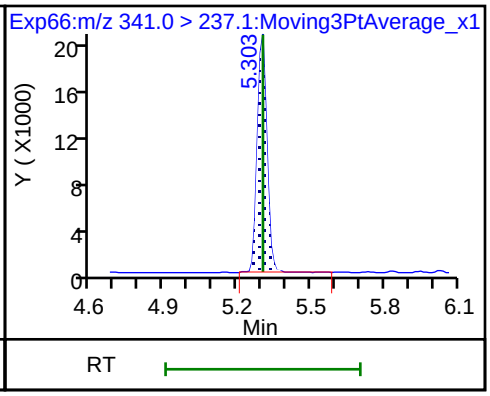
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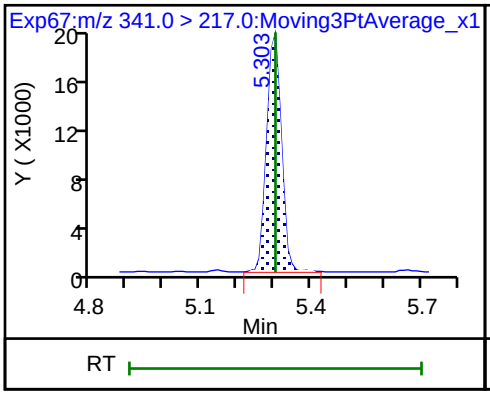
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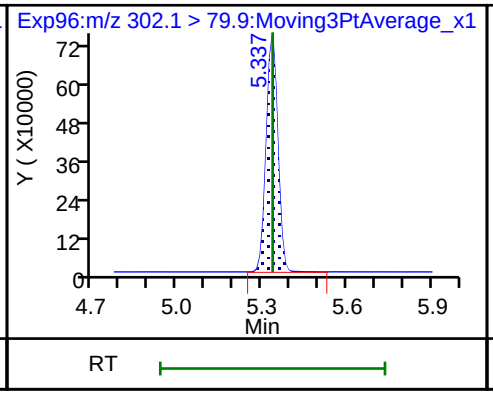
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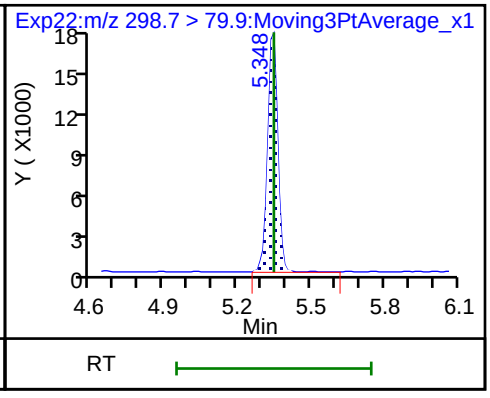
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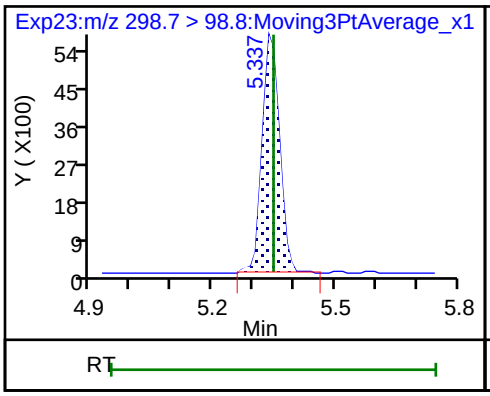
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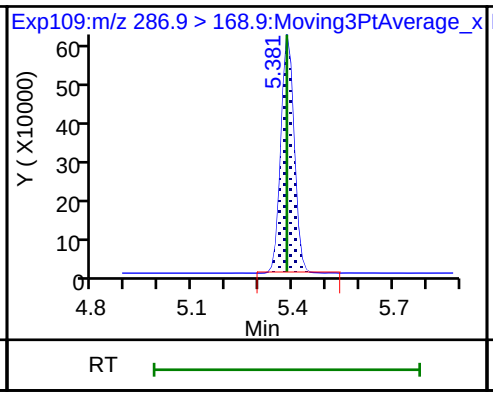
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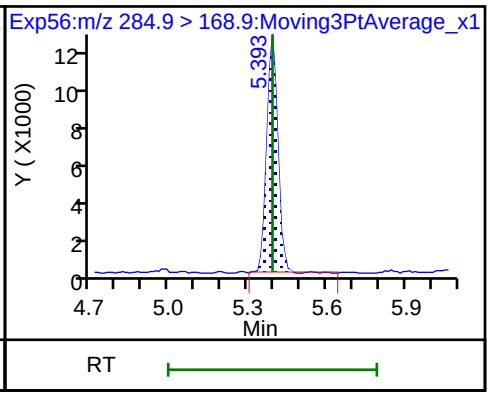
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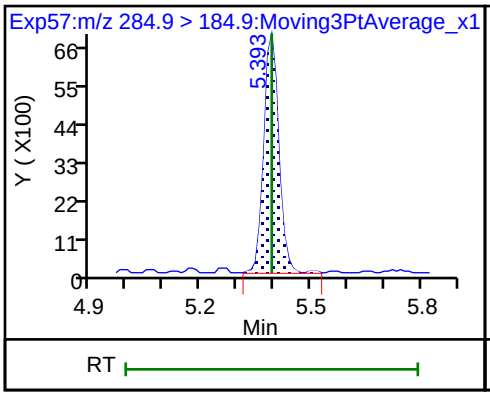
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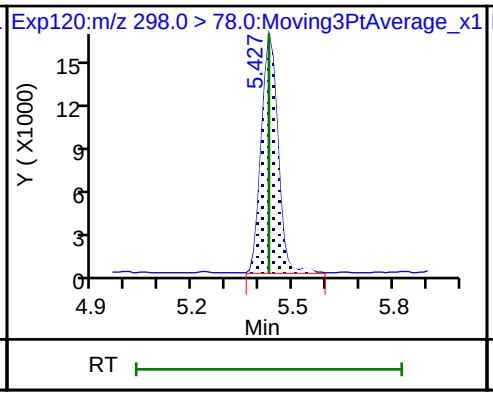
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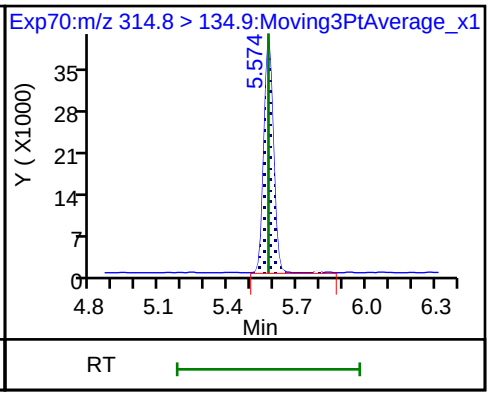
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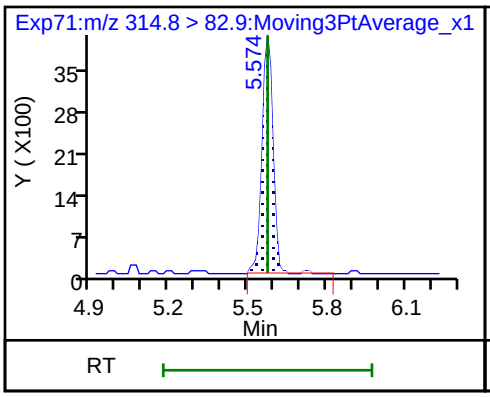
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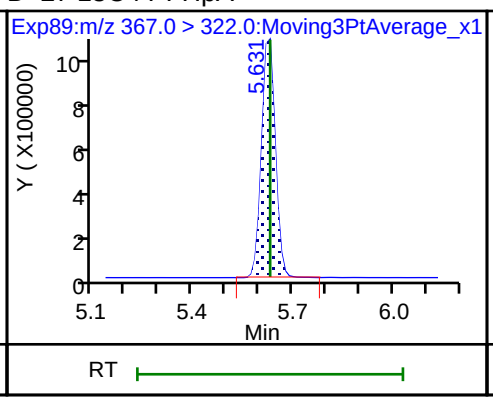
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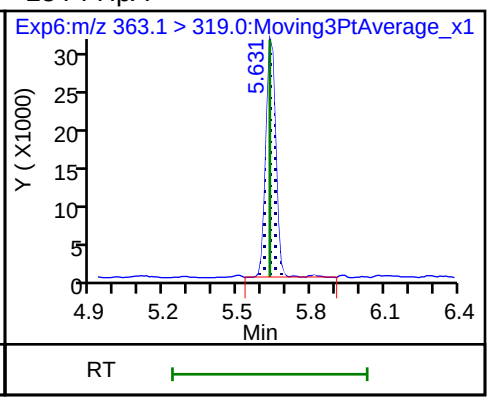
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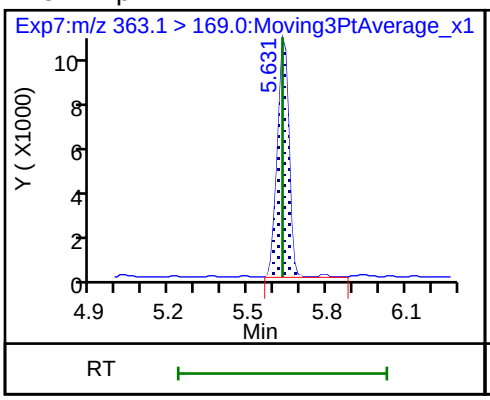
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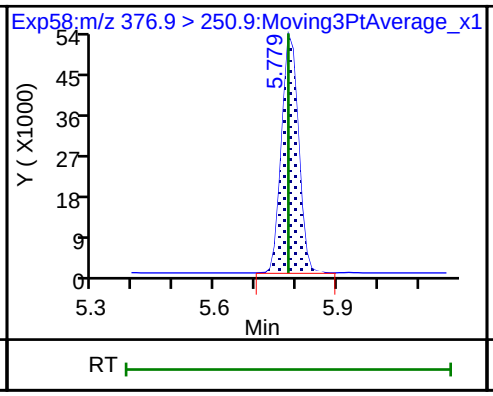
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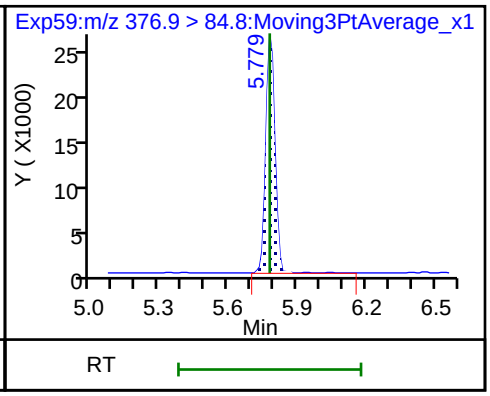
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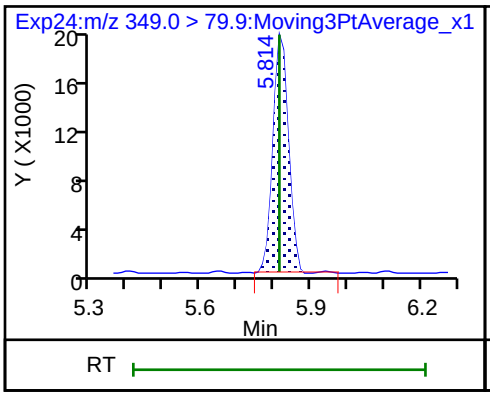
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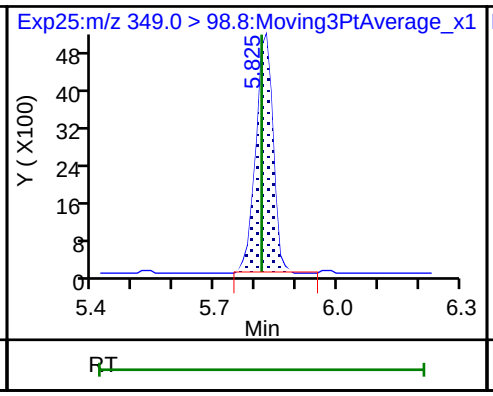
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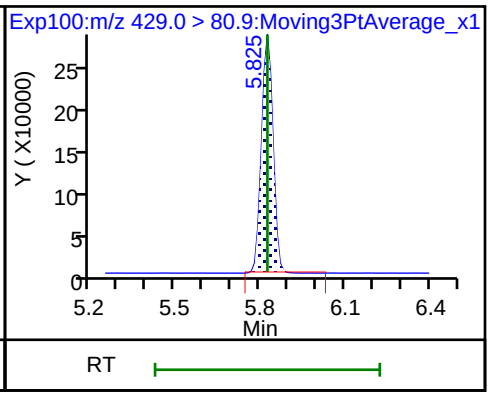
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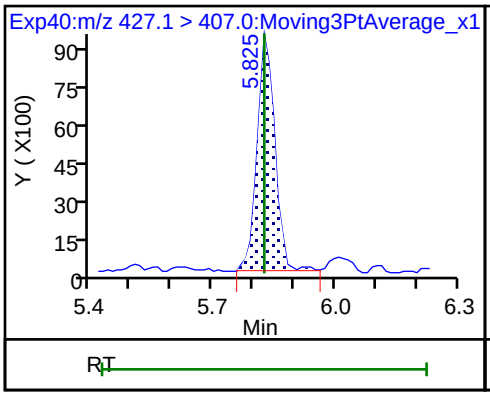
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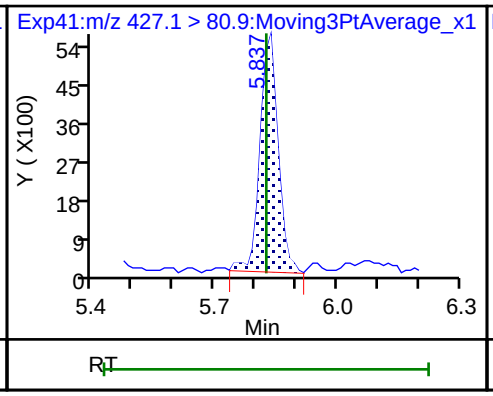
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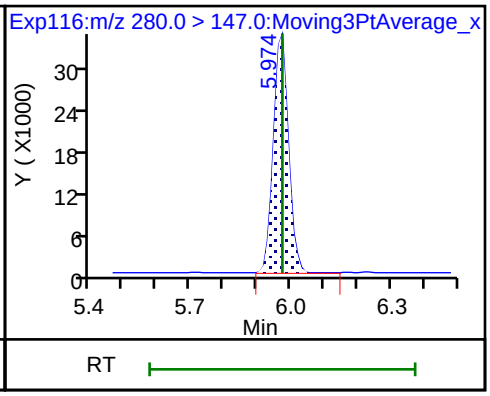
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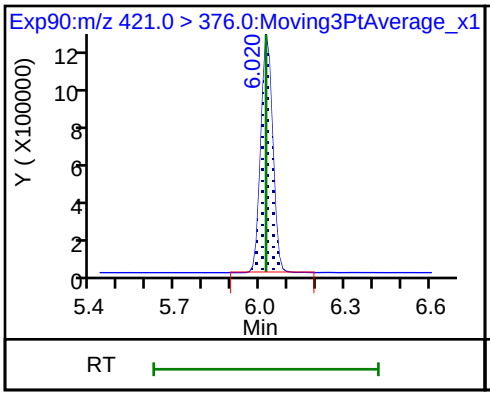
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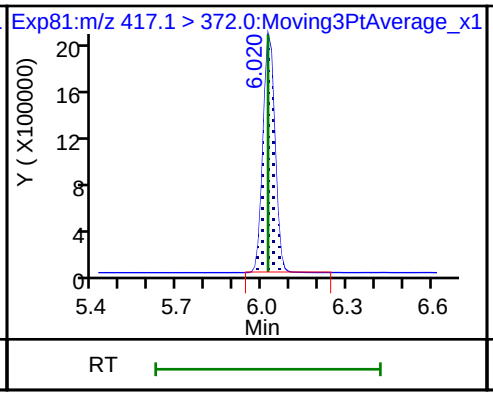
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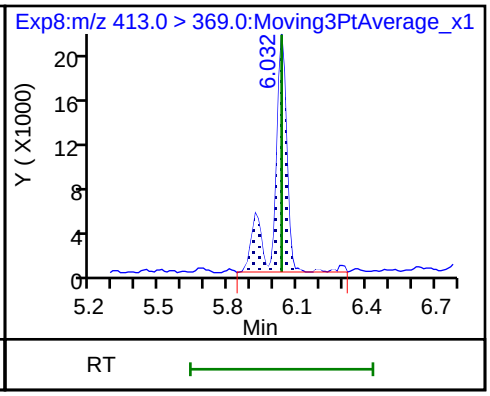
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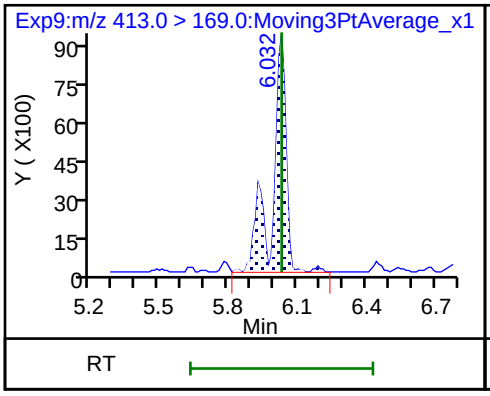
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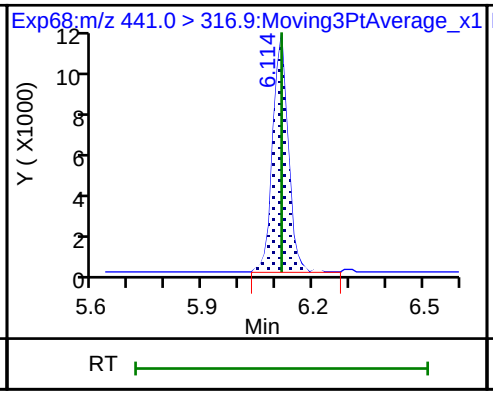
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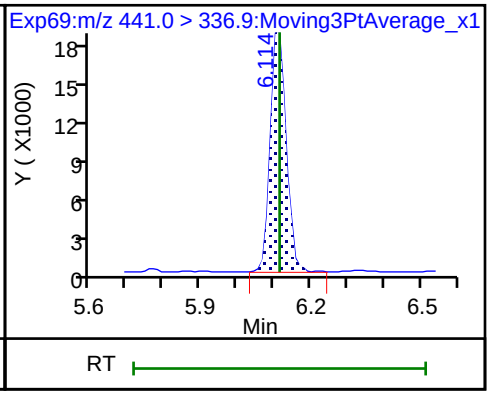
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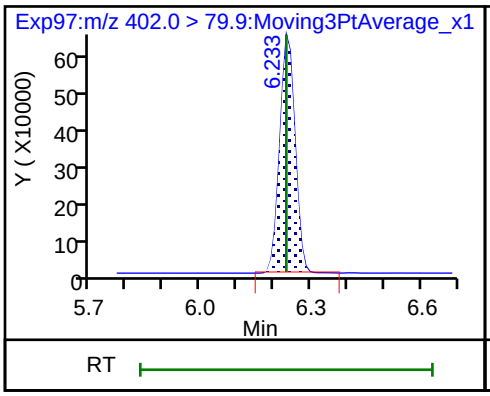
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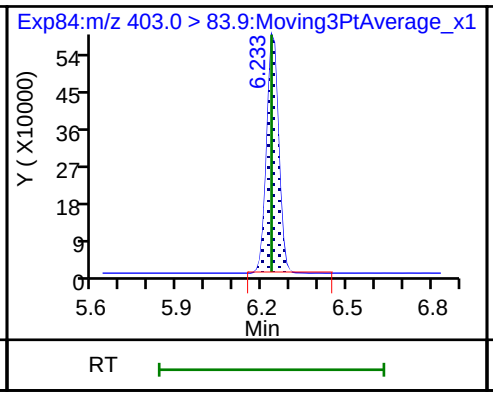
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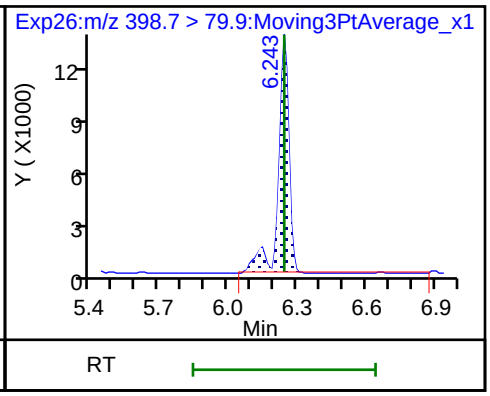
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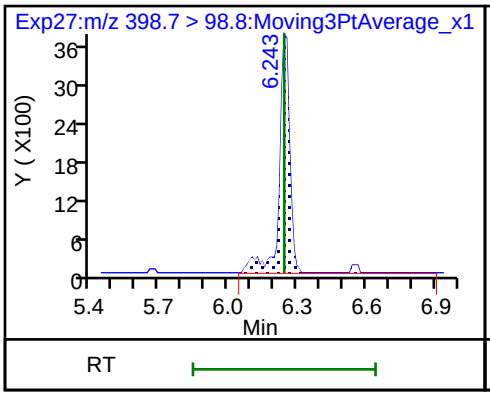
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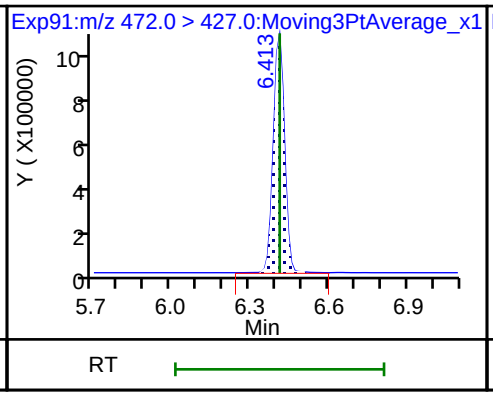
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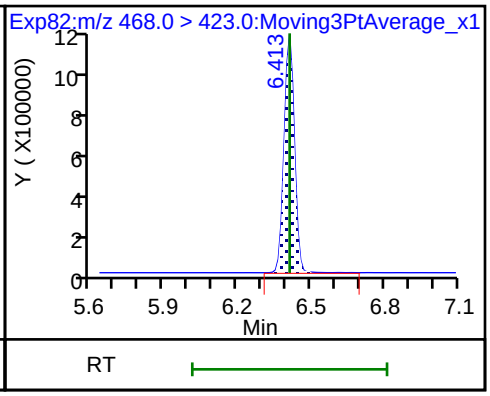
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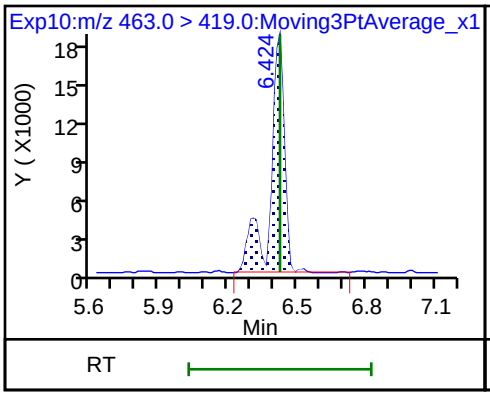
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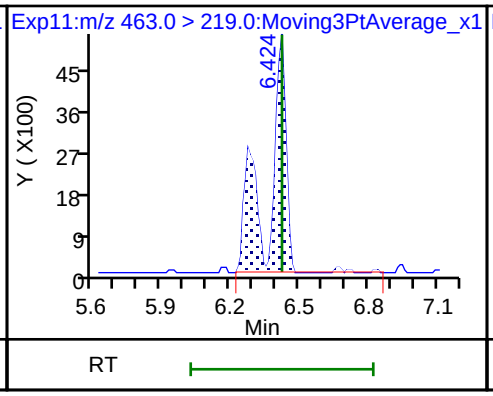
* 42 13C5 PFNA



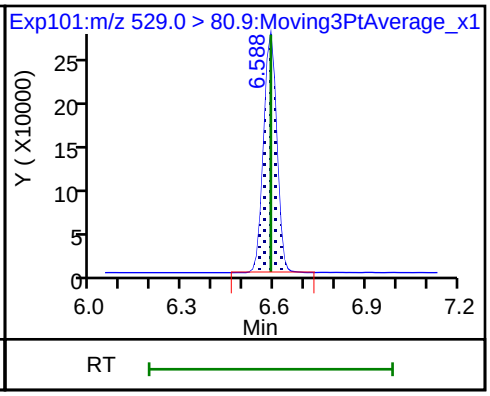
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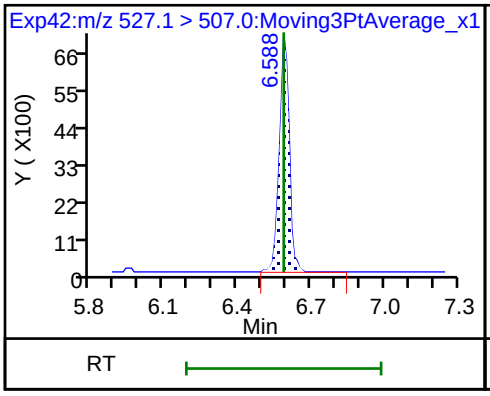
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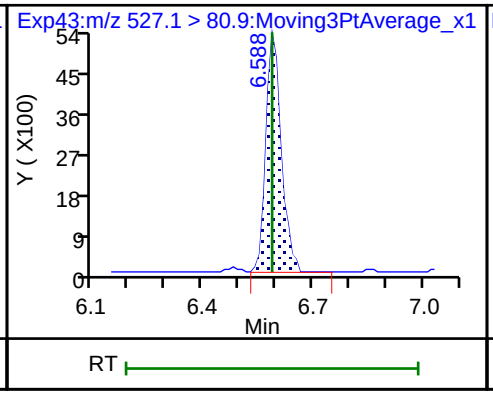
D 44 13C2-8:2FTS



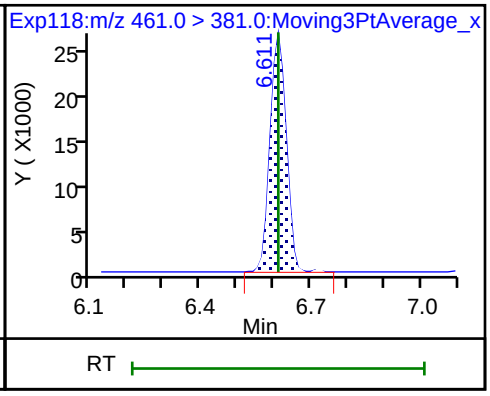
45 8:2FTS



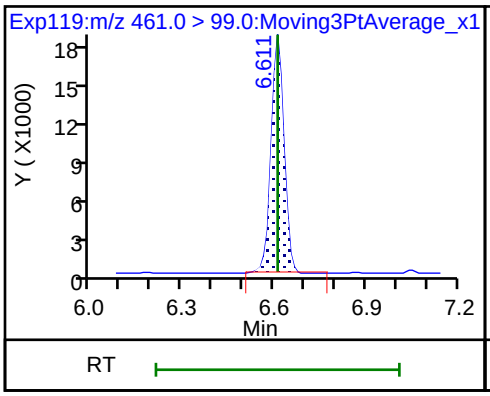
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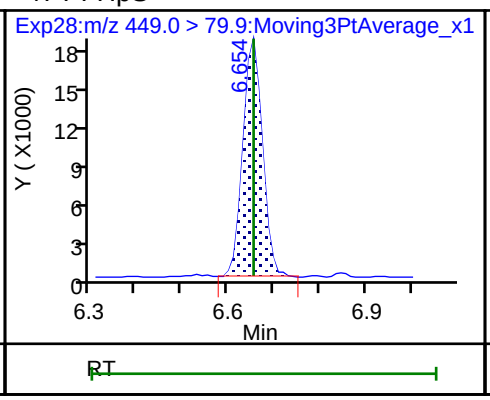
46 PFECHS



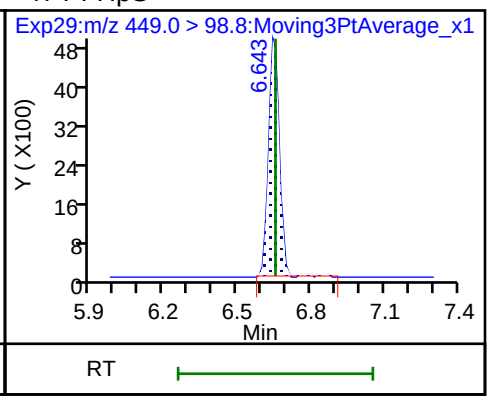
46 PFECHS



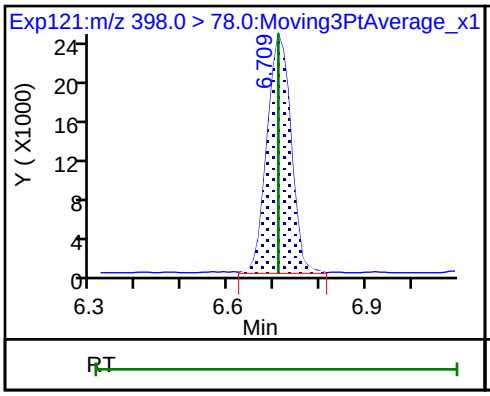
47 PFHpS



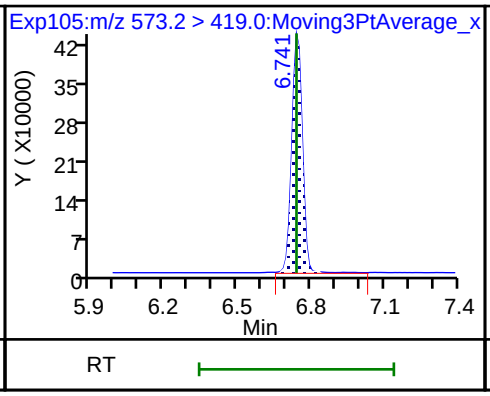
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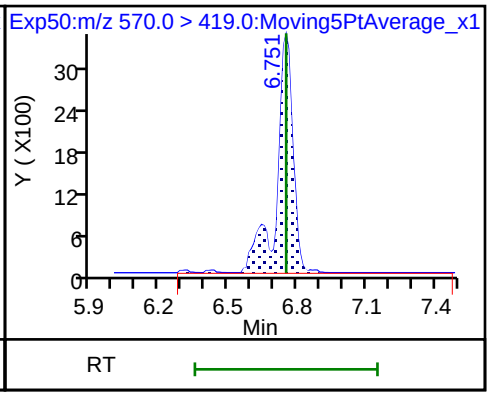
48 FHxSA



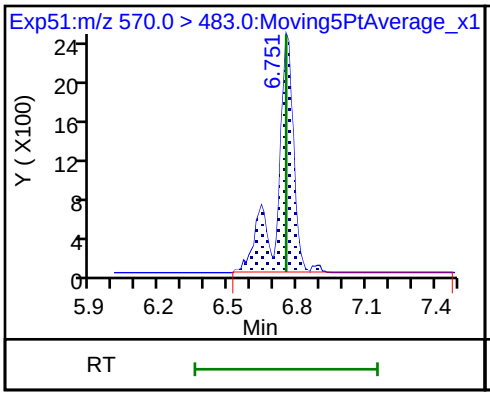
D 49 d3-NMeFOSAA



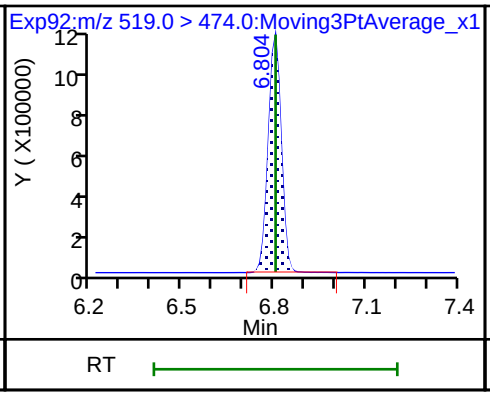
50 NMeFOSAA



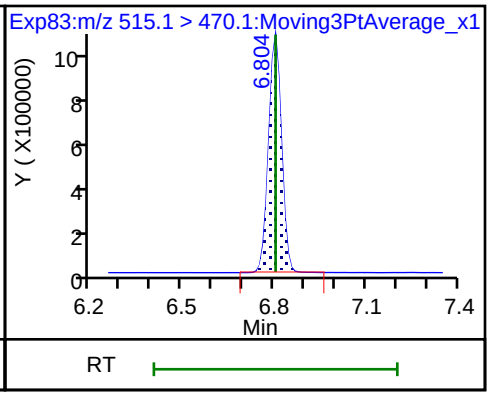
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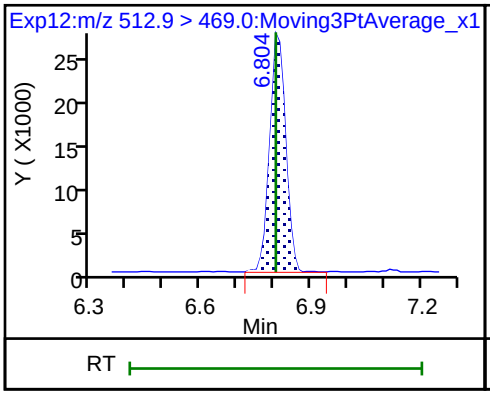
D 51 13C6 PFDA



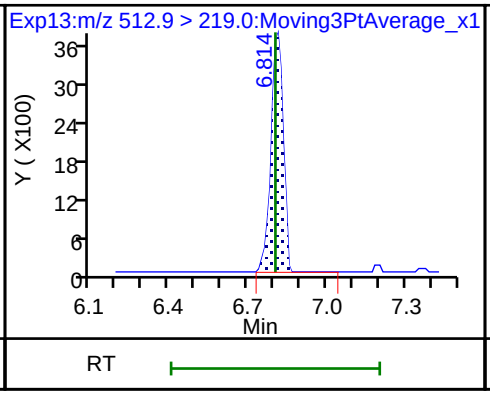
* 52 13C2 PFDA



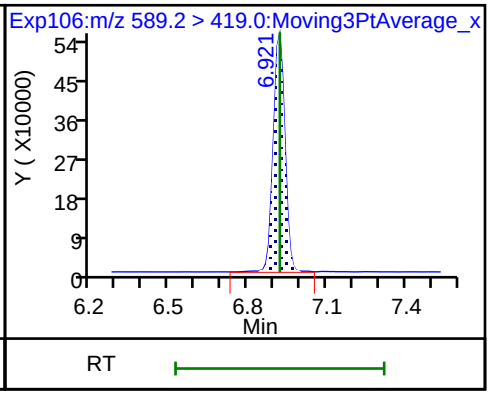
53 PFDA



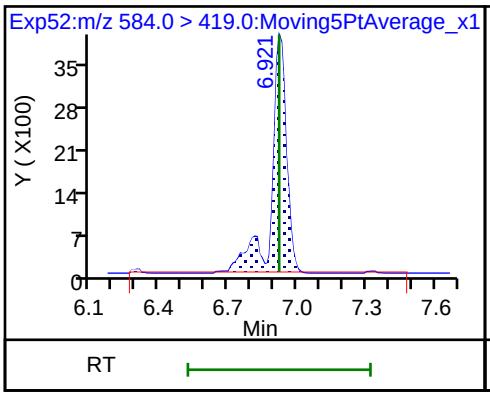
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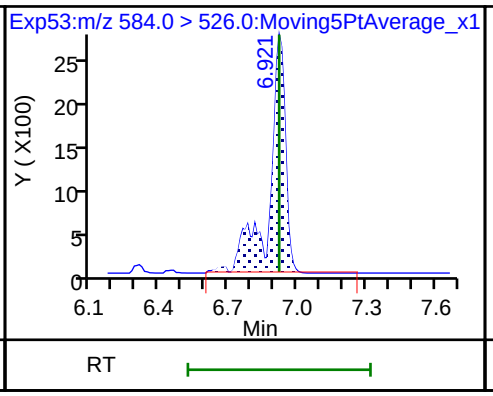
D 54 d5-NEtFOSAA



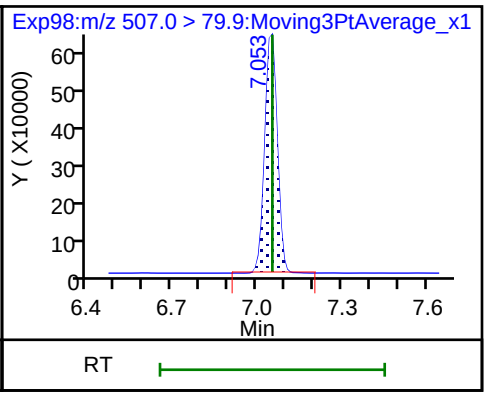
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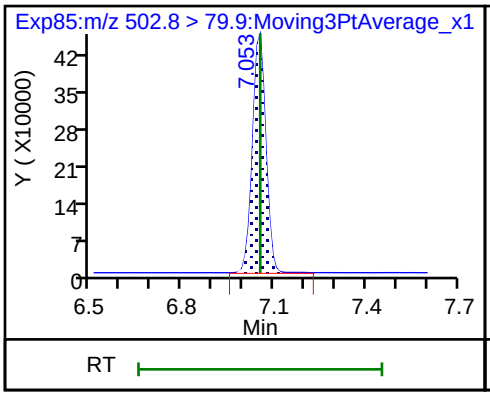
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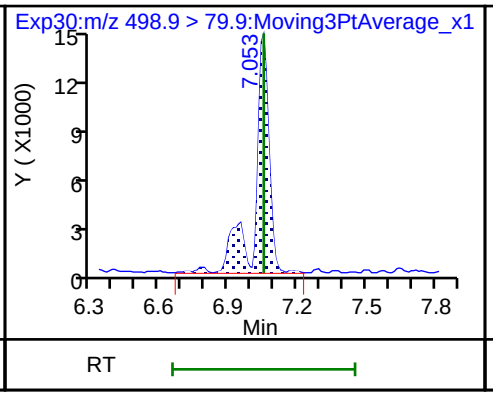
D 56 13C8 PFOS



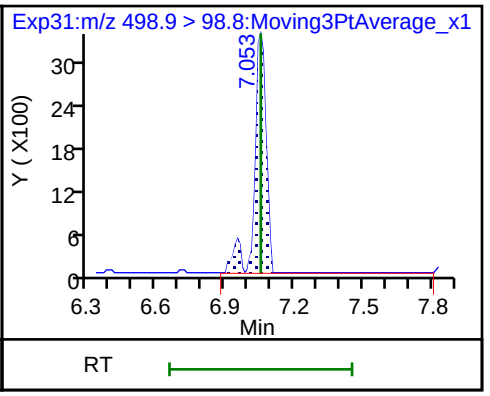
* 57 13C4 PFOS



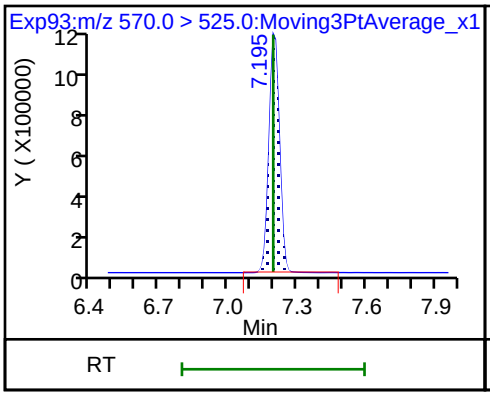
58 PFOS



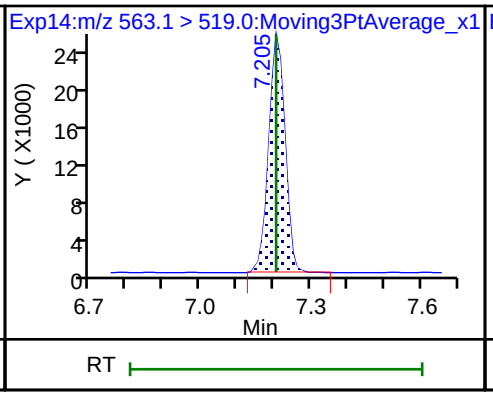
58 PFOS



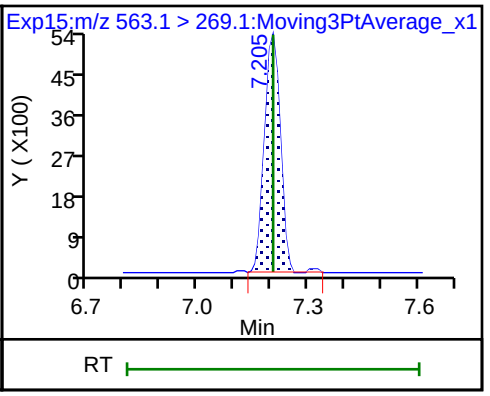
D 59 13C7 PFUnA



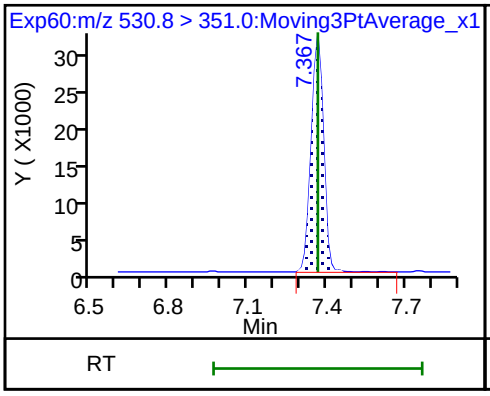
60 PFUnA



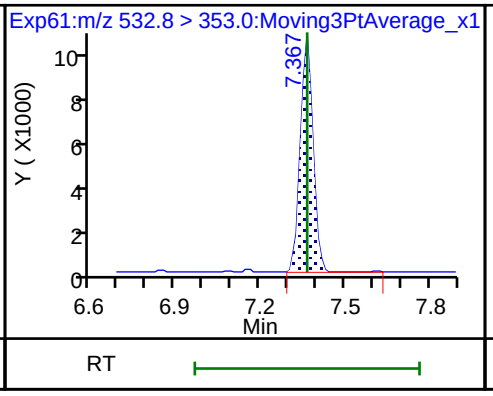
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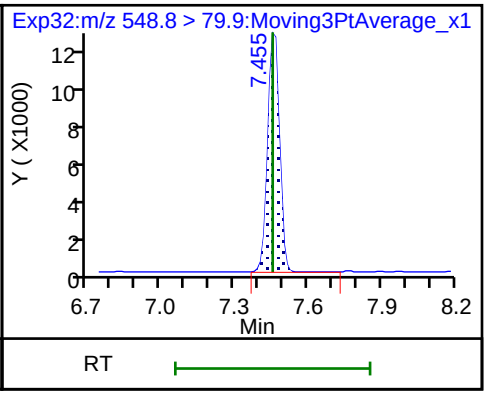
61 9ClFOS



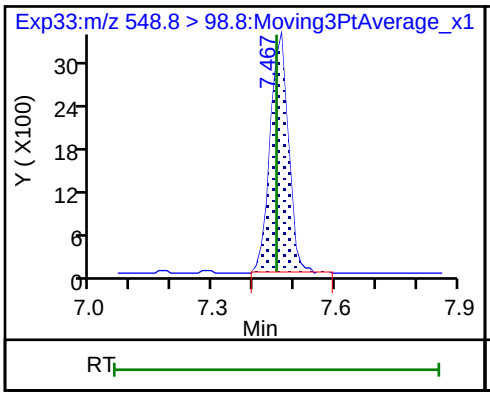
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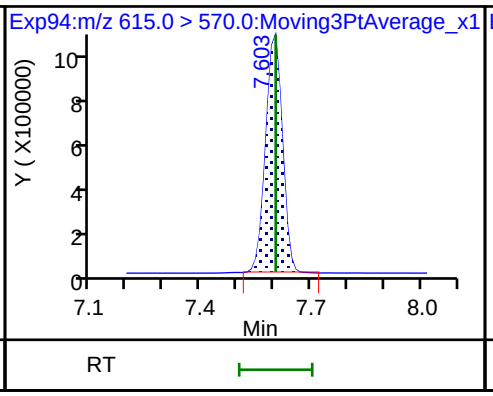
62 PFNS



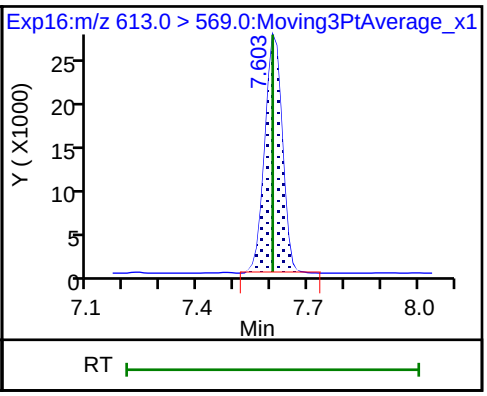
62 PFNS



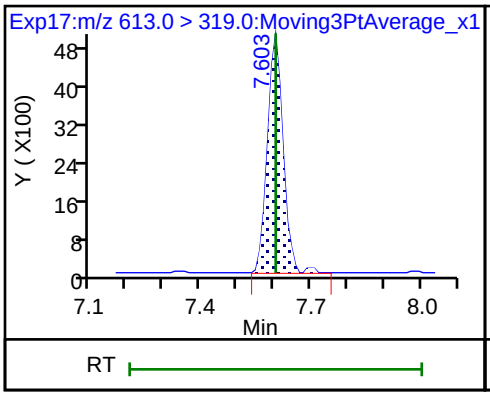
D 63 13C2 PFDoA



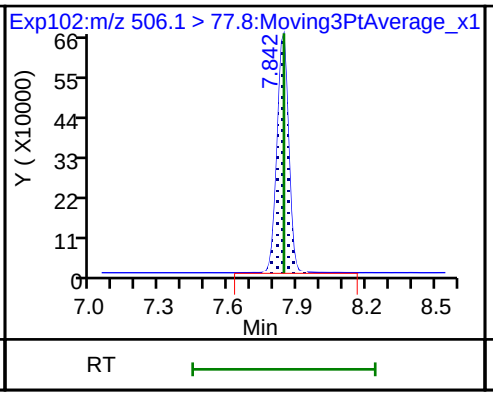
64 PFDoA



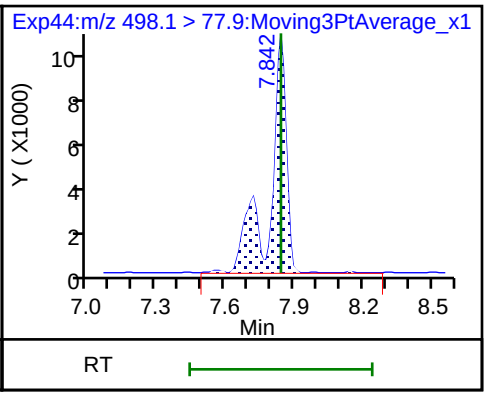
64 PFDoA



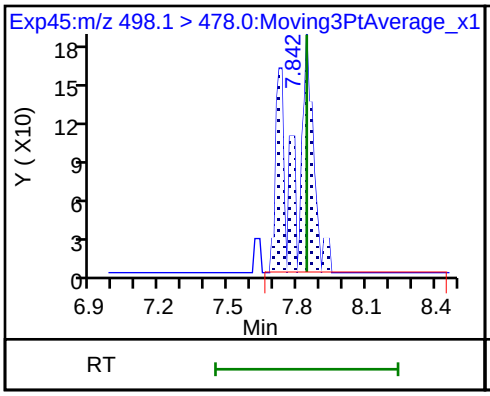
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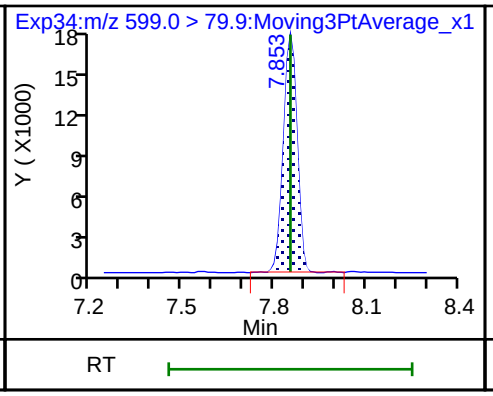
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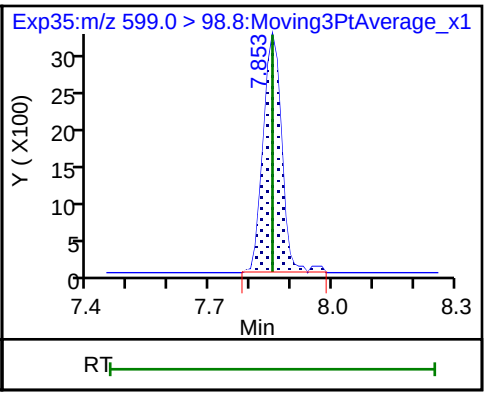
66 PFOSA



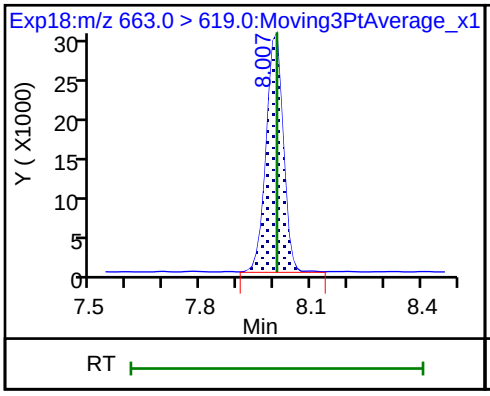
67 PFDS



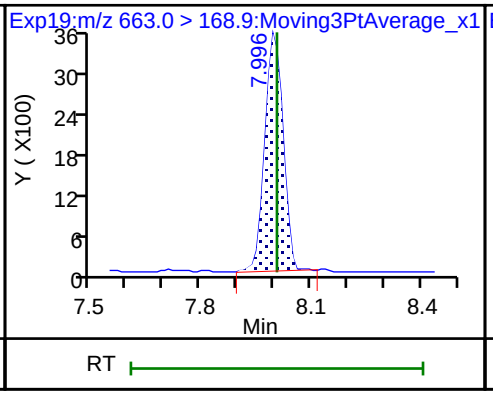
67 PFDS



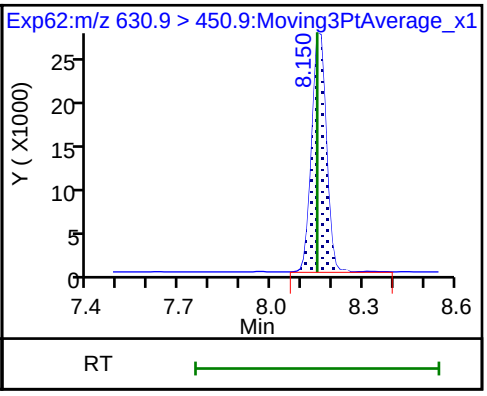
68 PFTrDA



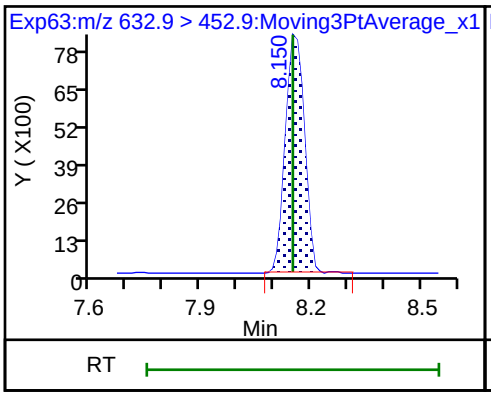
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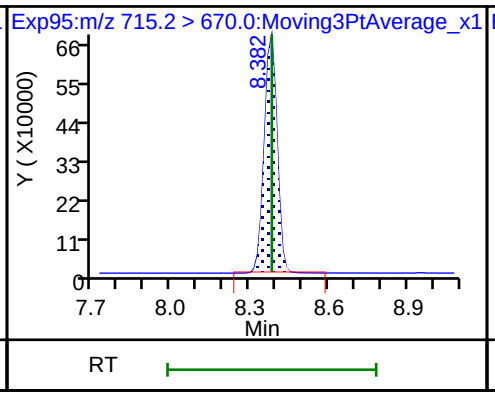
69 11ClFOS



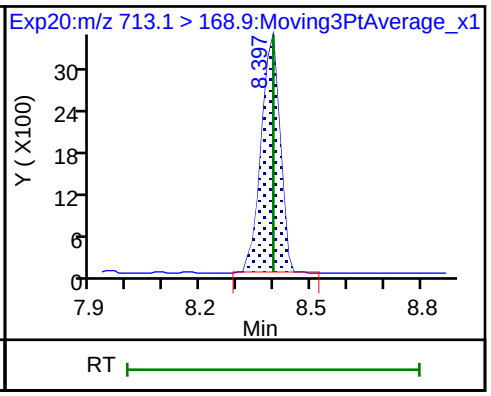
69 11ClFOS



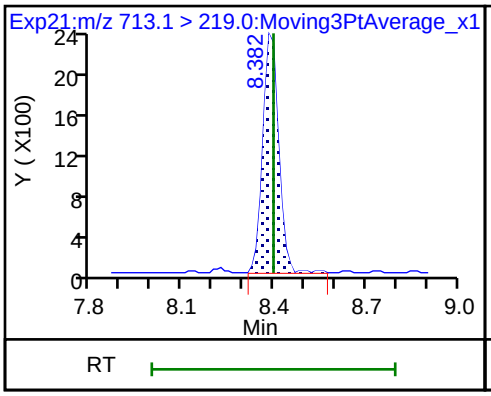
D 70 13C2 PFTeDA



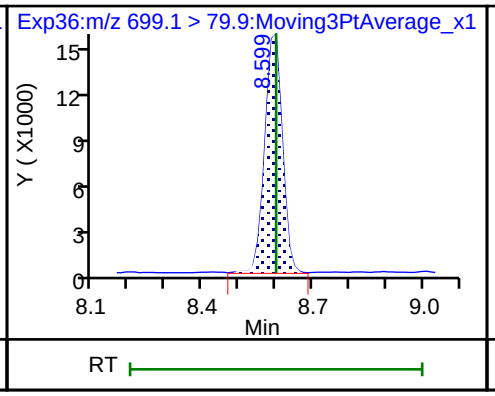
71 PFTeDA



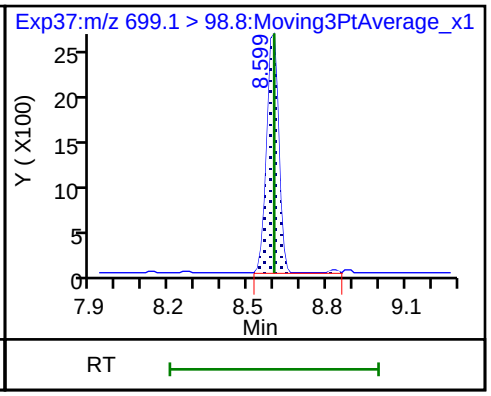
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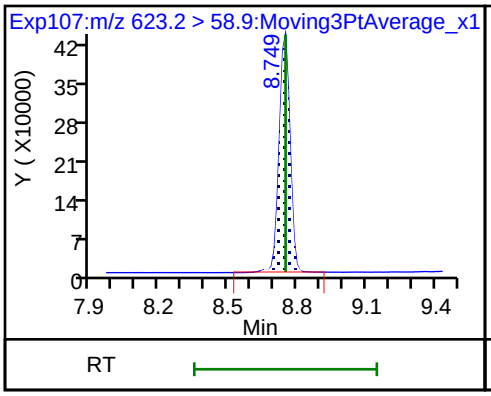
72 PFDoS



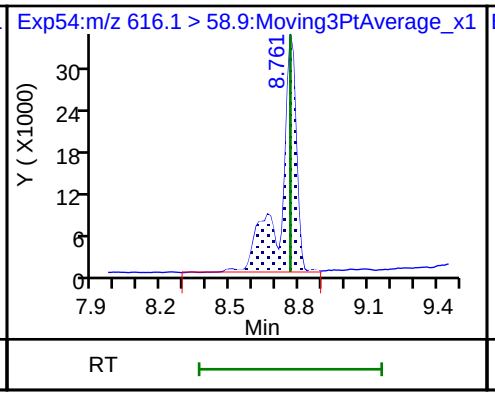
72 PFDoS



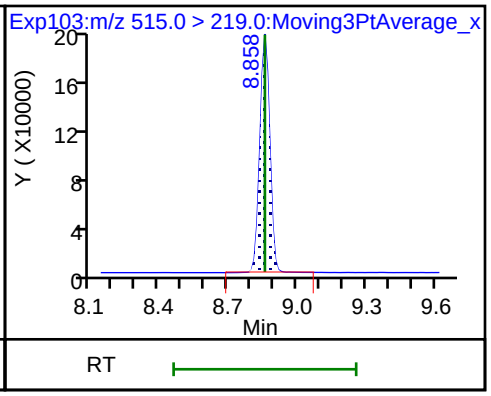
D 73 d7-N-Me-FOSE



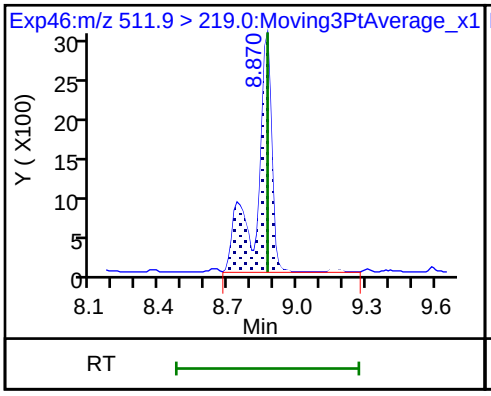
74 N-MeFOSE-M



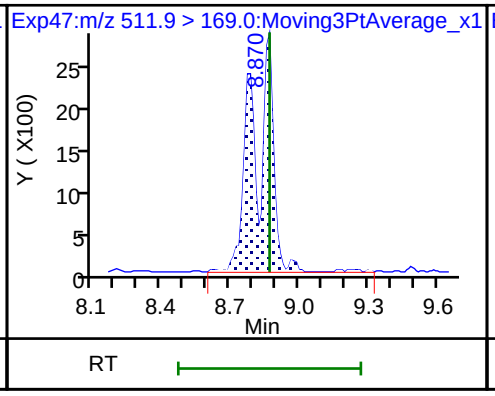
D 75 d3-NMePFOSA



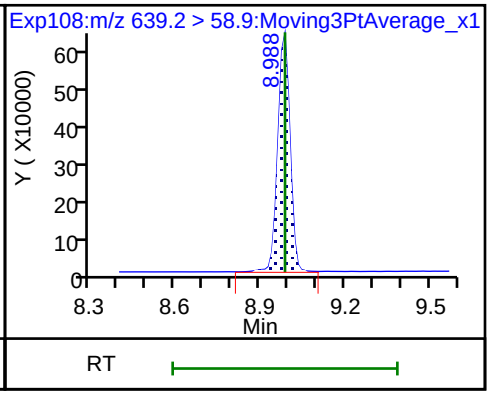
76 NMeFOSA



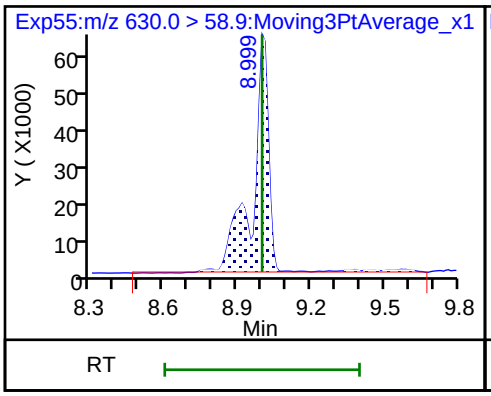
76 NMeFOSA



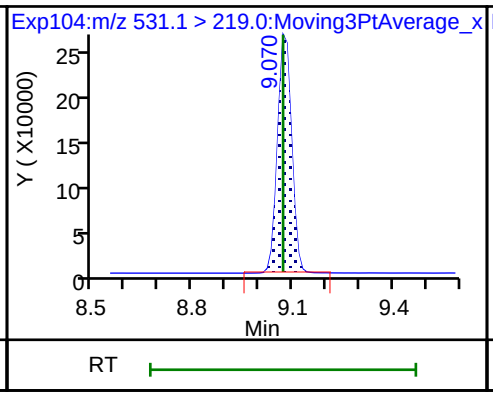
D 77 d9-N-EtFOSE



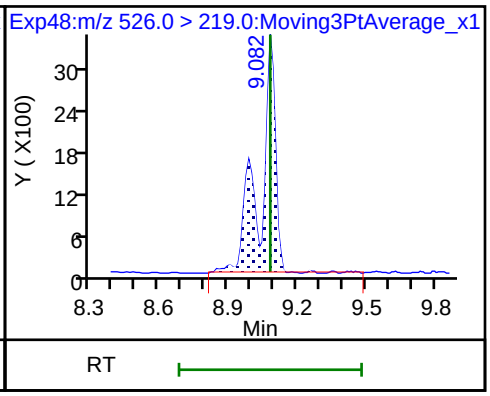
78 N-EtFOSE-M



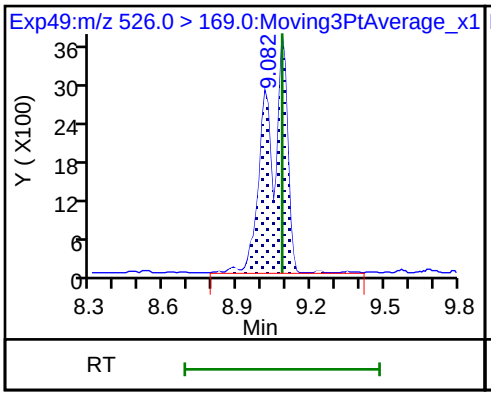
D 79 d5-NEtPFOSA



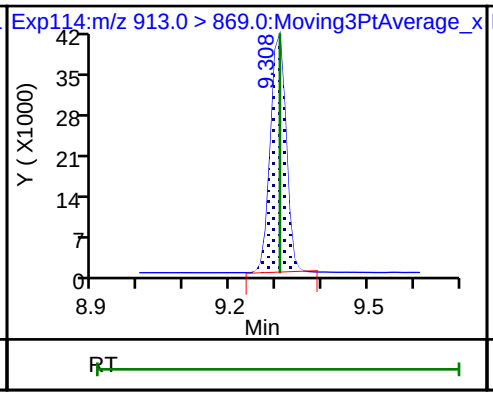
80 N-EtFOSA-M



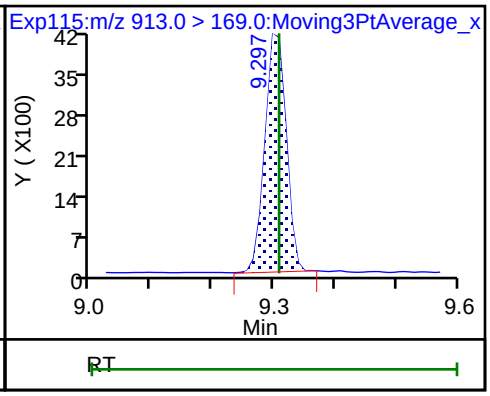
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/44 Calibration Date: 02/19/2026 18:01

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-35.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9309	0.8854		4.76	5.00	-5.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.0841	0.0759		1.81	2.00	-10.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.127	1.063		0.943	1.00	-6.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0403	0.0394		1.96	2.00	-2.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	0.8936	0.8419		0.942	1.00	-6.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.373	1.282		0.933	1.00	-7.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.735	1.725		1.87	1.88	-1.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.4216	0.4020		0.954	1.00	-5.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	1.050	0.9663		0.921	1.00	-8.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1207	0.1180		4.89	5.00	-2.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.000	0.9337		0.829	0.888	-7.0	30.0
Hexafluoropropylene oxide dimer acid (HFPO DA)	AveID	1.042	1.059		0.762	0.750	2.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.9299	0.9464		1.02	1.00	2.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	1.700	1.479		0.776	0.892	-13.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.118	1.031		0.922	1.00	-8.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.626	3.679		0.960	0.946	1.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.220	1.226		0.945	0.940	1.0	30.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	AveID	1.670	1.693		1.93	1.90	1.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	2.088	2.203		1.03	0.979	6.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.8915	0.8639		0.969	1.00	-3.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0705	0.0689		4.89	5.00	-2.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8883	0.8019		0.823	0.912	-10.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9059	0.8977		0.991	1.00	-1.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.365	1.324		1.86	1.92	-3.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	1.754	1.803		0.950	0.924	3.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.073	1.015		0.902	0.954	-5.0	30.0
Perfluorohexanesulfonamide (FHxSA)	AveID	1.591	1.722		1.08	1.00	8.0	30.0
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.136	1.036		0.912	1.00	-9.0	30.0

FORM VII 1633A

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/44 Calibration Date: 02/19/2026 18:01

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-35.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorodecanoic acid (PFDA)	AveID	0.997	0.9194		0.922	1.00	-8.0	30.0
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	1.141	1.055		0.925	1.00	-7.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.162	1.095		0.876	0.930	-6.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8931	0.8770		0.982	1.00	-2.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.102	1.922		0.854	0.934	-9.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8789	0.7654		0.838	0.962	-13.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	1.077	1.059		0.983	1.00	-2.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.114	0.9774		0.846	0.964	-12.0	30.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.8302	0.7736		0.932	1.00	-7.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.967	1.556		0.791	1.00	-21.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.837	1.721		0.885	0.944	-6.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.2163	0.1675		0.774	1.00	-23.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.033	0.9170		0.861	0.970	-11.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.232	2.156		4.83	5.00	-3.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9308	0.8762		0.941	1.00	-6.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.061	3.004		4.91	5.00	-2.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8421	0.7925		0.941	1.00	-6.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	2.806	1.456		0.519	1.00	-48.0*	30.0
13C3-PFPrA	Ave	0.9881	1.022		2.07	2.00	3.0	30.0
13C4 PFBA	Ave	1.165	1.120		1.92	2.00	-4.0	30.0
13C5 PFPeA	Ave	1.249	1.213		1.94	2.00	-3.0	30.0
M2-4:2 FTS	Ave	0.2232	0.2229		4.69	4.69	0.0	30.0
13C5 PFHxA	Ave	1.499	1.470		1.96	2.00	-2.0	30.0
13C3 PFBS	Ave	1.226	1.292		1.96	1.86	5.0	30.0
13C3 HFPO-DA	Ave	0.8482	0.7559		1.78	2.00	-11.0	30.0
13C4 PFHpA	Ave	1.382	1.361		1.97	2.00	-1.0	30.0
M2-6:2 FTS	Ave	0.1931	0.1929		4.76	4.76	0.0	30.0
13C8 PFOA	Ave	1.523	1.540		2.02	2.00	1.0	30.0
13C3 PFHxS	Ave	1.115	1.109		1.89	1.90	-1.0	30.0
13C9 PFNA	Ave	0.9835	0.9703		1.97	2.00	-1.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/44 Calibration Date: 02/19/2026 18:01

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-35.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2 FTS	Ave	0.1915	0.1840		4.61	4.80	-4.0	30.0
d3-NMeFOSAA	Ave	0.3332	0.3759		5.64	5.00	13.0	30.0
13C6 PFDA	Ave	1.116	1.079		1.93	2.00	-3.0	30.0
d5-NEtFOSAA	Ave	0.4196	0.4701		5.60	5.00	12.0	30.0
13C8 PFOS	Ave	1.388	1.448		2.00	1.92	4.0	30.0
13C7 PFUnA	Ave	1.115	1.045		1.88	2.00	-6.0	30.0
13C2 PFDoA	Ave	1.056	0.9769		1.85	2.00	-7.0	30.0
13C8 FOSA	Ave	1.389	1.586		2.28	2.00	14.0	30.0
13C2 PFTeDA	Ave	0.6332	0.7202		2.28	2.00	14.0	30.0
d7-N-MeFOSE-M	Ave	0.3547	0.3837		5.41	5.00	8.0	30.0
d3-NMePFOSA	Ave	0.3472	0.3927		2.26	2.00	13.0	30.0
d9-N-EtFOSE-M	Ave	0.4740	0.5081		5.36	5.00	7.0	30.0
d5-NEtPFOSA	Ave	0.4737	0.5354		2.26	2.00	13.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-35.d
Lims ID: CCV 5_CAL4
Client ID:
Sample Type: CCV
Inject. Date: 19-Feb-2026 18:01:20 ALS Bottle#: 5 Worklist Smp#: 44
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 5
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub3

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:19:32 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 21:18:30
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.983	1.983	0.0	0.485	2394361	2.07		103	1381	
2 Perfluoropropionic acid										
163.0 > 119.0	1.983	2.000	-0.017	1.000	5299788	4.76		95.1	1514	
D 3 13C4-PFBA										
216.8 > 171.9	4.080	4.087	-0.007	0.998	2622522	1.92		96.2	5442	
* 4 13C3PFBA										
216.0 > 172.0	4.087	4.087	0.0		2341714	2.00			8250	
5 PFBA										
212.8 > 168.9	4.094	4.094	0.0	1.004	199139	1.81		90.3	441	
6 PFMPA										
229.0 > 84.9	4.412	4.412	0.0	0.932	1483781	0.9433		94.3	4592	
7 3:3 FTCA										
241.0 > 177.0	4.422	4.422	0.0	0.934	109869	1.96	Target=1.04	97.8	1634	
241.0 > 117.0	4.422	4.422	0.0	0.934	102022		1.08(0.52-1.56)		494	
D 8 13C5 PFPeA										
268.0 > 223.0	4.735	4.747	-0.012	0.909	2790505	1.94		97.1	5929	
9 PFPA										
263.0 > 219.0	4.747	4.747	0.0	1.003	1174716	0.9422		94.2	1930	
10 PFMBA										
279.0 > 84.9	4.895	4.895	0.0	1.034	1788032	0.9331		93.3	5612	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.018	5.018	0.0	0.805	902746	4.69		99.9	3888	
12 4:2FTS										
327.1 > 307.0	5.028	5.028	0.0	1.002	622853	1.87	Target=1.64	99.4	6443	
327.1 > 80.9	5.028	5.028	0.0	1.002	367816		1.69(0.82-2.46)		3301	

Report Date: 19-Feb-2026 21:19:32 Chrom Revision: 2.3 16-Feb-2026 12:47:50
Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-35.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
14 NFDHA										
295.0 > 201.0	5.165	5.165	0.0	0.992	679922	0.9535	Target=1.37	95.4	3836	
295.0 > 84.9	5.165	5.165	0.0	0.992	487404		1.39(0.69-2.06)		3184	
D 15 13C5 PFHxA										
318.0 > 273.0	5.206	5.206	0.0	1.000	3382593	1.96		98.1	8074	
* 16 13C2 PFHxA										
315.1 > 270.0	5.206	5.206	0.0		5751960	5.00			8887	
17 PFHxA										
313.0 > 269.0	5.216	5.216	0.0	1.002	1634384	0.9206	Target=17.00	92.1	2391	
313.0 > 118.9	5.206	5.216	-0.010	1.000	99685		16.40(8.50-25.50)		599	
18 5:3 FTCA										
341.0 > 237.1	5.303	5.303	0.0	1.019	997813	4.89	Target=1.07	97.8	3903	
341.0 > 217.0	5.303	5.303	0.0	1.019	935432		1.07(0.53-1.60)		1065	
D 19 13C3 PFBS										
302.1 > 79.9	5.337	5.337	0.0	0.856	2078690	1.96		105	7257	
20 PFBS										
298.7 > 79.9	5.337	5.348	-0.011	1.000	924604	0.8292	Target=3.26	93.4	5373	
298.7 > 98.8	5.337	5.348	-0.011	1.000	267010		3.46(1.63-4.90)		1541	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.381	5.381	0.0	1.034	1739120	1.78		89.1	5969	
22 HFPO-DA										
284.9 > 168.9	5.393	5.393	0.0	1.002	690674	0.7620	Target=1.71	102	1909	
284.9 > 184.9	5.393	5.393	0.0	1.002	363962		1.90(0.86-2.57)		1387	
23 FBSA										
298.0 > 78.0	5.427	5.427	0.0	1.017	1055394	1.02		102	1274	
25 PFEESA										
314.8 > 134.9	5.574	5.574	0.0	1.071	2231313	0.7759	Target=9.87	87.0	7470	
314.8 > 82.9	5.574	5.574	0.0	1.071	219412		10.17(4.93-14.80)		1256	
D 27 13C4 PFHpA										
367.0 > 322.0	5.620	5.631	-0.011	1.079	3132016	1.97		98.5	8608	
28 PFHpA										
363.1 > 319.0	5.631	5.631	0.0	1.002	1614489	0.9225	Target=3.06	92.2	2668	
363.1 > 169.0	5.631	5.631	0.0	1.002	533251		3.03(1.53-4.59)		1811	
29 ADONA										
376.9 > 250.9	5.779	5.779	0.0	1.074	3026547	0.9598	Target=2.15	101	8252	
376.9 > 84.8	5.779	5.779	0.0	1.074	1350207		2.24(1.08-3.23)		4044	
30 PFPeS										
349.0 > 79.9	5.814	5.814	0.0	0.933	1103100	0.9448	Target=3.62	101	6023	
349.0 > 98.8	5.814	5.814	0.0	0.933	296049		3.73(1.81-5.42)		1617	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.825	5.825	0.0	0.935	792833	4.75		99.9	2922	
32 6:2FTS										
427.1 > 407.0	5.825	5.825	0.0	1.000	536817	1.93	Target=1.50	101	1428	
427.1 > 80.9	5.825	5.825	0.0	1.000	354490		1.51(0.75-2.25)		1101	
33 BTS										
280.0 > 147.0	5.963	5.974	-0.011	0.957	2064459	1.03		106	6352	
D 34 13C8 PFOA										
421.0 > 376.0	6.020	6.020	0.0	1.000	3579183	2.02		101	5422	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.020	6.020	0.0		5811383	5.00			6941	
36 PFOA										
413.0 > 369.0	6.032	6.032	0.0	1.002	1545963	0.9690	Target=2.55	96.9	1081	
413.0 > 169.0	6.032	6.032	0.0	1.002	608939		2.54(1.27-3.82)		900	
37 7:3 FTCA										
441.0 > 316.9	6.114	6.114	0.0	1.174	582796	4.89	Target=0.54	97.8	949	
441.0 > 336.9	6.114	6.114	0.0	1.174	1071653		0.54(0.27-0.81)		2213	
D 38 13C3 PFHxS										
402.0 > 79.9	6.233	6.233	0.0	1.000	1814717	1.89		99.5	4616	
* 39 18O2 PFHxS										
403.0 > 83.9	6.233	6.233	0.0		1636987	1.90			4116	
40 PFHxS										
398.7 > 79.9	6.243	6.243	0.0	1.002	699997	0.8233	Target=4.54	90.3	2821	
398.7 > 98.8	6.233	6.243	-0.010	1.000	161968		4.32(2.27-6.81)		821	
D 41 13C9 PFNA										
472.0 > 427.0	6.401	6.413	-0.012	0.998	3281030	1.97		98.7	4855	
* 42 13C5 PFNA										
468.0 > 423.0	6.413	6.413	0.0		3381505	2.00			7545	
43 PFNA										
463.0 > 419.0	6.413	6.424	-0.011	1.002	1472646	0.99	Target=2.78	99.1	2976	
463.0 > 219.0	6.413	6.424	-0.011	1.002	515275		2.86(1.39-4.17)		1183	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.577	6.588	-0.011	1.055	762604	4.61		96.1	2963	
45 8:2FTS										
527.1 > 507.0	6.588	6.588	0.0	1.002	403866	1.86	Target=1.45	97.0	1528	
527.1 > 80.9	6.588	6.588	0.0	1.002	281174		1.44(0.73-2.18)		1226	
46 PFECHS										
461.0 > 381.0	6.600	6.611	-0.011	1.059	1594684	0.9502	Target=1.67	103	6127	
461.0 > 99.0	6.600	6.611	-0.011	1.059	1004066		1.59(0.84-2.51)		1916	
47 PFHpS										
449.0 > 79.9	6.643	6.654	-0.011	0.943	983926	0.9022	Target=4.71	94.6	2135	
449.0 > 98.8	6.643	6.654	-0.011	0.943	208627		4.72(2.36-7.07)		1338	
48 FHxSA										
398.0 > 78.0	6.709	6.709	0.0	1.076	1648002	1.08		108	2437	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.741	6.741	0.0	0.957	1319539	5.64		113	2516	
50 NMeFOSAA										
570.0 > 419.0	6.741	6.751	-0.010	1.000	273370	0.9120	Target=1.26	91.2	3558	
570.0 > 483.0	6.741	6.751	-0.010	1.000	223917		1.22(0.63-1.89)		2600	
D 51 13C6 PFDA										
519.0 > 474.0	6.793	6.804	-0.011	1.000	3435713	1.93		96.7	6257	
* 52 13C2 PFDA										
515.1 > 470.1	6.793	6.804	-0.011		3183611	2.00			4572	
53 PFDA										
512.9 > 469.0	6.804	6.804	0.0	1.002	1579327	0.9222	Target=6.81	92.2	3001	
512.9 > 219.0	6.804	6.804	0.0	1.002	250781		6.30(3.40-10.21)		793	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.910	6.921	-0.011	0.981	1649888	5.60		112	2199	
55 NEtFOSAA										
584.0 > 419.0	6.921	6.921	0.0	1.002	348198	0.9252	Target=1.64	92.5	83499	
584.0 > 526.0	6.921	6.921	0.0	1.002	214338		1.62(0.82-2.45)		3348	
D 56 13C8 PFOS										
507.0 > 79.9	7.042	7.053	-0.011	1.000	1947309	2.00		104	1237	
* 57 13C4 PFOS										
502.8 > 79.9	7.042	7.053	-0.011		1345034	1.92			3957	
58 PFOS										
498.9 > 79.9	7.042	7.053	-0.011	1.000	1035111	0.8764	Target=5.55	94.2	2056	
498.9 > 98.8	7.042	7.053	-0.011	1.000	189636		5.46(2.77-8.32)		884	
D 59 13C7 PFUnA										
570.0 > 525.0	7.184	7.195	-0.011	1.058	3328409	1.87		93.7	8754	
60 PFUnA										
563.1 > 519.0	7.194	7.205	-0.011	1.001	1459509	0.9820	Target=5.71	98.2	4864	
563.1 > 269.1	7.194	7.205	-0.011	1.001	265838		5.49(2.85-8.56)		1678	
61 9ClFOS										
530.8 > 351.0	7.353	7.367	-0.014	1.044	1824635	0.8541	Target=3.10	91.4	7574	
532.8 > 353.0	7.353	7.367	-0.014	1.044	604577		3.02(1.55-4.65)		2814	
62 PFNS										
548.8 > 79.9	7.443	7.455	-0.013	1.057	748373	0.8378	Target=4.40	87.1	4453	
548.8 > 98.8	7.443	7.455	-0.013	1.057	166157		4.50(2.20-6.60)		1496	
D 63 13C2 PFDoA										
615.0 > 570.0	7.581	7.603	-0.022	1.116	3110126	1.85		92.5	3776	
64 PFDoA										
613.0 > 569.0	7.592	7.603	-0.011	1.001	1646946	0.9834	Target=6.25	98.3	5957	
613.0 > 319.0	7.592	7.603	-0.011	1.001	263335		6.25(3.12-9.37)		1468	
D 65 13C8 FOSA										
506.1 > 77.8	7.841	7.842	-0.001	1.113	2226181	2.28		114	4017	
66 PFOSA										
498.1 > 77.9	7.841	7.842	-0.001	1.000	861101	0.9319	Target=44.01	93.2	2573	
498.1 > 478.0	7.841	7.842	-0.001	1.000	18270		47.13(22.00-66.01)		143	
67 PFDS										
599.0 > 79.9	7.831	7.853	-0.022	1.112	957639	0.8461	Target=4.97	87.8	5333	
599.0 > 98.8	7.831	7.853	-0.022	1.112	195343		4.90(2.49-7.46)		2224	
68 PFTrDA										
663.0 > 619.0	7.984	8.007	-0.023	0.956	1783610	0.7909	Target=7.34	79.1	8219	
663.0 > 168.9	7.984	8.007	-0.023	0.956	235714		7.57(3.67-11.01)		1921	
69 11ClFOS										
630.9 > 450.9	8.139	8.150	-0.011	1.156	1651373	0.8846	Target=3.07	93.7	6582	
632.9 > 452.9	8.139	8.150	-0.011	1.156	533265		3.10(1.54-4.61)		4365	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.353	8.382	-0.029	1.230	2292944	2.27		114	2819	
71 PFTeDA										
713.1 > 168.9	8.367	8.397	-0.030	1.002	191989	0.7742	Target=1.18	77.4	1994	
713.1 > 219.0	8.367	8.397	-0.030	1.002	155817		1.23(0.59-1.77)		832	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.573	8.599	-0.026	1.217	903997	0.8611	Target=5.61	88.8	2995	
699.1 > 98.8	8.573	8.599	-0.026	1.217	168533		5.36(2.81-8.42)		2165	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.748	8.749	-0.001	1.242	1346835	5.41		108	601	
74 N-MeFOSE-M										
616.1 > 58.9	8.760	8.761	-0.001	1.001	2904131	4.83		96.6	1094	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.857	8.858	-0.001	1.258	551405	2.26		113	2191	
76 NMeFOSA										
511.9 > 219.0	8.869	8.870	-0.001	1.001	241575	0.9414	Target=0.75	94.1	1161	
511.9 > 169.0	8.869	8.870	-0.001	1.001	320214		0.75(0.38-1.13)		1029	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.987	8.988	-0.001	1.276	1783492	5.36		107	664	
78 N-EtFOSE-M										
630.0 > 58.9	9.010	8.999	0.011	1.003	5357746	4.91		98.1	1841	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.081	9.070	0.011	1.289	751771	2.26		113	2153	
80 N-EtFOSA-M										
526.0 > 219.0	9.093	9.082	0.011	1.001	297887	0.9411	Target=0.82	94.1	1404	
526.0 > 169.0	9.081	9.082	-0.001	1.000	355677		0.84(0.41-1.23)		956	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.275	9.308	-0.033	1.110	1669450	0.5190	Target=9.64	51.9	20927	
913.0 > 169.0	9.275	9.308	-0.033	1.110	175007		9.54(4.82-14.45)		4740	

QC Flag Legend

Processing Flags

Reagents:

1633_125_CAL4_00082 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 21:19:32 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-35.d

Injection Date: 19-Feb-2026 18:01:20 Instrument ID: 30637

Lims ID: CCV 5_CAL4

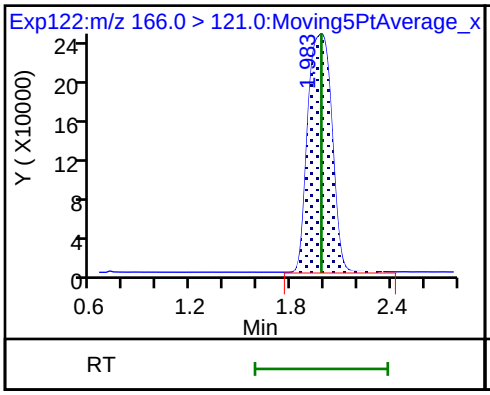
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 5 Worklist Smp#: 44

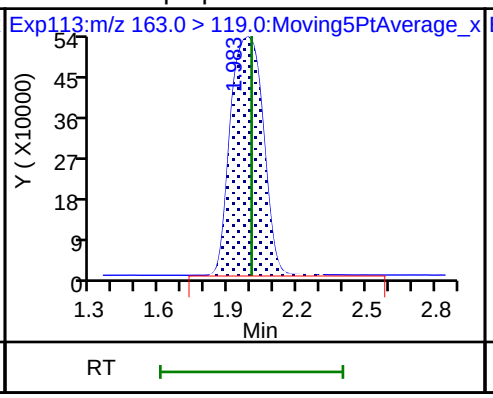
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

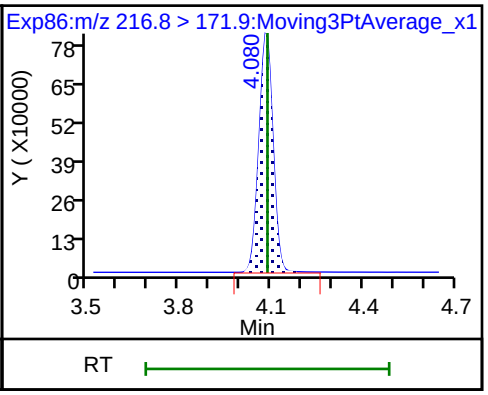
D 1 13C3PFPrA



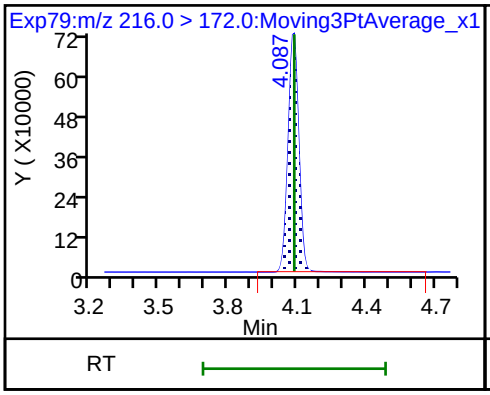
2 Perfluoropropionic acid



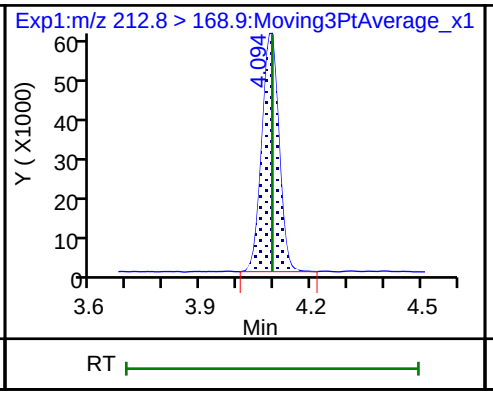
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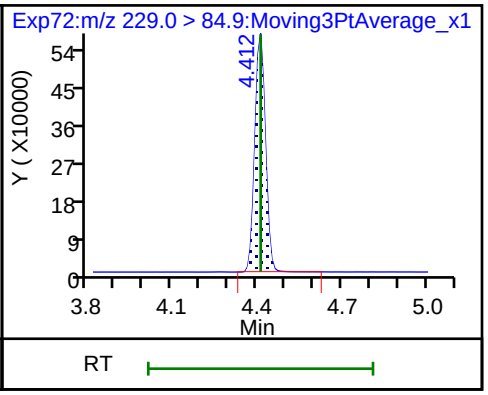
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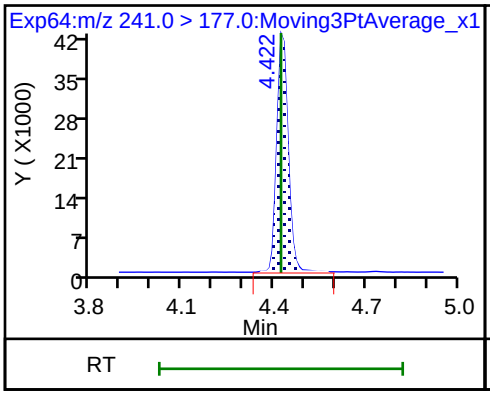
5 PFBA



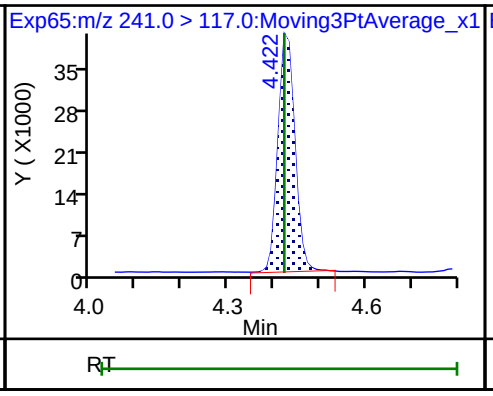
6 PFMPA



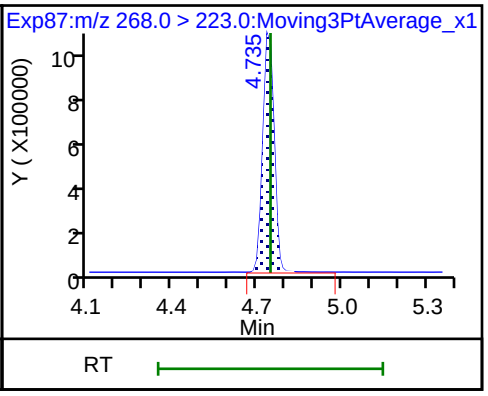
7 3:3 FTCA



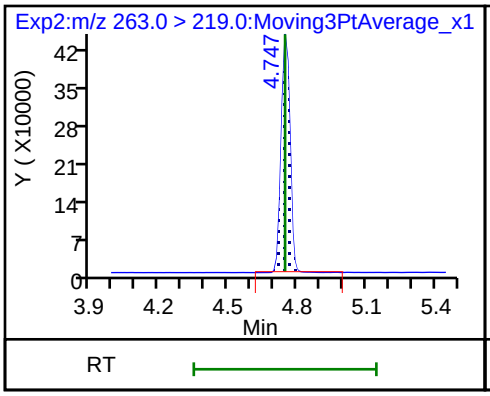
7 3:3 FTCA



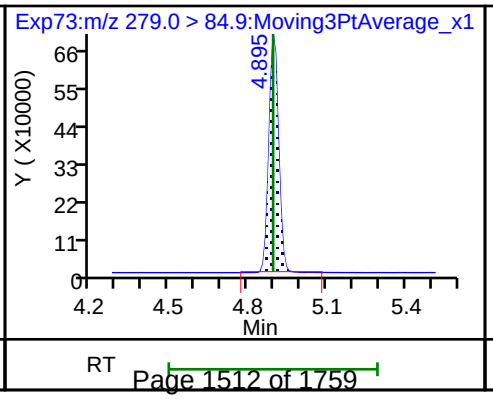
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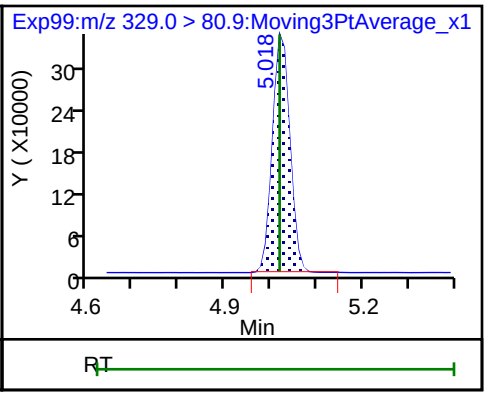
9 PFPA



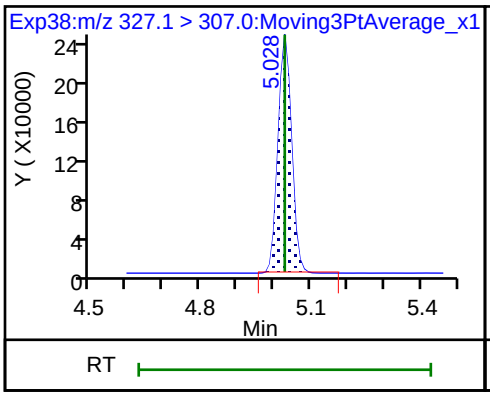
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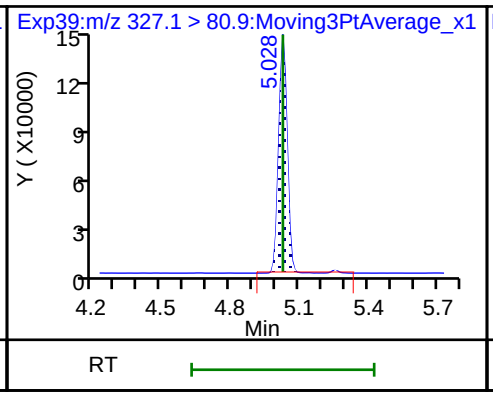
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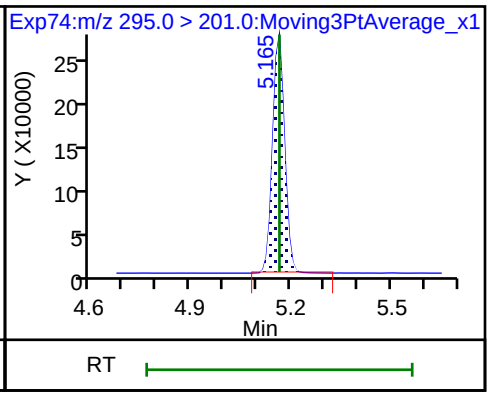
12 4:2FTS



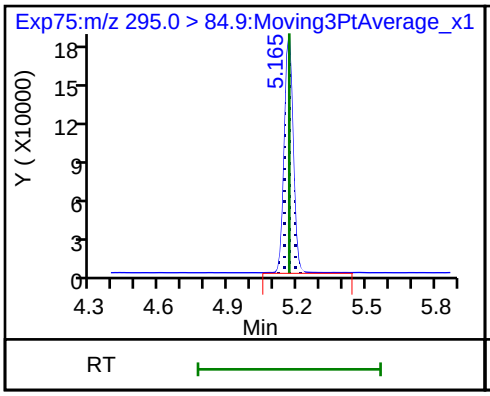
12 4:2FTS



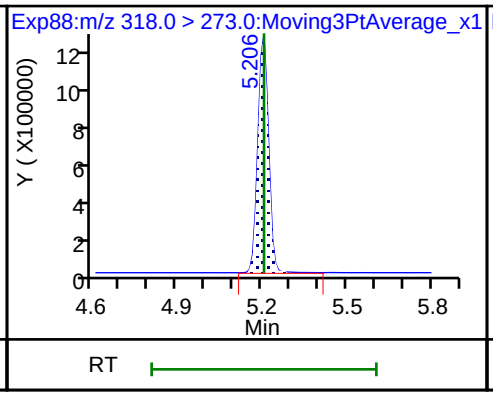
14 NFDHA



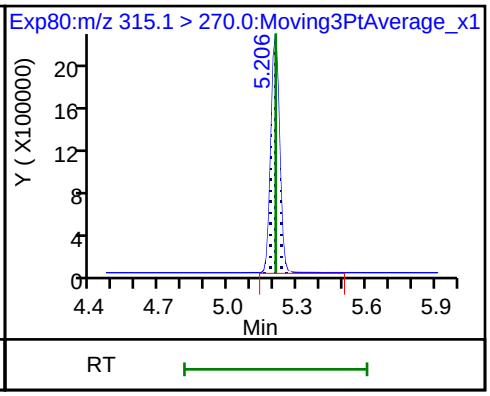
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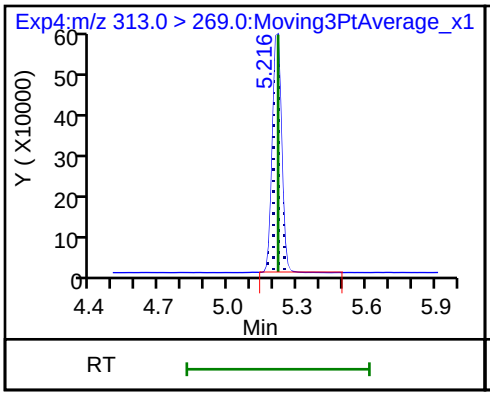
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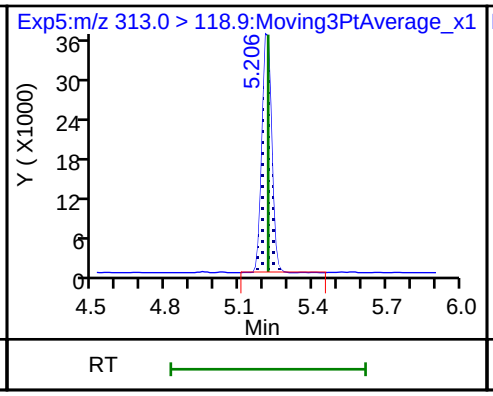
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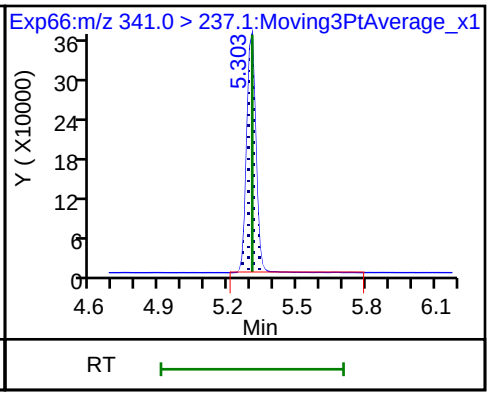
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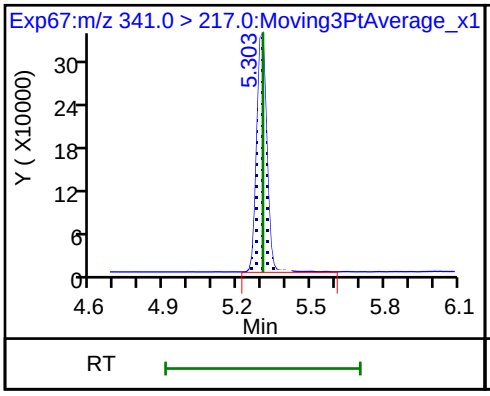
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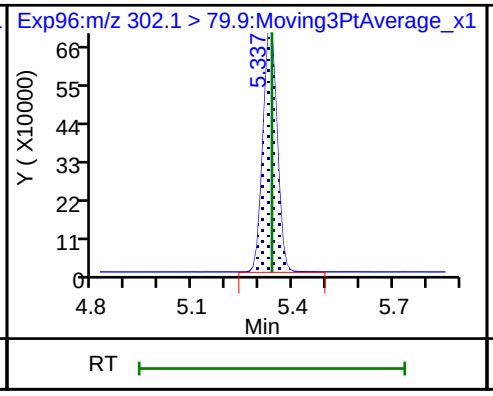
18 5:3 FTCA



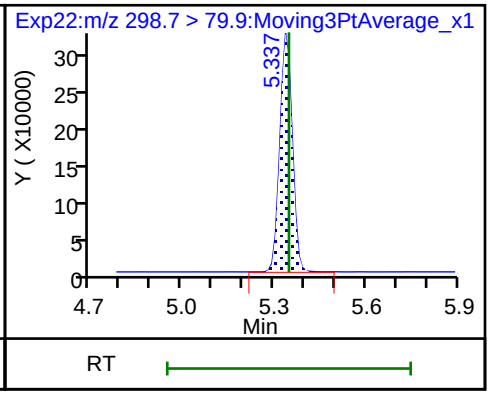
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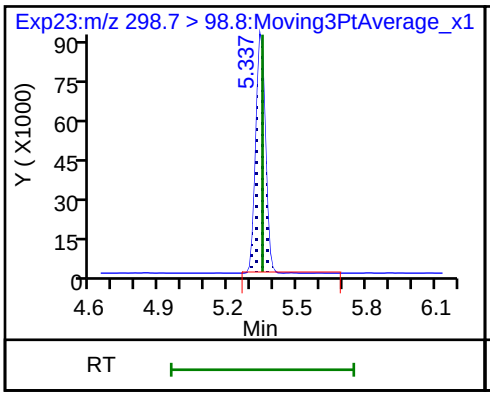
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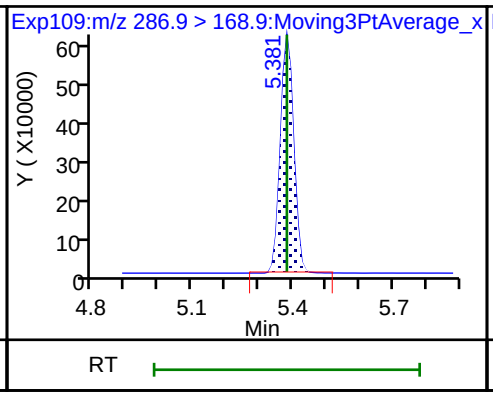
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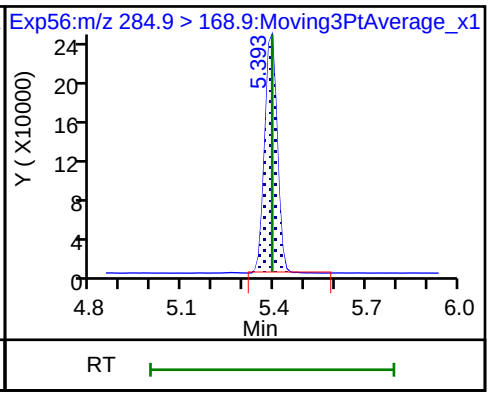
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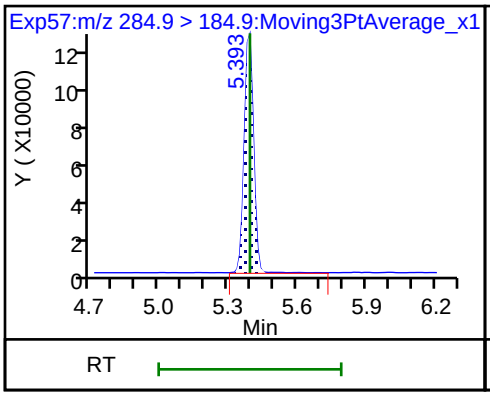
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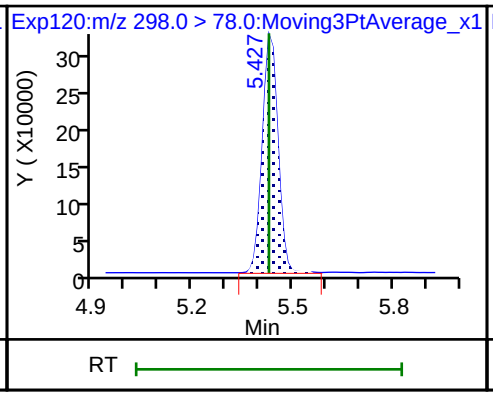
22 HFPO-DA



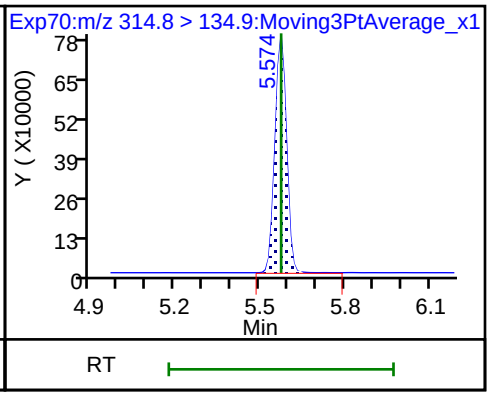
22 HFPO-DA



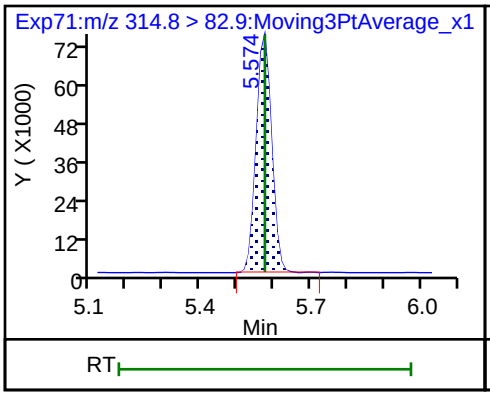
23 FBSA



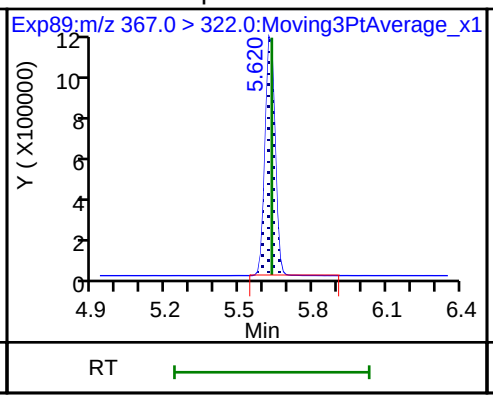
25 PFEESA



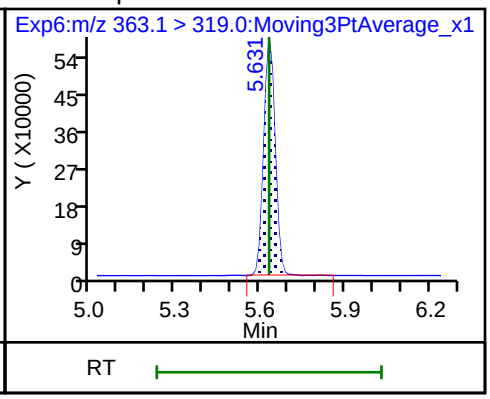
25 PFEESA



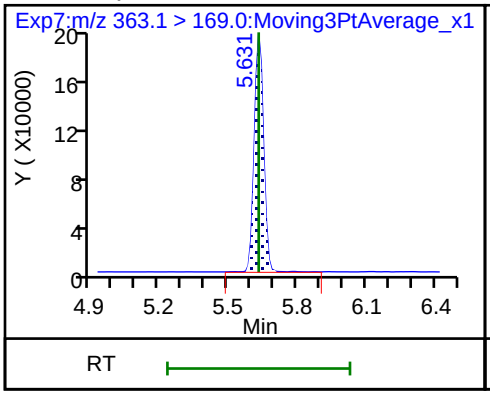
D 27 13C4 PFHpA



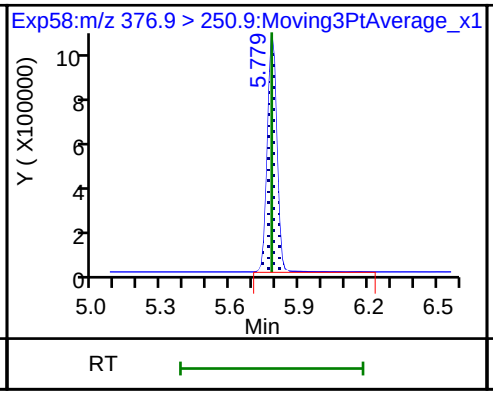
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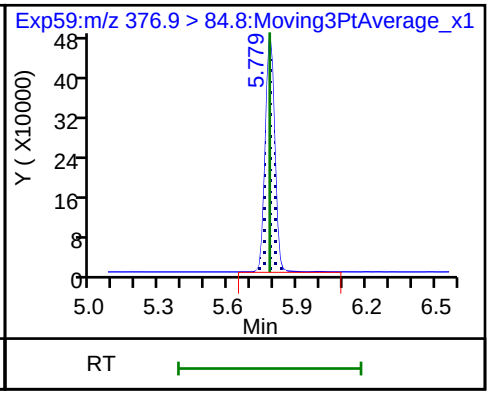
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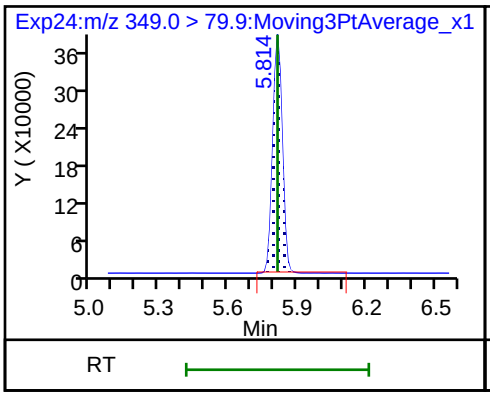
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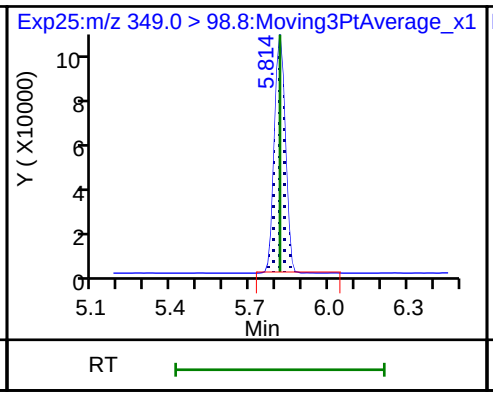
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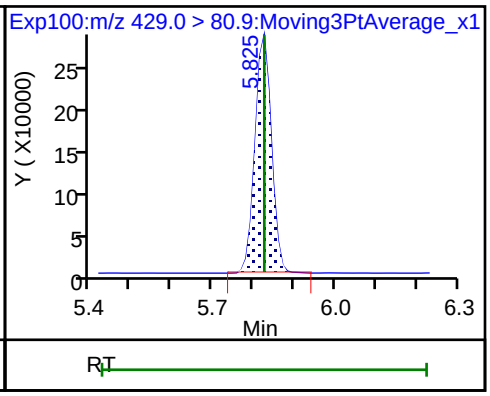
30 PFPeS



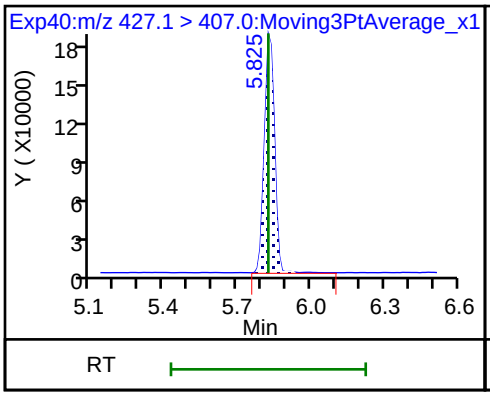
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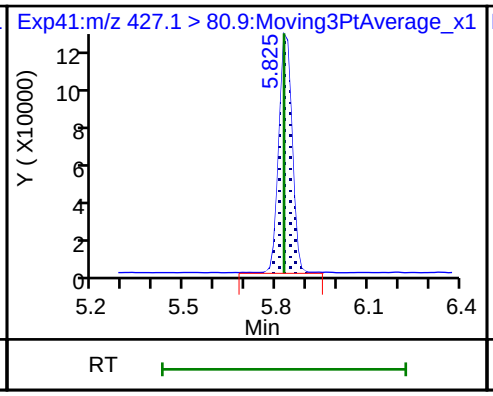
D 31 13C2-6:2FTS



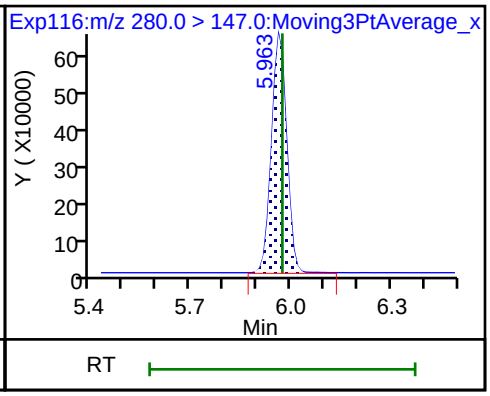
32 6:2FTS



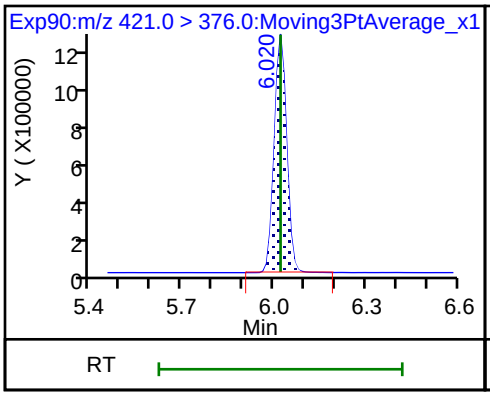
32 6:2FTS



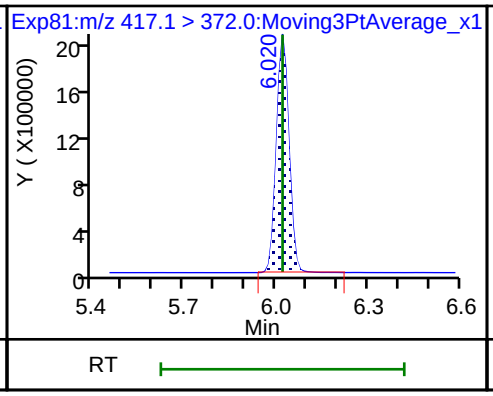
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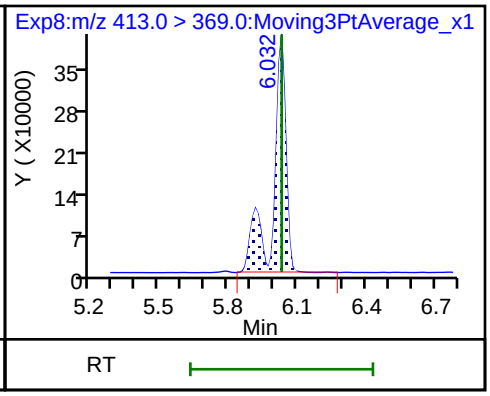
D 34 13C8 PFOA



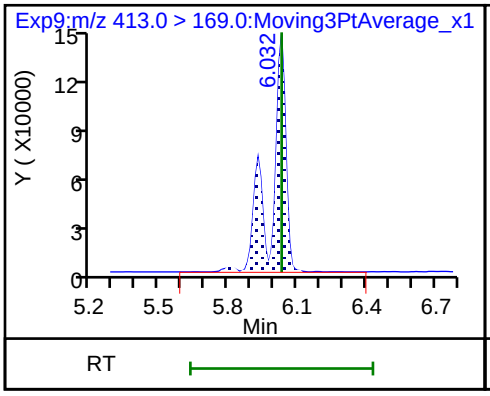
* 35 13C4 PFOA



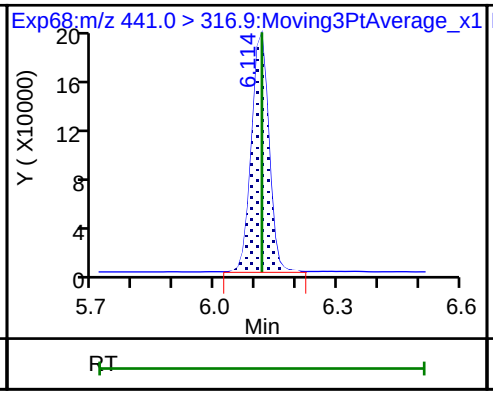
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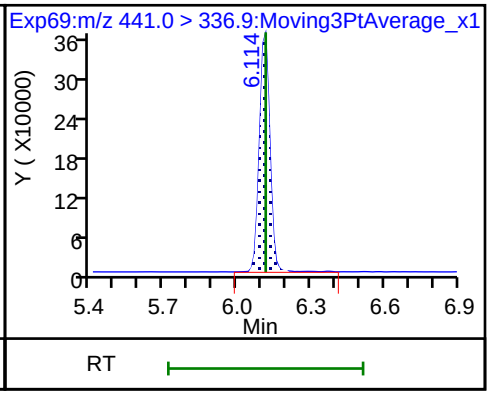
36 PFOA



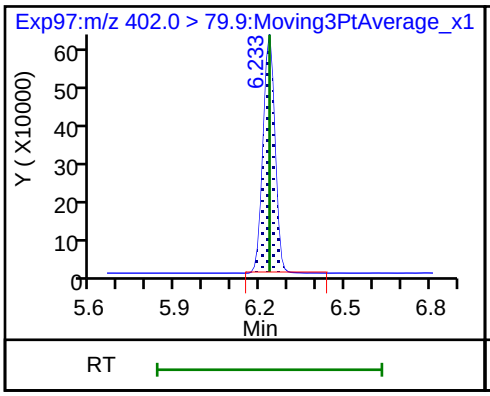
37 7:3 FTCA



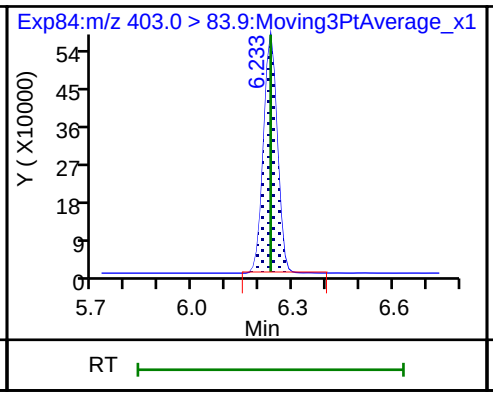
37 7:3 FTCA



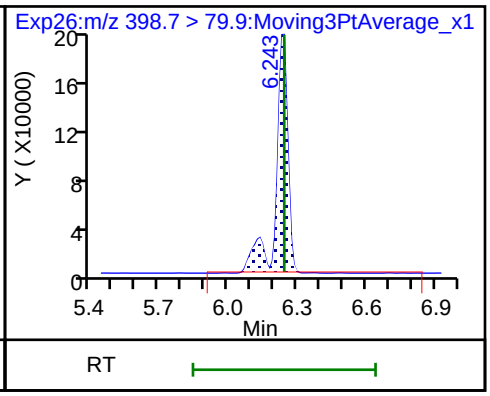
D 38 13C3 PFHxS



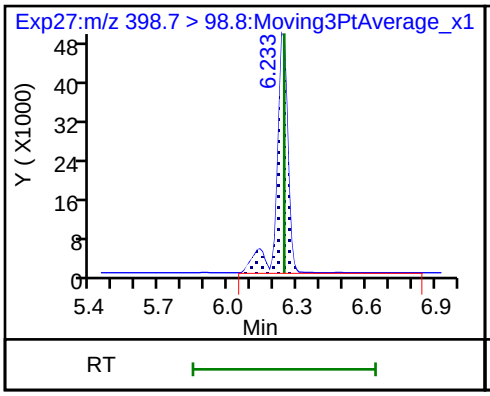
* 39 18O2 PFHxS



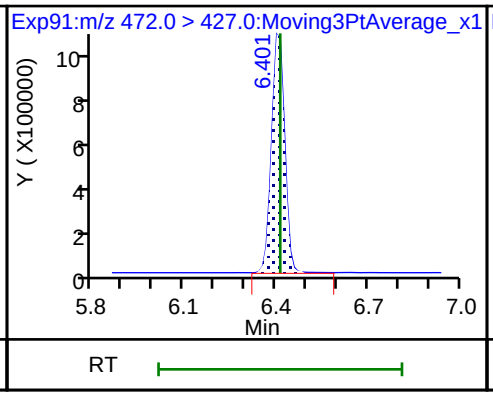
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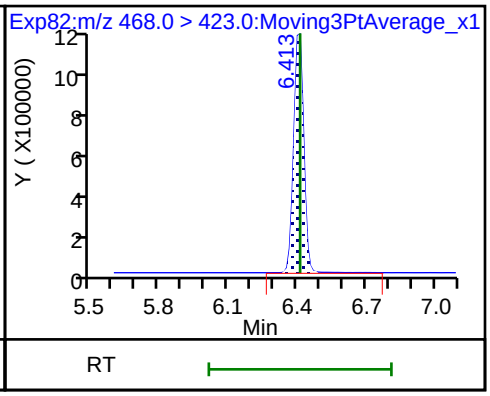
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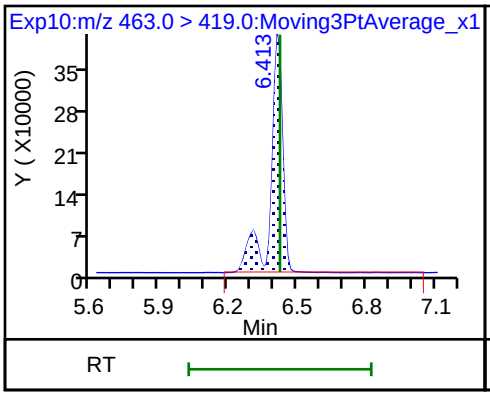
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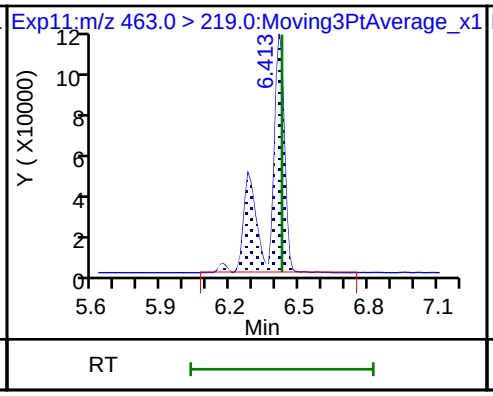
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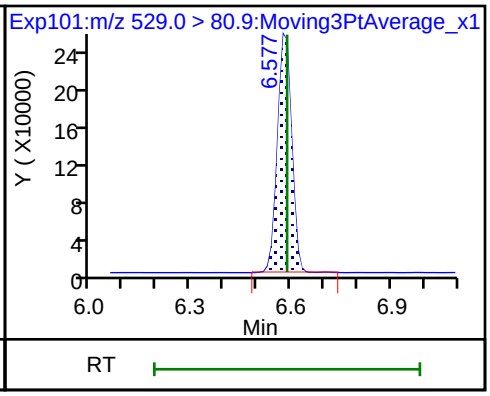
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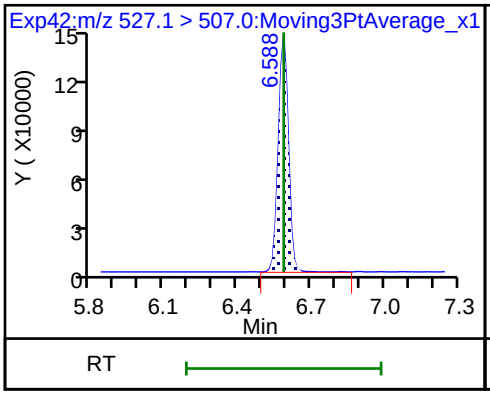
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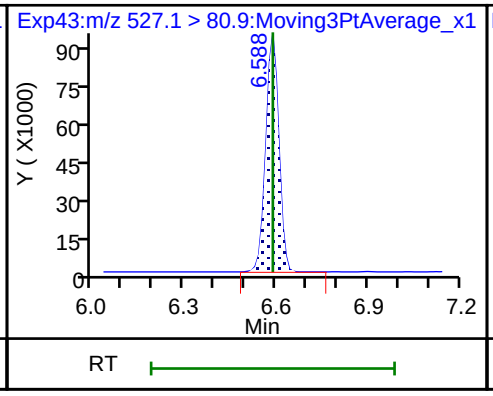
D 44 13C2-8:2FTS



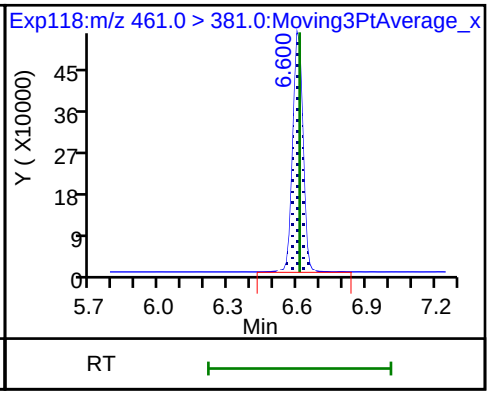
45 8:2FTS



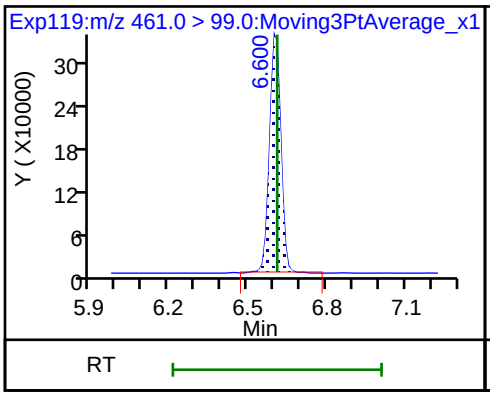
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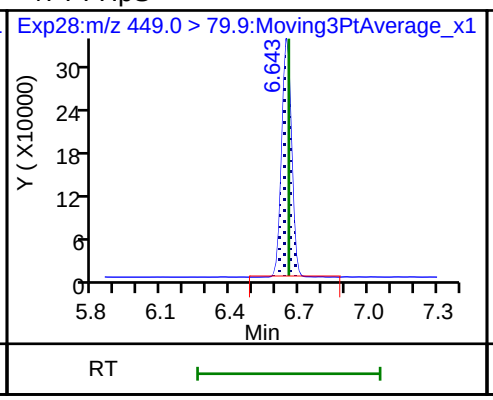
46 PFECHS



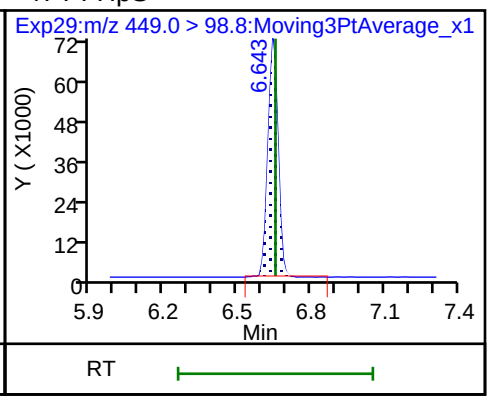
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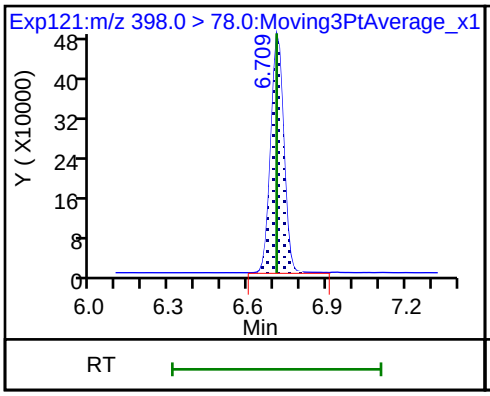
47 PFHpS



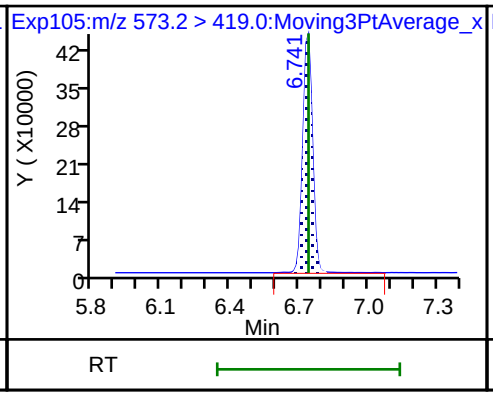
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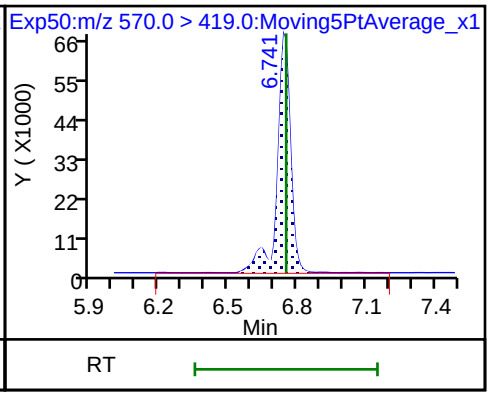
48 FHxSA



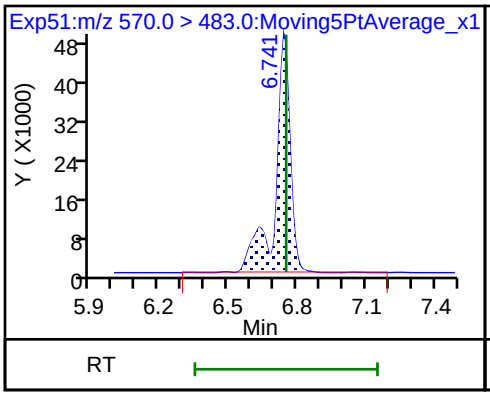
D 49 d3-NMeFOSAA



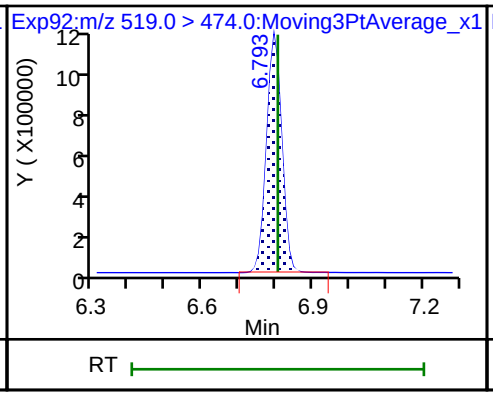
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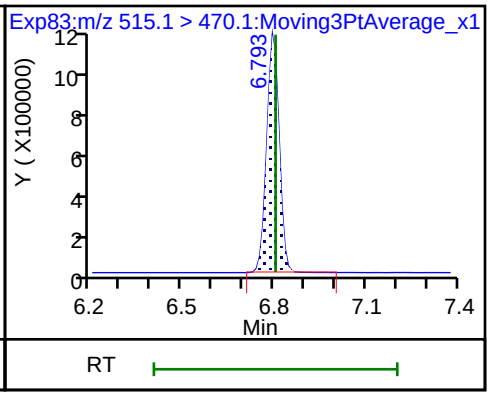
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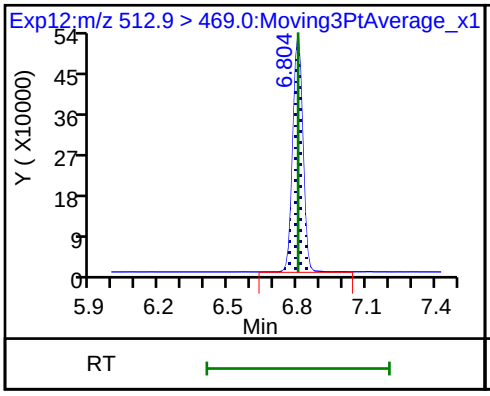
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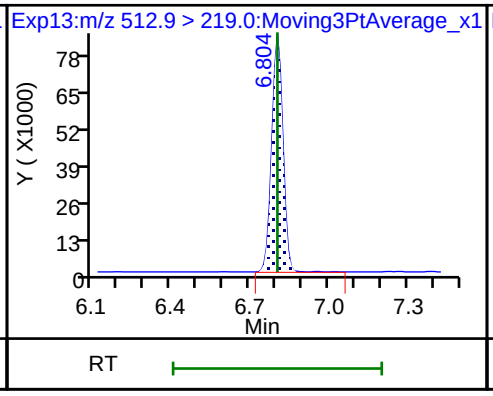
* 52 13C2 PFDA



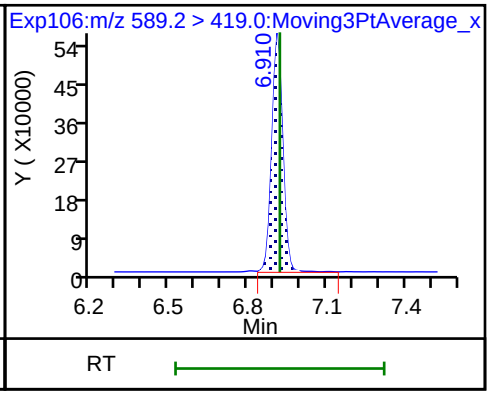
53 PFDA



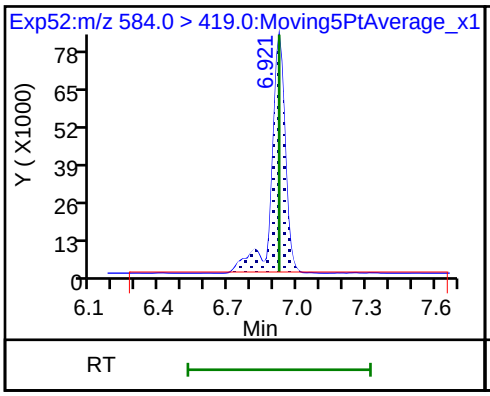
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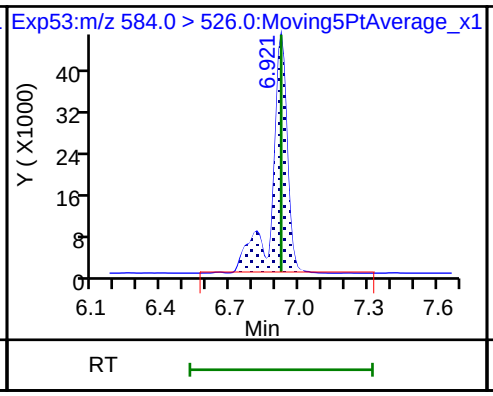
D 54 d5-NEtFOSAA



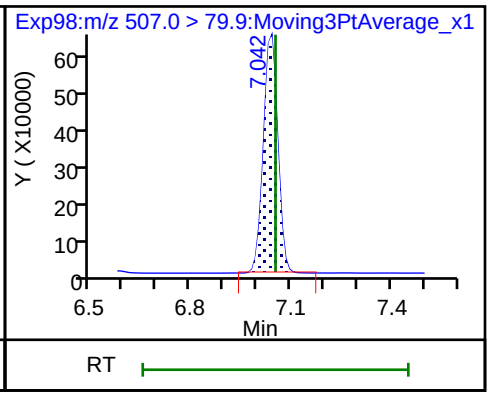
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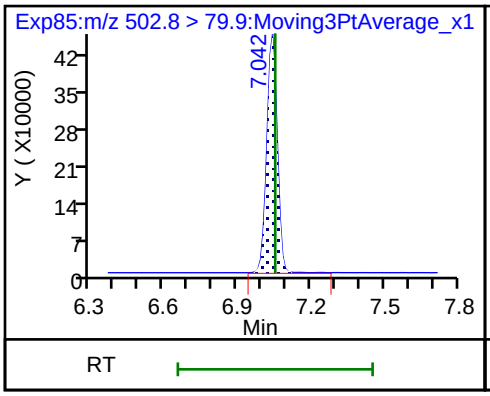
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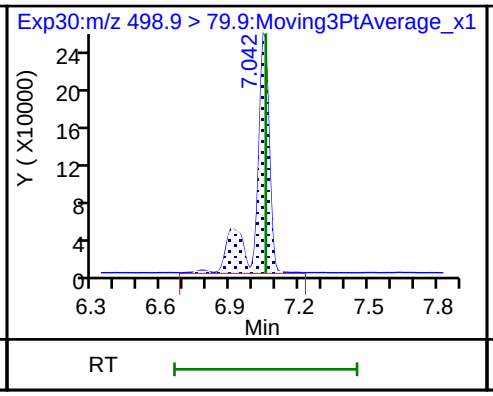
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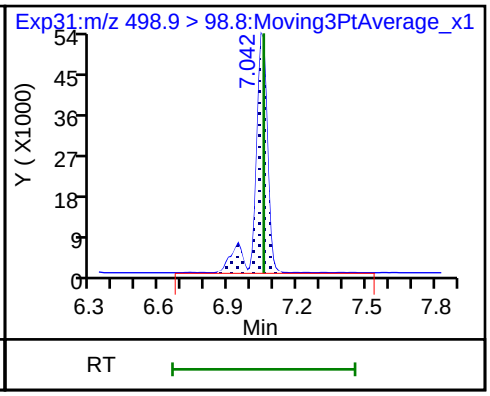
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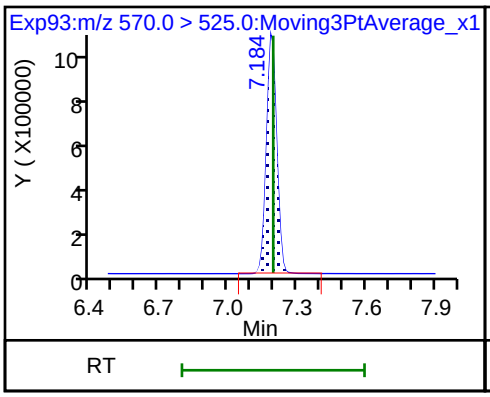
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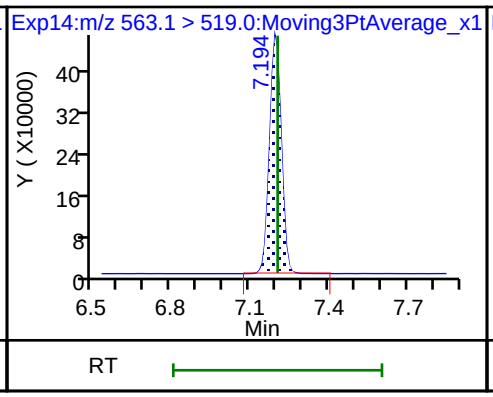
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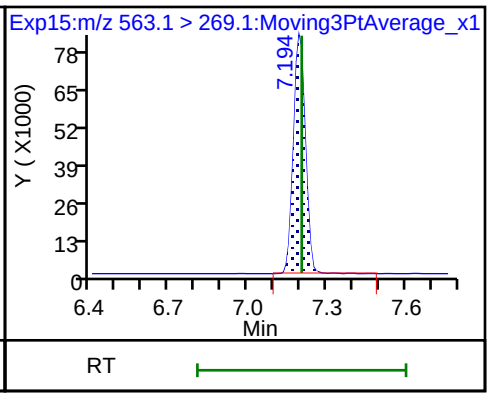
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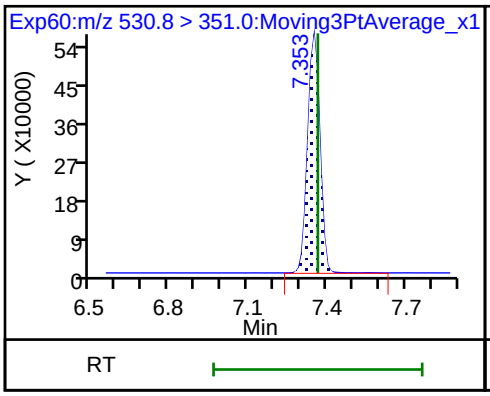
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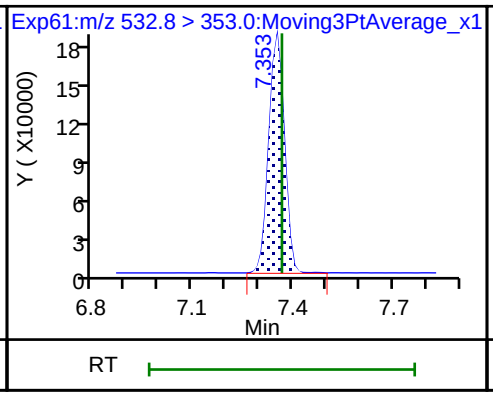
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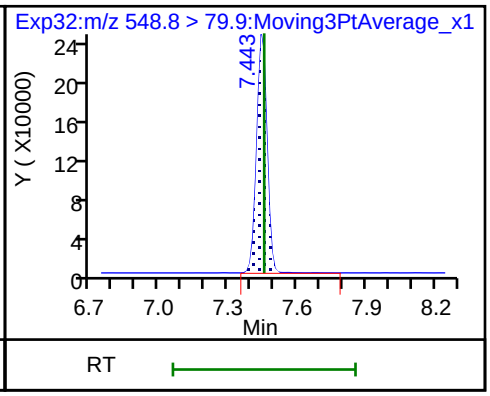
61 9ClFOS



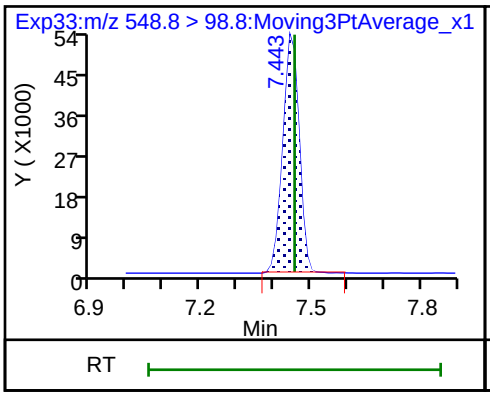
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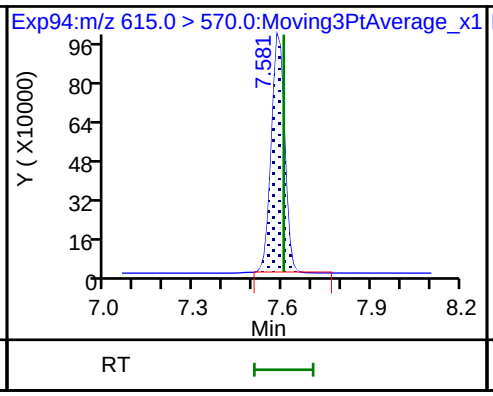
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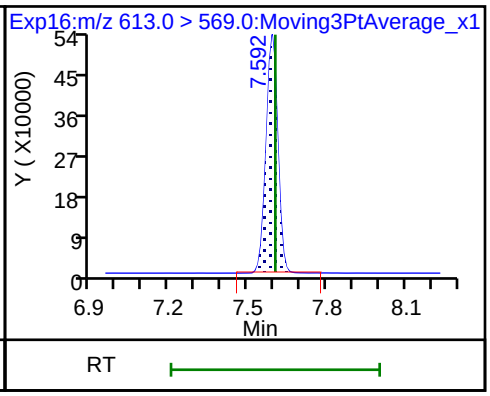
62 PFNS



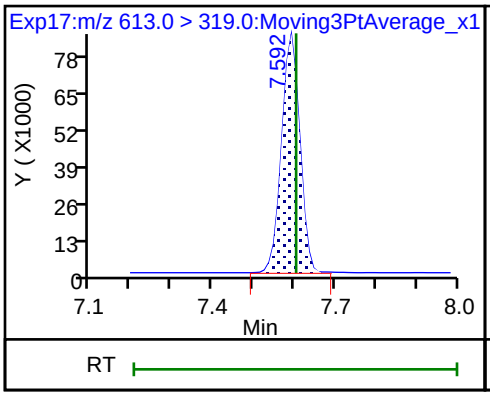
D 63 13C2 PFDoA



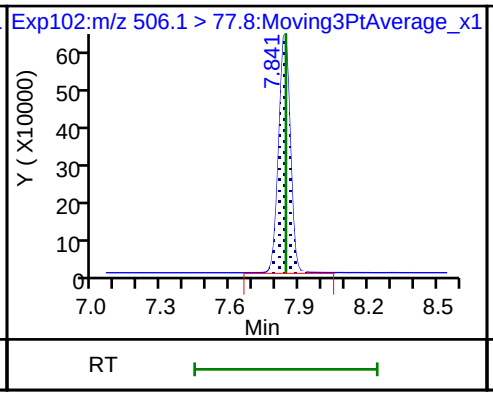
64 PFDoA



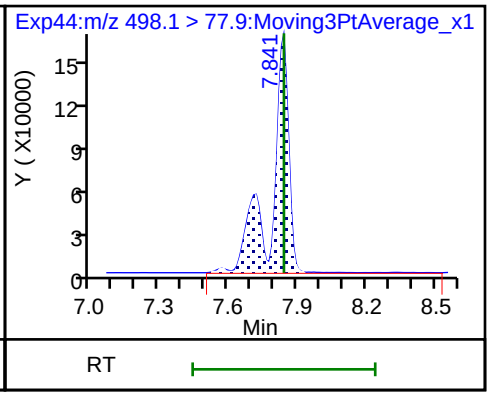
64 PFDoA



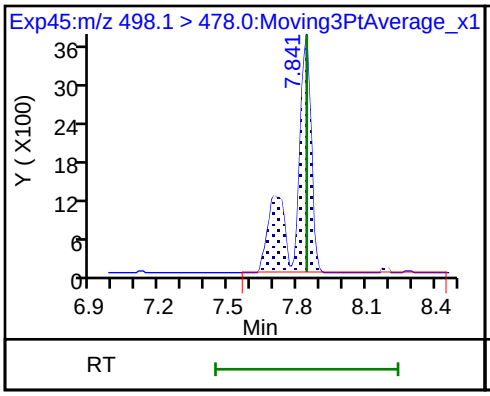
D 65 13C8 FOSA



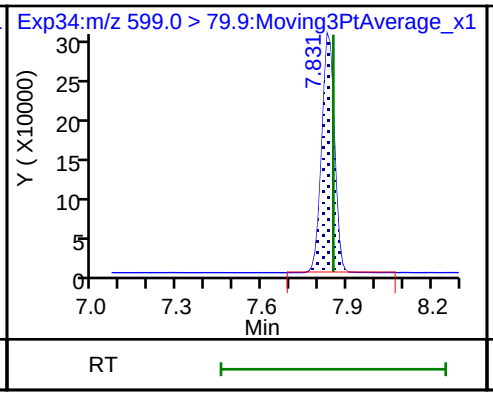
66 PFOSA



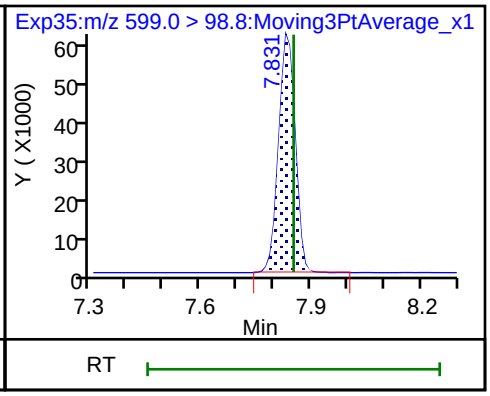
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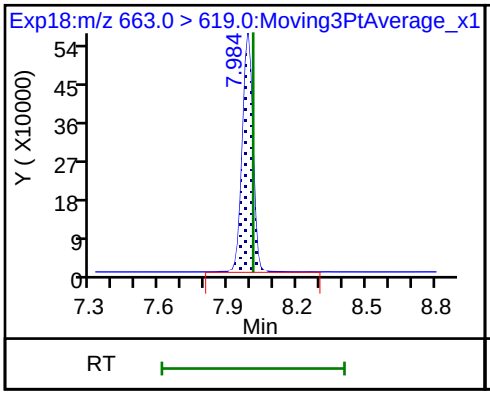
67 PFDS



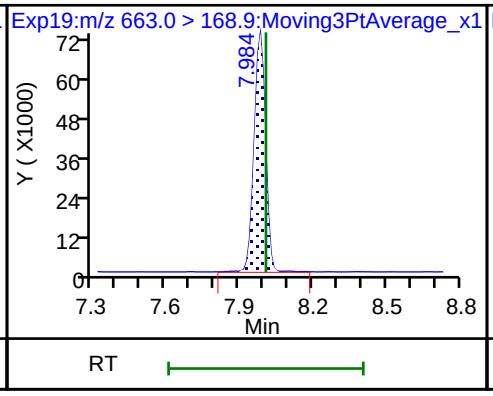
67 PFDS



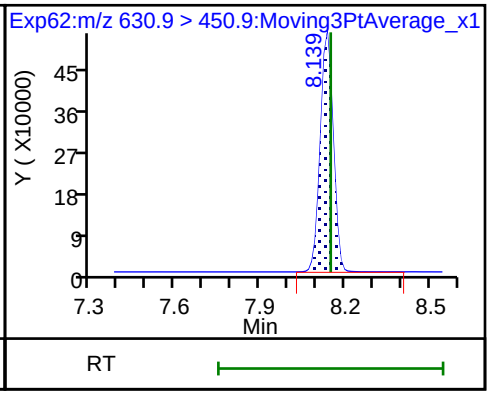
68 PFTrDA



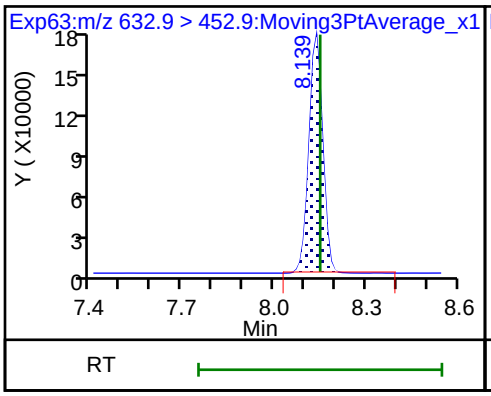
68 PFTrDA



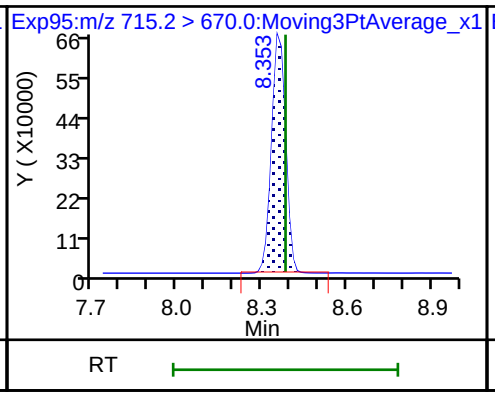
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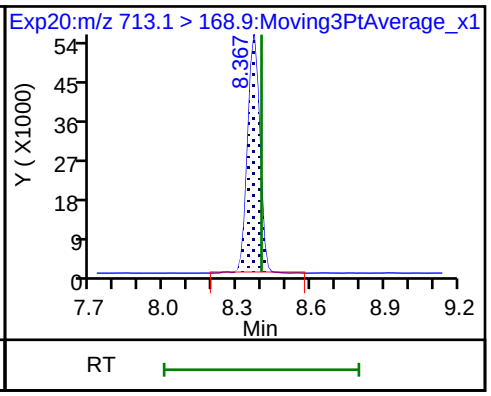
69 11ClFOS



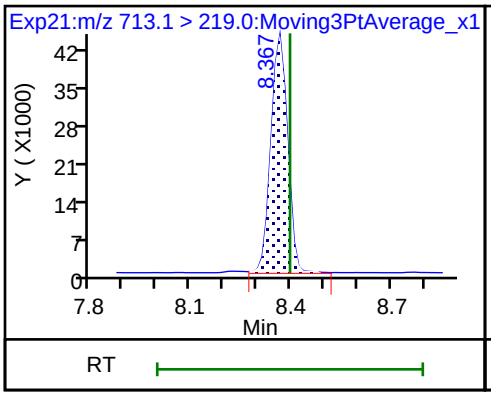
D 70 13C2 PFTeDA



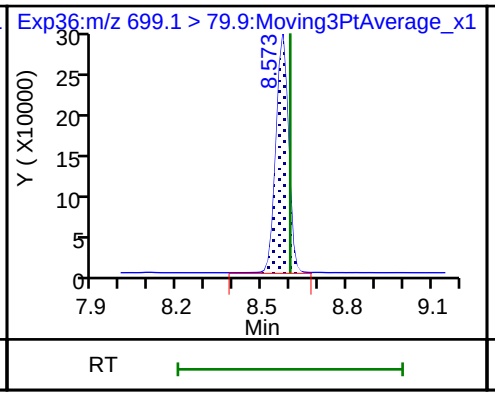
71 PFTeDA



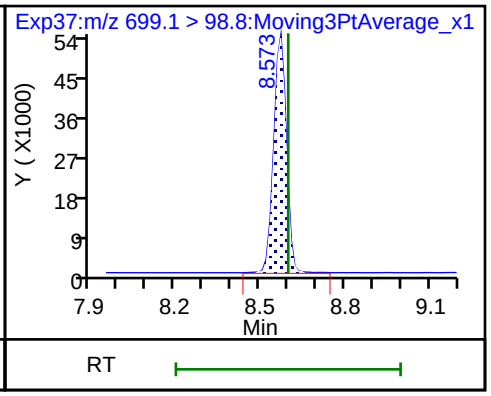
71 PFTeDA



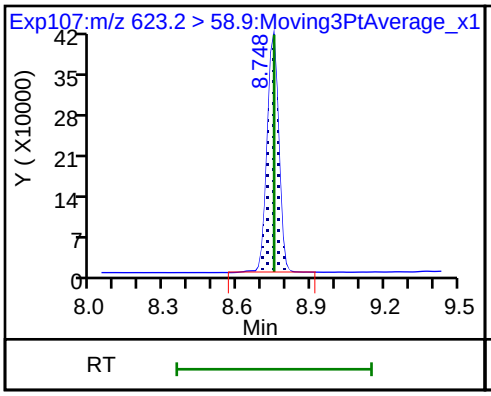
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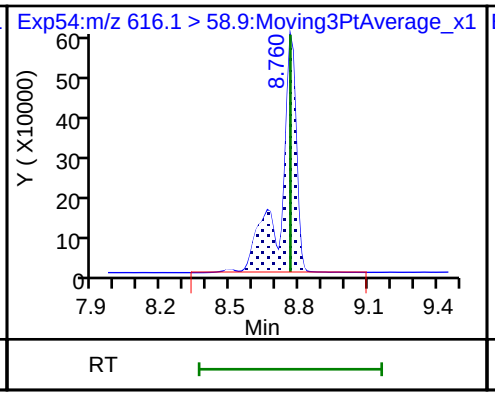
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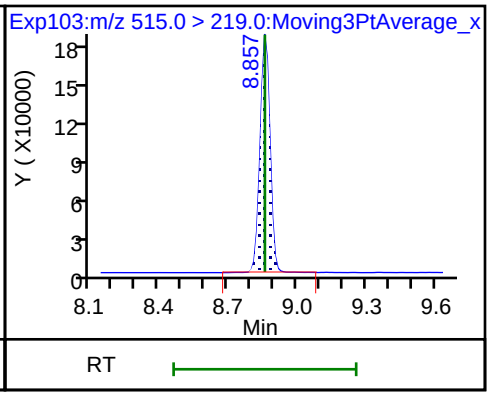
D 73 d7-N-Me-FOSE



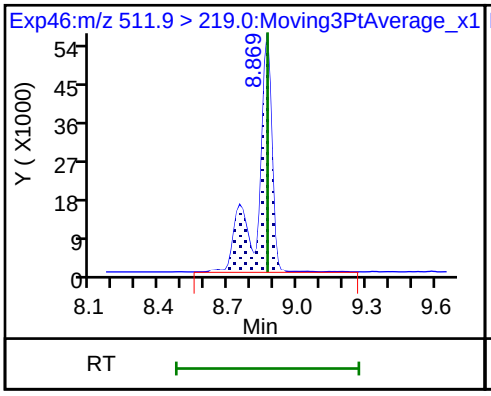
74 N-MeFOSE-M



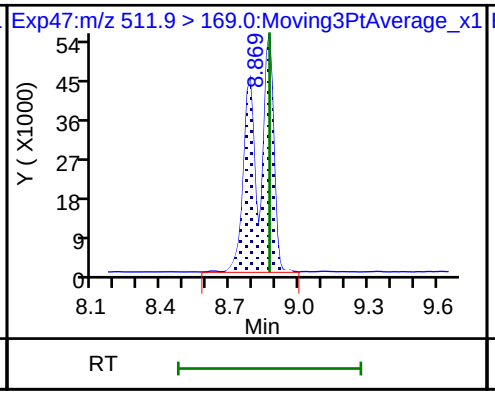
D 75 d3-NMePFOSA



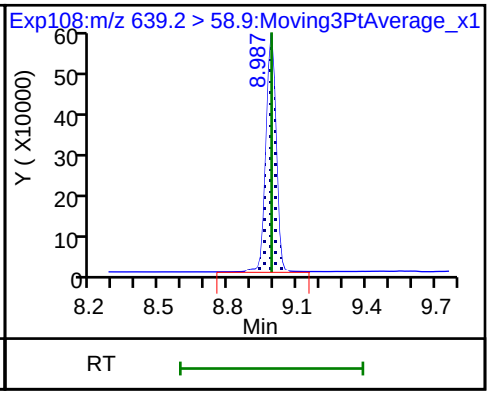
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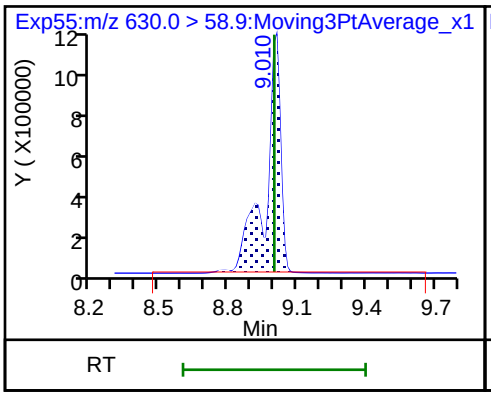
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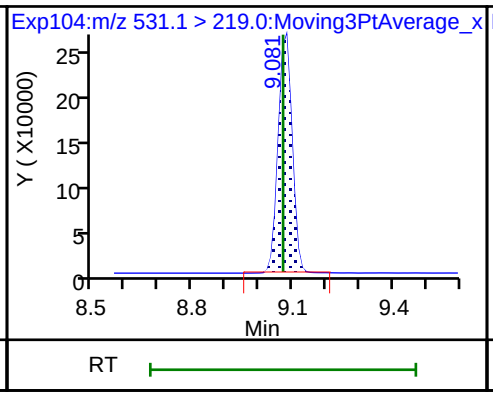
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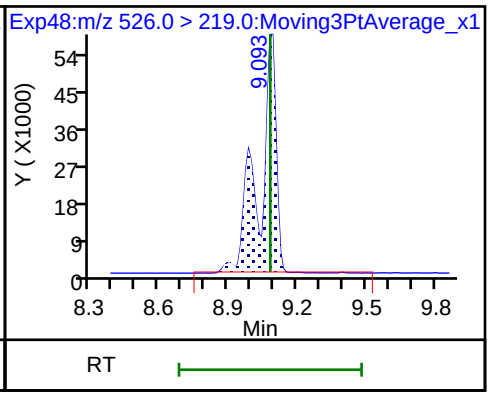
78 N-EtFOSE-M



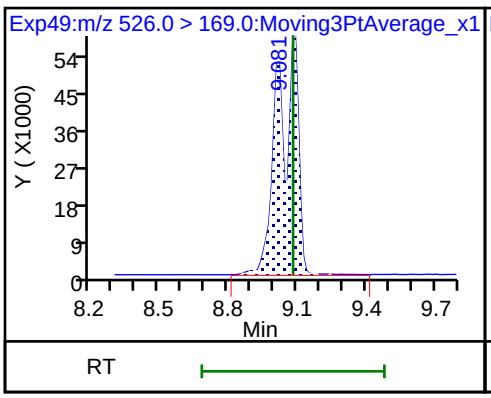
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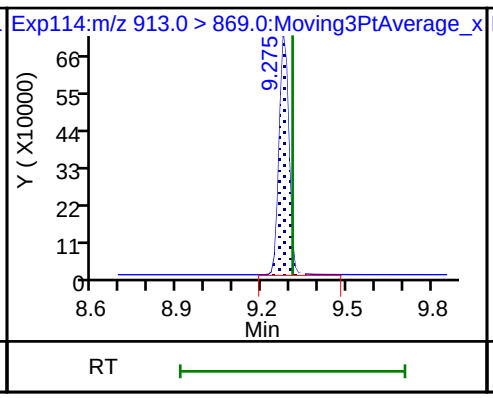
80 N-EtFOSA-M



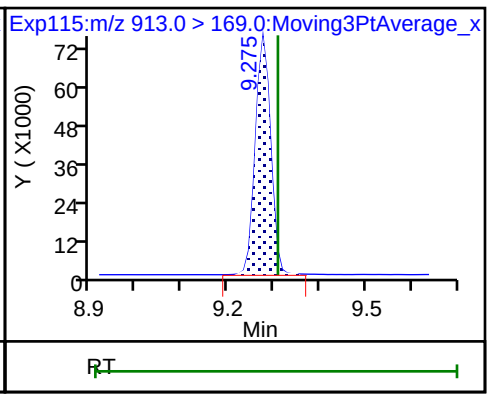
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/45 Calibration Date: 02/19/2026 21:24

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-47.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoropropionic acid (PFPrA)	AveID	0.9309	0.8894		4.78	5.00	-4.0	30.0
Perfluorobutanoic acid (PFBA)	AveID	0.0841	0.0748		1.78	2.00	-11.0	30.0
Perfluoro-3-methoxypropanoic acid (PFMPA)	AveID	1.127	1.043		0.925	1.00	-7.0	30.0
3-Perfluoropropylpropanoic acid (3:3 FTCA)	AveID	0.0403	0.0380		1.89	2.00	-6.0	30.0
Perfluoropentanoic acid (PFPeA)	AveID	0.8936	0.7845		0.878	1.00	-12.0	30.0
Perfluoro-4-methoxybutanoic acid (PFMBA)	AveID	1.373	1.261		0.918	1.00	-8.0	30.0
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	AveID	1.735	1.766		1.91	1.88	2.0	30.0
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	AveID	0.4216	0.4023		0.954	1.00	-5.0	30.0
Perfluorohexanoic acid (PFHxA)	AveID	1.050	1.043		0.994	1.00	-1.0	30.0
3-Perfluoropentylpropanoic acid (5:3 FTCA)	AveID	0.1207	0.1235		5.12	5.00	2.0	30.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.000	0.9370		0.832	0.888	-6.0	30.0
Hexafluoropropylene oxide dimer acid (HFPO DA)	AveID	1.042	0.9676		0.696	0.750	-7.0	30.0
Perfluorobutanesulfonamide (FBSA)	AveID	0.9299	0.9350		1.01	1.00	1.0	30.0
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	AveID	1.700	1.475		0.774	0.892	-13.0	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.118	1.114		0.997	1.00	0.0	30.0
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	AveID	3.626	3.572		0.932	0.946	-1.0	30.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	1.220	1.199		0.924	0.940	-2.0	30.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	AveID	1.670	1.735		1.98	1.90	4.0	30.0
Bis(trifluoromethane)sulfonamide (TFSI)	AveID	2.088	2.075		0.973	0.979	-1.0	30.0
Perfluorooctanoic acid (PFOA)	AveID	0.8915	0.8656		0.971	1.00	-3.0	30.0
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	AveID	0.0705	0.0723		5.13	5.00	3.0	30.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	0.8883	0.7626		0.783	0.912	-14.0	30.0
Perfluorononanoic acid (PFNA)	AveID	0.9059	0.8360		0.923	1.00	-8.0	30.0
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	AveID	1.365	1.483		2.09	1.92	9.0	30.0
Perfluoro-4-ethylcyclohexane sulfonic acid (PFECHS)	AveID	1.754	1.799		0.948	0.924	3.0	30.0
Perfluoroheptanesulfonic acid (PFHpS)	AveID	1.073	0.9698		0.862	0.954	-10.0	30.0
Perfluorohexanesulfonamide (FHxSA)	AveID	1.591	1.703		1.07	1.00	7.0	30.0
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	1.136	1.036		0.912	1.00	-9.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/45 Calibration Date: 02/19/2026 21:24

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-47.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorodecanoic acid (PFDA)	AveID	0.997	0.9789		0.982	1.00	-2.0	30.0
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	1.141	1.034		0.906	1.00	-9.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.162	1.058		0.846	0.930	-9.0	30.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8931	0.8949		1.00	1.00	0.0	30.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	AveID	2.102	1.921		0.854	0.934	-9.0	30.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.8789	0.7360		0.806	0.962	-16.0	30.0
Perfluorododecanoic acid (PFDoA)	AveID	1.077	1.056		0.980	1.00	-2.0	30.0
Perfluorodecanesulfonic acid (PFDS)	AveID	1.114	0.9446		0.818	0.964	-15.0	30.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.8302	0.7529		0.907	1.00	-9.0	30.0
Perfluorotridecanoic acid (PFTrDA)	AveID	1.967	1.585		0.806	1.00	-19.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	AveID	1.837	1.705		0.876	0.944	-7.0	30.0
Perfluorotetradecanoic acid (PFTeDA)	AveID	0.2163	0.1740		0.805	1.00	-20.0	30.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	1.033	0.9076		0.852	0.970	-12.0	30.0
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	AveID	2.232	2.191		4.91	5.00	-2.0	30.0
N-methylperfluorooctane sulfonamide (NMeFOSA)	AveID	0.9308	0.8686		0.933	1.00	-7.0	30.0
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	AveID	3.061	3.060		5.00	5.00	0.0	30.0
N-ethylperfluorooctane sulfonamide (NEtFOSA)	AveID	0.8421	0.7634		0.907	1.00	-9.0	30.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	2.806	1.357		0.484	1.00	-52.0*	30.0
13C3-PFPrA	Ave	0.9881	1.047		2.12	2.00	6.0	30.0
13C4 PFBA	Ave	1.165	1.132		1.94	2.00	-3.0	30.0
13C5 PFPeA	Ave	1.249	1.285		2.06	2.00	3.0	30.0
M2-4:2 FTS	Ave	0.2232	0.2263		4.76	4.69	1.0	30.0
13C5 PFHxA	Ave	1.499	1.456		1.94	2.00	-3.0	30.0
13C3 PFBS	Ave	1.226	1.284		1.95	1.86	5.0	30.0
13C3 HFPO-DA	Ave	0.8482	0.7992		1.88	2.00	-6.0	30.0
13C4 PFHpA	Ave	1.382	1.408		2.04	2.00	2.0	30.0
M2-6:2 FTS	Ave	0.1931	0.1892		4.66	4.76	-2.0	30.0
13C8 PFOA	Ave	1.523	1.583		2.08	2.00	4.0	30.0
13C3 PFHxS	Ave	1.115	1.141		1.94	1.90	2.0	30.0
13C9 PFNA	Ave	0.9835	1.025		2.08	2.00	4.0	30.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Lab Sample ID: CCV 410-771230/45 Calibration Date: 02/19/2026 21:24

Instrument ID: 30637 Calib Start Date: 02/04/2026 12:31

GC Column: Gemini C18 50mm ID: 3.00(mm) Calib End Date: 02/04/2026 14:06

Lab File ID: 26FEB19E-47.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2 FTS	Ave	0.1915	0.1766		4.43	4.80	-8.0	30.0
d3-NMeFOSAA	Ave	0.3332	0.3759		5.64	5.00	13.0	30.0
13C6 PFDA	Ave	1.116	1.072		1.92	2.00	-4.0	30.0
d5-NEtFOSAA	Ave	0.4196	0.4799		5.72	5.00	14.0	30.0
13C8 PFOS	Ave	1.388	1.428		1.97	1.92	3.0	30.0
13C7 PFUnA	Ave	1.115	1.033		1.85	2.00	-7.0	30.0
13C2 PFDoA	Ave	1.056	1.004		1.90	2.00	-5.0	30.0
13C8 FOSA	Ave	1.389	1.555		2.24	2.00	12.0	30.0
13C2 PFTeDA	Ave	0.6332	0.6970		2.20	2.00	10.0	30.0
d7-N-MeFOSE-M	Ave	0.3547	0.3710		5.23	5.00	5.0	30.0
d3-NMePFOSA	Ave	0.3472	0.3783		2.18	2.00	9.0	30.0
d9-N-EtFOSE-M	Ave	0.4740	0.4930		5.20	5.00	4.0	30.0
d5-NEtPFOSA	Ave	0.4737	0.5262		2.22	2.00	11.0	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-47.d
Lims ID: CCV 6_CAL4
Client ID:
Sample Type: CCV
Inject. Date: 19-Feb-2026 21:24:22 ALS Bottle#: 5 Worklist Smp#: 45
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 5
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637
Sublist: chrom-30637_1633Final*sub3

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 22:24:42 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 22:24:12
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.966	1.983	-0.017	0.484	2341495	2.12		106	1504	
2 Perfluoropropionic acid										
163.0 > 119.0	1.974	2.000	-0.026	1.004	5206587	4.78		95.6	1590	
D 3 13C4-PFBA										
216.8 > 171.9	4.065	4.087	-0.022	1.000	2531413	1.94		97.2	5610	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.087	-0.022		2235673	2.00			4766	
5 PFBA										
212.8 > 168.9	4.072	4.094	-0.022	1.002	189332	1.78		88.9	378	
6 PFMPA										
229.0 > 84.9	4.392	4.412	-0.020	0.930	1456289	0.9253		92.5	4861	
7 3:3 FTCA										
241.0 > 177.0	4.412	4.422	-0.010	0.934	106018	1.89	Target=1.04	94.3	1191	
241.0 > 117.0	4.412	4.422	-0.010	0.934	100220		1.06(0.52-1.56)		455	
D 8 13C5 PFPeA										
268.0 > 223.0	4.722	4.747	-0.025	0.911	2792105	2.06		103	6030	
9 PFPA										
263.0 > 219.0	4.734	4.747	-0.013	1.003	1095259	0.8779		87.8	1639	
10 PFMBA										
279.0 > 84.9	4.885	4.895	-0.010	1.034	1760144	0.9180		91.8	7062	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.008	5.018	-0.010	0.806	885481	4.76		101	3932	
12 4:2FTS										
327.1 > 307.0	5.008	5.028	-0.020	1.000	625560	1.91	Target=1.64	102	5386	
327.1 > 80.9	5.008	5.028	-0.020	1.000	356726		1.75(0.82-2.46)		916	

Report Date: 19-Feb-2026 22:24:44 Chrom Revision: 2.3 16-Feb-2026 12:47:50
Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-47.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
14 NFDHA										
295.0 > 201.0	5.145	5.165	-0.020	0.992	636649	0.9543	Target=1.37	95.4	2415	
295.0 > 84.9	5.145	5.165	-0.020	0.992	460839		1.38(0.69-2.06)		2831	
D 15 13C5 PFHxA										
318.0 > 273.0	5.185	5.206	-0.021	1.000	3164681	1.94		97.2	6191	
* 16 13C2 PFHxA										
315.1 > 270.0	5.185	5.206	-0.021		5433276	5.00			7578	
17 PFHxA										
313.0 > 269.0	5.195	5.216	-0.021	1.002	1651164	0.99	Target=17.00	99.4	3195	
313.0 > 118.9	5.195	5.216	-0.021	1.002	97876		16.87(8.50-25.50)		742	
18 5:3 FTCA										
341.0 > 237.1	5.280	5.303	-0.023	1.018	977454	5.12	Target=1.07	102	3171	
341.0 > 217.0	5.280	5.303	-0.023	1.018	878013		1.11(0.53-1.60)		1164	
D 19 13C3 PFBS										
302.1 > 79.9	5.314	5.337	-0.023	0.855	1997309	1.95		105	7200	
20 PFBS										
298.7 > 79.9	5.325	5.348	-0.023	1.002	891588	0.8321	Target=3.26	93.7	3761	
298.7 > 98.8	5.325	5.348	-0.023	1.002	244953		3.64(1.63-4.90)		1420	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.359	5.381	-0.022	1.034	1736974	1.88		94.2	3964	
22 HFPO-DA										
284.9 > 168.9	5.370	5.393	-0.023	1.002	630291	0.6962	Target=1.71	92.8	2116	
284.9 > 184.9	5.370	5.393	-0.023	1.002	356679		1.77(0.86-2.57)		1658	
23 FBSA										
298.0 > 78.0	5.416	5.427	-0.011	1.019	1001852	1.01		101	1109	
25 PFEESA										
314.8 > 134.9	5.551	5.574	-0.023	1.071	2081644	0.7737	Target=9.87	86.7	6183	
314.8 > 82.9	5.551	5.574	-0.023	1.071	207104		10.05(4.93-14.80)		1116	
D 27 13C4 PFHpA										
367.0 > 322.0	5.608	5.631	-0.023	1.082	3060244	2.04		102	6599	
28 PFHpA										
363.1 > 319.0	5.619	5.631	-0.012	1.002	1705154	1.00	Target=3.06	99.7	2900	
363.1 > 169.0	5.619	5.631	-0.012	1.002	534065		3.19(1.53-4.59)		1998	
29 ADONA										
376.9 > 250.9	5.768	5.779	-0.011	1.076	2934944	0.9319	Target=2.15	98.5	8498	
376.9 > 84.8	5.768	5.779	-0.011	1.076	1349098		2.18(1.08-3.23)		4925	
30 PFPeS										
349.0 > 79.9	5.791	5.814	-0.023	0.932	1072849	0.9237	Target=3.62	98.3	3556	
349.0 > 98.8	5.791	5.814	-0.023	0.932	300206		3.57(1.81-5.42)		1612	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.802	5.825	-0.023	0.934	751406	4.66		98.0	2900	
32 6:2FTS										
427.1 > 407.0	5.813	5.825	-0.012	1.002	521399	1.98	Target=1.50	104	1765	
427.1 > 80.9	5.813	5.825	-0.012	1.002	343193		1.52(0.75-2.25)		1198	
33 BTS										
280.0 > 147.0	5.951	5.974	-0.023	0.958	1933974	0.9728		99.4	7503	
D 34 13C8 PFOA										
421.0 > 376.0	5.997	6.020	-0.023	0.998	3469921	2.08		104	7979	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	6.008	6.020	-0.012		5481343	5.00			7480	
36 PFOA										
413.0 > 369.0	6.008	6.032	-0.024	1.002	1501841	0.9710	Target=2.55	97.1	932	
413.0 > 169.0	6.008	6.032	-0.024	1.002	588868		2.55(1.27-3.82)		1068	
37 7:3 FTCA										
441.0 > 316.9	6.091	6.114	-0.023	1.175	572086	5.13	Target=0.54	103	1259	
441.0 > 336.9	6.091	6.114	-0.023	1.175	1033011		0.55(0.27-0.81)		1811	
D 38 13C3 PFHxS										
402.0 > 79.9	6.212	6.233	-0.021	1.000	1805332	1.94		102	3036	
* 39 18O2 PFHxS										
403.0 > 83.9	6.212	6.233	-0.021		1581773	1.90			5977	
40 PFHxS										
398.7 > 79.9	6.222	6.243	-0.021	1.002	662257	0.7830	Target=4.54	85.9	2153	
398.7 > 98.8	6.222	6.243	-0.021	1.002	160298		4.13(2.27-6.81)		542	
D 41 13C9 PFNA										
472.0 > 427.0	6.389	6.413	-0.024	1.000	3379936	2.08		104	5263	
* 42 13C5 PFNA										
468.0 > 423.0	6.389	6.413	-0.024		3297650	2.00			9077	
43 PFNA										
463.0 > 419.0	6.401	6.424	-0.023	1.002	1412772	0.9228	Target=2.78	92.3	2205	
463.0 > 219.0	6.401	6.424	-0.023	1.002	489486		2.89(1.39-4.17)		1801	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.565	6.588	-0.023	1.057	707304	4.43		92.2	2403	
45 8:2FTS										
527.1 > 507.0	6.576	6.588	-0.012	1.002	419708	2.09	Target=1.45	109	1735	
527.1 > 80.9	6.576	6.588	-0.012	1.002	289669		1.45(0.73-2.18)		1130	
46 PFECHS										
461.0 > 381.0	6.588	6.611	-0.023	1.061	1583206	0.9482	Target=1.67	103	4226	
461.0 > 99.0	6.588	6.611	-0.023	1.061	937965		1.69(0.84-2.51)		2182	
47 PFHpS										
449.0 > 79.9	6.632	6.654	-0.022	0.944	928296	0.8622	Target=4.71	90.4	2320	
449.0 > 98.8	6.632	6.654	-0.022	0.944	207725		4.47(2.36-7.07)		1297	
48 FHxSA										
398.0 > 78.0	6.698	6.709	-0.011	1.078	1621907	1.07		107	2639	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.719	6.741	-0.022	0.956	1320995	5.64		113	2805	
50 NMeFOSAA										
570.0 > 419.0	6.729	6.751	-0.022	1.002	273713	0.9121	Target=1.26	91.2	1508	
570.0 > 483.0	6.729	6.751	-0.022	1.002	222077		1.23(0.63-1.89)		3801	
D 51 13C6 PFDA										
519.0 > 474.0	6.782	6.804	-0.022	1.000	3275517	1.92		96.1	5588	
* 52 13C2 PFDA										
515.1 > 470.1	6.782	6.804	-0.022		3054199	2.00			5275	
53 PFDA										
512.9 > 469.0	6.792	6.804	-0.012	1.001	1603120	0.9819	Target=6.81	98.2	3891	
512.9 > 219.0	6.792	6.804	-0.012	1.001	218120		7.35(3.40-10.21)		1181	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.898	6.921	-0.023	0.981	1686272	5.72		114	4267	
55 NEtFOSAA										
584.0 > 419.0	6.909	6.921	-0.012	1.002	348575	0.9062	Target=1.64	90.6	81928	
584.0 > 526.0	6.909	6.921	-0.012	1.002	212373		1.64(0.82-2.45)		3275	
D 56 13C8 PFOS										
507.0 > 79.9	7.022	7.053	-0.031	0.999	1922401	1.97		103	1366	
* 57 13C4 PFOS										
502.8 > 79.9	7.032	7.053	-0.021		1346580	1.92			4870	
58 PFOS										
498.9 > 79.9	7.032	7.053	-0.021	1.001	987035	0.8465	Target=5.55	91.0	2449	
498.9 > 98.8	7.032	7.053	-0.021	1.001	176188		5.60(2.77-8.32)		1084	
D 59 13C7 PFUnA										
570.0 > 525.0	7.174	7.195	-0.021	1.058	3156417	1.85		92.7	8506	
60 PFUnA										
563.1 > 519.0	7.184	7.205	-0.021	1.001	1412273	1.00	Target=5.71	100	6811	
563.1 > 269.1	7.184	7.205	-0.021	1.001	245354		5.76(2.85-8.56)		844	
61 9ClFOS										
530.8 > 351.0	7.338	7.367	-0.029	1.045	1800332	0.8537	Target=3.10	91.4	5052	
532.8 > 353.0	7.338	7.367	-0.029	1.045	574275		3.13(1.55-4.65)		2350	
62 PFNS										
548.8 > 79.9	7.429	7.455	-0.026	1.058	710437	0.8057	Target=4.40	83.8	3953	
548.8 > 98.8	7.429	7.455	-0.026	1.058	158943		4.47(2.20-6.60)		1351	
D 63 13C2 PFDoA										
615.0 > 570.0	7.569	7.603	-0.034	1.116	3066502	1.90		95.1	3494	
64 PFDoA										
613.0 > 569.0	7.580	7.603	-0.023	1.001	1618570	0.9803	Target=6.25	98.0	5647	
613.0 > 319.0	7.580	7.603	-0.023	1.001	258350		6.27(3.12-9.37)		2382	
D 65 13C8 FOSA										
506.1 > 77.8	7.830	7.842	-0.012	1.114	2185661	2.24		112	7684	
66 PFOSA										
498.1 > 77.9	7.830	7.842	-0.012	1.000	822830	0.9070	Target=44.01	90.7	2181	
498.1 > 478.0	7.830	7.842	-0.012	1.000	18703		43.99(22.00-66.01)		146	
67 PFDS										
599.0 > 79.9	7.819	7.853	-0.034	1.114	913628	0.8177	Target=4.97	84.8	5812	
599.0 > 98.8	7.819	7.853	-0.034	1.114	179035		5.10(2.49-7.46)		1574	
68 PFTrDA										
663.0 > 619.0	7.972	8.007	-0.035	0.955	1687404	0.8059	Target=7.34	80.6	4077	
663.0 > 168.9	7.972	8.007	-0.035	0.955	237417		7.11(3.67-11.01)		1757	
69 11ClFOS										M
630.9 > 450.9	8.127	8.150	-0.023	1.157	1614674	0.8761	Target=3.07	92.8	5592	M
632.9 > 452.9	8.127	8.150	-0.023	1.157	533961		3.02(1.54-4.61)		2253	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.352	8.382	-0.030	1.231	2128882	2.20		110	3290	
71 PFTeDA										
713.1 > 168.9	8.352	8.397	-0.045	1.000	185236	0.8045	Target=1.18	80.5	1733	
713.1 > 219.0	8.352	8.397	-0.045	1.000	150537		1.23(0.59-1.77)		1264	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.560	8.599	-0.039	1.219	883321	0.8523	Target=5.61	87.9	3292	
699.1 > 98.8	8.560	8.599	-0.039	1.219	166366		5.31(2.81-8.42)		2301	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.735	8.749	-0.014	1.242	1303617	5.23		105	576	
74 N-MeFOSE-M										
616.1 > 58.9	8.760	8.761	-0.001	1.003	2856288	4.91		98.2	1151	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.845	8.858	-0.013	1.258	531813	2.18		109	2008	
76 NMeFOSA										
511.9 > 219.0	8.857	8.870	-0.013	1.001	230967	0.9332	Target=0.75	93.3	1906	
511.9 > 169.0	8.857	8.870	-0.013	1.001	316688		0.73(0.38-1.13)		1127	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.974	8.988	-0.014	1.276	1732542	5.20		104	631	
78 N-EtFOSE-M										
630.0 > 58.9	8.998	8.999	-0.001	1.003	5302256	5.00		100.0	1680	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.069	9.070	-0.002	1.290	739583	2.22		111	2356	
80 N-EtFOSA-M										
526.0 > 219.0	9.080	9.082	-0.002	1.001	282300	0.9066	Target=0.82	90.7	1515	
526.0 > 169.0	9.080	9.082	-0.002	1.001	344292		0.82(0.41-1.23)		1193	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.264	9.308	-0.044	1.109	1444928	0.4838	Target=9.64	48.4	18743	
913.0 > 169.0	9.264	9.308	-0.044	1.109	156024		9.26(4.82-14.45)		5043	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

1633_125_CAL4_00082 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 22:24:44 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-47.d

Injection Date: 19-Feb-2026 21:24:22 Instrument ID: 30637

Lims ID: CCV 6_CAL4

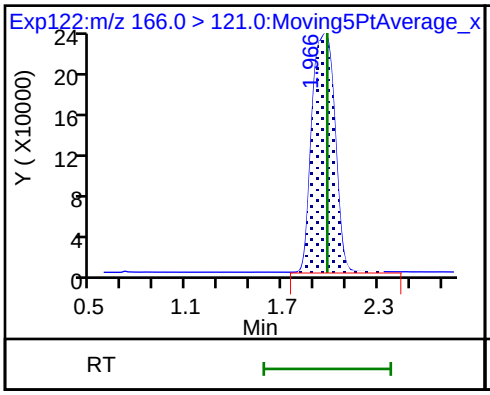
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 5 Worklist Smp#: 45

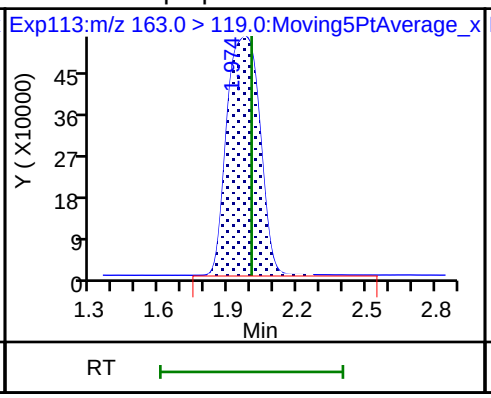
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

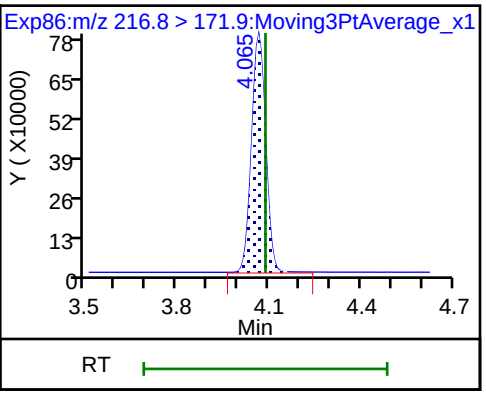
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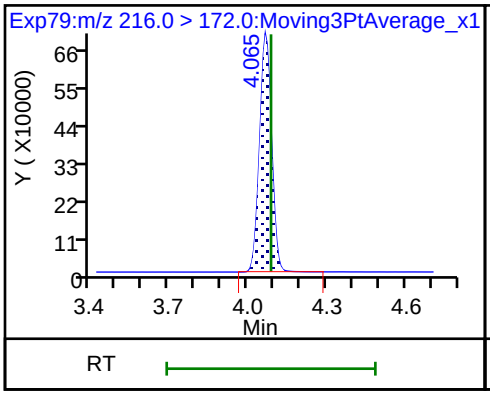
2 Perfluoropropionic acid



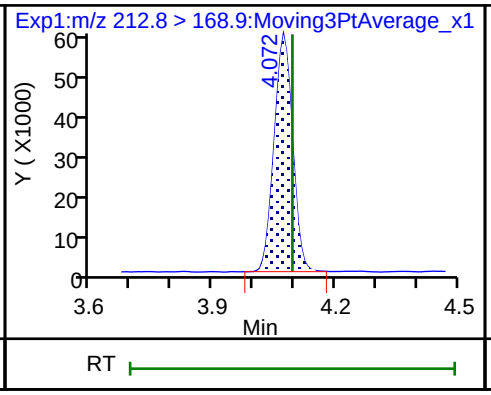
D 3 13C4-PFBA



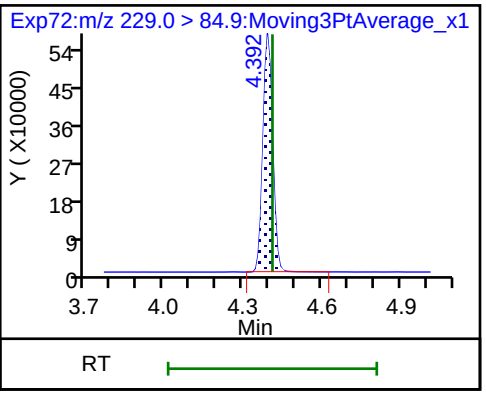
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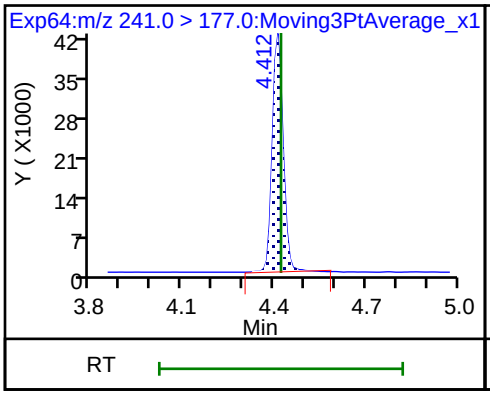
5 PFBA



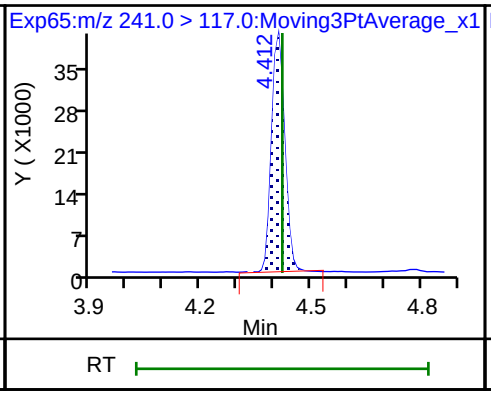
6 PFMPA



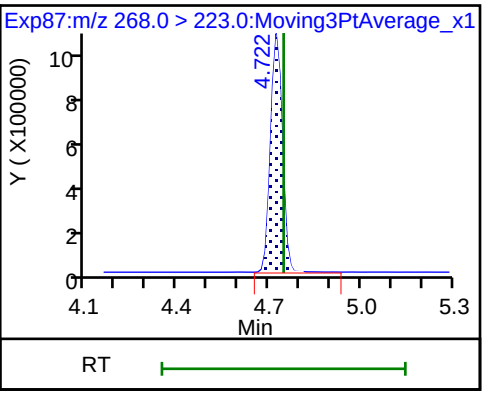
7 3:3 FTCA



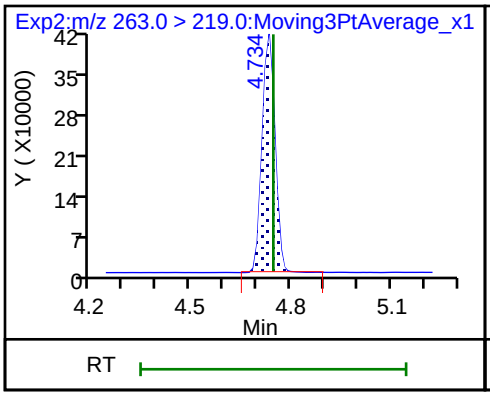
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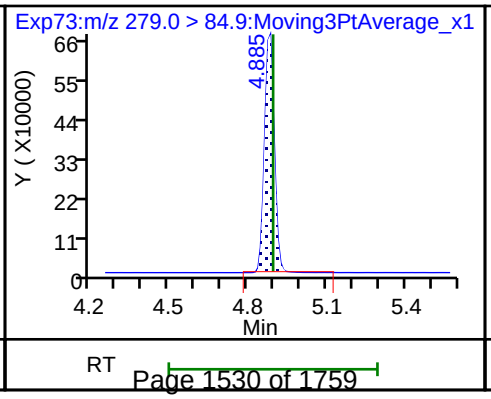
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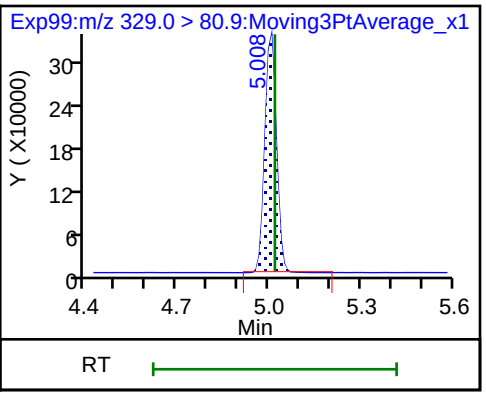
9 PFPA



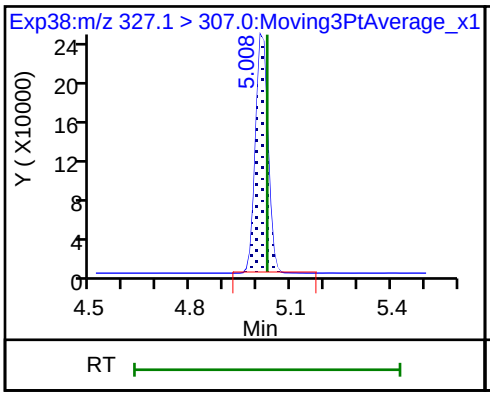
10 PFMBA



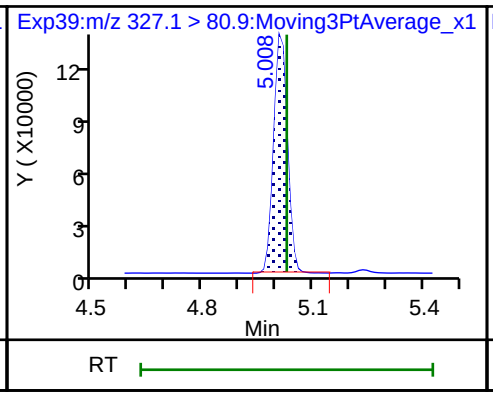
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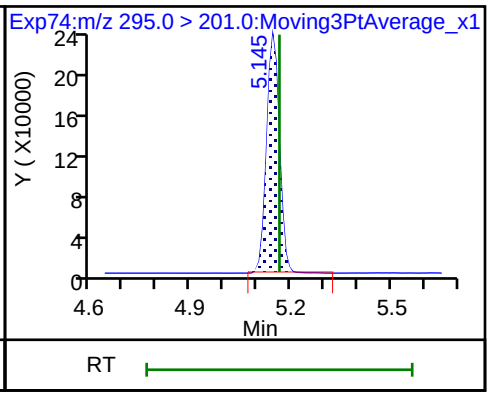
12 4:2FTS



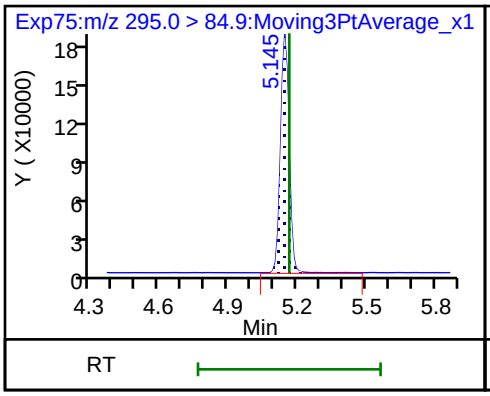
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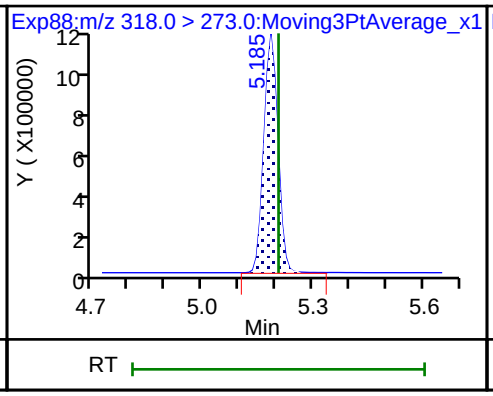
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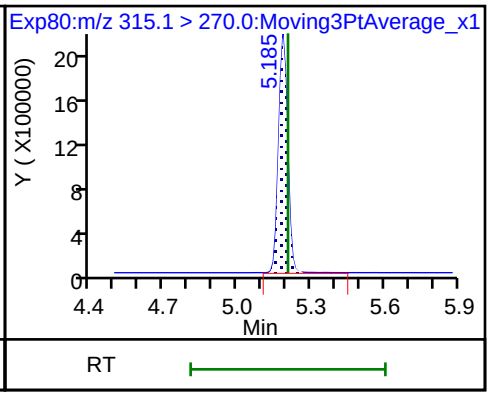
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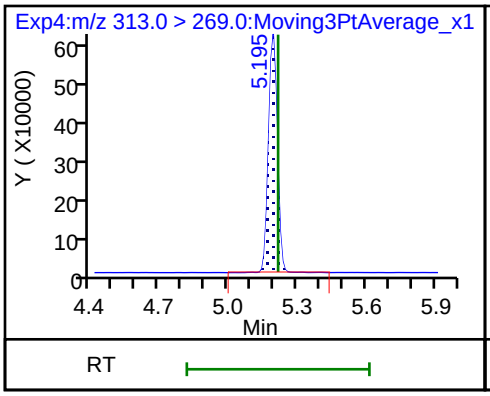
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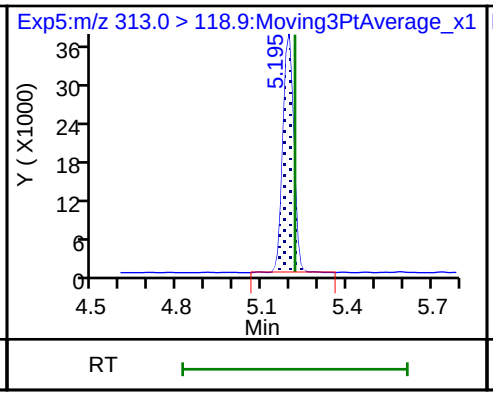
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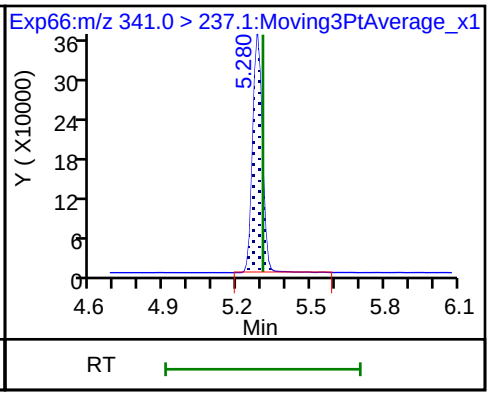
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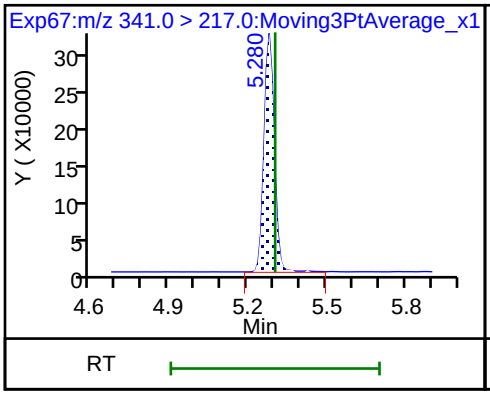
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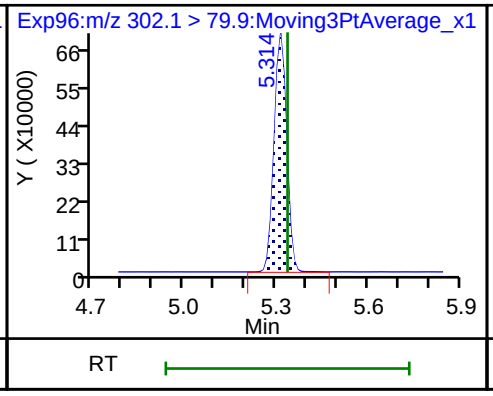
18 5:3 FTCA



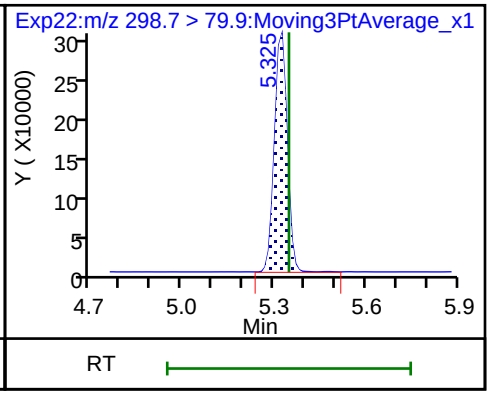
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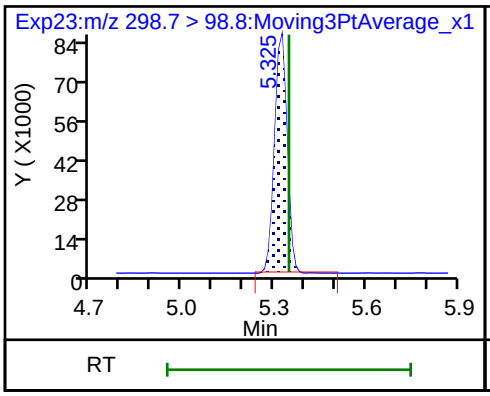
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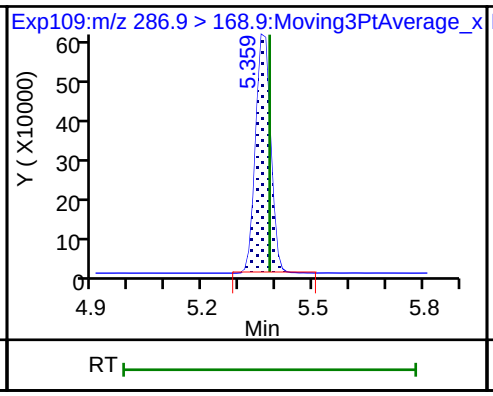
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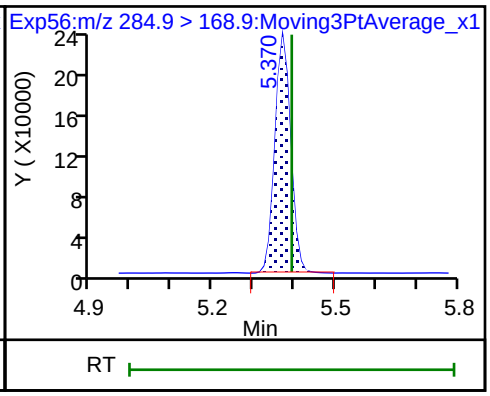
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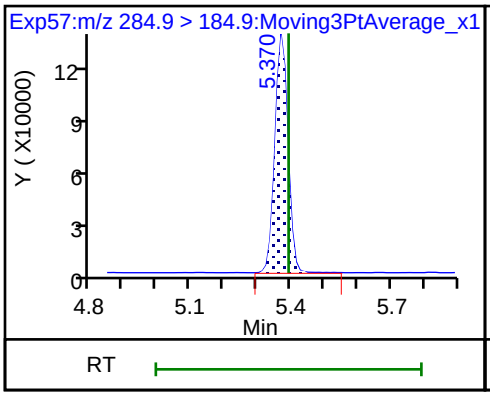
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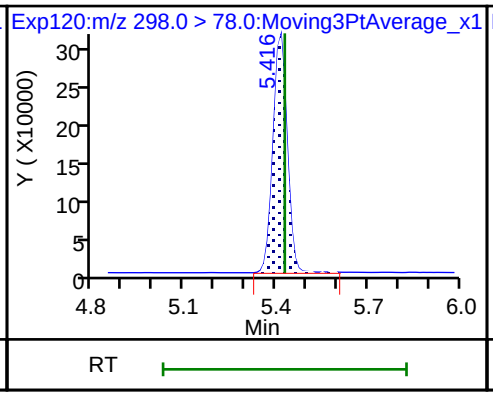
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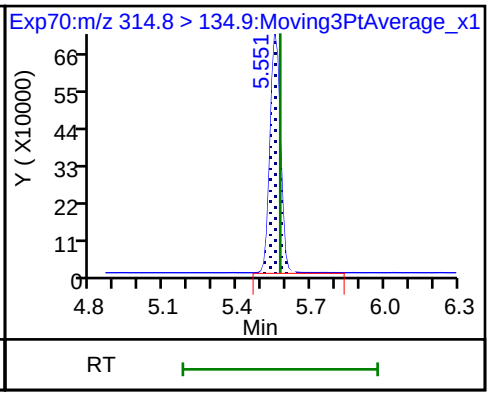
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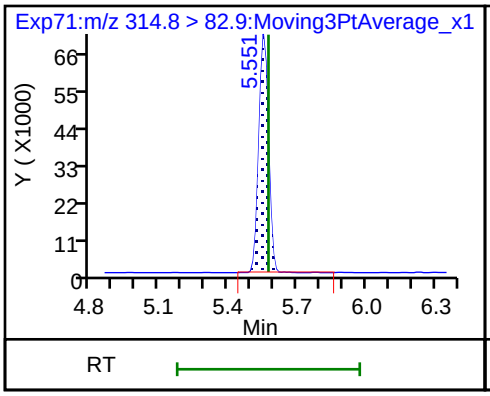
23 FBSA



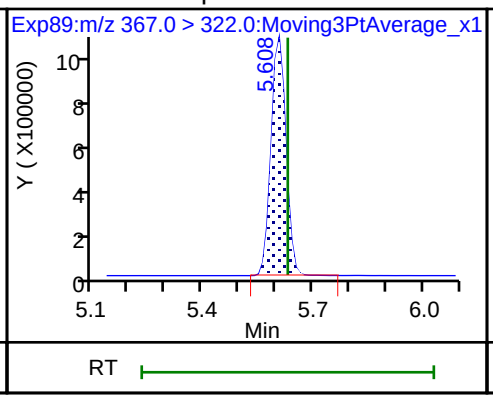
25 PFEESA



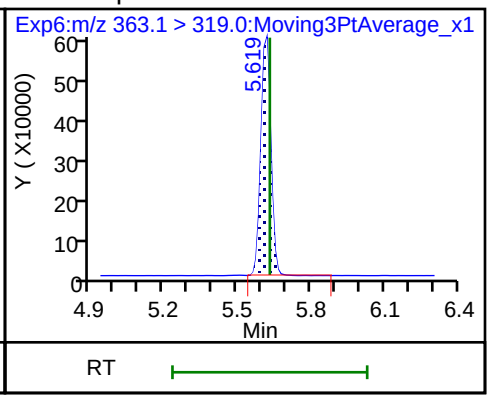
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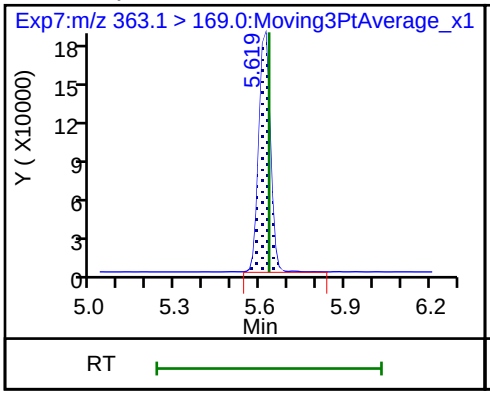
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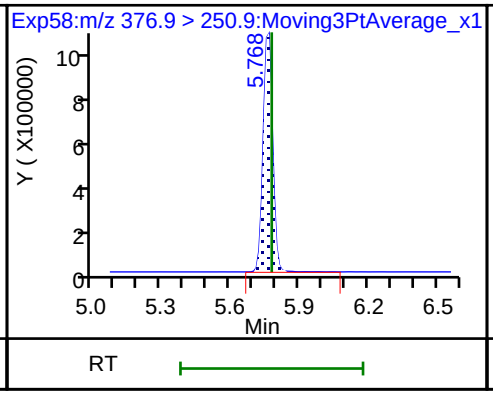
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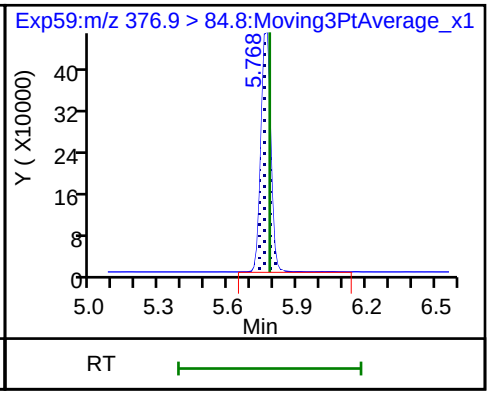
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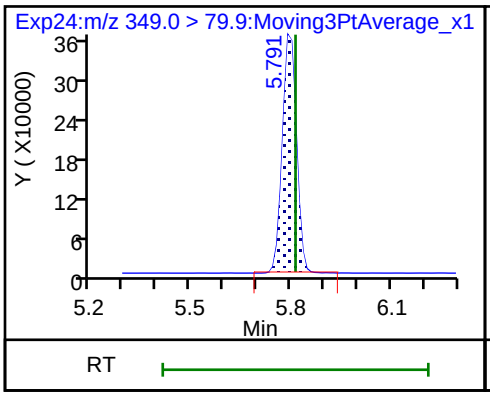
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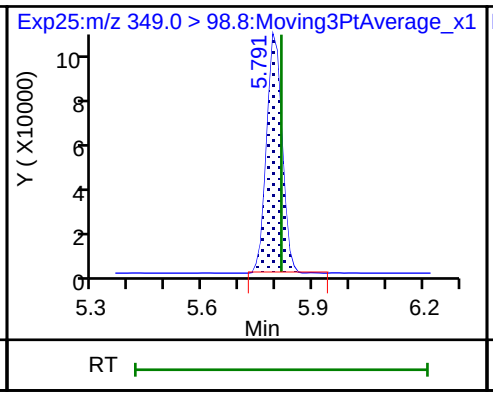
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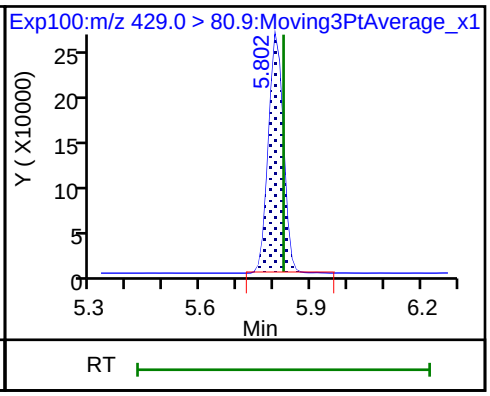
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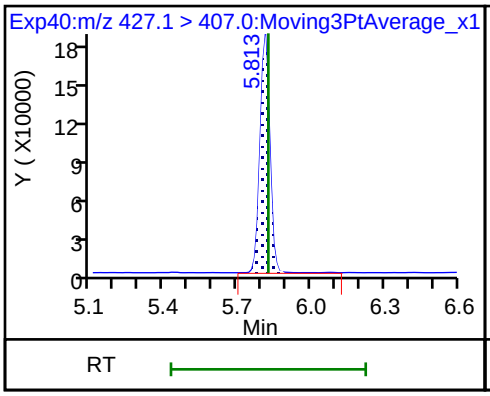
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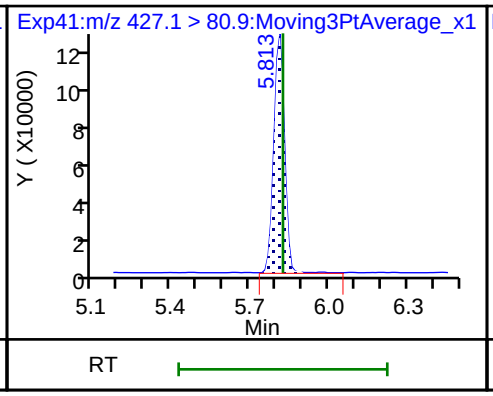
D 31 13C2-6:2FTS



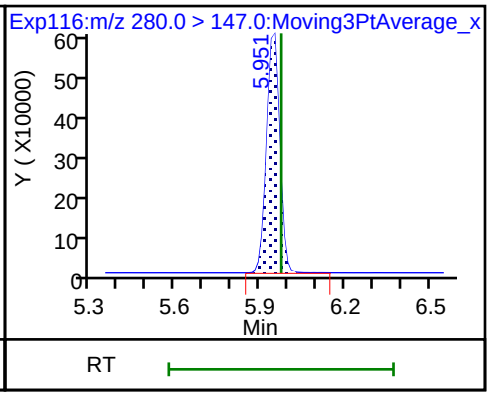
32 6:2FTS



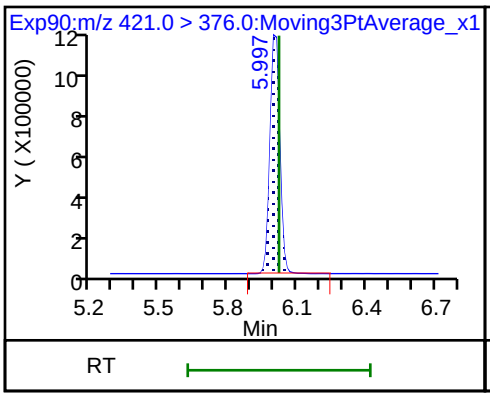
32 6:2FTS



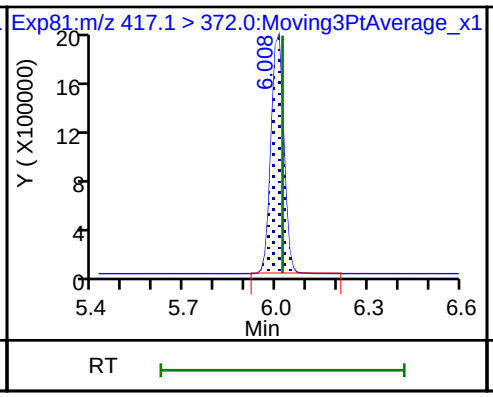
33 BTS



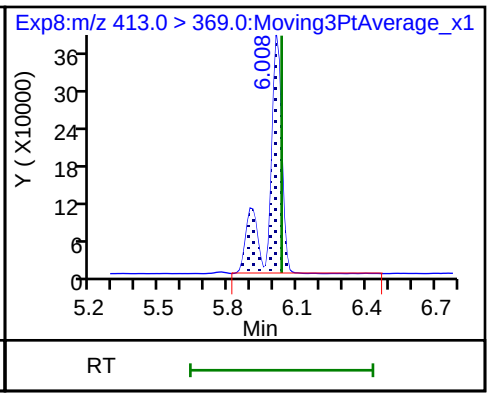
D 34 13C8 PFOA



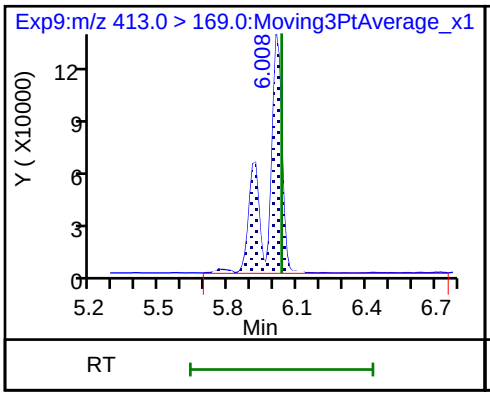
* 35 13C4 PFOA



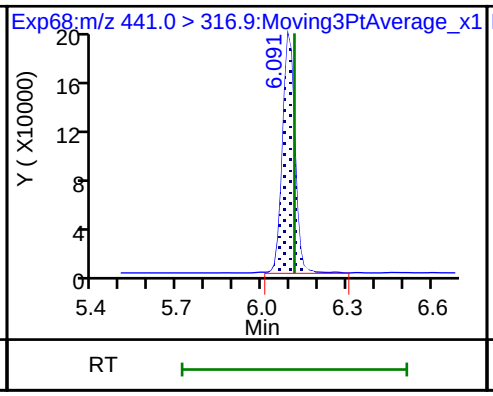
36 PFOA



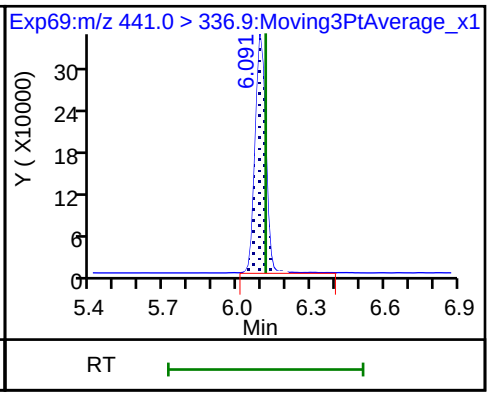
36 PFOA



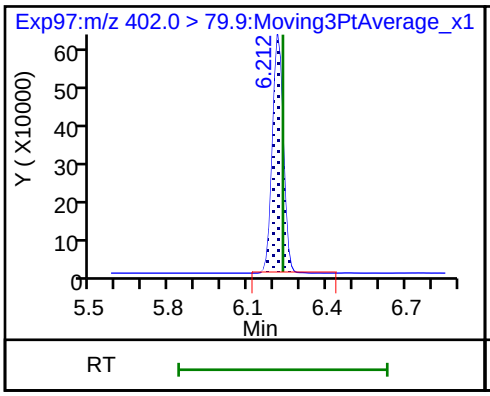
37 7:3 FTCA



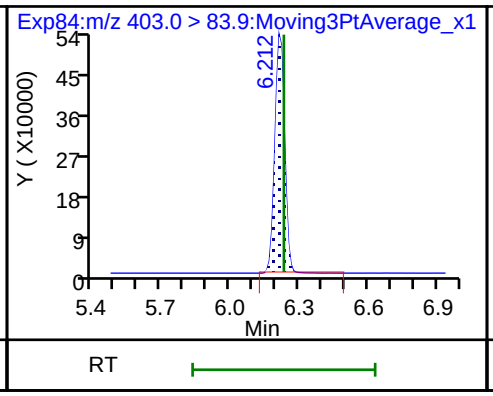
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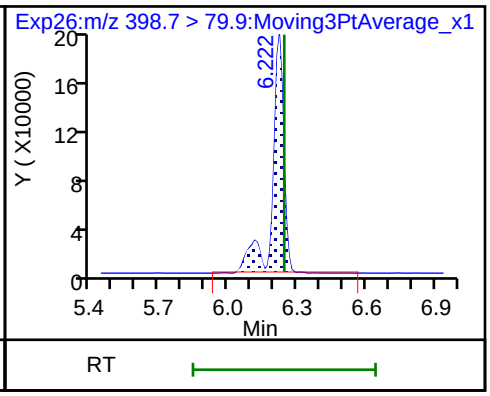
D 38 13C3 PFHxS



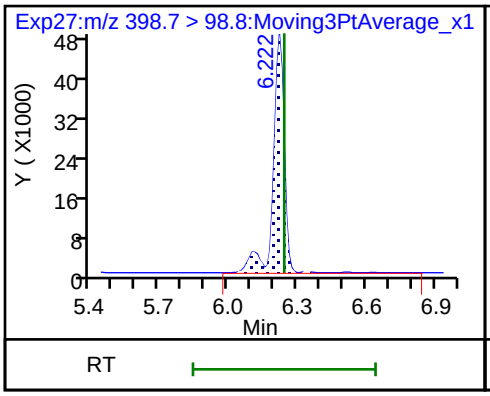
* 39 18O2 PFHxS



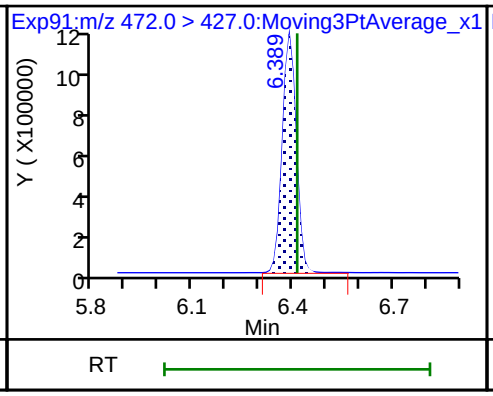
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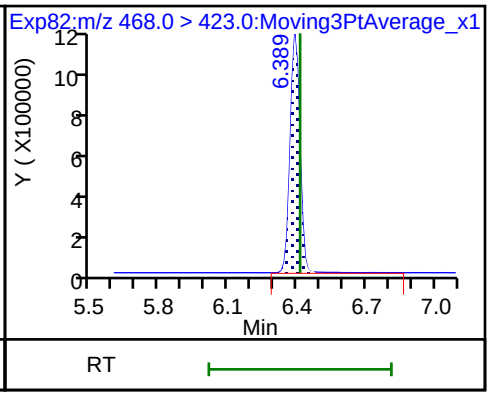
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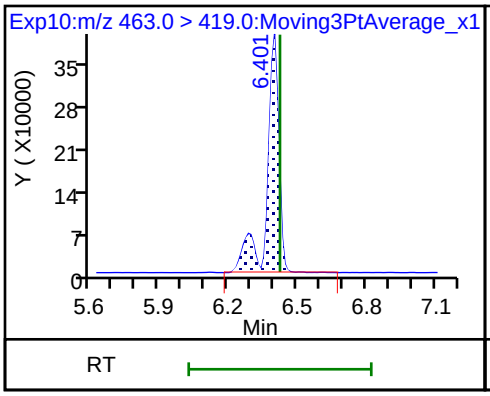
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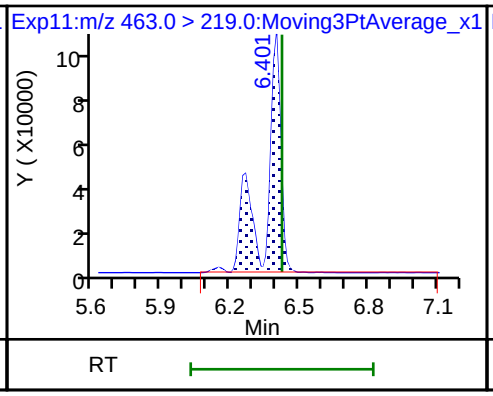
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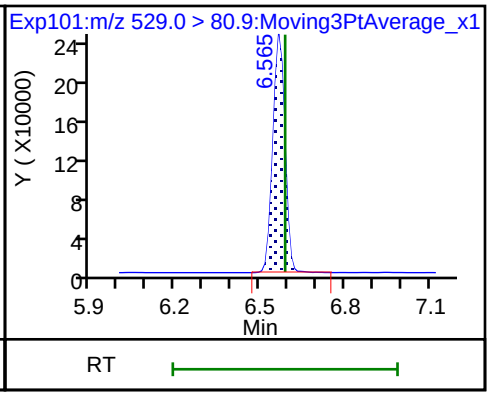
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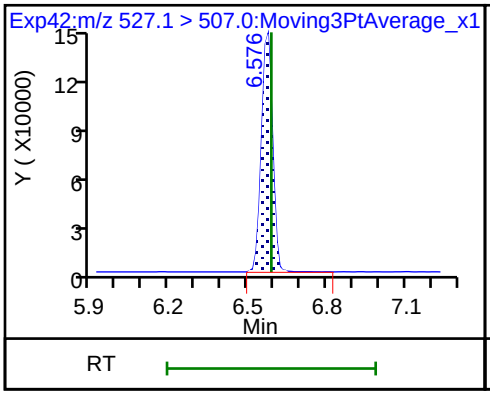
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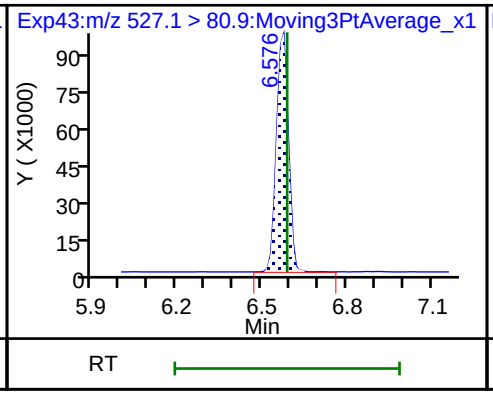
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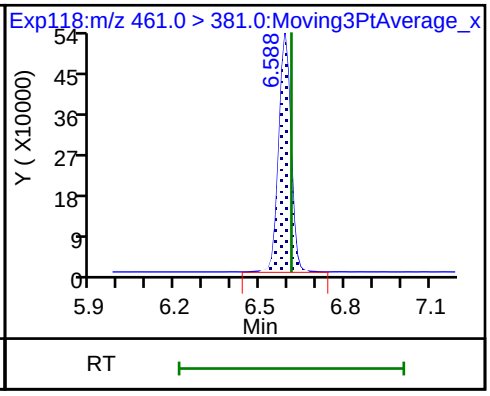
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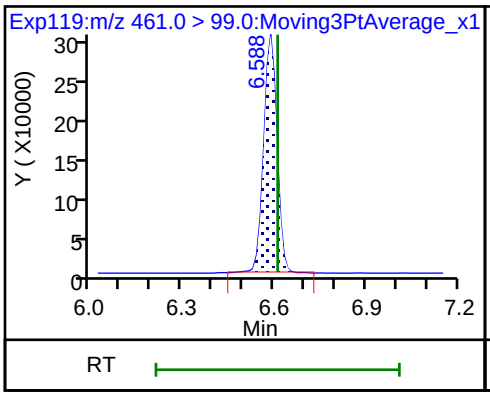
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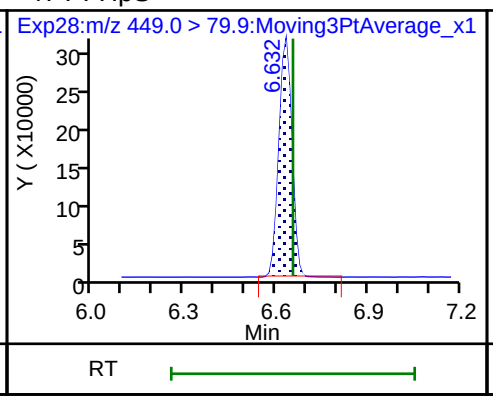
46 PFECHS



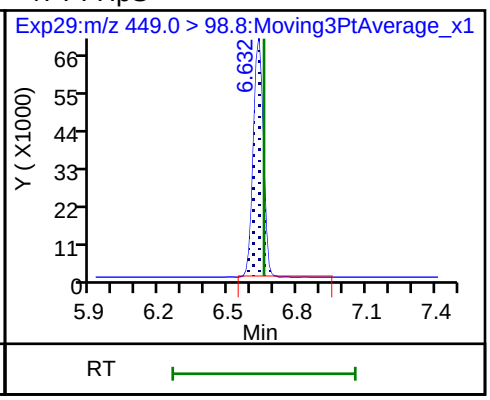
46 PFECHS



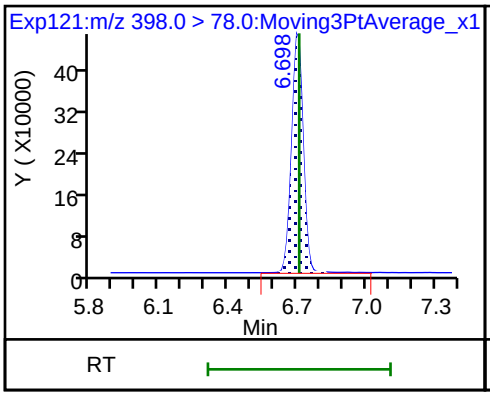
47 PFHpS



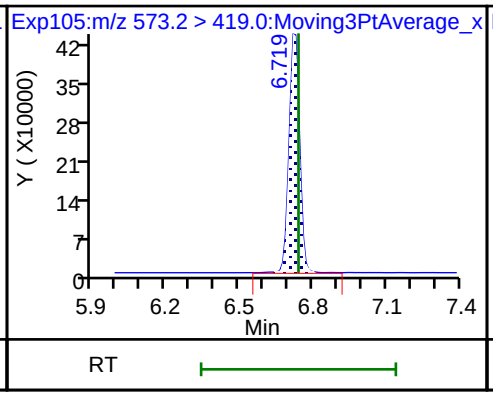
47 PFHpS



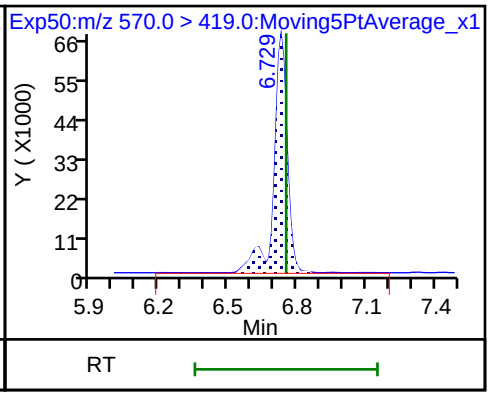
48 FHxSA



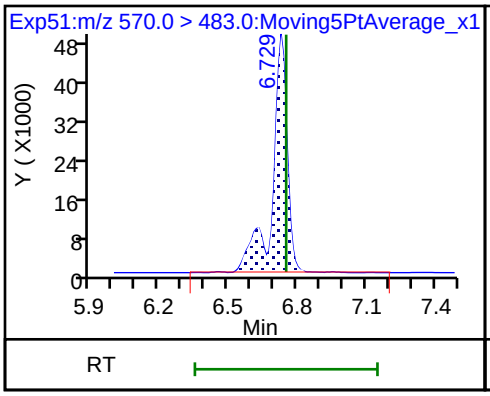
D 49 d3-NMeFOSAA



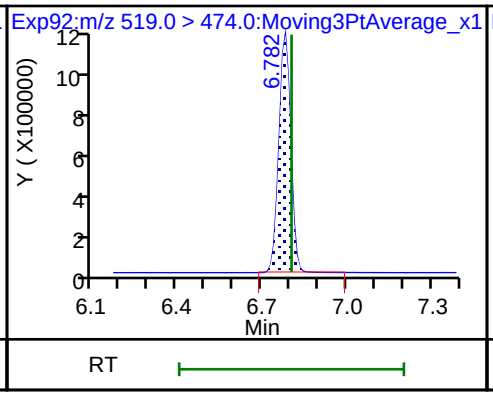
50 NMeFOSAA



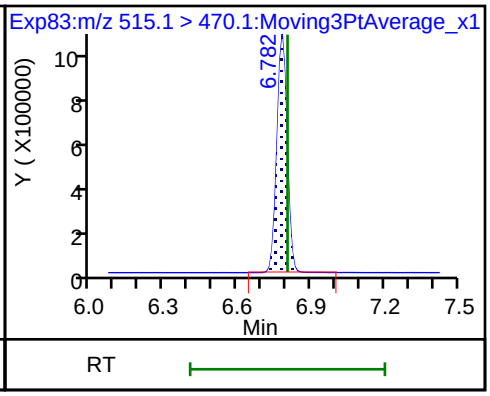
50 NMeFOSAA



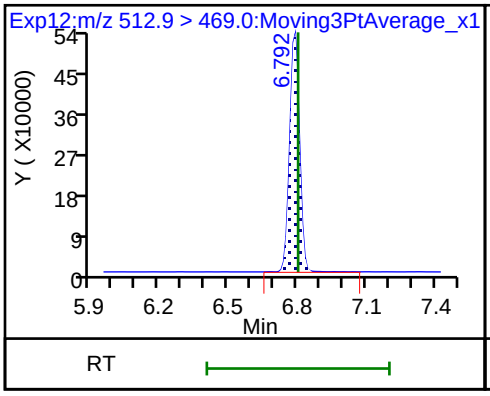
D 51 13C6 PFDA



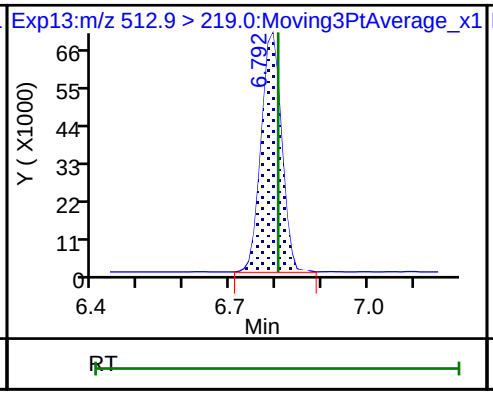
* 52 13C2 PFDA



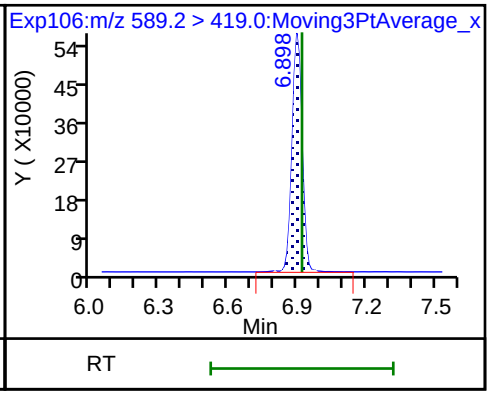
53 PFDA



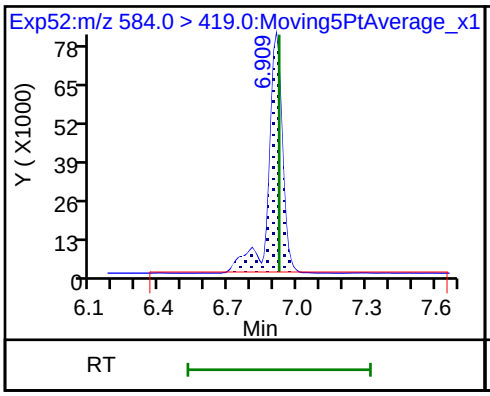
53 PFDA



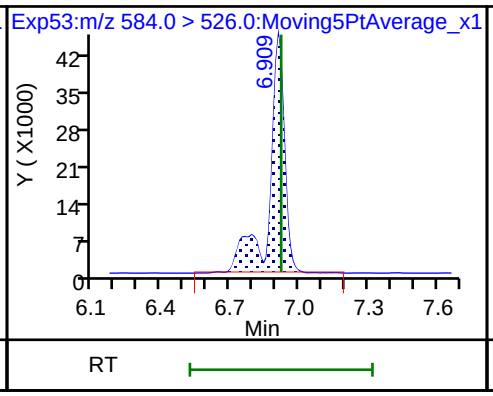
D 54 d5-NEtFOSAA



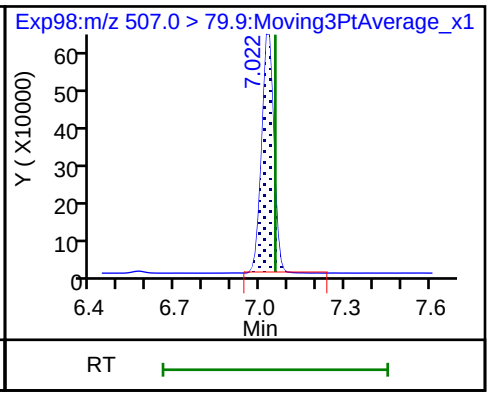
55 NEtFOSAA



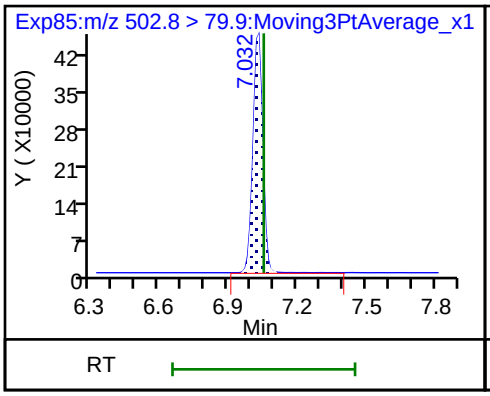
55 NEtFOSAA



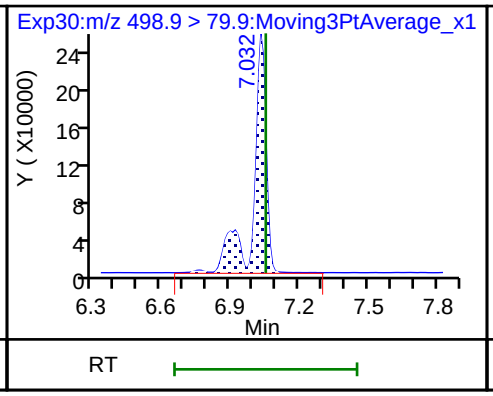
D 56 13C8 PFOS



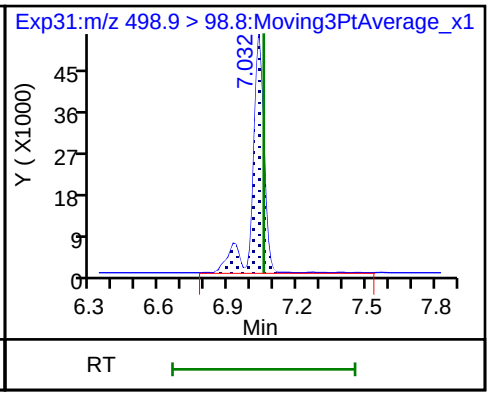
* 57 13C4 PFOS



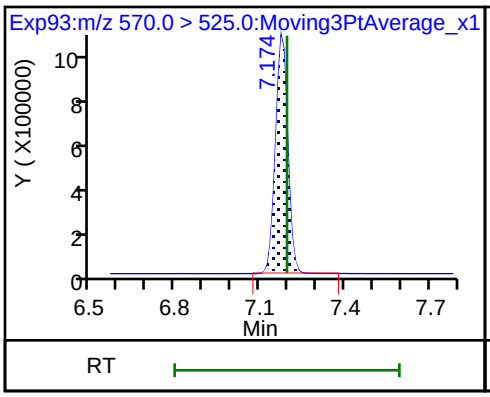
58 PFOS



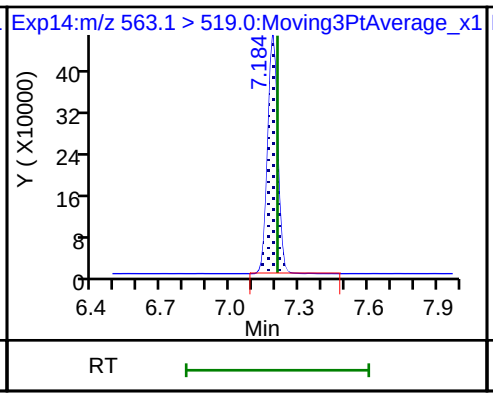
58 PFOS



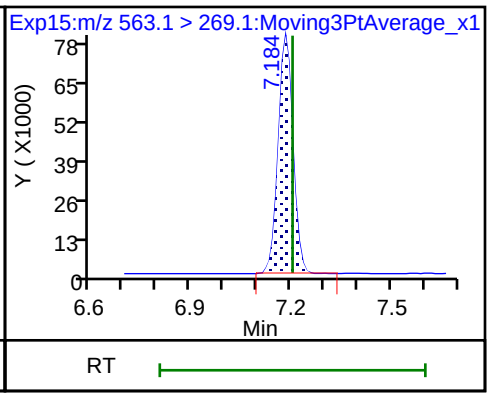
D 59 13C7 PFUnA



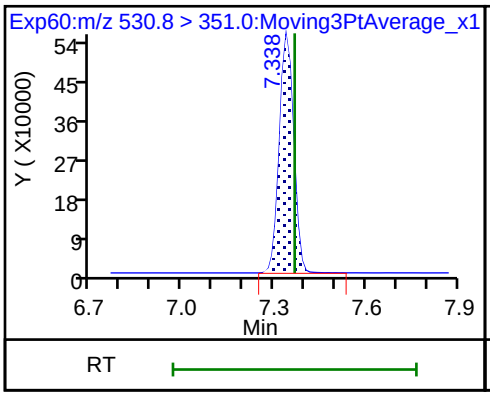
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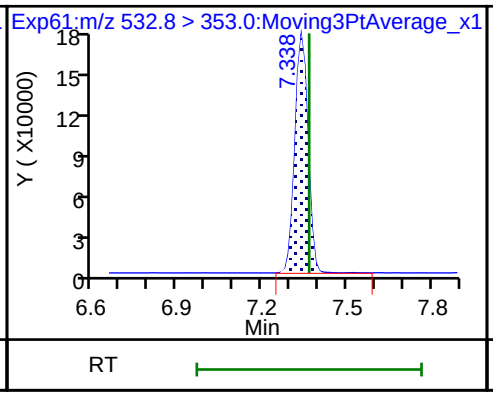
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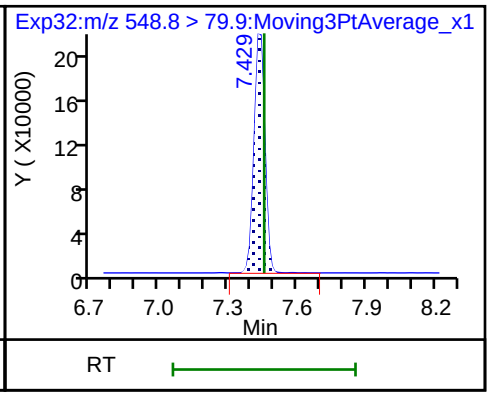
61 9ClFOS



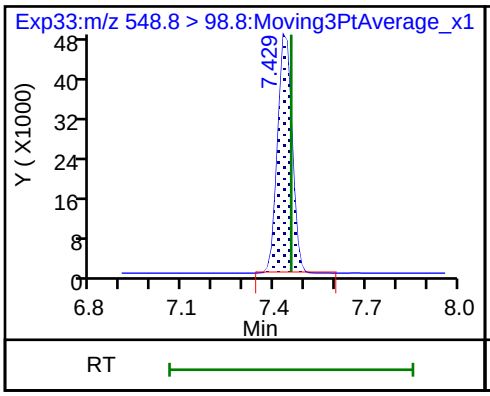
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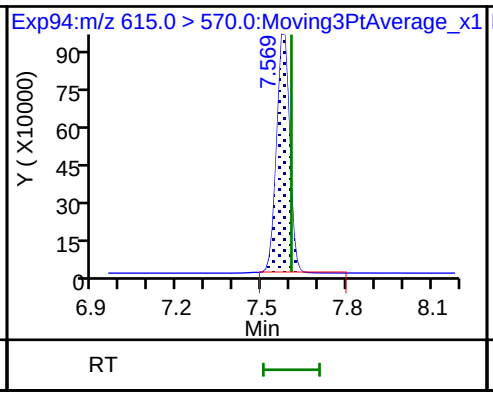
62 PFNS



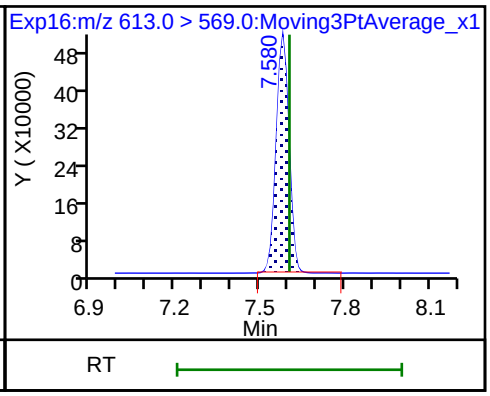
62 PFNS



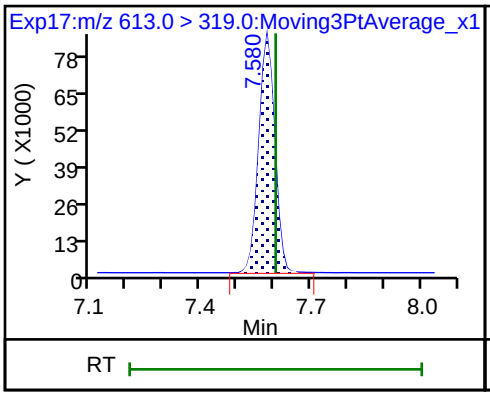
D 63 13C2 PFDoA



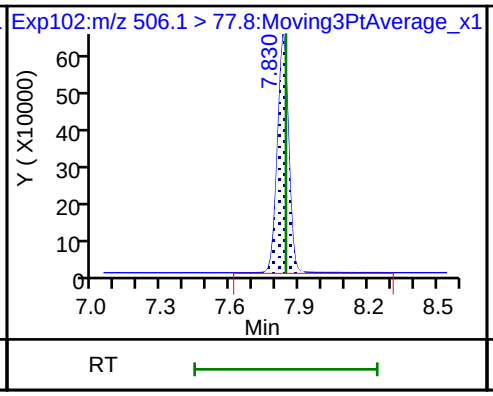
64 PFDoA



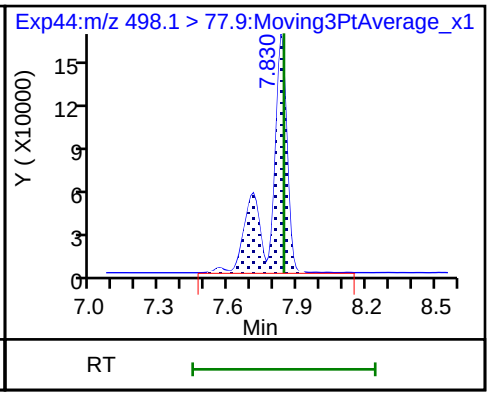
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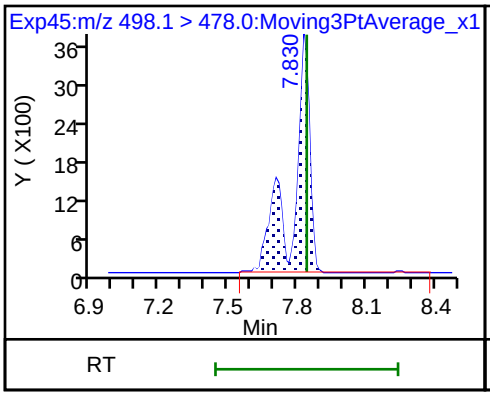
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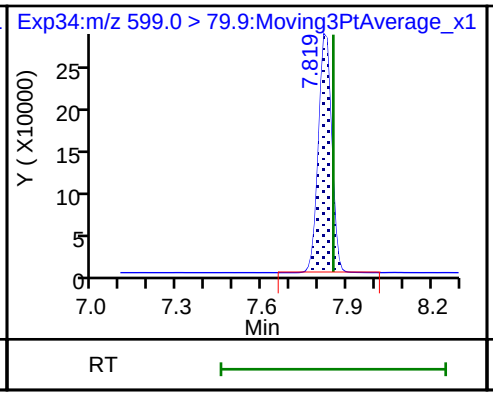
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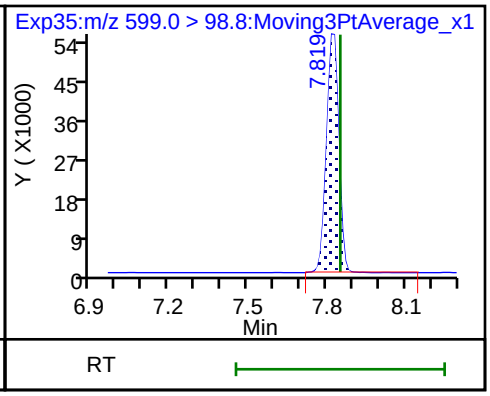
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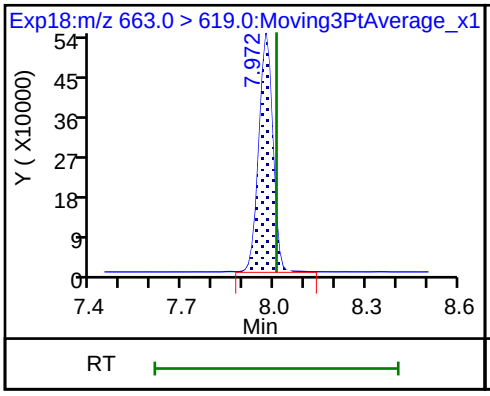
67 PFDS



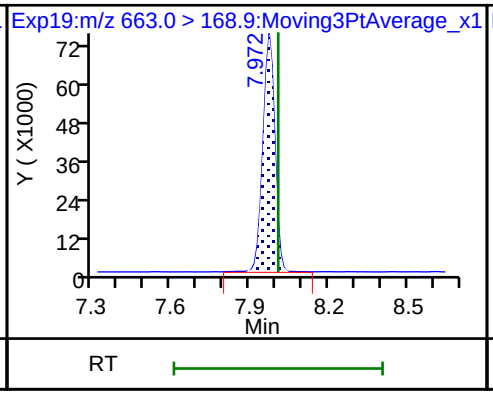
67 PFDS



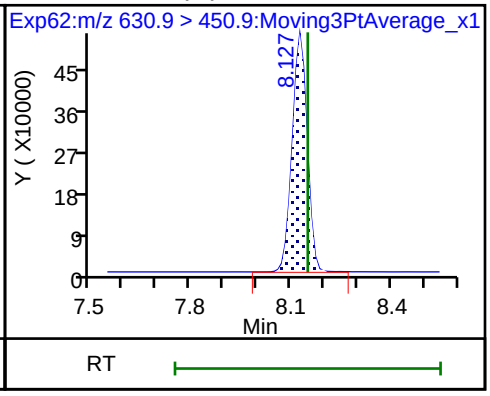
68 PFTrDA



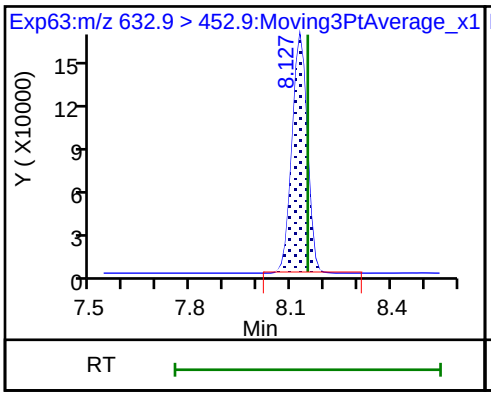
68 PFTrDA



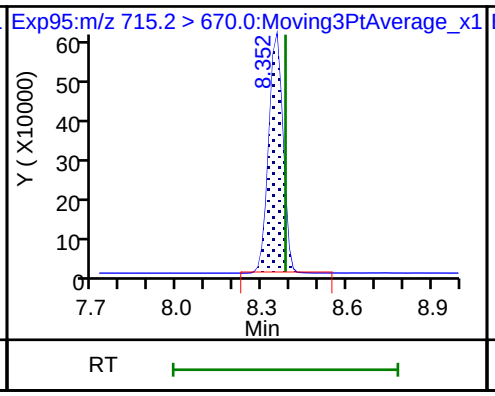
69 11ClFOS (M)



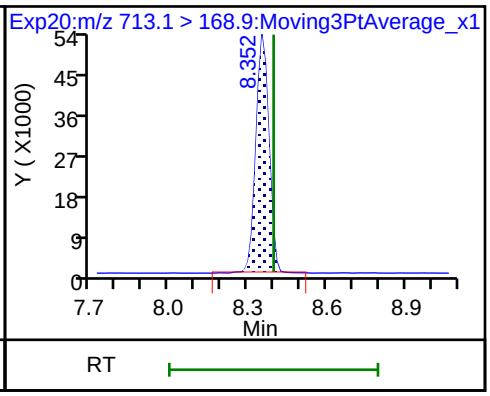
69 11ClFOS



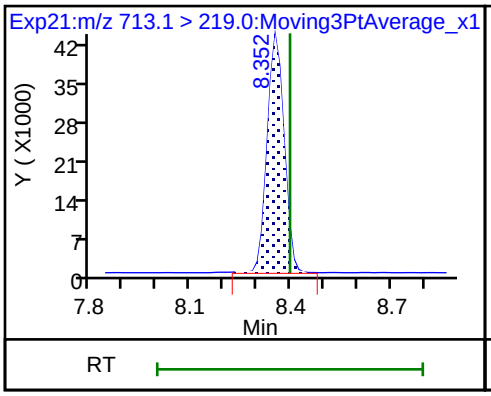
D 70 13C2 PFTeDA



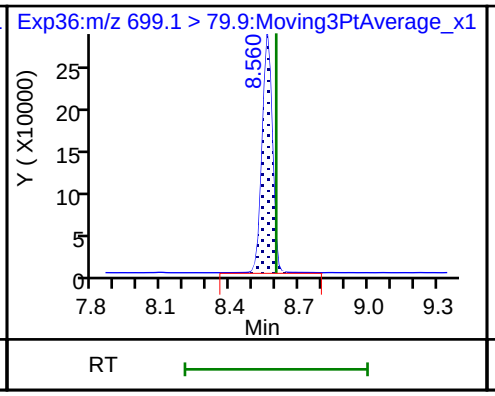
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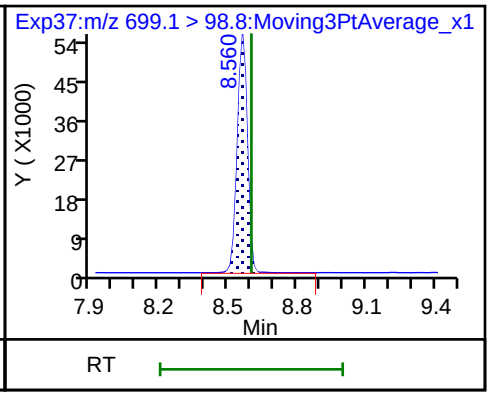
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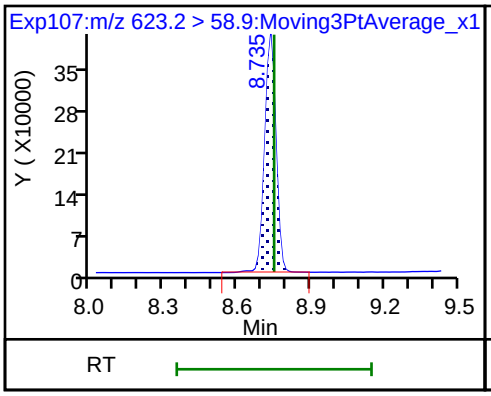
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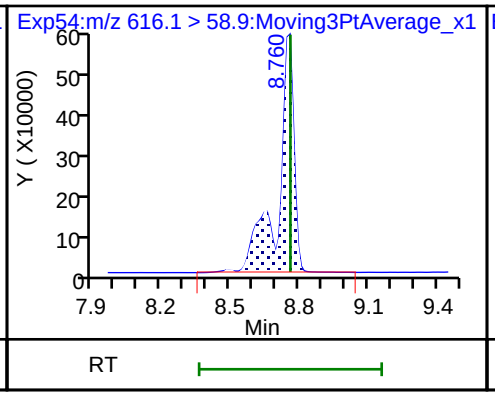
72 PFDoS



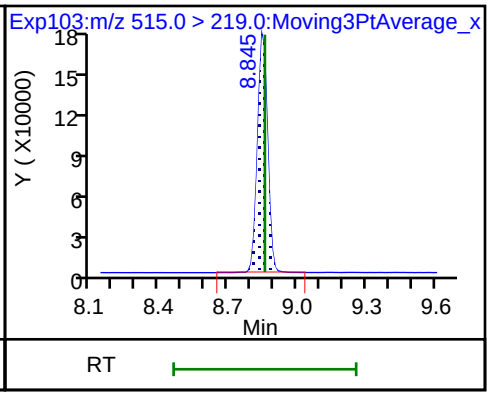
D 73 d7-N-Me-FOSE



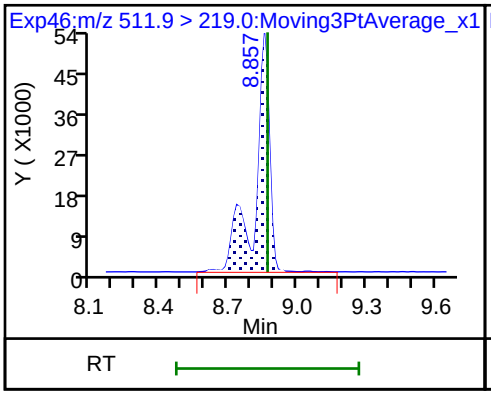
74 N-MeFOSE-M



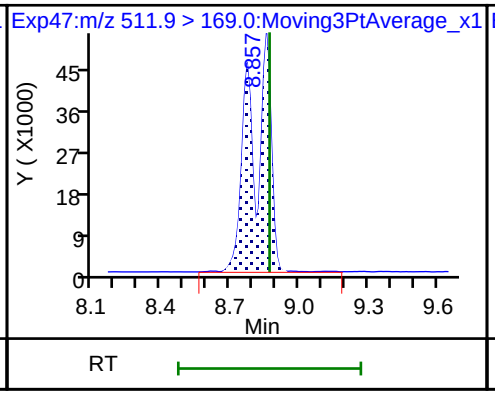
D 75 d3-NMePFOSA



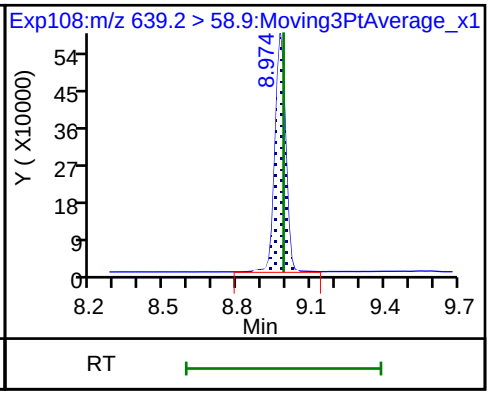
76 NMeFOSA



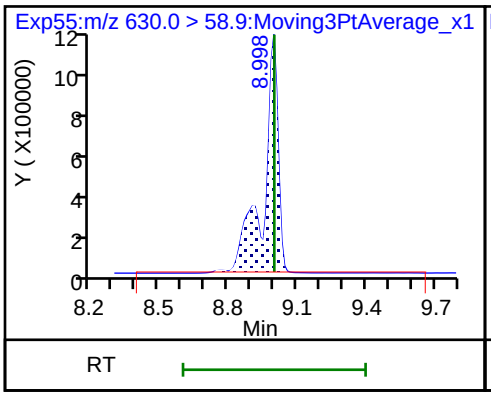
76 NMeFOSA



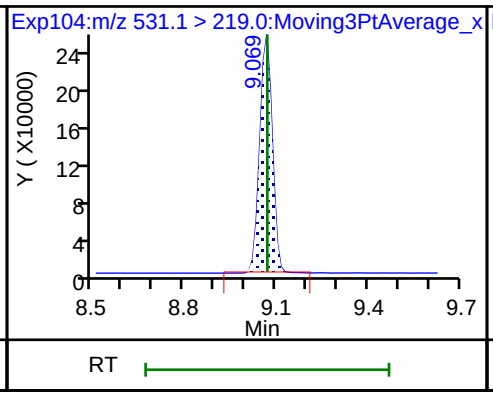
D 77 d9-N-EtFOSE



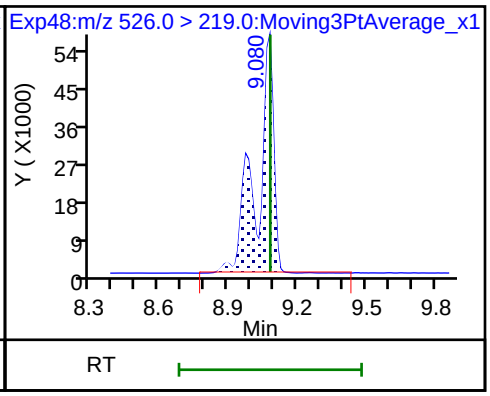
78 N-EtFOSE-M



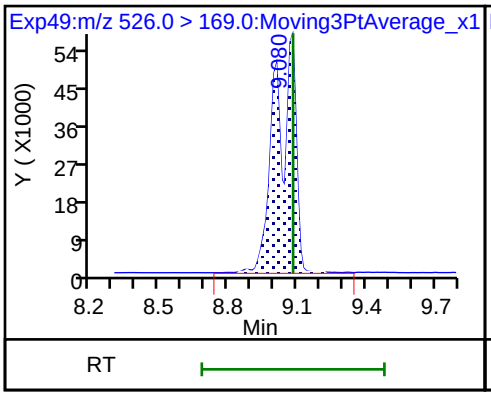
D 79 d5-NEtPFOSA



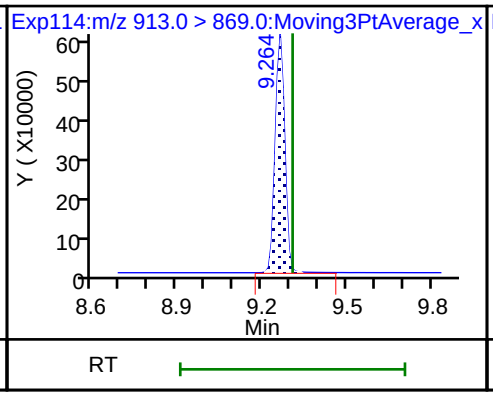
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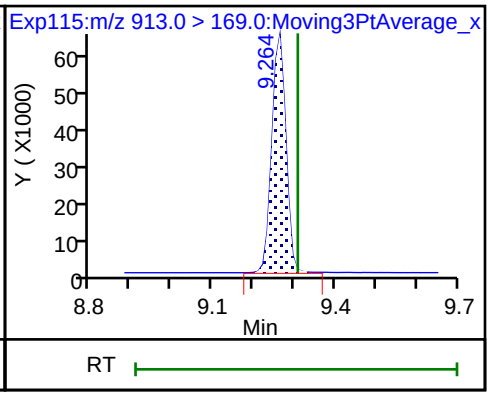
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

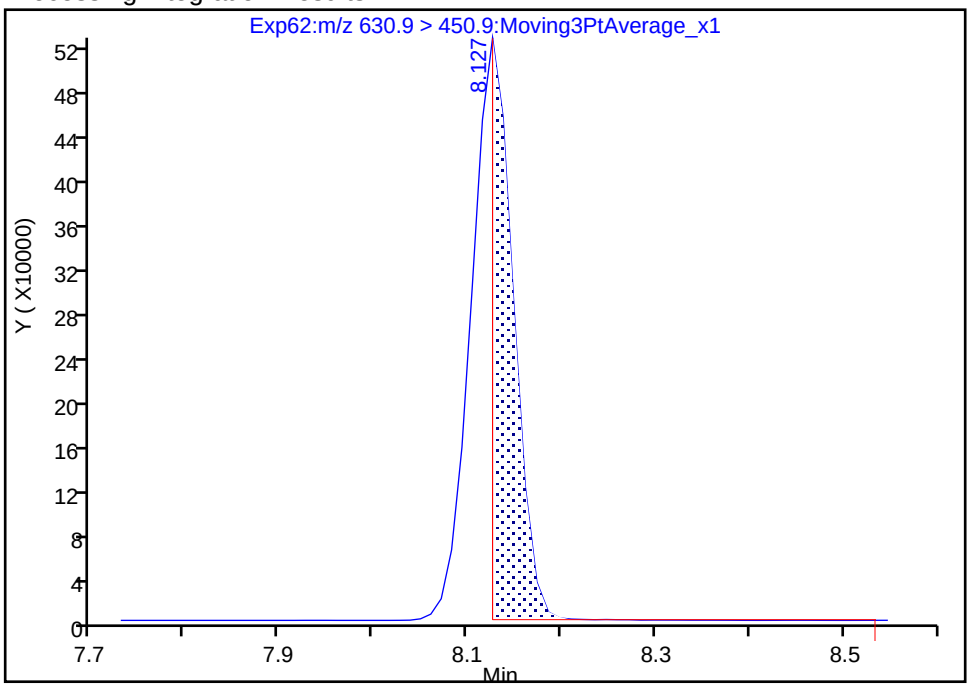
Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-47.d
Injection Date: 19-Feb-2026 21:24:22 Instrument ID: 30637
Lims ID: CCV 6_CAL4
Client ID:
Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 5 Worklist Smp#: 45
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL
Column: Detector Sciex2 QQQ

69 11ClFOS, CAS: 763051-92-9

Signal: 1

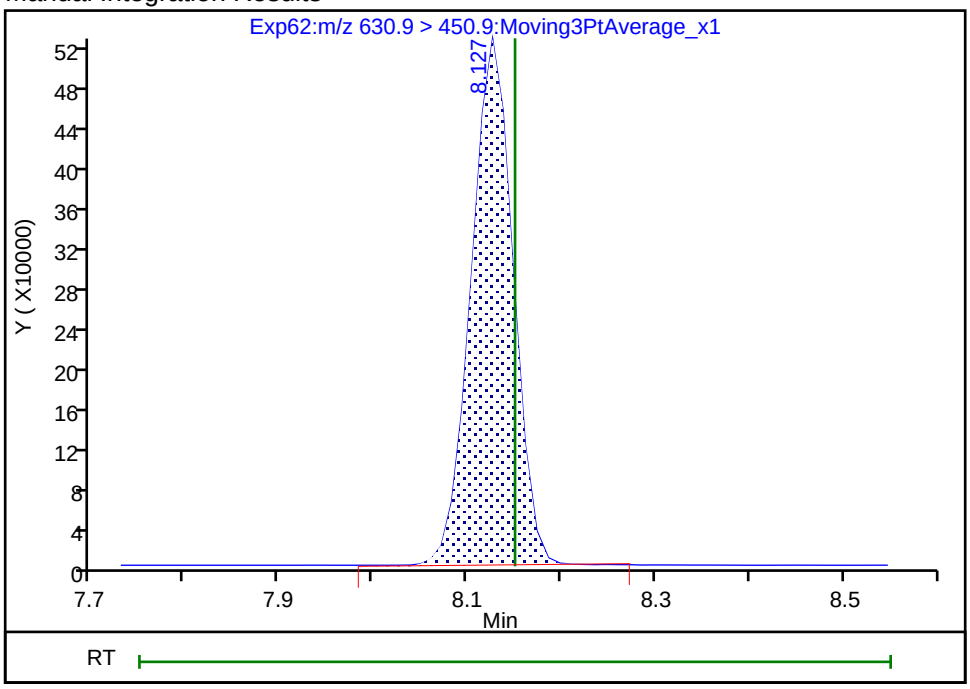
Processing Integration Results

RT: 8.13
Area: 801903
Amount: 0.435111
Amount Units: ng/ml



Manual Integration Results

RT: 8.13
Area: 1614674
Amount: 0.876119
Amount Units: ng/ml



Reviewer: XBL5, 19-Feb-2026 22:24:05 -05:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-11.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 16-Feb-2026 22:37:58 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: Plate: 1 Rack: 1 410-0175852-011
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 07:51:32 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:44:43
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 TUDCA										
498.20 > 80.00	5.235	5.235	0.0	1.000	562818	562818			90.0	
24 TCDCA										
498.10 > 80.00	5.675	5.675	0.0	1.000	351089	351089			18.4	
25 TDCA										a
498.00 > 80.00	5.795	5.795	0.0	1.000	311212	311212			22.1	a

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

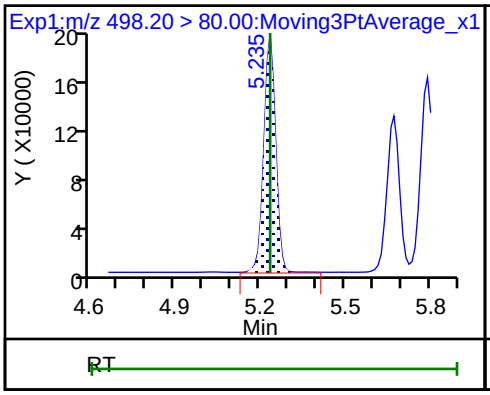
1633_125_WDM_00019 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2026 07:51:32 Chrom Revision: 2.3 16-Feb-2026 12:47:50

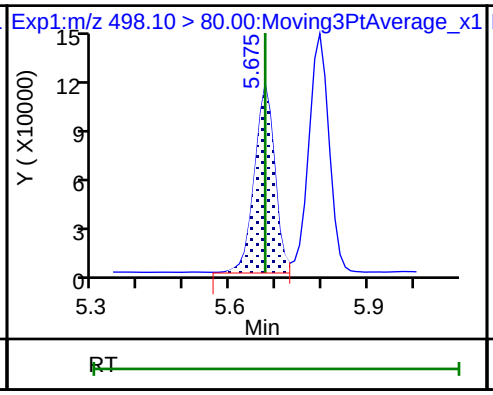
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-11.d				
Injection Date:	16-Feb-2026 22:37:58	Instrument ID:	30577		
Lims ID:	WDM				
Client ID:					
Operator ID:	ETUS023_USR_INS00009	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30577-1633-125	Limit Group:	LC - 1633 LVI- ICAL		

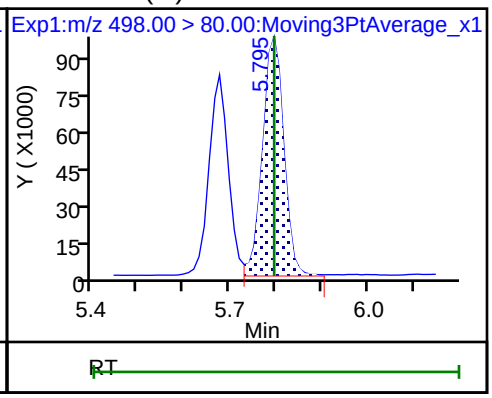
13 TUDCA

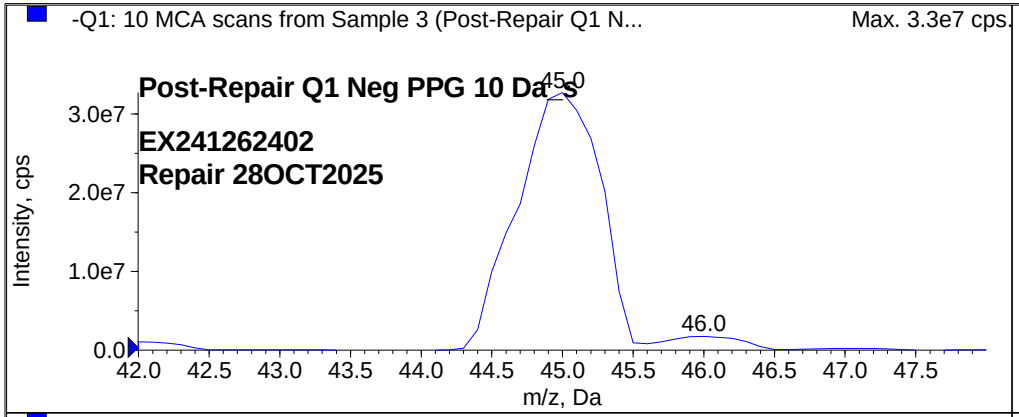


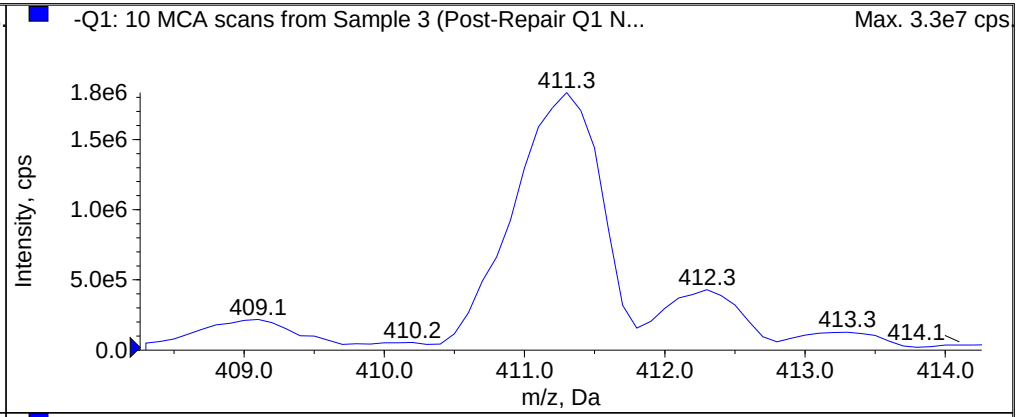
24 TCDCA

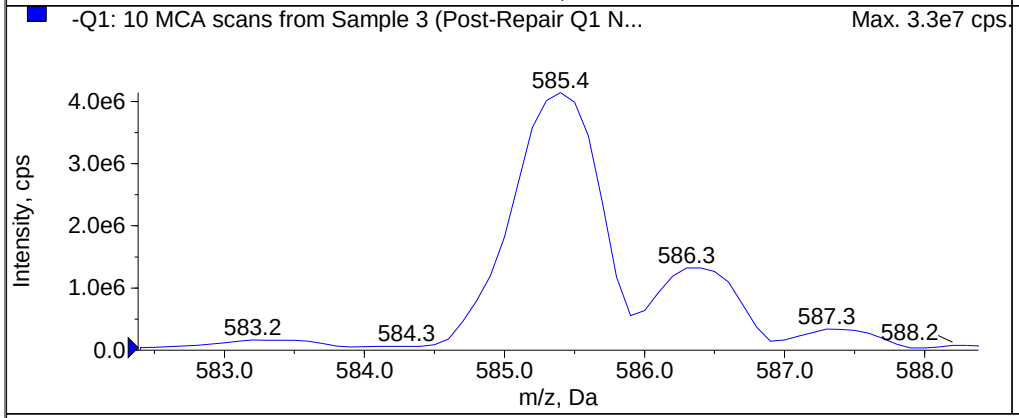


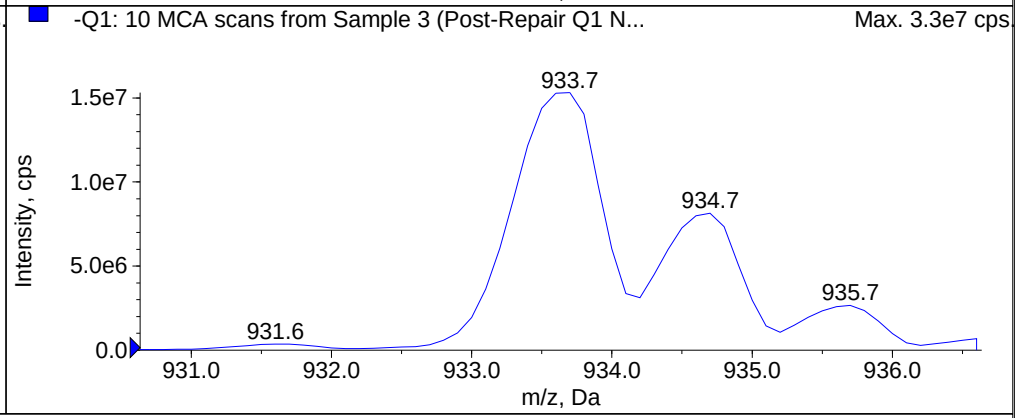
25 TDCA (M)





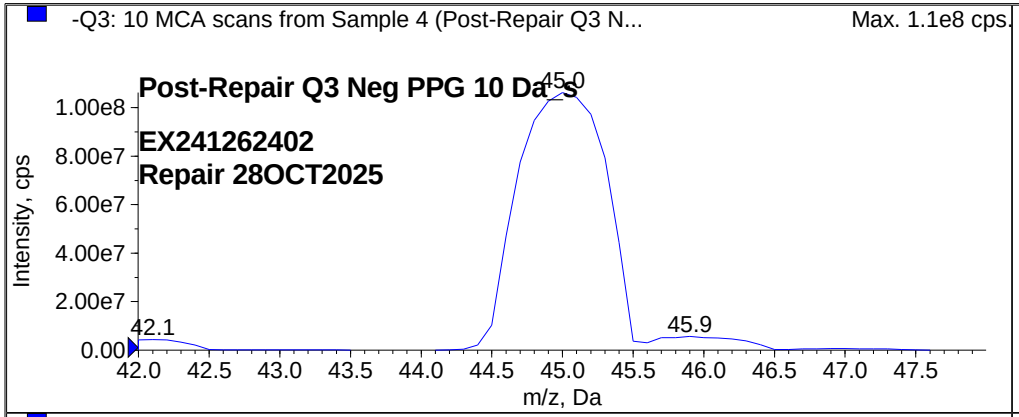


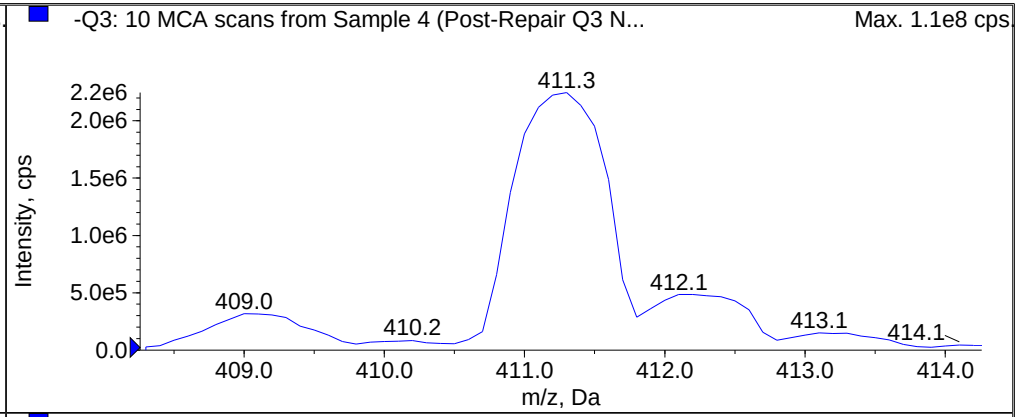


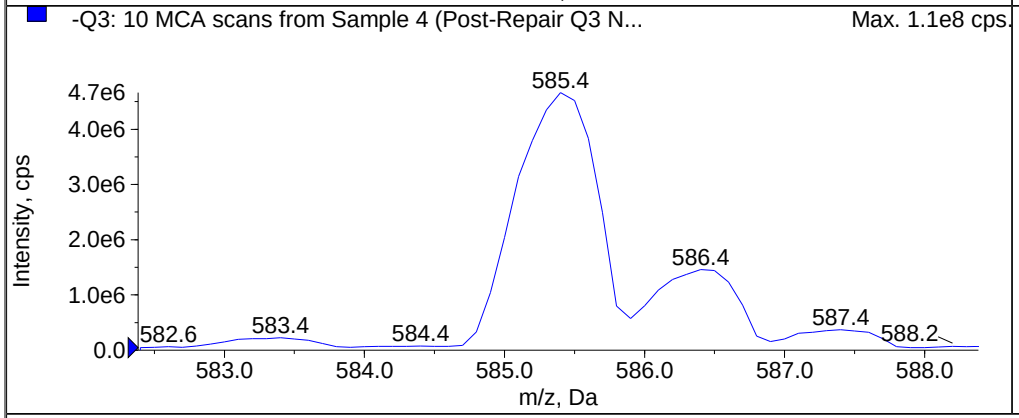


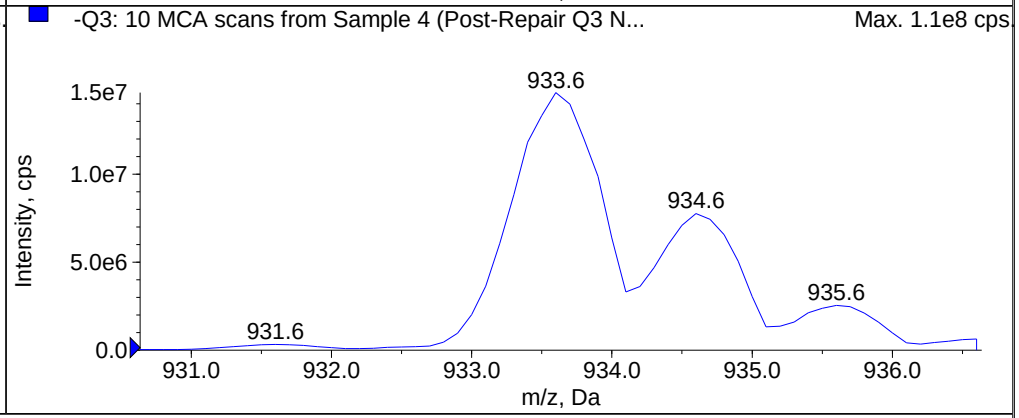
Peak List for " -Q1: 10 MCA scans from Sample 3 (Post-Repair Q1 Neg PPG 10 Da_s) of Post-Repair Q1 Neg PPG 10 Da_s.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	45.0072	3.2731e7	0.6903	-9.1564e-3
2	411.2590	411.2640	1.8346e6	0.6911	-5.0078e-3
3	585.3850	585.3866	4.1421e6	0.6975	-1.5678e-3
4	933.6360	933.6191	1.5313e7	0.7043	0.0169
5	1572.0970	n/a	n/a	n/a	n/a
6	1863.3060	n/a	n/a	n/a	n/a
7	1979.3890	n/a	n/a	n/a	n/a









Peak List for " -Q3: 10 MCA scans from Sample 4 (Post-Repair Q3 Neg PPG 10 Da_s) of Post-Repair Q3 Neg PPG 10 Da_s.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	45.0041	1.0625e8	0.7550	-6.1498e-3
2	411.2590	411.2594	2.2462e6	0.7770	-3.5603e-4
3	585.3850	585.3838	4.6620e6	0.6835	1.2294e-3
4	933.6360	933.6125	1.4621e7	0.7283	0.0235
5	1572.0970	n/a	n/a	n/a	n/a
6	1863.3060	n/a	n/a	n/a	n/a
7	1979.3890	n/a	n/a	n/a	n/a

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-04.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Feb-2026 10:52:33 ALS Bottle#: 11 Worklist Smp#: 4
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: Plate: 1 Rack: 1
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 18-Feb-2026 14:30:41 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1628

First Level Reviewer: DX7G Date: 18-Feb-2026 14:27:24
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 TUDCA										
498.20 > 80.00	5.239	5.239	0.0	1.000	452547	452547			98.3	
24 TCDCA										
498.10 > 80.00	5.680	5.680	0.0	1.000	288685	288685			17.5	
25 TDCA										
498.00 > 80.00	5.800	5.800	0.0	1.000	240008	240008			20.6	

QC Flag Legend

Processing Flags

Reagents:

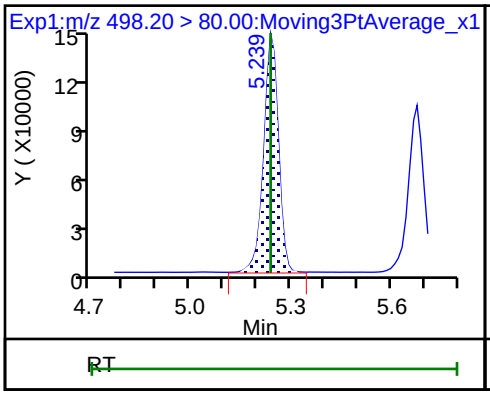
1633_125_WDM_00019 Amount Added: 1.00 Units: mL

Report Date: 18-Feb-2026 14:30:42 Chrom Revision: 2.3 16-Feb-2026 12:47:50

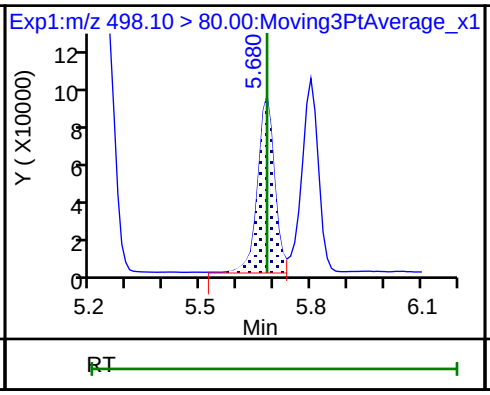
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26Feb18-04.d				
Injection Date:	18-Feb-2026 10:52:33	Instrument ID:	30577		
Lims ID:	WDM				
Client ID:					
Operator ID:	ETUS023_USR_INS00009	ALS Bottle#:	11	Worklist Smp#:	4
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30577-1633-125	Limit Group:	LC - 1633 LVI- ICAL		

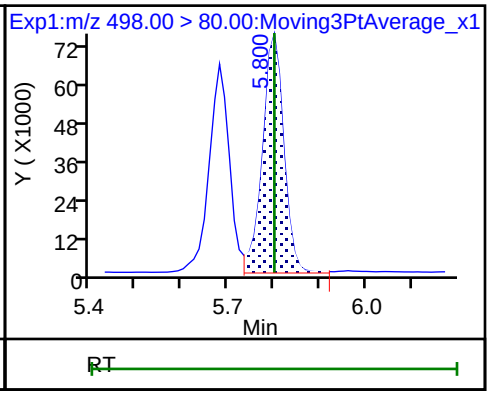
13 TUDCA



24 TCDCA



25 TDCA



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-11.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 04-Feb-2026 14:46:42 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: 410-0174629-011 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 11
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 21:01:57 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 20:44:36
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 TUDCA 498.2 > 80.0	5.019	5.019	0.0	1.000	612599	612599			247	
24 TCDCA 498.1 > 80.0	5.452	5.452	0.0	1.000	372410	372410			104	
26 TDCA 498.0 > 80.0	5.575	5.575	0.0	1.000	335075	335075			28.9	

QC Flag Legend
Processing Flags

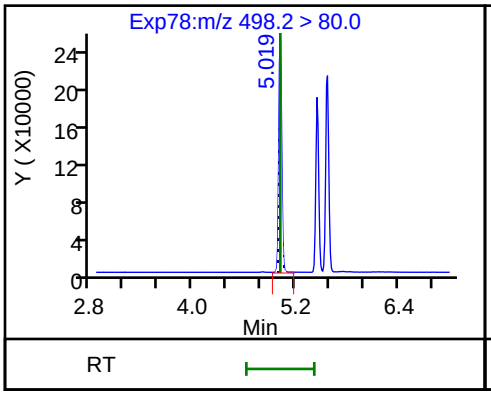
Reagents:
1633_125_WDM_00018 Amount Added: 200.00 Units: uL

Report Date: 04-Feb-2026 21:01:57 Chrom Revision: 2.3 29-Jan-2026 10:42:58

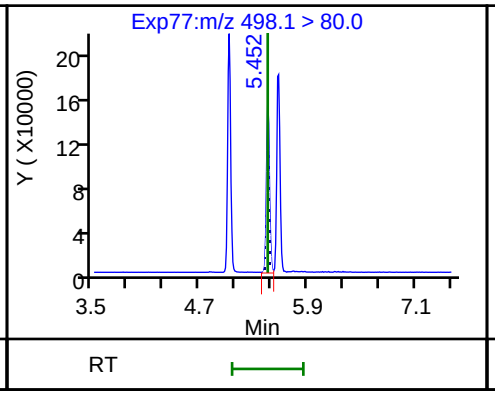
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-11.d				
Injection Date:	04-Feb-2026 14:46:42	Instrument ID:	30637		
Lims ID:	WDM				
Client ID:					
Operator ID:	ETUS023_USR_INS00050	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	30637_1633Final	Limit Group:	LC - 1633 LVI- ICAL		

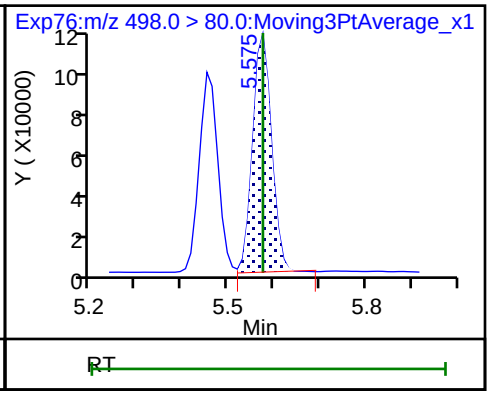
13 TUDCA



24 TCDCA



26 TDCA



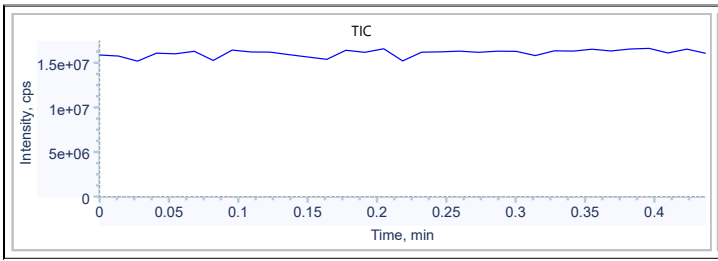
Instrument Tuning Report

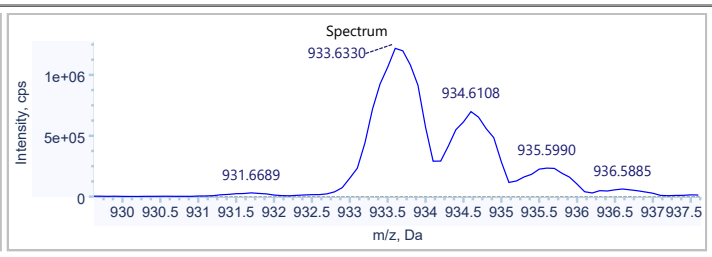
1/6/2025 10:01 AM

Instrument Name:	SCIEX Triple Quad 5500+	**Manufacturer:**	AB Sciex
Instrument Model:	TripleQuad5500+	**Target Instrument:**	TripleQuad5500+
Ion Source:	TurboIonSpray	**Optimization Set:**	5500+ MS Scan Tuning
Serial Number:	EX242162406	**Doc Num Revision:**	TripleQuad5500+PickSetTune Eng
User Name:	ETUS023_USR_INS00050		

1. Negative Prerequisites

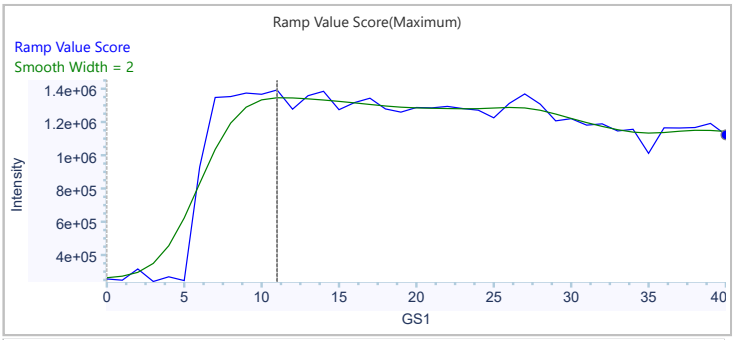
Step	Result	Details
Achieve Stable Spray Neg	**Pass**	

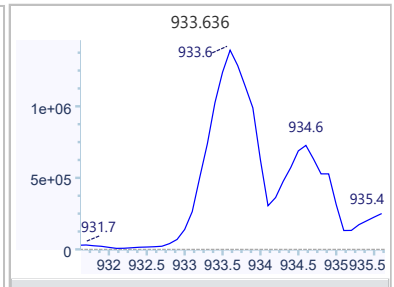




Step	Result	Details
Optimize Gas 1 Neg	**Pass**	Found best GS1 (psi) value of 11

Pause After Acquisition Iteration: 1 / 1





Item	Min	Max	Actual	Status
Intensity (cps)	5.00e4	1.00e8	1.39e6	Pass

Parameter	Ramp Start	Ramp End	Ramp Step	Initial Default	Current Value	Best Value
GS1 (psi)	0.0	40.0	1.0	20.0	11.0	11.0

Best Value Criteria: The value with the maximum intensity that meets the specifications.
Spectra: Average 3 scans per step. Scan speed: 10
Selected Value: 11.0

Saved value 933.636 - 11 to: GS1.MassSpectrometer

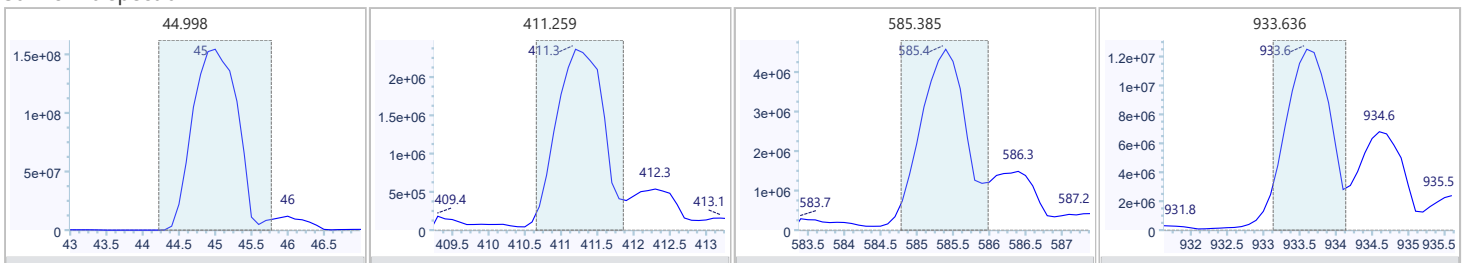
2. Negative Q1 Unit Resolution Optimization

Step	Result	Details

Instrument Name:	SCIEX Triple Quad 5500+	**Manufacturer:**	AB Sciex
Instrument Model:	TripleQuad5500+	**Target Instrument:**	TripleQuad5500+
Ion Source:	TurboIonSpray	**Optimization Set:**	5500+ MS Scan Tuning
Serial Number:	EX242162406	**Doc Num Revision:**	TripleQuad5500+PickSetTune Eng
User Name:	ETUS023_USR_INS00050		

Step	Result	Details
Confirm Q1 Negative 10 Da/sec	**Pass**	Data file:D:\SCIEX OS Data\Optimization \Optimization-2025-01-06-09-57-48

Sum of 10 spectra



Item	Min	Max	Actual	Status
Mass (Da)	44.898	45.098	45.0035	Pass
Width (Da)	0.60	0.80	0.73	Pass
Intensity (cps)	1.00e2	1.00e11	1.54e8	Pass

Item	Min	Max	Actual	Status
Mass (Da)	411.159	411.359	411.2698	Pass
Width (Da)	0.60	0.80	0.75	Pass
Intensity (cps)	1.00e2	1.00e11	2.36e6	Pass

Item	Min	Max	Actual	Status
Mass (Da)	585.285	585.485	585.3714	Pass
Width (Da)	0.60	0.80	0.69	Pass
Intensity (cps)	1.00e2	1.00e11	4.58e6	Pass

Item	Min	Max	Actual	Status
Mass (Da)	933.536	933.736	933.6249	Pass
Width (Da)	0.60	0.80	0.72	Pass
Intensity (cps)	1.00e7	1.00e11	1.25e7	Pass

Calibration

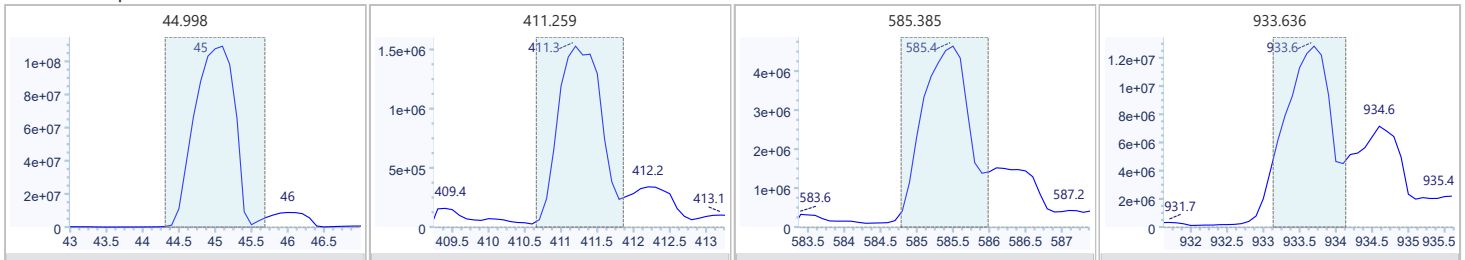
Average Slope: 183.001

Mass/Charge (Da)	DAC	Slope	Variation
44.998	8100	n/a	n/a
411.259	75121	182.987	1
585.385	106996	183.057	1
933.636	170720	182.983	1

3. Negative Q3 Unit Resolution Optimization

Step	Result	Details
Confirm Q3 Negative 10 Da/sec	**Pass**	Data file:D:\SCIEX OS Data\Optimization \Optimization-2025-01-06-09-57-48

Sum of 10 spectra



Item	Min	Max	Actual	Status
Mass (Da)	44.898	45.098	44.9982	Pass
Width (Da)	0.60	0.80	0.66	Pass
Intensity (cps)	1.00e2	1.00e11	1.09e8	Pass

Item	Min	Max	Actual	Status
Mass (Da)	411.159	411.359	411.262	Pass
Width (Da)	0.60	0.80	0.68	Pass
Intensity (cps)	1.00e2	1.00e11	1.53e6	Pass

Item	Min	Max	Actual	Status
Mass (Da)	585.285	585.485	585.3999	Pass
Width (Da)	0.60	0.80	0.75	Pass
Intensity (cps)	1.00e2	1.00e11	4.64e6	Pass

Item	Min	Max	Actual	Status
Mass (Da)	933.536	933.736	933.628	Pass
Width (Da)	0.60	0.80	0.75	Pass
Intensity (cps)	8.00e6	1.00e11	1.28e7	Pass

Calibration

Average Slope: 183.108

Mass/Charge (Da)	DAC	Slope	Variation
44.998	8096	n/a	n/a
411.259	75149	183.074	1
585.385	107032	183.103	1
933.636	170813	183.147	1

Instrument Tuning Report

1/6/2025 10:01 AM

Instrument Name:	SCIEX Triple Quad 5500+	**Manufacturer:**	AB Sciex
Instrument Model:	TripleQuad5500+	**Target Instrument:**	TripleQuad5500+
Ion Source:	TurboIonSpray	**Optimization Set:**	5500+ MS Scan Tuning
Serial Number:	EX242162406	**Doc Num Revision:**	TripleQuad5500+PickSetTune Eng
User Name:	ETUS023_USR_INS00050		

4. Report

Step	Result	Details
Save Tuning Settings	Incomplete	
Save Report	Incomplete	

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26Feb19a-04.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Feb-2026 10:07:01 ALS Bottle#: 11 Worklist Smp#: 4
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: WDM
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 11
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 11:39:36 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1684

First Level Reviewer: VGQ7 Date: 19-Feb-2026 11:39:06
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 TUDCA 498.2 > 80.0	5.028	5.028	0.0	1.000	489422	489422			212	
24 TCDCA 498.1 > 80.0	5.474	5.474	0.0	1.000	296781	296781			99.2	
26 TDCA 498.0 > 80.0	5.585	5.585	0.0	1.000	276637	276637			31.1	

QC Flag Legend

Processing Flags

Reagents:

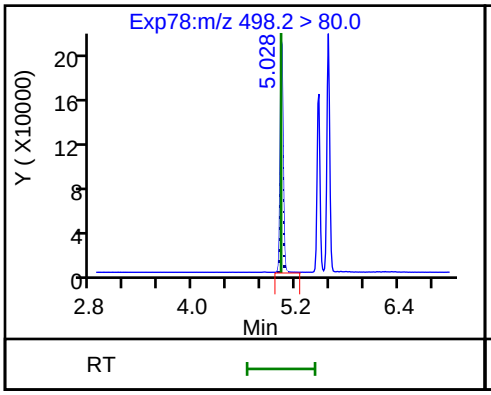
1633_125_WDM_00018 Amount Added: 1.00 Units: mL

Report Date: 19-Feb-2026 11:39:36 Chrom Revision: 2.3 16-Feb-2026 12:47:50

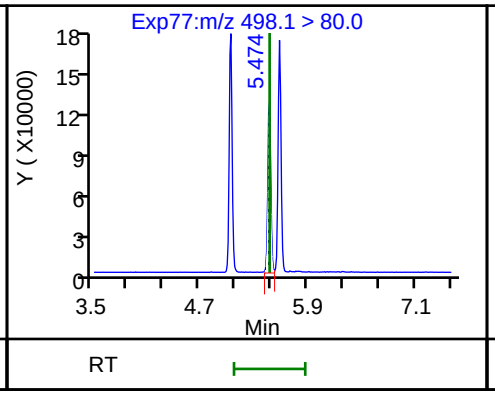
Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26Feb19a-04.d				
Injection Date:	19-Feb-2026 10:07:01	Instrument ID:	30637		
Lims ID:	WDM				
Client ID:					
Operator ID:	ETUS023_USR_INS00050	ALS Bottle#:	11	Worklist Smp#:	4
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30637_1633Final	Limit Group:	LC - 1633 LVI- ICAL		

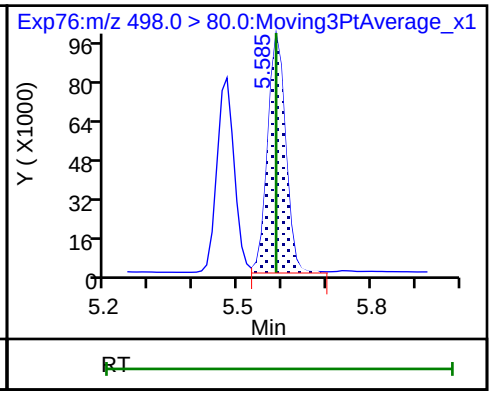
13 TUDCA



24 TCDCA



26 TDCA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-770909/1-A

Matrix: Water
Lab File ID: 26FEB19QC-49.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:16

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.00	U	4.00	1.10
2706-90-3	Perfluoropentanoic acid (PFPeA)	2.00	U	2.00	0.60
307-24-4	Perfluorohexanoic acid (PFHxA)	2.00	U	2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	2.00	U	2.00	0.90
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	0.80
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.00	U	2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	1.30
68259-12-1	Perfluorononanesulfonic acid (PFNS)	2.00	U	2.00	0.50
335-77-3	Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	2.00	U	2.00	0.60
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	4.00	U	4.00	1.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	4.00	U	4.00	1.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	4.00	U	4.00	1.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	2.00	U	2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.718	J	2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	2.00	U	2.00	1.10

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-770909/1-A

Matrix: Water
Lab File ID: 26FEB19QC-49.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:16

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.50
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.50
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	10.0	U	10.0	4.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	10.0	U	10.0	4.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	U	2.00	1.40
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	U	2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	U	2.00	0.50
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	U	2.00	0.50
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	U	2.00	0.50
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	2.00	U	2.00	0.50
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	2.00	U	2.00	0.50
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	U	2.00	0.50
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	4.00	U	4.00	1.00
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	10.0	U	10.0	2.80
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	10.0	U	10.0	2.50

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-770909/1-A

Matrix: Water
Lab File ID: 26FEB19QC-49.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:16

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	110		5-130
2283397-79-3	13C5 PFPeA	110		40-130
2328024-54-8	13C5 PFHxA	108		40-130
2328024-55-9	13C4 PFHpA	113		40-130
1350614-84-4	13C8 PFOA	111		40-130
2283397-80-6	13C9 PFNA	101		40-130
2328024-56-0	13C6 PFDA	87.8		40-130
STL02580	13C7 PFUnA	87.4		30-130
STL02116	13C2 PFTeDA	81.8		10-130
2708218-83-9	13C3 PFBS	111		40-135
2708218-85-1	13C3 PFHxS	99.8		40-130
2265893-05-6	13C8 PFOS	95.4		40-130
STL01056	13C8 FOSA	124		40-130
1400690-70-1	d3-NMeFOSAA	105		40-170
1265205-97-7	d5-NEtFOSAA	106		25-135
STL02395	13C2 4:2 FTS	112		40-200
STL02279	13C2 6:2 FTS	116		40-200
STL02280	13C2 8:2 FTS	95.1		40-300
STL02255	13C3 HFPO-DA	110		40-130
STL02277	d7-N-MeFOSE-M	66.4		10-130
STL02278	d9-N-EtFOSE-M	61.2		10-130
STL02704	d5-NEtPFOSA	85.6		10-130
STL02705	d3-NMePFOSA	87.4		10-130
960315-52-0	13C2 PFDoA	78.7		10-130

Report Date: 19-Feb-2026 21:19:12 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-49.d
Lims ID: MB 410-770909/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Feb-2026 20:16:41 ALS Bottle#: 49 Worklist Smp#: 49
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: MB770909
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 49
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:18:51 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 21:17:29
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.931	1.983	-0.052	0.475	2380269	2.30		115	1221	
D 3 13C4-PFBA										
216.8 > 171.9	4.065	4.087	-0.022	1.000	2692151	2.21		110	6947	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.087	-0.022		2094317	2.00			5994	
D 8 13C5 PFPeA										
268.0 > 223.0	4.722	4.747	-0.025	0.913	2717837	2.20		110	6737	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.997	5.018	-0.021	0.804	930644	5.27		112	4247	
D 15 13C5 PFHxA										
318.0 > 273.0	5.175	5.206	-0.031	1.000	3210904	2.17		108	8608	
* 16 13C2 PFHxA										
315.1 > 270.0	5.175	5.206	-0.031		4938819	5.00			10303	
D 19 13C3 PFBS										
302.1 > 79.9	5.303	5.337	-0.034	0.854	2004918	2.07		111	6444	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.359	5.381	-0.022	1.036	1843598	2.20		110	3923	
24 TCDCA										
498.1 > 80.0	5.631	5.474	0.157	0.803	475	NR			4.8	
26 TDCA										
498.0 > 80.0	5.700	5.585	0.115	0.813	1429	NR			3.3	
D 27 13C4 PFHpA										
367.0 > 322.0	5.596	5.631	-0.035	1.081	3084034	2.26		113	7981	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.802	5.825	-0.023	0.934	845492	5.54		116	4063	
33 BTS										
280.0 > 147.0	5.940	5.974	-0.034	0.956	3975	0.002164			16.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 34 13C8 PFOA										
421.0 > 376.0	5.997	6.020	-0.023	1.000	3396010	2.22		111	7383	
* 35 13C4 PFOA										
417.1 > 372.0	5.997	6.020	-0.023		5022057	5.00			6568	
D 38 13C3 PFHxS										
402.0 > 79.9	6.212	6.233	-0.021	1.000	1668098	1.89		99.8	4607	
* 39 18O2 PFHxS										
403.0 > 83.9	6.212	6.233	-0.021		1499673	1.90			5675	
D 41 13C9 PFNA										
472.0 > 427.0	6.389	6.413	-0.024	1.000	2926681	2.01		101	5757	
* 42 13C5 PFNA										
468.0 > 423.0	6.389	6.413	-0.024		2953954	2.00			5170	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.565	6.588	-0.023	1.057	691593	4.57		95.1	1811	
46 PFECHS										
461.0 > 381.0	6.577	6.611	-0.034	1.059	2233	0.001447	Target=1.67		13.9	
461.0 > 99.0	6.577	6.611	-0.034	1.059	2576		0.87(0.84-2.51)		9.3	
48 FHxSA										
398.0 > 78.0	6.687	6.709	-0.022	1.077	2108	0.001506			6.9	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.719	6.741	-0.022	0.958	1056586	5.23		105	1667	
D 51 13C6 PFDA										
519.0 > 474.0	6.773	6.804	-0.031	1.000	2711729	1.76		87.8	5801	
* 52 13C2 PFDA										
515.1 > 470.1	6.773	6.804	-0.031		2764974	2.00			4072	
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.888	6.921	-0.033	0.982	1343641	5.28		106	1810	
D 56 13C8 PFOS										
507.0 > 79.9	7.014	7.053	-0.039	1.000	1539518	1.83		95.4	2966	
* 57 13C4 PFOS										
502.8 > 79.9	7.014	7.053	-0.039		1162939	1.92			5153	
D 59 13C7 PFUnA										
570.0 > 525.0	7.165	7.195	-0.030	1.058	2696467	1.75		87.4	7619	
D 63 13C2 PFDoA										
615.0 > 570.0	7.560	7.603	-0.043	1.116	2297383	1.57		78.7	3718	
D 65 13C8 FOSA										
506.1 > 77.8	7.832	7.842	-0.010	1.117	2092516	2.48		124	5085	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.340	8.382	-0.042	1.231	1431812	1.64		81.8	2305	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.736	8.749	-0.013	1.246	715186	3.32		66.4	358	
74 N-MeFOSE-M										
616.1 > 58.9	8.761	8.761	0.0	1.003	30797	0.0965			29.1	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.858	8.858	0.0	1.263	368447	1.75		87.4	2535	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
76 NMeFOSA										
511.9 > 219.0	8.870	8.870	0.0	1.001	3079	0.0180	Target=0.75		38.7	
511.9 > 169.0	8.870	8.870	0.0	1.001	3849		0.80(0.38-1.13)		29.3	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.988	8.988	0.0	1.281	880808	3.06		61.2	357	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.070	9.070	0.0	1.293	492243	1.71		85.6	2202	
80 N-EtFOSA-M										
526.0 > 219.0	9.082	9.082	0.0	1.001	4204	0.0203	Target=0.82		53.3	
526.0 > 169.0	9.011	9.082	-0.071	0.994	4929		0.85(0.41-1.23)		53.1	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 21:19:12 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-49.d

Injection Date: 19-Feb-2026 20:16:41 Instrument ID: 30637

Lims ID: MB 410-770909/1-A

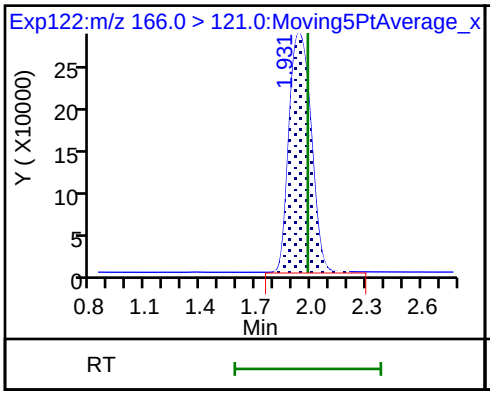
Client ID:

Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 49 Worklist Smp#: 49

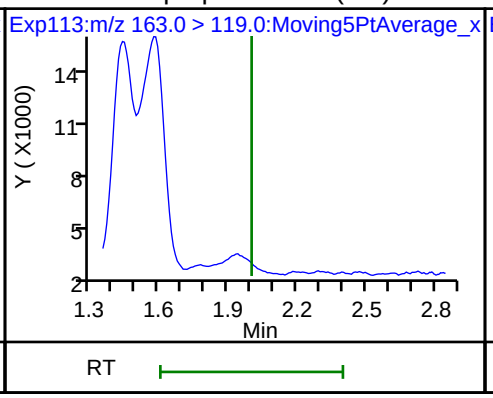
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

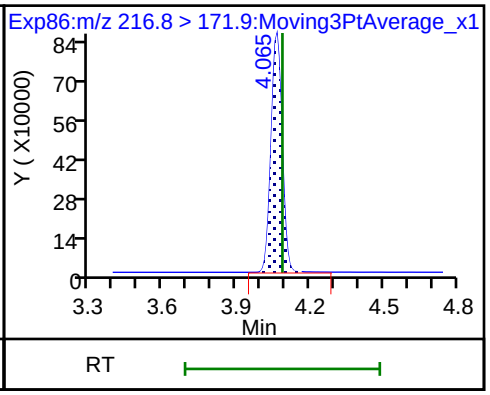
D 1 13C3PFPrA



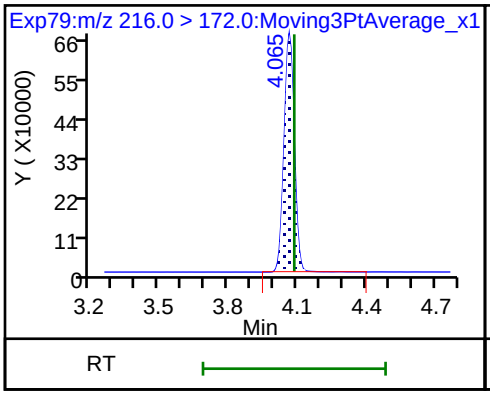
2 Perfluoropropionic acid (ND)



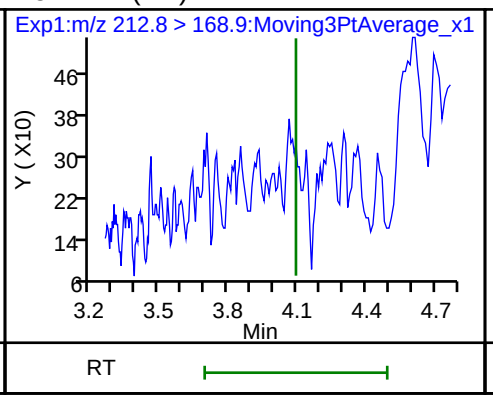
D 3 13C4-PFBA



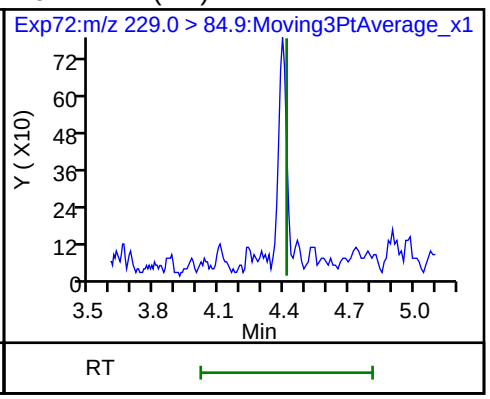
* 4 13C3PFBA



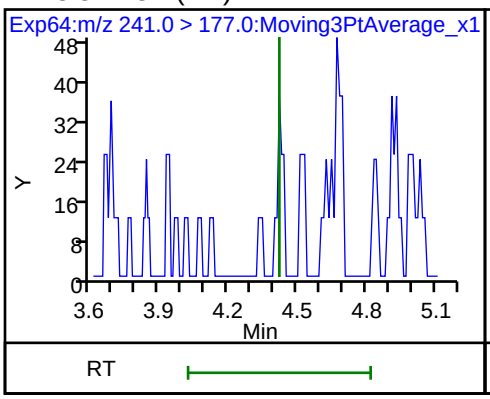
5 PFBA (ND)



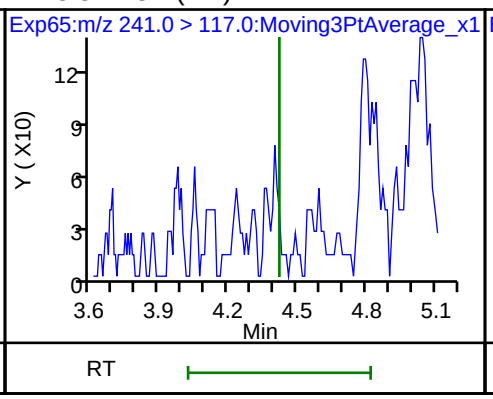
6 PFMPA (ND)



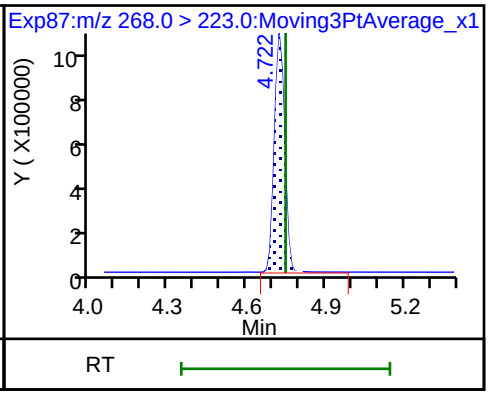
7 3:3 FTCA (ND)



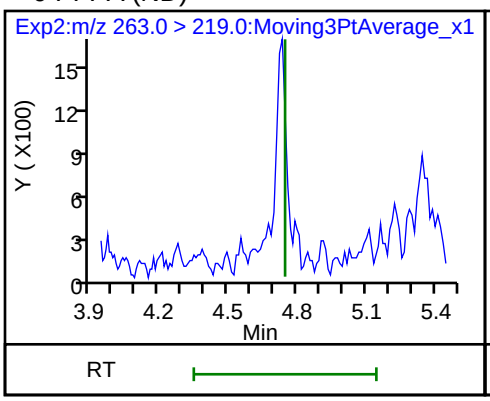
7 3:3 FTCA (ND)



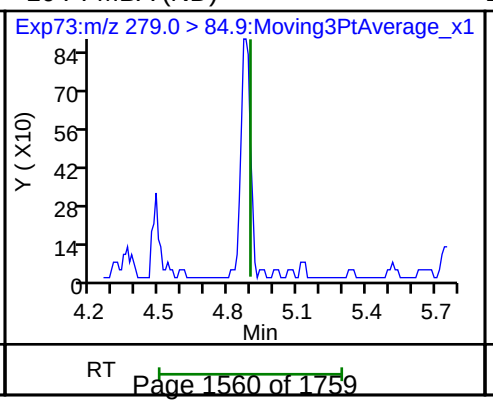
D 8 13C5 PFPeA



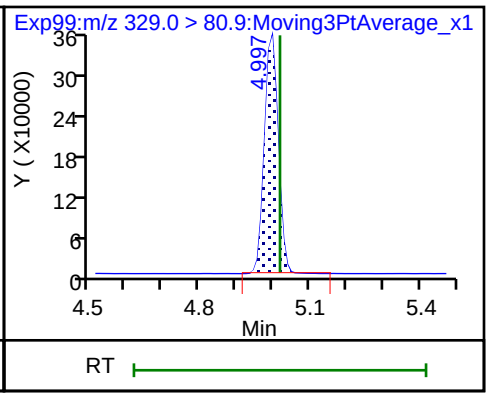
9 PFPA (ND)



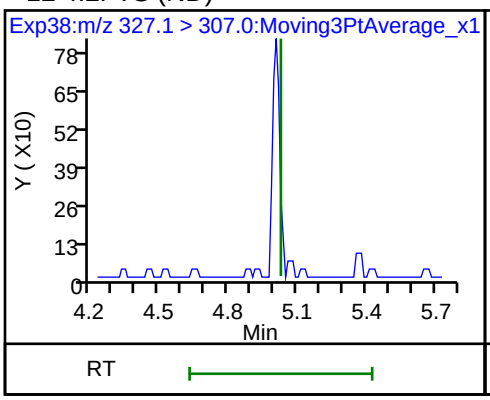
10 PFMBA (ND)



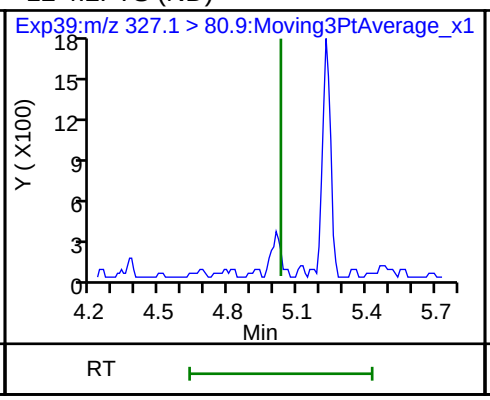
D 11 13C2-4:2FTS



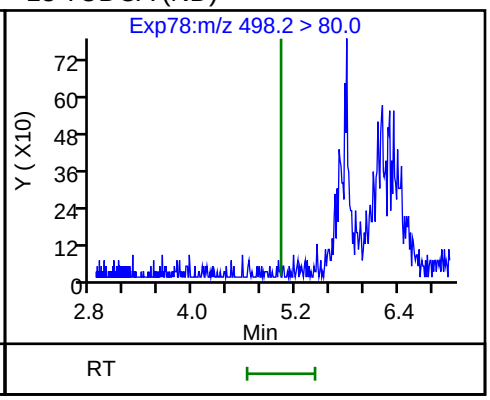
12 4:2FTS (ND)



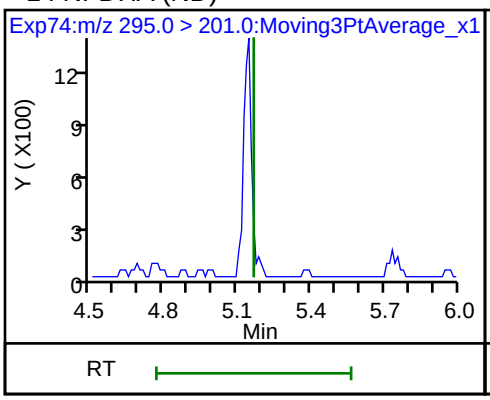
12 4:2FTS (ND)



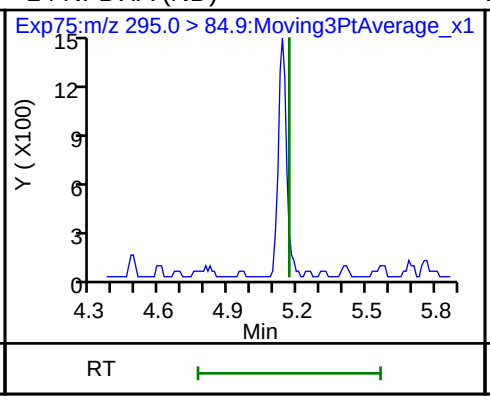
13 TUDCA (ND)



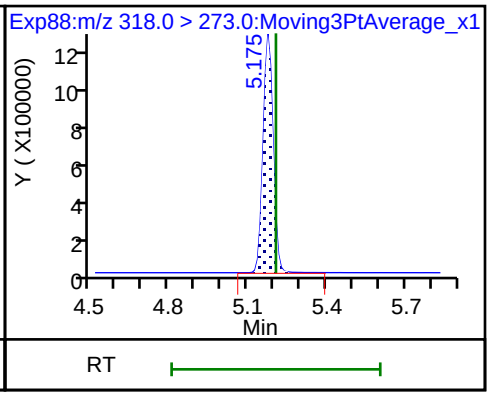
14 NFDHA (ND)



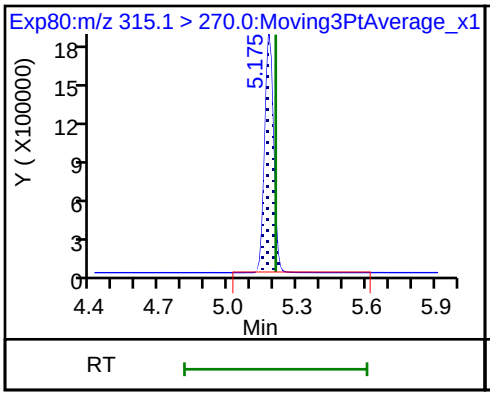
14 NFDHA (ND)



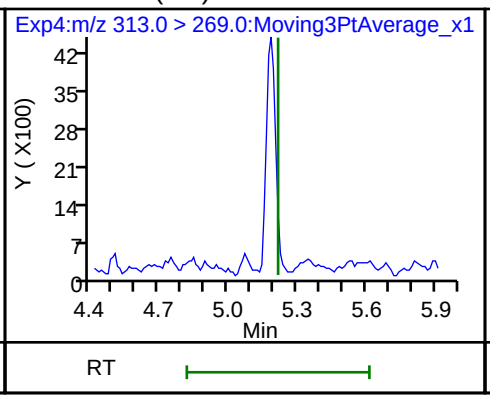
D 15 13C5 PFHxA



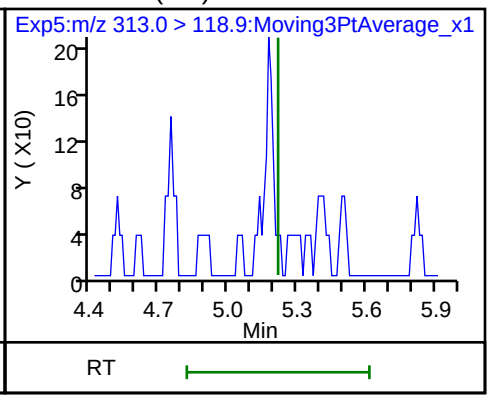
* 16 13C2 PFHxA



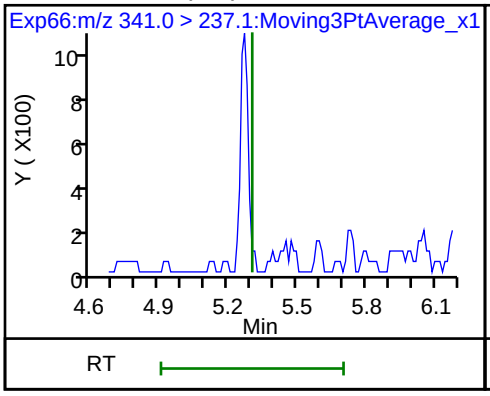
17 PFHxA (ND)



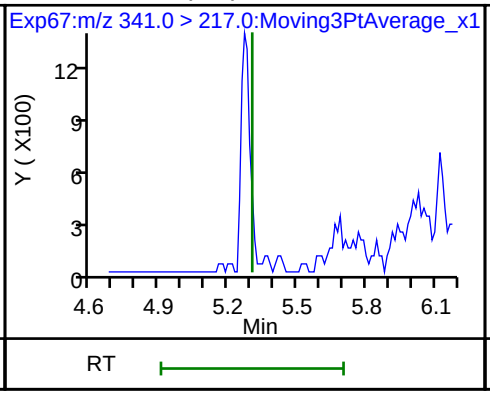
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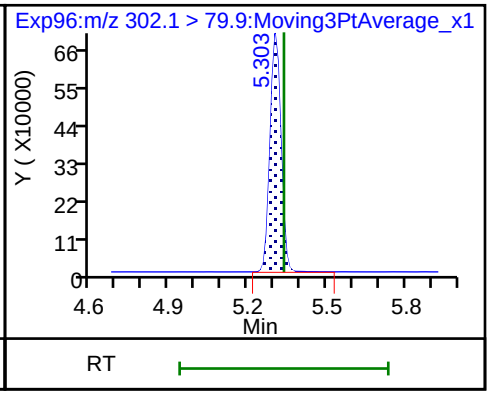
18 5:3 FTCA (ND)



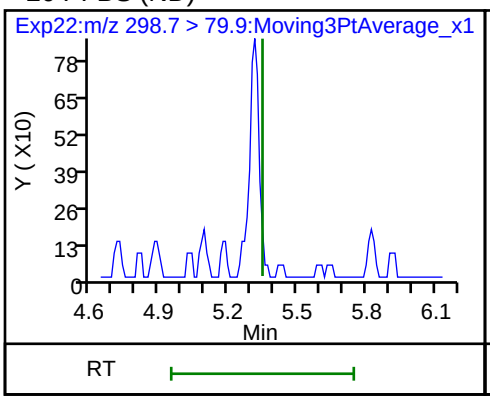
18 5:3 FTCA (ND)



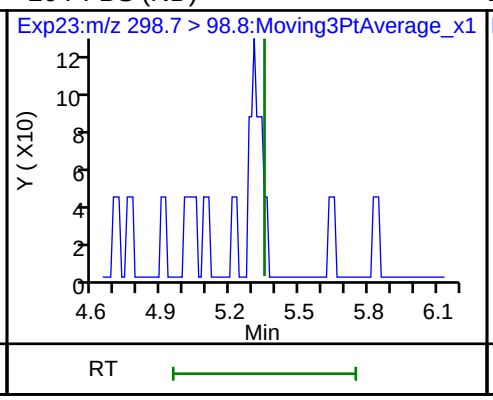
D 19 13C3 PFBS



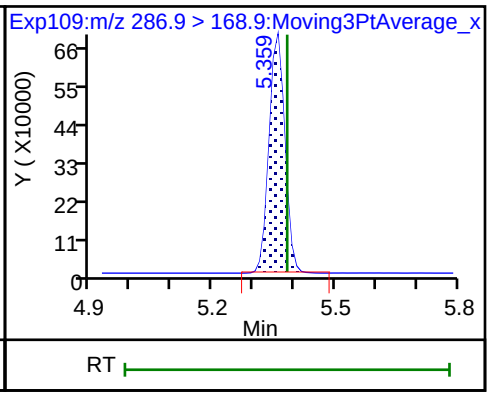
20 PFBS (ND)



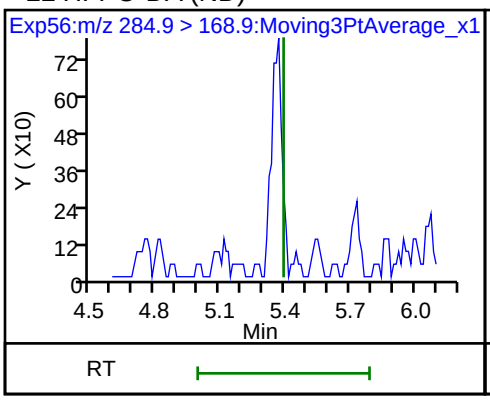
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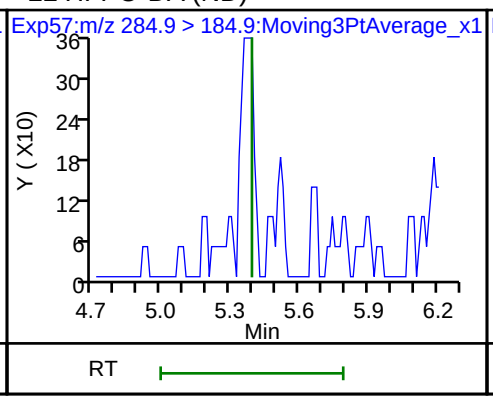
D 21 13C3 HFPO-DA



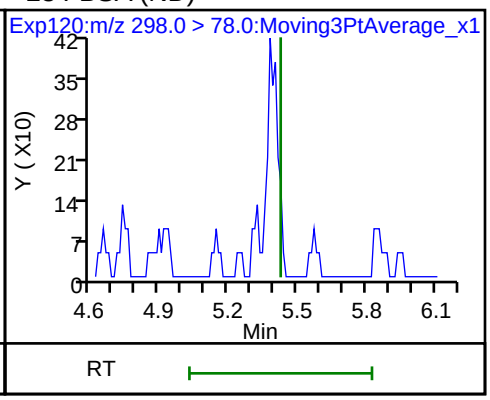
22 HFPO-DA (ND)



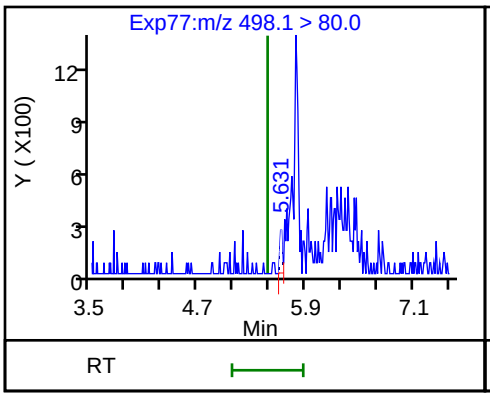
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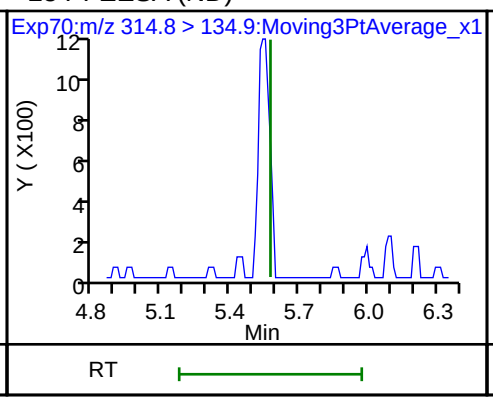
23 FBSA (ND)



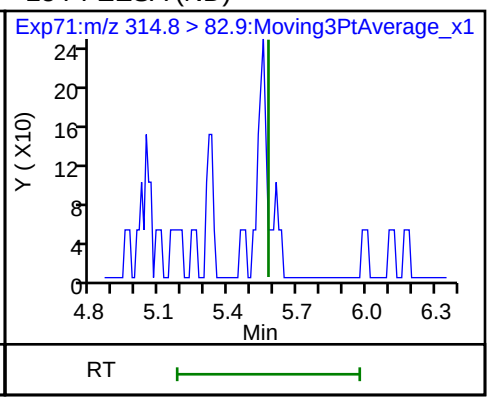
24 TCDCA



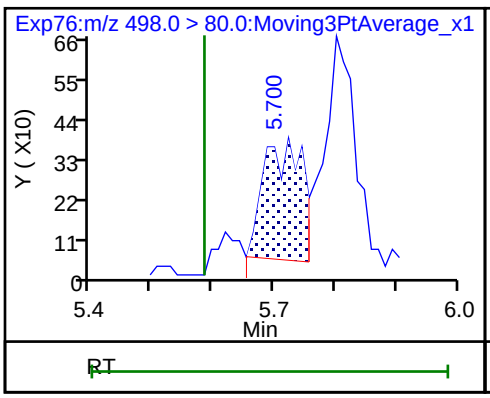
25 PFEESA (ND)



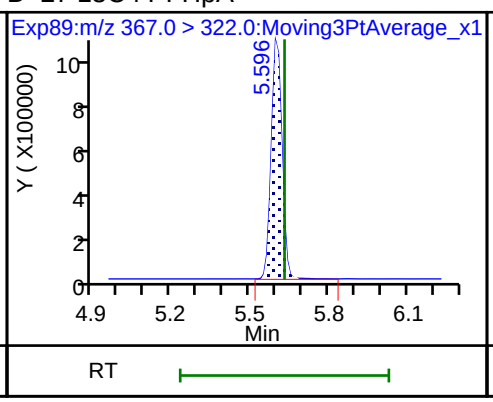
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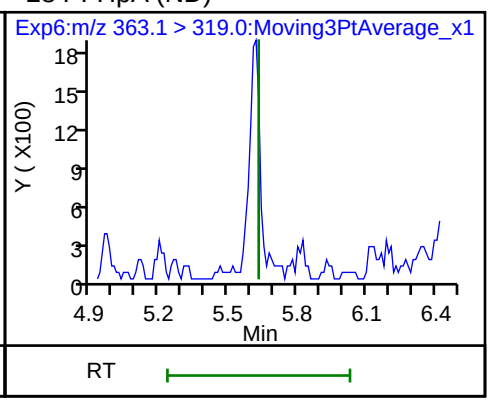
26 TDCA



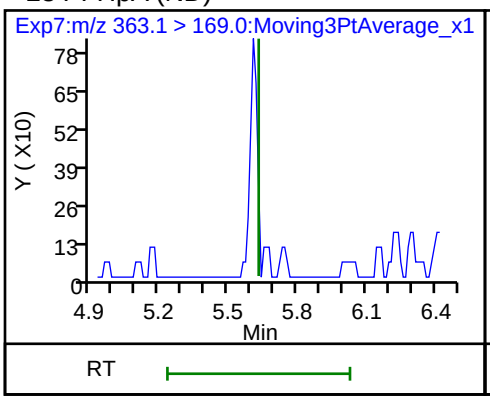
D 27 13C4 PFHpA



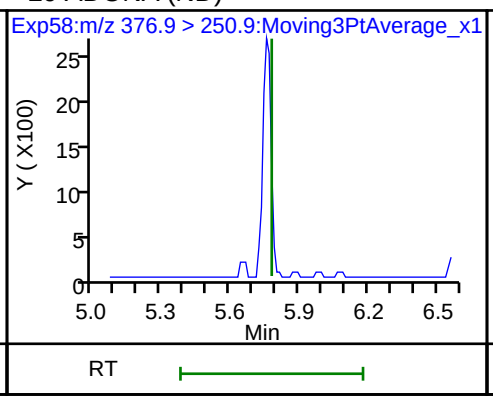
28 PFHpA (ND)



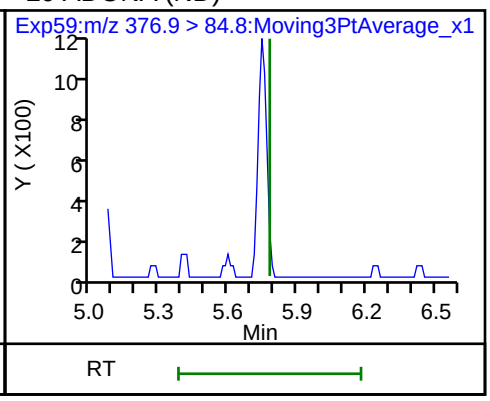
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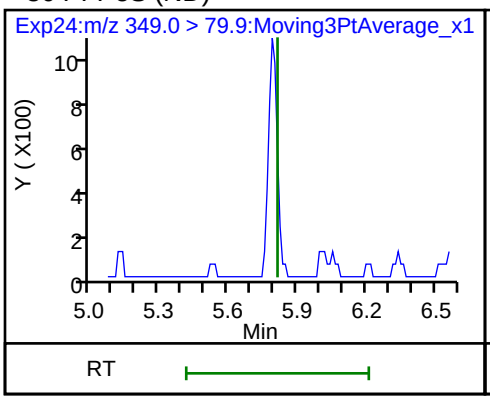
29 ADONA (ND)



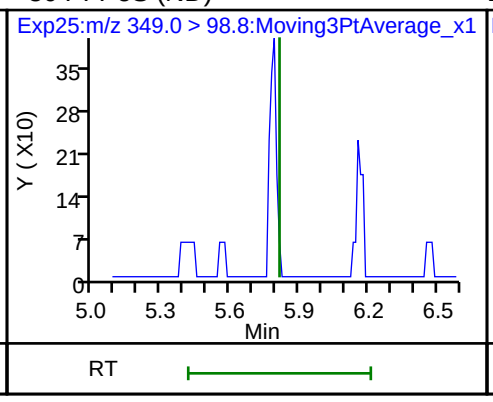
29 ADONA (ND)



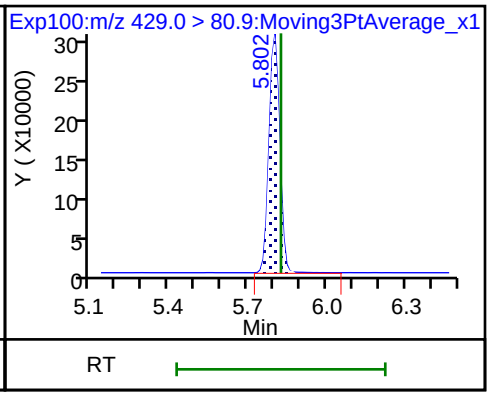
30 PFPeS (ND)



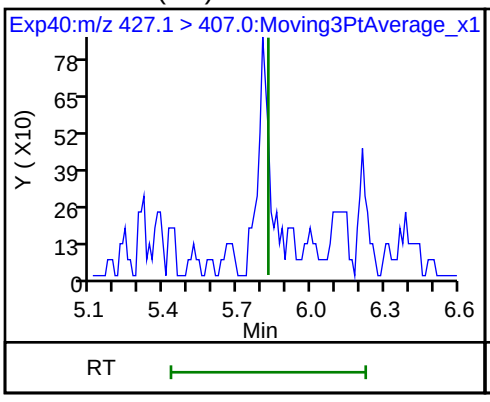
30 PFPeS (ND)



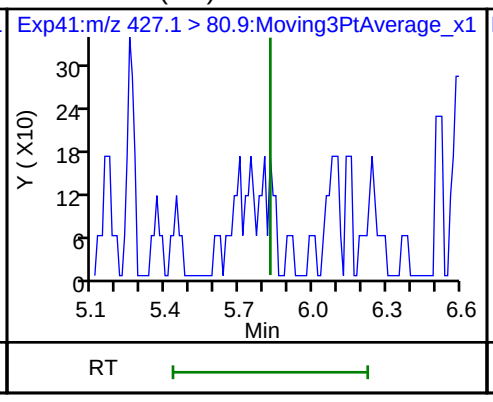
D 31 13C2-6:2FTS



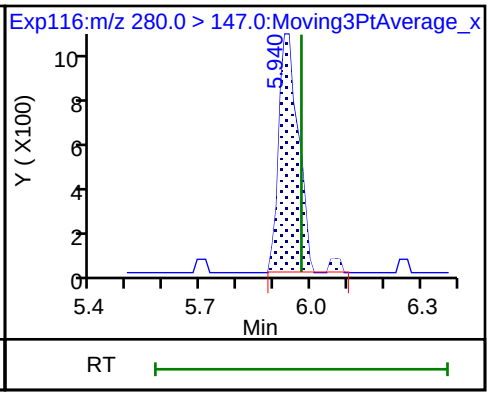
32 6:2FTS (ND)



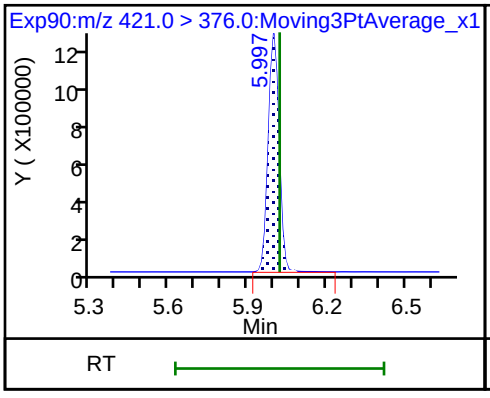
32 6:2FTS (ND)



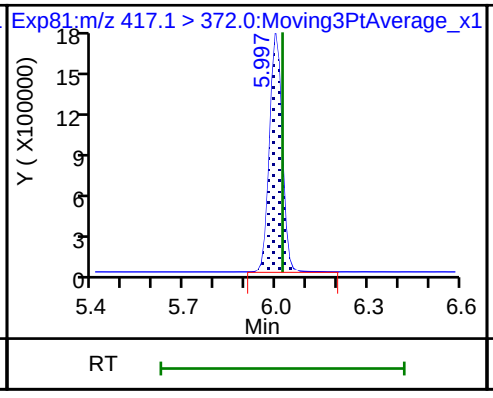
33 BTS



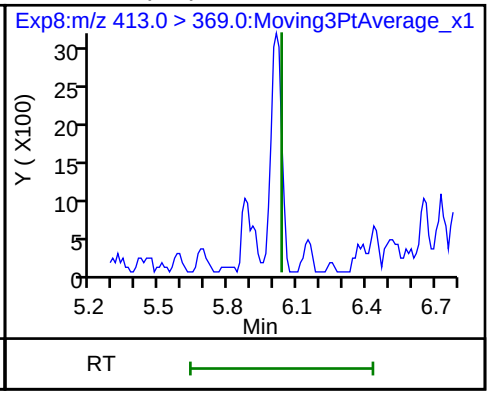
D 34 13C8 PFOA



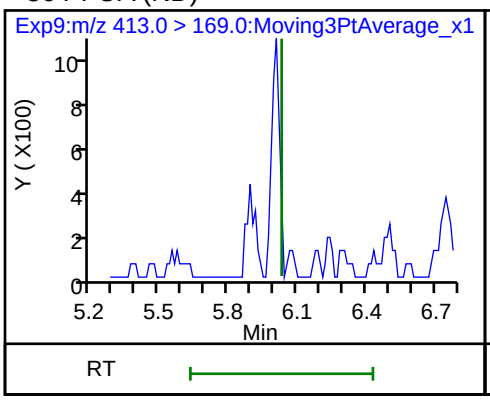
* 35 13C4 PFOA



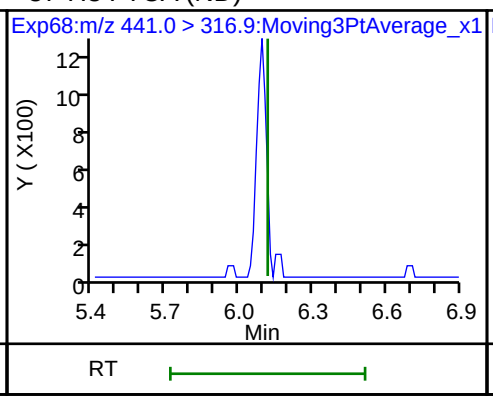
36 PFOA (ND)



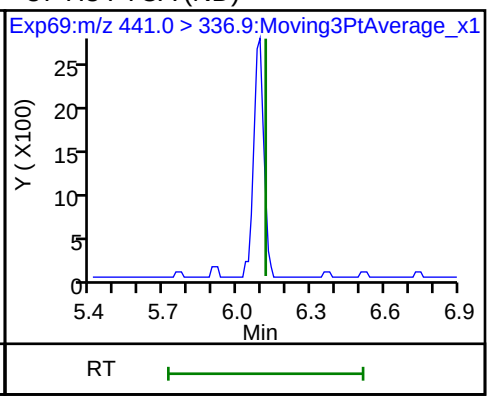
36 PFOA (ND)



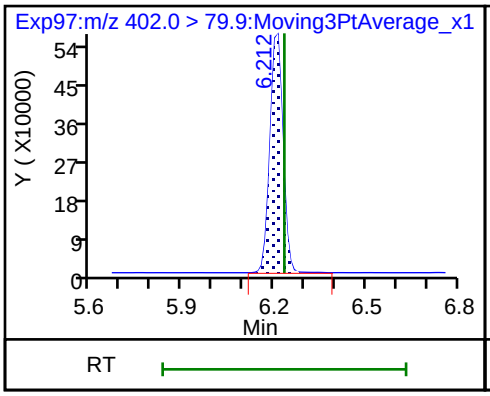
37 7:3 FTCA (ND)



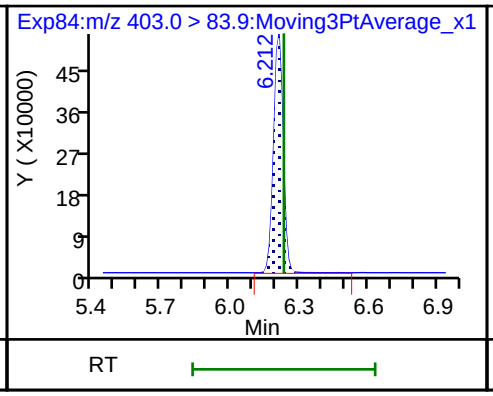
37 7:3 FTCA (ND)



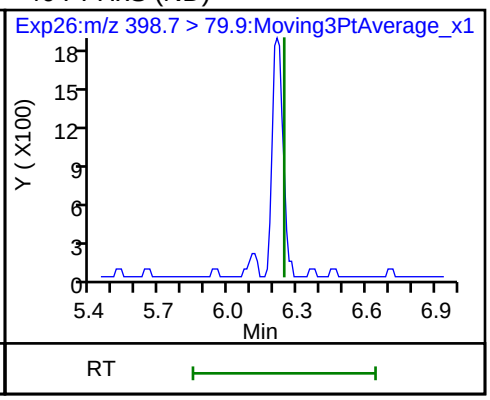
D 38 13C3 PFHxS



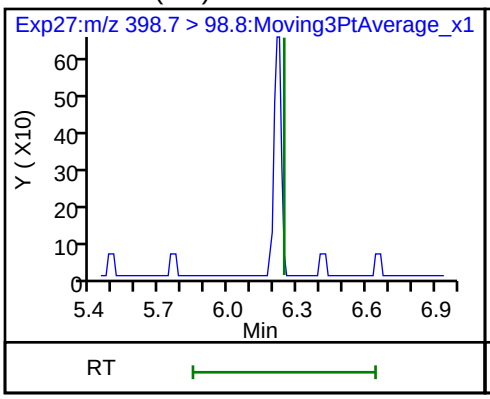
* 39 18O2 PFHxS



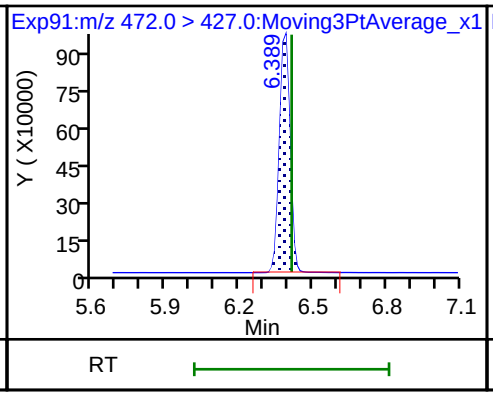
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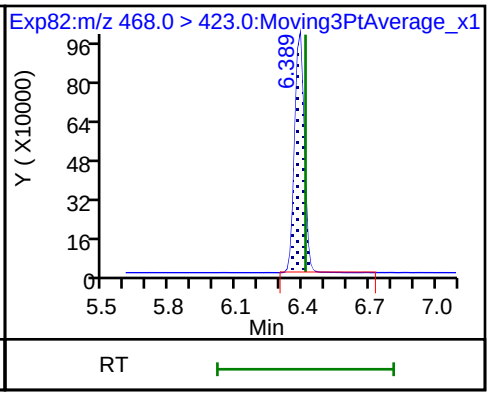
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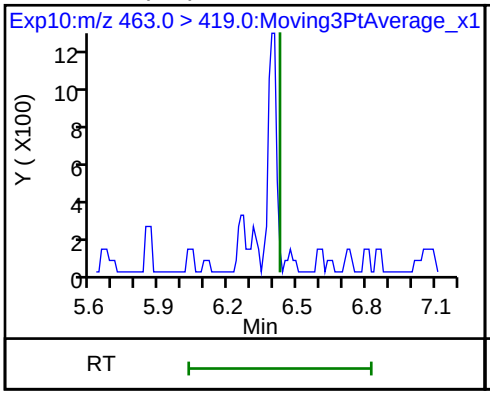
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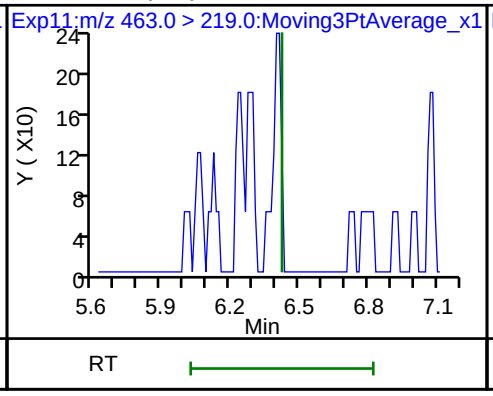
* 42 13C5 PFNA



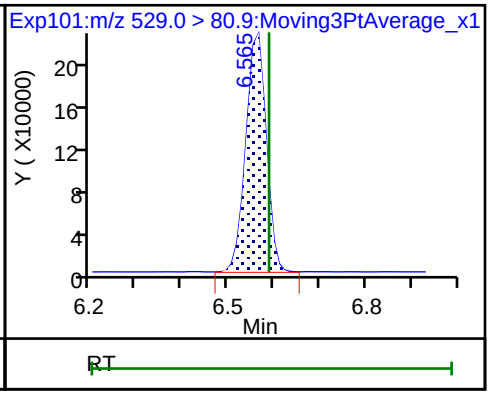
43 PFNA (ND)



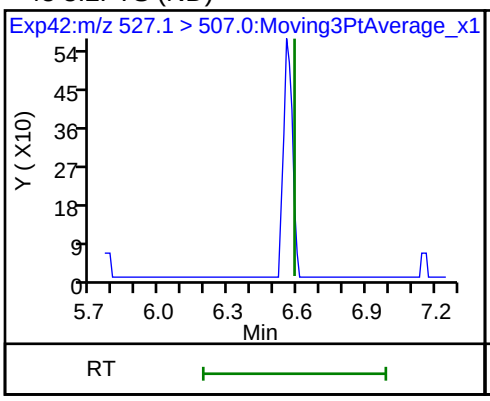
43 PFNA (ND)



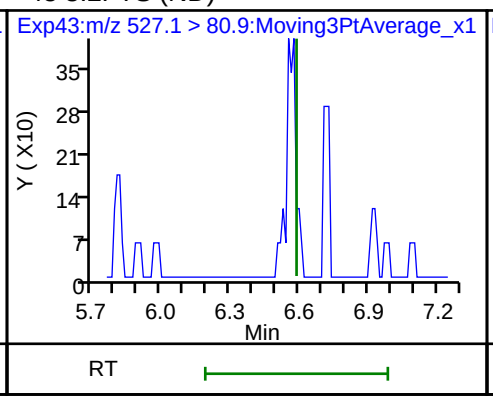
D 44 13C2-8:2FTS



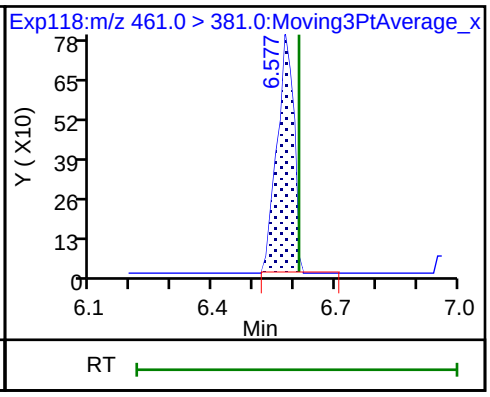
45 8:2FTS (ND)



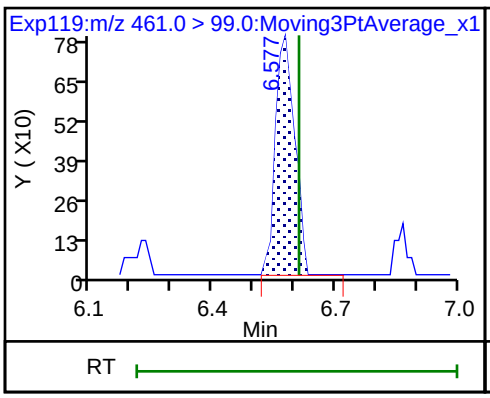
45 8:2FTS (ND)



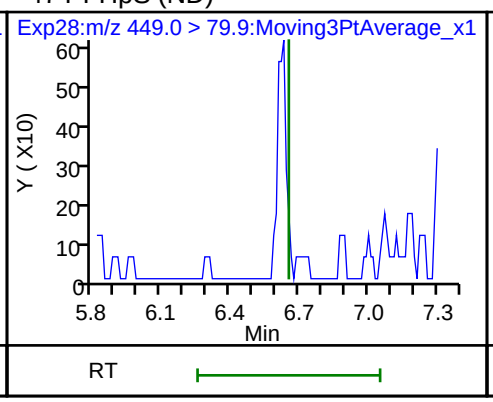
46 PFECHS



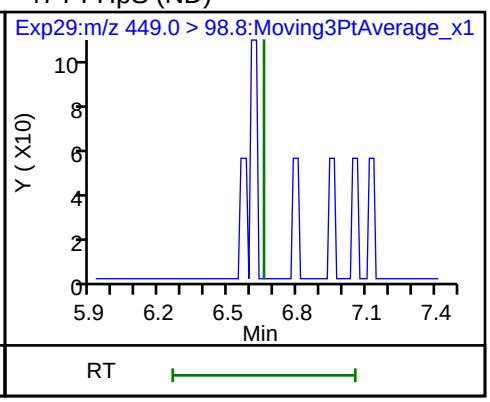
46 PFECHS



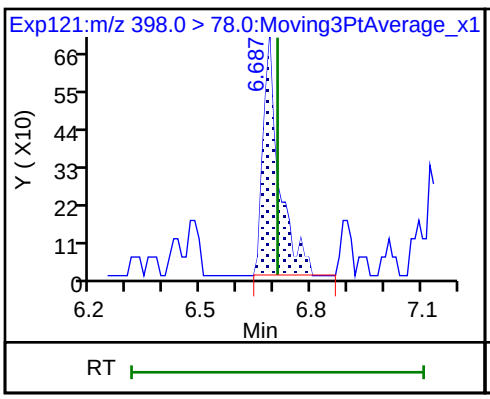
47 PFHpS (ND)



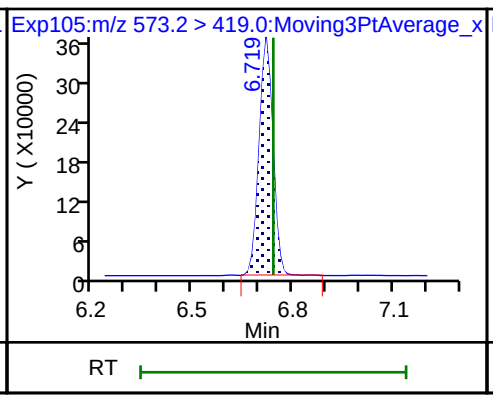
47 PFHpS (ND)



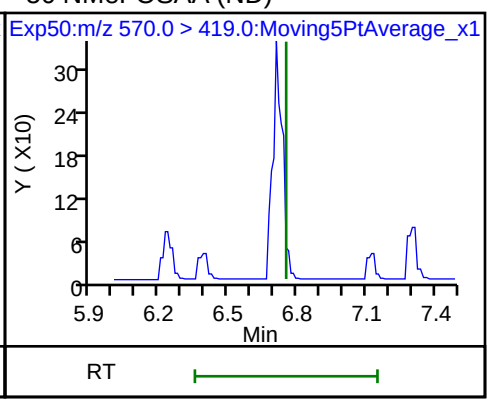
48 FHxSA



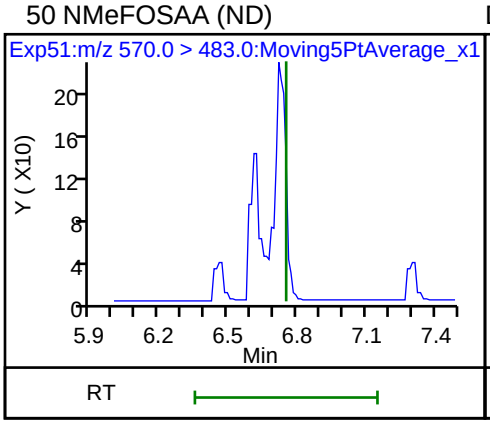
D 49 d3-NMeFOSAA



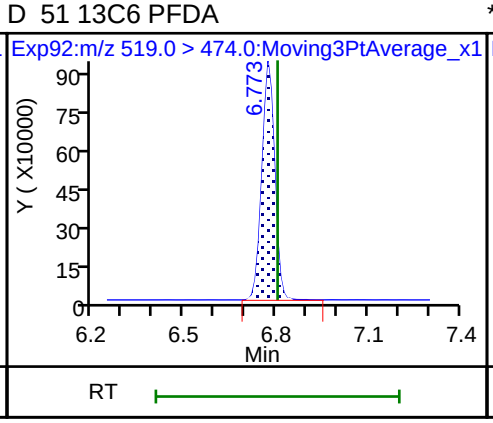
50 NMeFOSAA (ND)



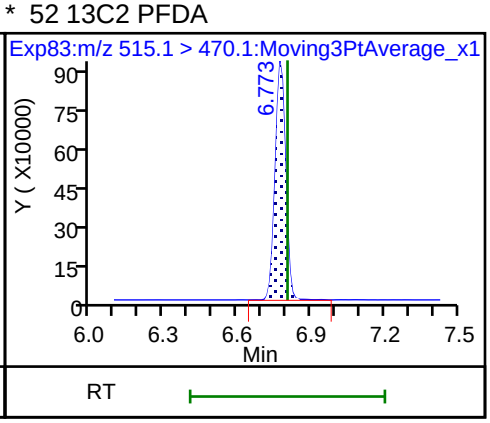
50 NMeFOSAA (ND)



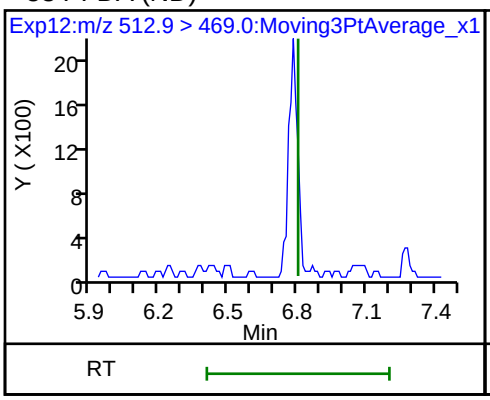
D 51 13C6 PFDA



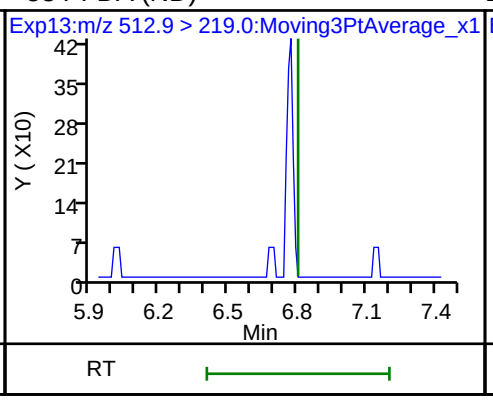
* 52 13C2 PFDA



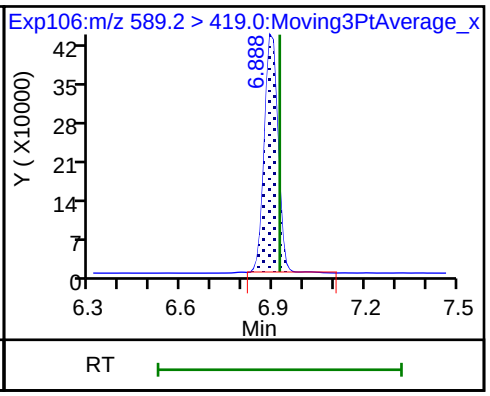
53 PFDA (ND)



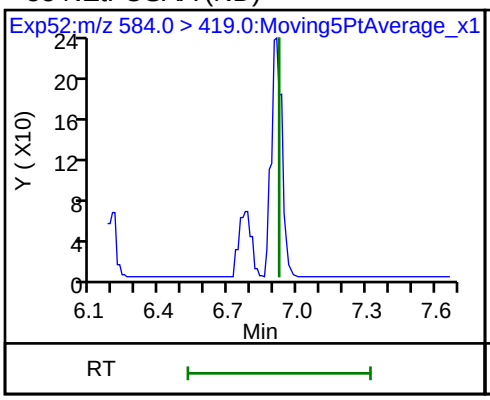
53 PFDA (ND)



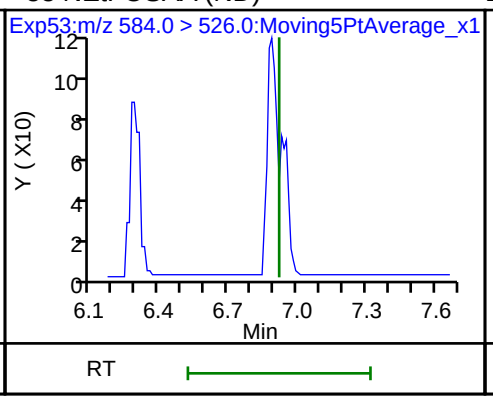
D 54 d5-NEtFOSAA



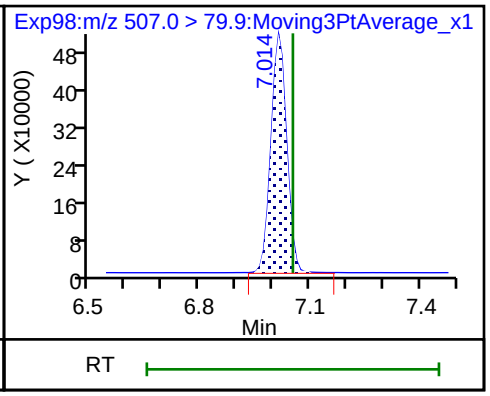
55 NEtFOSAA (ND)



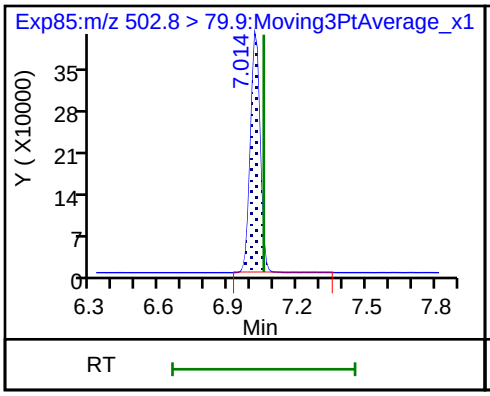
55 NEtFOSAA (ND)



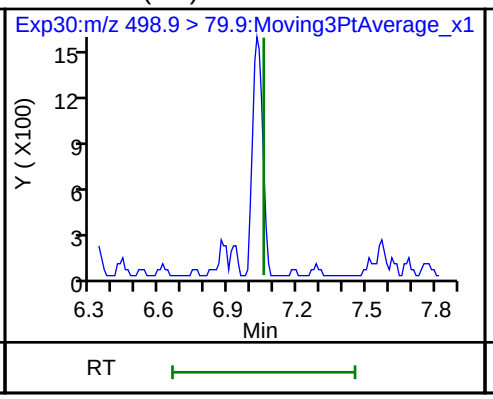
D 56 13C8 PFOS



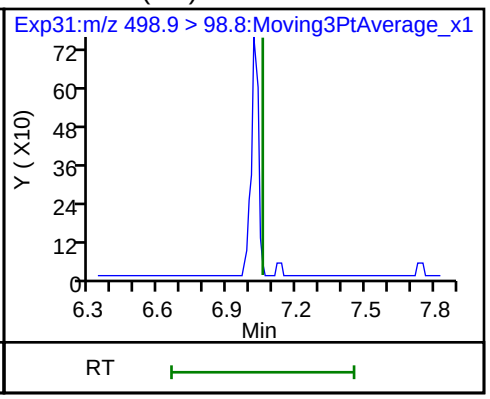
* 57 13C4 PFOS



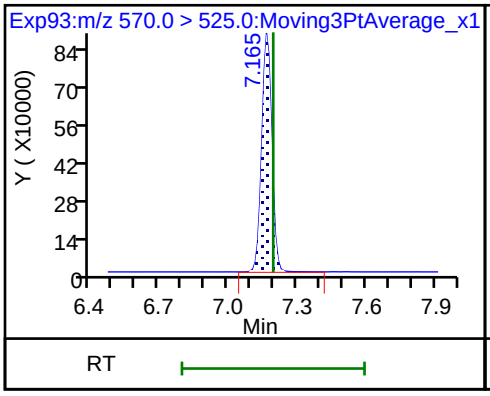
58 PFOS (ND)



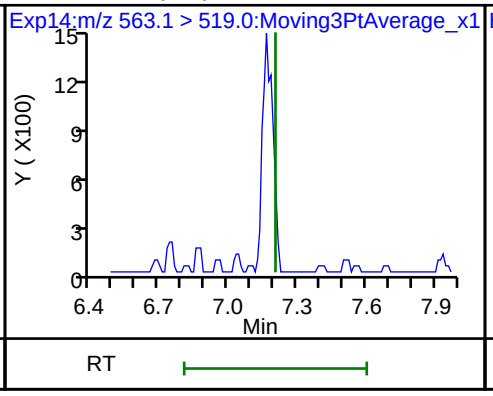
58 PFOS (ND)



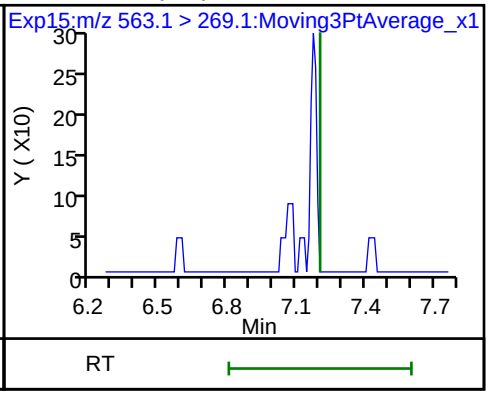
D 59 13C7 PFUnA



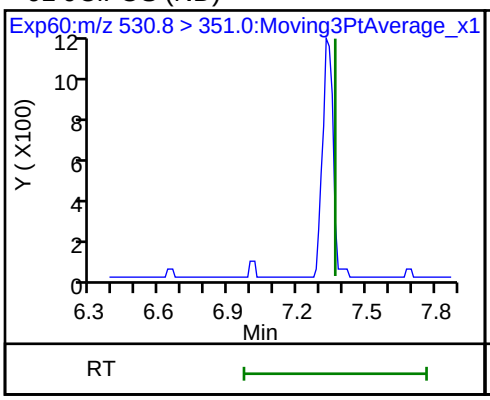
60 PFUnA (ND)



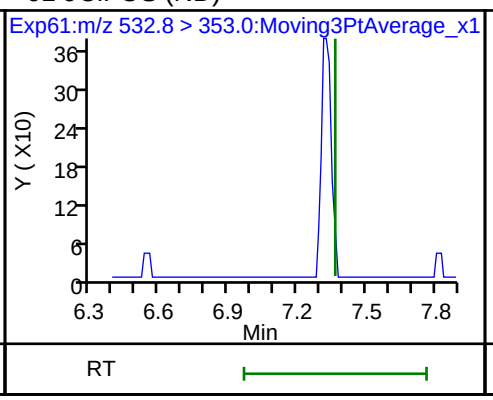
60 PFUnA (ND)



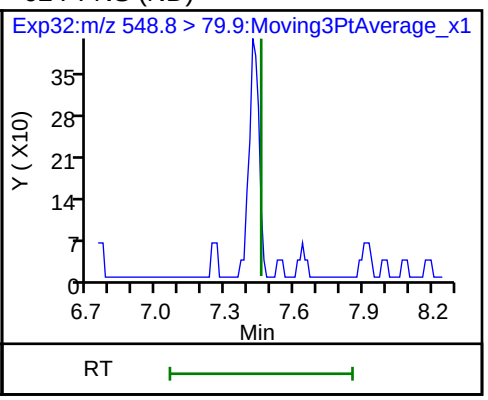
61 9ClFOS (ND)



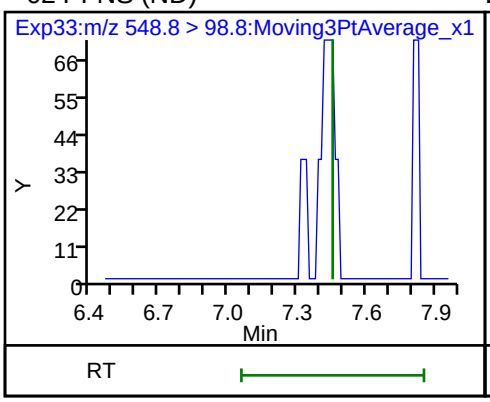
61 9ClFOS (ND)



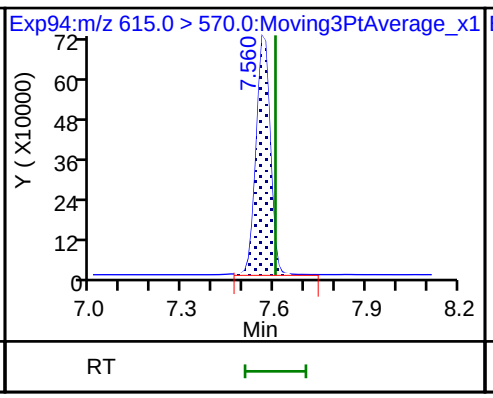
62 PFNS (ND)



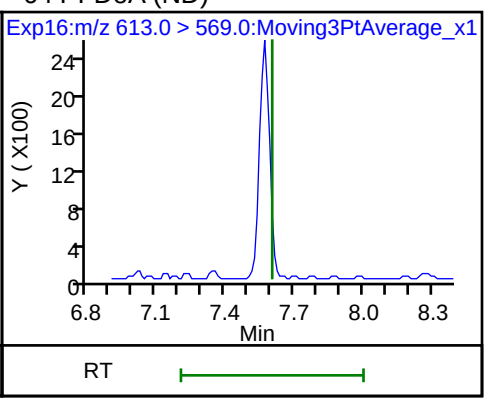
62 PFNS (ND)



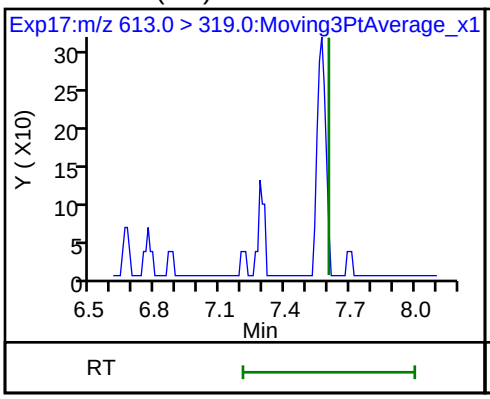
D 63 13C2 PFDoA



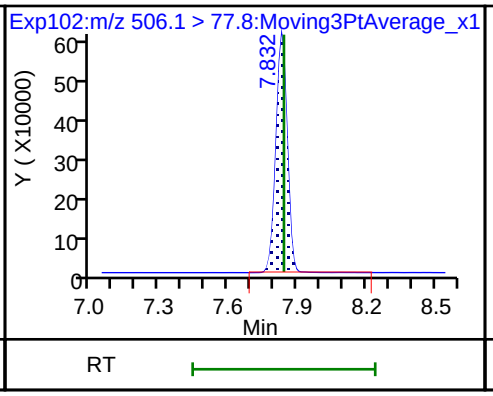
64 PFDoA (ND)



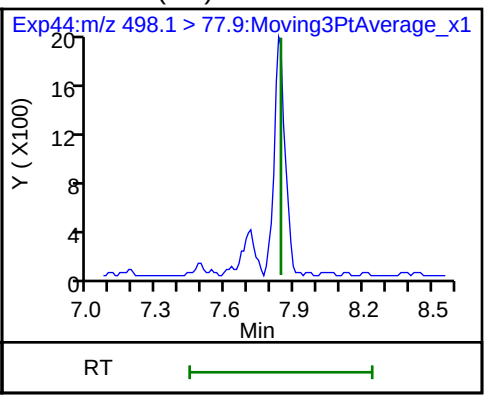
64 PFDoA (ND)



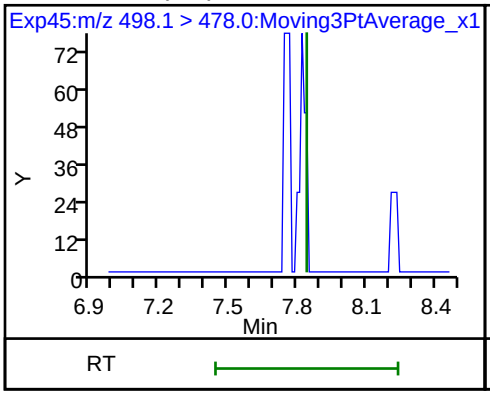
D 65 13C8 FOSA



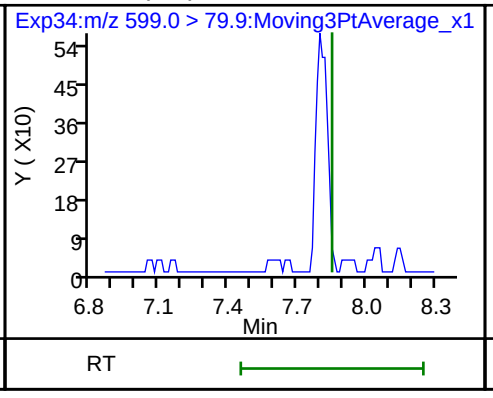
66 PFOSA (ND)



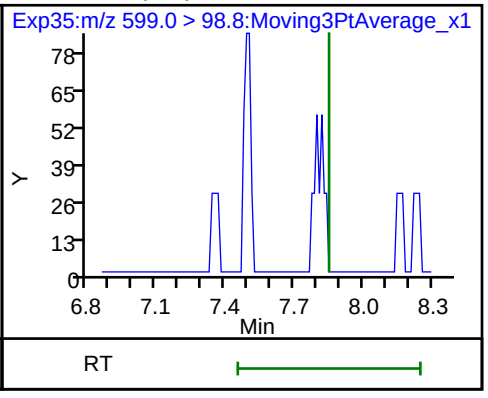
66 PFOSA (ND)



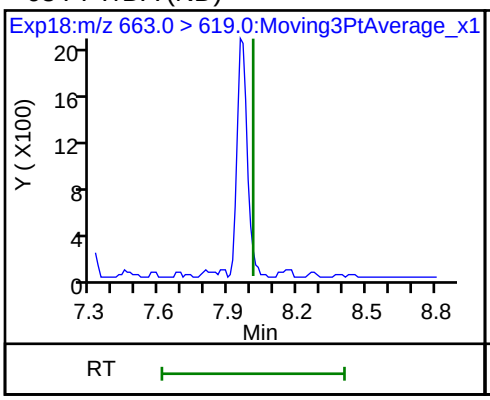
67 PFDS (ND)



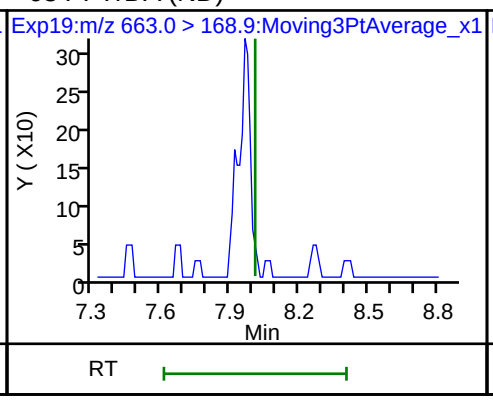
67 PFDS (ND)



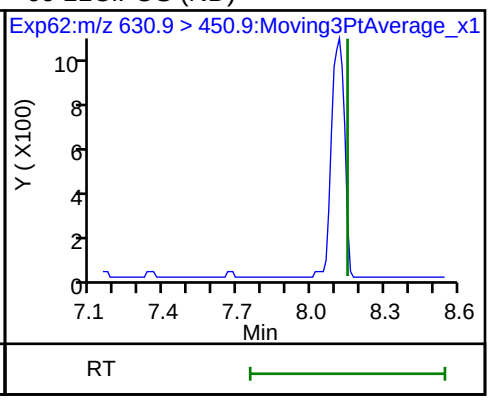
68 PFTrDA (ND)



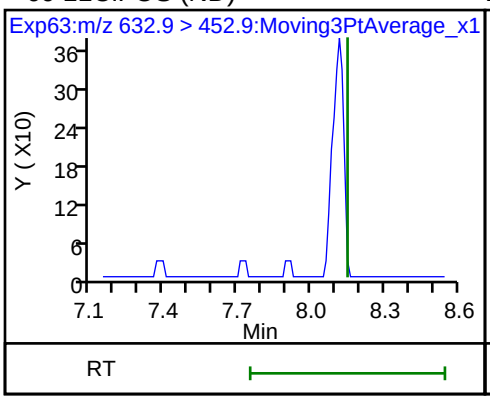
68 PFTrDA (ND)



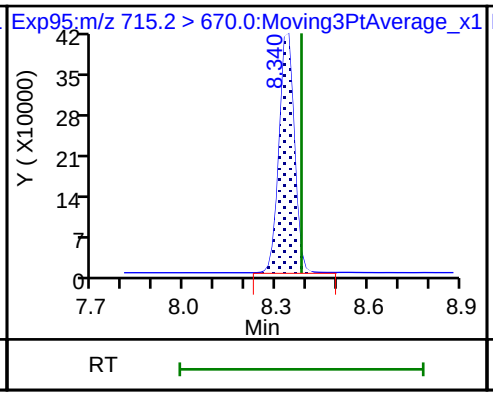
69 11ClFOS (ND)



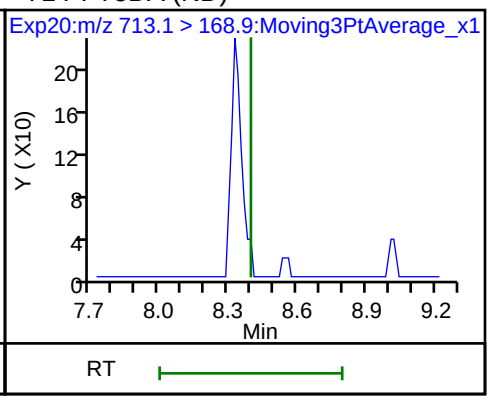
69 11ClFOS (ND)



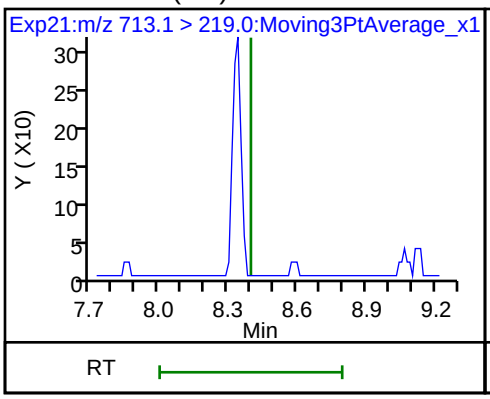
D 70 13C2 PFTeDA



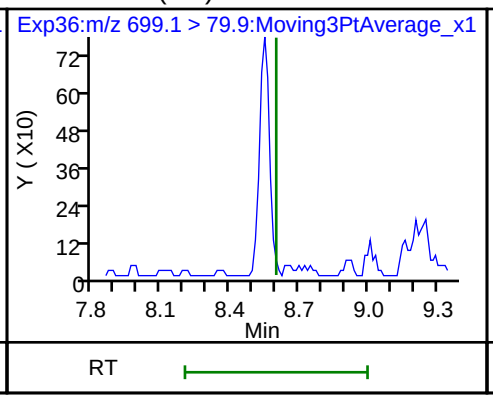
71 PFTeDA (ND)



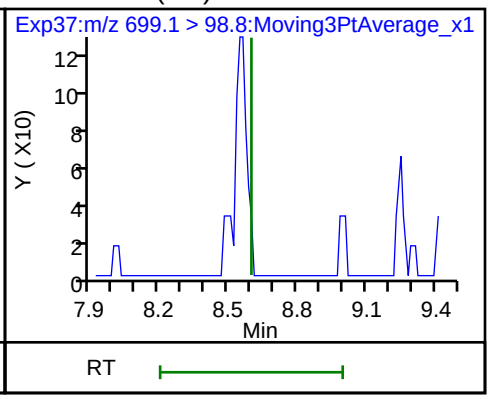
71 PFTeDA (ND)



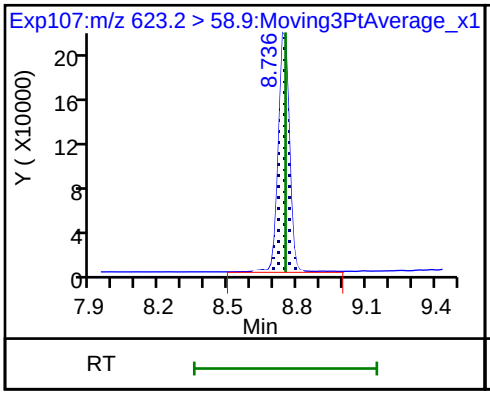
72 PFDoS (ND)



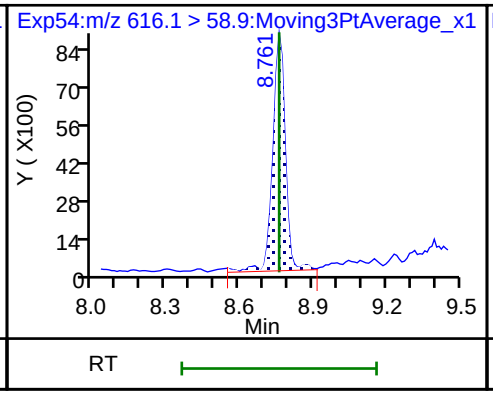
72 PFDoS (ND)



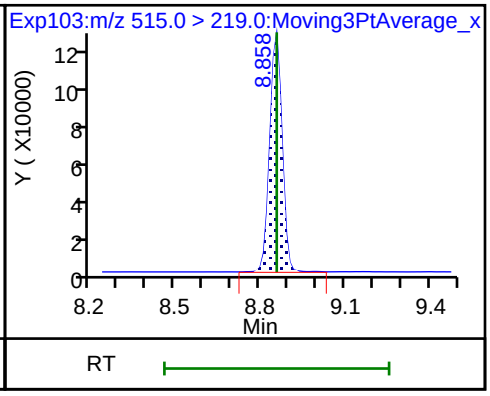
D 73 d7-N-Me-FOSE



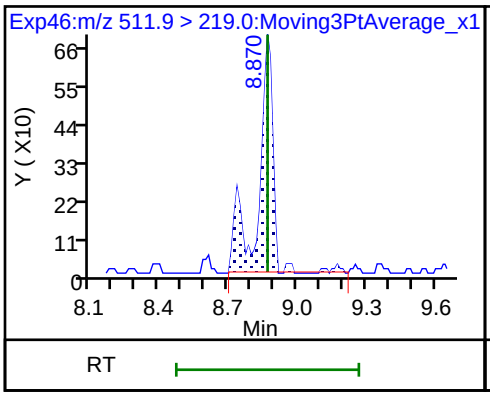
74 N-MeFOSE-M



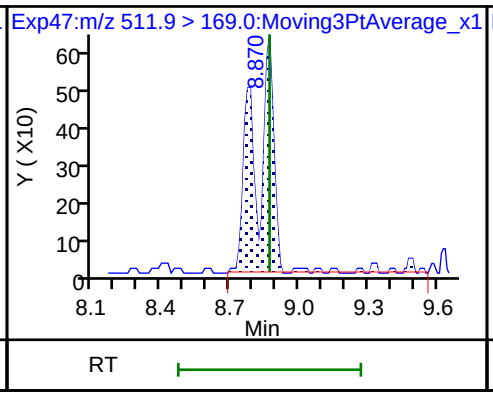
D 75 d3-NMePFOSA



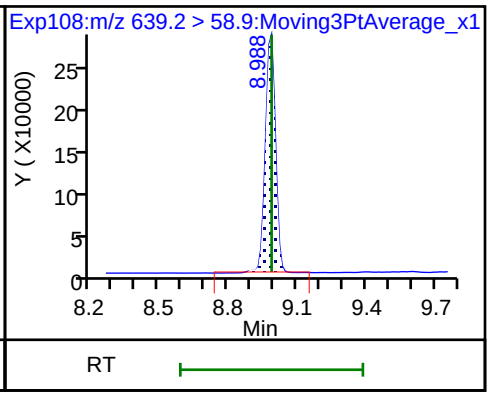
76 NMeFOSA



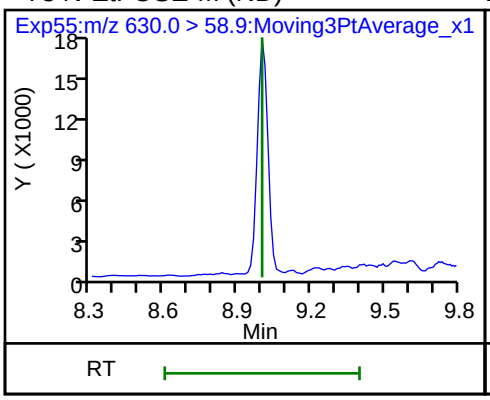
76 NMeFOSA



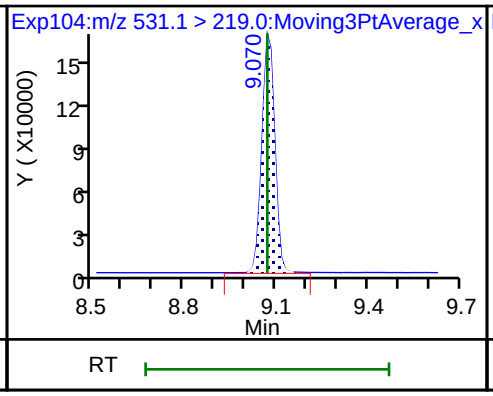
D 77 d9-N-EtFOSE



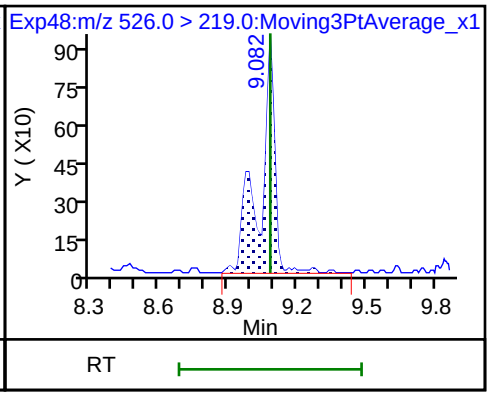
78 N-EtFOSE-M (ND)



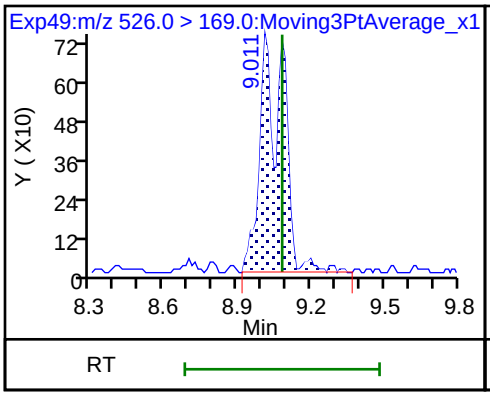
D 79 d5-NEtPFOSA



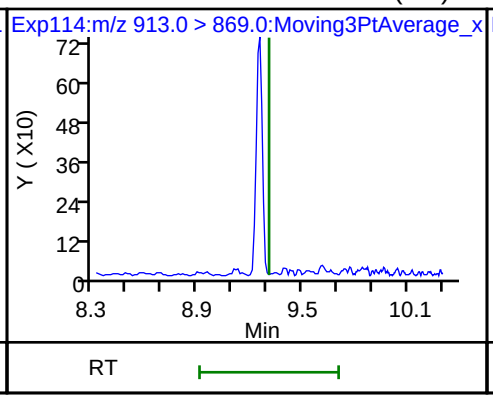
80 N-EtFOSA-M



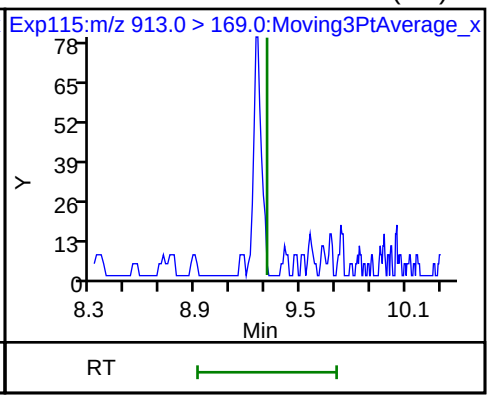
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid (ND)



81 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/76

Matrix: Water
Lab File ID: 26FEB18JO-66.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 02:57

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.010	U	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/76

Matrix: Water
Lab File ID: 26FEB18JO-66.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 02:57

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/76

Matrix: Water
Lab File ID: 26FEB18JO-66.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 02:57

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	93.8		5-130
2283397-79-3	13C5 PFPeA	90.9		40-130
2328024-54-8	13C5 PFHxA	94.4		40-130
2328024-55-9	13C4 PFHpA	96.6		40-130
1350614-84-4	13C8 PFOA	95.9		40-130
2283397-80-6	13C9 PFNA	97.4		40-130
2328024-56-0	13C6 PFDA	95.2		40-130
STL02580	13C7 PFUnA	91.8		30-130
STL02116	13C2 PFTeDA	99.5		10-130
2708218-83-9	13C3 PFBS	95.7		40-135
2708218-85-1	13C3 PFHxS	96.8		40-130
2265893-05-6	13C8 PFOS	103		40-130
STL01056	13C8 FOSA	101		40-130
1400690-70-1	d3-NMeFOSAA	104		40-170
1265205-97-7	d5-NEtFOSAA	112		25-135
STL02395	13C2 4:2 FTS	81.9		40-200
STL02279	13C2 6:2 FTS	96.3		40-200
STL02280	13C2 8:2 FTS	78.9		40-300
STL02255	13C3 HFPO-DA	96.8		40-130
STL02277	d7-N-MeFOSE-M	94.3		10-130
STL02278	d9-N-EtFOSE-M	102		10-130
STL02704	d5-NEtPFOSA	92.6		10-130
STL02705	d3-NMePFOSA	94.6		10-130
960315-52-0	13C2 PFDoA	97.4		10-130

Report Date: 19-Feb-2026 12:33:29 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-66.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Feb-2026 02:57:32 ALS Bottle#: 1 Worklist Smp#: 76
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1 Rack: 1 410-0176047-076
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:33:16 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:31:31
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.133	0.017	0.497	1001218	1.91		95.6	2317	
D 4 13C4-PFBA										
216.80 > 171.90	4.317	4.309	0.008	0.998	1393362	1.88		93.8	5859	
* 5 13C3PFBA										
216.00 > 172.00	4.324	4.309	0.015		1510300	2.00			2939	
D 8 13C5 PFPeA										
268.30 > 223.00	4.970	4.959	0.011	0.916	1445466	1.82		90.9	3380	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.246	5.235	0.011	0.807	780923	3.84		81.9	3280	
* 16 13C2 PFHxA										
315.10 > 270.00	5.424	5.424	0.0		4479404	5.00			7311	
D 15 13C5 PFHxA										
318.00 > 273.00	5.424	5.424	0.0	1.000	1840786	1.89		94.4	3317	
D 19 13C3 PFBS										
302.10 > 79.90	5.561	5.561	0.0	0.856	1730927	1.78		95.7	5520	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.607	5.607	0.0	1.034	1229526	1.94		96.8	3782	
24 TCDCA										
498.10 > 80.00	6.059	5.677	0.382	0.824	1416	NR			7.3	
25 TDCA										
498.00 > 80.00	6.059	5.797	0.262	0.824	869	NR			8.7	
D 28 13C4 PFHpA										
367.10 > 322.00	5.851	5.851	0.0	1.079	1843771	1.93		96.6	6106	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.059	6.059	0.0	0.932	774768	4.58		96.3	3697	
* 34 13C4 PFOA										
417.10 > 372.00	6.268	6.269	-0.001		6256907	5.00			4221	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.268	6.269	-0.001	1.000	2299259	1.92		95.9	4302	
D 38 13C3 PFHxS										
402.10 > 79.90	6.500	6.512	-0.012	1.000	1508521	1.84		96.8	3865	
* 39 18O2 PFHxS										
403.00 > 83.90	6.500	6.512	-0.012		1427007	1.90			2551	
* 42 13C5 PFNA										
468.00 > 423.00	6.673	6.684	-0.011		1886364	2.00			4723	
D 41 13C9 PFNA										
472.10 > 427.00	6.673	6.684	-0.011	1.000	1837097	1.95		97.4	3266	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.868	6.868	0.0	1.057	658914	3.79		78.9	2081	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.027	7.037	-0.011	0.954	1516019	5.20		104	2696	
* 51 13C2 PFDA										
515.10 > 470.10	7.096	7.107	-0.010		1785475	2.00			3843	
D 52 13C6 PFDA										
519.10 > 474.10	7.096	7.107	-0.010	1.000	1691583	1.90		95.2	4190	
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.219	7.219	0.0	0.981	1501118	5.62		112	4156	
* 57 13C4 PFOS										
502.80 > 79.90	7.362	7.373	-0.011		1168562	1.92			3852	
D 56 13C8 PFOS										
507.10 > 79.90	7.351	7.373	-0.022	0.999	1332579	1.97		103	4470	
D 59 13C7 PFUnA										
570.00 > 525.10	7.497	7.506	-0.009	1.057	1703707	1.84		91.8	3633	
D 81 PFDoA										
615.10 > 570.00	7.911	7.935	-0.024	1.115	1806954	1.95		97.4	4321	
D 65 13C8 FOSA										
506.10 > 77.80	8.164	8.155	0.009	1.109	1467893	2.03		101	3838	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.694	8.722	-0.028	1.225	1695843	1.99		99.5	4420	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.958	8.945	0.013	1.217	226024	4.72		94.3	772	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.069	9.057	0.012	1.232	397333	1.89		94.6	6228	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.175	9.176	-0.001	1.246	279333	5.11		102	630	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.264	9.252	0.012	1.258	474926	1.85		92.6	1570	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_IS_V_00511	Amount Added: 50.00	Units: uL
1633_125_SS_00162	Amount Added: 5.00	Units: uL

Report Date: 19-Feb-2026 12:33:29 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-66.d

Injection Date: 19-Feb-2026 02:57:32 Instrument ID: 30577

Lims ID: CCB

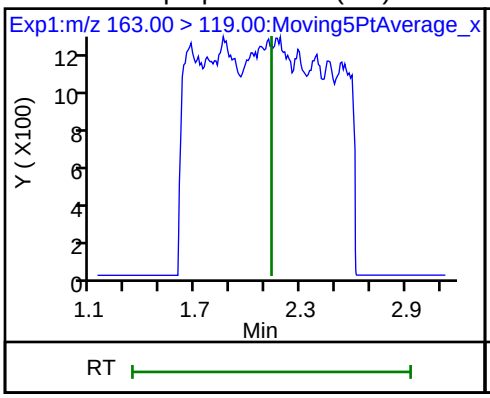
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 1 Worklist Smp#: 76

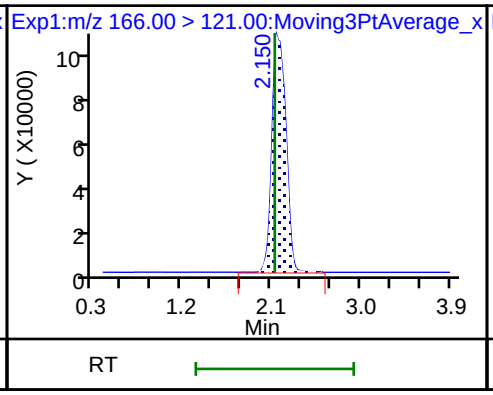
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

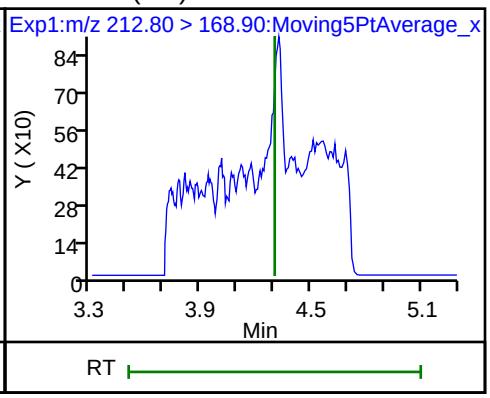
2 Perfluoropropionic acid (ND)



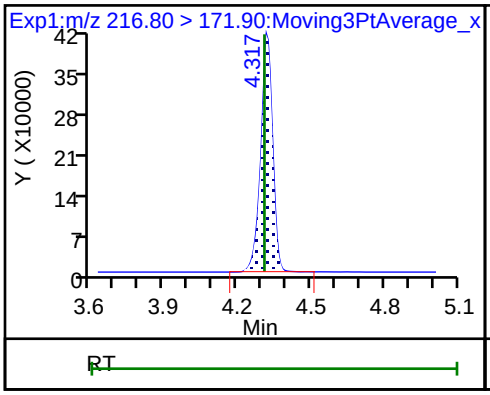
D 1 13C3PFPrA



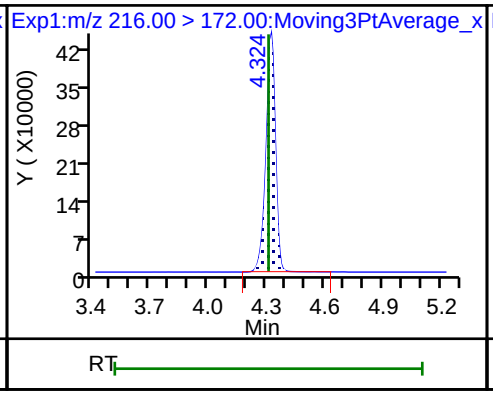
3 PFBA (ND)



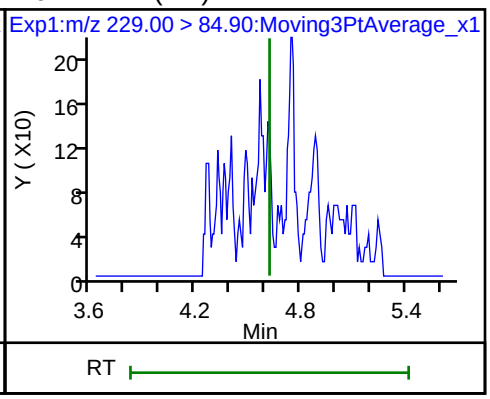
D 4 13C4-PFBA



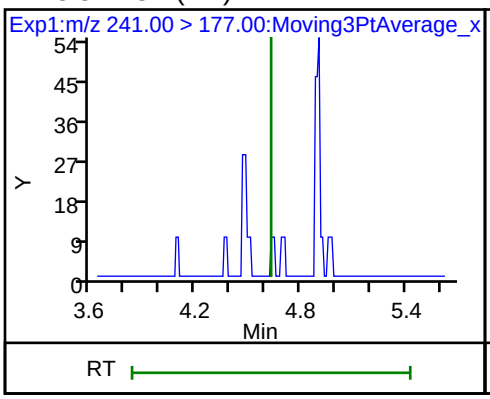
* 5 13C3PFBA



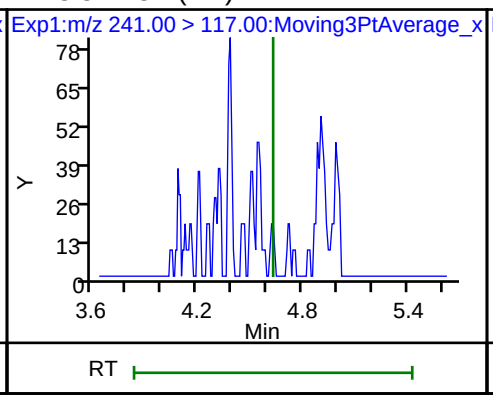
6 PFMPA (ND)



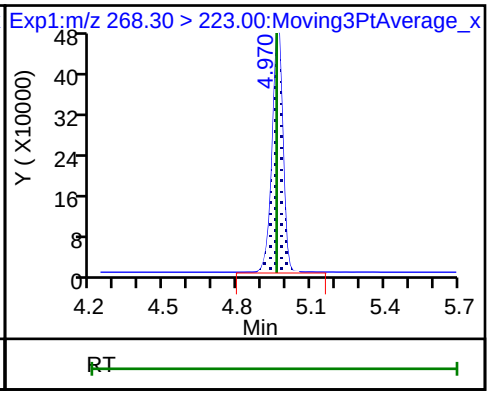
7 3:3 FTCA (ND)



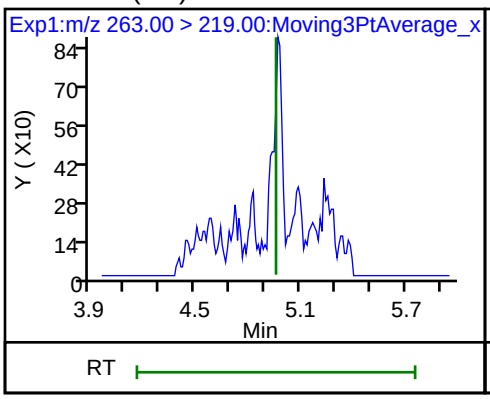
7 3:3 FTCA (ND)



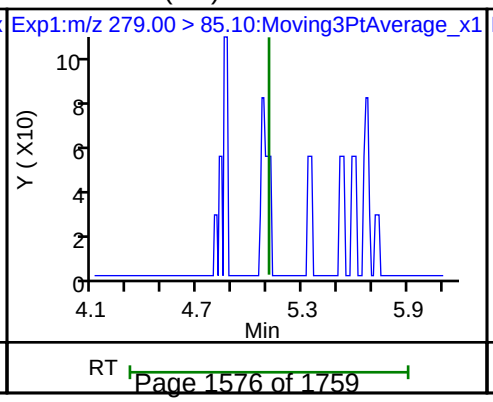
D 8 13C5 PFPeA



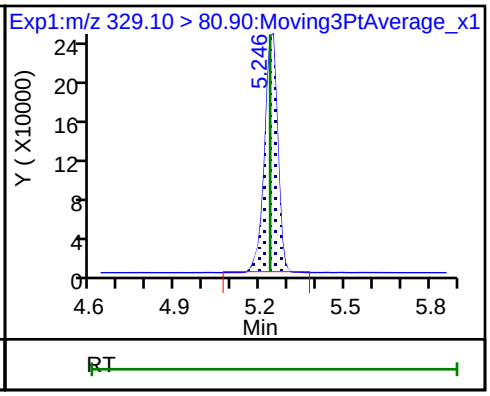
9 PFPA (ND)



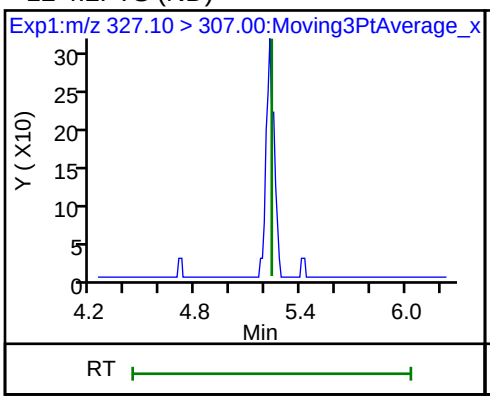
10 PFMBA (ND)



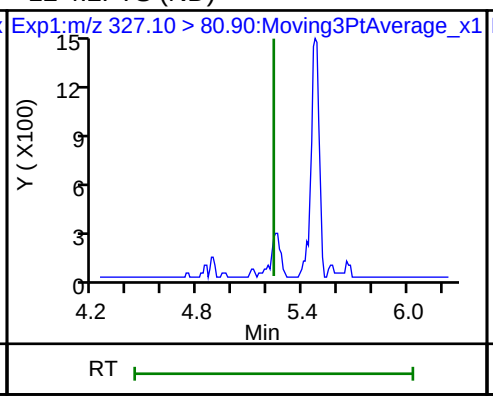
D 11 13C2-4:2FTS



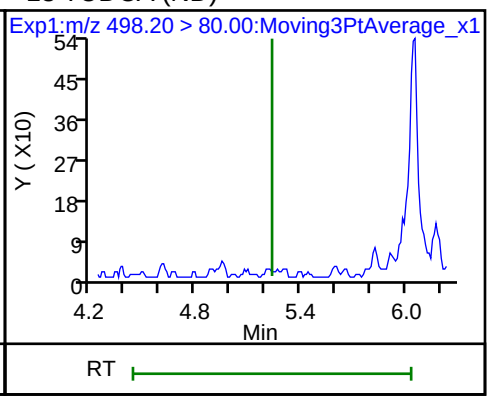
12 4:2FTS (ND)



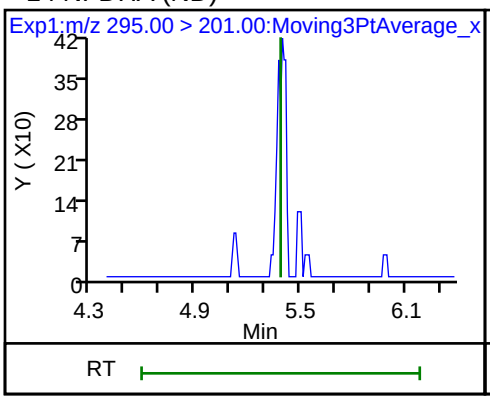
12 4:2FTS (ND)



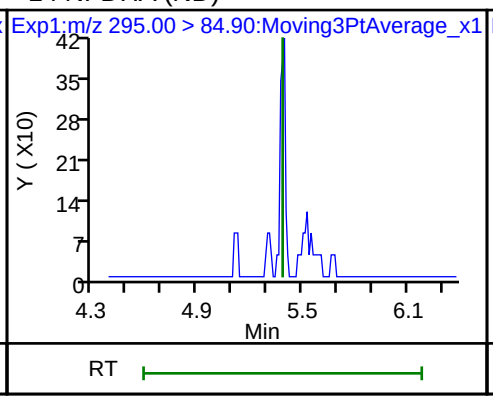
13 TUDCA (ND)



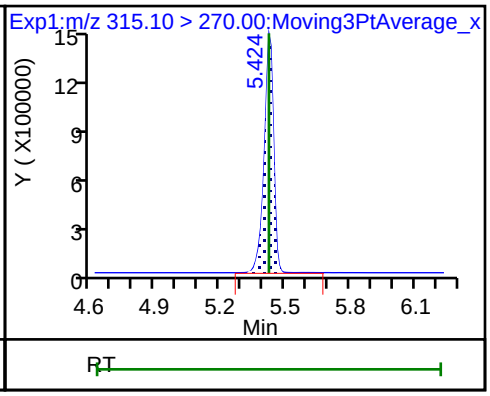
14 NFDHA (ND)



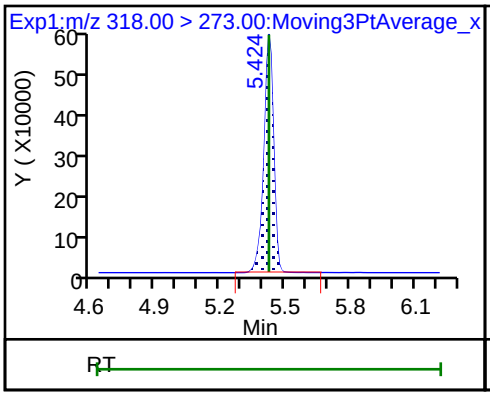
14 NFDHA (ND)



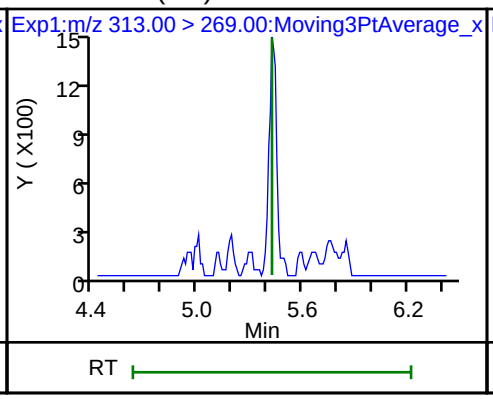
* 16 13C2 PFHxA



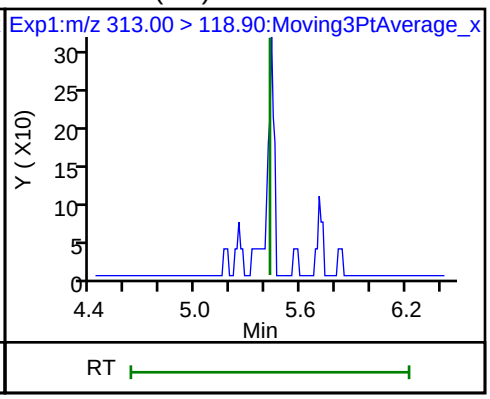
D 15 13C5 PFHxA



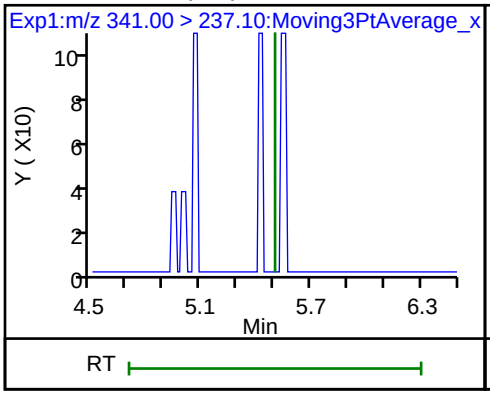
17 PFHxA (ND)



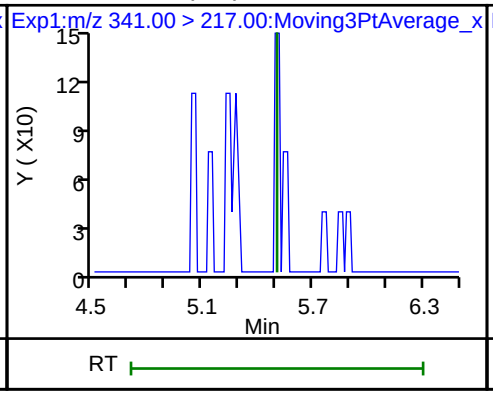
17 PFHxA (ND)



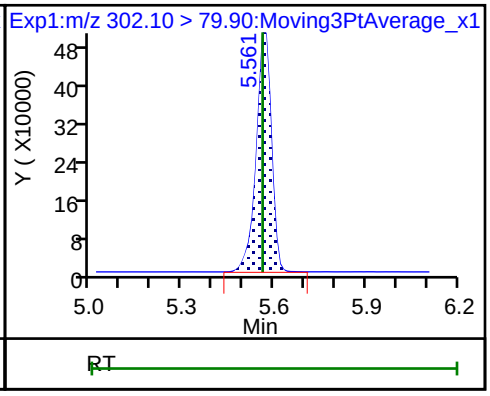
18 5:3 FTCA (ND)



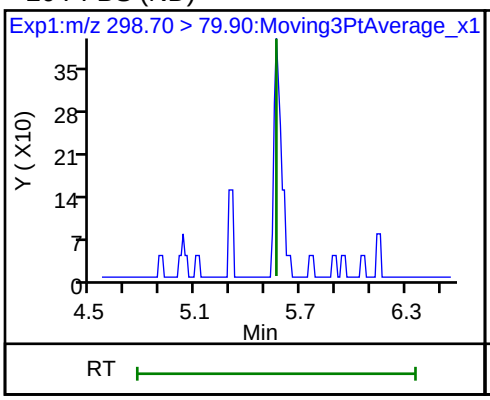
18 5:3 FTCA (ND)



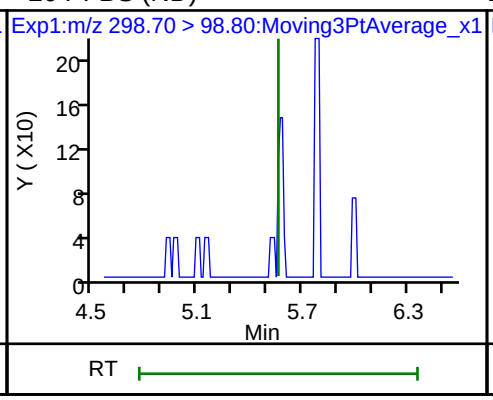
D 19 13C3 PFBS



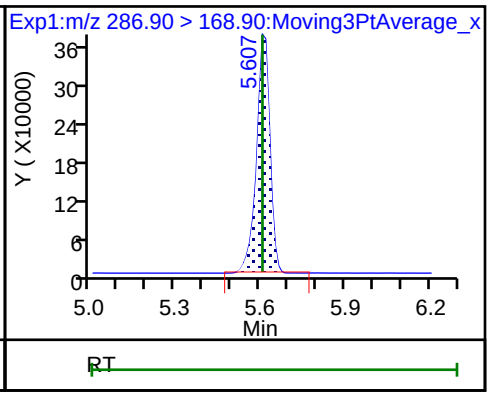
20 PFBS (ND)



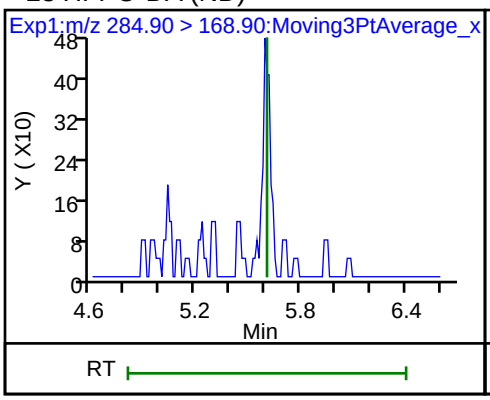
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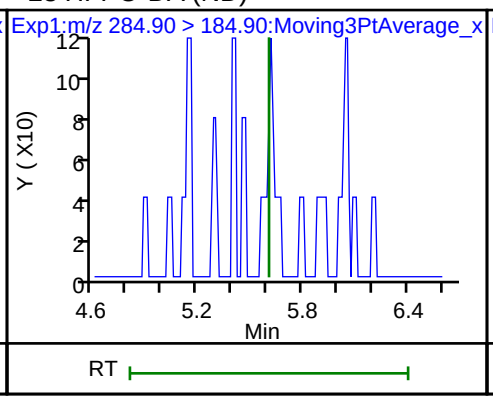
D 22 13C3 HFPO-DA



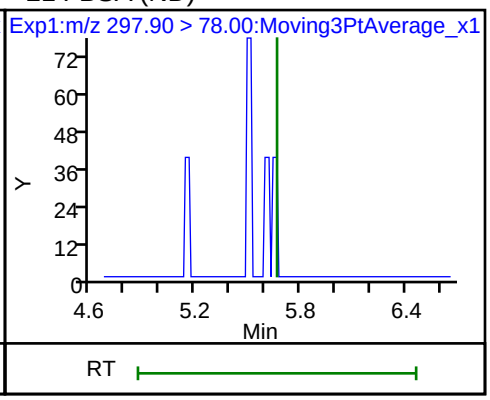
23 HFPO-DA (ND)



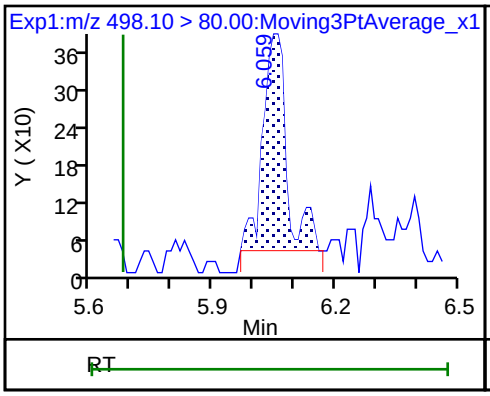
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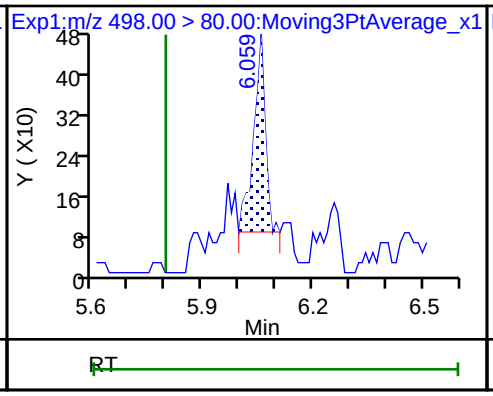
21 FBSA (ND)



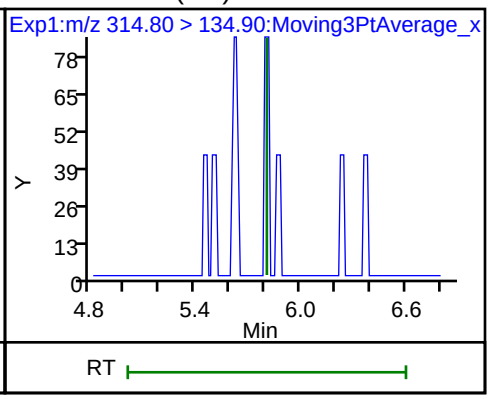
24 TCDCA



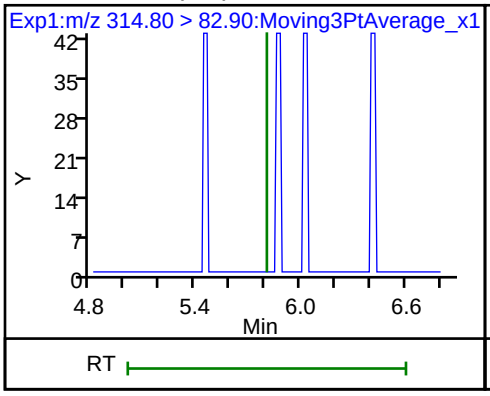
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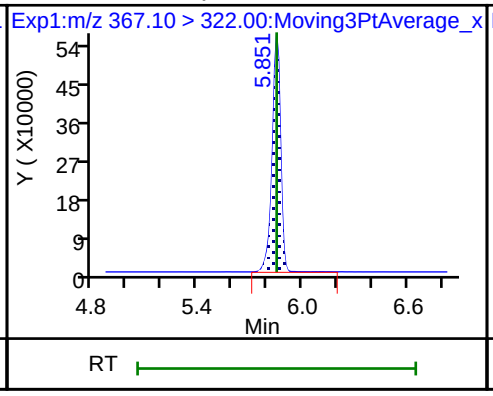
26 PFEESA (ND)



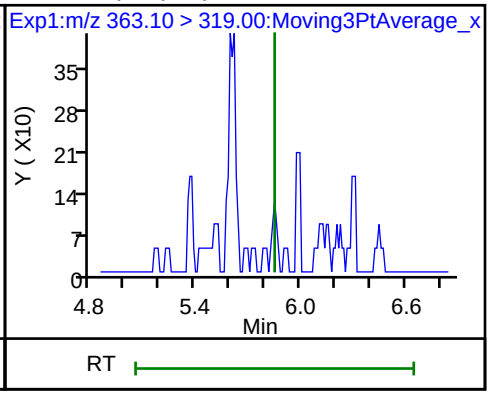
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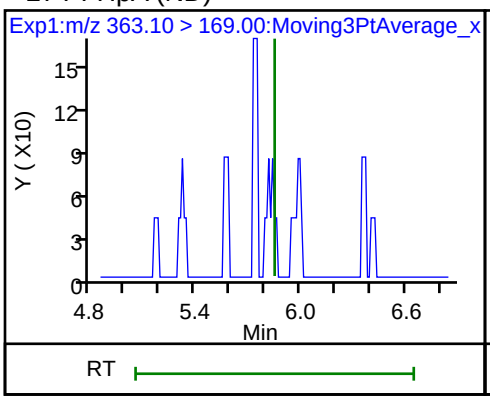
D 28 13C4 PFHpA



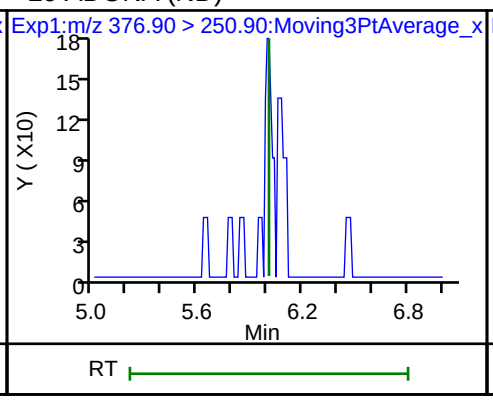
27 PFHpA (ND)



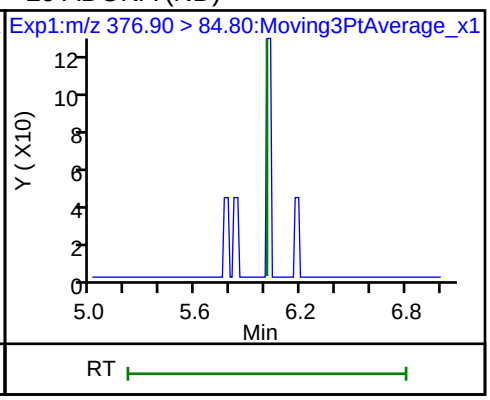
27 PFHpA (ND)



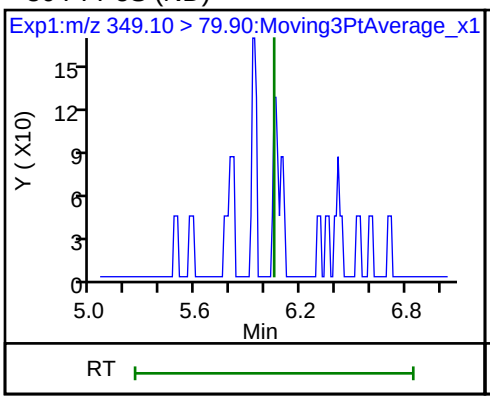
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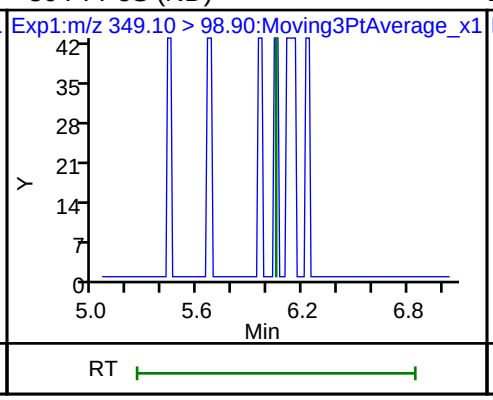
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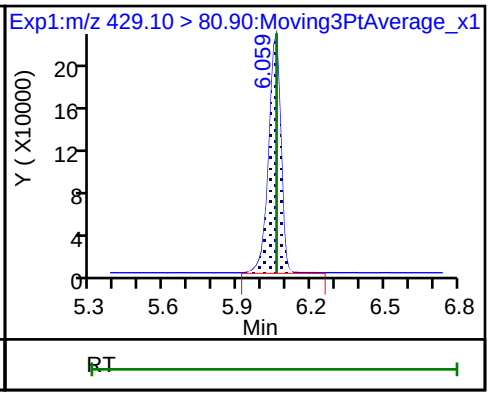
30 PFPeS (ND)



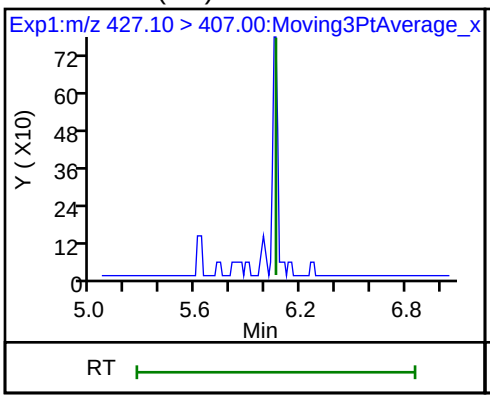
30 PFPeS (ND)



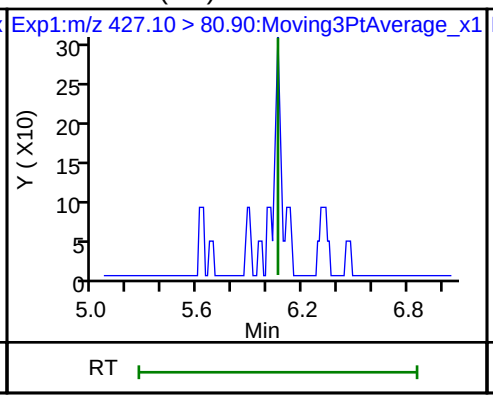
D 32 13C2-6:2FTS



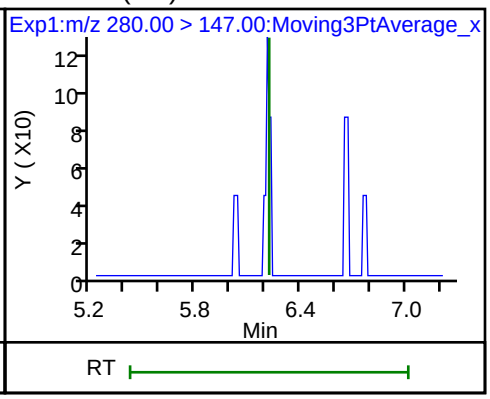
31 6:2FTS (ND)



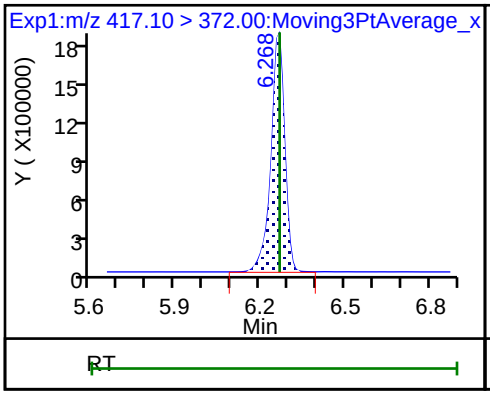
31 6:2FTS (ND)



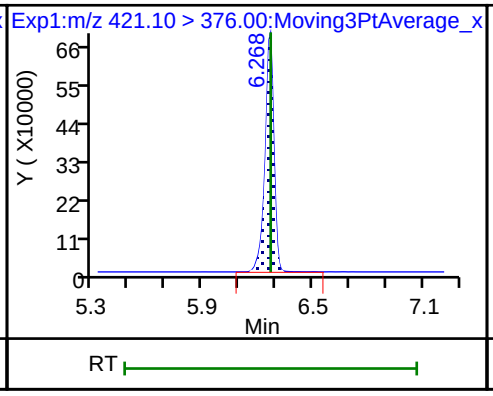
33 BTS (ND)



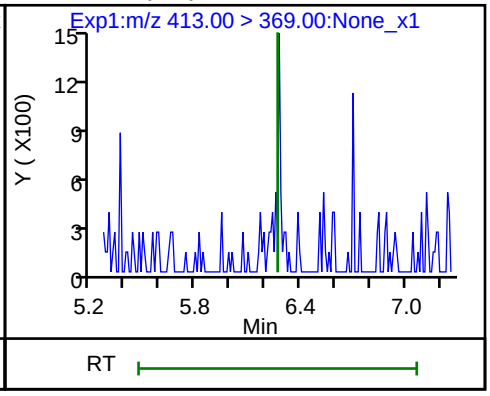
* 34 13C4 PFOA



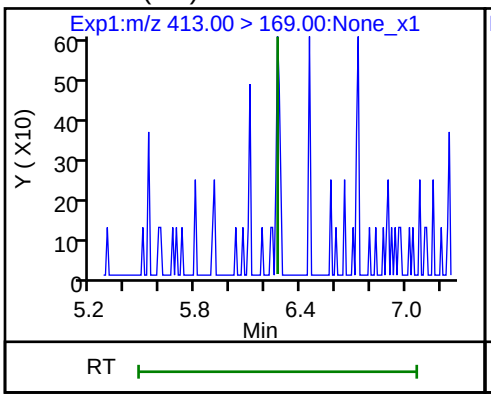
D 35 13C8 PFOA



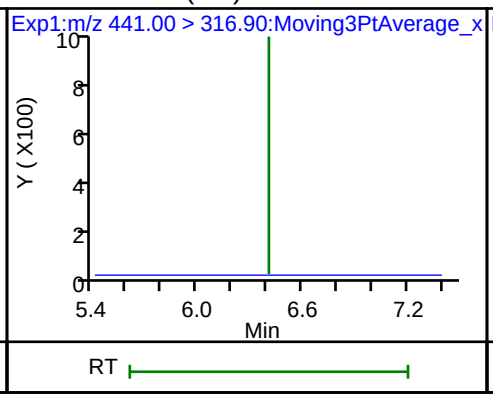
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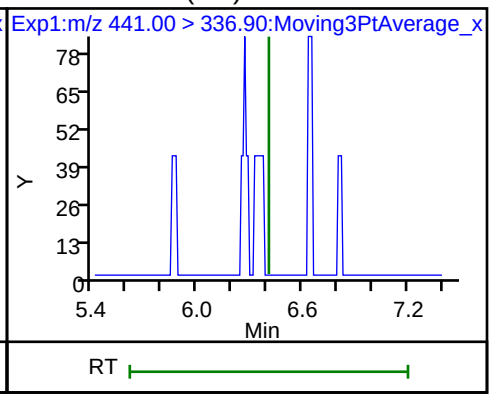
36 PFOA (ND)



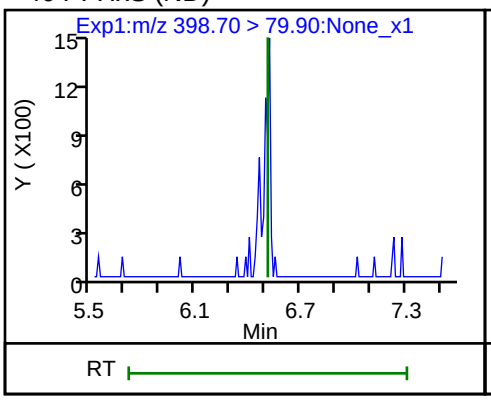
37 7:3 FTCA (ND)



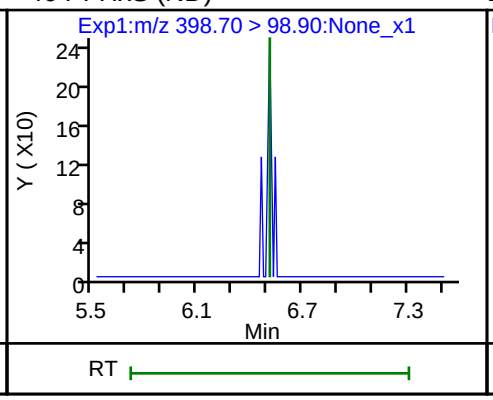
37 7:3 FTCA (ND)



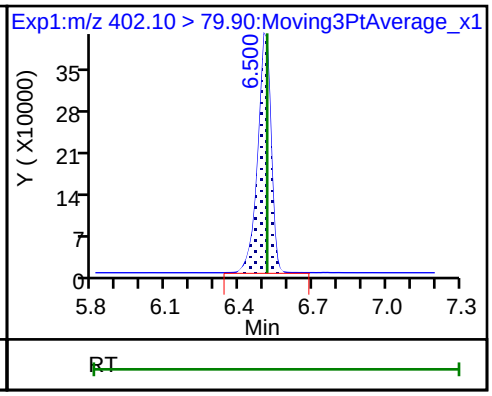
40 PFHxS (ND)



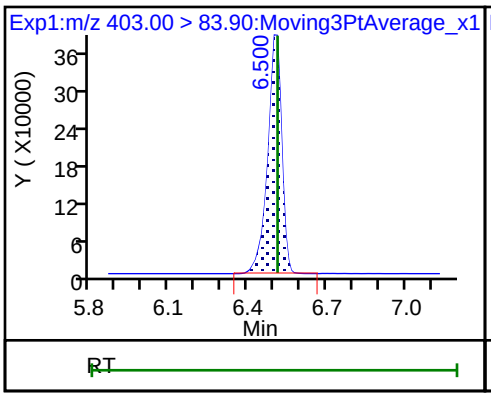
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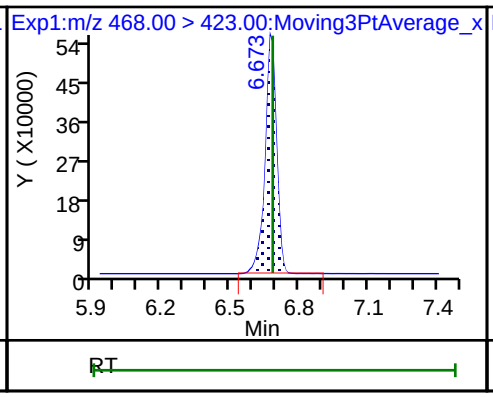
D 38 13C3 PFHxS



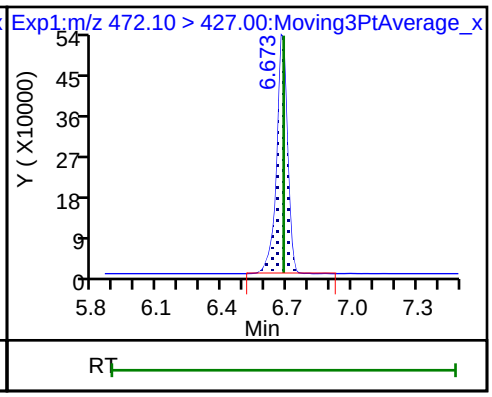
* 39 18O2 PFHxS



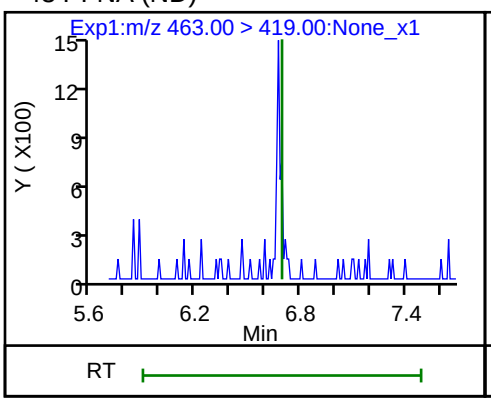
* 42 13C5 PFNA



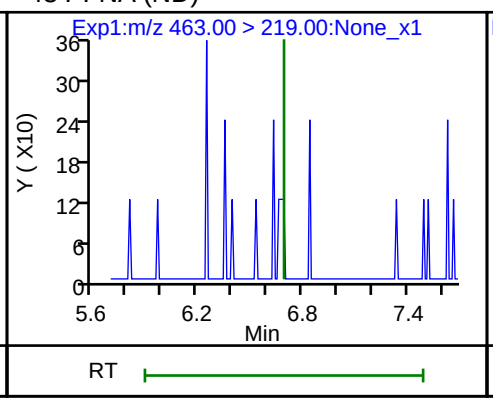
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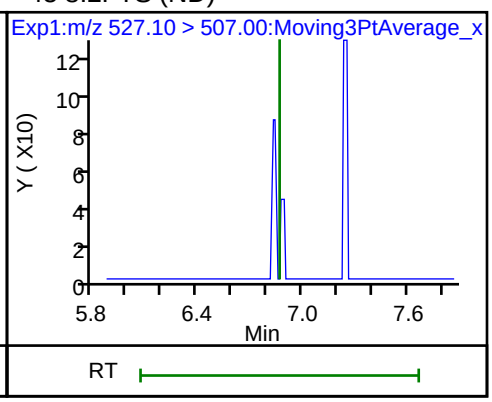
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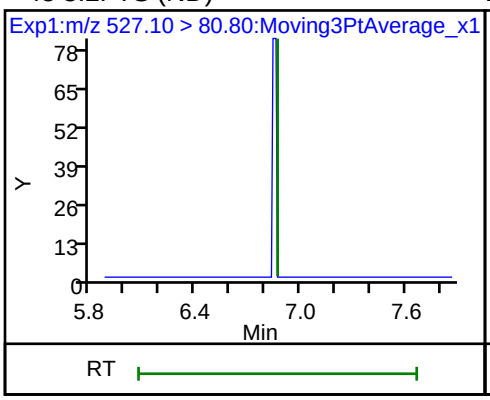
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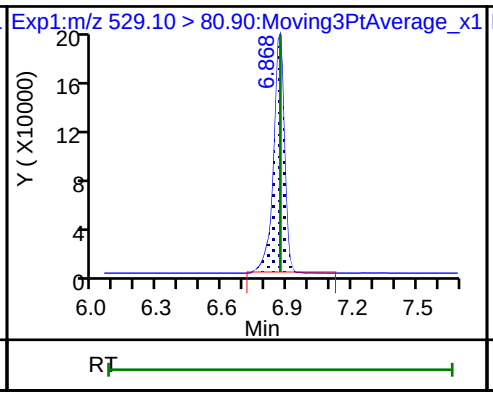
45 8:2FTS (ND)



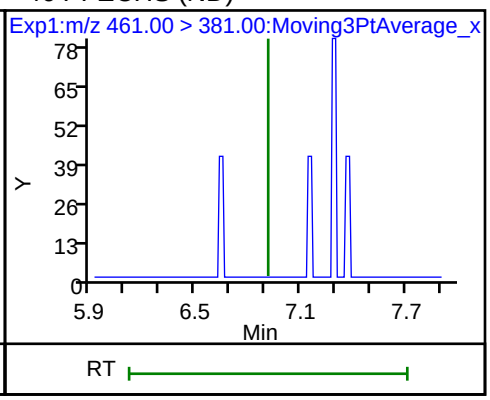
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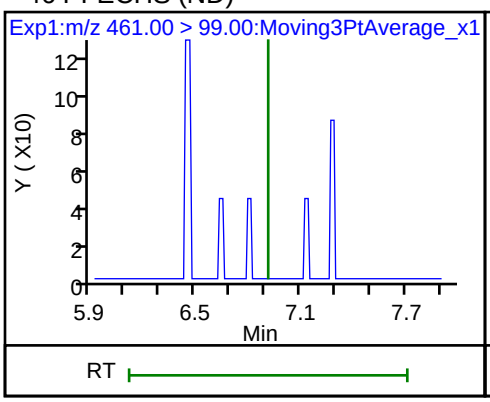
D 44 13C2-8:2FTS



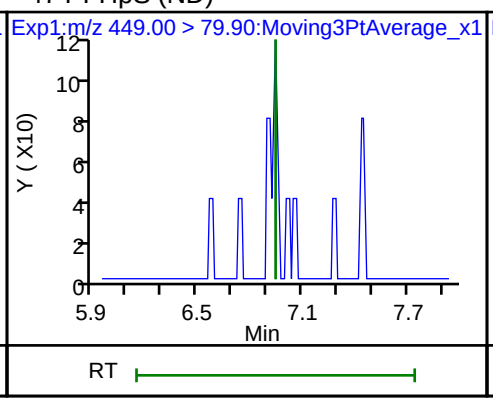
46 PFECHS (ND)



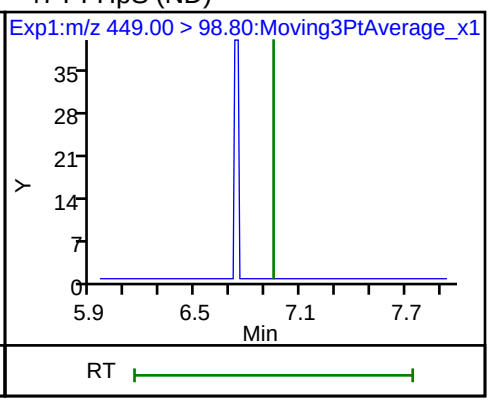
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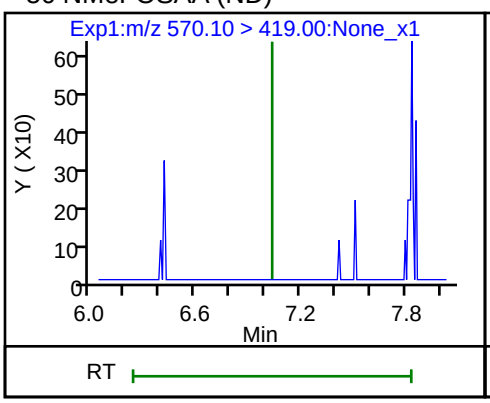
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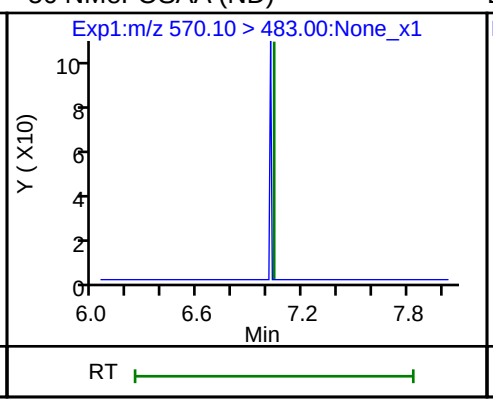
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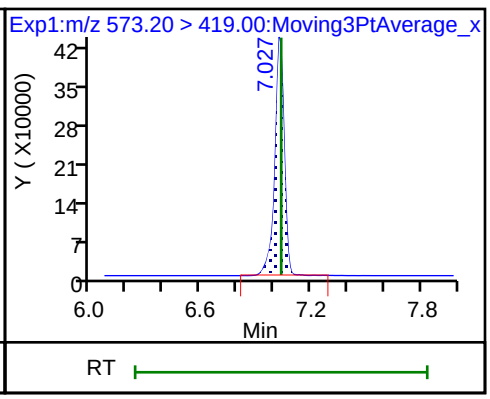
50 NMeFOSAA (ND)



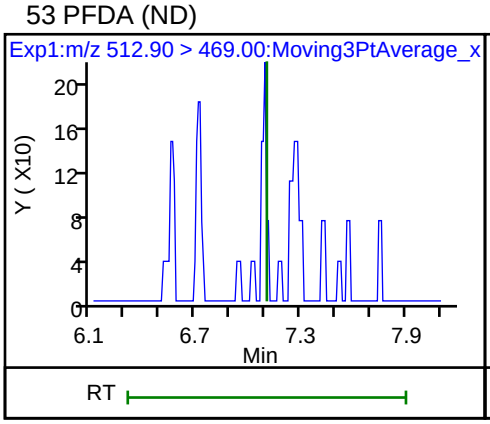
50 NMeFOSAA (ND)



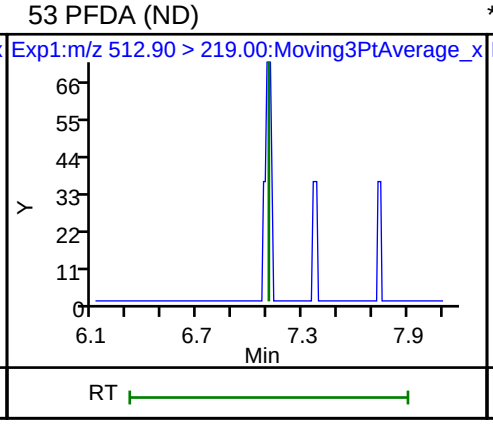
D 49 d3-NMeFOSAA



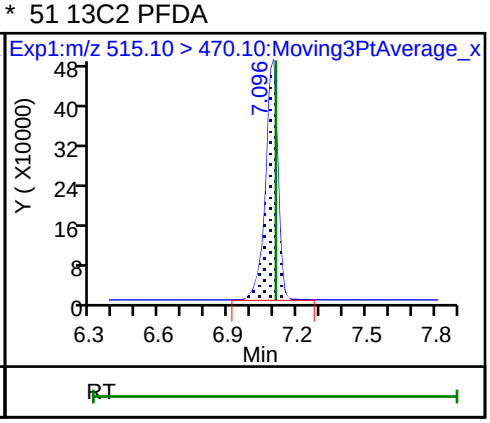
53 PFDA (ND)



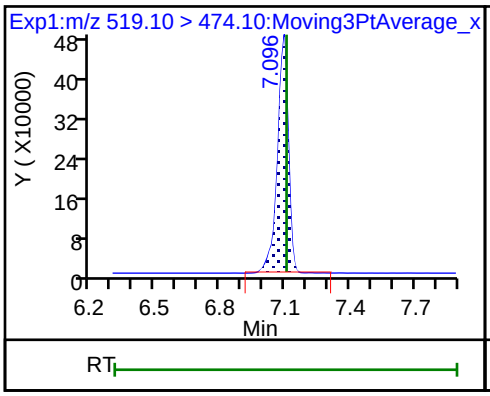
53 PFDA (ND)



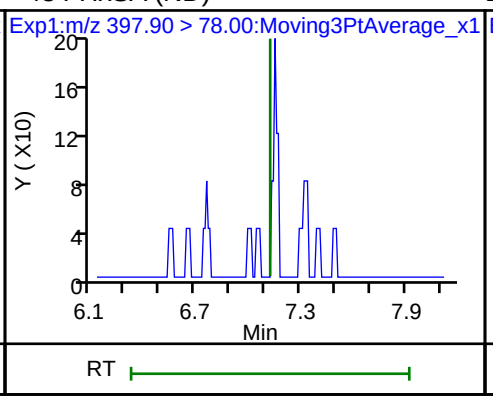
* 51 13C2 PFDA



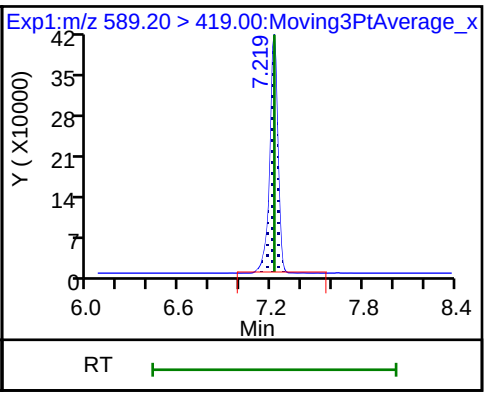
D 52 13C6 PFDA



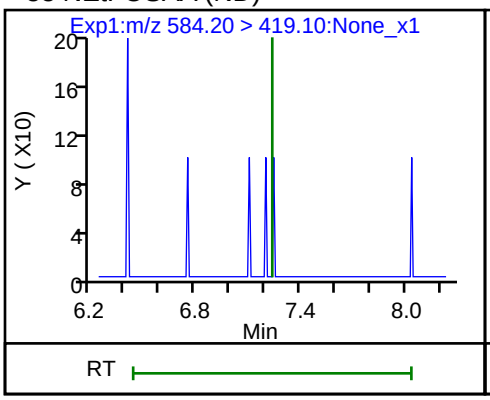
48 FHxSA (ND)



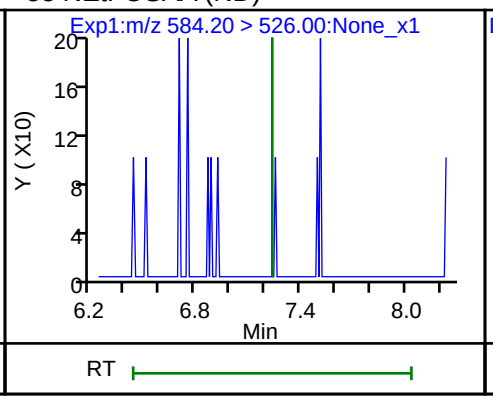
D 54 d5-NEtFOSAA



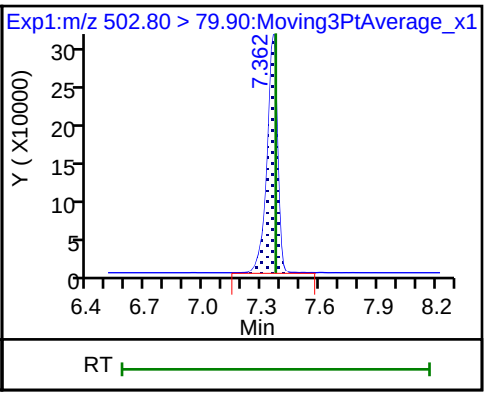
55 NEtFOSAA (ND)



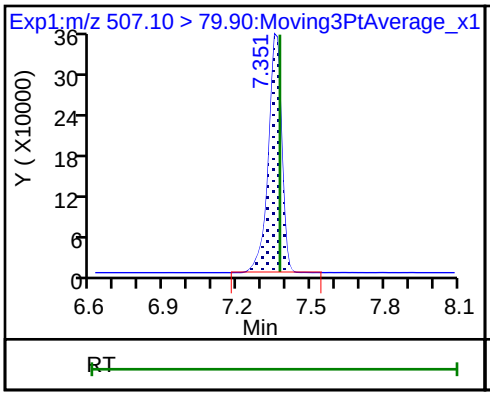
55 NEtFOSAA (ND)



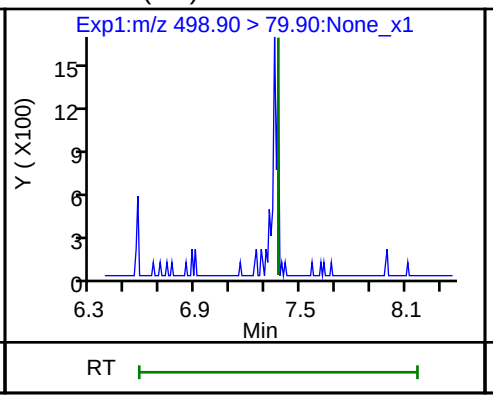
* 57 13C4 PFOS



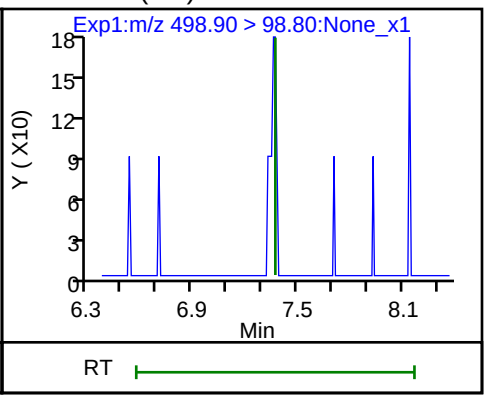
D 56 13C8 PFOS



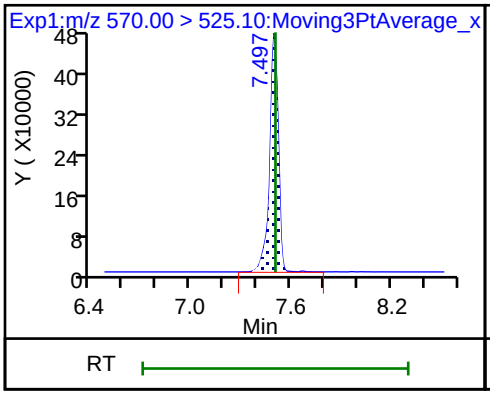
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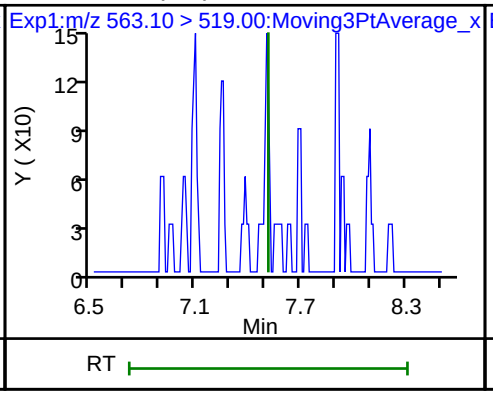
58 PFOS (ND)



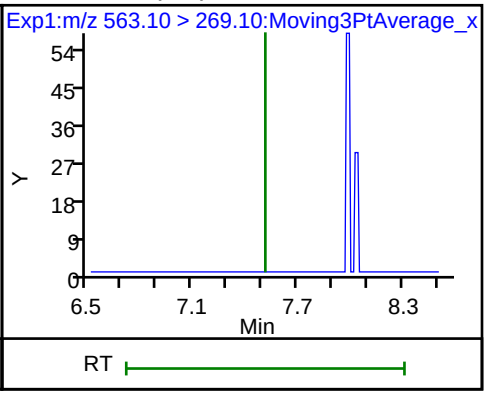
D 59 13C7 PFUnA



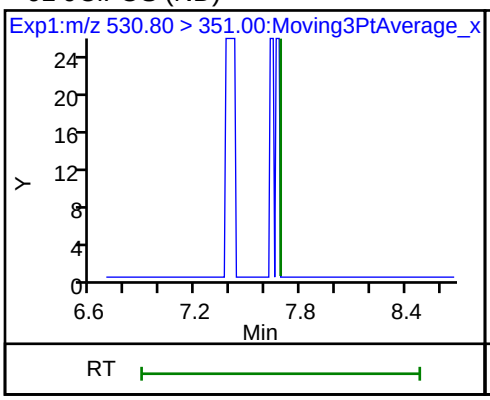
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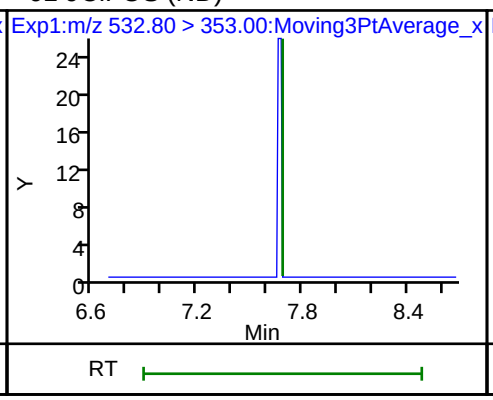
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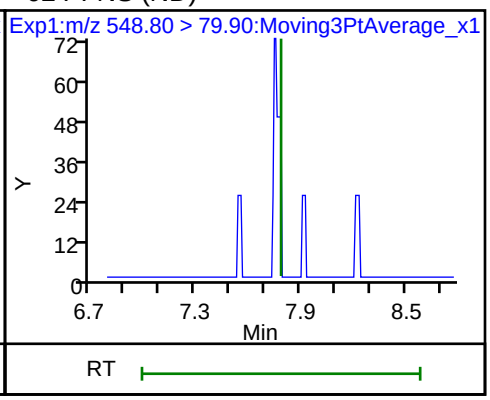
61 9ClFOS (ND)



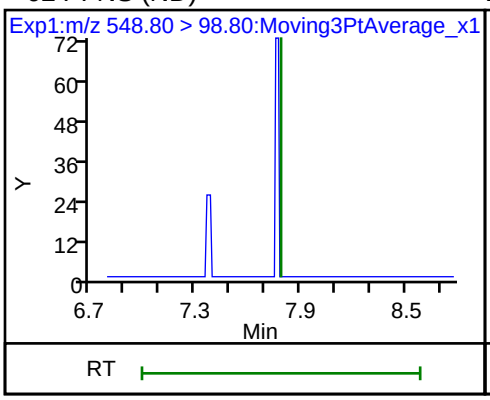
61 9ClFOS (ND)



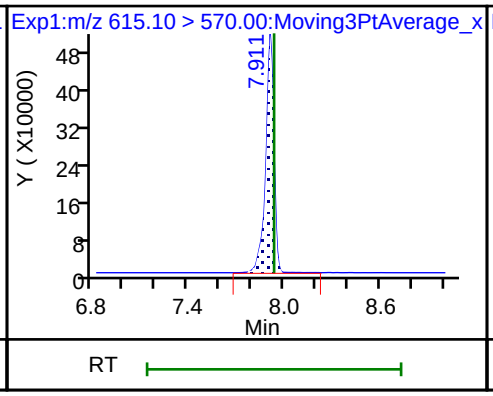
62 PFNS (ND)



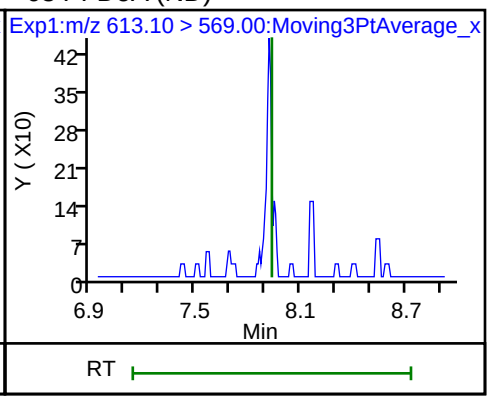
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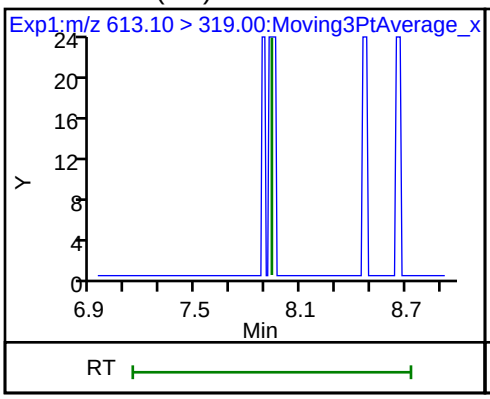
D 81 PFDoA



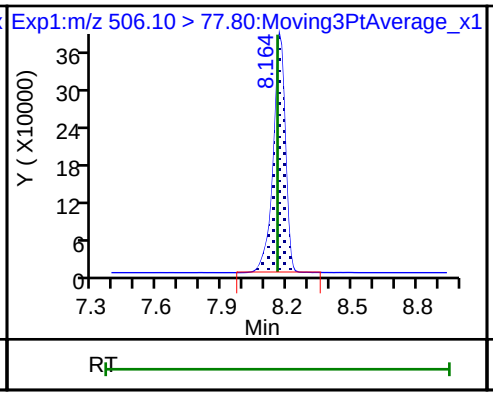
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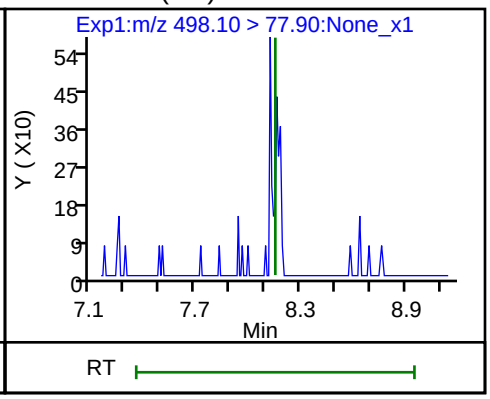
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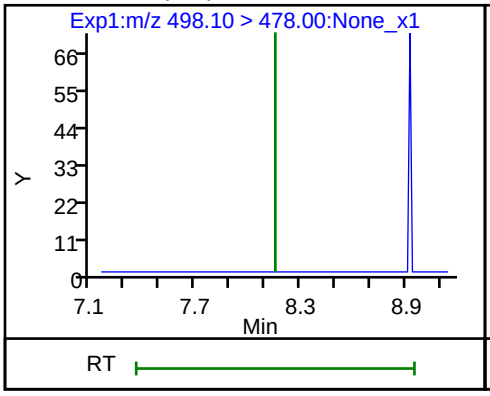
D 65 13C8 FOSA



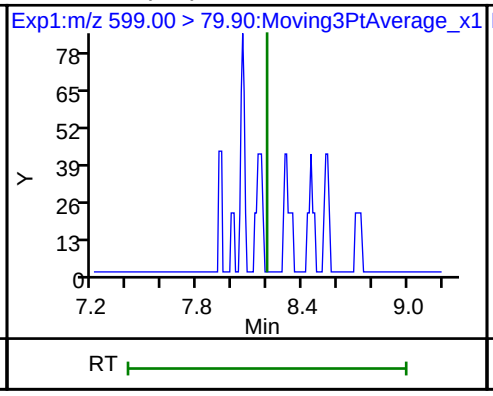
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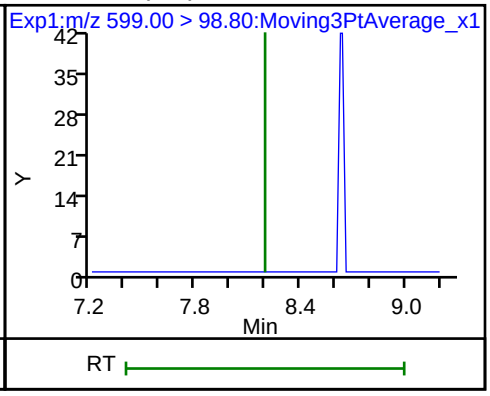
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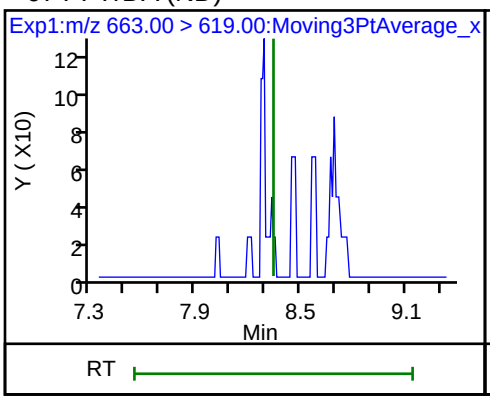
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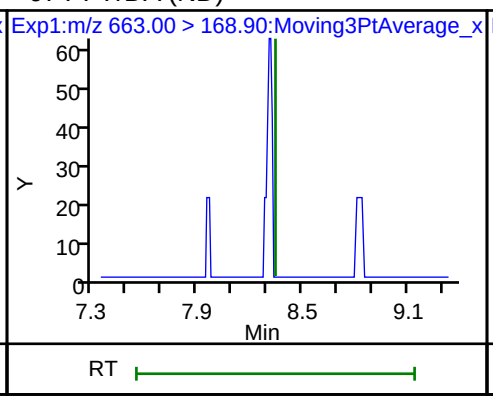
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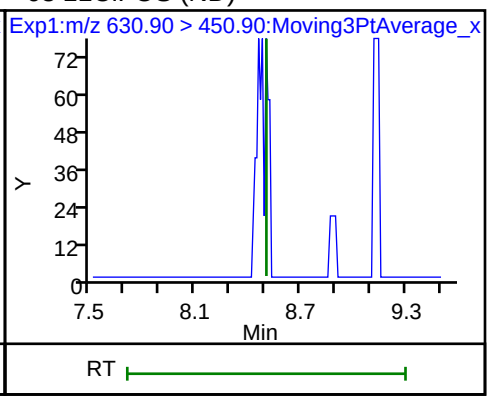
67 PFTrDA (ND)



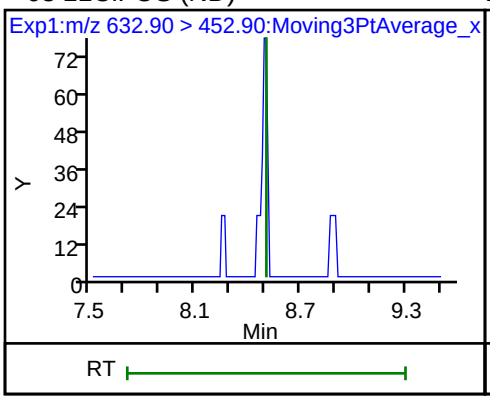
67 PFTrDA (ND)



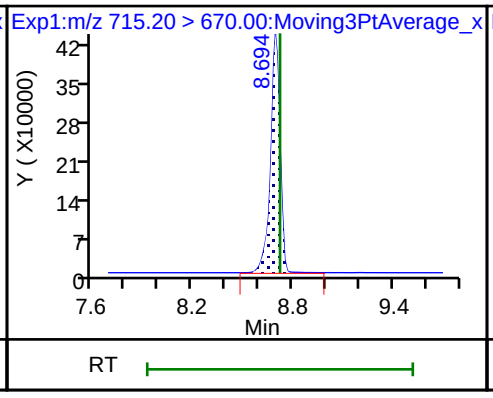
68 11ClFOS (ND)



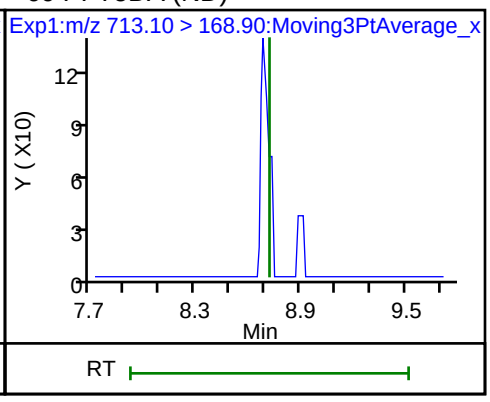
68 11ClFOS (ND)



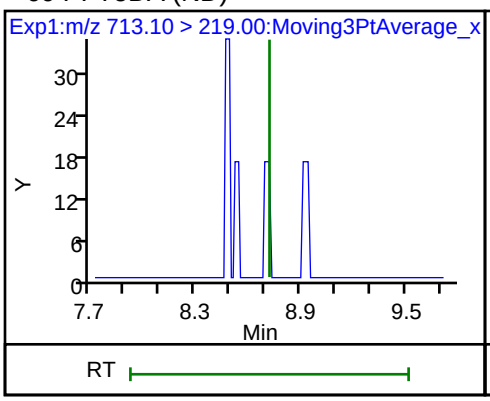
D 70 13C2 PFTeDA



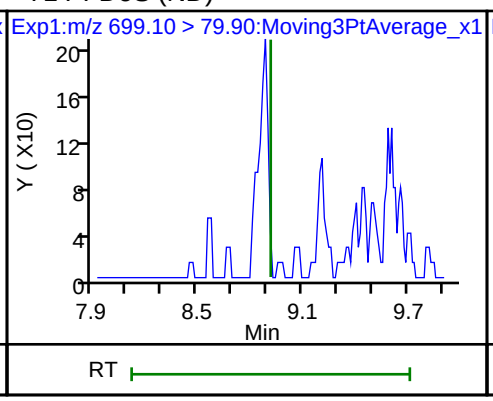
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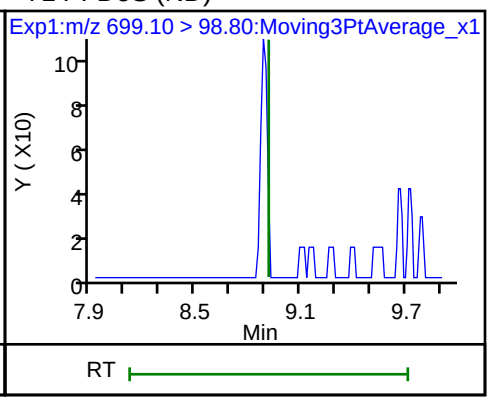
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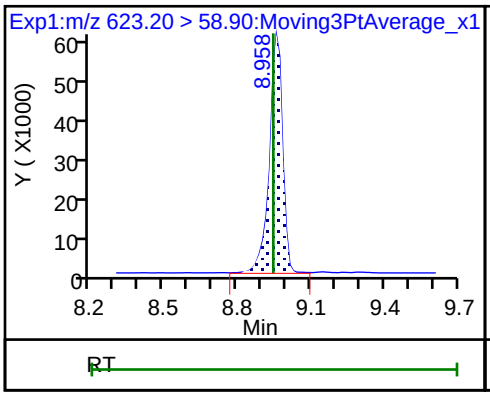
71 PFDoS (ND)



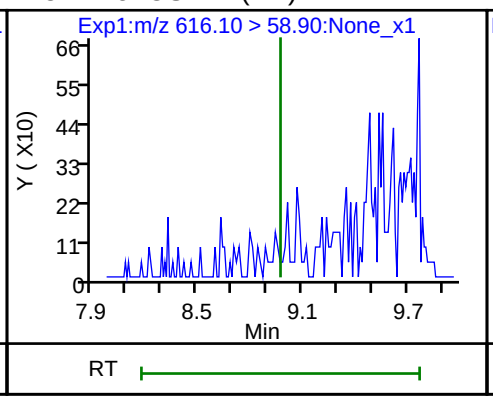
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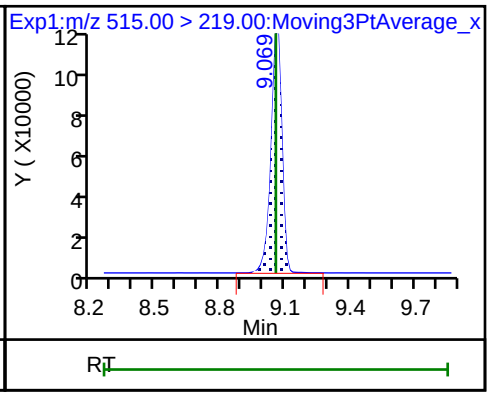
D 72 d7-N-Me-FOSE



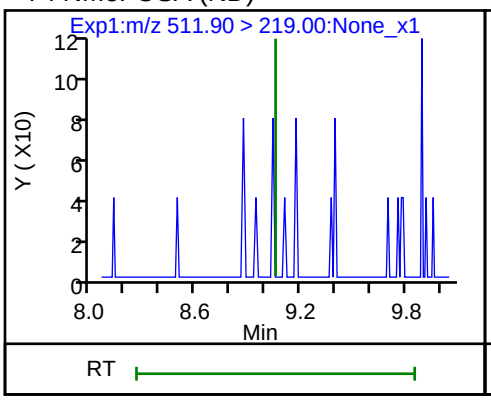
73 N-MeFOSE-M (ND)



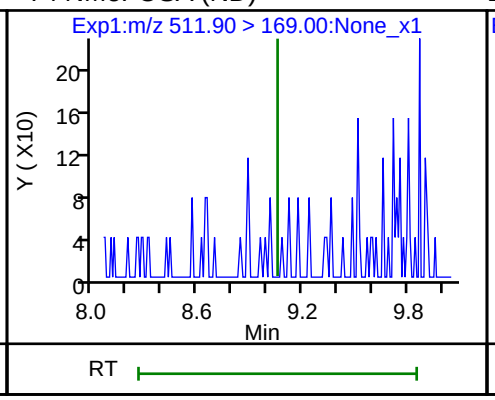
D 75 d3-NMePFOSA



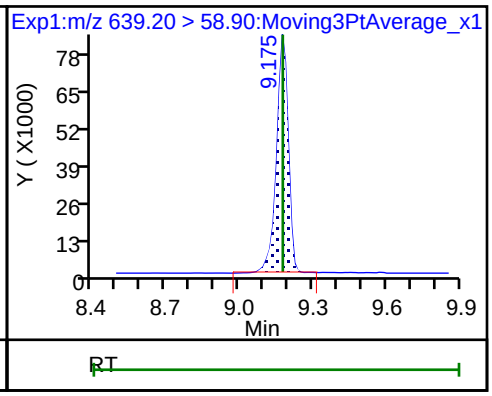
74 NMeFOSA (ND)



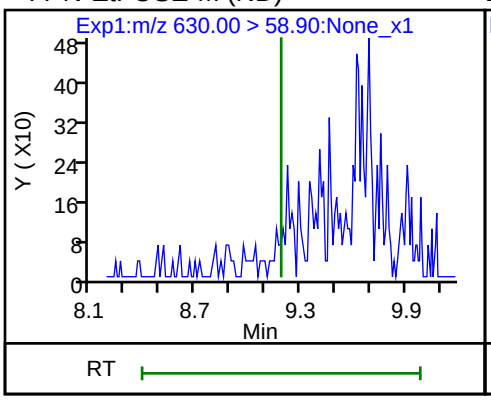
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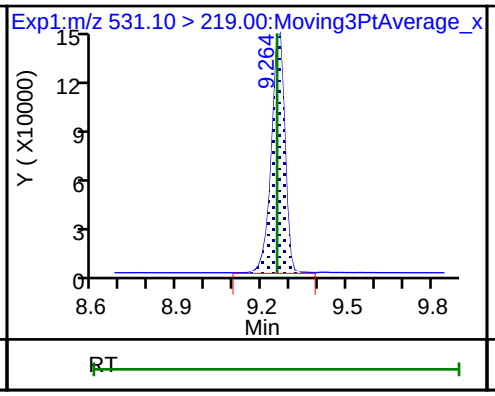
D 76 d9-N-EtFOSE



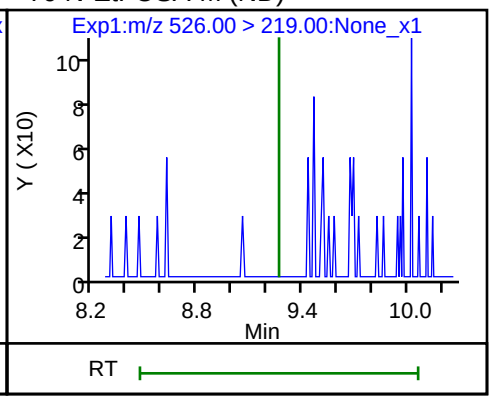
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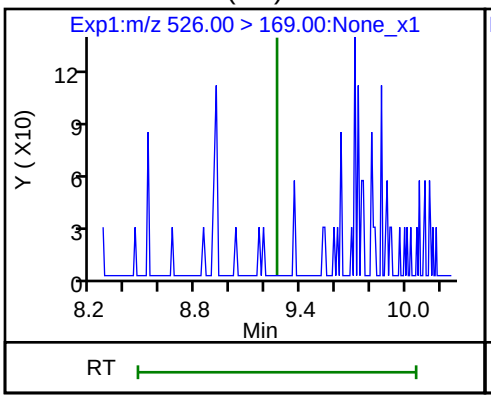
D 78 d5-NEtPFOSA



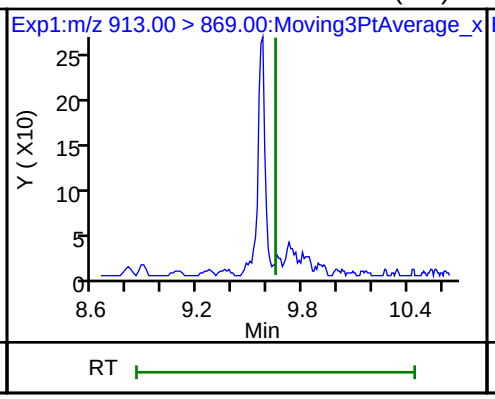
79 N-EtFOSA-M (ND)



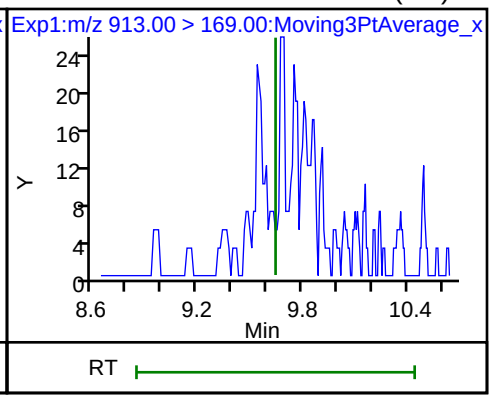
79 N-EtFOSA-M (ND)



80 Perfluorooctadecanoic acid (ND)



80 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/78

Matrix: Water
Lab File ID: 26FEB18JO-78.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 05:40

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.010	U	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/78

Matrix: Water
Lab File ID: 26FEB18JO-78.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 05:40

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-770716/78

Matrix: Water
Lab File ID: 26FEB18JO-78.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 05:40

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	94.6		5-130
2283397-79-3	13C5 PFPeA	92.0		40-130
2328024-54-8	13C5 PFHxA	103		40-130
2328024-55-9	13C4 PFHpA	99.3		40-130
1350614-84-4	13C8 PFOA	101		40-130
2283397-80-6	13C9 PFNA	104		40-130
2328024-56-0	13C6 PFDA	97.0		40-130
STL02580	13C7 PFUnA	98.1		30-130
STL02116	13C2 PFTeDA	93.8		10-130
2708218-83-9	13C3 PFBS	98.7		40-135
2708218-85-1	13C3 PFHxS	96.5		40-130
2265893-05-6	13C8 PFOS	99.2		40-130
STL01056	13C8 FOSA	95.7		40-130
1400690-70-1	d3-NMeFOSAA	99.2		40-170
1265205-97-7	d5-NEtFOSAA	112		25-135
STL02395	13C2 4:2 FTS	93.0		40-200
STL02279	13C2 6:2 FTS	95.1		40-200
STL02280	13C2 8:2 FTS	85.7		40-300
STL02255	13C3 HFPO-DA	98.3		40-130
STL02277	d7-N-MeFOSE-M	99.8		10-130
STL02278	d9-N-EtFOSE-M	112		10-130
STL02704	d5-NEtPFOSA	97.9		10-130
STL02705	d3-NMePFOSA	96.7		10-130
960315-52-0	13C2 PFDoA	93.0		10-130

Report Date: 19-Feb-2026 11:14:09 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-78.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Feb-2026 05:40:36 ALS Bottle#: 1 Worklist Smp#: 78
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1 Rack: 1 410-0176047-078
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 11:13:49 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 10:59:12
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.133	0.017	0.496	939031	1.83		91.3	1843	
D 4 13C4-PFBA										
216.80 > 171.90	4.332	4.309	0.023	1.000	1380853	1.89		94.6	10580	
* 5 13C3PFBA										
216.00 > 172.00	4.332	4.309	0.023		1482725	2.00			3092	
D 8 13C5 PFPeA										
268.30 > 223.00	4.975	4.959	0.016	0.915	1331482	1.84		92.0	3410	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.260	5.235	0.025	0.806	834509	4.36		93.0	3753	
* 16 13C2 PFHxA										
315.10 > 270.00	5.437	5.424	0.013		4079101	5.00			7720	
D 15 13C5 PFHxA										
318.00 > 273.00	5.447	5.424	0.023	1.002	1831634	2.06		103	4136	
D 19 13C3 PFBS										
302.10 > 79.90	5.588	5.561	0.027	0.856	1682650	1.84		98.7	5162	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.634	5.607	0.027	1.036	1137000	1.97		98.3	3301	
24 TCDCA										
498.10 > 80.00	6.063	5.677	0.386	0.822	1664	NR			8.9	
D 28 13C4 PFHpA										
367.10 > 322.00	5.877	5.851	0.026	1.081	1726726	1.99		99.3	4335	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.073	6.059	0.014	0.930	720428	4.52		95.1	1867	
* 34 13C4 PFOA										
417.10 > 372.00	6.282	6.269	0.013		5912330	5.00			4285	
D 35 13C8 PFOA										
421.10 > 376.00	6.282	6.269	0.013	1.000	2281242	2.01		101	4947	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 38 13C3 PFHxS 402.10 > 79.90	6.528	6.512	0.016	1.000	1415848	1.83		96.5	8559	
* 39 18O2 PFHxS 403.00 > 83.90	6.528	6.512	0.016		1344426	1.90			2019	
* 42 13C5 PFNA 468.00 > 423.00	6.709	6.684	0.025		1904633	2.00			4253	
D 41 13C9 PFNA 472.10 > 427.00	6.699	6.684	0.015	0.999	1989556	2.09		104	5057	
D 44 13C2-8:2FTS 529.10 > 80.90	6.883	6.868	0.015	1.054	674386	4.11		85.7	2311	
D 49 d3-NMeFOSAA 573.20 > 419.00	7.053	7.037	0.016	0.956	1436264	4.96		99.2	1969	
* 51 13C2 PFDA 515.10 > 470.10	7.112	7.107	0.006		1859252	2.00			3776	
D 52 13C6 PFDA 519.10 > 474.10	7.112	7.107	0.006	1.000	1793544	1.94		97.0	3517	
D 54 d5-NEtFOSAA 589.20 > 419.00	7.243	7.219	0.024	0.982	1478684	5.58		112	1920	
* 57 13C4 PFOS 502.80 > 79.90	7.379	7.373	0.006		1160069	1.92			4671	
D 56 13C8 PFOS 507.10 > 79.90	7.379	7.373	0.006	1.000	1279293	1.90		99.2	5134	
D 59 13C7 PFUnA 570.00 > 525.10	7.522	7.506	0.016	1.058	1896044	1.96		98.1	6404	
D 81 PFDoA 615.10 > 570.00	7.933	7.935	-0.002	1.115	1797453	1.86		93.0	2751	
D 65 13C8 FOSA 506.10 > 77.80	8.184	8.155	0.029	1.109	1376175	1.91		95.7	3165	
D 70 13C2 PFTeDA 715.20 > 670.00	8.705	8.722	-0.017	1.224	1665829	1.88		93.8	5024	
D 72 d7-N-Me-FOSE 623.20 > 58.90	8.972	8.945	0.027	1.216	237490	4.99		99.8	656	
D 75 d3-NMePFOSA 515.00 > 219.00	9.069	9.057	0.012	1.229	403510	1.93		96.7	1979	
D 76 d9-N-EtFOSE 639.20 > 58.90	9.187	9.176	0.011	1.245	304134	5.60		112	917	
D 78 d5-NEtPFOSA 531.10 > 219.00	9.264	9.252	0.012	1.255	498051	1.96		97.9	1930	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_IS_V_00511	Amount Added: 50.00	Units: uL
1633_125_SS_00162	Amount Added: 5.00	Units: uL

Report Date: 19-Feb-2026 11:14:09 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-78.d

Injection Date: 19-Feb-2026 05:40:36 Instrument ID: 30577

Lims ID: CCB

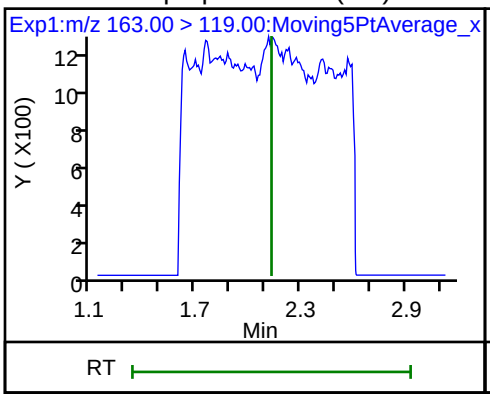
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 1 Worklist Smp#: 78

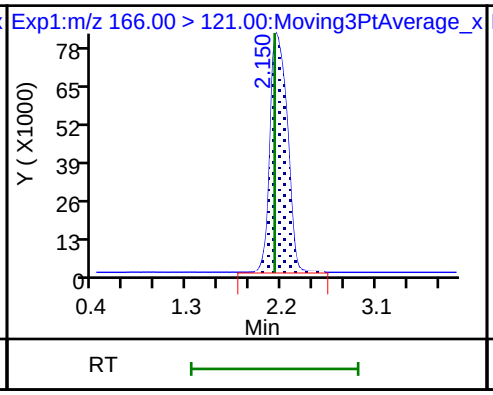
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

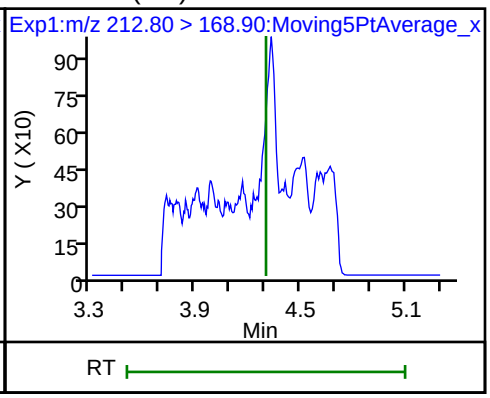
2 Perfluoropropionic acid (ND)



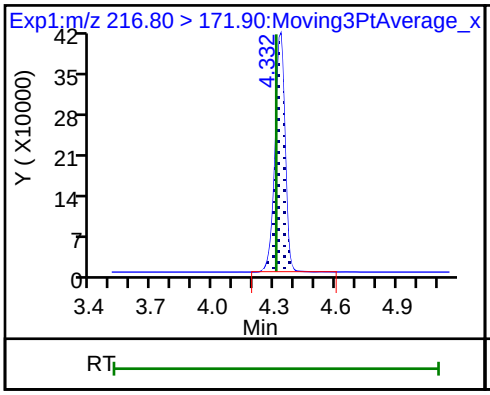
D 1 13C3PFPrA



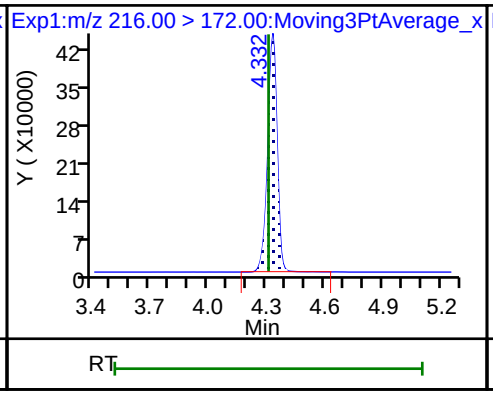
3 PFBA (ND)



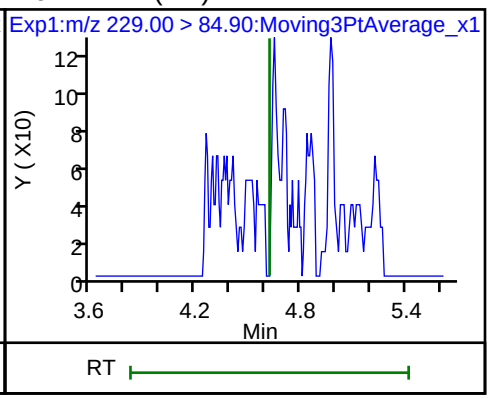
D 4 13C4-PFBA



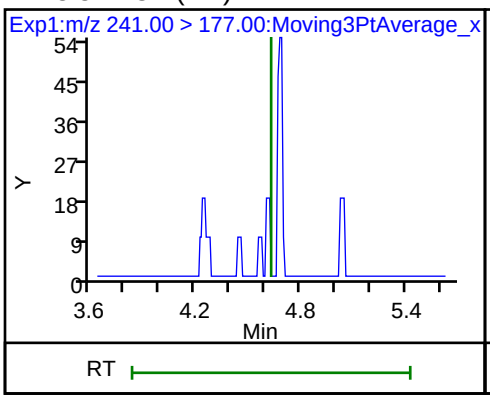
* 5 13C3PFBA



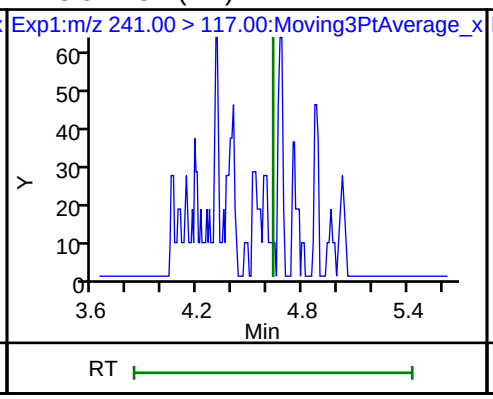
6 PFMPA (ND)



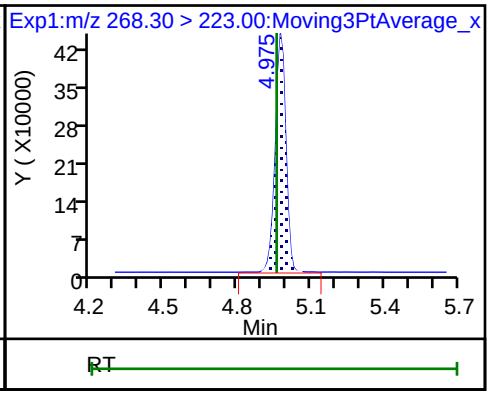
7 3:3 FTCA (ND)



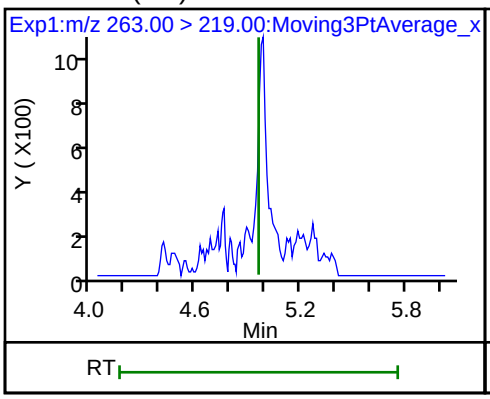
7 3:3 FTCA (ND)



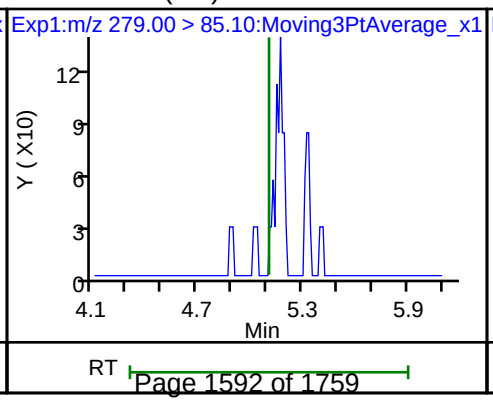
D 8 13C5 PFPeA



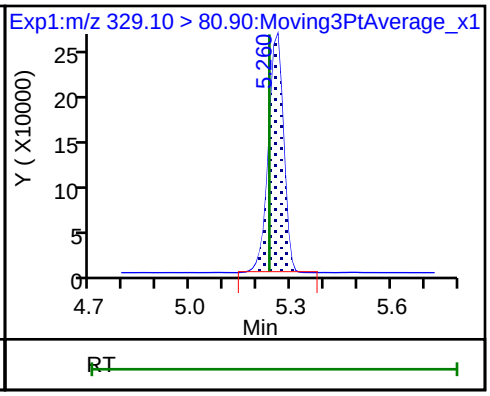
9 PFPA (ND)



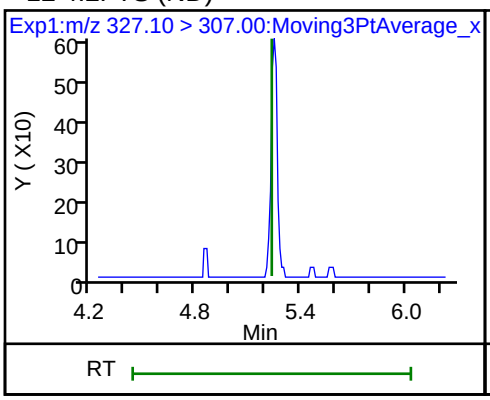
10 PFMBA (ND)



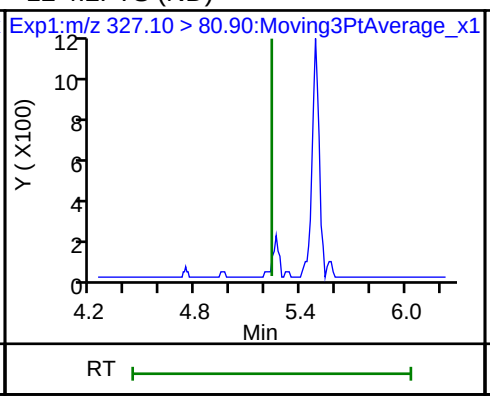
D 11 13C2-4:2FTS



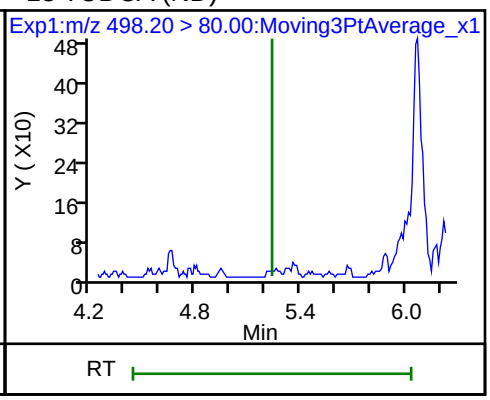
12 4:2FTS (ND)



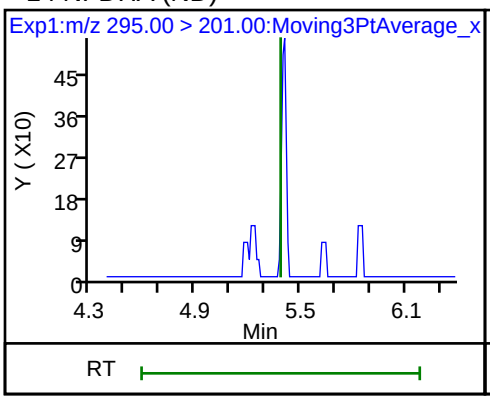
12 4:2FTS (ND)



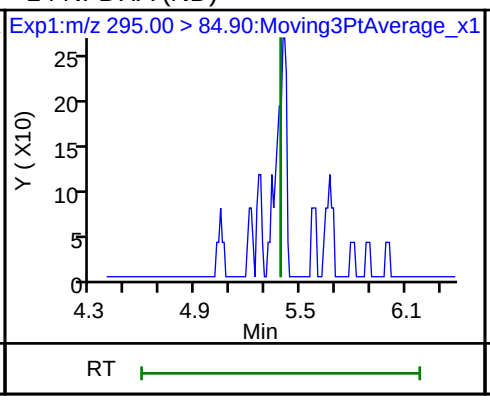
13 TUDCA (ND)



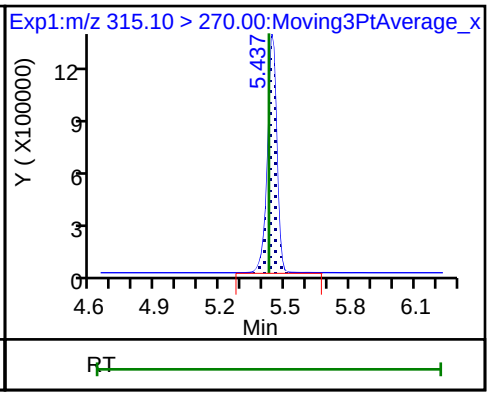
14 NFDHA (ND)



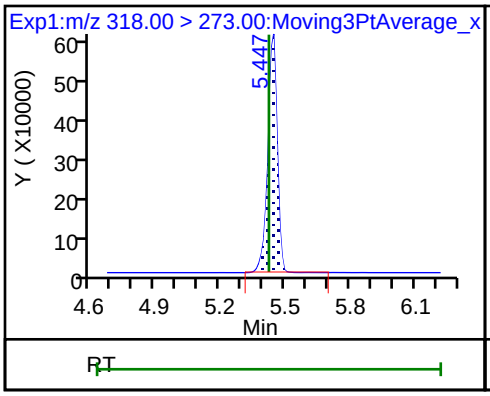
14 NFDHA (ND)



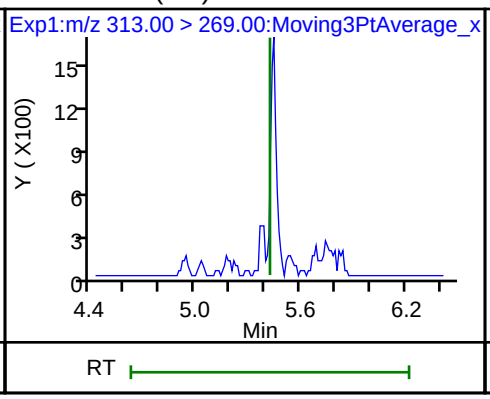
* 16 13C2 PFHxA



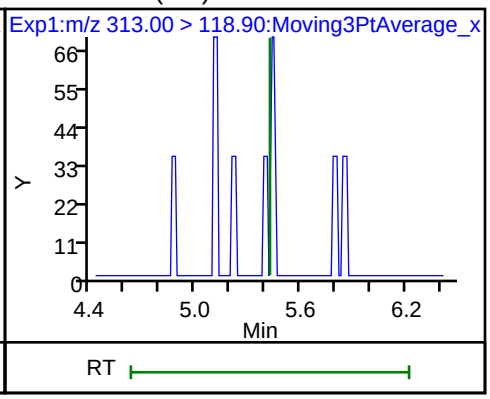
D 15 13C5 PFHxA



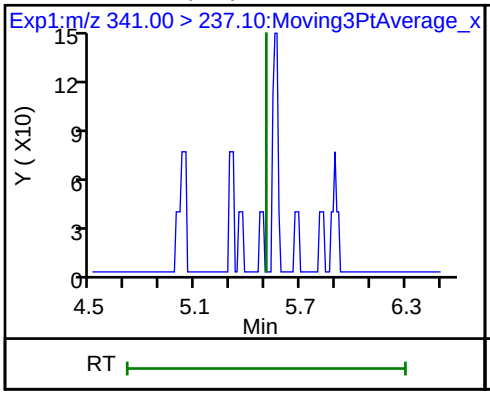
17 PFHxA (ND)



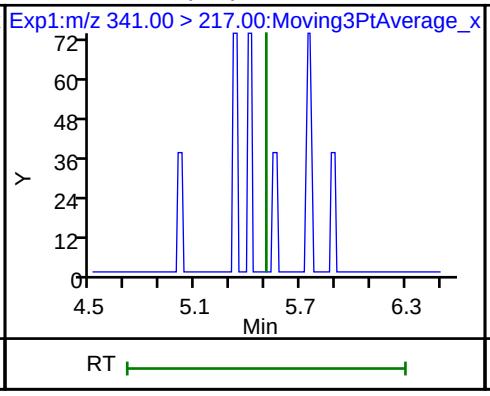
17 PFHxA (ND)



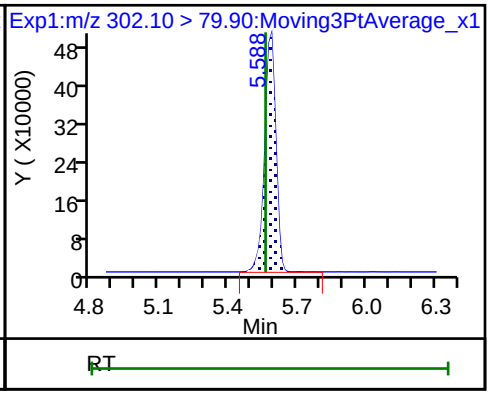
18 5:3 FTCA (ND)



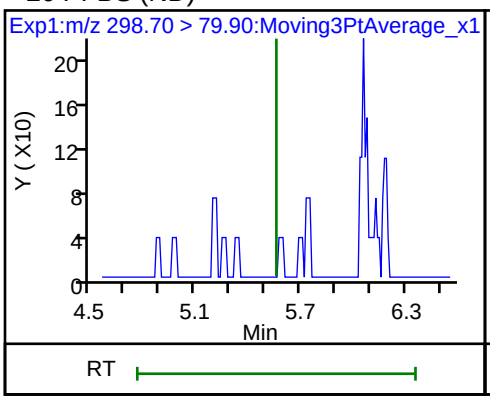
18 5:3 FTCA (ND)



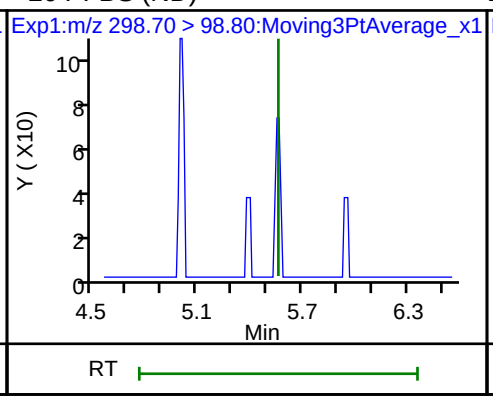
D 19 13C3 PFBS



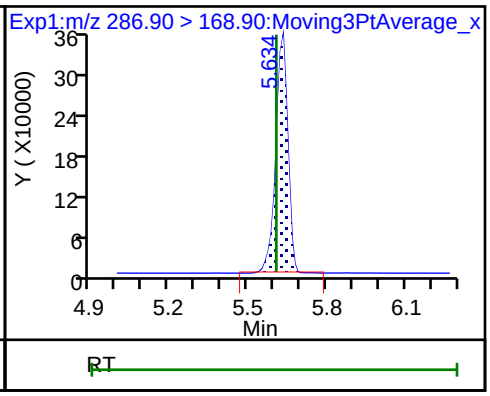
20 PFBS (ND)



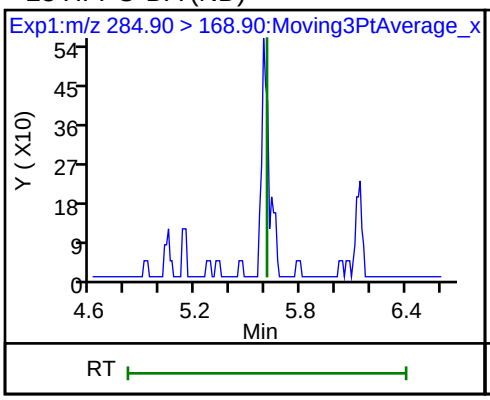
20 PFBS (ND)



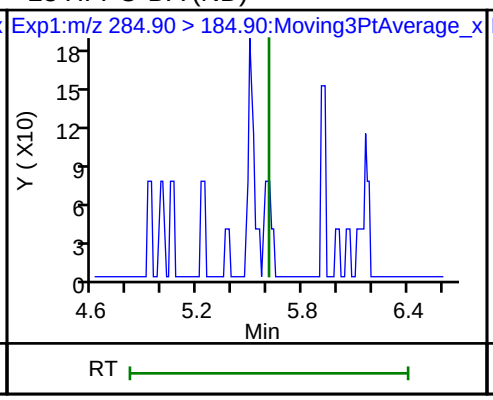
D 22 13C3 HFPO-DA



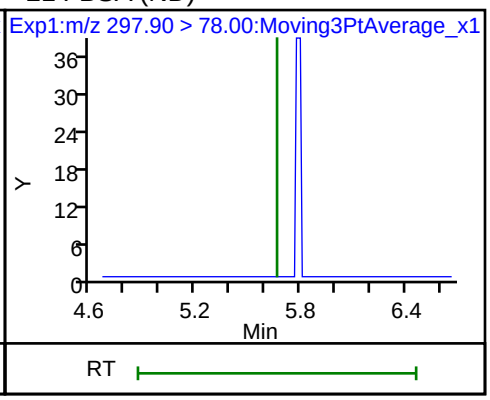
23 HFPO-DA (ND)



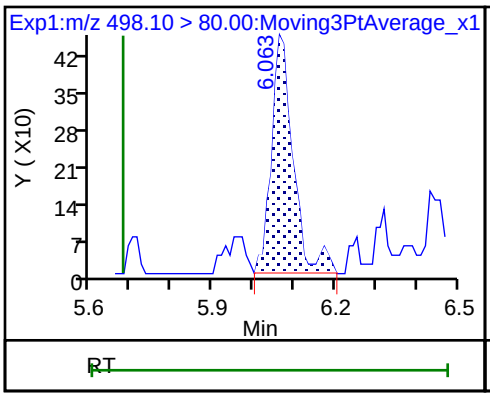
23 HFPO-DA (ND)



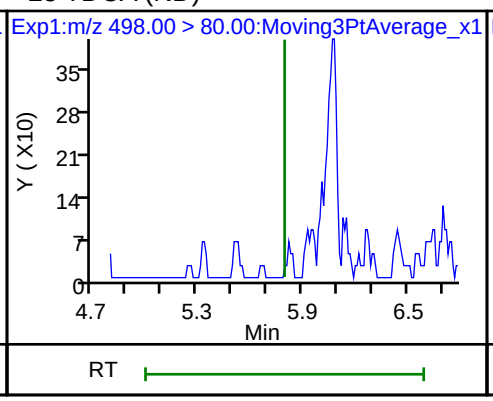
21 FBSA (ND)



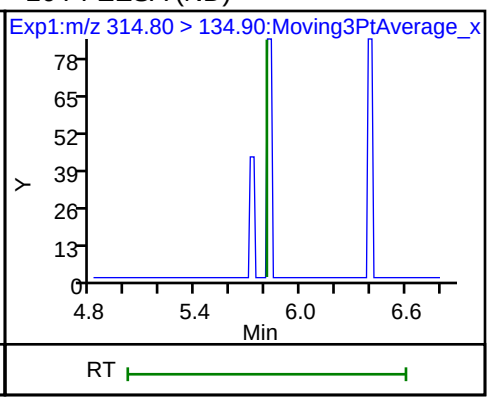
24 TCDCA



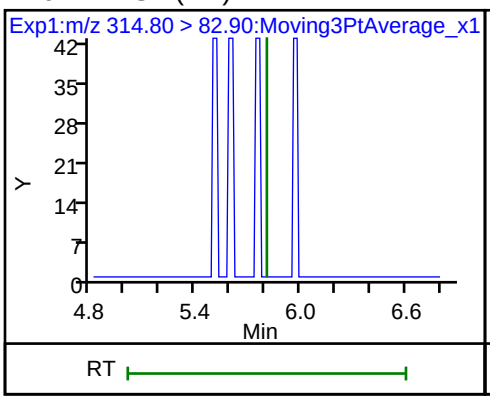
25 TDCA (ND)



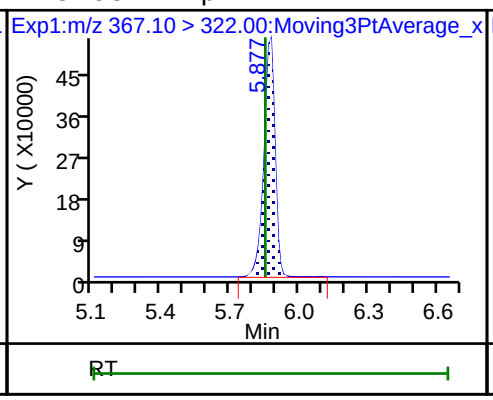
26 PFEESA (ND)



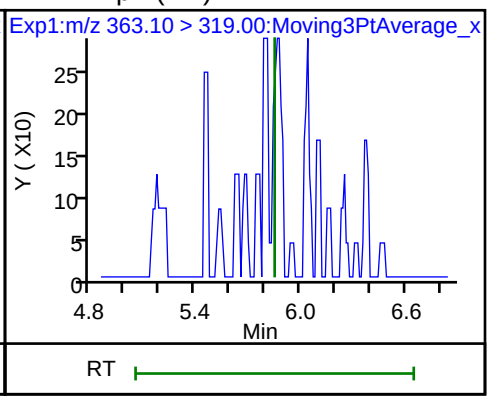
26 PFEESA (ND)



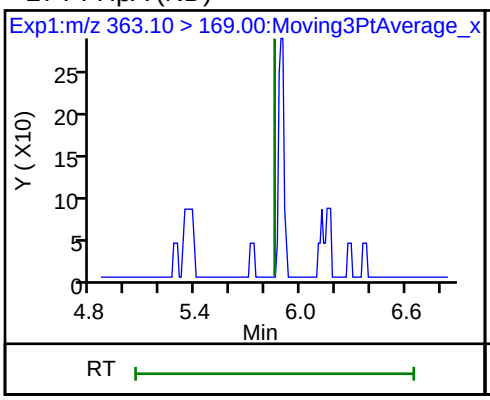
D 28 13C4 PFHpA



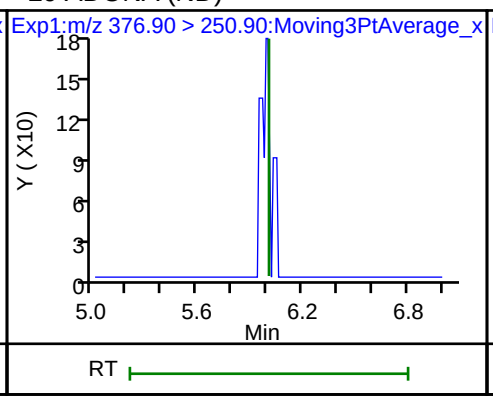
27 PFHpA (ND)



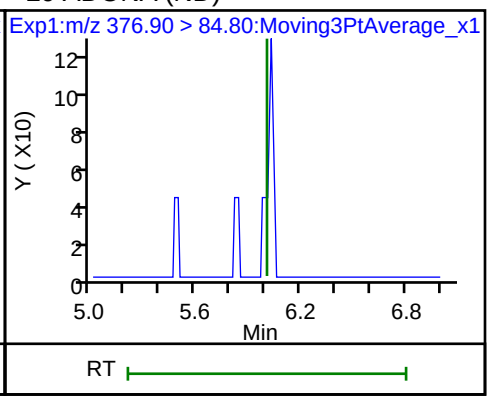
27 PFHpA (ND)



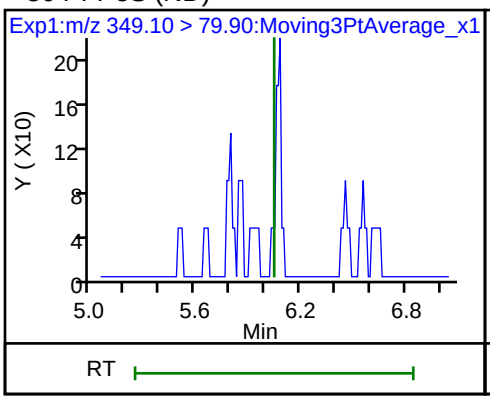
29 ADONA (ND)



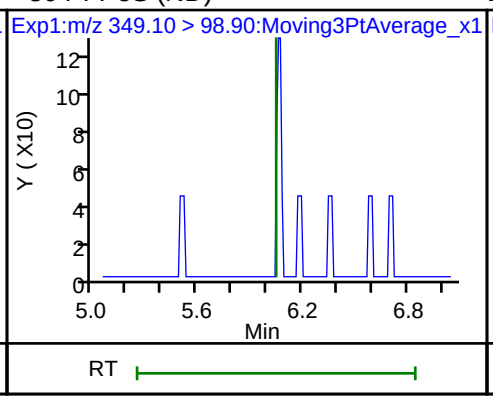
29 ADONA (ND)



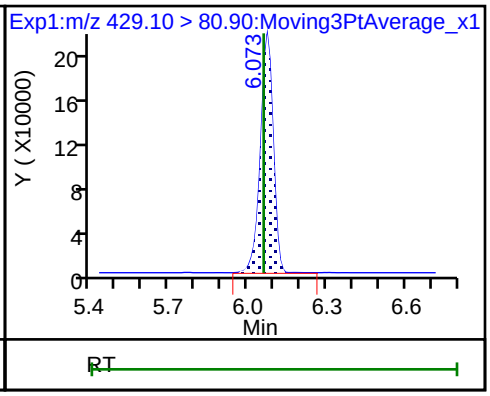
30 PFPeS (ND)



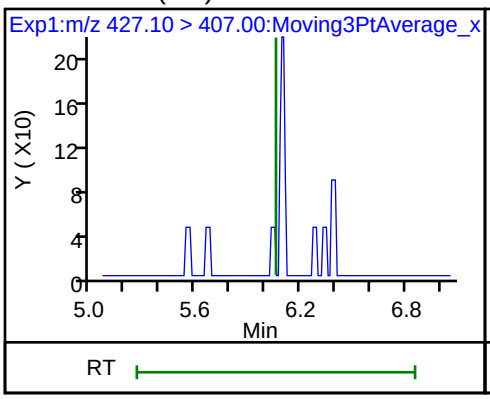
30 PFPeS (ND)



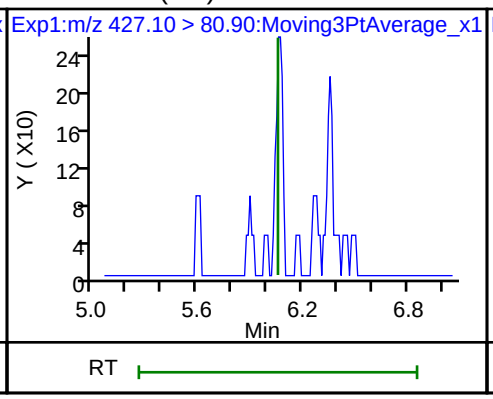
D 32 13C2-6:2FTS



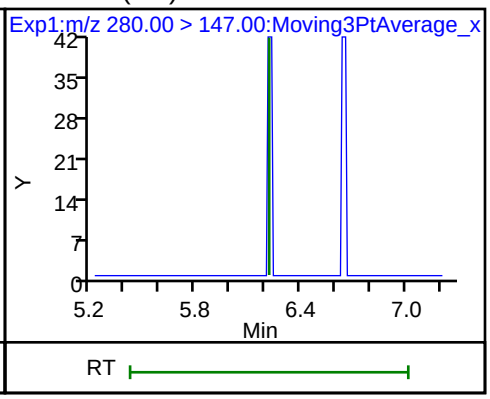
31 6:2FTS (ND)



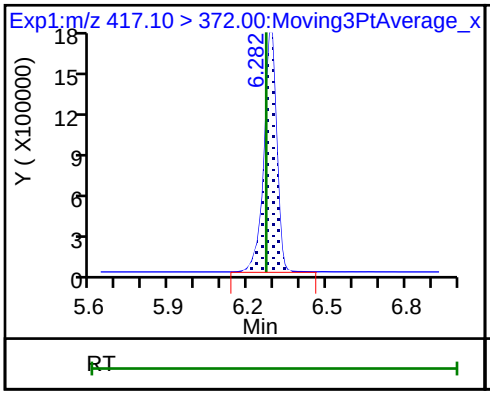
31 6:2FTS (ND)



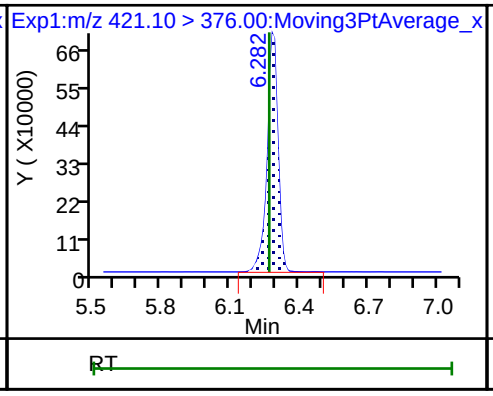
33 BTS (ND)



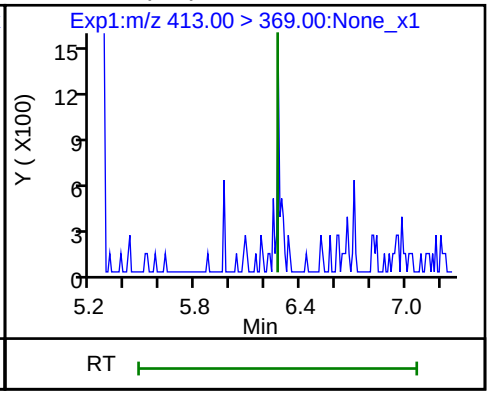
* 34 13C4 PFOA



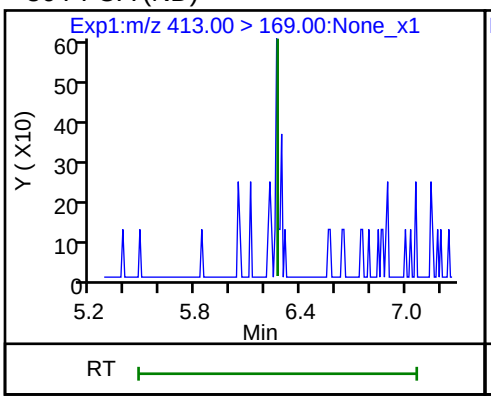
D 35 13C8 PFOA



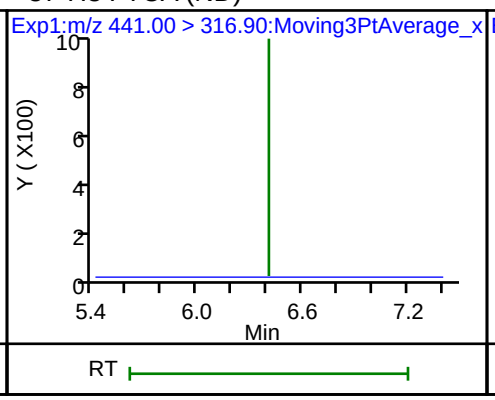
36 PFOA (ND)



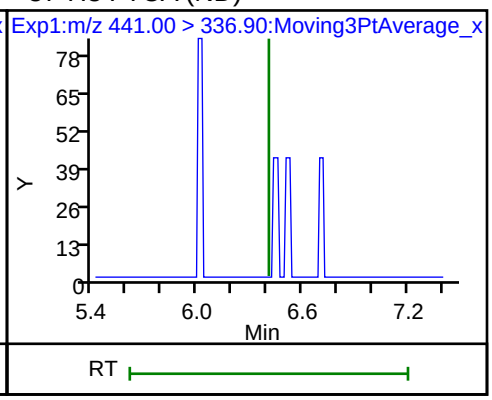
36 PFOA (ND)



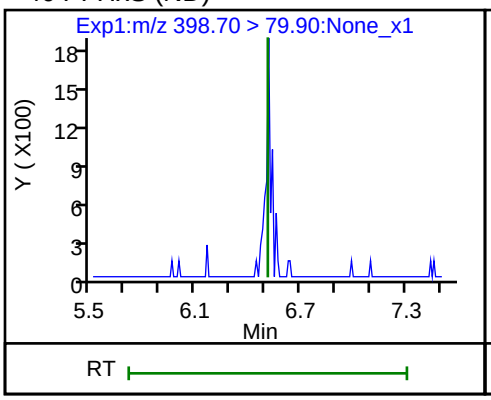
37 7:3 FTCA (ND)



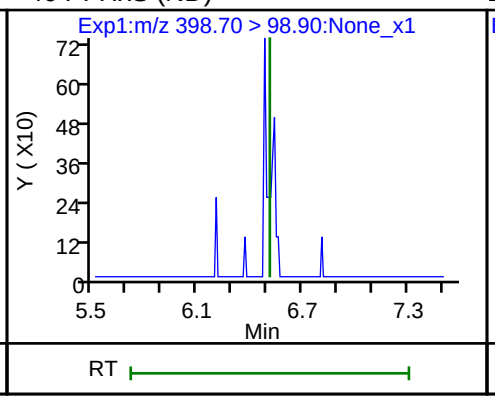
37 7:3 FTCA (ND)



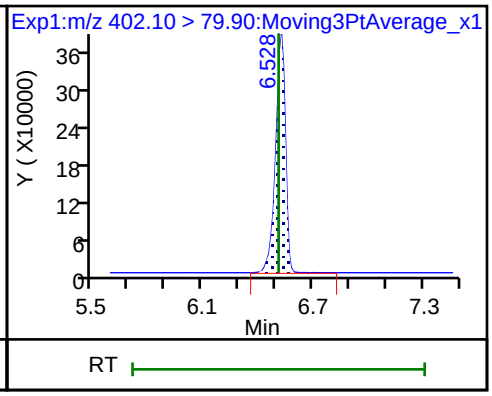
40 PFHxS (ND)



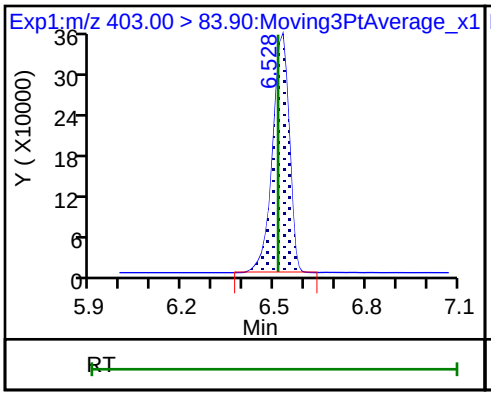
40 PFHxS (ND)



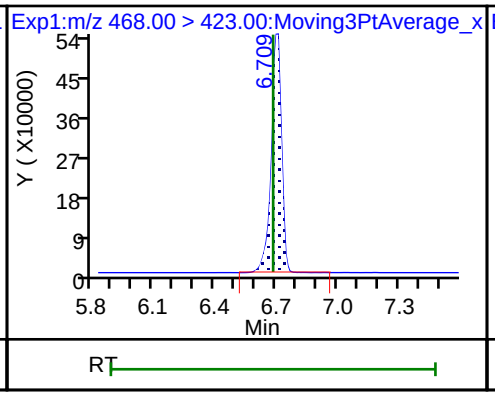
D 38 13C3 PFHxS



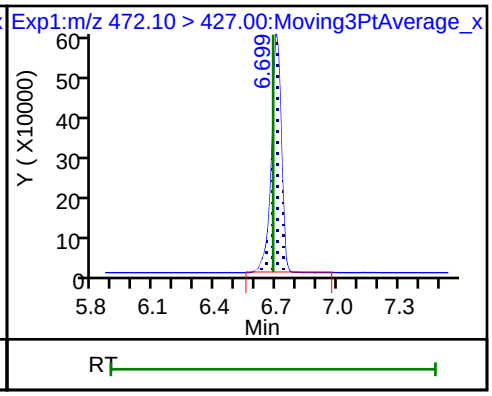
* 39 18O2 PFHxS



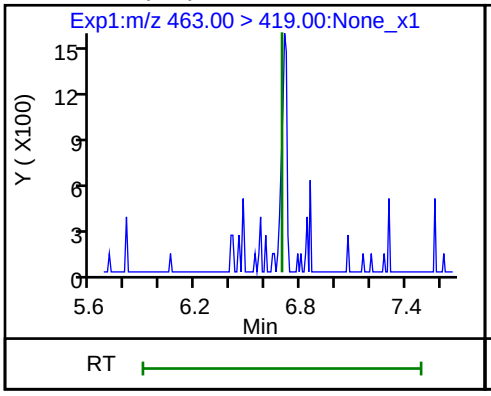
* 42 13C5 PFNA



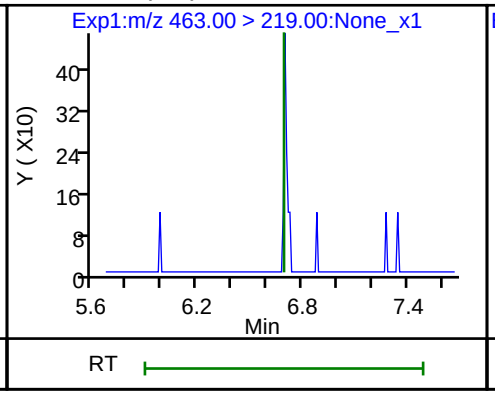
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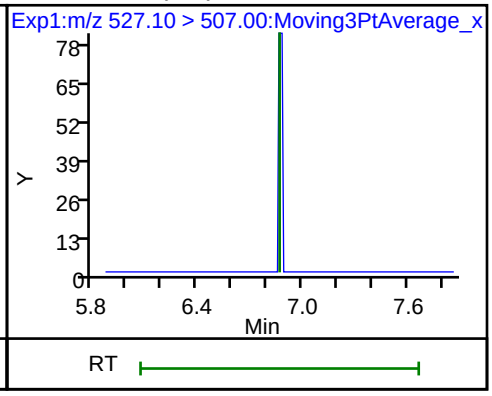
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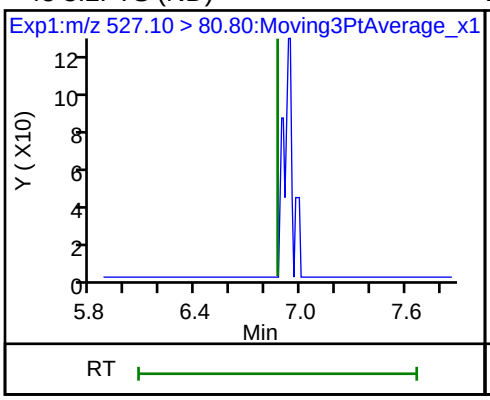
43 PFNA (ND)



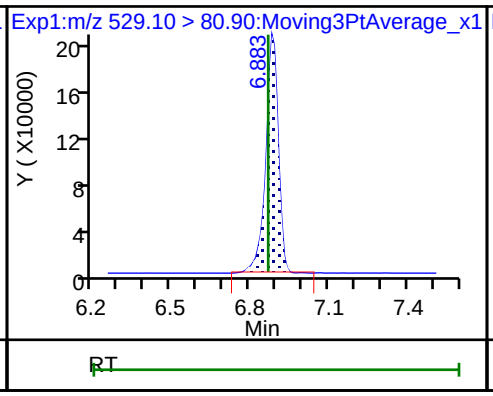
45 8:2FTS (ND)



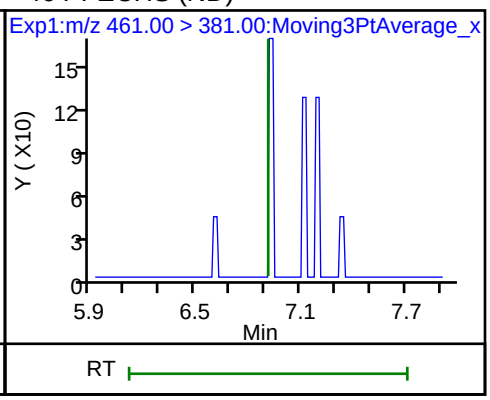
45 8:2FTS (ND)



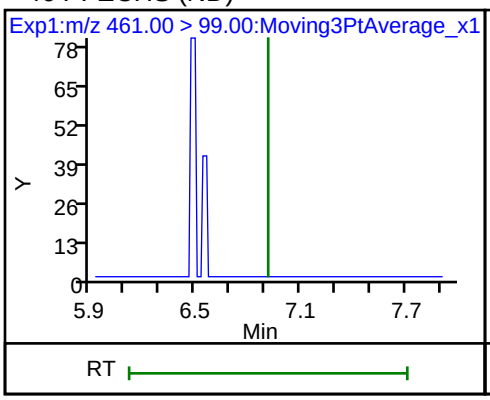
D 44 13C2-8:2FTS



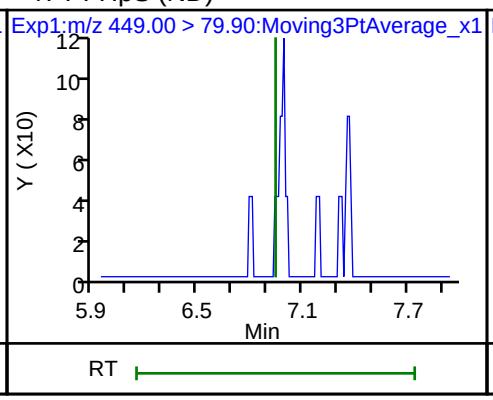
46 PFECHS (ND)



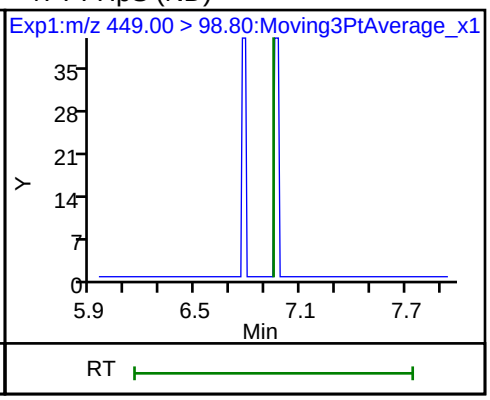
46 PFECHS (ND)



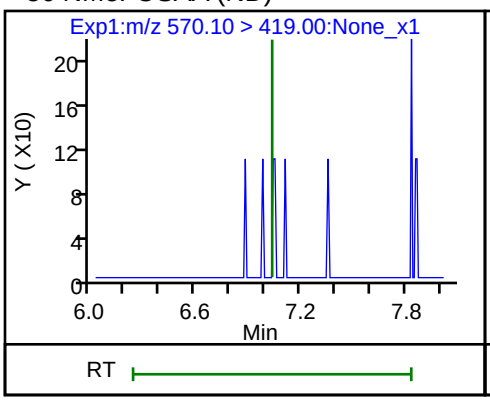
47 PFHpS (ND)



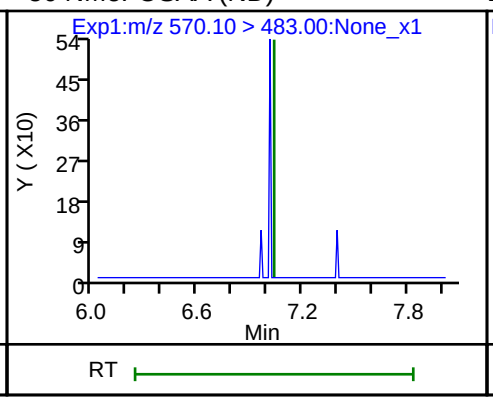
47 PFHpS (ND)



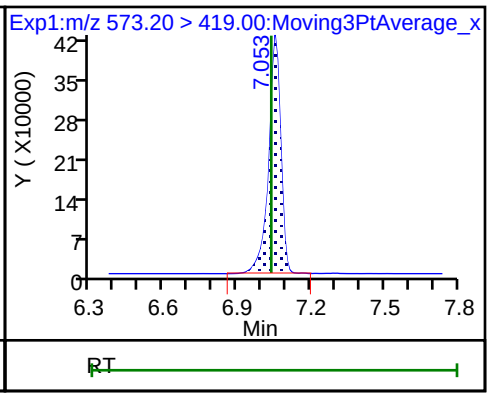
50 NMeFOSAA (ND)



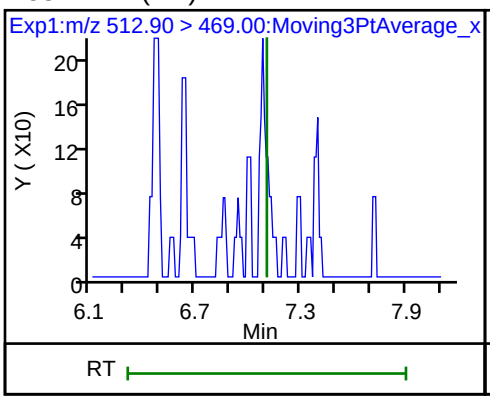
50 NMeFOSAA (ND)



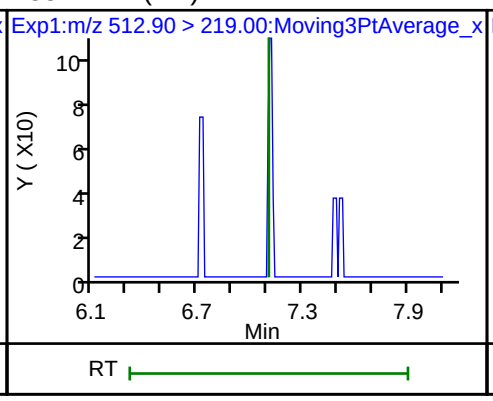
D 49 d3-NMeFOSAA



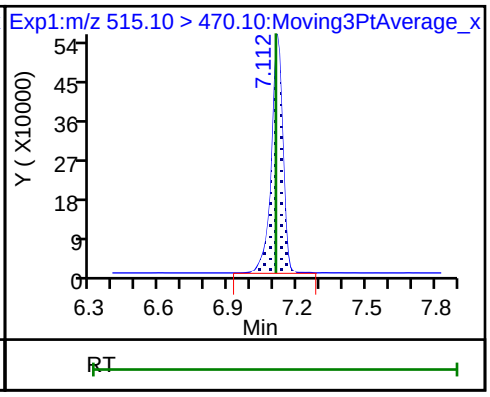
53 PFDA (ND)



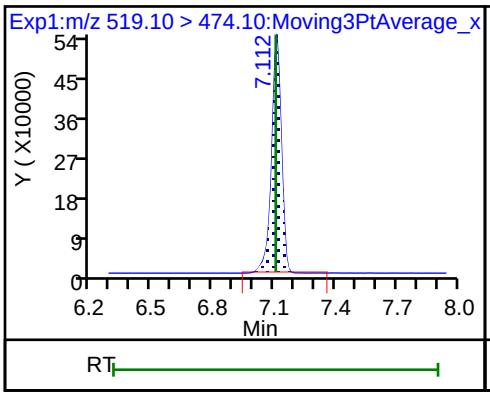
53 PFDA (ND)



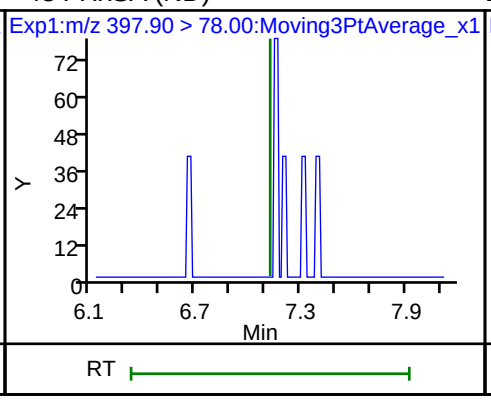
* 51 13C2 PFDA



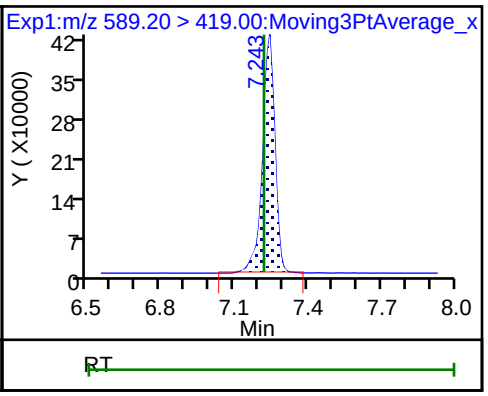
D 52 13C6 PFDA



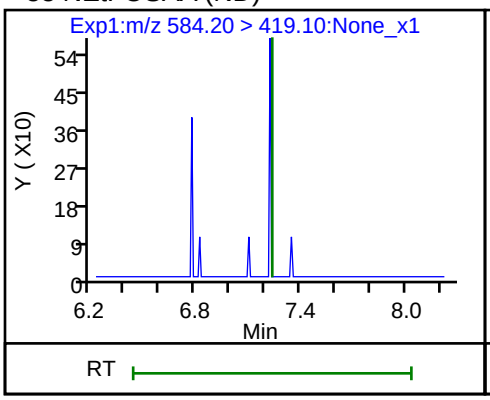
48 FHxSA (ND)



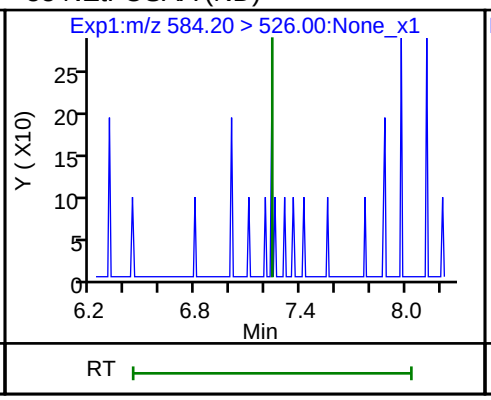
D 54 d5-NEtFOSAA



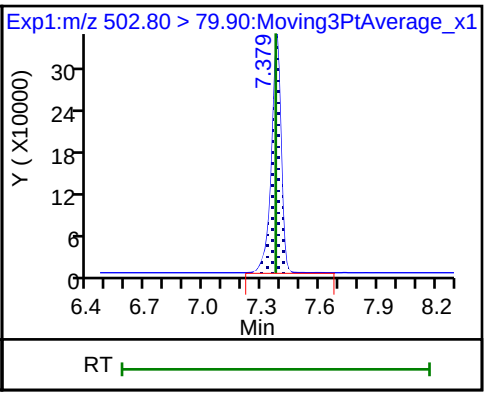
55 NEtFOSAA (ND)



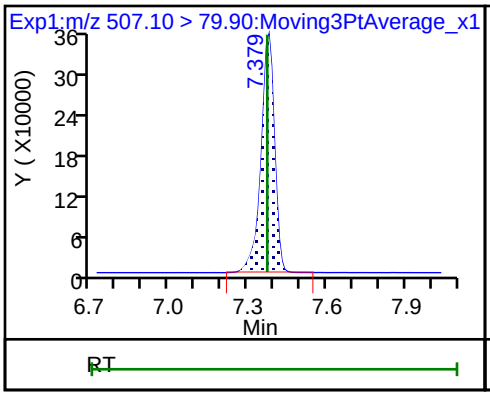
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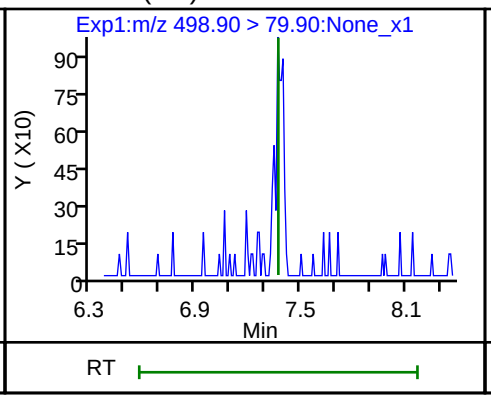
* 57 13C4 PFOS



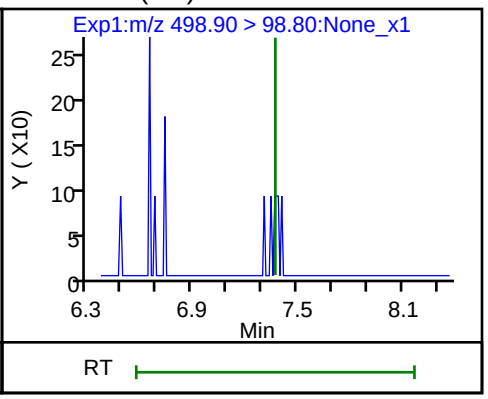
D 56 13C8 PFOS



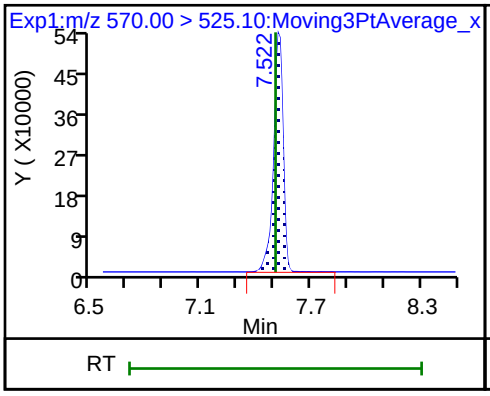
58 PFOS (ND)



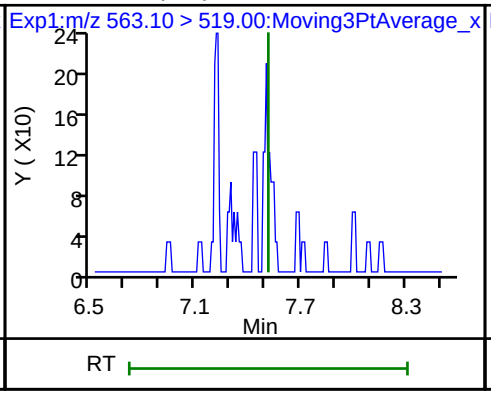
58 PFOS (ND)



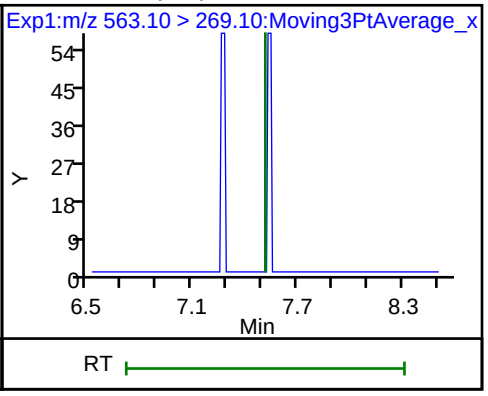
D 59 13C7 PFUnA



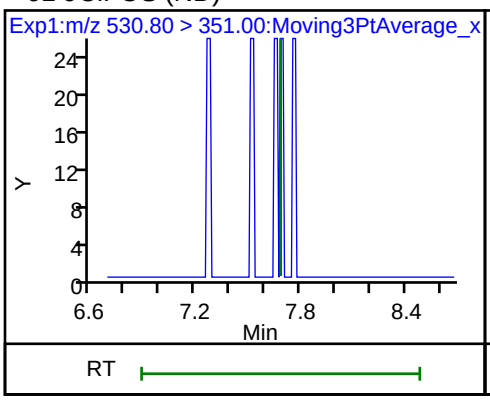
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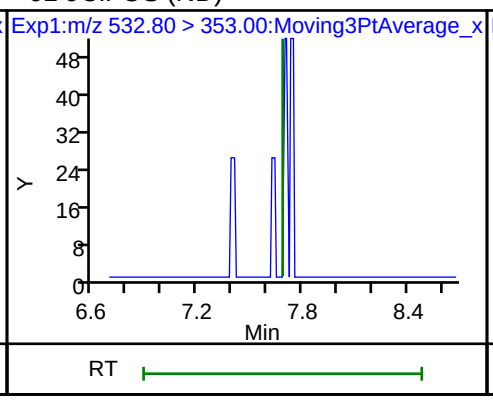
60 PFUnA (ND)



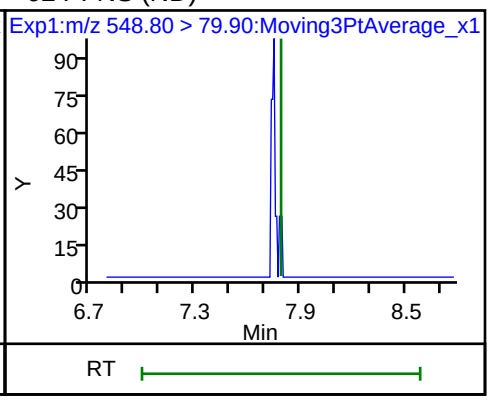
61 9ClFOS (ND)



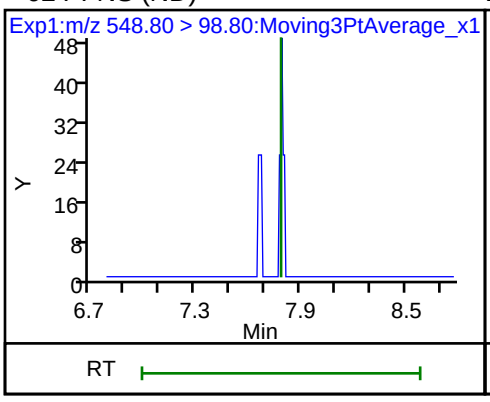
61 9ClFOS (ND)



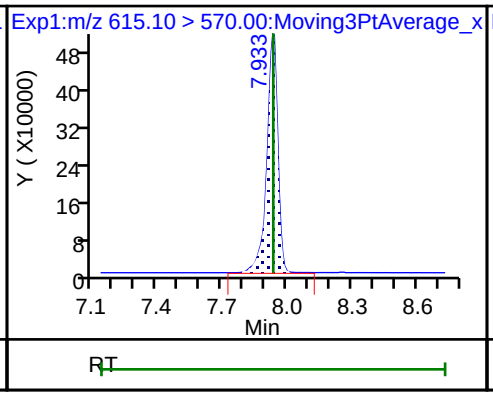
62 PFNS (ND)



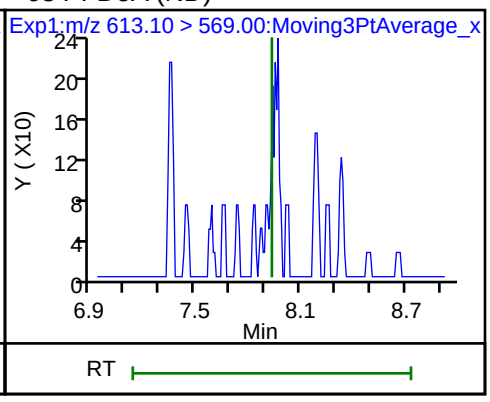
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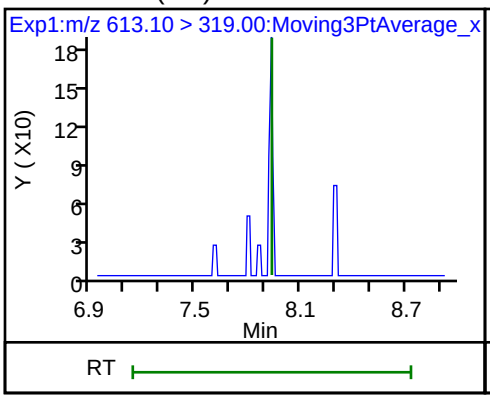
D 81 PFDoA



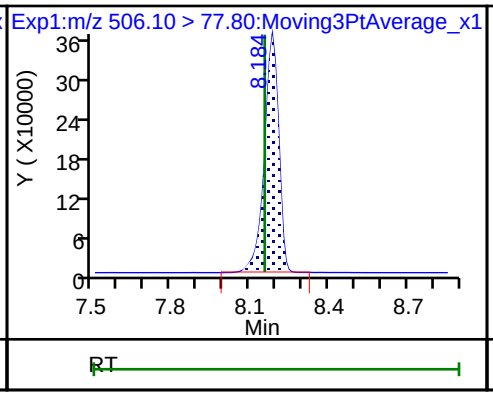
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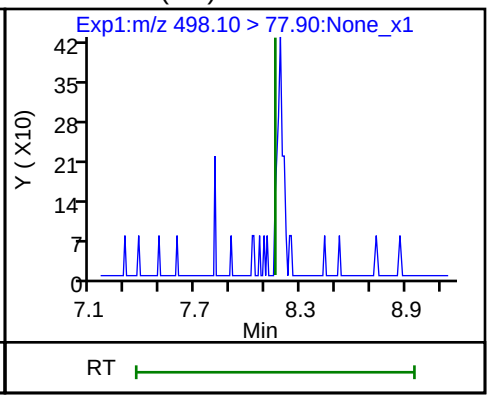
63 PFDoA (ND)



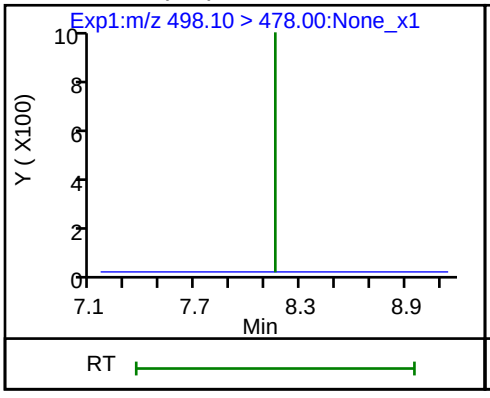
D 65 13C8 FOSA



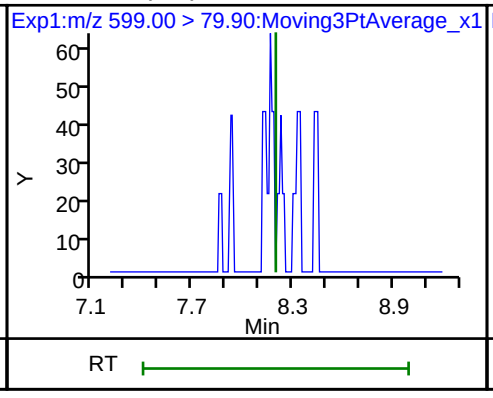
64 PFOSA (ND)



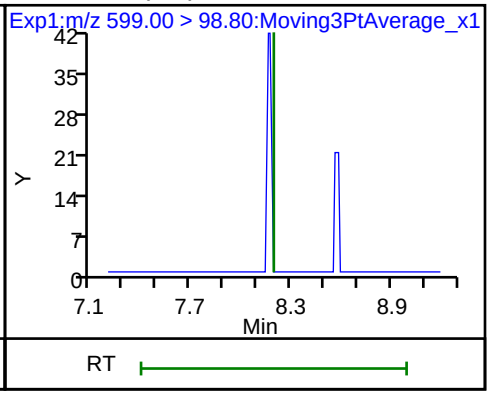
64 PFOSA (ND)



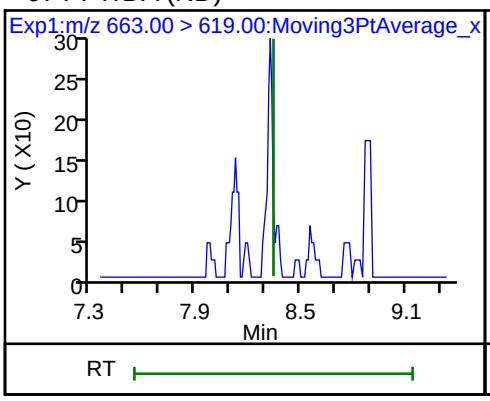
66 PFDS (ND)



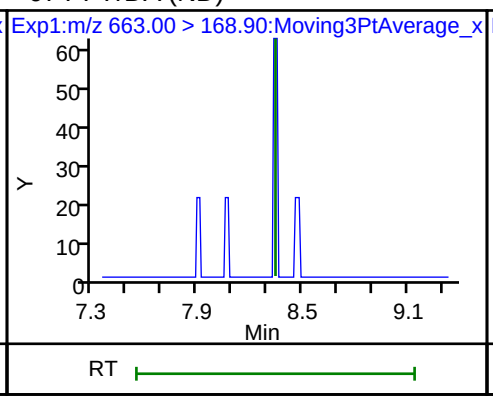
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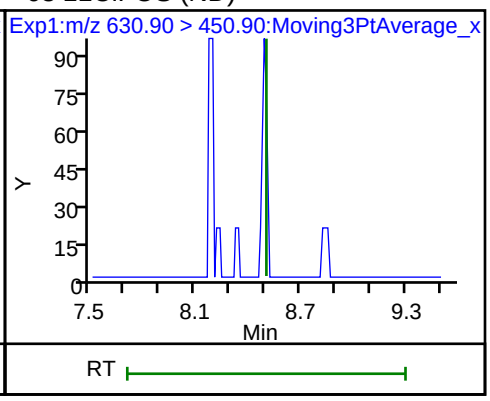
67 PFTrDA (ND)



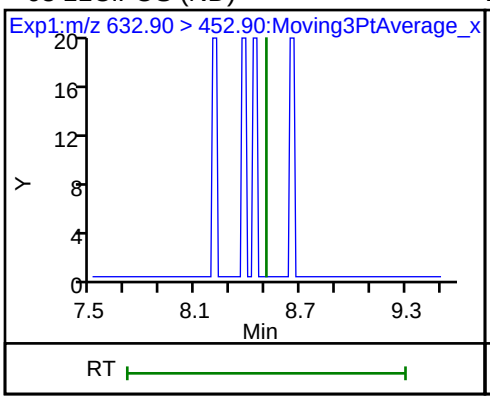
67 PFTrDA (ND)



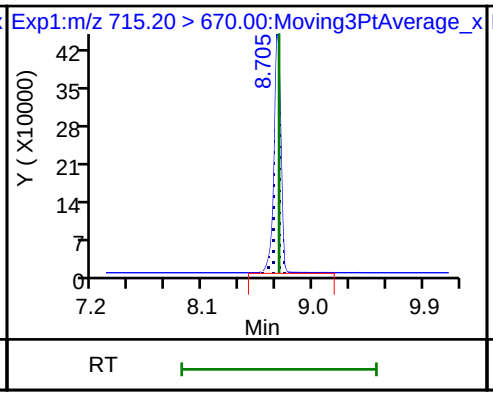
68 11ClFOS (ND)



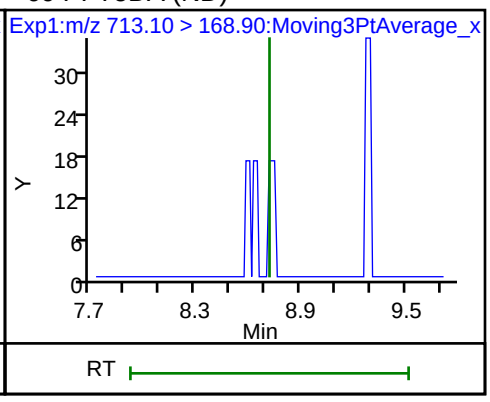
68 11ClFOS (ND)



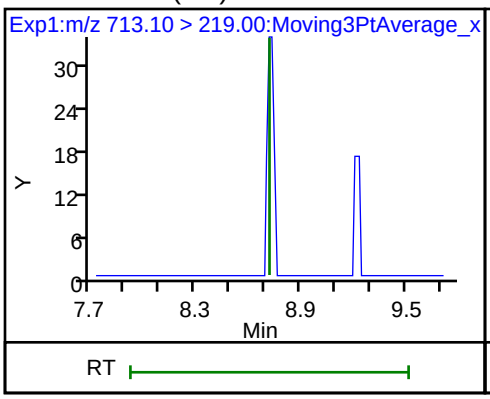
D 70 13C2 PFTeDA



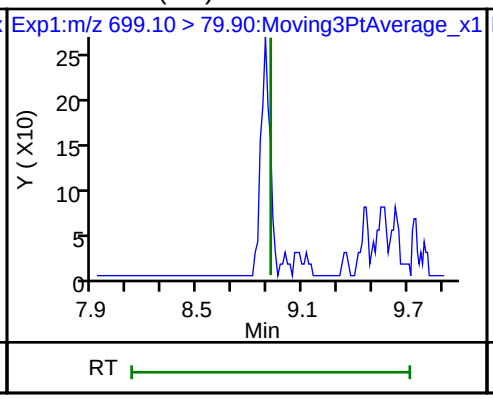
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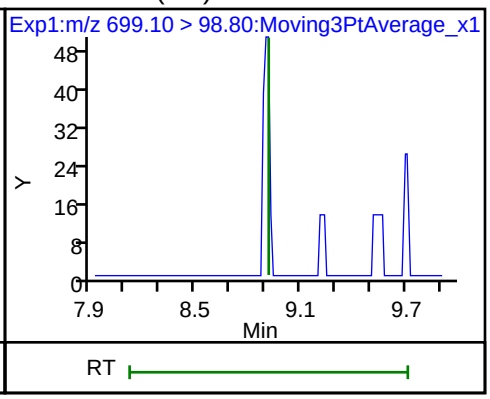
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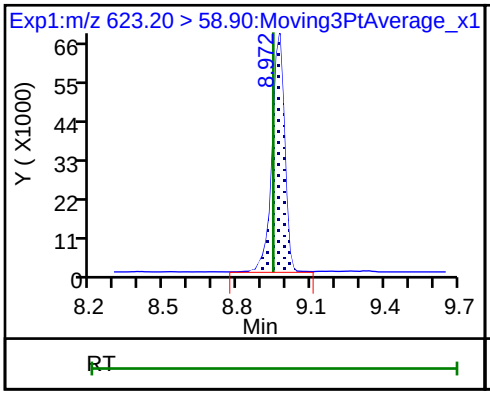
71 PFDoS (ND)



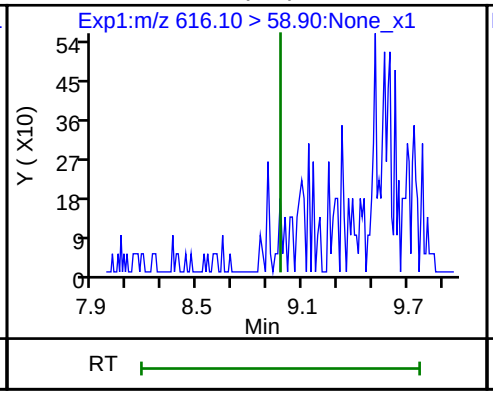
71 PFDoS (ND)



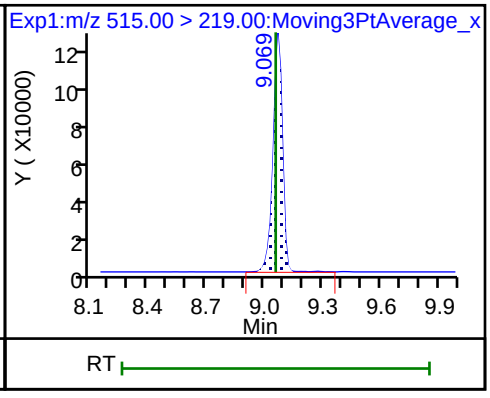
D 72 d7-N-Me-FOSE



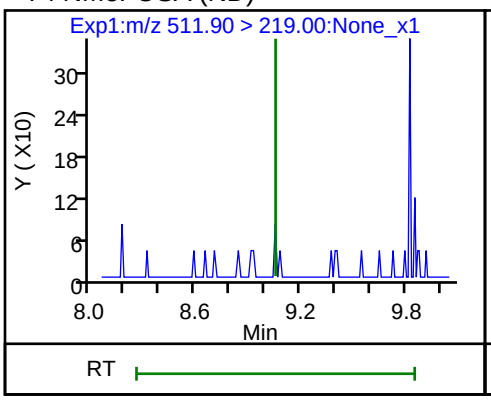
73 N-MeFOSE-M (ND)



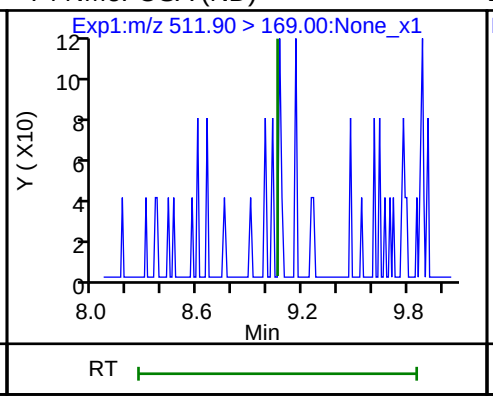
D 75 d3-NMePFOSA



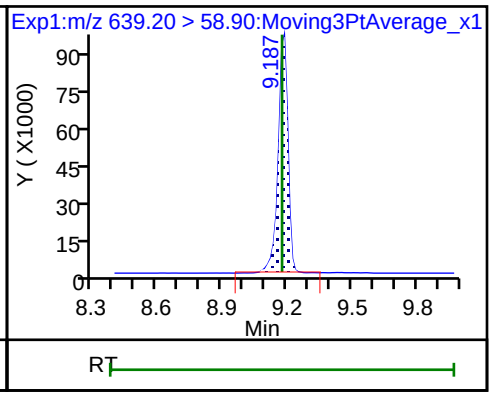
74 NMeFOSA (ND)



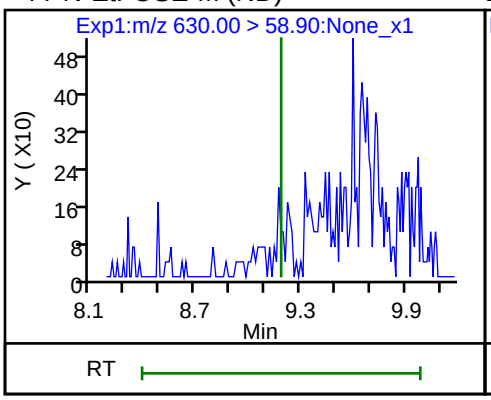
74 NMeFOSA (ND)



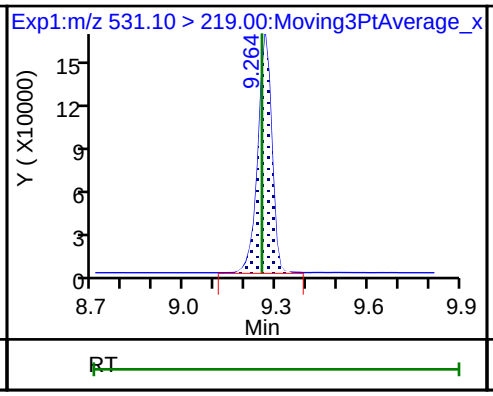
D 76 d9-N-EtFOSE



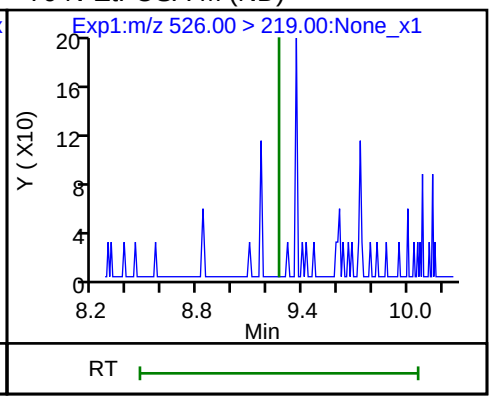
77 N-EtFOSE-M (ND)



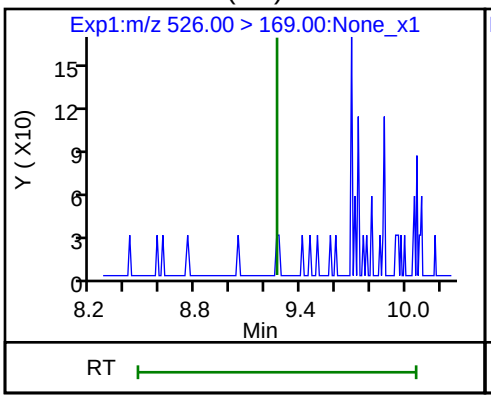
D 78 d5-NEtPFOSA



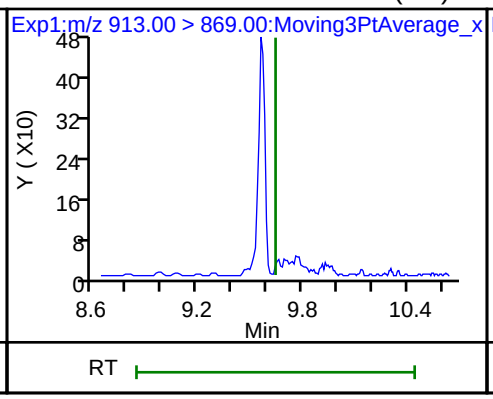
79 N-EtFOSA-M (ND)



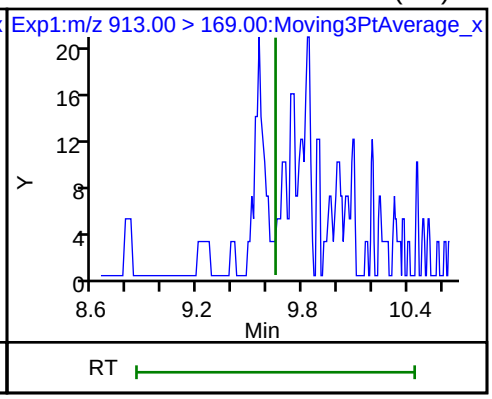
79 N-EtFOSA-M (ND)



80 Perfluorooctadecanoic acid (ND)



80 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-771230/42

Matrix: Water
Lab File ID: 26FEB19E-36.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 18:14

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.00842	J	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
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Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-771230/42

Matrix: Water
Lab File ID: 26FEB19E-36.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 18:14

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-771230/42

Matrix: Water
Lab File ID: 26FEB19E-36.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 18:14

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	103		5-130
2283397-79-3	13C5 PFPeA	104		40-130
2328024-54-8	13C5 PFHxA	106		40-130
2328024-55-9	13C4 PFHpA	108		40-130
1350614-84-4	13C8 PFOA	108		40-130
2283397-80-6	13C9 PFNA	104		40-130
2328024-56-0	13C6 PFDA	101		40-130
STL02580	13C7 PFUnA	102		30-130
STL02116	13C2 PFTeDA	129		10-130
2708218-83-9	13C3 PFBS	109		40-135
2708218-85-1	13C3 PFHxS	108		40-130
2265893-05-6	13C8 PFOS	112		40-130
STL01056	13C8 FOSA	138	*	40-130
1400690-70-1	d3-NMeFOSAA	137		40-170
1265205-97-7	d5-NEtFOSAA	142	*	25-135
STL02395	13C2 4:2 FTS	111		40-200
STL02279	13C2 6:2 FTS	132		40-200
STL02280	13C2 8:2 FTS	120		40-300
STL02255	13C3 HFPO-DA	95.8		40-130
STL02277	d7-N-MeFOSE-M	129		10-130
STL02278	d9-N-EtFOSE-M	133	*	10-130
STL02704	d5-NEtPFOSA	133	*	10-130
STL02705	d3-NMePFOSA	136	*	10-130
960315-52-0	13C2 PFDoA	97.5		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-36.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Feb-2026 18:14:51 ALS Bottle#: 1 Worklist Smp#: 42
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 1
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:19:32 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 21:18:51
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.974	1.983	-0.009	0.486	2463242	2.18		109	1518	
D 3 13C4-PFBA										
216.8 > 171.9	4.065	4.087	-0.022	1.000	2734565	2.05		103	4973	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.087	-0.022		2290163	2.00			6236	
5 PFBA										7
212.8 > 168.9	4.330	4.094	0.236	1.065	968	0.008417			1.5	7
LOD = 0.0275										
D 8 13C5 PFPeA										
268.0 > 223.0	4.722	4.747	-0.025	0.911	2868881	2.07		104	6477	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.008	5.018	-0.010	0.805	1051250	5.21		111	5210	
D 15 13C5 PFHxA										
318.0 > 273.0	5.185	5.206	-0.021	1.000	3525588	2.12		106	9334	
* 16 13C2 PFHxA										
315.1 > 270.0	5.185	5.206	-0.021		5538869	5.00			7480	
D 19 13C3 PFBS										
302.1 > 79.9	5.314	5.337	-0.023	0.854	2248299	2.03		109	8171	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.370	5.381	-0.011	1.036	1801214	1.92		95.8	4339	
23 FBSA										
298.0 > 78.0	5.196	5.427	-0.231	0.978	305	0.000272			2.2	
24 TCDCA										
498.1 > 80.0	5.643	5.474	0.169	0.803	454	NR			4.3	
26 TDCA										
498.0 > 80.0	5.802	5.585	0.217	0.826	2484	NR			9.1	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 27 13C4 PFHpA										
367.0 > 322.0	5.608	5.631	-0.023	1.082	3303589	2.16		108	8776	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.814	5.825	-0.011	0.934	1099325	6.30		132	4611	
D 34 13C8 PFOA										
421.0 > 376.0	6.009	6.020	-0.011	1.000	3782725	2.15		108	6893	
* 35 13C4 PFOA										
417.1 > 372.0	6.009	6.020	-0.011		5772764	5.00			7211	
D 38 13C3 PFHxS										
402.0 > 79.9	6.222	6.233	-0.011	1.000	2064171	2.05		108	4485	
* 39 18O2 PFHxS										
403.0 > 83.9	6.222	6.233	-0.011		1714043	1.90			7820	
D 41 13C9 PFNA										
472.0 > 427.0	6.389	6.413	-0.024	1.000	3615518	2.08		104	6318	
* 42 13C5 PFNA										
468.0 > 423.0	6.389	6.413	-0.024		3530605	2.00			6265	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.565	6.588	-0.023	1.055	993852	5.74		120	2225	
48 FHxSA										
398.0 > 78.0	6.741	6.709	0.032	1.083	835	0.000482			2.9	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.730	6.741	-0.011	0.957	1404075	6.83		137	1665	
D 51 13C6 PFDA										
519.0 > 474.0	6.783	6.804	-0.021	1.000	3585072	2.01		101	5634	
* 52 13C2 PFDA										
515.1 > 470.1	6.783	6.804	-0.021		3189785	2.00			6207	
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.899	6.921	-0.022	0.981	1844135	7.12		142	2886	
D 56 13C8 PFOS										
507.0 > 79.9	7.023	7.053	-0.030	0.999	1834997	2.14		112	2449	
* 57 13C4 PFOS										
502.8 > 79.9	7.032	7.053	-0.021		1182023	1.92			3835	
D 59 13C7 PFUnA										
570.0 > 525.0	7.175	7.195	-0.021	1.058	3643947	2.05		102	7821	
D 63 13C2 PFDoA										
615.0 > 570.0	7.570	7.603	-0.033	1.116	3284866	1.95		97.5	3232	
D 65 13C8 FOSA										
506.1 > 77.8	7.820	7.842	-0.022	1.112	2373402	2.77		138	4992	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.353	8.382	-0.029	1.231	2598786	2.57		129	3740	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.735	8.749	-0.014	1.242	1408356	6.44		129	547	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.845	8.858	-0.013	1.258	580696	2.71		136	2510	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.963	8.988	-0.025	1.275	1945694	6.65		133	746	

Report Date: 19-Feb-2026 21:19:34 Chrom Revision: 2.3 16-Feb-2026 12:47:50
Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-36.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
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.057	9.070	-0.013	1.288	778385	2.66		133	2587	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

1633_125_SS_00191 Amount Added: 5.00 Units: uL

1633_125_IS_00084 Amount Added: 5.00 Units: uL

Report Date: 19-Feb-2026 21:19:34 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-36.d

Injection Date: 19-Feb-2026 18:14:51 Instrument ID: 30637

Lims ID: CCB

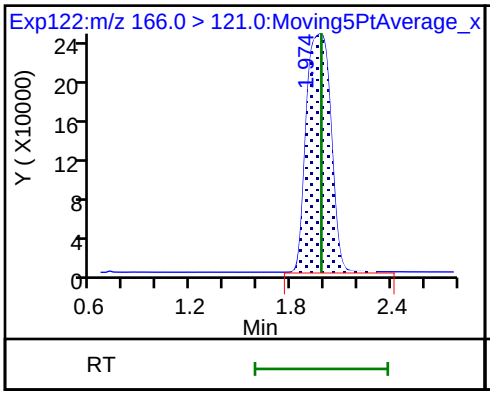
Client ID:

Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 1 Worklist Smp#: 42

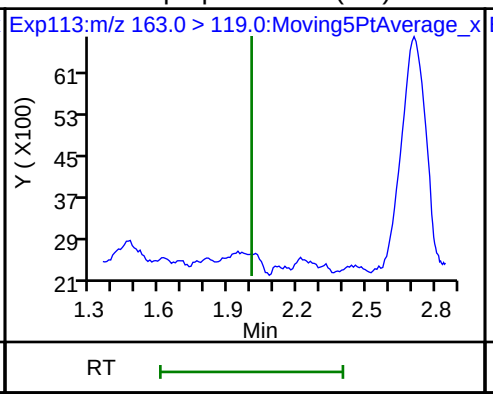
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

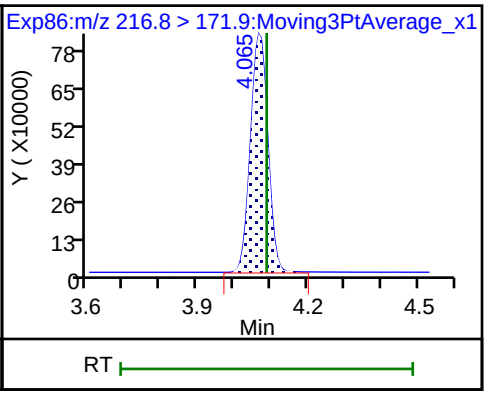
D 1 13C3PFPrA



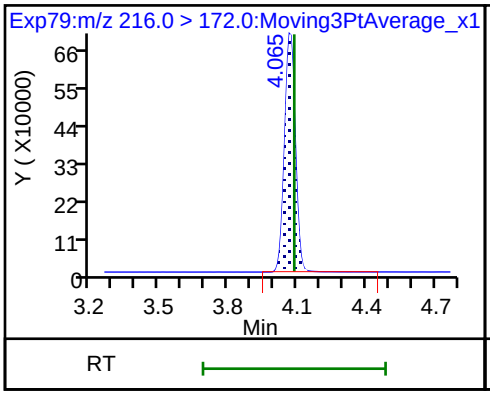
2 Perfluoropropionic acid (ND)



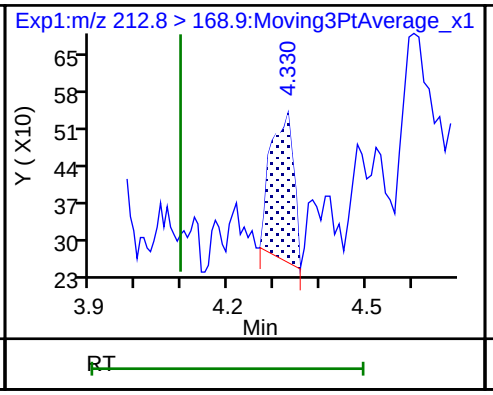
D 3 13C4-PFBA



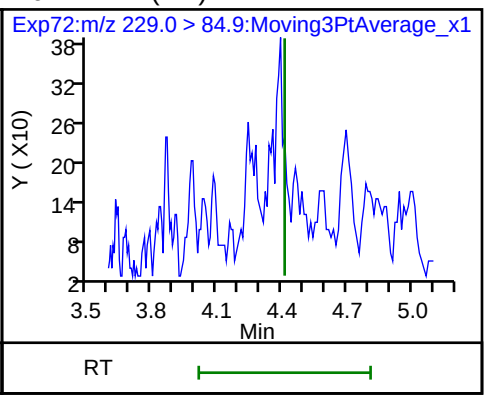
* 4 13C3PFBA



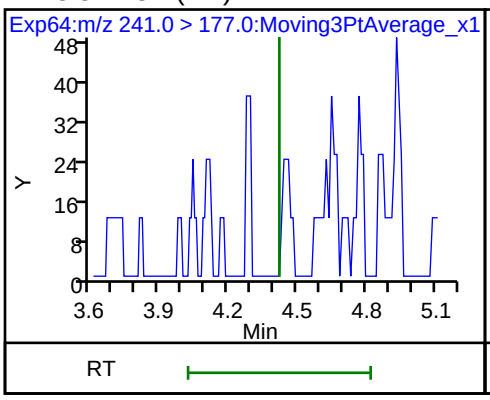
5 PFBA



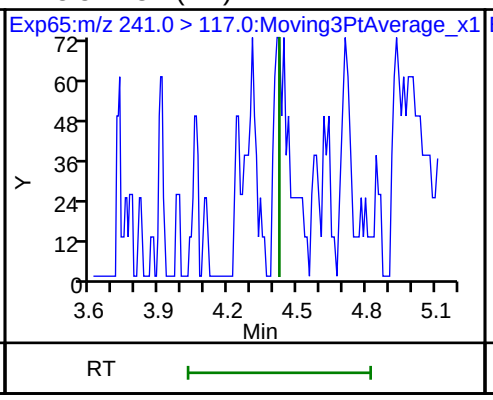
6 PFMPA (ND)



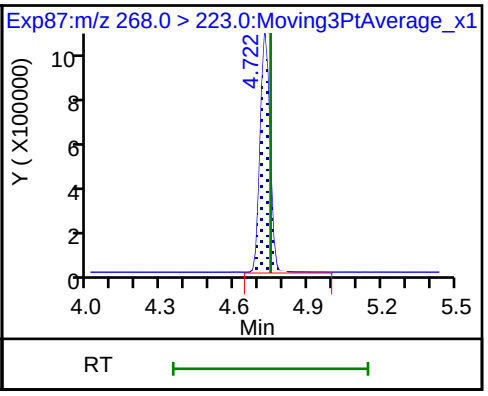
7 3:3 FTCA (ND)



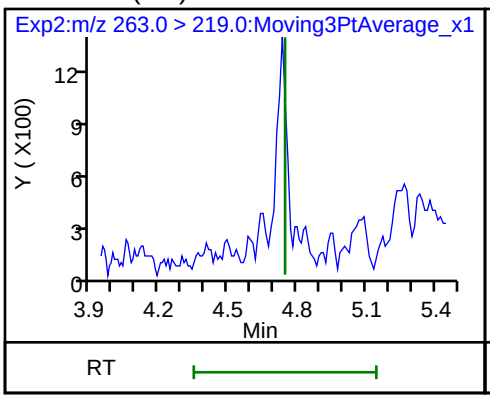
7 3:3 FTCA (ND)



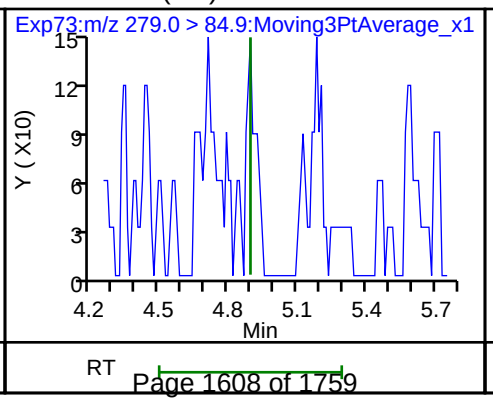
D 8 13C5 PFPeA



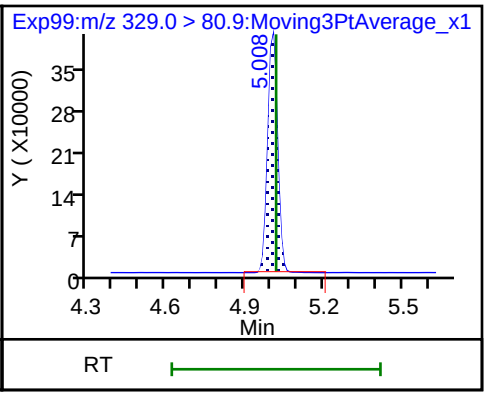
9 PFPA (ND)



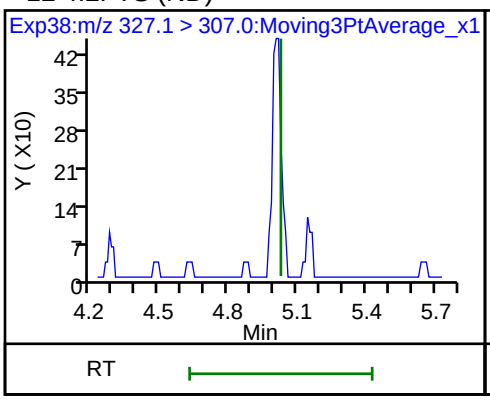
10 PFMBA (ND)



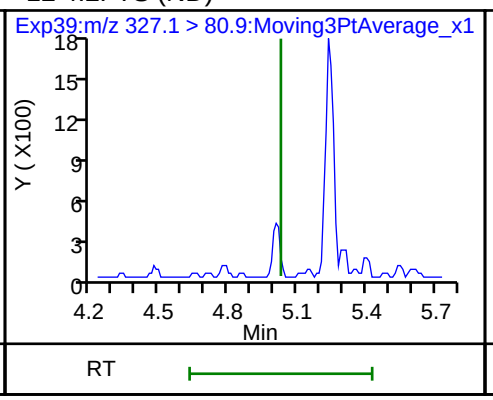
D 11 13C2-4:2FTS



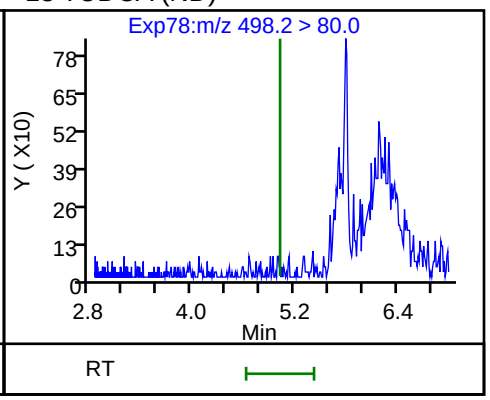
12 4:2FTS (ND)



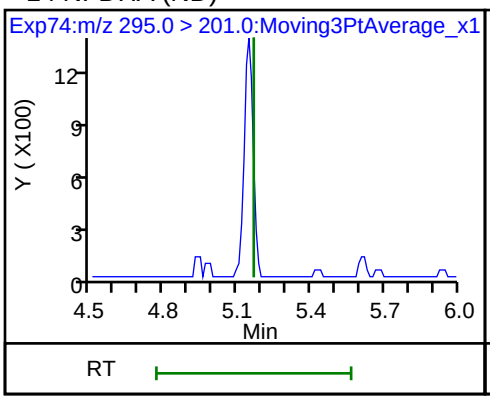
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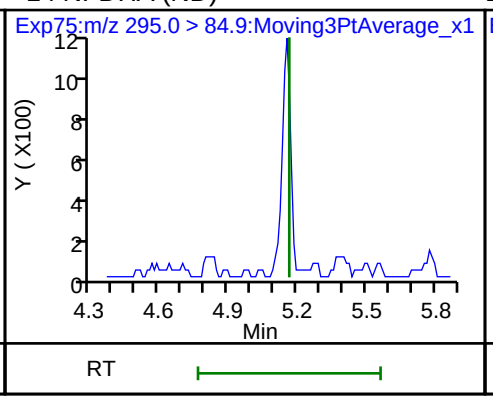
13 TUDCA (ND)



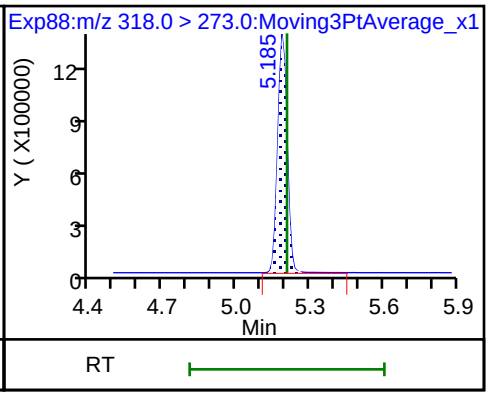
14 NFDHA (ND)



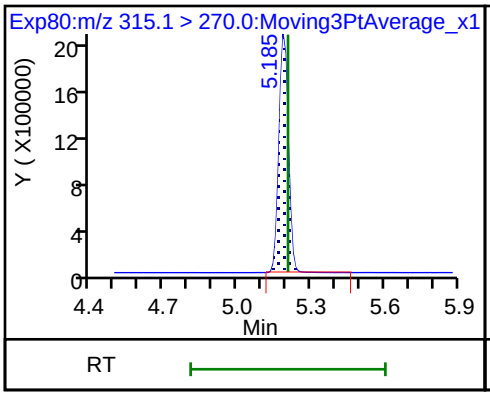
14 NFDHA (ND)



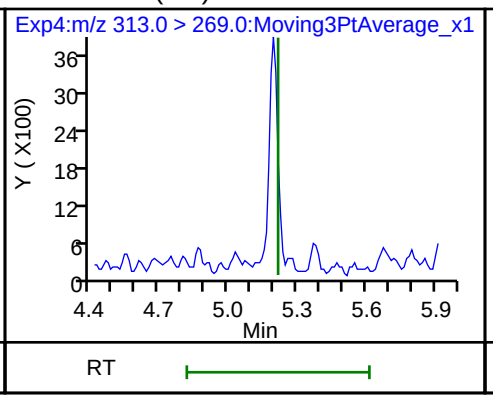
D 15 13C5 PFHxA



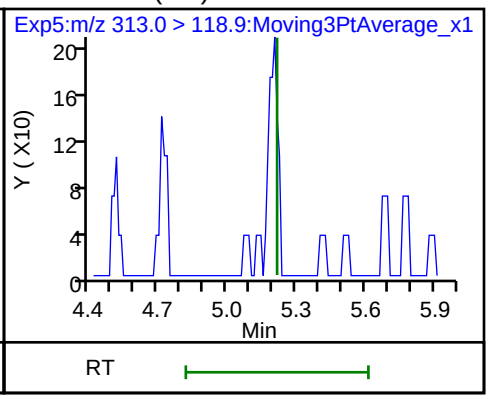
* 16 13C2 PFHxA



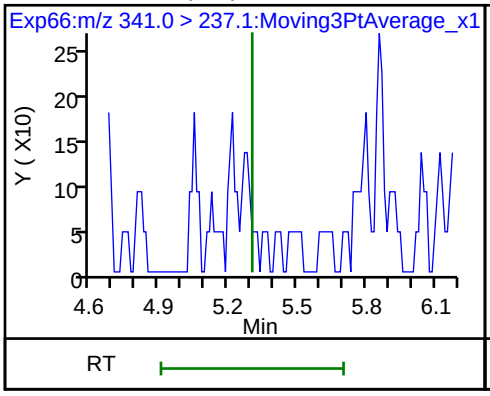
17 PFHxA (ND)



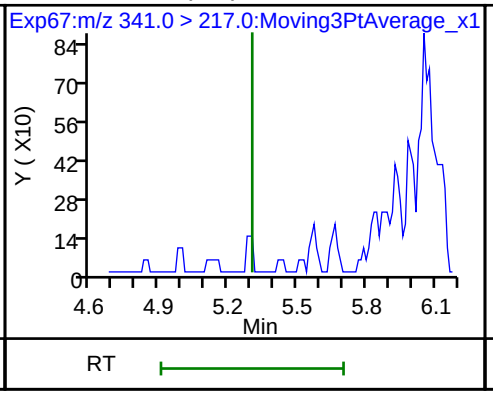
17 PFHxA (ND)



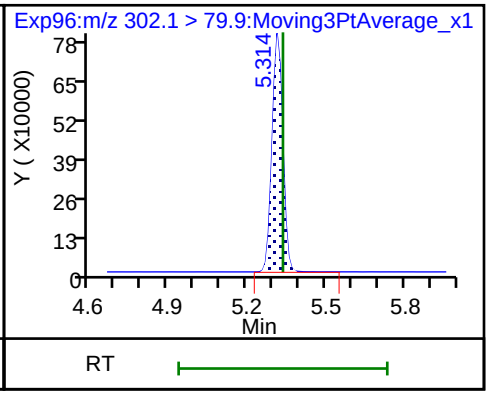
18 5:3 FTCA (ND)



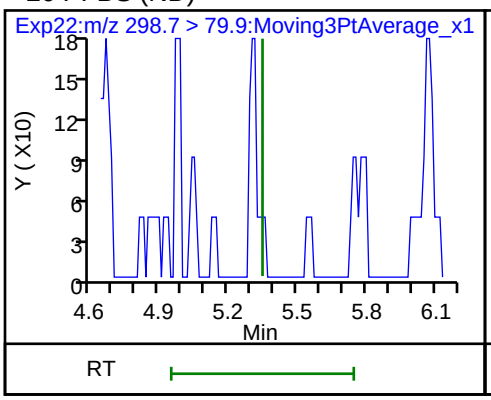
18 5:3 FTCA (ND)



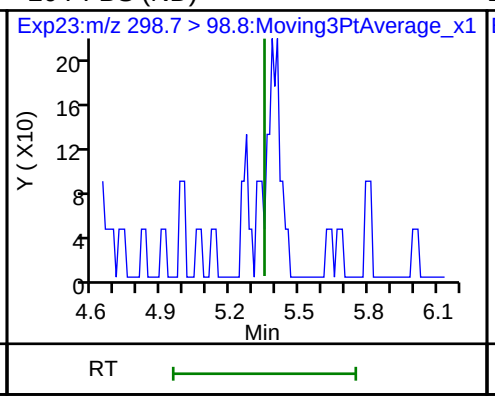
D 19 13C3 PFBS



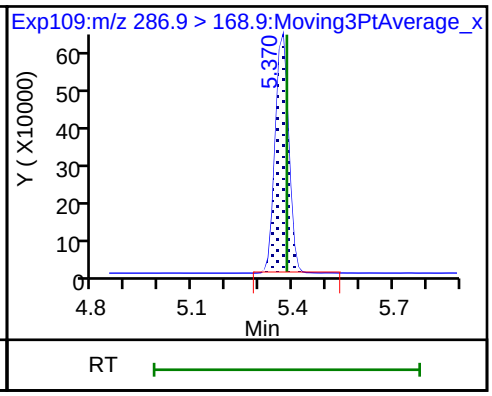
20 PFBS (ND)



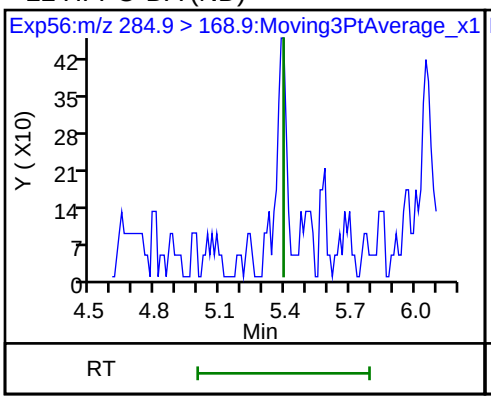
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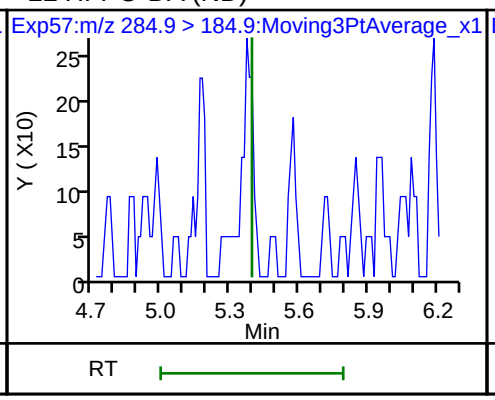
D 21 13C3 HFPO-DA



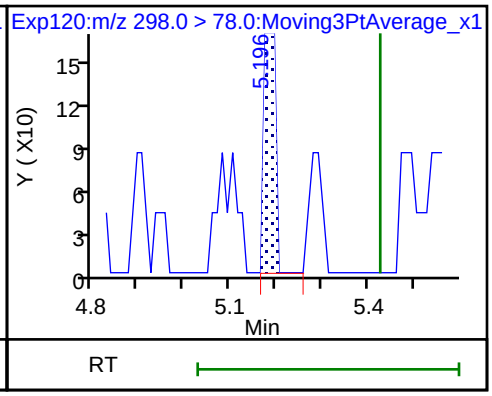
22 HFPO-DA (ND)



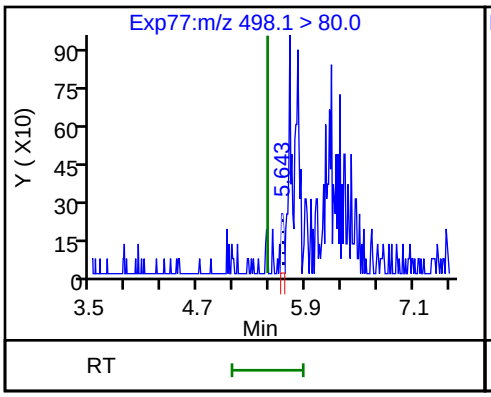
22 HFPO-DA (ND)



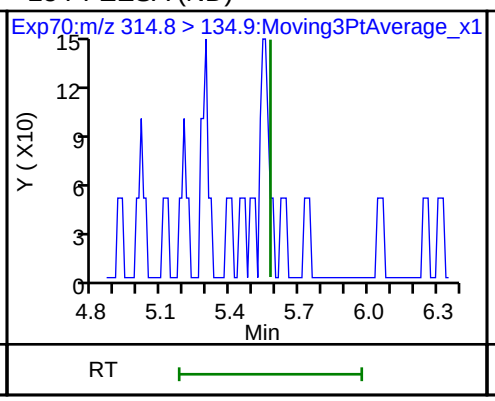
23 FBSA



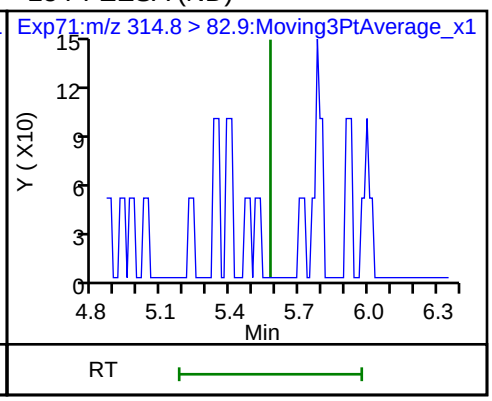
24 TCDCA



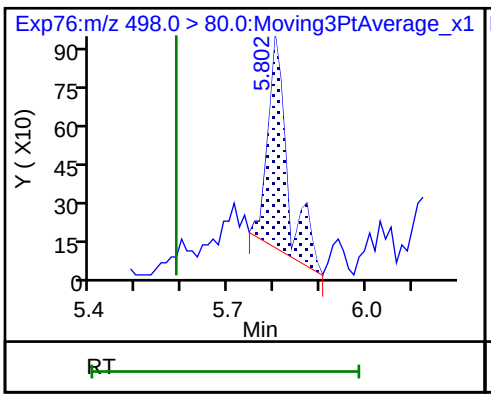
25 PFEESA (ND)



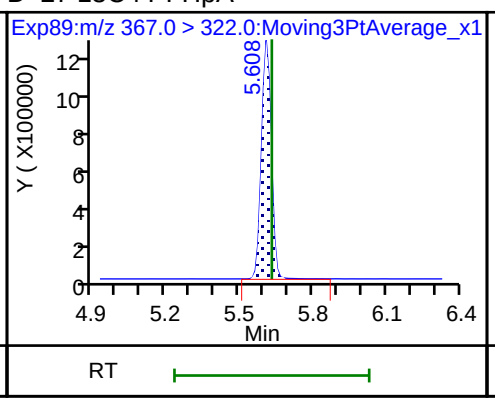
25 PFEESA (ND)



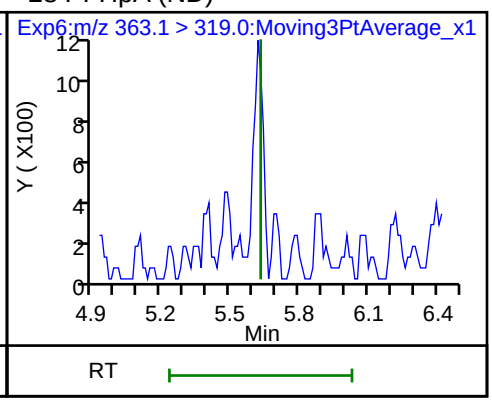
26 TDCA



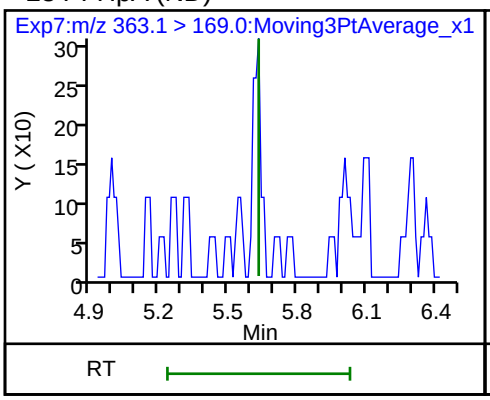
D 27 13C4 PFHpA



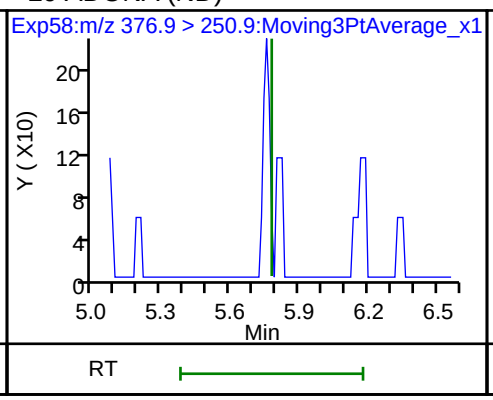
28 PFHpA (ND)



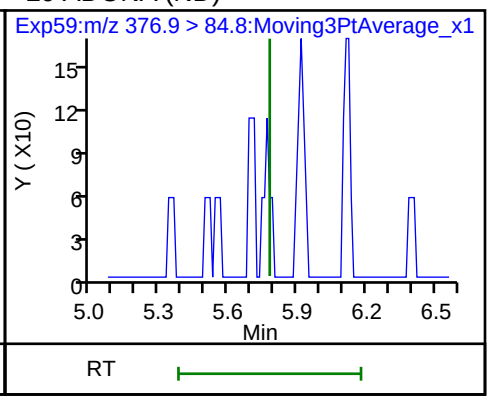
28 PFHpA (ND)



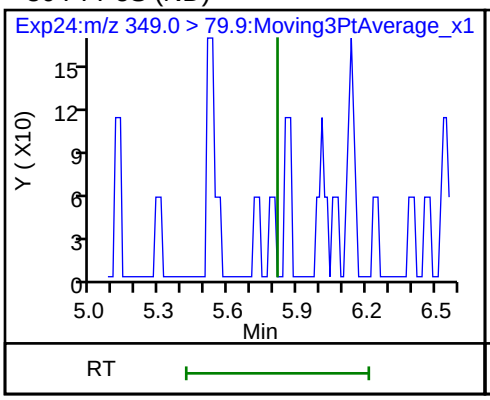
29 ADONA (ND)



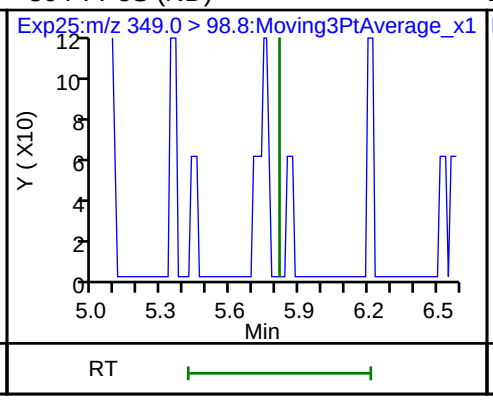
29 ADONA (ND)



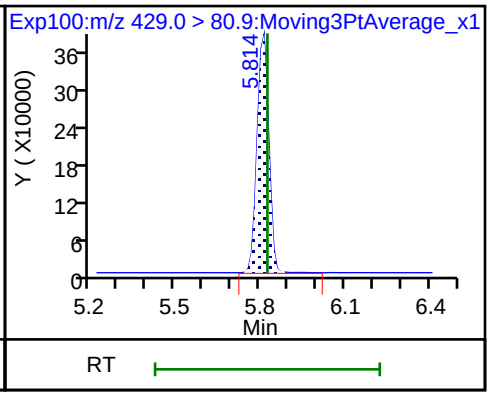
30 PFPeS (ND)



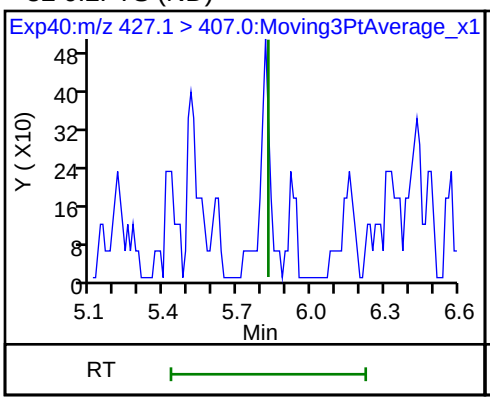
30 PFPeS (ND)



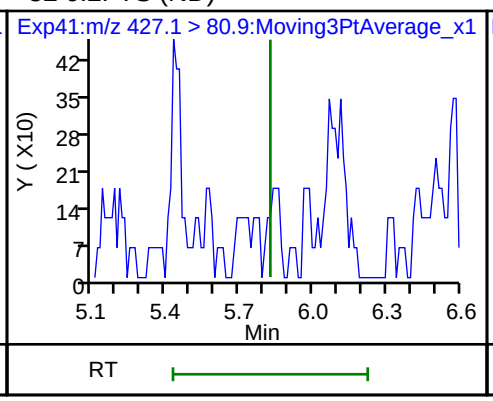
D 31 13C2-6:2FTS



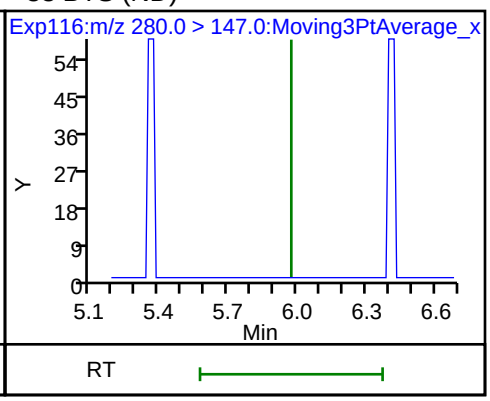
32 6:2FTS (ND)



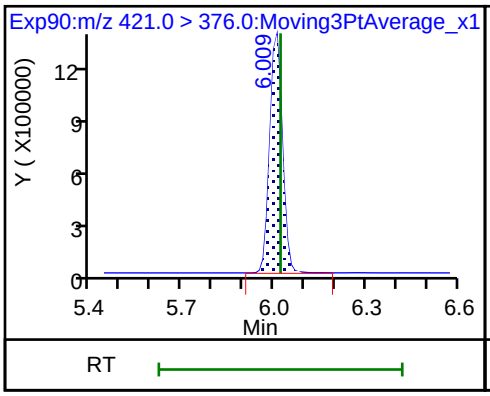
32 6:2FTS (ND)



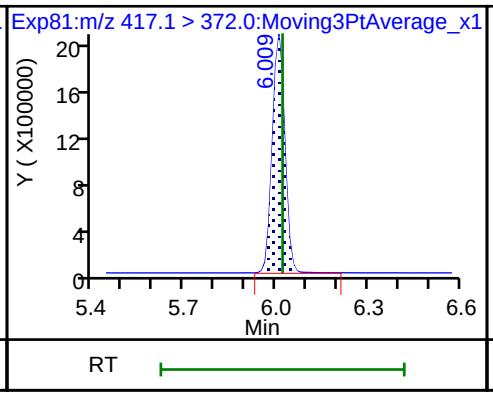
33 BTS (ND)



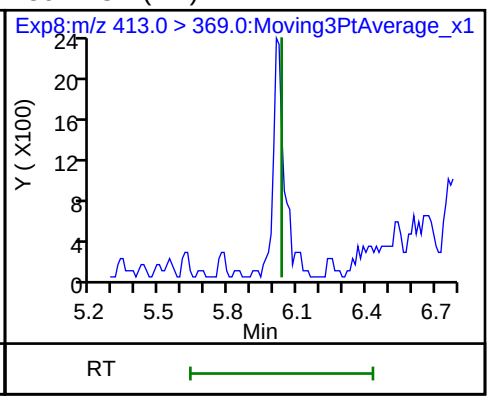
D 34 13C8 PFOA



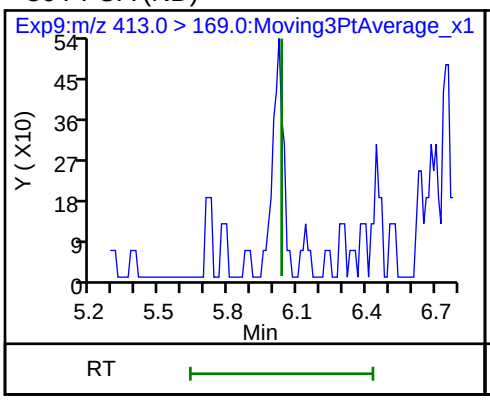
* 35 13C4 PFOA



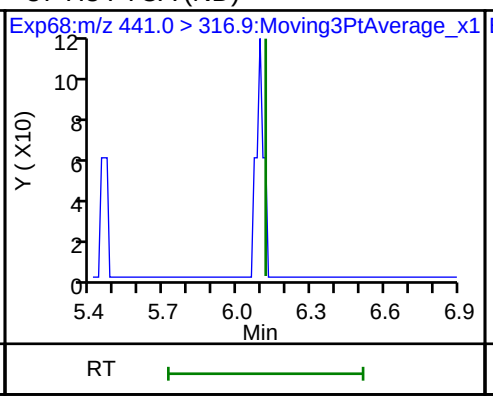
36 PFOA (ND)



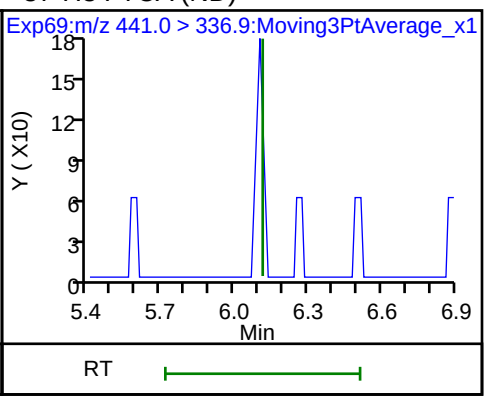
36 PFOA (ND)



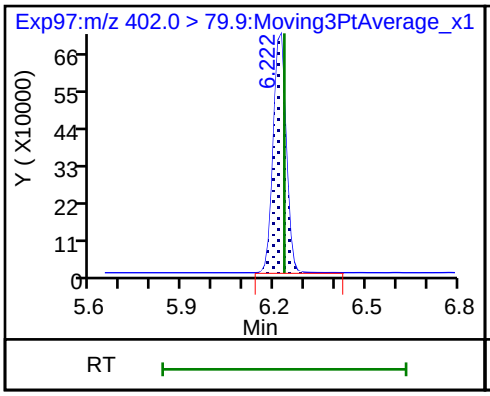
37 7:3 FTCA (ND)



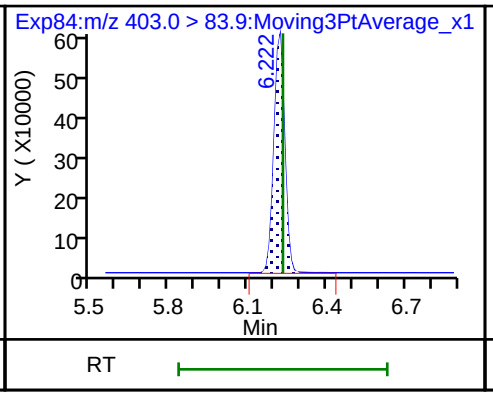
37 7:3 FTCA (ND)



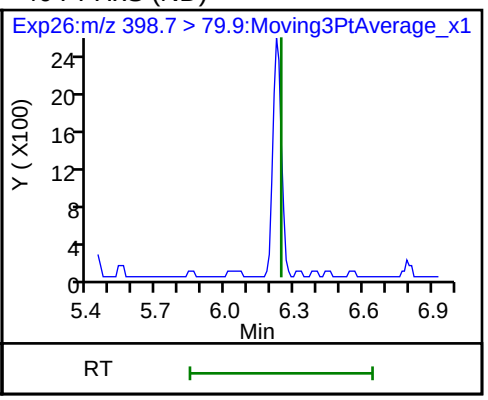
D 38 13C3 PFHxS



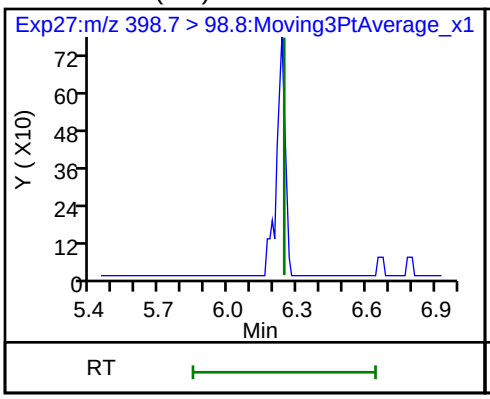
* 39 18O2 PFHxS



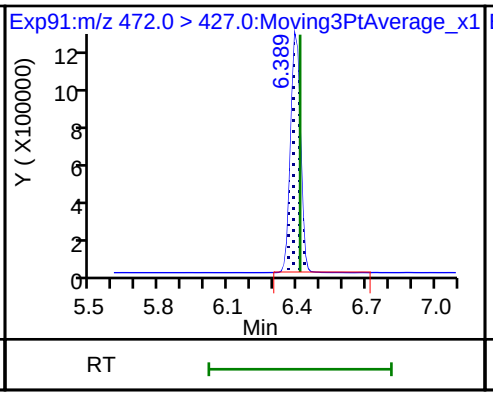
40 PFHxS (ND)



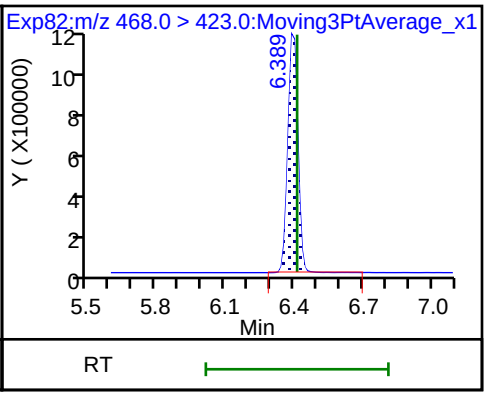
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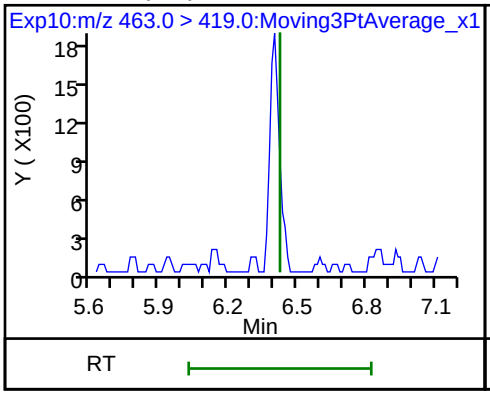
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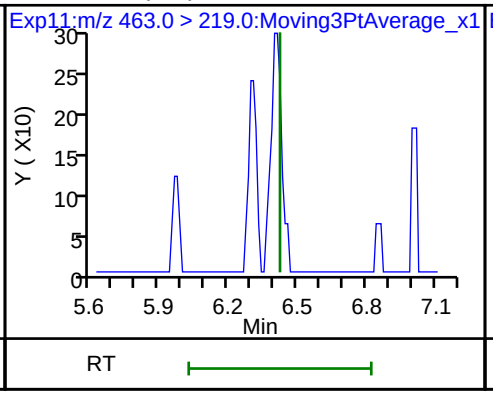
* 42 13C5 PFNA



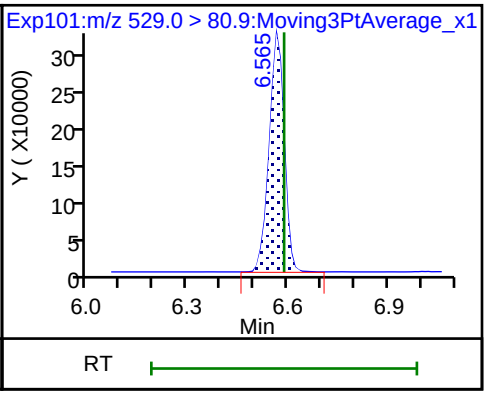
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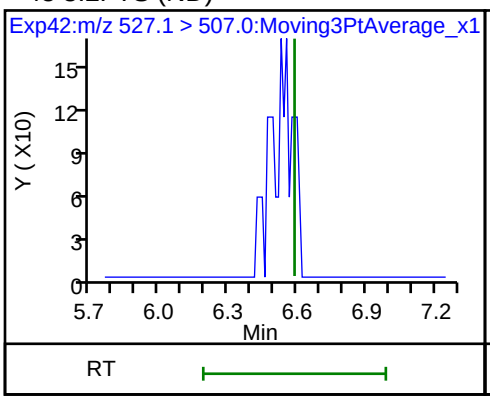
43 PFNA (ND)



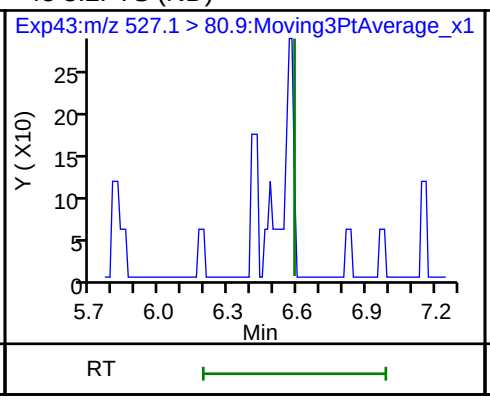
D 44 13C2-8:2FTS



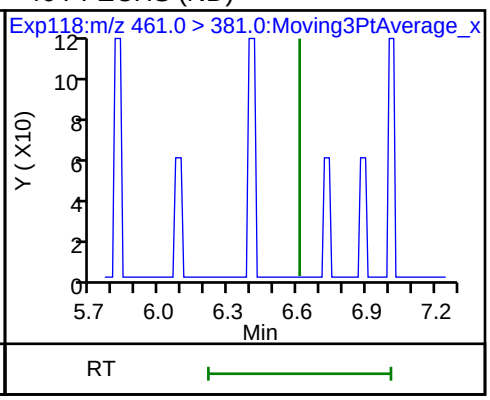
45 8:2FTS (ND)



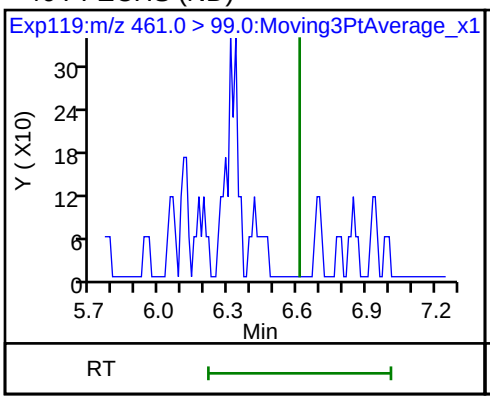
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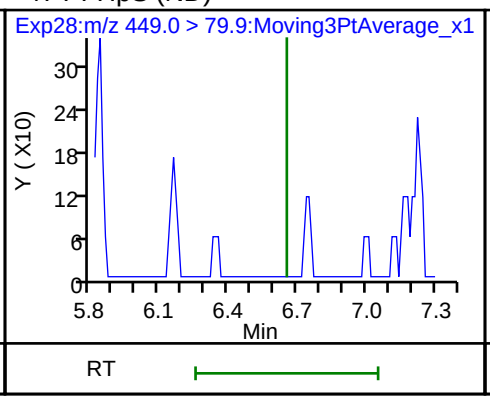
46 PFECHS (ND)



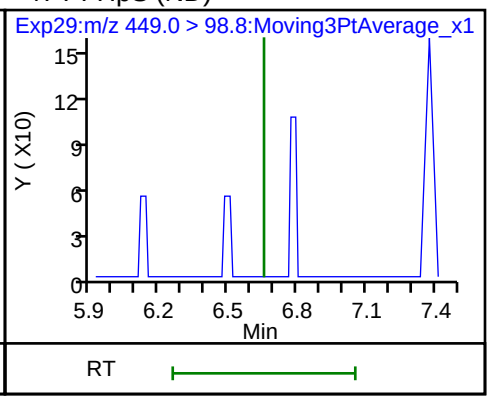
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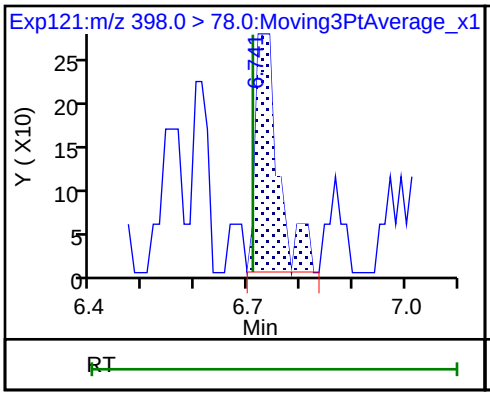
47 PFHpS (ND)



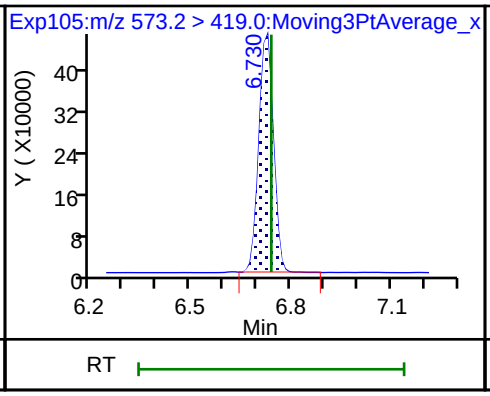
47 PFHpS (ND)



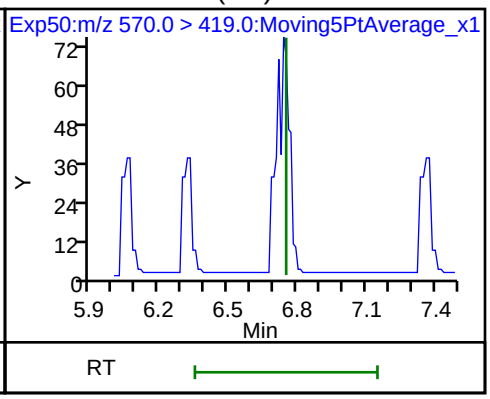
48 FHxSA



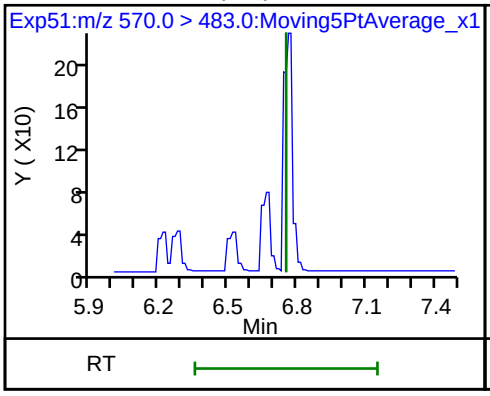
D 49 d3-NMeFOSAA



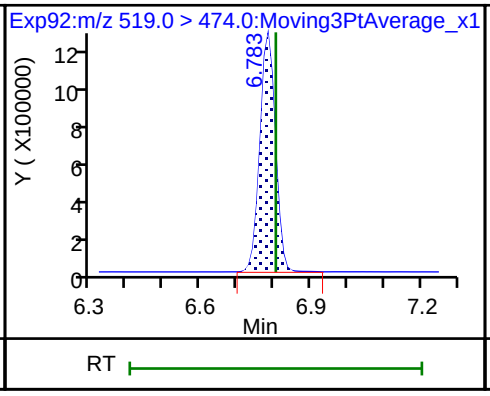
50 NMeFOSAA (ND)



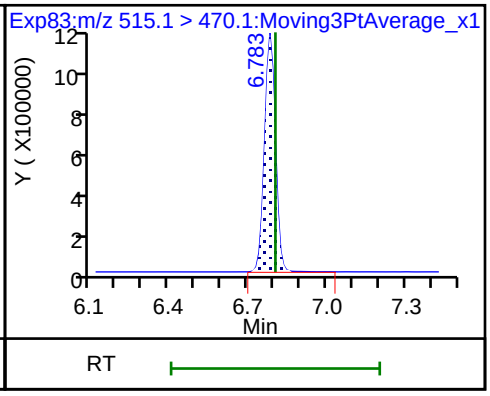
50 NMeFOSAA (ND)



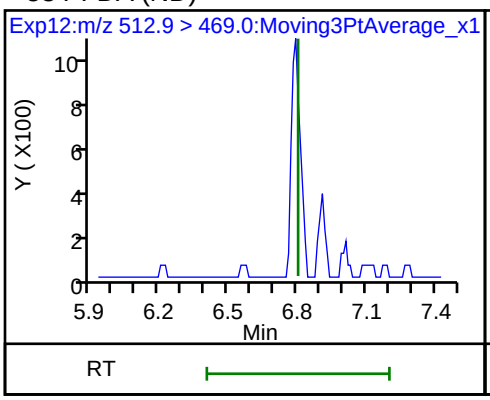
D 51 13C6 PFDA



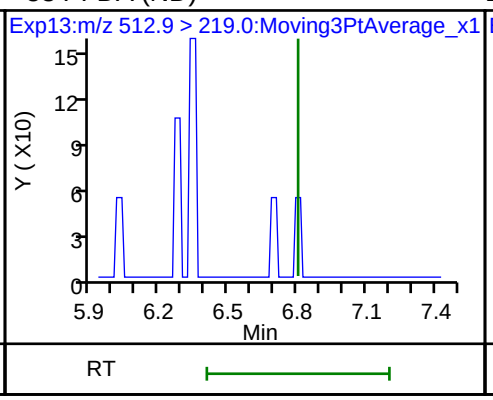
* 52 13C2 PFDA



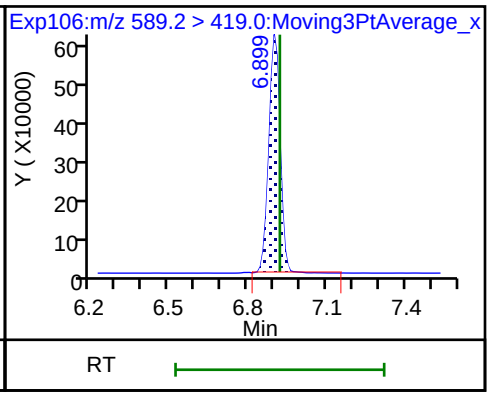
53 PFDA (ND)



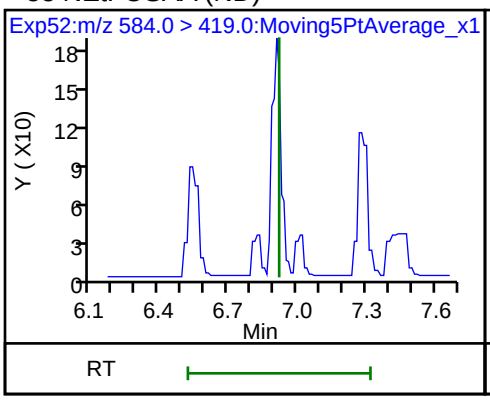
53 PFDA (ND)



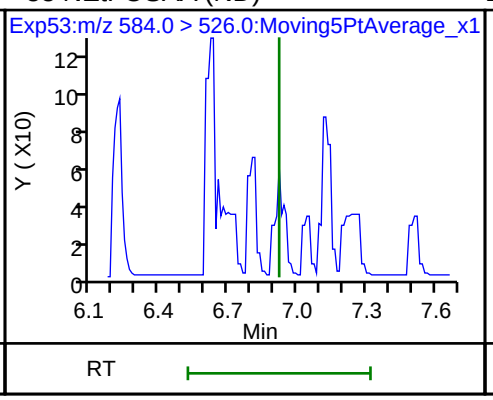
D 54 d5-NEtFOSAA



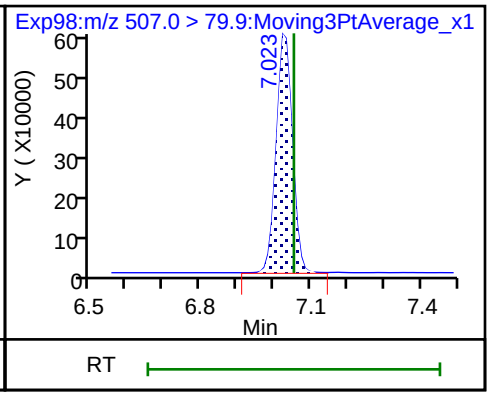
55 NEtFOSAA (ND)



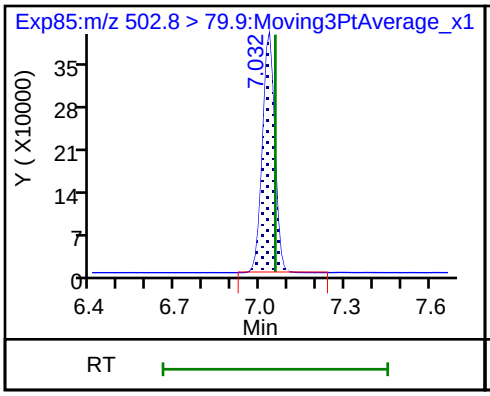
55 NEtFOSAA (ND)



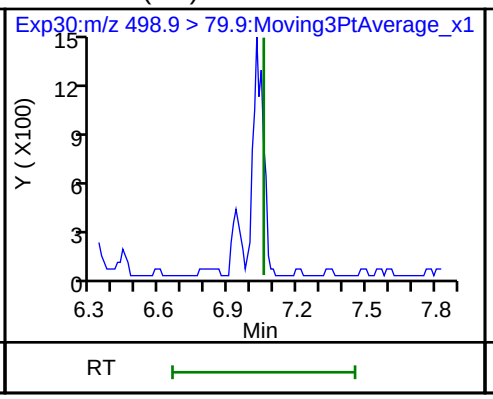
D 56 13C8 PFOS



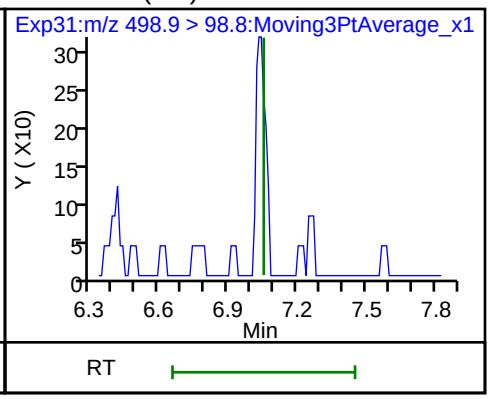
* 57 13C4 PFOS



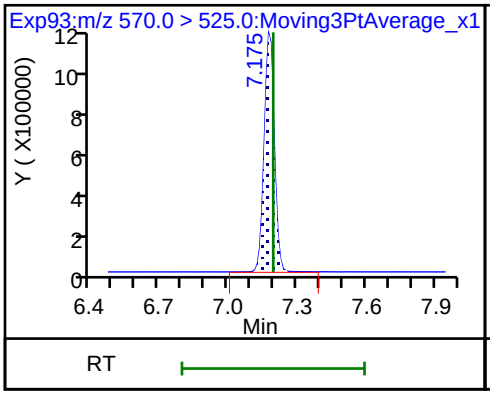
58 PFOS (ND)



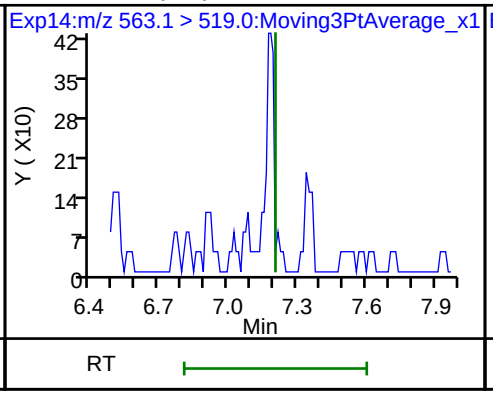
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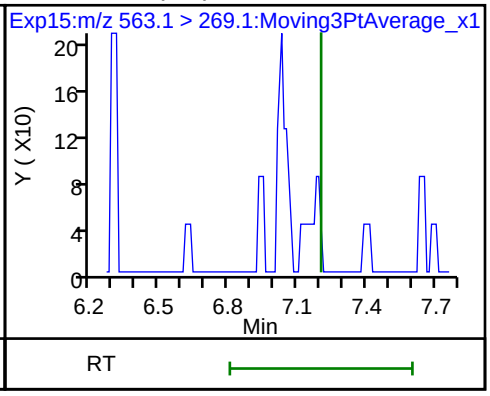
D 59 13C7 PFUnA



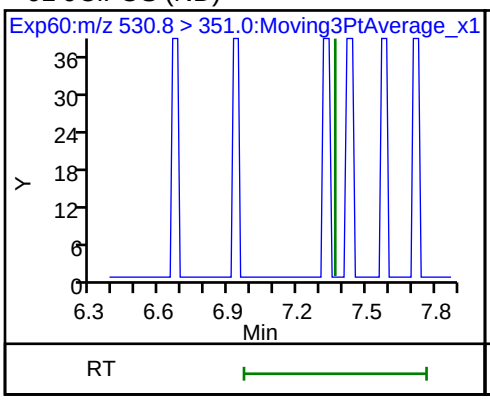
60 PFUnA (ND)



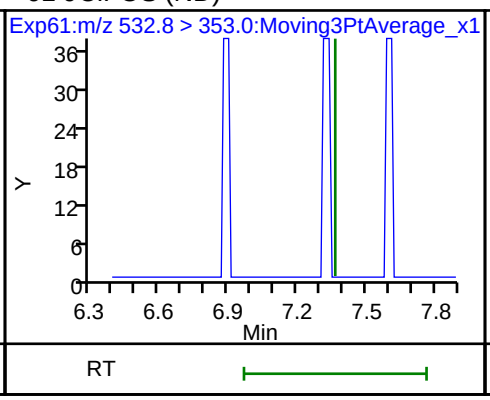
60 PFUnA (ND)



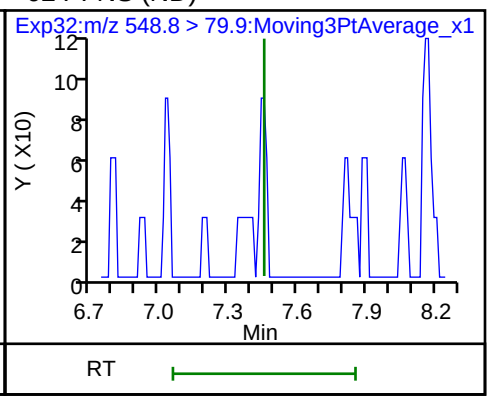
61 9ClFOS (ND)



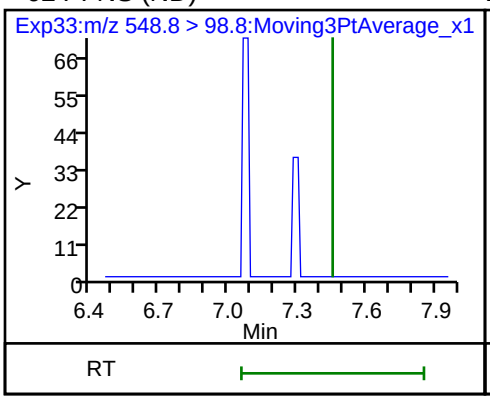
61 9ClFOS (ND)



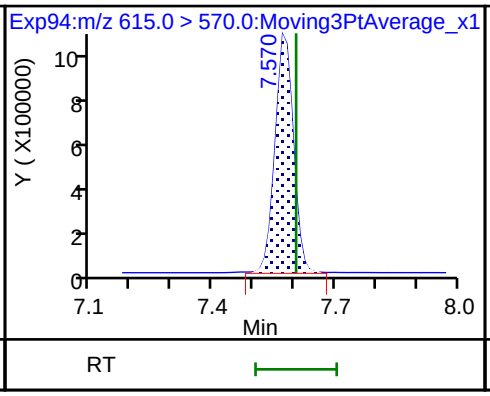
62 PFNS (ND)



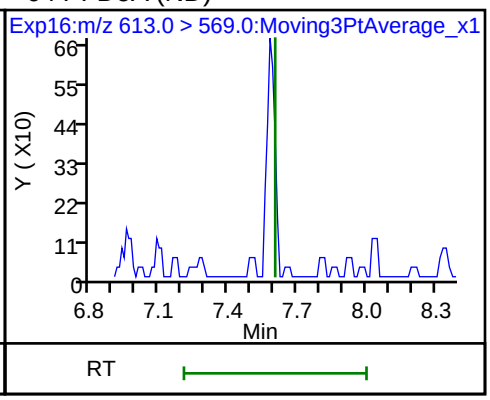
62 PFNS (ND)



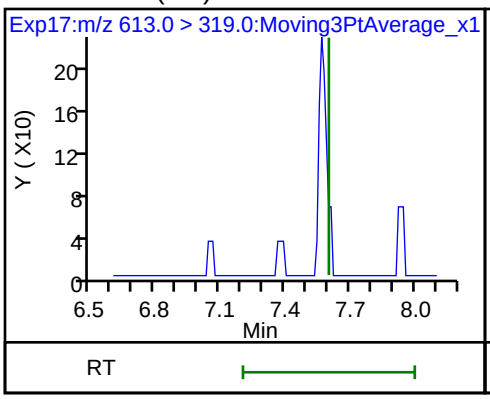
D 63 13C2 PFDoA



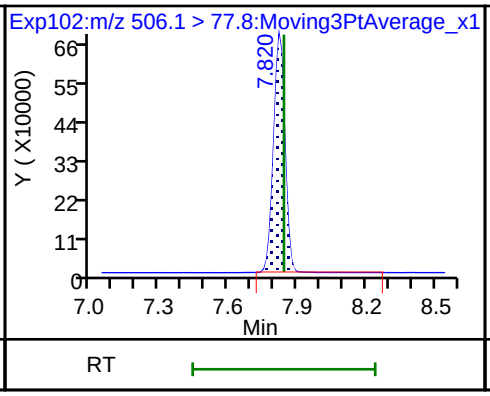
64 PFDoA (ND)



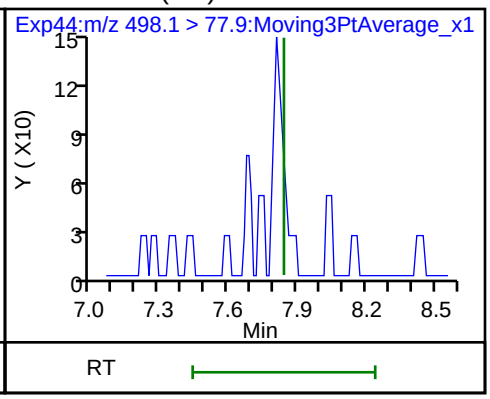
64 PFDoA (ND)



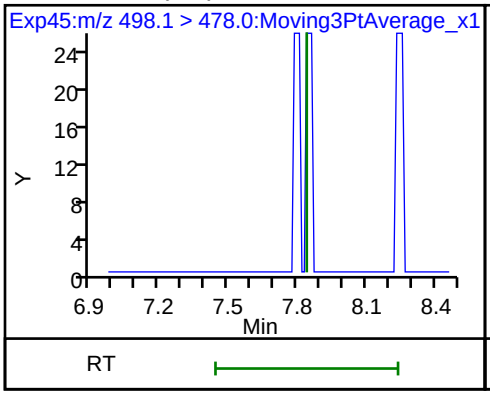
D 65 13C8 FOSA



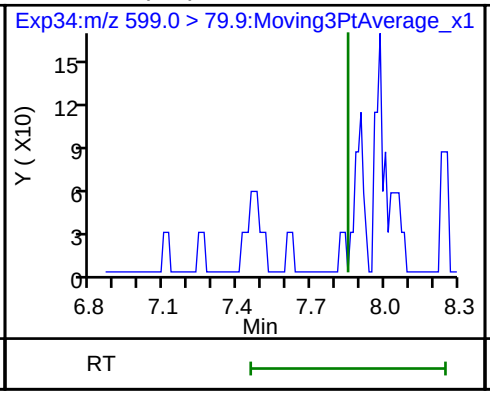
66 PFOSA (ND)



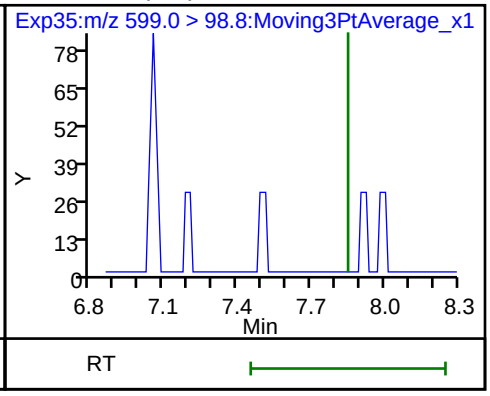
66 PFOSA (ND)



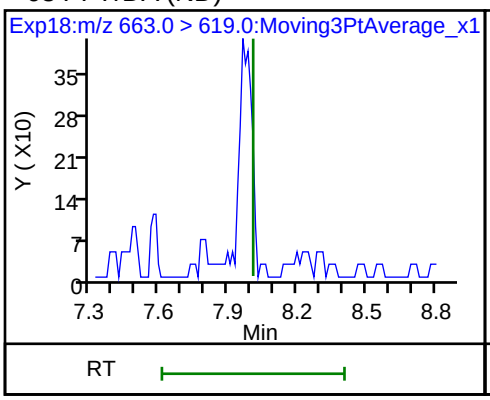
67 PFDS (ND)



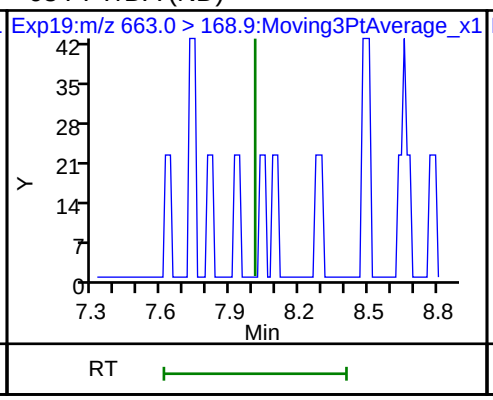
67 PFDS (ND)



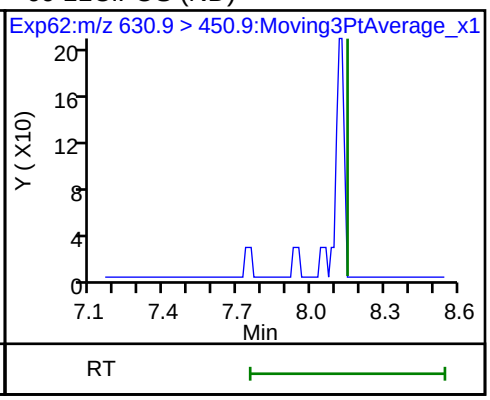
68 PFTrDA (ND)



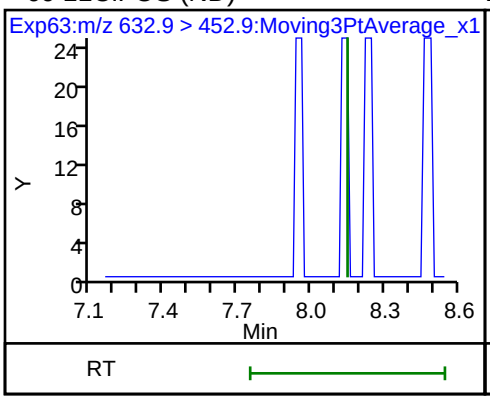
68 PFTrDA (ND)



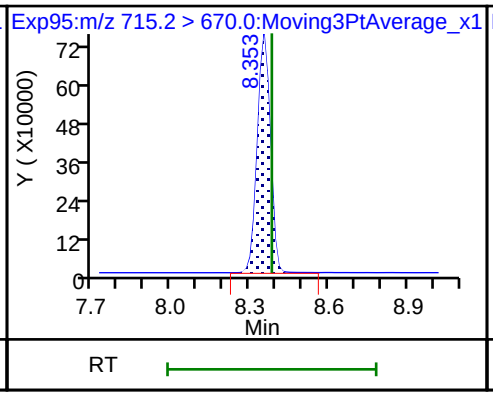
69 11ClFOS (ND)



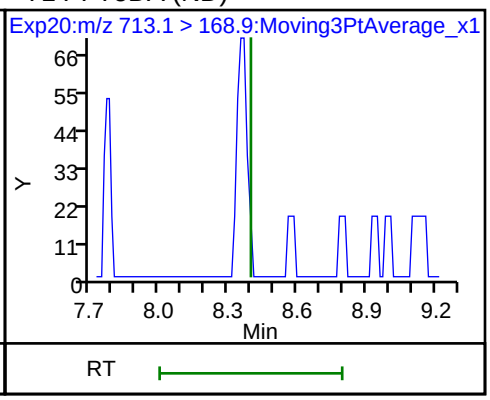
69 11ClFOS (ND)



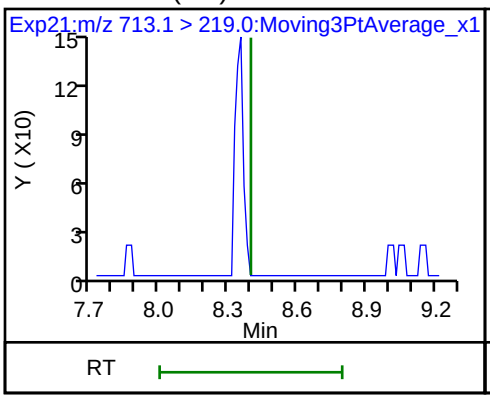
D 70 13C2 PFTeDA



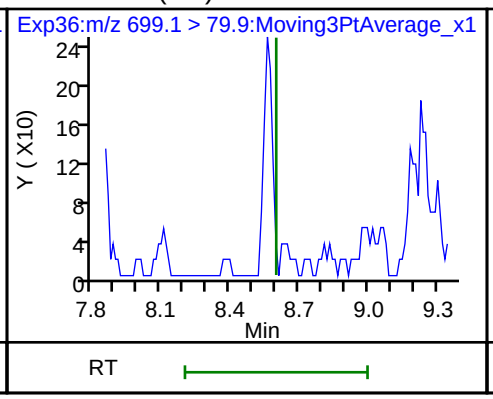
71 PFTeDA (ND)



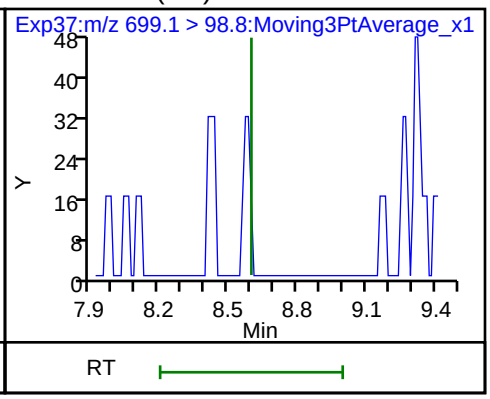
71 PFTeDA (ND)



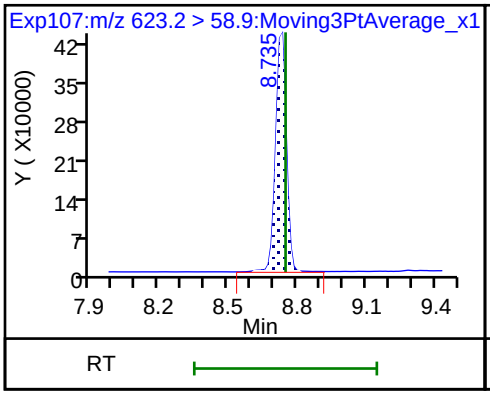
72 PFDoS (ND)



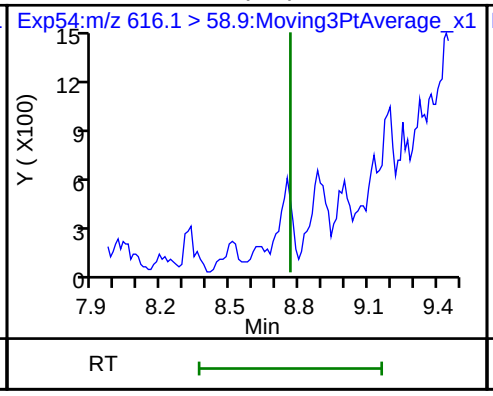
72 PFDoS (ND)



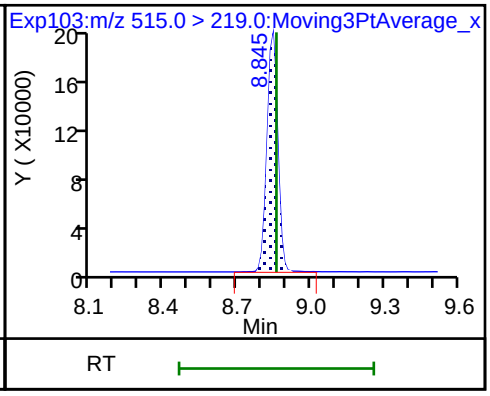
D 73 d7-N-Me-FOSE



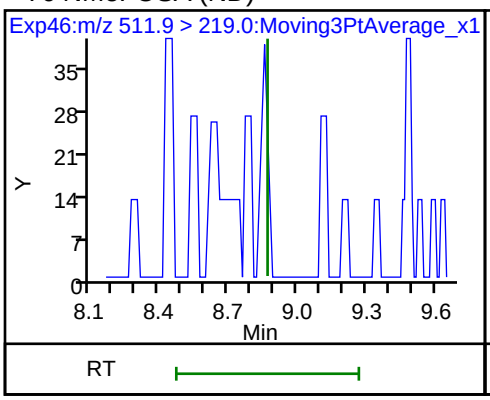
74 N-MeFOSE-M (ND)



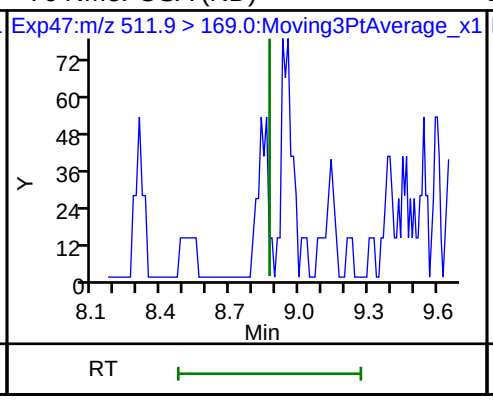
D 75 d3-NMePFOSA



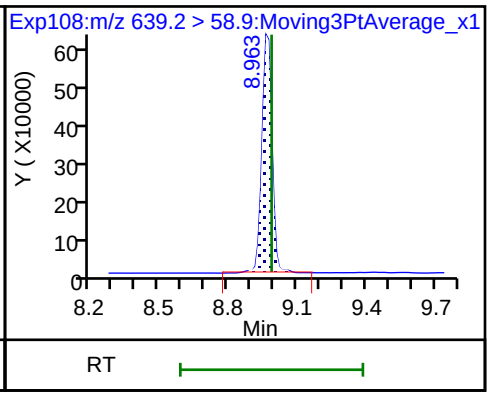
76 NMeFOSA (ND)



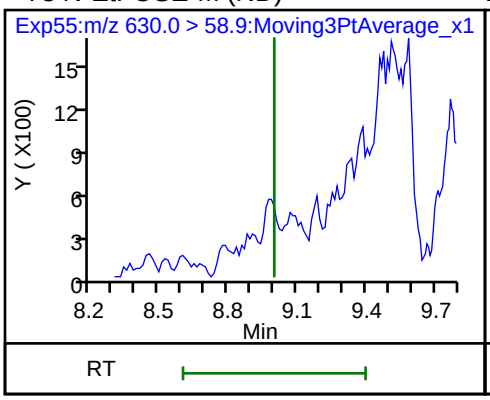
76 NMeFOSA (ND)



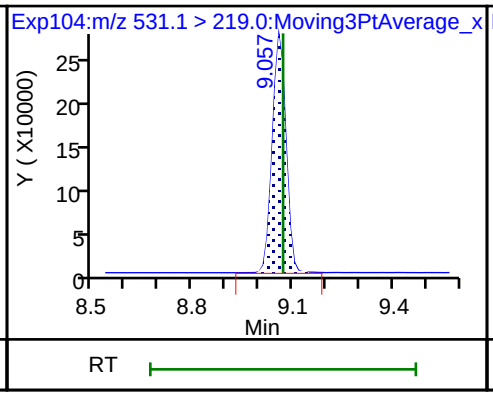
D 77 d9-N-EtFOSE



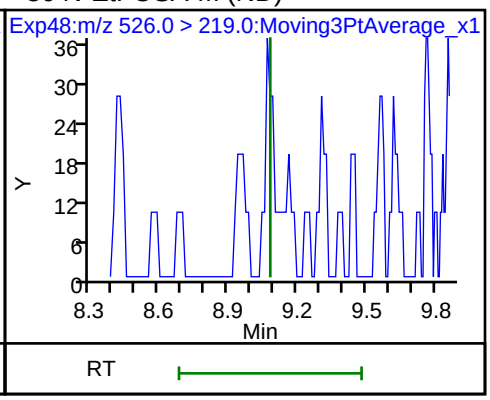
78 N-EtFOSE-M (ND)



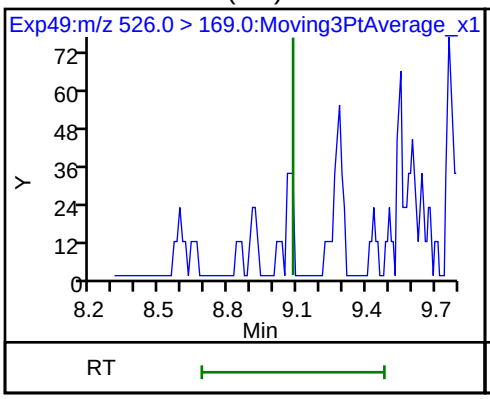
D 79 d5-NEtPFOSA



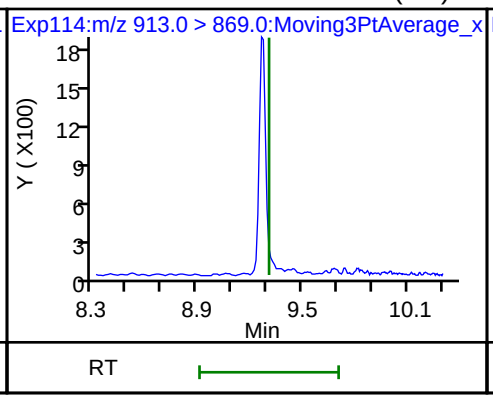
80 N-EtFOSA-M (ND)



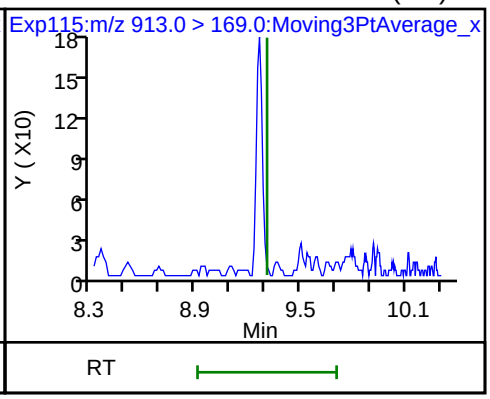
80 N-EtFOSA-M (ND)



81 Perfluorooctadecanoic acid (ND)



81 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: CCB 410-771230/43

Matrix: Water
Lab File ID: 26FEB19E-48.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/19/2026 21:37

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.010	U	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 410-771230/43

Matrix: Water Lab File ID: 26FEB19E-48.d

Analysis Method: 1633A Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 02/19/2026 21:37

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230 Units: ng/mL

Preparation Batch No.: Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 410-771230/43

Matrix: Water Lab File ID: 26FEB19E-48.d

Analysis Method: 1633A Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 02/19/2026 21:37

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230 Units: ng/mL

Preparation Batch No.: Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	103		5-130
2283397-79-3	13C5 PFPeA	110		40-130
2328024-54-8	13C5 PFHxA	106		40-130
2328024-55-9	13C4 PFHpA	108		40-130
1350614-84-4	13C8 PFOA	113		40-130
2283397-80-6	13C9 PFNA	100		40-130
2328024-56-0	13C6 PFDA	106		40-130
STL02580	13C7 PFUnA	103		30-130
STL02116	13C2 PFTeDA	134	*	10-130
2708218-83-9	13C3 PFBS	108		40-135
2708218-85-1	13C3 PFHxS	108		40-130
2265893-05-6	13C8 PFOS	113		40-130
STL01056	13C8 FOSA	144	*	40-130
1400690-70-1	d3-NMeFOSAA	147		40-170
1265205-97-7	d5-NEtFOSAA	150	*	25-135
STL02395	13C2 4:2 FTS	105		40-200
STL02279	13C2 6:2 FTS	134		40-200
STL02280	13C2 8:2 FTS	119		40-300
STL02255	13C3 HFPO-DA	97.9		40-130
STL02277	d7-N-MeFOSE-M	133	*	10-130
STL02278	d9-N-EtFOSE-M	133	*	10-130
STL02704	d5-NEtPFOSA	139	*	10-130
STL02705	d3-NMePFOSA	143	*	10-130
960315-52-0	13C2 PFDoA	105		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-48.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 19-Feb-2026 21:37:56 ALS Bottle#: 1 Worklist Smp#: 43
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: CCB
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 1
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:59:17 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 22:24:32
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.974	1.983	-0.009	0.485	2472941	2.22		111	1419	
D 3 13C4-PFBA										
216.8 > 171.9	4.067	4.087	-0.021	1.000	2704951	2.06		103	6961	
* 4 13C3PFBA										
216.0 > 172.0	4.067	4.087	-0.021		2251645	2.00			4983	
D 8 13C5 PFPeA										
268.0 > 223.0	4.725	4.747	-0.022	0.911	2986784	2.20		110	7154	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.009	5.018	-0.009	0.805	993464	4.94		105	4765	
D 15 13C5 PFHxA										
318.0 > 273.0	5.186	5.206	-0.020	1.000	3450643	2.12		106	8260	
* 16 13C2 PFHxA										
315.1 > 270.0	5.186	5.206	-0.020		5434638	5.00			10525	
D 19 13C3 PFBS										
302.1 > 79.9	5.315	5.337	-0.022	0.854	2213046	2.00		108	7656	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.360	5.381	-0.021	1.034	1806078	1.96		97.9	4466	
24 TCDCA										
498.1 > 80.0	5.690	5.474	0.216	0.810	752	NR			10.5	
26 TDCA										
498.0 > 80.0	5.803	5.585	0.218	0.826	1251	NR			4.7	
D 27 13C4 PFHpA										
367.0 > 322.0	5.609	5.631	-0.022	1.082	3234615	2.15		108	9699	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.803	5.825	-0.022	0.933	1106916	6.37		134	3128	
33 BTS										
280.0 > 147.0	6.202	5.974	0.228	0.998	224	0.000099			1.6	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 34 13C8 PFOA 421.0 > 376.0	6.009	6.020	-0.011	1.000	3981243	2.26		113	8216	
* 35 13C4 PFOA 417.1 > 372.0	6.009	6.020	-0.011		5777854	5.00			5945	
D 38 13C3 PFHxS 402.0 > 79.9	6.213	6.233	-0.020	0.998	2049715	2.04		108	4822	
* 39 18O2 PFHxS 403.0 > 83.9	6.223	6.233	-0.010		1707070	1.90			4391	
D 41 13C9 PFNA 472.0 > 427.0	6.390	6.413	-0.023	1.000	3573364	2.00		100	4270	
* 42 13C5 PFNA 468.0 > 423.0	6.390	6.413	-0.023		3626872	2.00			7445	
D 44 13C2-8:2FTS 529.0 > 80.9	6.566	6.588	-0.022	1.055	987044	5.72		119	2049	
48 FHxSA 398.0 > 78.0	6.731	6.709	0.022	1.083	943	0.000548			4.7	
D 49 d3-NMeFOSAA 573.2 > 419.0	6.720	6.741	-0.021	0.956	1465289	7.36		147	3654	
D 51 13C6 PFDA 519.0 > 474.0	6.783	6.804	-0.021	1.000	3665634	2.13		106	4544	
* 52 13C2 PFDA 515.1 > 470.1	6.783	6.804	-0.021		3089354	2.00			5435	
D 54 d5-NEtFOSAA 589.2 > 419.0	6.900	6.921	-0.021	0.981	1877834	7.49		150	2310	
D 56 13C8 PFOS 507.0 > 79.9	7.023	7.053	-0.030	0.999	1792565	2.16		113	2781	
* 57 13C4 PFOS 502.8 > 79.9	7.033	7.053	-0.020		1144427	1.92			3727	
D 59 13C7 PFUnA 570.0 > 525.0	7.175	7.195	-0.020	1.058	3553757	2.06		103	8009	
D 63 13C2 PFDoA 615.0 > 570.0	7.581	7.603	-0.022	1.118	3412442	2.09		105	4374	
D 65 13C8 FOSA 506.1 > 77.8	7.831	7.842	-0.011	1.114	2396001	2.89		144	4662	
D 70 13C2 PFTeDA 715.2 > 670.0	8.353	8.382	-0.029	1.231	2617648	2.68		134	4089	
D 73 d7-N-Me-FOSE 623.2 > 58.9	8.735	8.749	-0.014	1.242	1413702	6.67		133	533	
D 75 d3-NMePFOSA 515.0 > 219.0	8.857	8.858	-0.001	1.259	593237	2.86		143	2580	
D 77 d9-N-EtFOSE 639.2 > 58.9	8.975	8.988	-0.013	1.276	1883618	6.65		133	802	
D 79 d5-NEtPFOSA 531.1 > 219.0	9.069	9.070	-0.001	1.290	784063	2.77		139	2449	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_SS_00191	Amount Added:	5.00	Units: uL
1633_125_IS_00084	Amount Added:	5.00	Units: uL

Report Date: 20-Feb-2026 00:02:16 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19E-48.d

Injection Date: 19-Feb-2026 21:37:56 Instrument ID: 30637

Lims ID: CCB

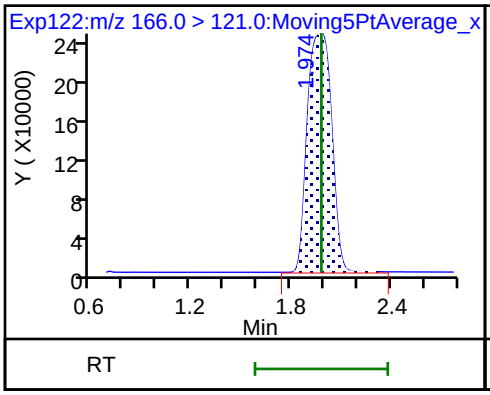
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 1 Worklist Smp#: 43

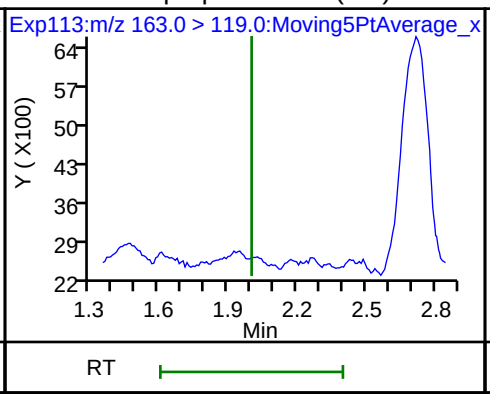
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

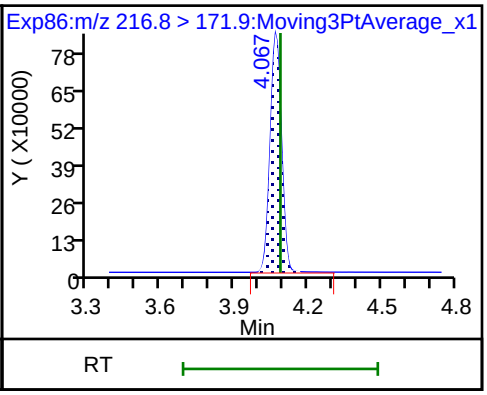
D 1 13C3PFPrA



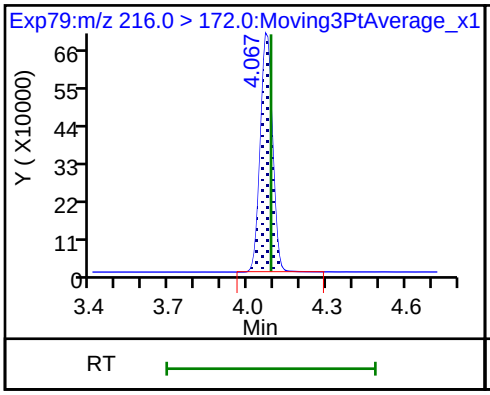
2 Perfluoropropionic acid (ND)



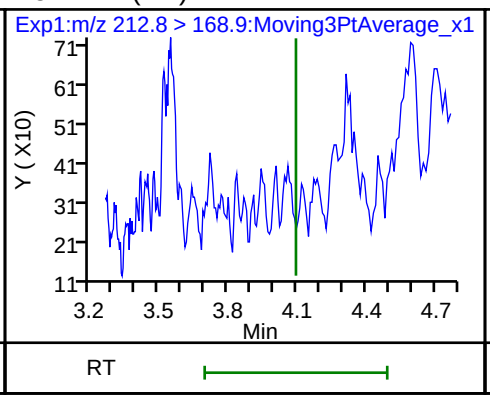
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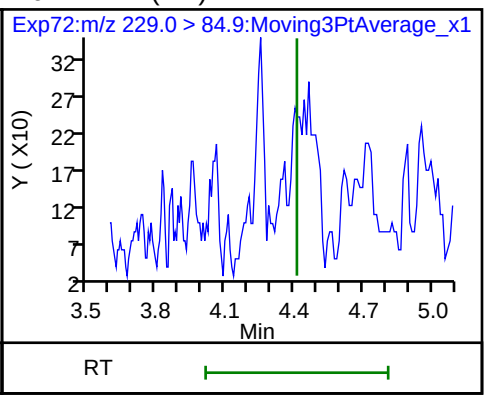
* 4 13C3PFBA



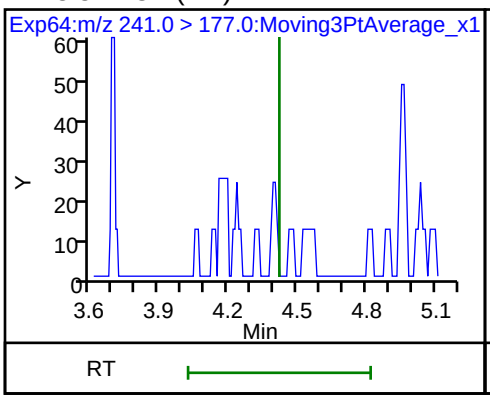
5 PFBA (ND)



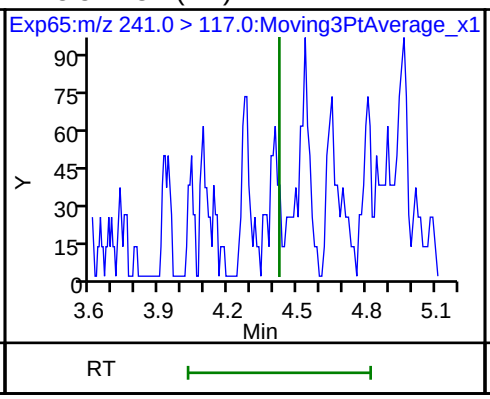
6 PFMPA (ND)



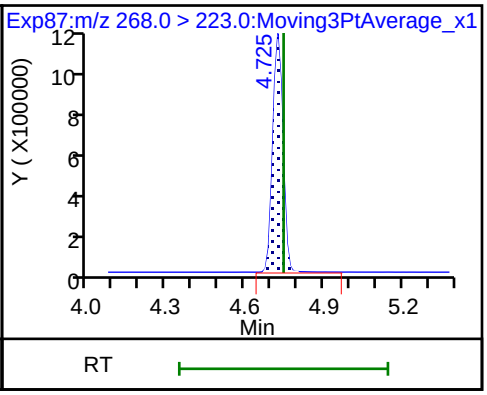
7 3:3 FTCA (ND)



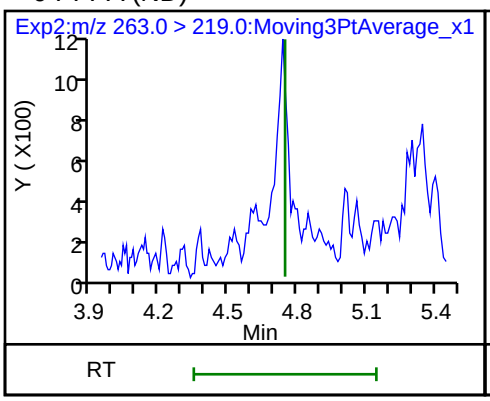
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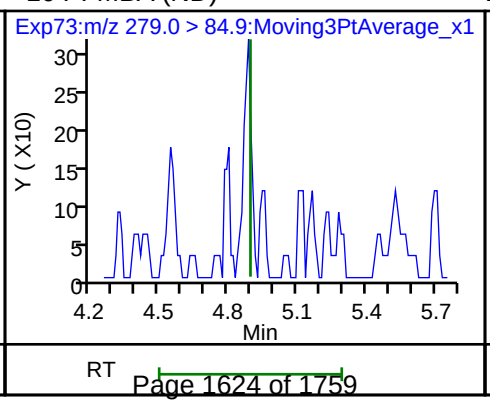
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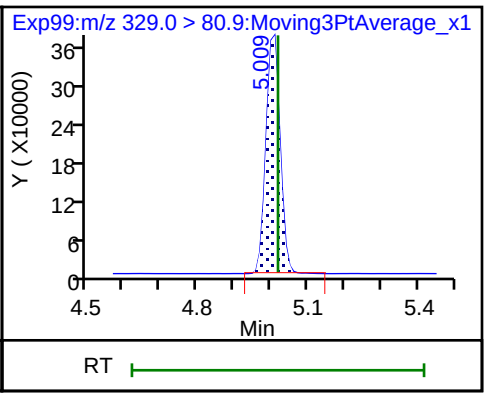
9 PFPA (ND)



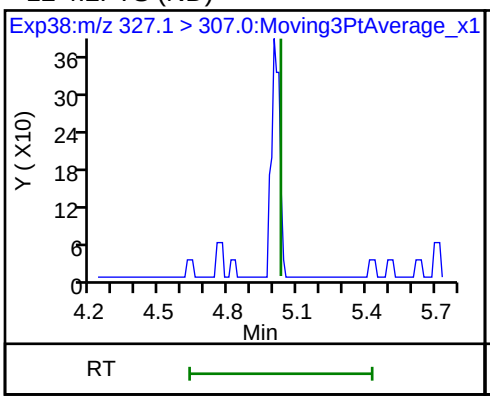
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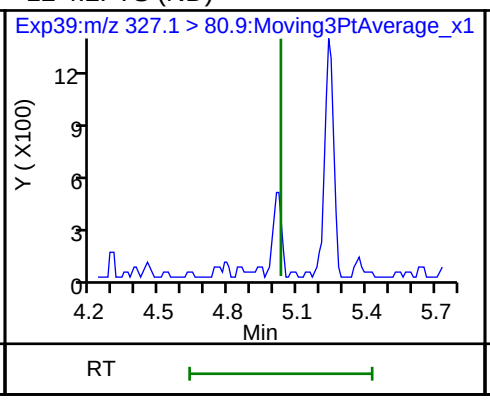
D 11 13C2-4:2FTS



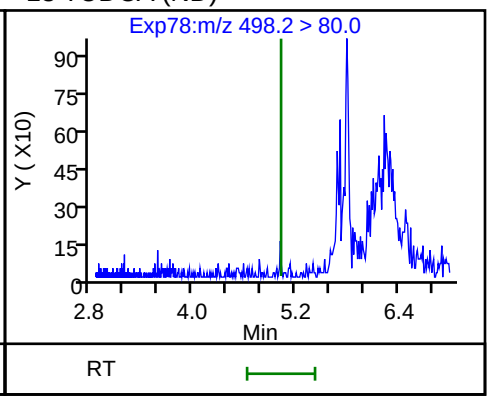
12 4:2FTS (ND)



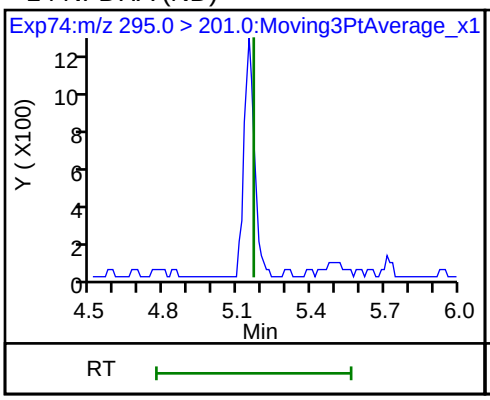
12 4:2FTS (ND)



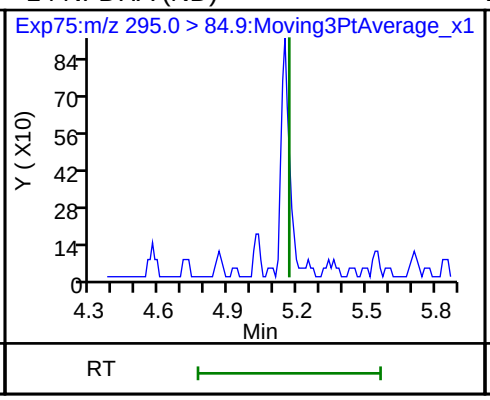
13 TUDCA (ND)



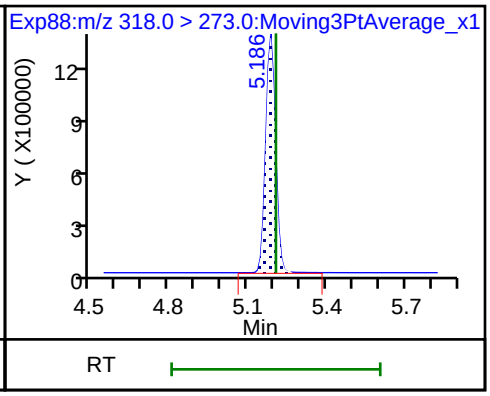
14 NFDHA (ND)



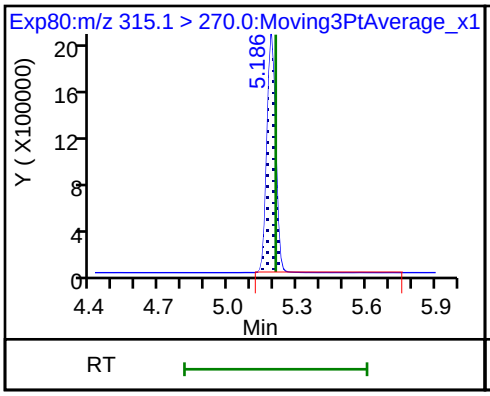
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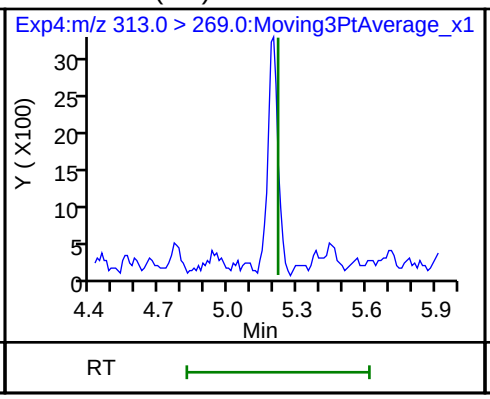
D 15 13C5 PFHxA



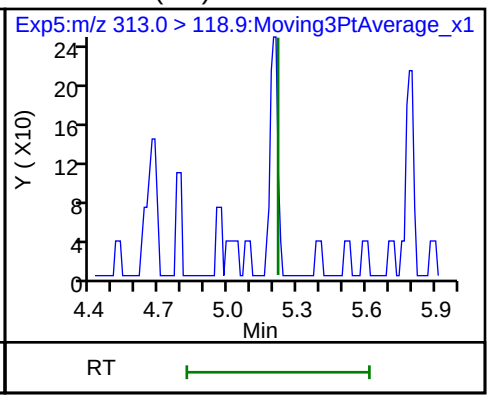
* 16 13C2 PFHxA



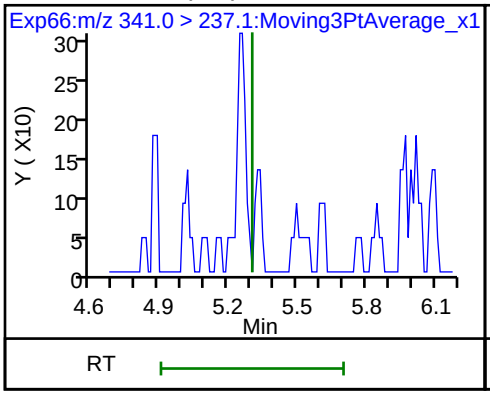
17 PFHxA (ND)



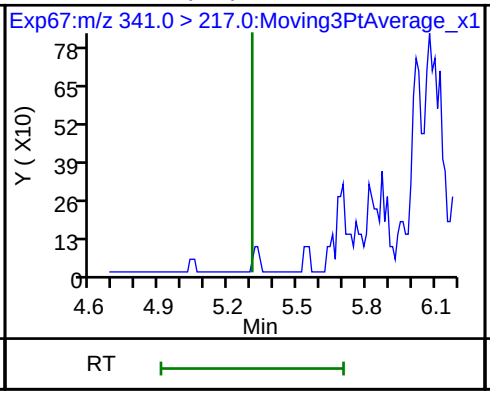
17 PFHxA (ND)



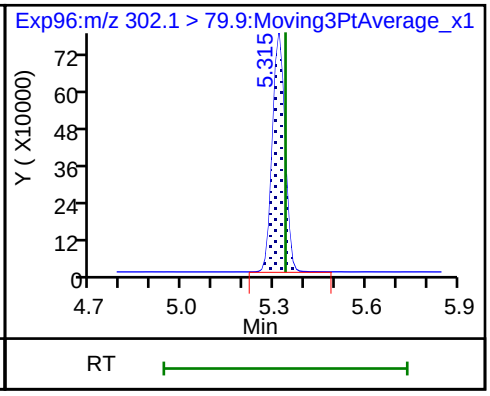
18 5:3 FTCA (ND)



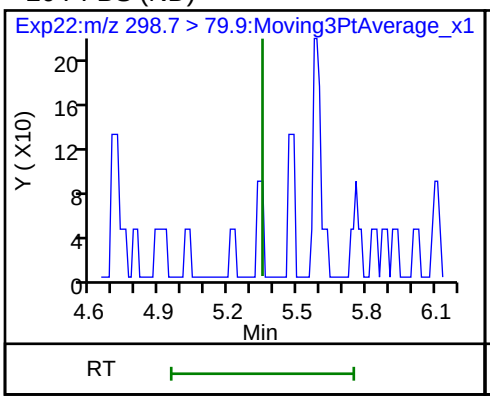
18 5:3 FTCA (ND)



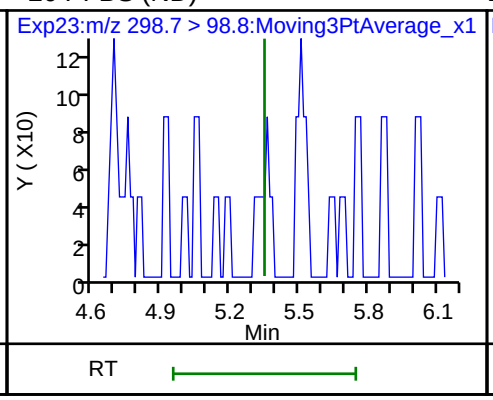
D 19 13C3 PFBS



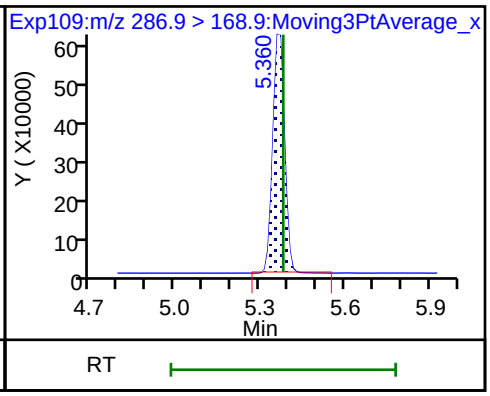
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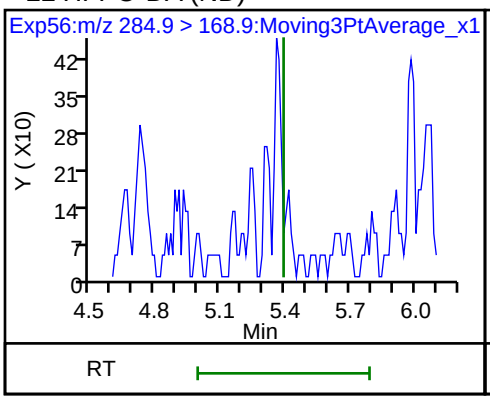
20 PFBS (ND)



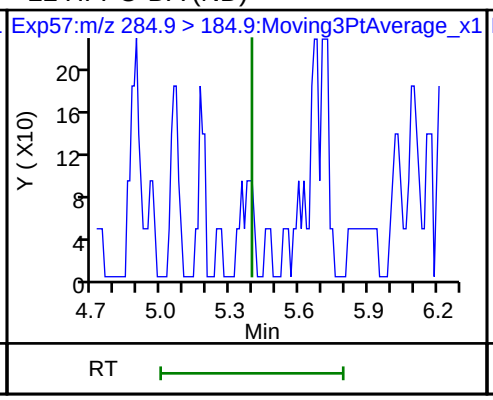
D 21 13C3 HFPO-DA



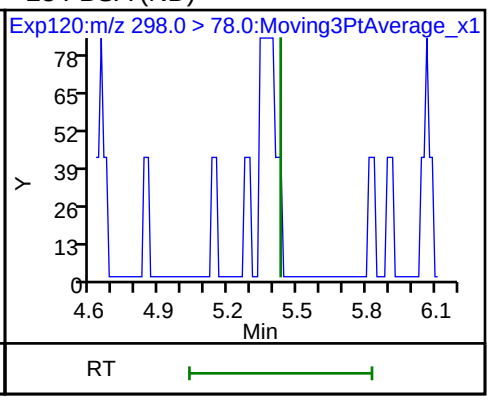
22 HFPO-DA (ND)



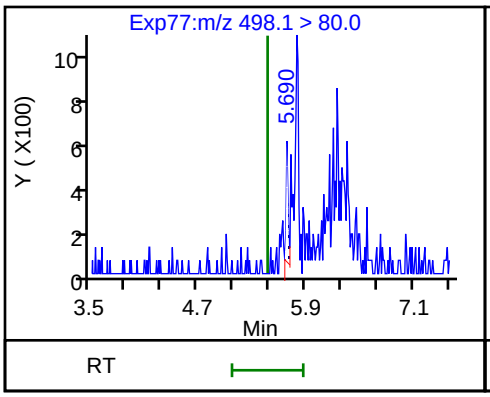
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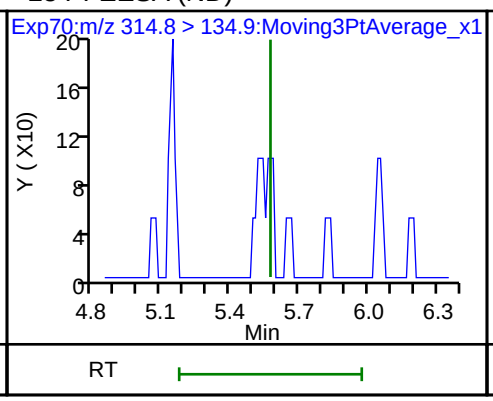
23 FBSA (ND)



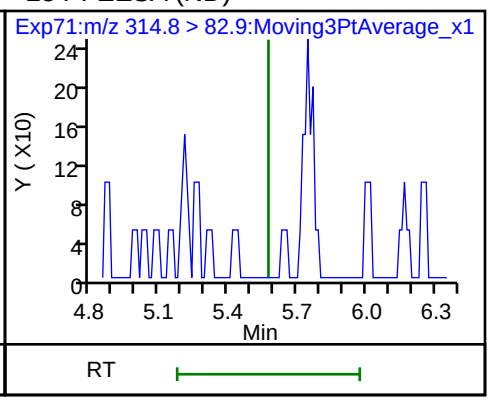
24 TCDCA



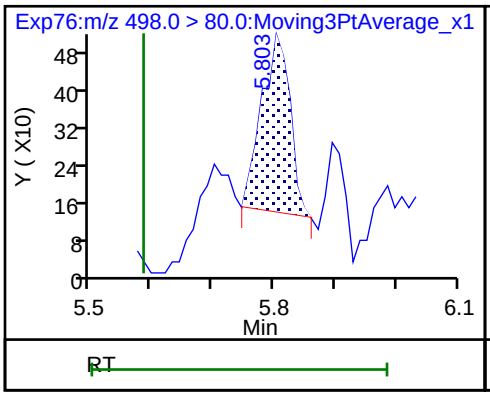
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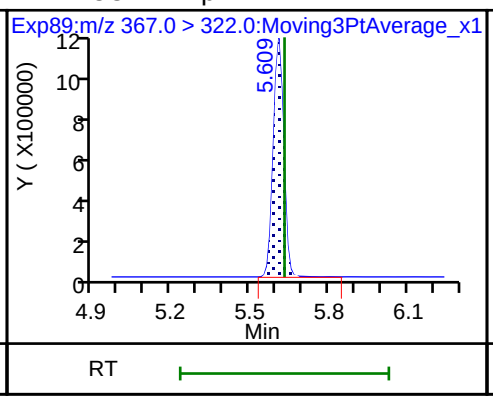
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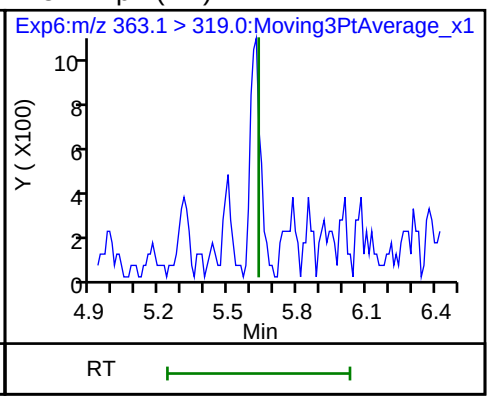
26 TDCA



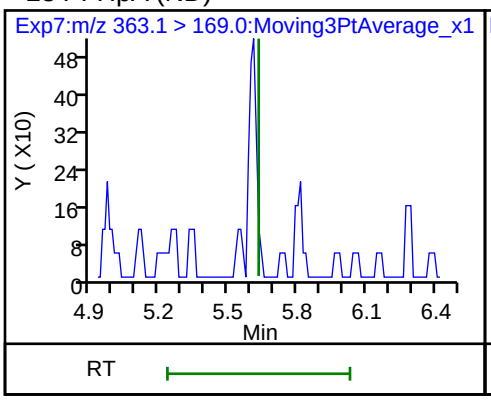
D 27 13C4 PFHpA



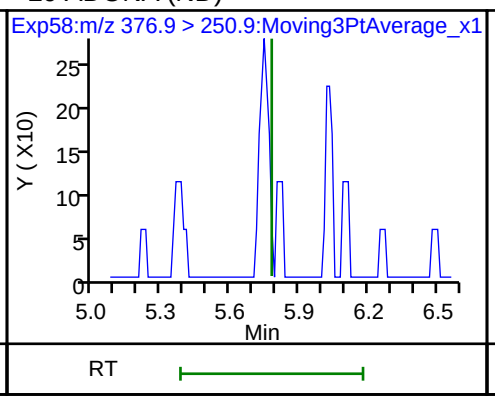
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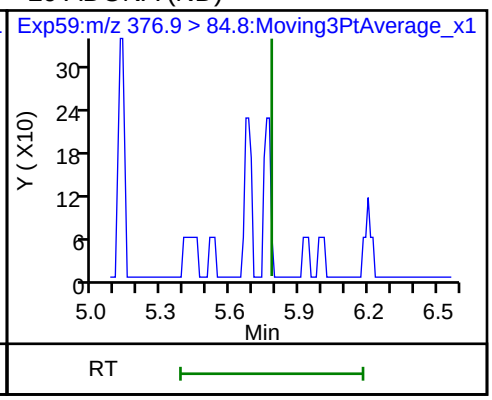
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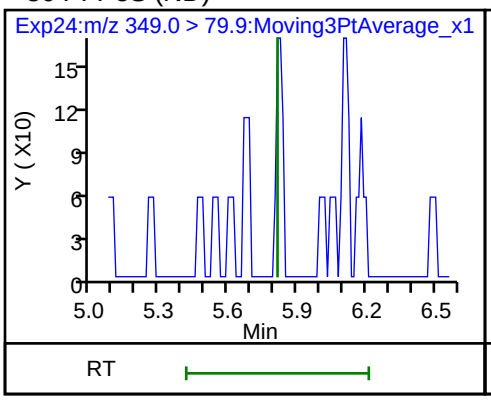
29 ADONA (ND)



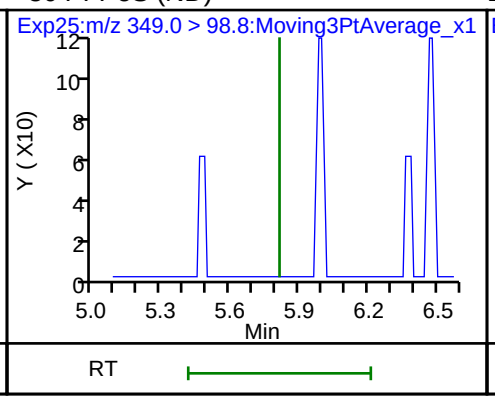
29 ADONA (ND)



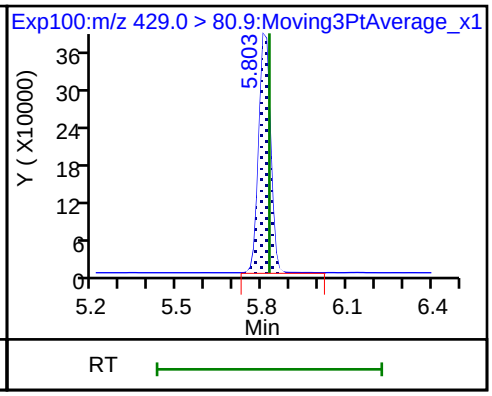
30 PFPeS (ND)



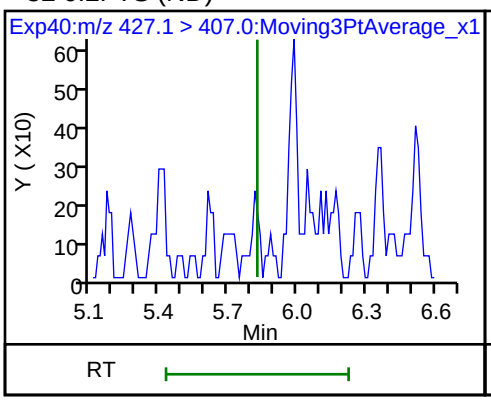
30 PFPeS (ND)



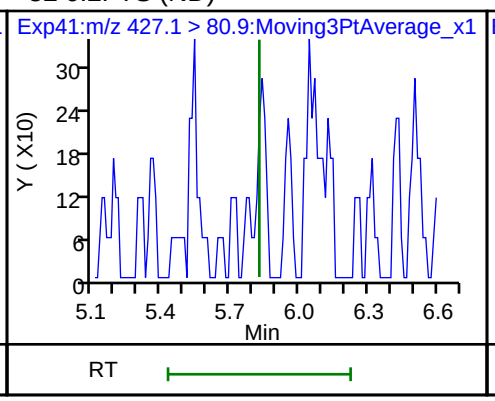
D 31 13C2-6:2FTS



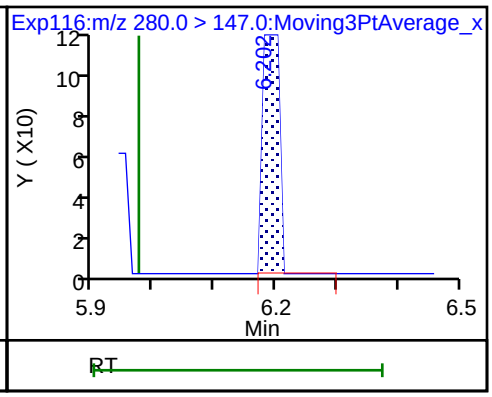
32 6:2FTS (ND)



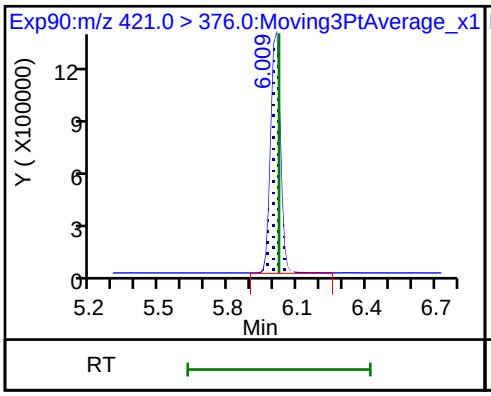
32 6:2FTS (ND)



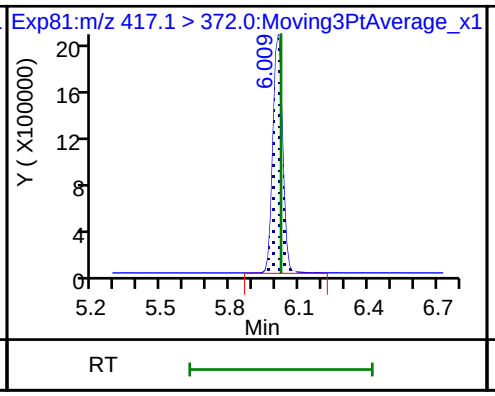
33 BTS



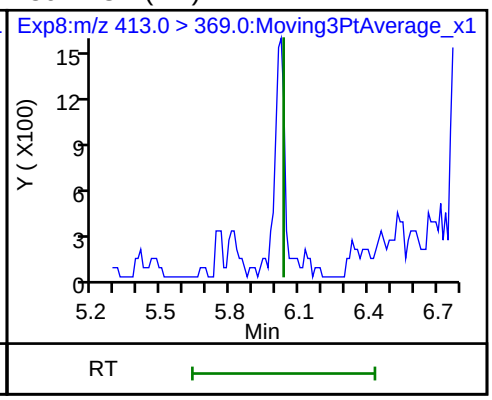
D 34 13C8 PFOA



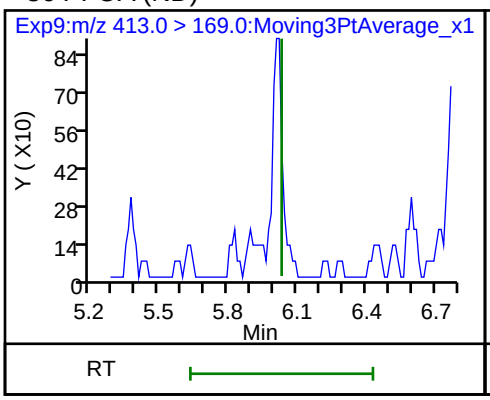
* 35 13C4 PFOA



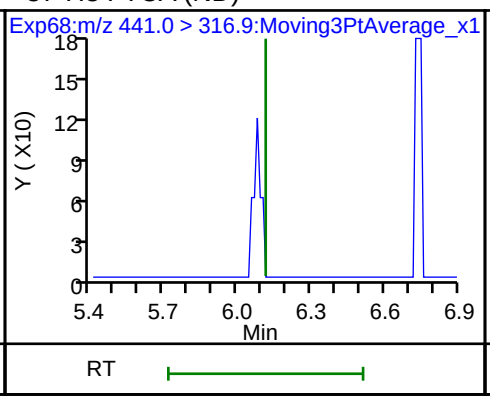
36 PFOA (ND)



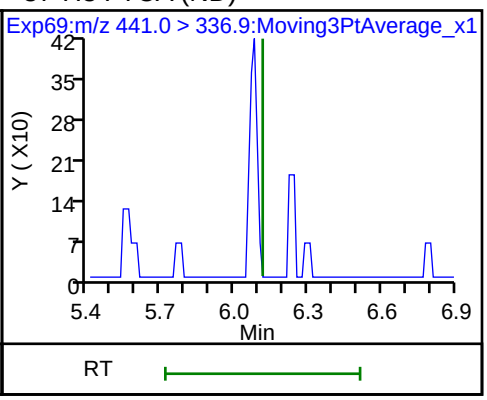
36 PFOA (ND)



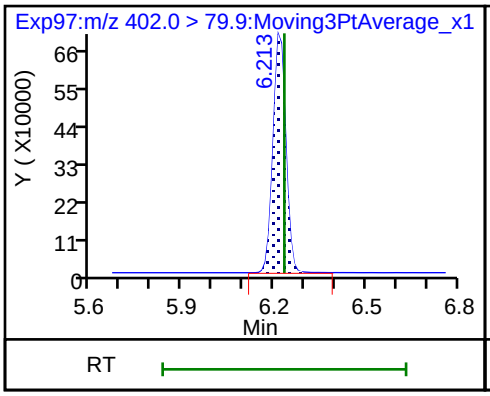
37 7:3 FTCA (ND)



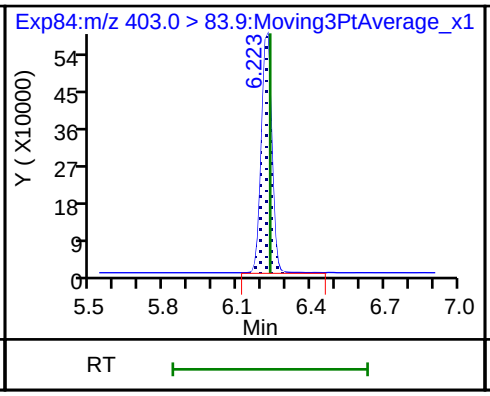
37 7:3 FTCA (ND)



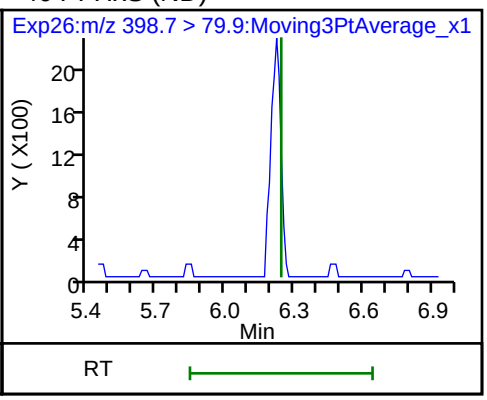
D 38 13C3 PFHxS



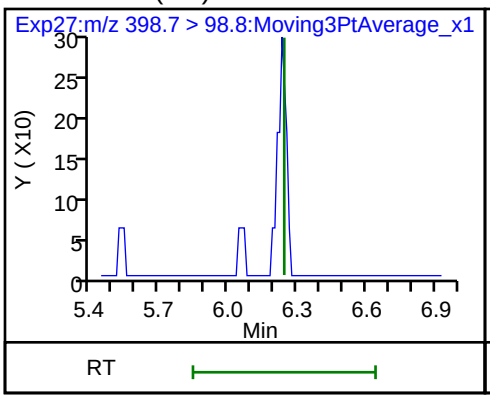
* 39 18O2 PFHxS



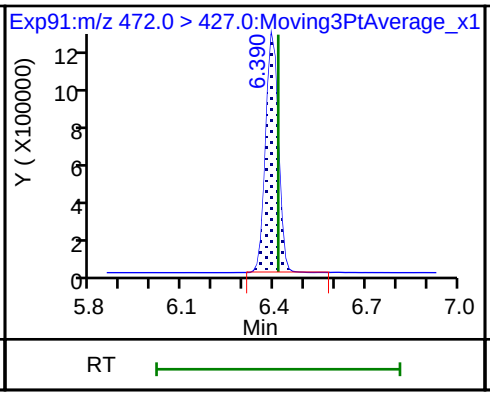
40 PFHxS (ND)



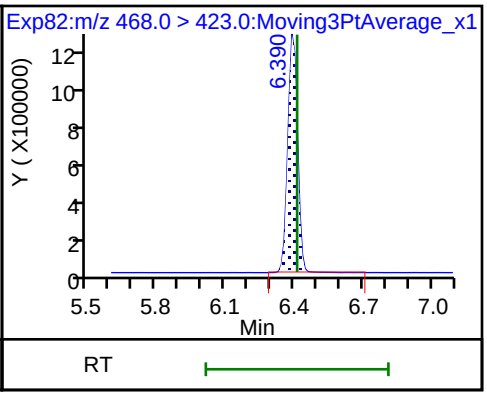
40 PFHxS (ND)



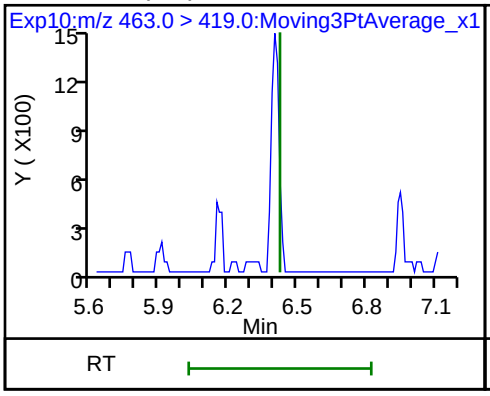
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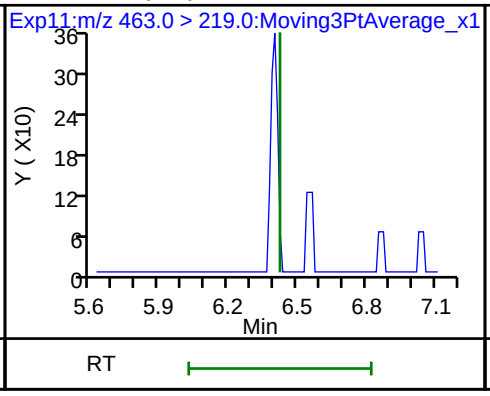
* 42 13C5 PFNA



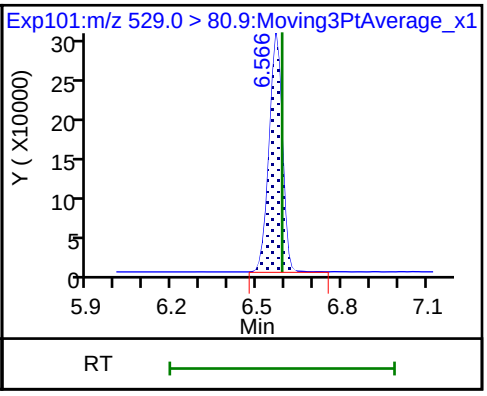
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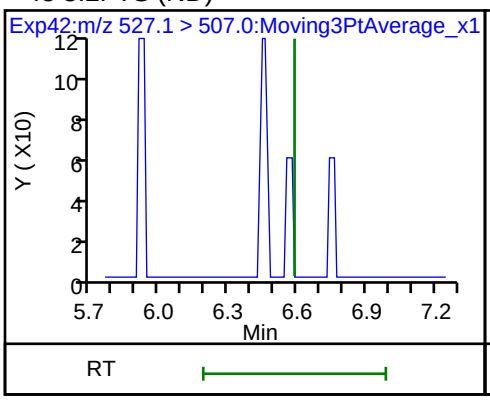
43 PFNA (ND)



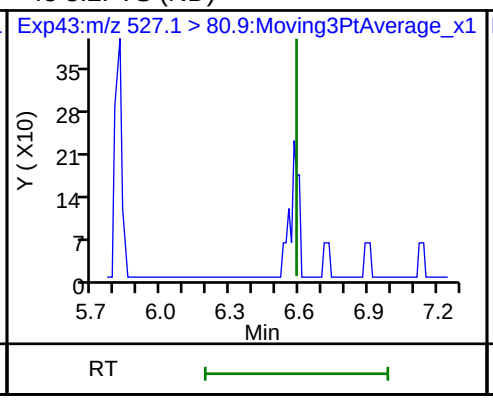
D 44 13C2-8:2FTS



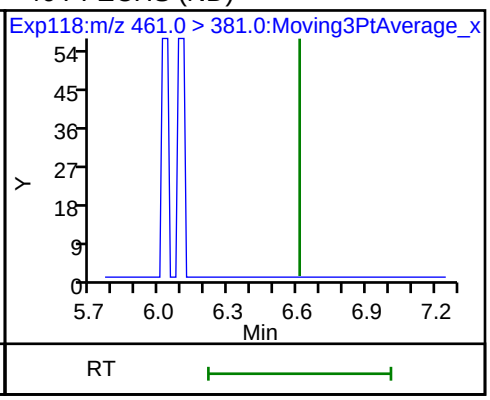
45 8:2FTS (ND)



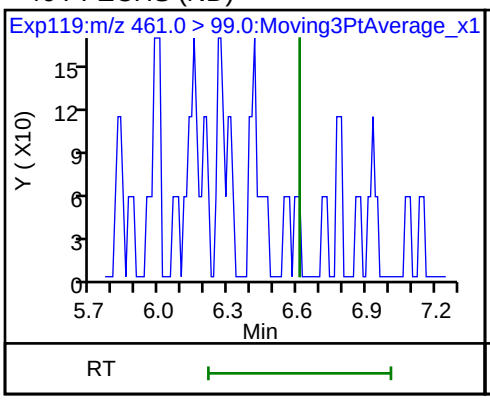
45 8:2FTS (ND)



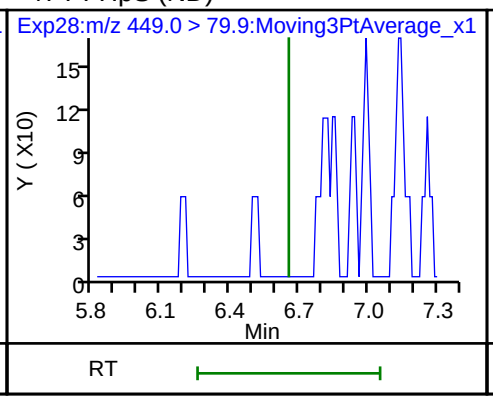
46 PFECHS (ND)



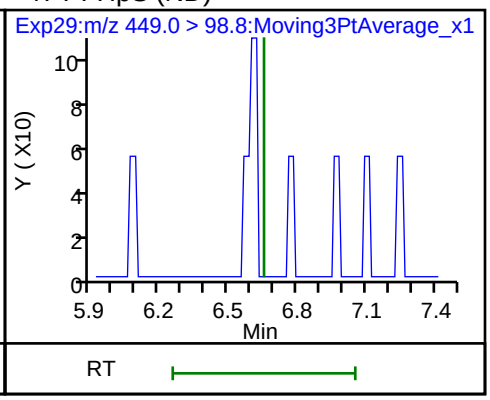
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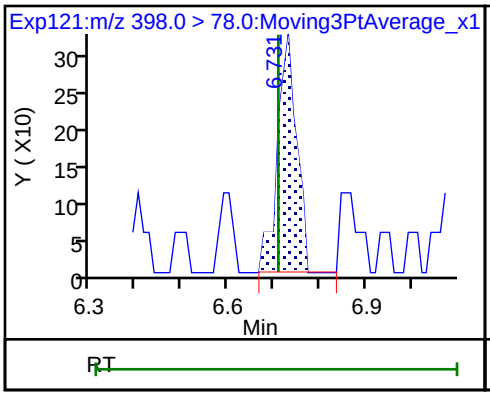
47 PFHpS (ND)



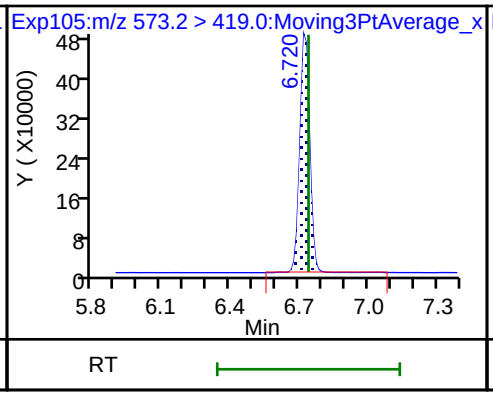
47 PFHpS (ND)



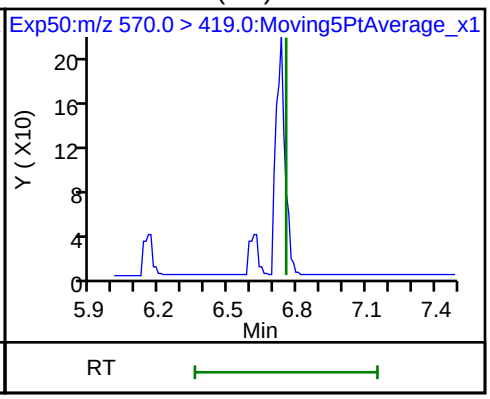
48 FHxSA



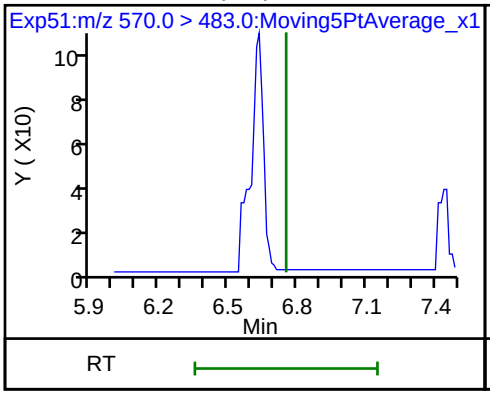
D 49 d3-NMeFOSAA



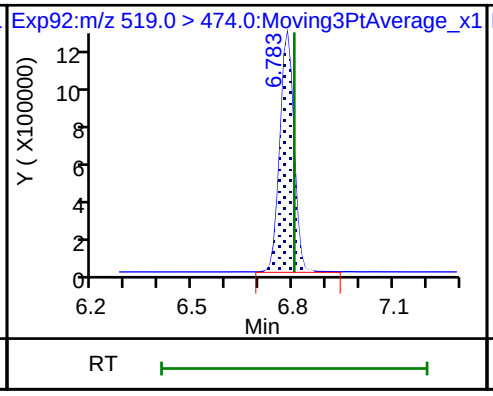
50 NMeFOSAA (ND)



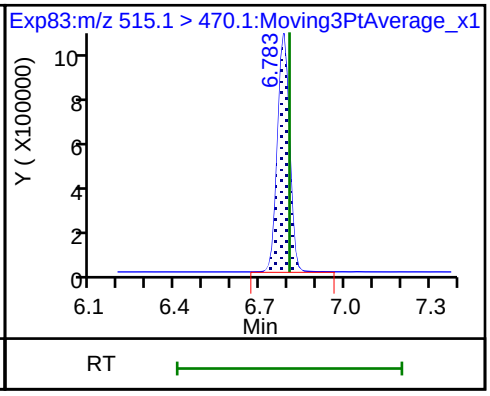
50 NMeFOSAA (ND)



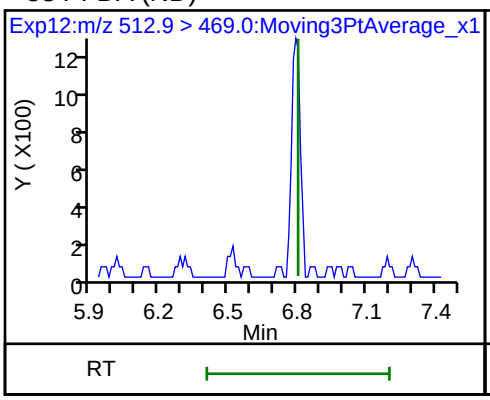
D 51 13C6 PFDA



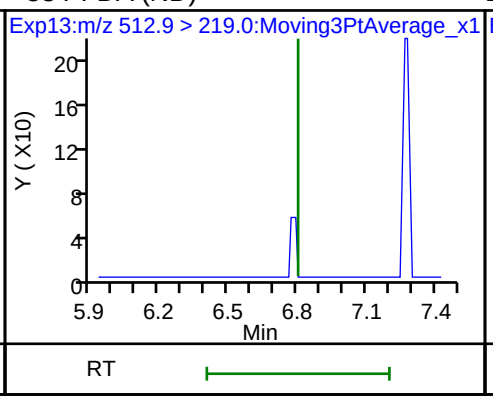
* 52 13C2 PFDA



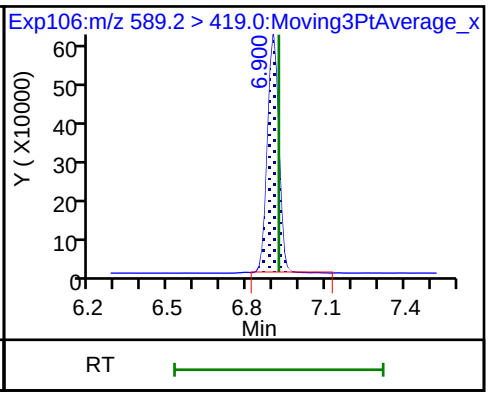
53 PFDA (ND)



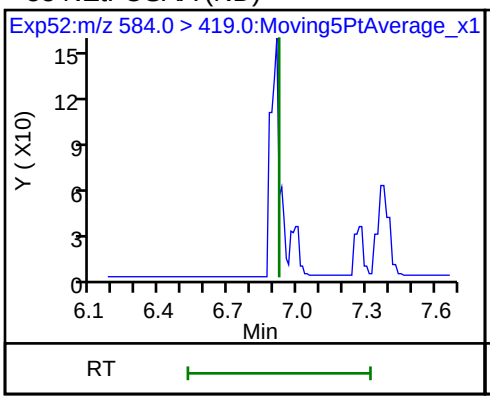
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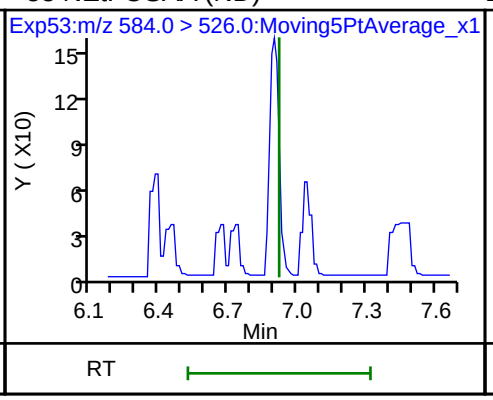
D 54 d5-NEtFOSAA



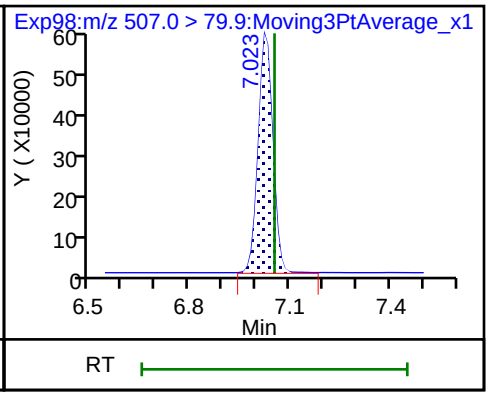
55 NEtFOSAA (ND)



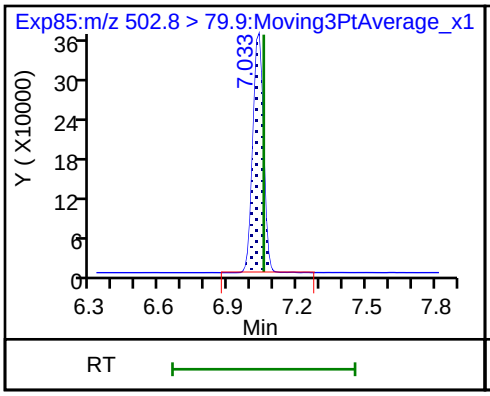
55 NEtFOSAA (ND)



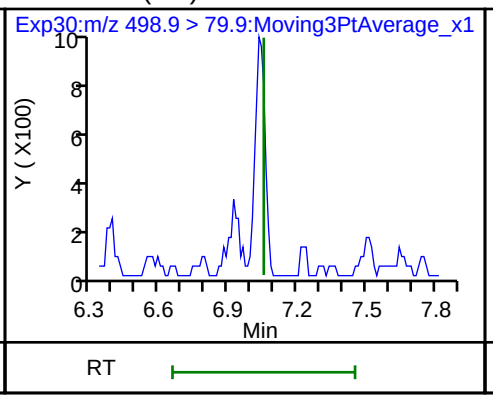
D 56 13C8 PFOS



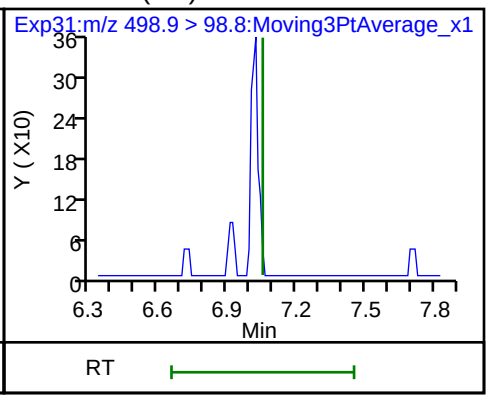
* 57 13C4 PFOS



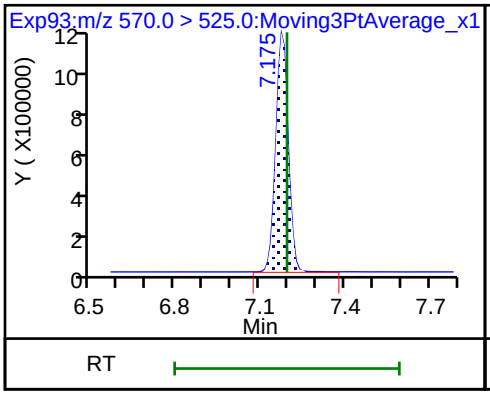
58 PFOS (ND)



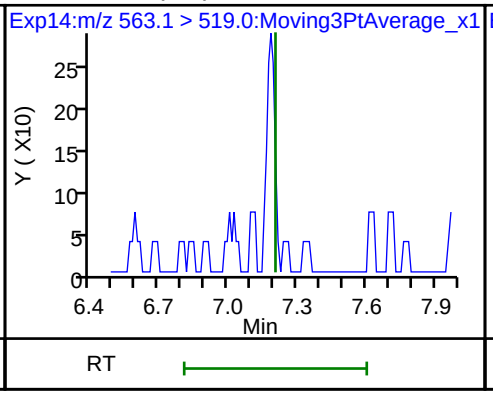
58 PFOS (ND)



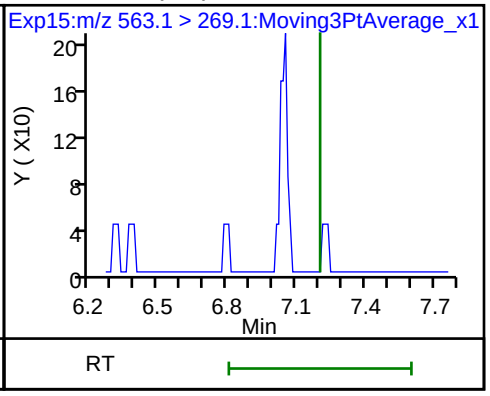
D 59 13C7 PFUnA



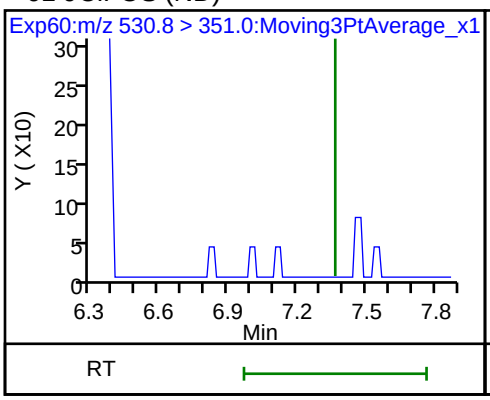
60 PFUnA (ND)



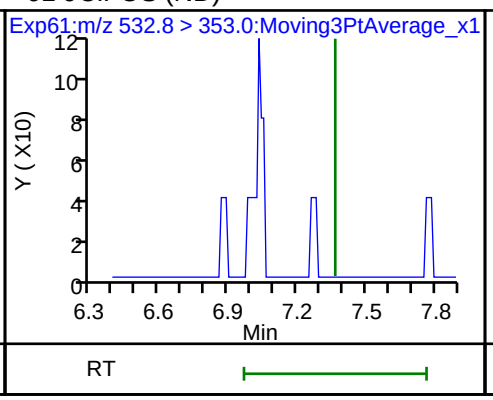
60 PFUnA (ND)



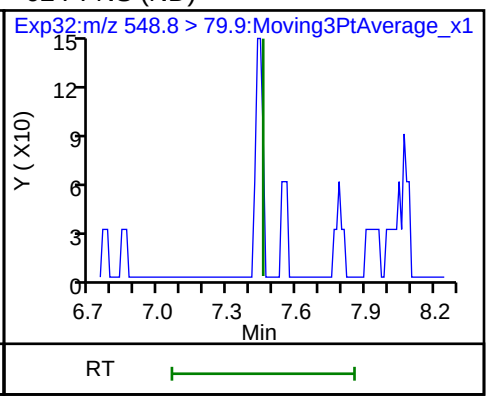
61 9ClFOS (ND)



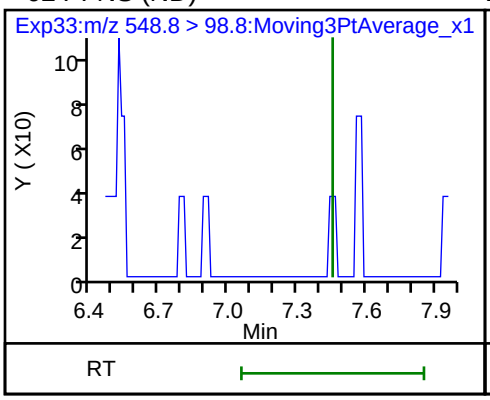
61 9ClFOS (ND)



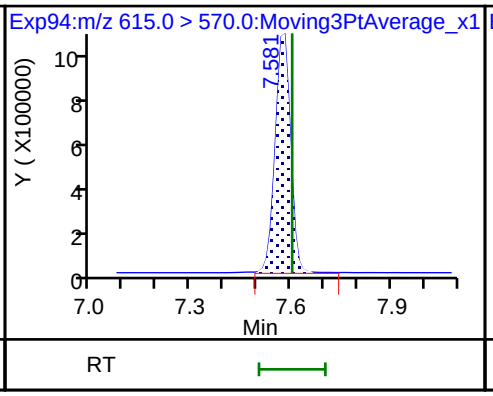
62 PFNS (ND)



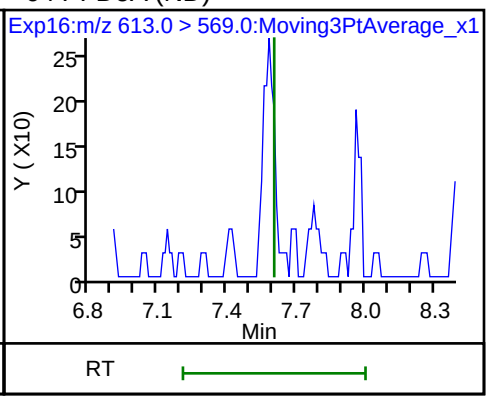
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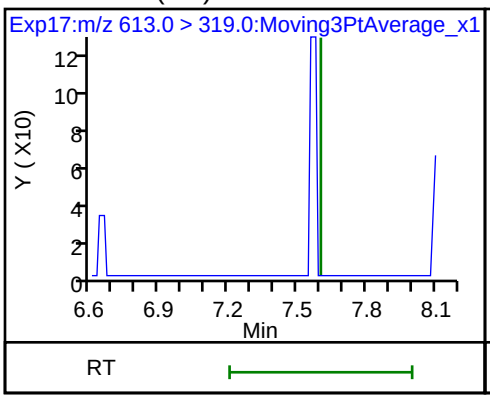
D 63 13C2 PFDoA



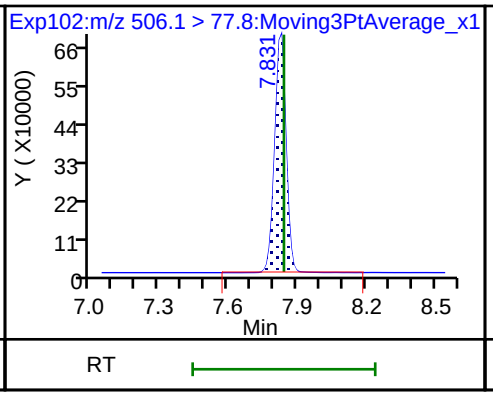
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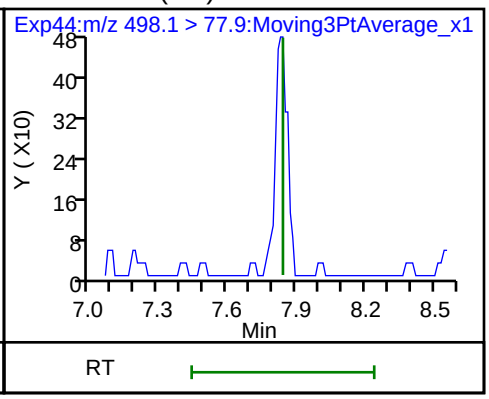
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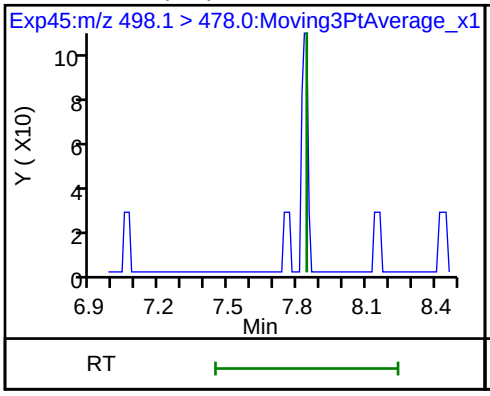
D 65 13C8 FOSA



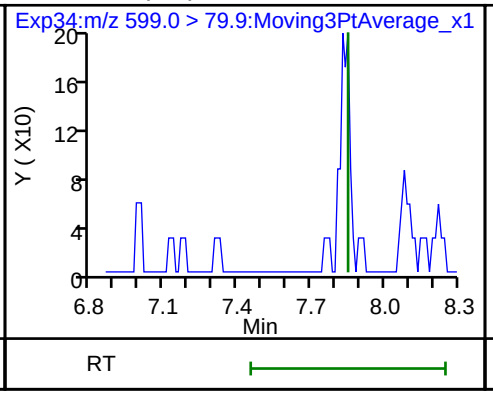
66 PFOSA (ND)



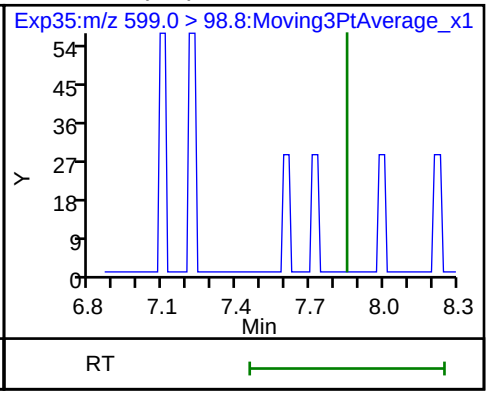
66 PFOSA (ND)



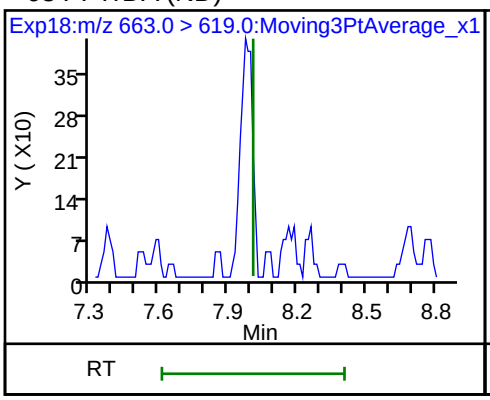
67 PFDS (ND)



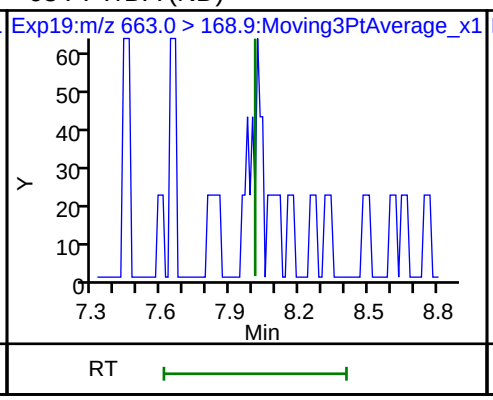
67 PFDS (ND)



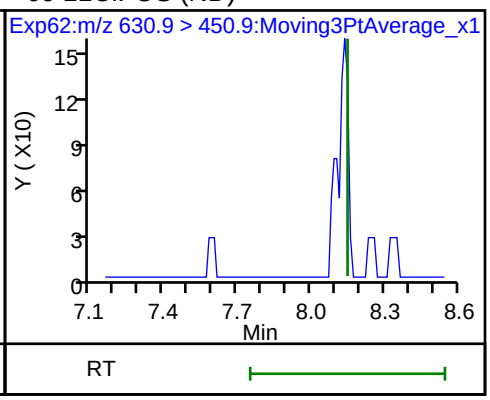
68 PFTrDA (ND)



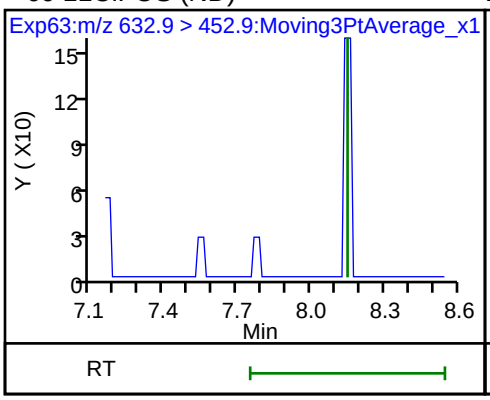
68 PFTrDA (ND)



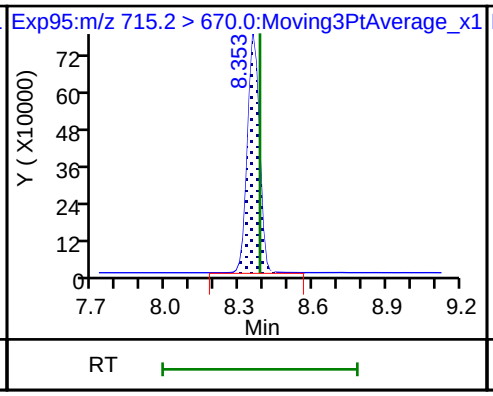
69 11ClFOS (ND)



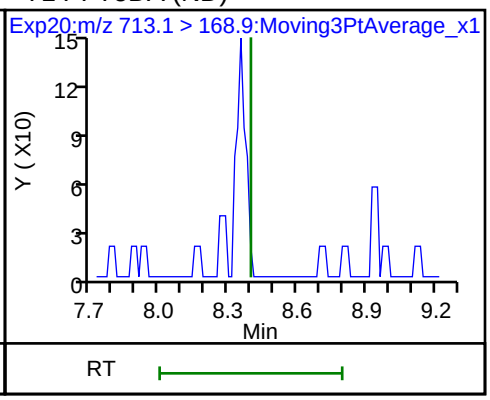
69 11ClFOS (ND)



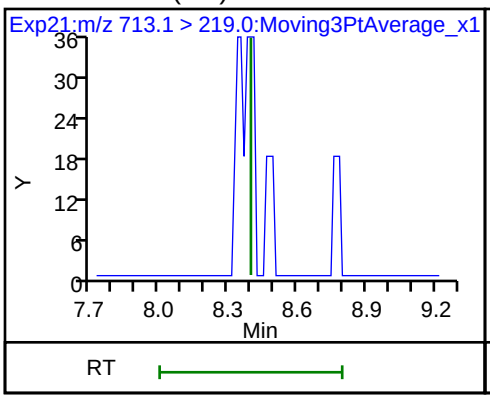
D 70 13C2 PFTeDA



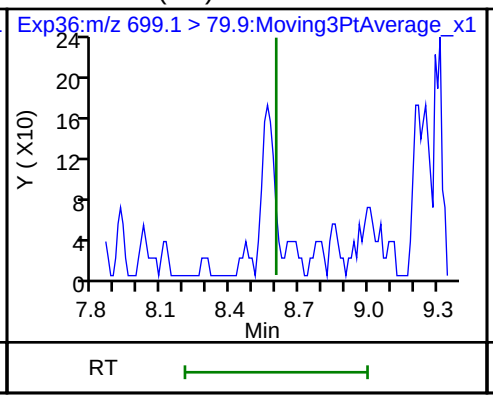
71 PFTeDA (ND)



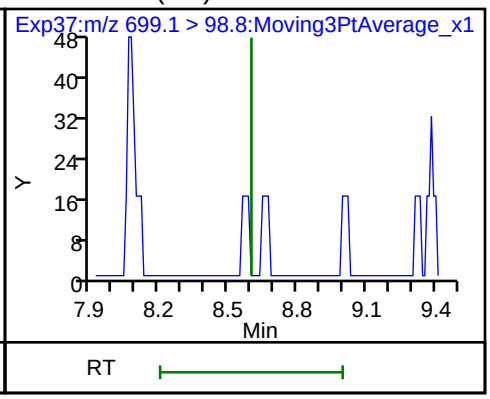
71 PFTeDA (ND)



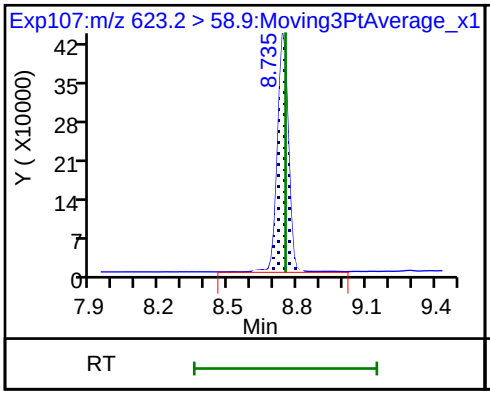
72 PFDoS (ND)



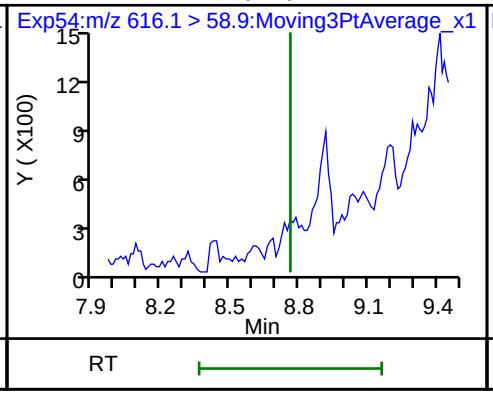
72 PFDoS (ND)



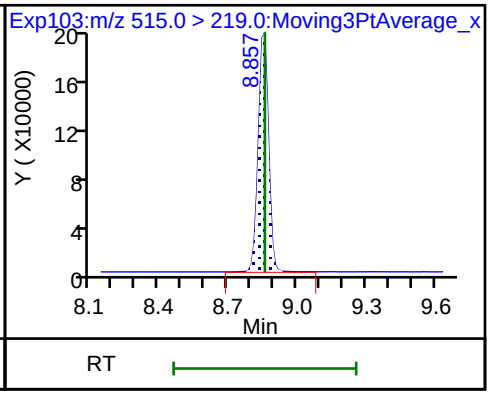
D 73 d7-N-Me-FOSE



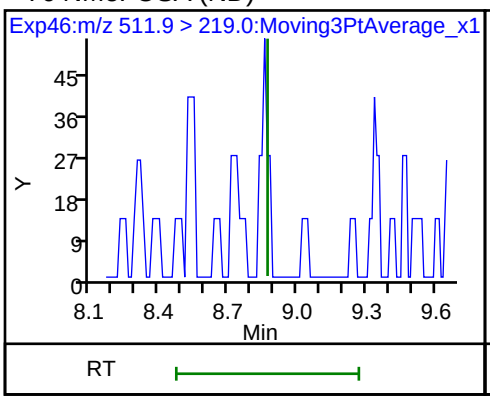
74 N-MeFOSE-M (ND)



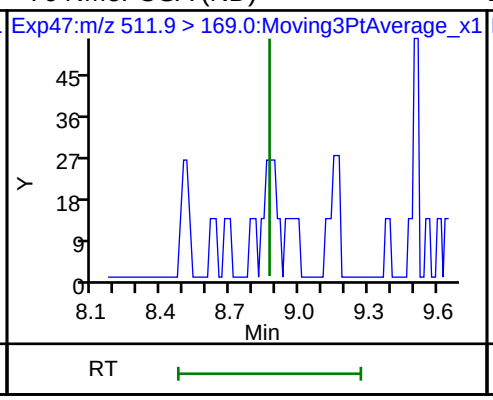
D 75 d3-NMePFOSA



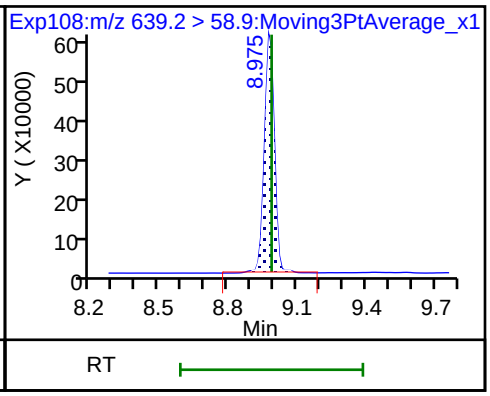
76 NMeFOSA (ND)



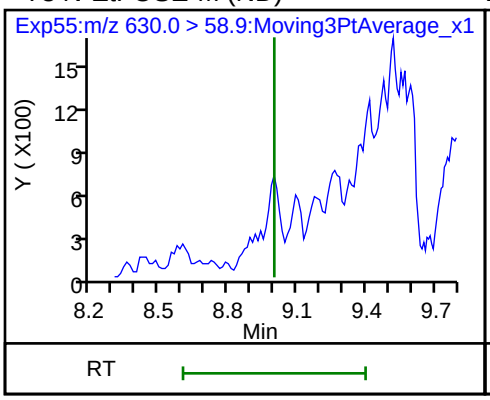
76 NMeFOSA (ND)



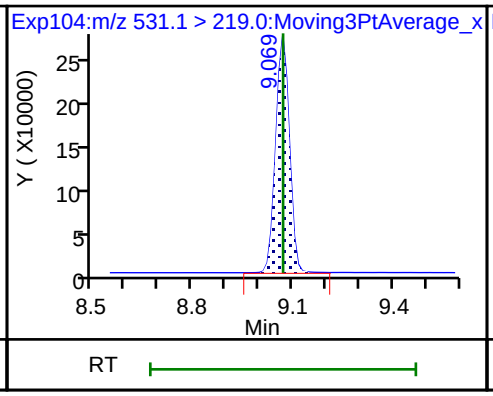
D 77 d9-N-EtFOSE



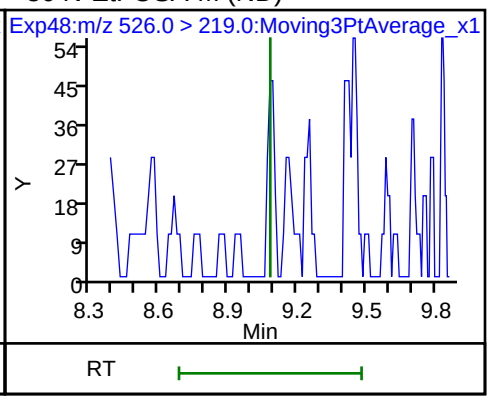
78 N-EtFOSE-M (ND)



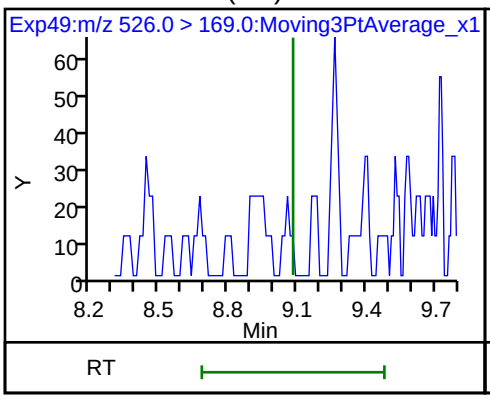
D 79 d5-NEtPFOSA



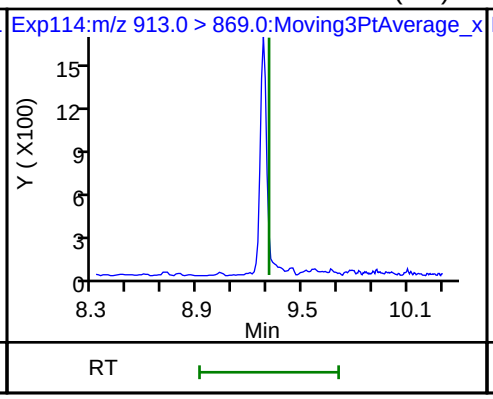
80 N-EtFOSA-M (ND)



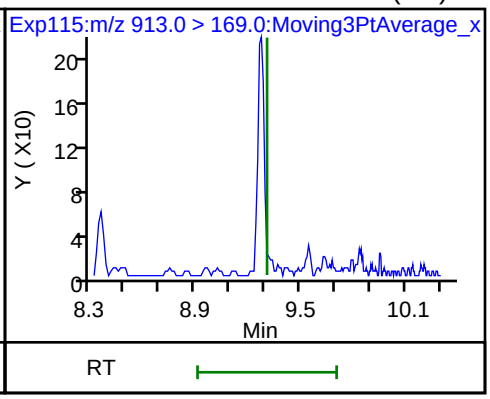
80 N-EtFOSA-M (ND)



81 Perfluorooctadecanoic acid (ND)



81 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: ICB 410-764556/9

Matrix: Water
Lab File ID: 26FEB04CAL-09.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/04/2026 14:19

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 10(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 764556
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.010	U	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: ICB 410-764556/9

Matrix: Water
Lab File ID: 26FEB04CAL-09.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/04/2026 14:19

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 10(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 764556
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: ICB 410-764556/9

Matrix: Water
Lab File ID: 26FEB04CAL-09.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/04/2026 14:19

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 10(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 764556
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	86.8		5-130
2283397-79-3	13C5 PFPeA	96.8		40-130
2328024-54-8	13C5 PFHxA	96.6		40-130
2328024-55-9	13C4 PFHpA	103		40-130
1350614-84-4	13C8 PFOA	97.4		40-130
2283397-80-6	13C9 PFNA	95.9		40-130
2328024-56-0	13C6 PFDA	91.6		40-130
STL02580	13C7 PFUnA	96.7		30-130
STL02116	13C2 PFTeDA	93.0		10-130
2708218-83-9	13C3 PFBS	93.7		40-135
2708218-85-1	13C3 PFHxS	96.7		40-130
2265893-05-6	13C8 PFOS	96.2		40-130
STL01056	13C8 FOSA	93.0		40-130
1400690-70-1	d3-NMeFOSAA	95.0		40-170
1265205-97-7	d5-NEtFOSAA	93.4		25-135
STL02395	13C2 4:2 FTS	101		40-200
STL02279	13C2 6:2 FTS	110		40-200
STL02280	13C2 8:2 FTS	102		40-300
STL02255	13C3 HFPO-DA	93.3		40-130
STL02277	d7-N-MeFOSE-M	87.8		10-130
STL02278	d9-N-EtFOSE-M	91.8		10-130
STL02704	d5-NEtPFOSA	87.4		10-130
STL02705	d3-NMePFOSA	94.9		10-130
960315-52-0	13C2 PFDoA	92.3		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-09.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 04-Feb-2026 14:19:38 ALS Bottle#: 1 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICB
Misc. Info.: 410-0174629-009 Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 1
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 04-Feb-2026 20:47:43 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1655

First Level Reviewer: RPU6 Date: 04-Feb-2026 20:43:48
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.940	1.949	-0.009	0.477	2139990	1.81		90.3	1151	
D 3 13C4-PFBA										
216.8 > 171.9	4.065	4.058	0.007	1.000	2424022	1.74		86.8	5562	
* 4 13C3PFBA										
216.0 > 172.0	4.065	4.065	0.0		2398955	2.00			5053	
D 8 13C5 PFPeA										
268.0 > 223.0	4.721	4.723	-0.002	0.909	2509681	1.94		96.8	5623	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.007	5.008	-0.002	0.801	1016878	4.72		101	4129	
D 16 13C5 PFHxA										
318.0 > 273.0	5.194	5.185	0.009	1.000	3005446	1.93		96.6	7743	
* 15 13C2 PFHxA										
315.1 > 270.0	5.194	5.185	0.009		5187753	5.00			7390	
D 20 13C3 PFBS										
302.1 > 79.9	5.335	5.325	0.010	0.853	2068149	1.75		93.7	7694	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.380	5.370	0.010	1.036	1642767	1.87		93.3	2776	
24 TCDCA										
498.1 > 80.0	5.744	5.452	0.292	0.811	239	NR			2.5	
26 TDCA										
498.0 > 80.0	5.824	5.575	0.249	0.822	1982	NR			9.6	
D 27 13C4 PFHpA										
367.0 > 322.0	5.618	5.620	-0.002	1.082	2954386	2.06		103	5567	
D 30 13C2-6:2FTS										
429.0 > 80.9	5.812	5.814	-0.002	0.930	974837	5.23		110	3323	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C8 PFOA										
421.0 > 376.0	6.030	6.020	0.010	1.000	3499604	1.95		97.4	5069	
* 35 13C4 PFOA										
417.1 > 372.0	6.030	6.020	0.010		5900372	5.00			4725	
D 38 13C3 PFHxS										
402.0 > 79.9	6.252	6.243	0.009	1.000	1974838	1.83		96.7	5122	
* 39 18O2 PFHxS										
403.0 > 83.9	6.252	6.243	0.009		1831574	1.90			4610	
D 41 13C9 PFNA										
472.0 > 427.0	6.422	6.413	0.009	1.000	3231975	1.92		95.9	6319	
* 42 13C5 PFNA										
468.0 > 423.0	6.422	6.424	-0.002		3426725	2.00			5417	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.597	6.600	-0.003	1.055	905104	4.89		102	2058	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.749	6.752	-0.003	0.953	1232269	4.75		95.0	2010	
D 52 13C6 PFDA										
519.0 > 474.0	6.822	6.814	0.008	1.000	3247599	1.83		91.6	6362	
* 51 13C2 PFDA										
515.1 > 470.1	6.822	6.825	-0.003		3175523	2.00			5146	
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.928	6.932	-0.004	0.978	1525972	4.67		93.4	1672	
D 56 13C8 PFOS										
507.0 > 79.9	7.081	7.084	-0.003	1.000	1992536	1.84		96.2	3024	
* 57 13C4 PFOS										
502.8 > 79.9	7.081	7.084	-0.003		1492595	1.92			6624	
D 59 13C7 PFUnA										
570.0 > 525.0	7.222	7.227	-0.005	1.059	3424725	1.93		96.7	6771	
D 63 13C2 PFDoA										
615.0 > 570.0	7.642	7.636	0.006	1.120	3094043	1.85		92.3	3182	
D 65 13C8 FOSA										
506.1 > 77.8	7.783	7.788	-0.005	1.099	2011866	1.86		93.0	3771	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.446	8.452	-0.006	1.238	1868974	1.86		93.0	2788	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.742	8.735	0.007	1.235	1213784	4.39		87.8	389	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.852	8.845	0.007	1.250	513265	1.90		94.9	2470	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.982	8.975	0.007	1.268	1695536	4.59		91.8	745	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.076	9.069	0.007	1.282	645394	1.75		87.4	2458	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_SS_00191	Amount Added:	5.00	Units: uL
1633_125_IS_V_00511	Amount Added:	50.00	Units: uL

Report Date: 04-Feb-2026 21:01:52 Chrom Revision: 2.3 29-Jan-2026 10:42:58

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-09.d

Injection Date: 04-Feb-2026 14:19:38 Instrument ID: 30637

Lims ID: ICB

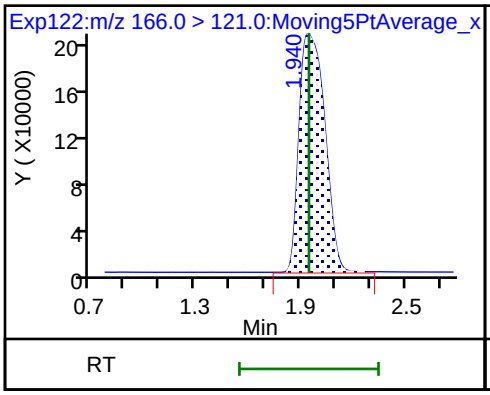
Client ID:

Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 1 Worklist Smp#: 9

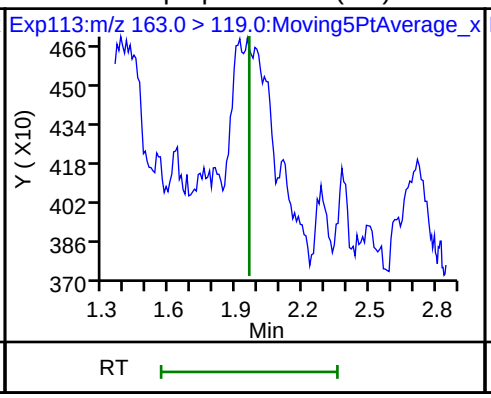
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

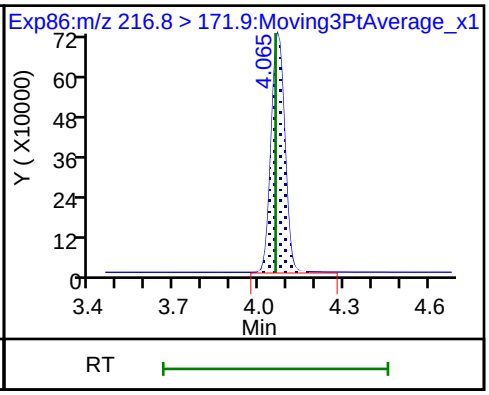
D 1 13C3PFPrA



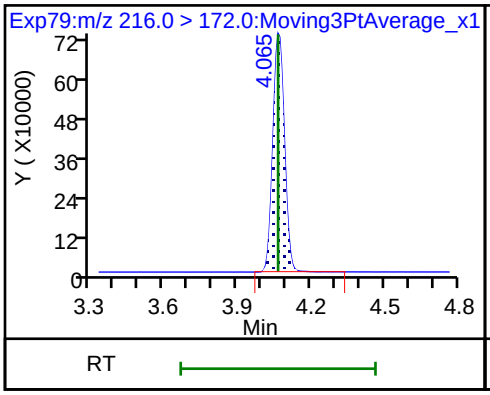
2 Perfluoropropionic acid (ND)



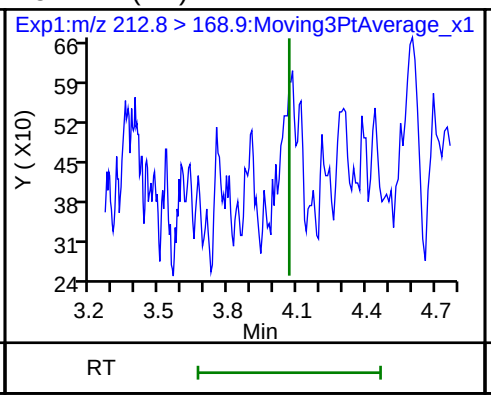
D 3 13C4-PFBA



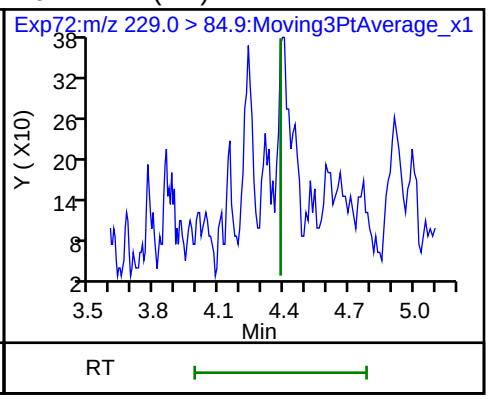
* 4 13C3PFBA



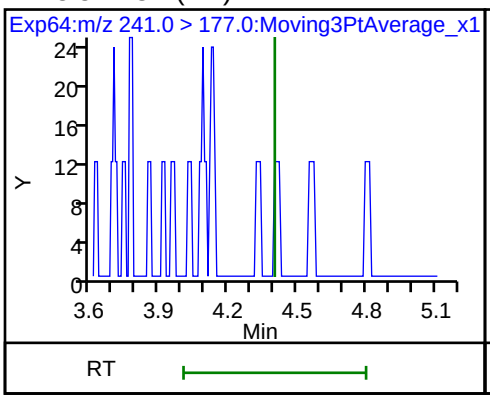
5 PFBA (ND)



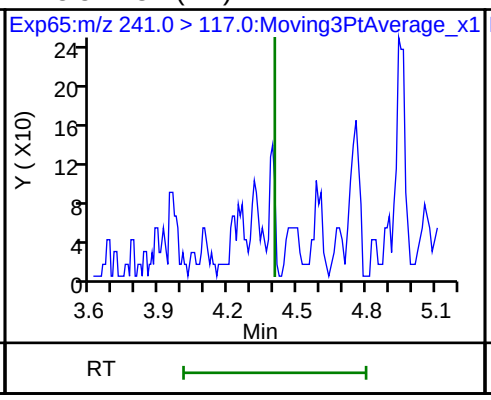
6 PFMPA (ND)



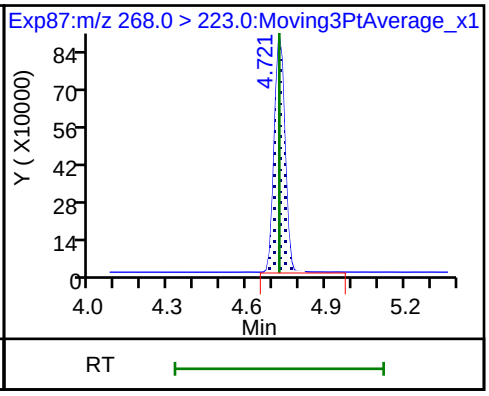
7 3:3 FTCA (ND)



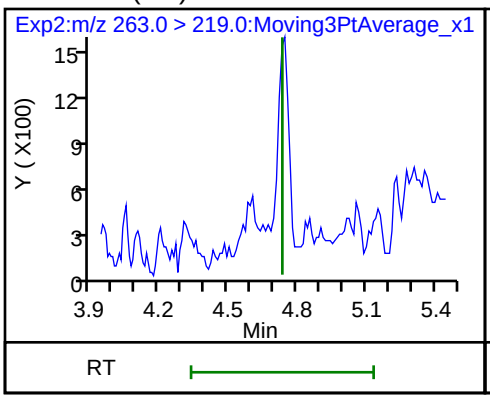
7 3:3 FTCA (ND)



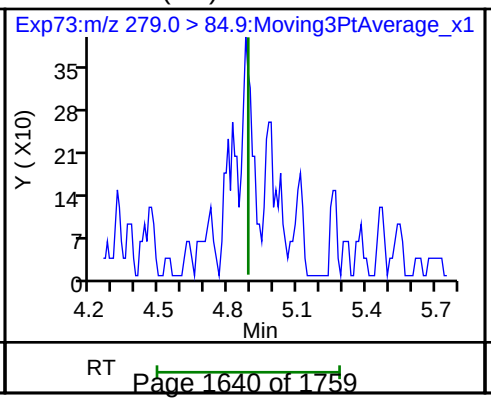
D 8 13C5 PFPeA



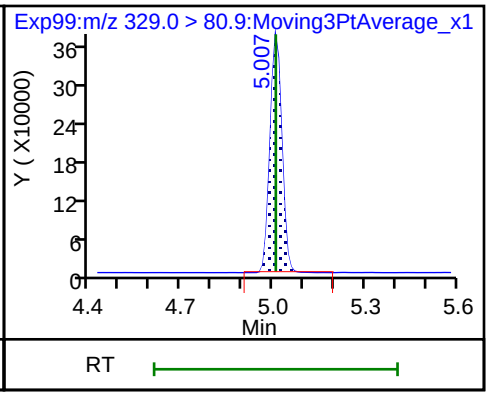
9 PFPA (ND)



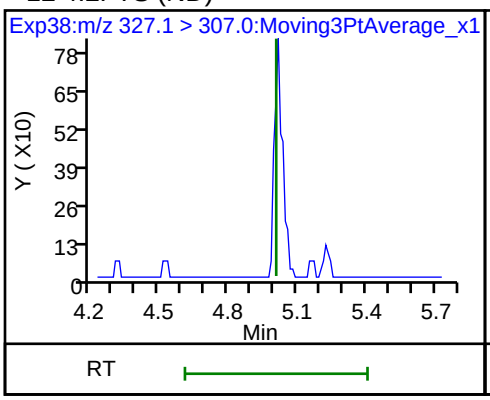
10 PFMBA (ND)



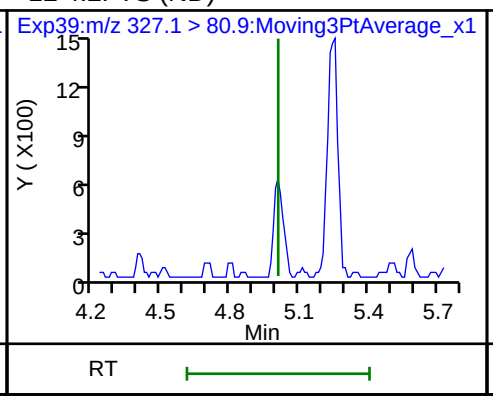
D 11 13C2-4:2FTS



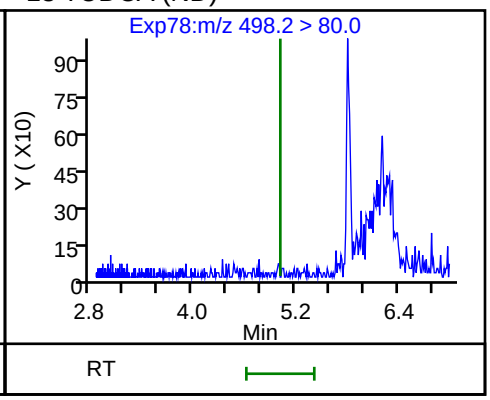
12 4:2FTS (ND)



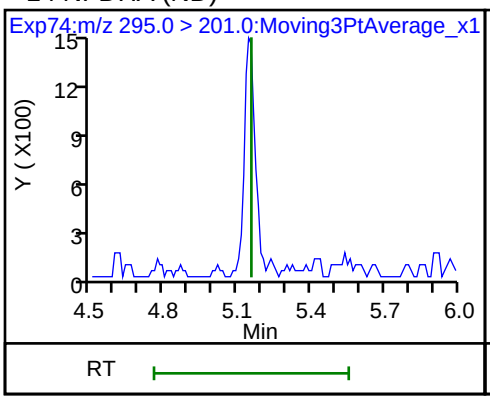
12 4:2FTS (ND)



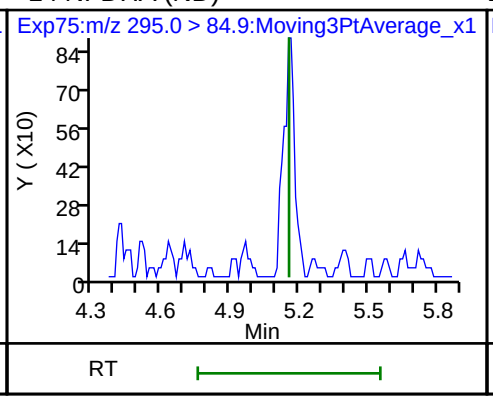
13 TUDCA (ND)



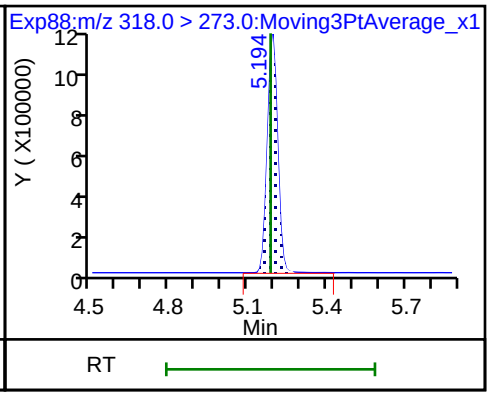
14 NFDHA (ND)



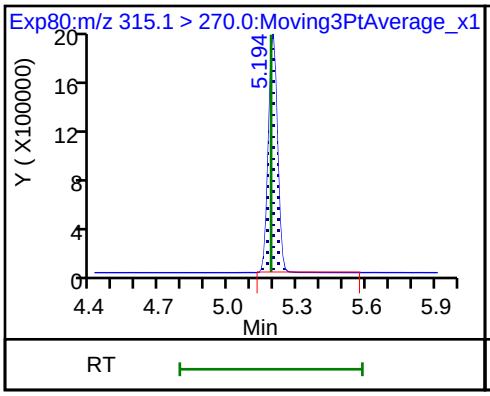
14 NFDHA (ND)



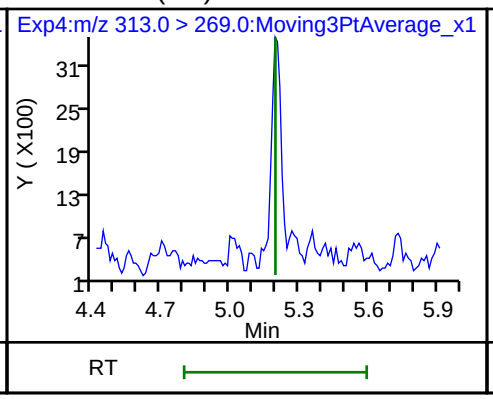
D 16 13C5 PFHxA



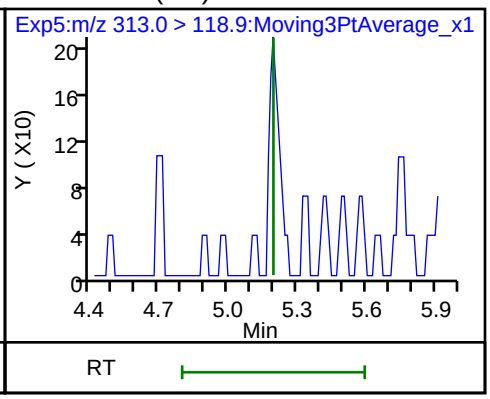
* 15 13C2 PFHxA



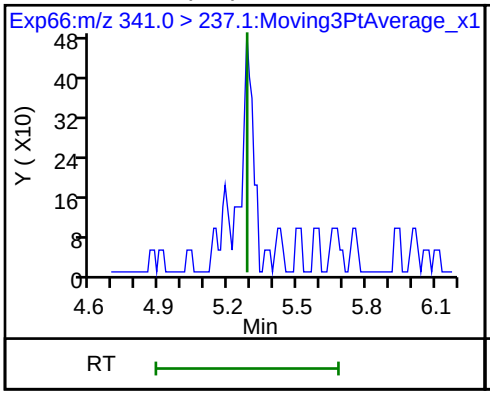
17 PFHxA (ND)



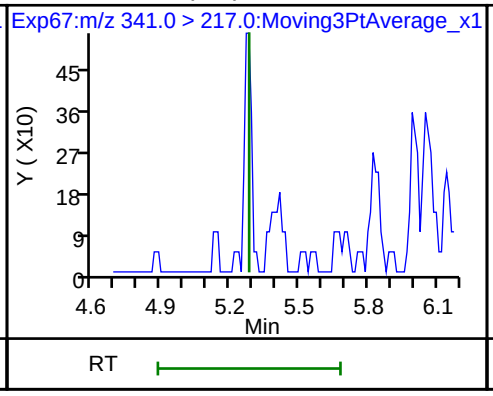
17 PFHxA (ND)



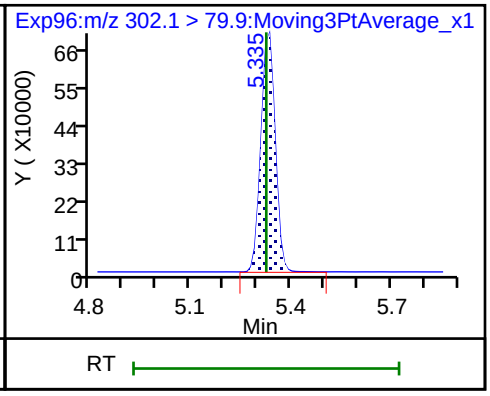
18 5:3 FTCA (ND)



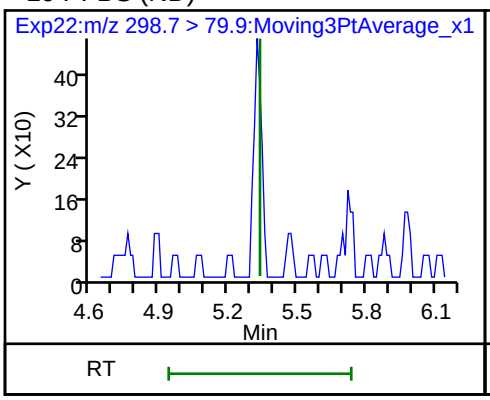
18 5:3 FTCA (ND)



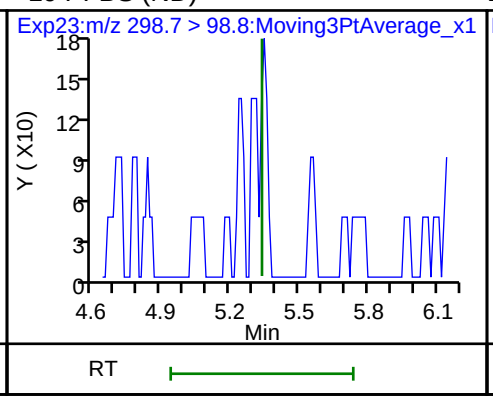
D 20 13C3 PFBS



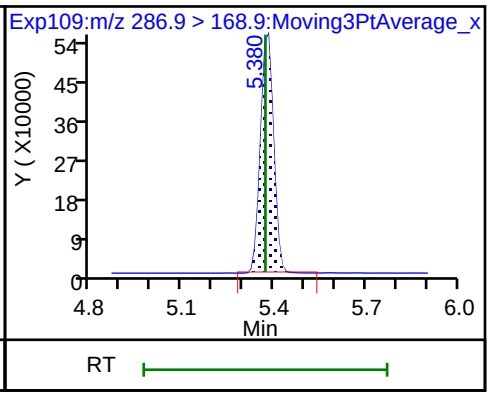
19 PFBS (ND)



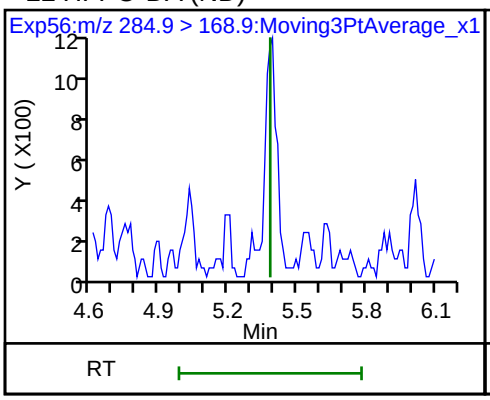
19 PFBS (ND)



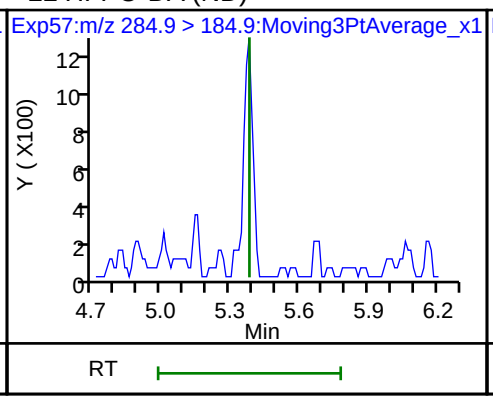
D 21 13C3 HFPO-DA



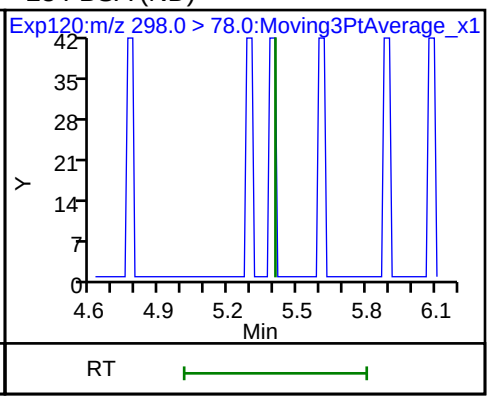
22 HFPO-DA (ND)



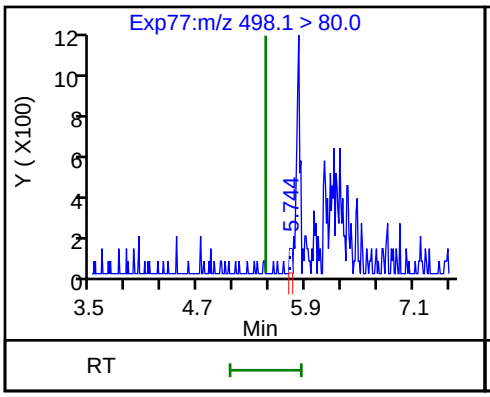
22 HFPO-DA (ND)



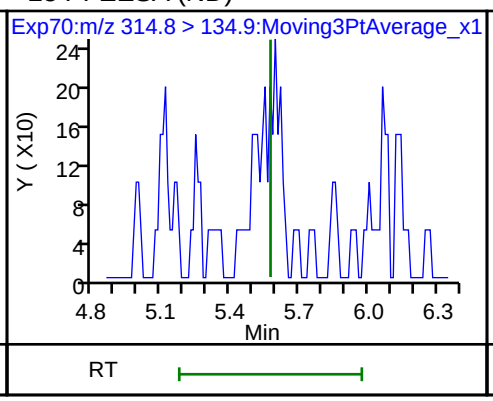
23 FBSA (ND)



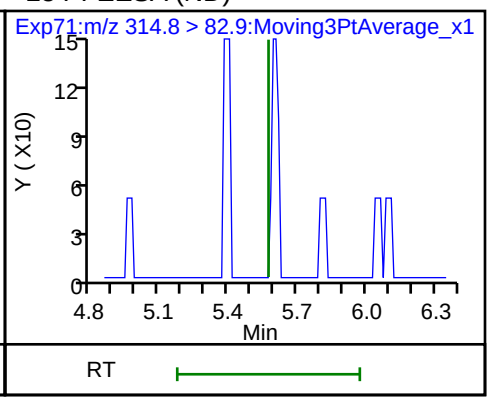
24 TCDCA



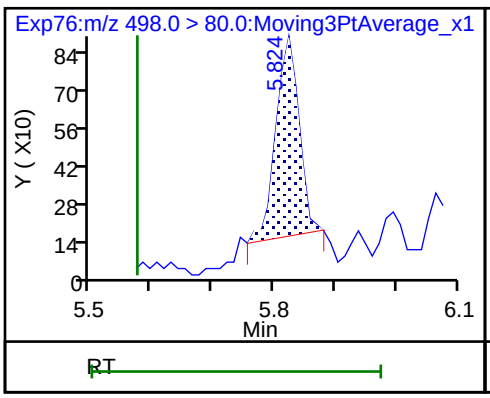
25 PFEESA (ND)



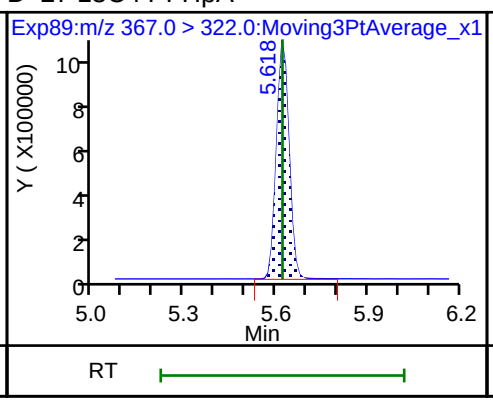
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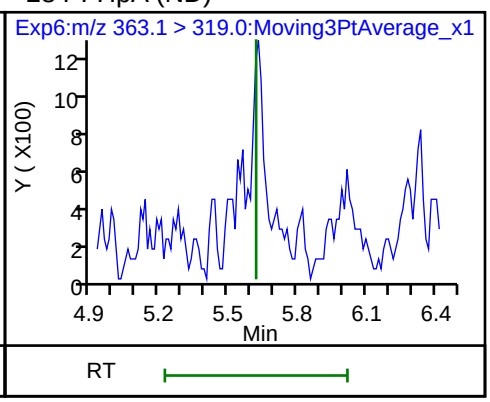
26 TDCA



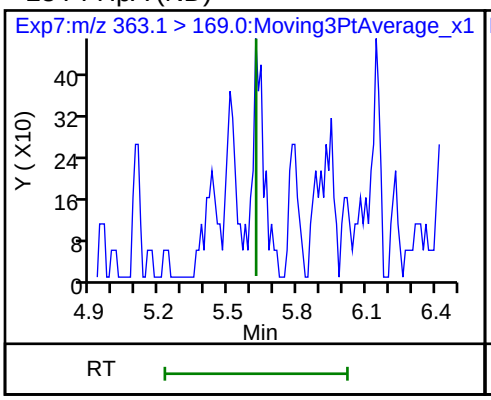
D 27 13C4 PFHpA



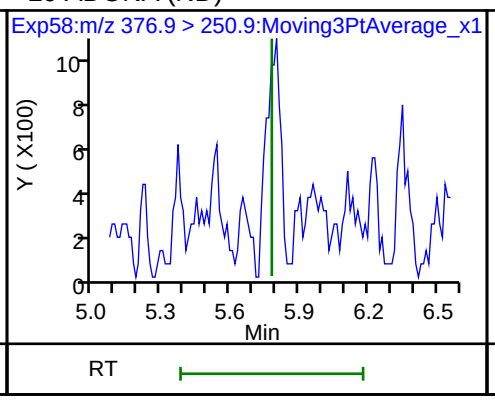
28 PFHpA (ND)



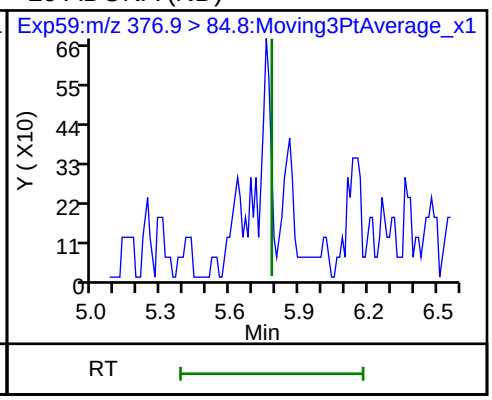
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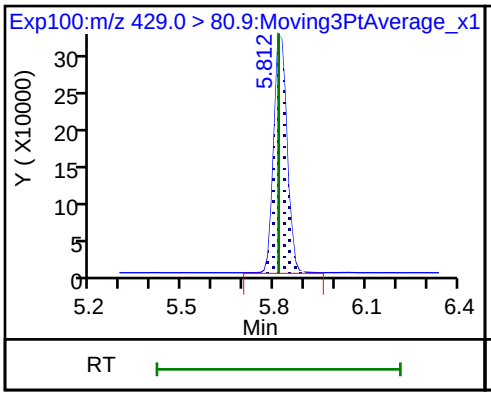
29 ADONA (ND)



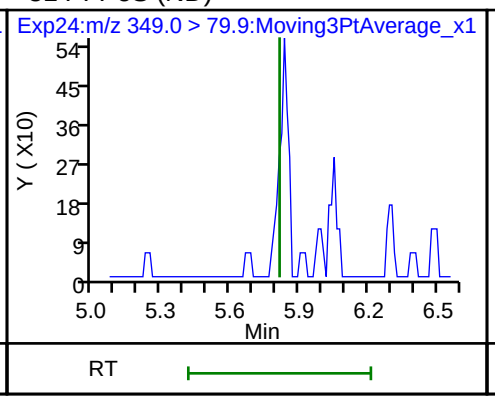
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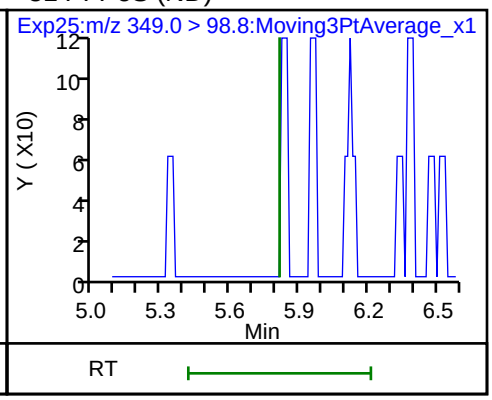
D 30 13C2-6:2FTS



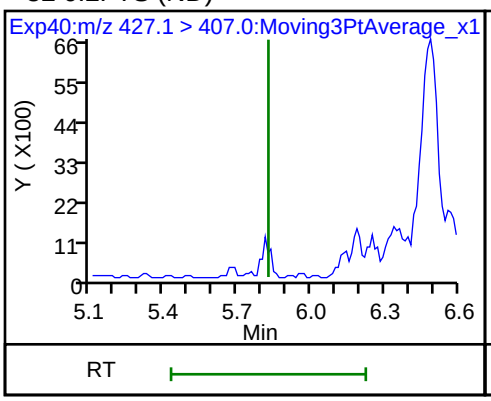
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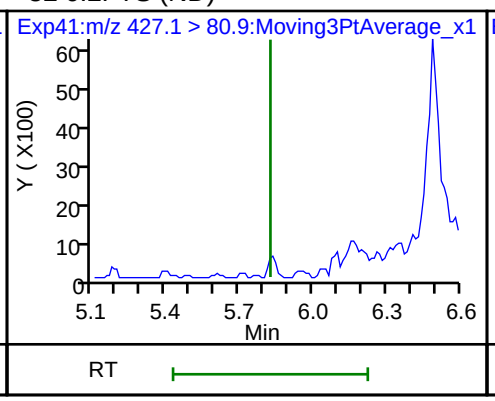
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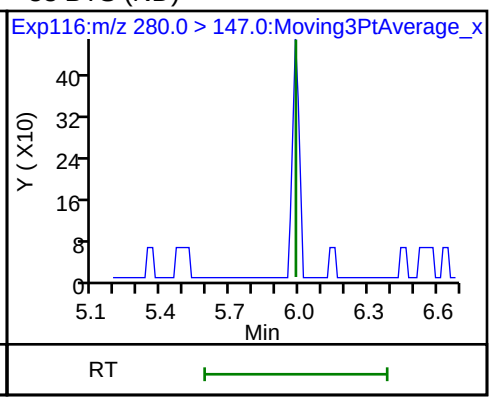
32 6:2FTS (ND)



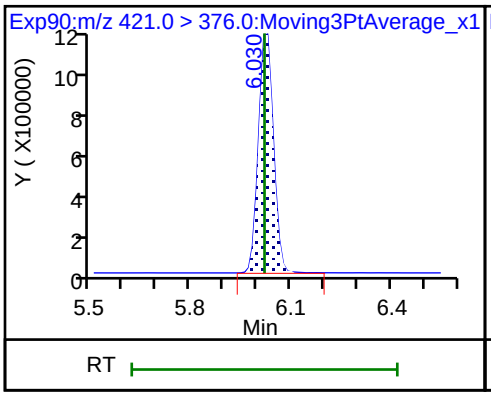
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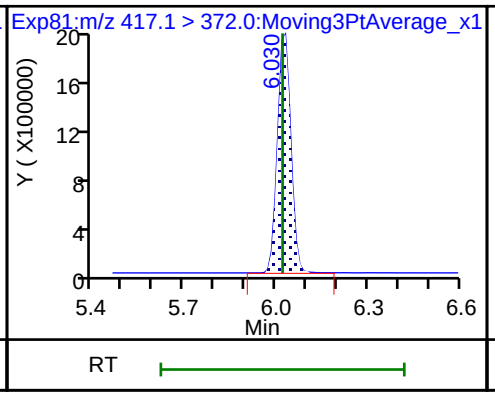
33 BTS (ND)



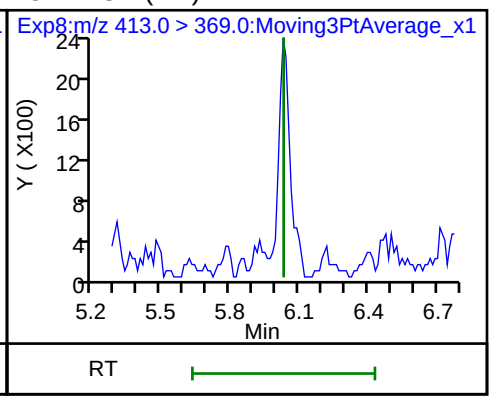
D 36 13C8 PFOA



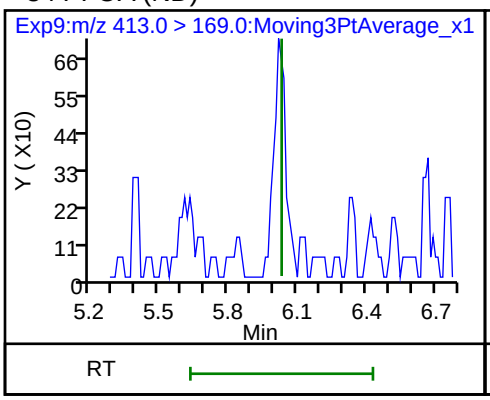
* 35 13C4 PFOA



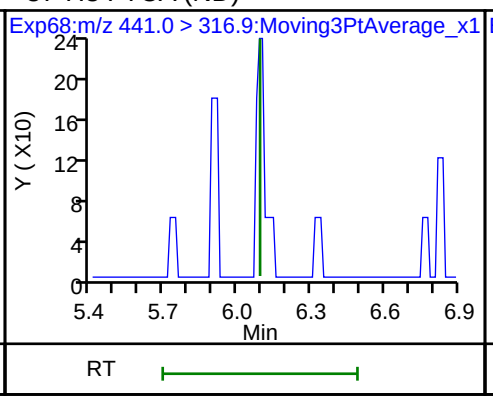
34 PFOA (ND)



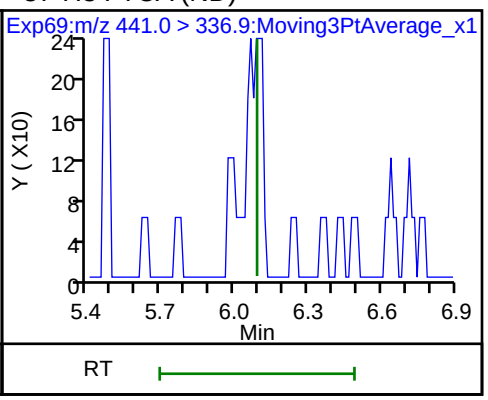
34 PFOA (ND)



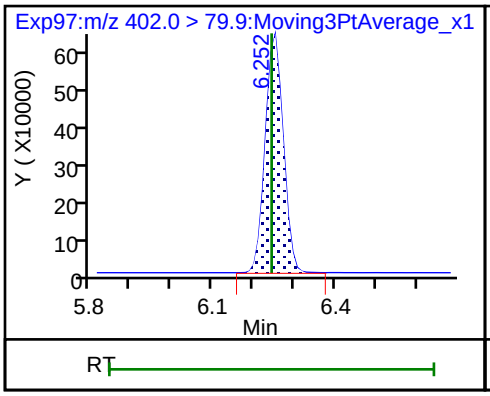
37 7:3 FTCA (ND)



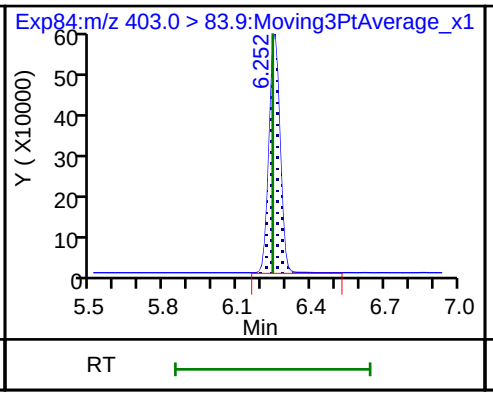
37 7:3 FTCA (ND)



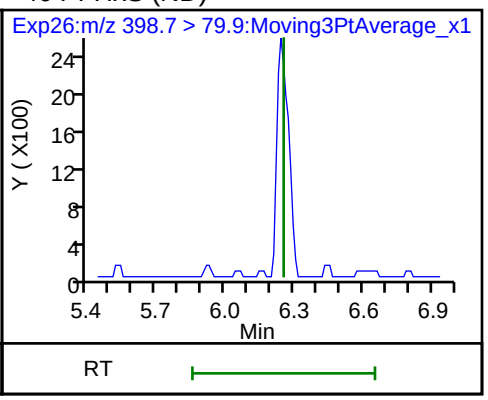
D 38 13C3 PFHxS



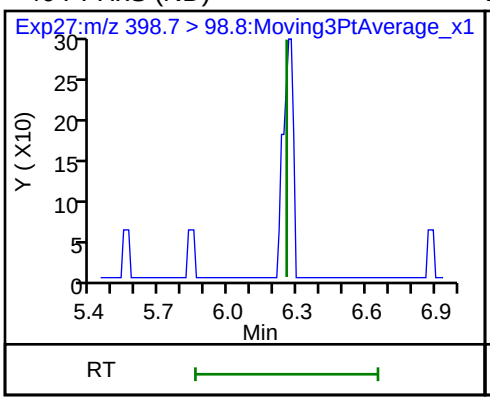
* 39 18O2 PFHxS



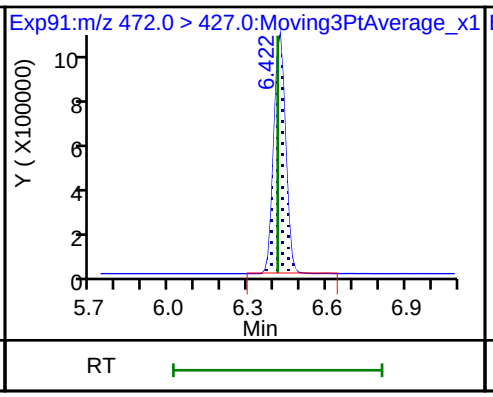
40 PFHxS (ND)



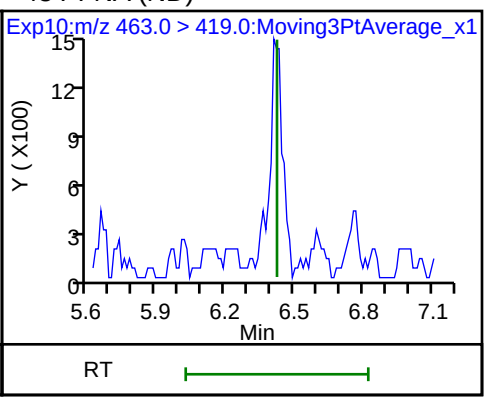
40 PFHxS (ND)



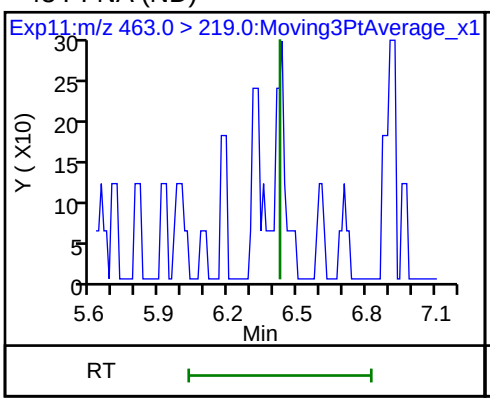
D 41 13C9 PFNA



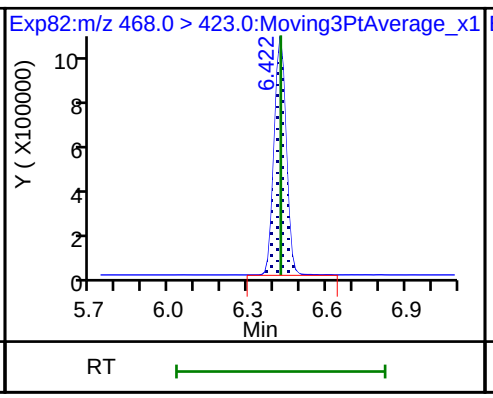
43 PFNA (ND)



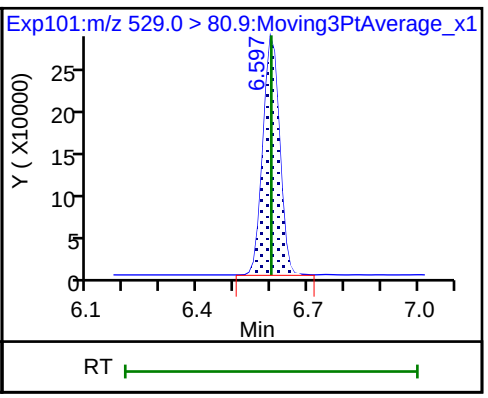
43 PFNA (ND)



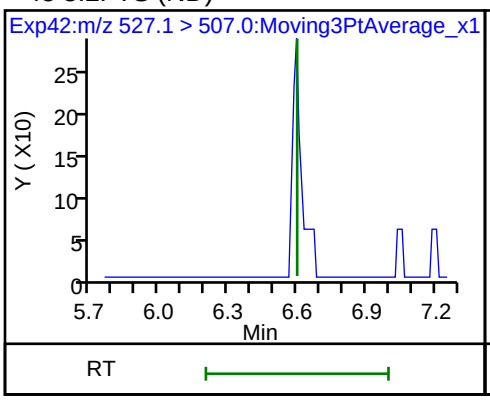
* 42 13C5 PFNA



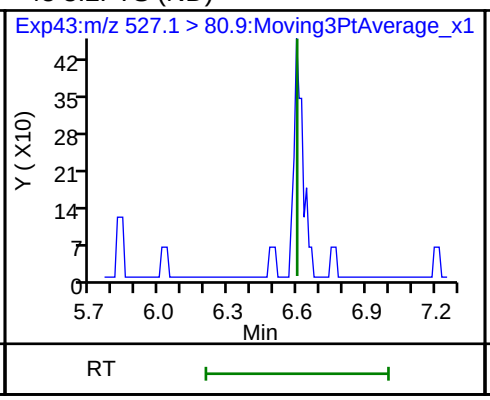
D 44 13C2-8:2FTS



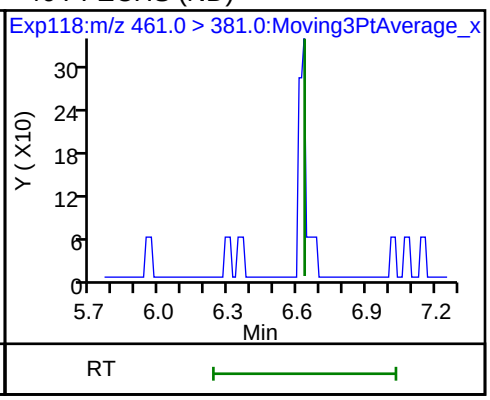
45 8:2FTS (ND)



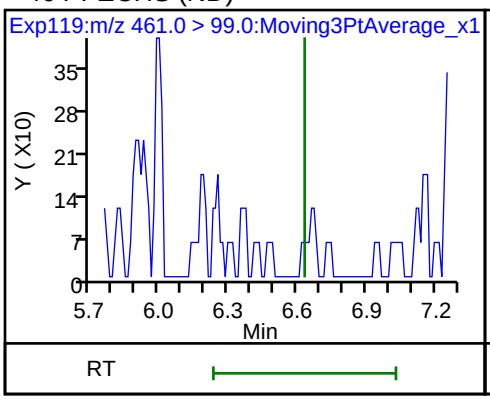
45 8:2FTS (ND)



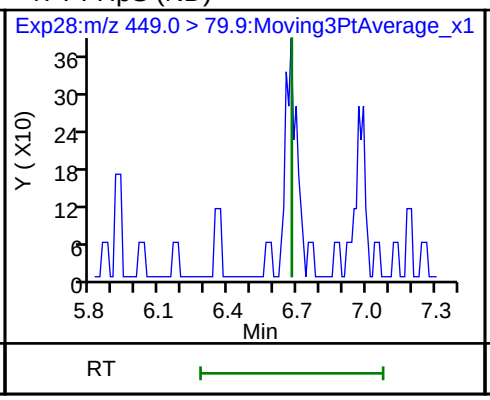
46 PFECHS (ND)



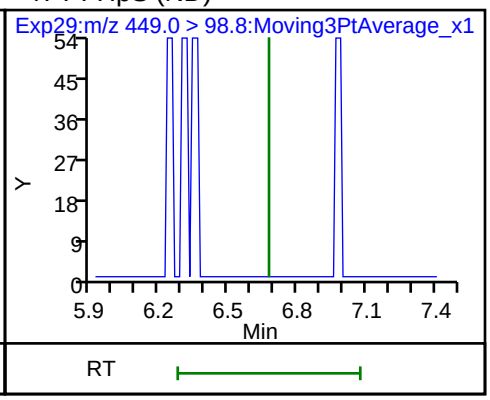
46 PFECHS (ND)



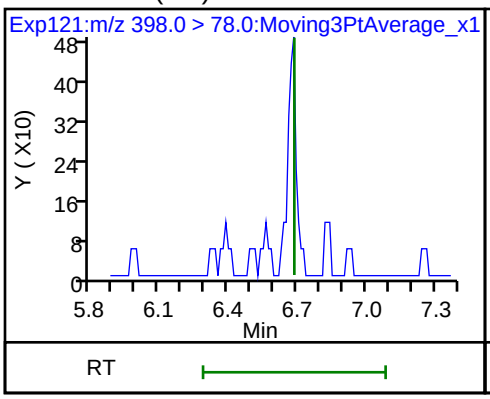
47 PFHpS (ND)



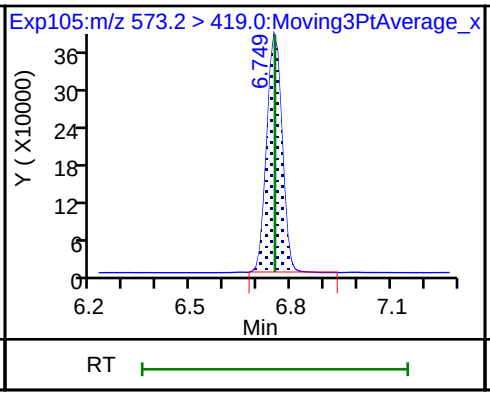
47 PFHpS (ND)



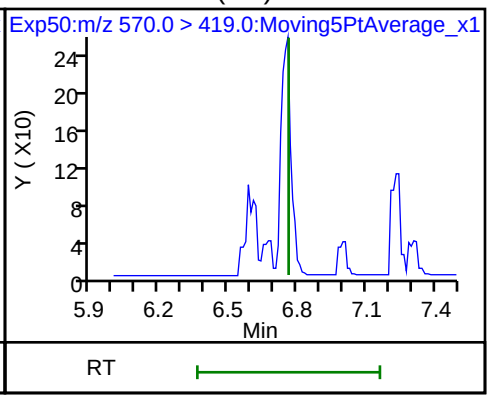
48 FHxSA (ND)



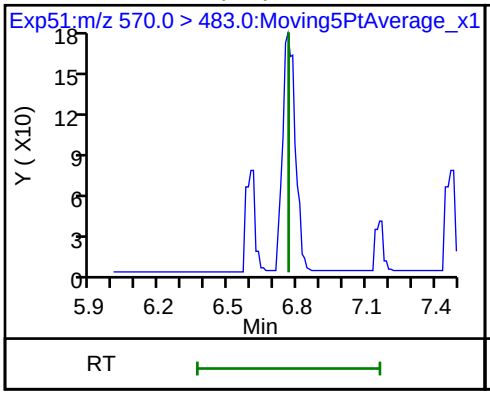
D 49 d3-NMeFOSAA



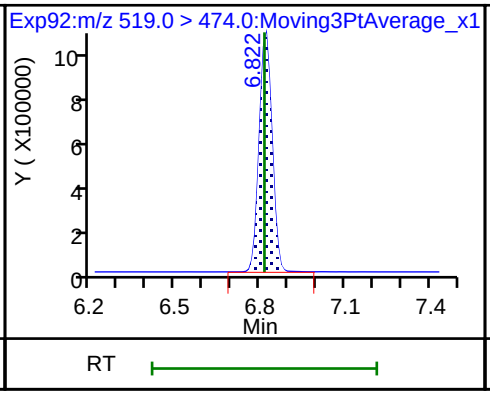
50 NMeFOSAA (ND)



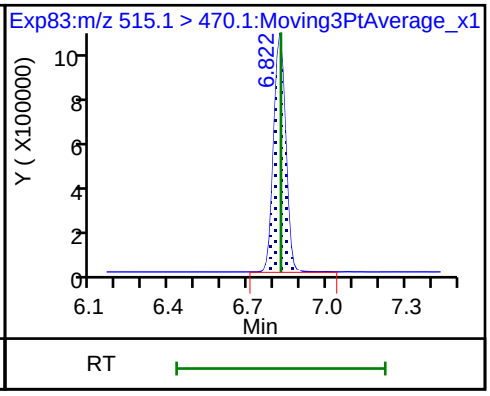
50 NMeFOSAA (ND)



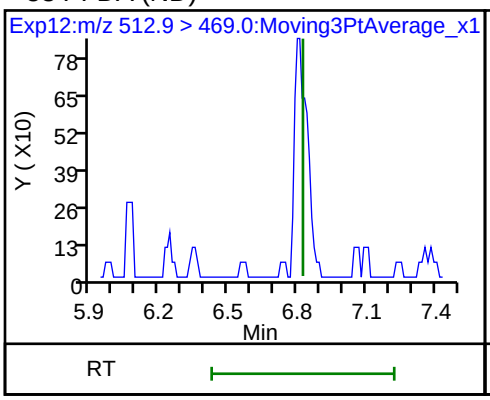
D 52 13C6 PFDA



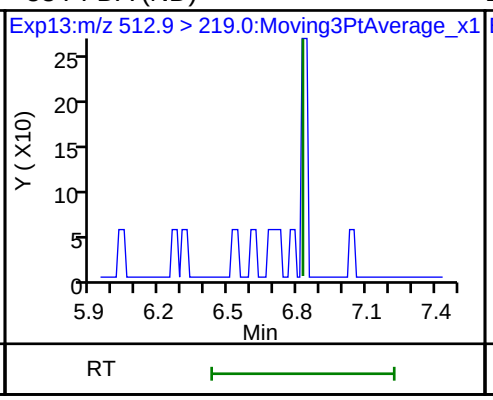
* 51 13C2 PFDA



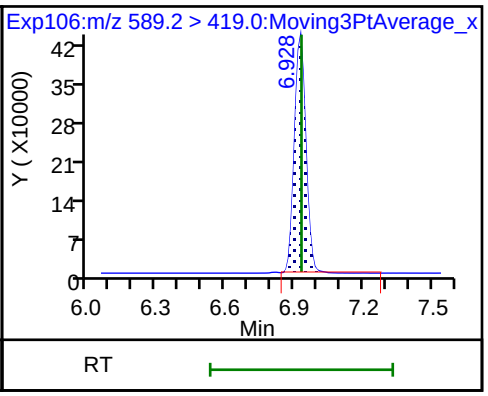
53 PFDA (ND)



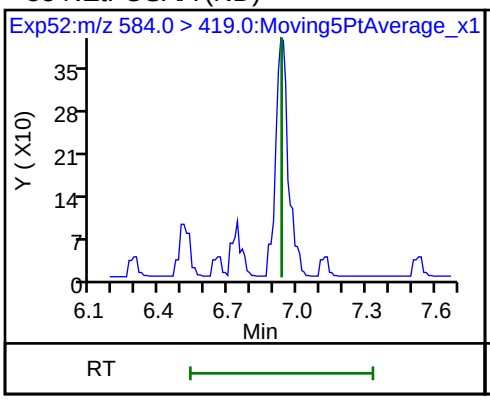
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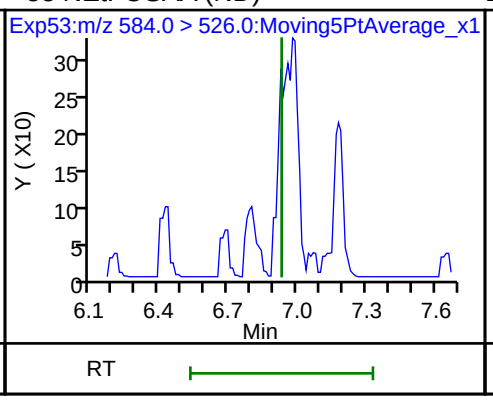
D 54 d5-NEtFOSAA



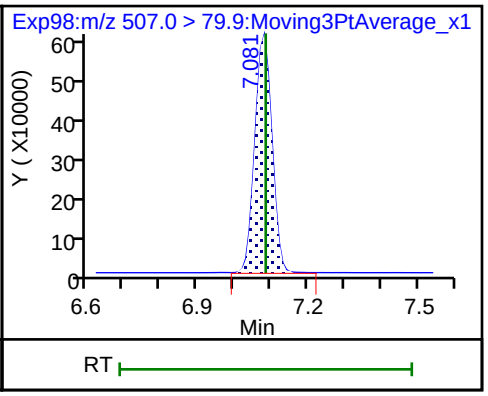
55 NEtFOSAA (ND)



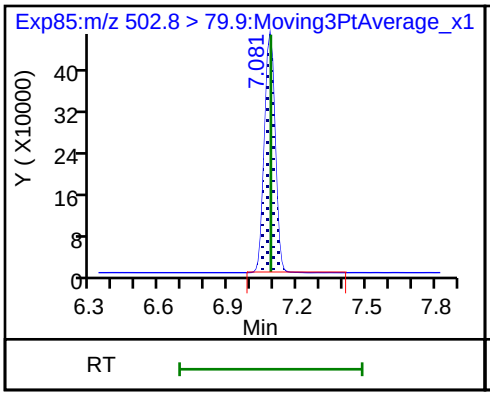
55 NEtFOSAA (ND)



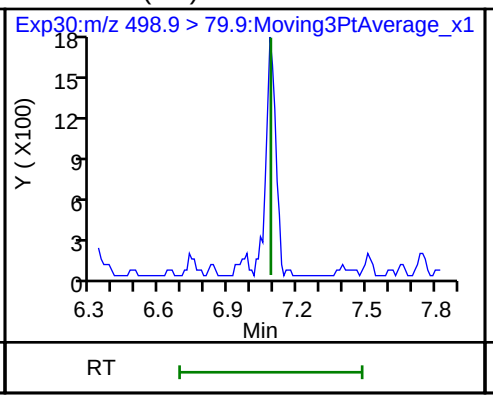
D 56 13C8 PFOS



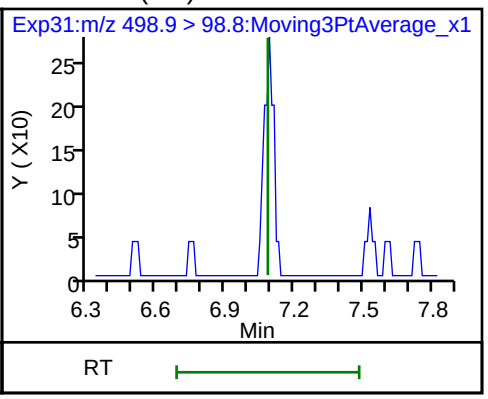
* 57 13C4 PFOS



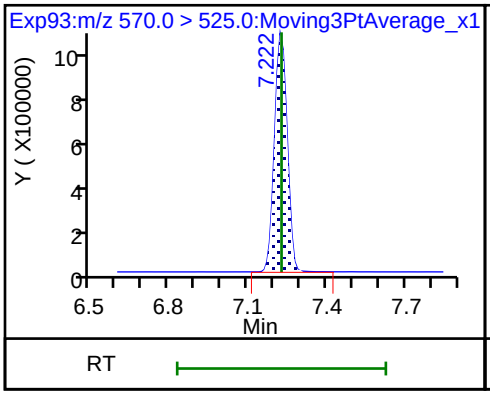
58 PFOS (ND)



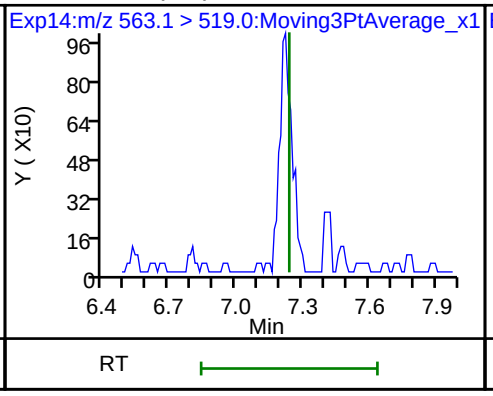
58 PFOS (ND)



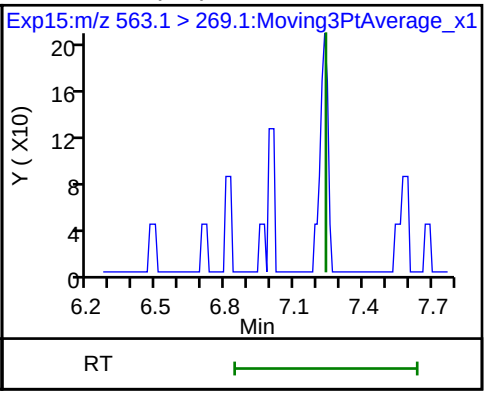
D 59 13C7 PFUnA



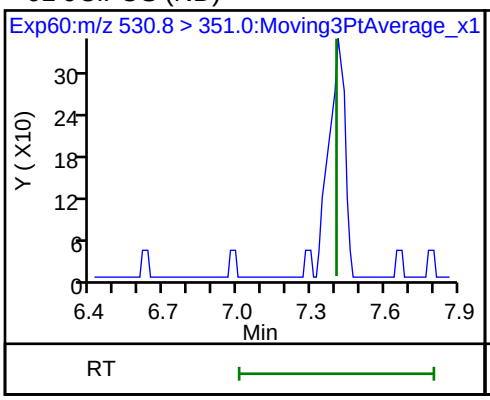
60 PFUnA (ND)



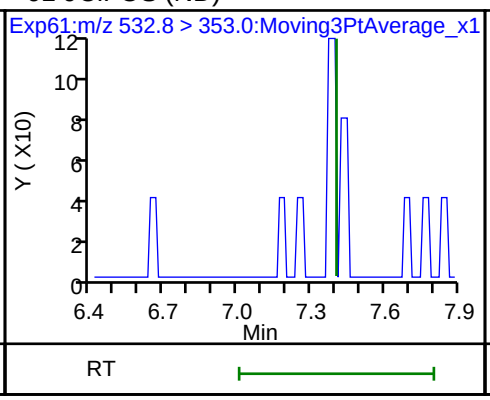
60 PFUnA (ND)



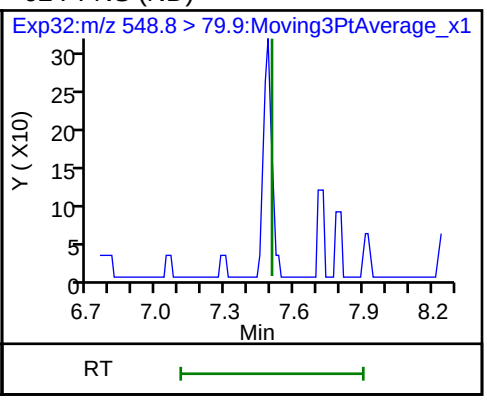
61 9ClFOS (ND)



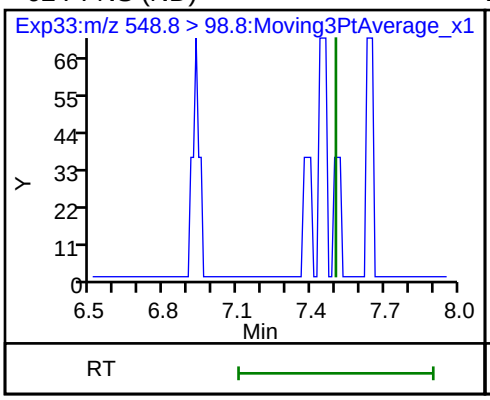
61 9ClFOS (ND)



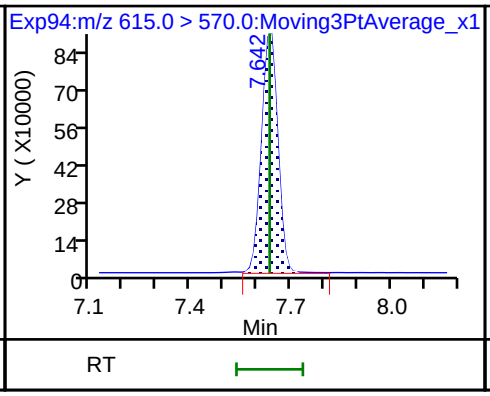
62 PFNS (ND)



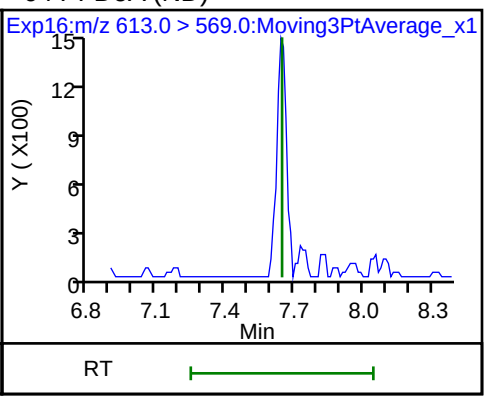
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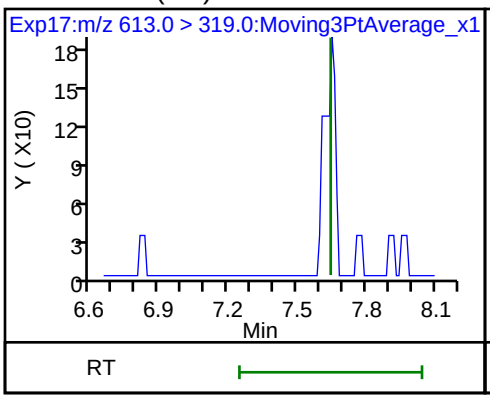
D 63 13C2 PFDoA



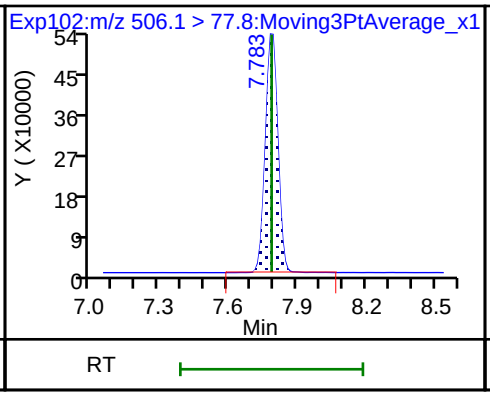
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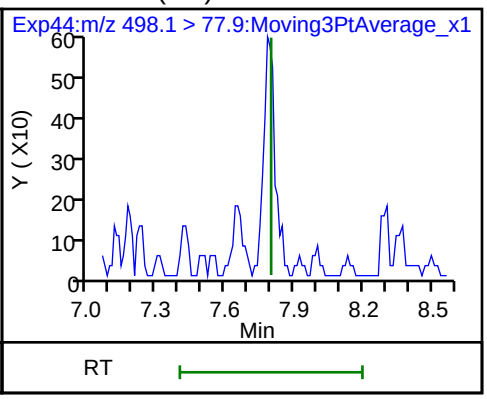
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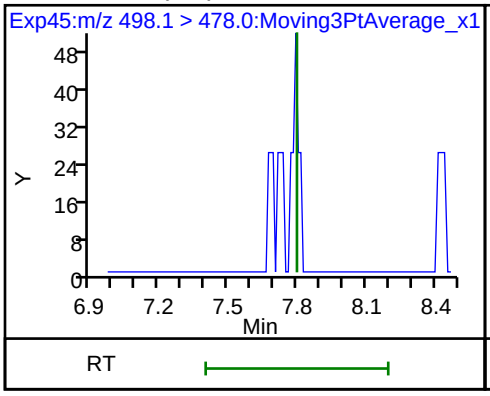
D 65 13C8 FOSA



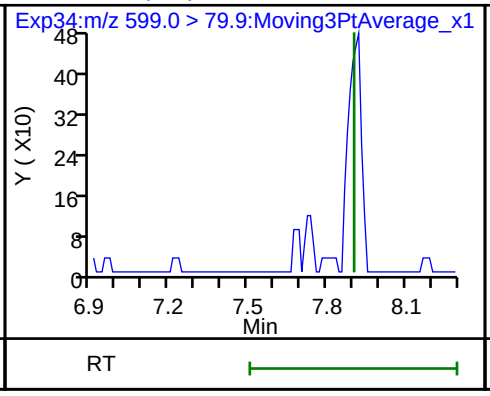
66 PFOSA (ND)



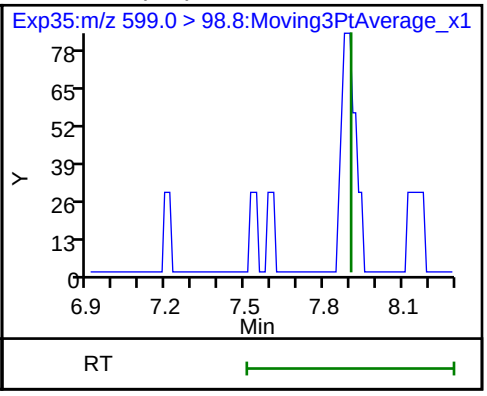
66 PFOSA (ND)



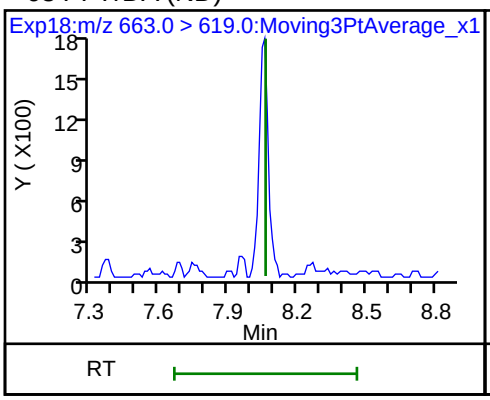
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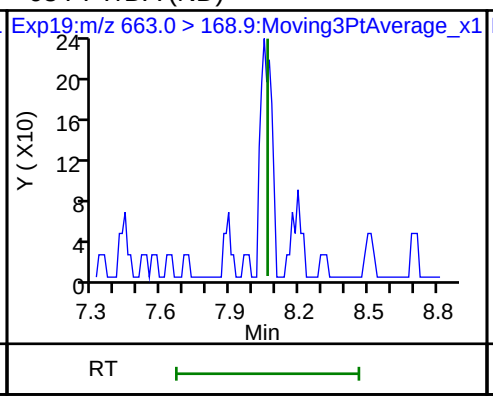
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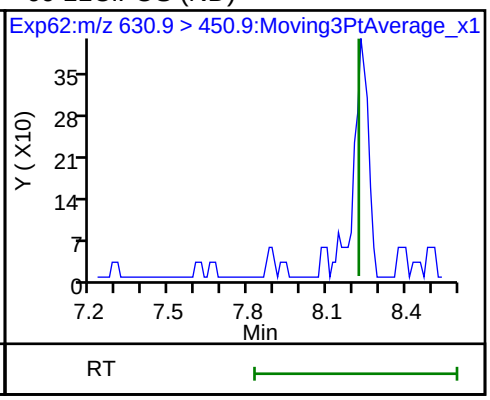
68 PFTrDA (ND)



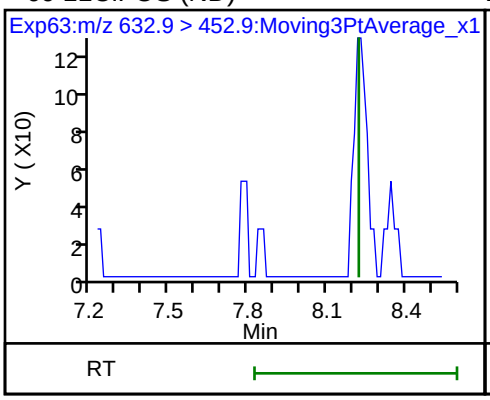
68 PFTrDA (ND)



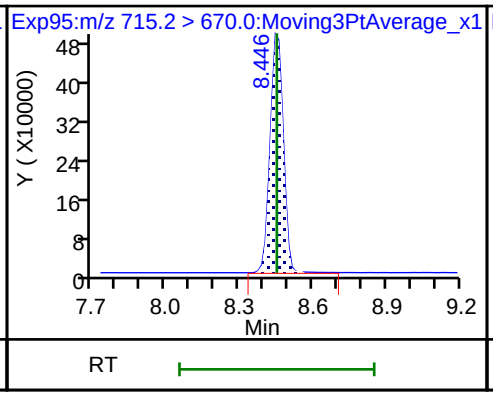
69 11ClFOS (ND)



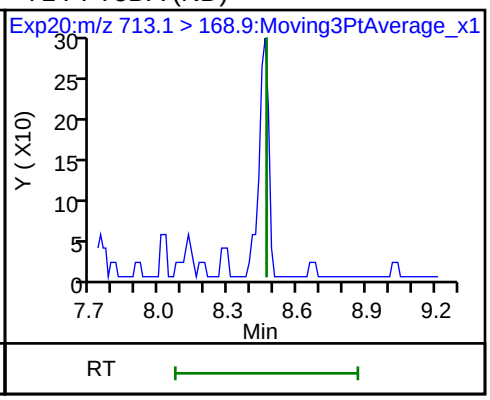
69 11ClFOS (ND)



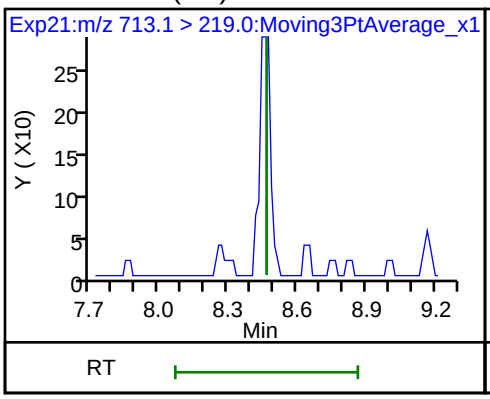
D 70 13C2 PFTeDA



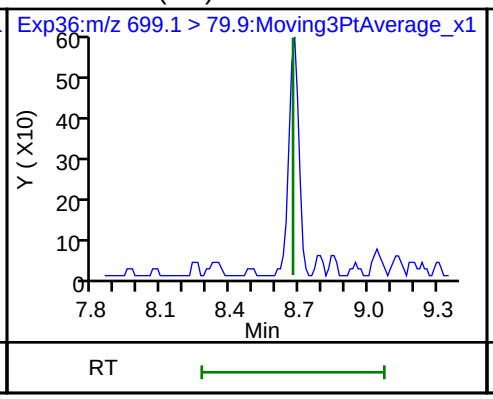
71 PFTeDA (ND)



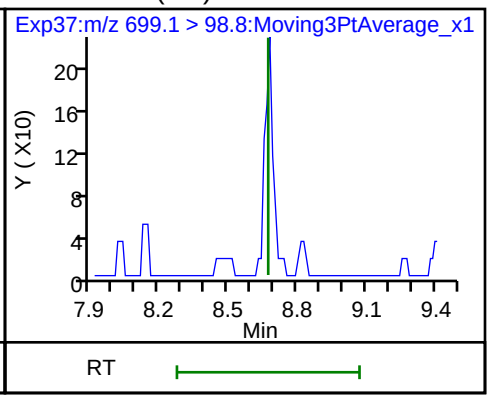
71 PFTeDA (ND)



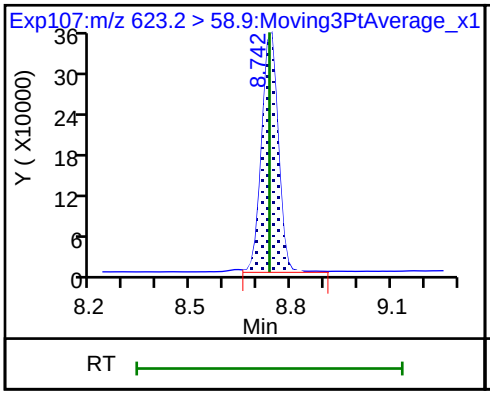
72 PFDoS (ND)



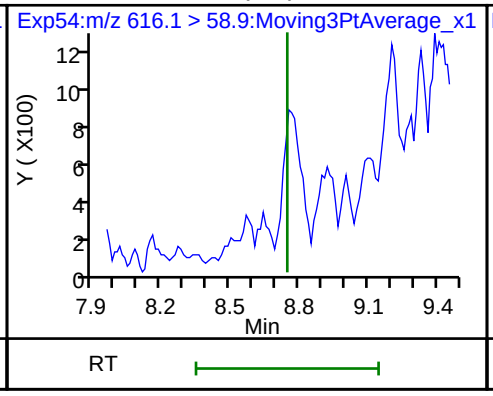
72 PFDoS (ND)



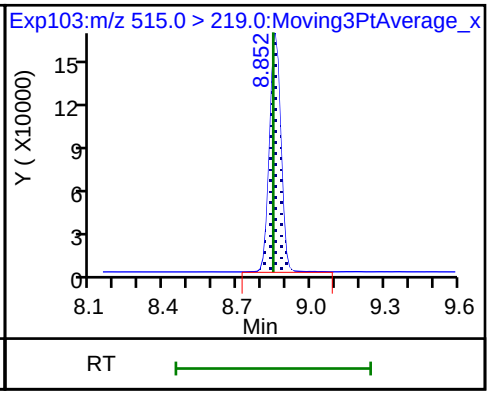
D 73 d7-N-Me-FOSE



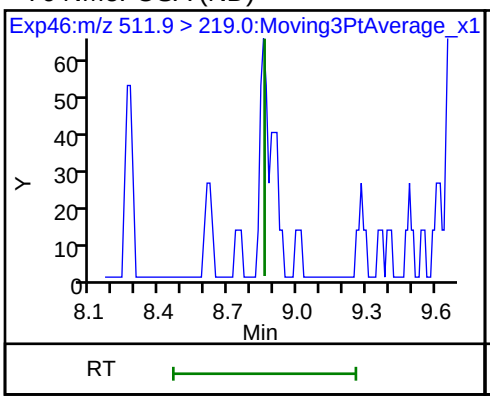
74 N-MeFOSE-M (ND)



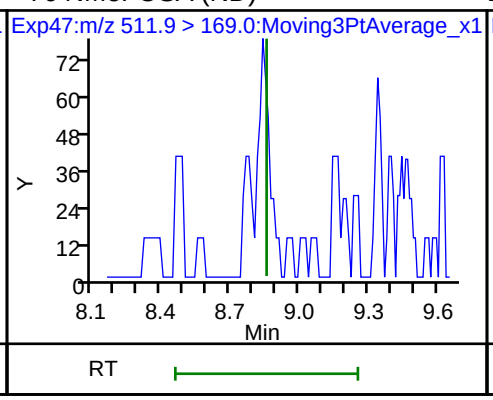
D 75 d3-NMePFOSA



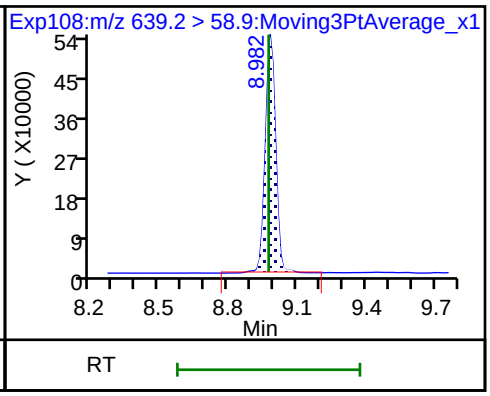
76 NMeFOSA (ND)



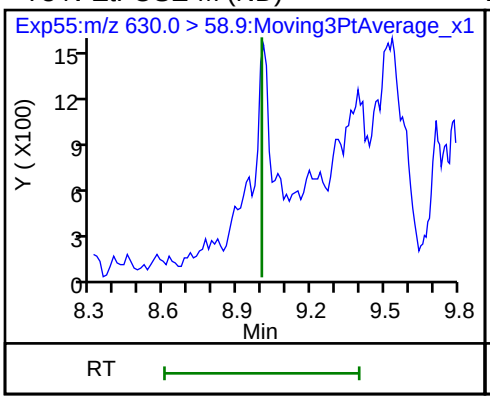
76 NMeFOSA (ND)



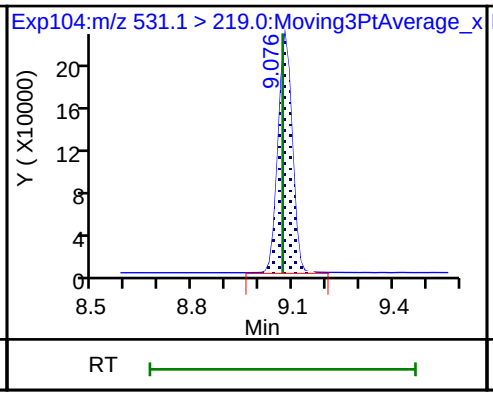
D 77 d9-N-EtFOSE



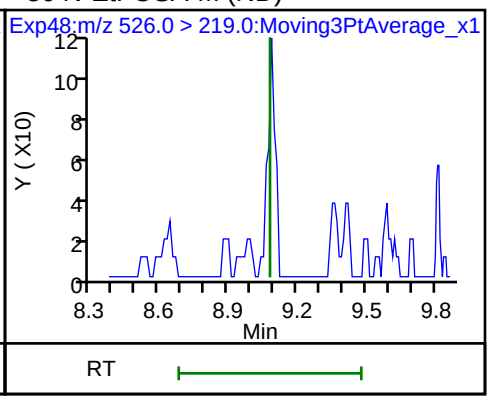
78 N-EtFOSE-M (ND)



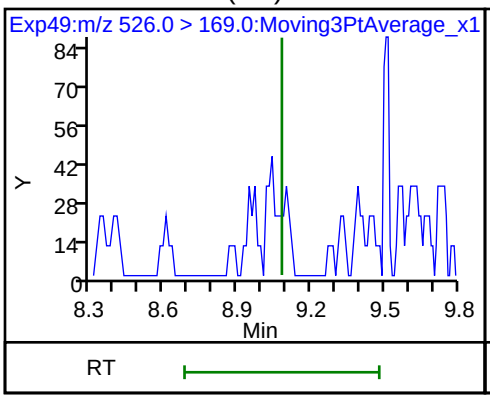
D 79 d5-NEtPFOSA



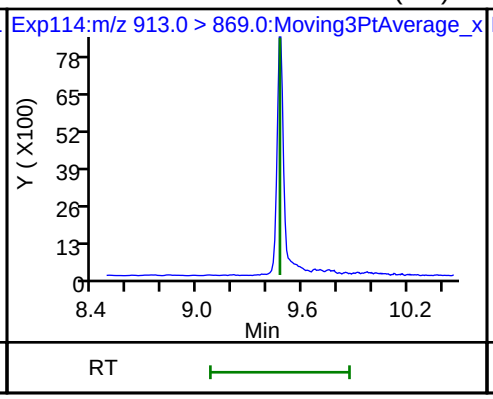
80 N-EtFOSA-M (ND)



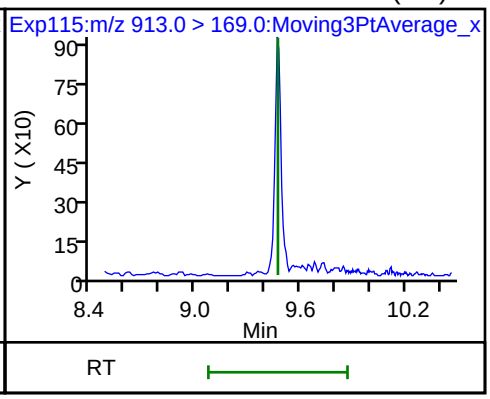
80 N-EtFOSA-M (ND)



81 Perfluorooctadecanoic acid (ND)



81 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: ICB 410-769782/9

Matrix: Water
Lab File ID: 26FEB16CAL-09.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/16/2026 22:10

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 769782
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.010	U	0.010	0.0040
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.010	U	0.010	0.0040
307-24-4	Perfluorohexanoic acid (PFHxA)	0.010	U	0.010	0.0040
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.010	U	0.010	0.0040
335-67-1	Perfluorooctanoic acid (PFOA)	0.010	U	0.010	0.0040
375-95-1	Perfluorononanoic acid (PFNA)	0.010	U	0.010	0.0040
335-76-2	Perfluorodecanoic acid (PFDA)	0.010	U	0.010	0.0040
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.010	U	0.010	0.0040
307-55-1	Perfluorododecanoic acid (PFDoA)	0.010	U	0.010	0.0040
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	0.010	U	0.010	0.0040
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.010	U	0.010	0.0040
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.010	U	0.010	0.0040
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	0.010	U	0.010	0.0040
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.010	U	0.010	0.0040
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	0.010	U	0.010	0.0040
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.010	U	0.010	0.0040
68259-12-1	Perfluorononanesulfonic acid (PFNS)	0.010	U	0.010	0.0040
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.010	U	0.010	0.0040
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	0.010	U	0.010	0.0040
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.010	U	0.010	0.0040
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.010	U	0.010	0.0040
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.010	U	0.010	0.0040
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.010	U	0.010	0.0040
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	0.010	U	0.010	0.0040
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: ICB 410-769782/9

Matrix: Water
Lab File ID: 26FEB16CAL-09.d

Analysis Method: 1633A
Date Collected:

Extraction Method:
Date Extracted:

Sample wt/vol: 0(mL)
Date Analyzed: 02/16/2026 22:10

Con. Extract Vol.:
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 769782
Units: ng/mL

Preparation Batch No.:
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.010	U	0.010	0.0040
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.010	U	0.010	0.0040
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	0.010	U	0.010	0.0040
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	0.010	U	0.010	0.0040
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.010	U	0.010	0.0040
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.010	U	0.010	0.0040
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.010	U	0.010	0.0040
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	0.010	U	0.010	0.0040
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.010	U	0.010	0.0040
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	0.010	U	0.010	0.0040
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	0.010	U	0.010	0.0040
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.010	U	0.010	0.0040
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	0.010	U	0.010	0.0040
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	0.010	U	0.010	0.0040
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	0.010	U	0.010	0.0040

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 410-769782/9

Matrix: Water Lab File ID: 26FEB16CAL-09.d

Analysis Method: 1633A Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 0(mL) Date Analyzed: 02/16/2026 22:10

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 769782 Units: ng/mL

Preparation Batch No.: Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	94.3		5-130
2283397-79-3	13C5 PFPeA	90.2		40-130
2328024-54-8	13C5 PFHxA	88.3		40-130
2328024-55-9	13C4 PFHpA	99.0		40-130
1350614-84-4	13C8 PFOA	102		40-130
2283397-80-6	13C9 PFNA	103		40-130
2328024-56-0	13C6 PFDA	99.6		40-130
STL02580	13C7 PFUnA	100		30-130
STL02116	13C2 PFTeDA	101		10-130
2708218-83-9	13C3 PFBS	99.2		40-135
2708218-85-1	13C3 PFHxS	95.0		40-130
2265893-05-6	13C8 PFOS	96.8		40-130
STL01056	13C8 FOSA	92.9		40-130
1400690-70-1	d3-NMeFOSAA	95.2		40-170
1265205-97-7	d5-NEtFOSAA	106		25-135
STL02395	13C2 4:2 FTS	97.1		40-200
STL02279	13C2 6:2 FTS	115		40-200
STL02280	13C2 8:2 FTS	98.6		40-300
STL02255	13C3 HFPO-DA	94.7		40-130
STL02277	d7-N-MeFOSE-M	89.8		10-130
STL02278	d9-N-EtFOSE-M	101		10-130
STL02704	d5-NEtPFOSA	88.0		10-130
STL02705	d3-NMePFOSA	90.7		10-130
960315-52-0	13C2 PFDoA	93.3		10-130

Report Date: 17-Feb-2026 07:51:17 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-09.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 16-Feb-2026 22:10:48 ALS Bottle#: 1 Worklist Smp#: 9
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: ICB
Misc. Info.: Plate: 1 Rack: 1 410-0175852-009
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 17-Feb-2026 07:50:25 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1648

First Level Reviewer: DX7G Date: 17-Feb-2026 07:43:46
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA 166.00 > 121.00	2.133	2.133	0.0	0.494	1003485	1.90		95.2	2016	
D 4 13C4-PFBA 216.80 > 171.90	4.310	4.309	0.001	0.998	1409819	1.89		94.3	15235	
* 5 13C3PFBA 216.00 > 172.00	4.317	4.309	0.008		1520076	2.00			3311	
D 8 13C5 PFPeA 268.30 > 223.00	4.964	4.959	0.005	0.915	1499196	1.80		90.2	9085	
D 11 13C2-4:2FTS 329.10 > 80.90	5.239	5.235	0.004	0.804	968949	4.56		97.1	5913	
* 16 13C2 PFHxA 315.10 > 270.00	5.428	5.424	0.004		4684401	5.00			5593	
D 15 13C5 PFHxA 318.00 > 273.00	5.428	5.424	0.004	1.000	1802159	1.77		88.3	4621	
D 19 13C3 PFBS 302.10 > 79.90	5.577	5.561	0.016	0.856	1878850	1.85		99.2	7158	
D 22 13C3 HFPO-DA 286.90 > 168.90	5.623	5.607	0.016	1.036	1258593	1.89		94.7	5104	
24 TCDCA 498.10 > 80.00	6.063	5.675	0.388	0.822	1837	NR			3.4	
25 TDCA 498.00 > 80.00	6.053	5.795	0.258	0.820	2534	NR			3.9	
D 28 13C4 PFHpA 367.10 > 322.00	5.856	5.851	0.005	1.079	1976871	1.98		99.0	5885	
D 32 13C2-6:2FTS 429.10 > 80.90	6.063	6.059	0.004	0.930	966861	5.46		115	3414	
* 34 13C4 PFOA 417.10 > 372.00	6.282	6.269	0.013		6143660	5.00			4297	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.273	6.269	0.004	0.998	2391272	2.03		102	4875	
D 38 13C3 PFHxS										
402.10 > 79.90	6.517	6.512	0.005	1.000	1549803	1.80		95.0	4435	
* 39 18O2 PFHxS										
403.00 > 83.90	6.517	6.512	0.005		1493947	1.90			3172	
D 41 13C9 PFNA										
472.10 > 427.00	6.699	6.684	0.015	1.000	1910240	2.05		103	3438	
* 42 13C5 PFNA										
468.00 > 423.00	6.699	6.684	0.015		1862856	2.00			3562	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.882	6.868	0.014	1.056	862821	4.73		98.6	1701	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.051	7.037	0.014	0.956	1633343	4.76		95.2	3638	
* 51 13C2 PFDA										
515.10 > 470.10	7.110	7.107	0.004		1892522	2.00			4534	
D 52 13C6 PFDA										
519.10 > 474.10	7.110	7.107	0.004	1.000	1875382	1.99		99.6	4638	
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.232	7.219	0.013	0.980	1669762	5.32		106	3463	
* 57 13C4 PFOS										
502.80 > 79.90	7.377	7.373	0.004		1373559	1.92			6160	
D 56 13C8 PFOS										
507.10 > 79.90	7.377	7.373	0.004	1.000	1477452	1.85		96.8	6317	
D 59 13C7 PFUnA										
570.00 > 525.10	7.528	7.506	0.022	1.059	1974090	2.01		100	4433	
D 81 PFDoA										
615.10 > 570.00	7.939	7.935	0.004	1.116	1835505	1.87		93.3	2361	
D 65 13C8 FOSA										
506.10 > 77.80	8.169	8.155	0.014	1.107	1581627	1.86		92.9	3940	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.724	8.722	0.002	1.227	1826493	2.02		101	3462	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.961	8.945	0.016	1.215	252906	4.49		89.8	735	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.058	9.057	0.001	1.228	447802	1.81		90.7	2097	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.178	9.176	0.002	1.244	323805	5.04		101	741	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.254	9.252	0.002	1.254	530084	1.76		88.0	2223	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

1633_125_IS_V_00511	Amount Added: 50.00	Units: uL
1633_125_SS_00162	Amount Added: 5.00	Units: uL

Report Date: 17-Feb-2026 07:51:17 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-09.d

Injection Date: 16-Feb-2026 22:10:48 Instrument ID: 30577

Lims ID: ICB

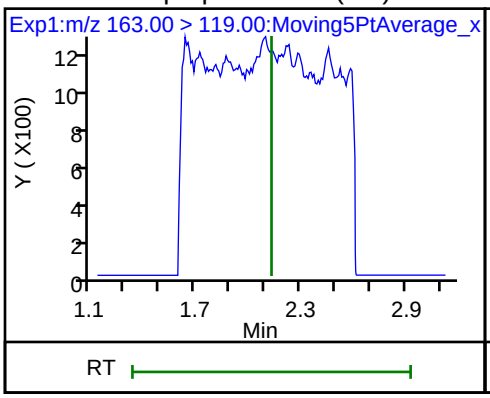
Client ID:

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 1 Worklist Smp#: 9

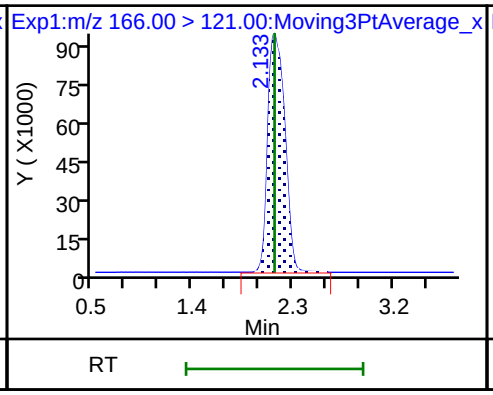
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

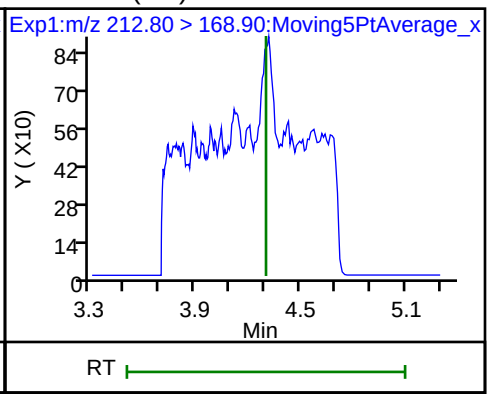
2 Perfluoropropionic acid (ND)



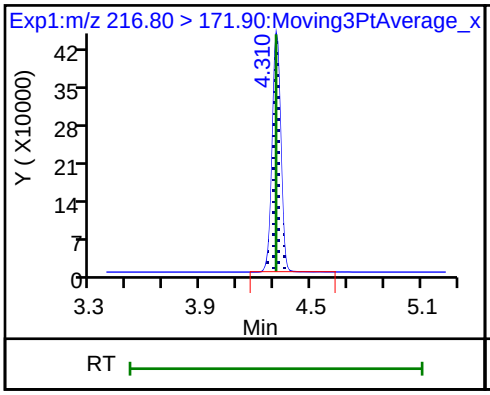
D 1 13C3PFPrA



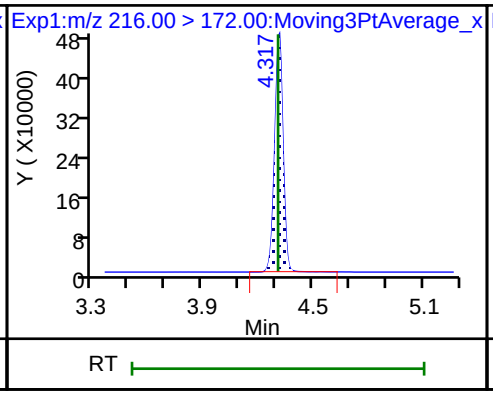
3 PFBA (ND)



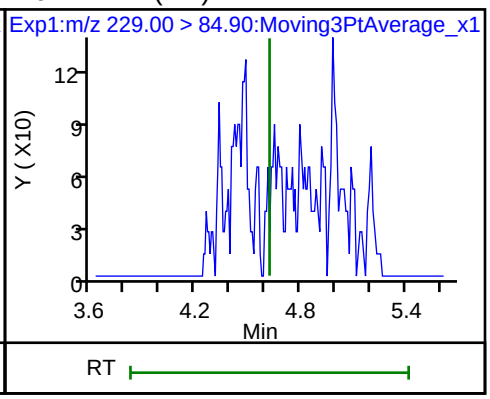
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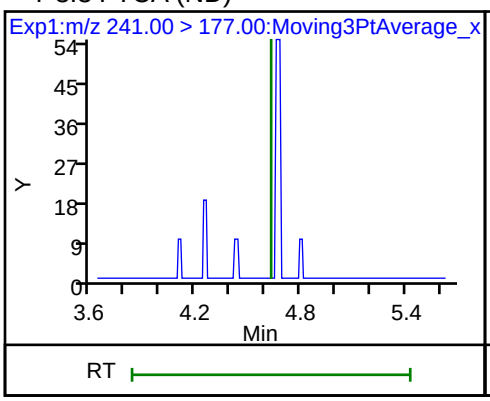
* 5 13C3PFBA



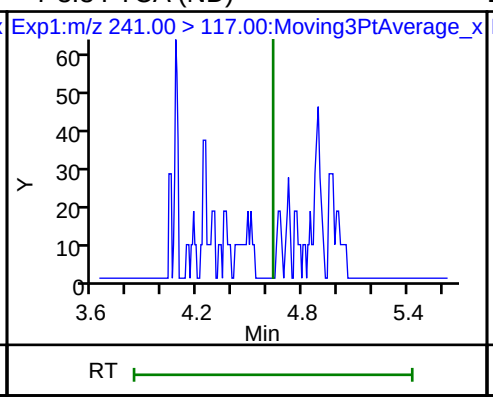
6 PFMPA (ND)



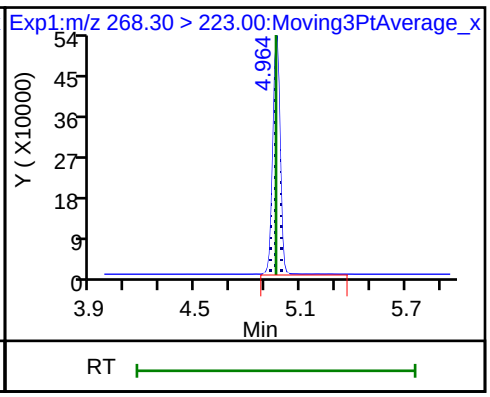
7 3:3 FTCA (ND)



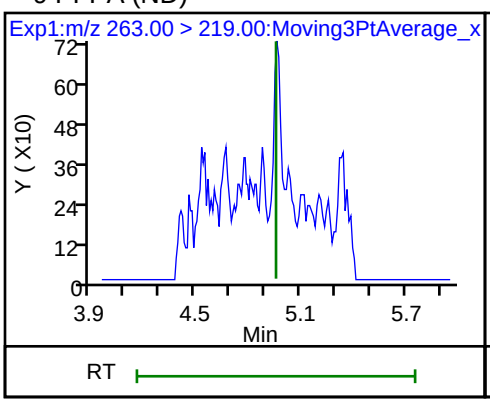
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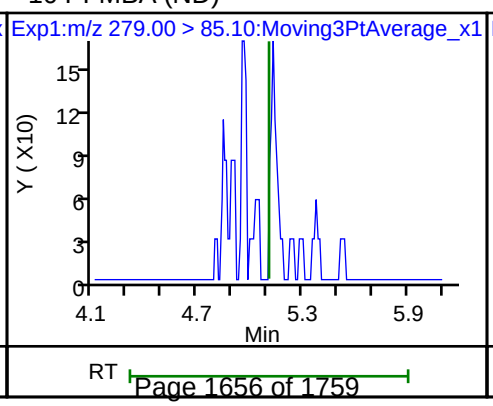
D 8 13C5 PFPeA



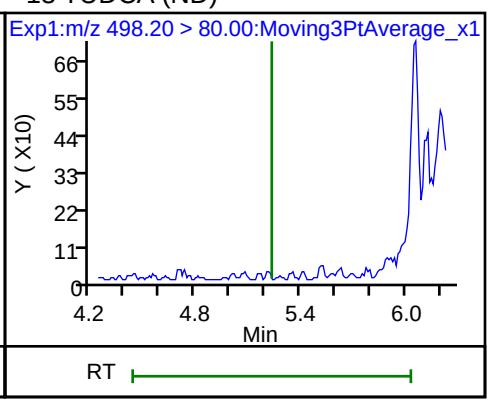
9 PFPA (ND)



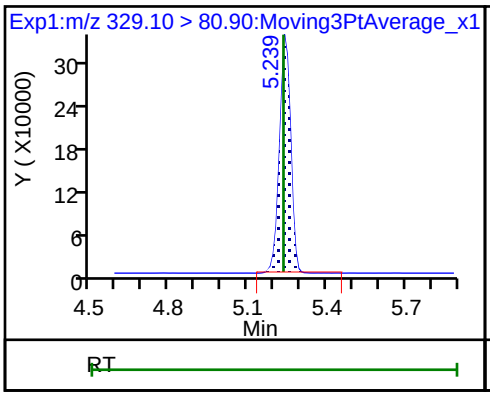
10 PFMBA (ND)



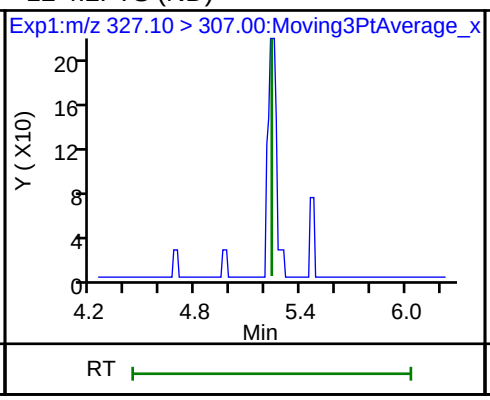
13 TUDCA (ND)



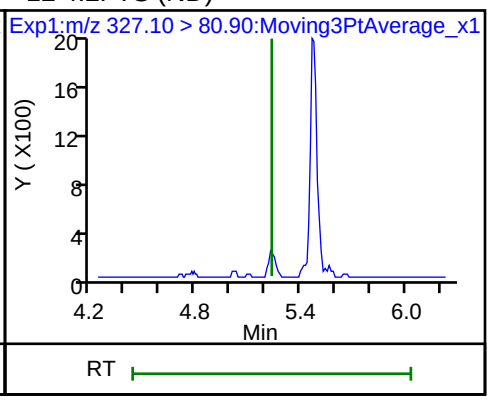
D 11 13C2-4:2FTS



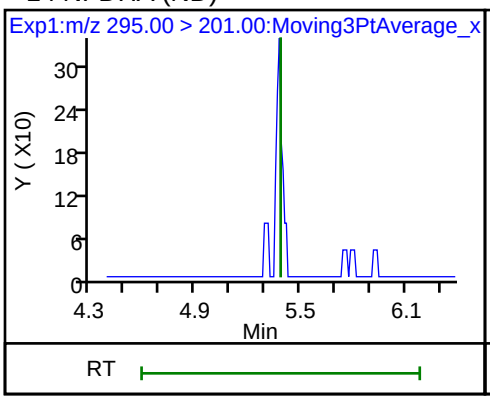
12 4:2FTS (ND)



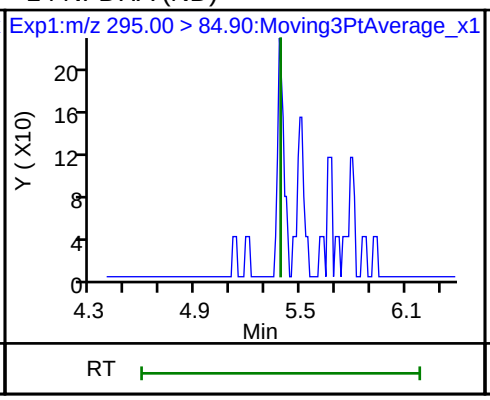
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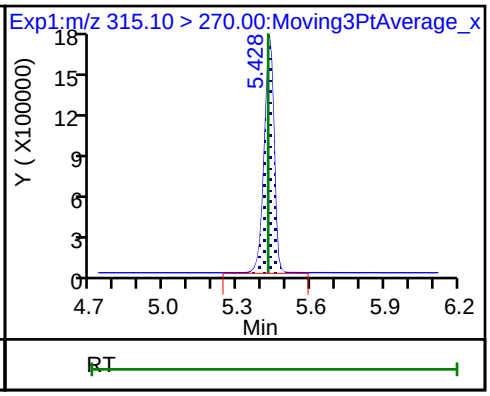
14 NFDHA (ND)



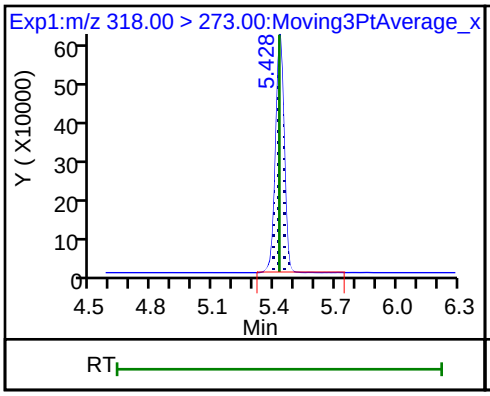
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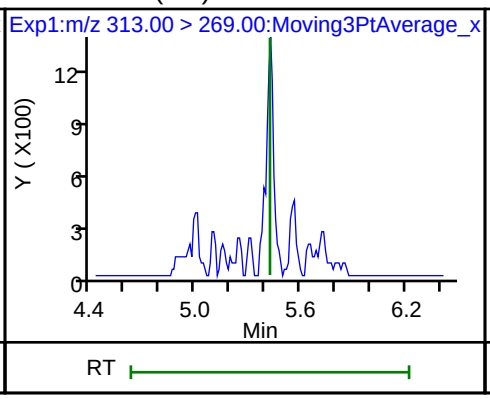
* 16 13C2 PFHxA



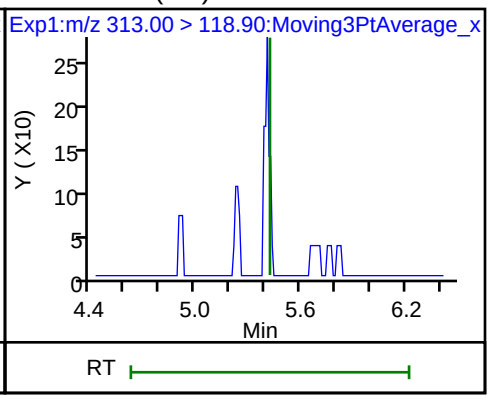
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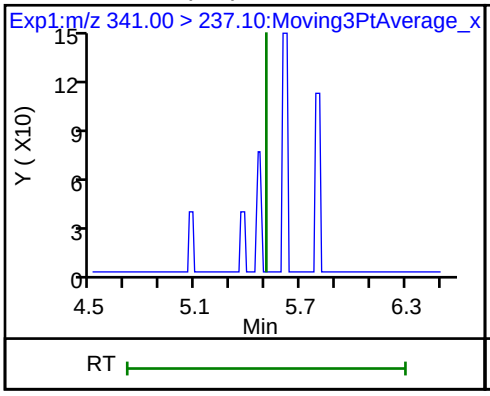
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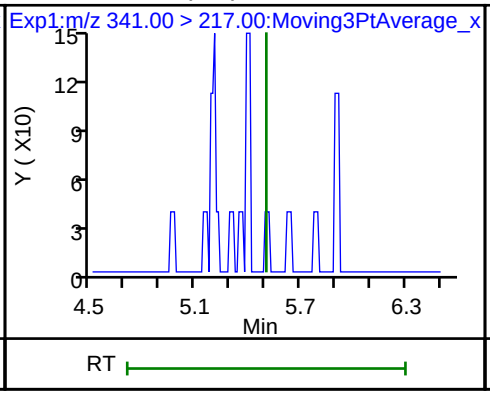
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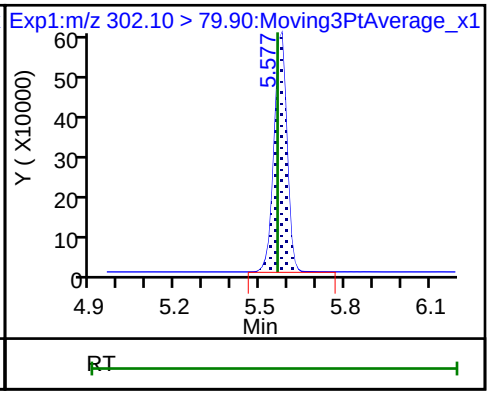
18 5:3 FTCA (ND)



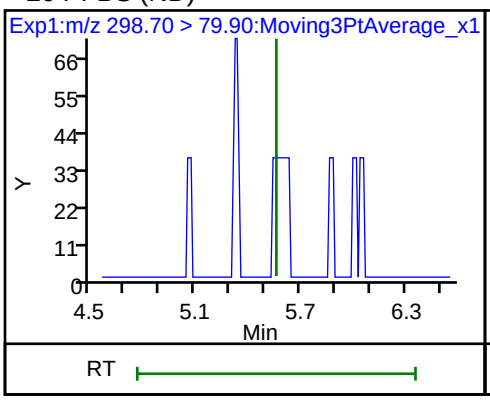
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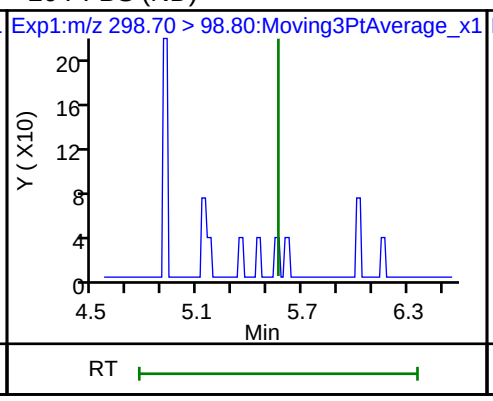
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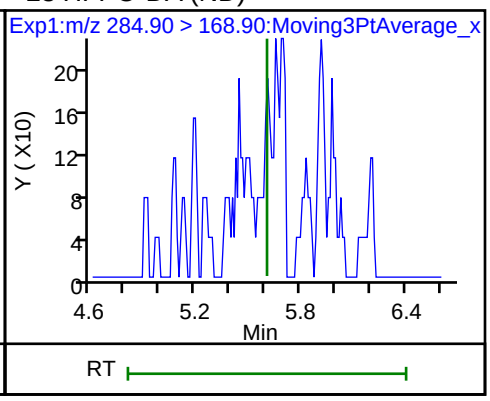
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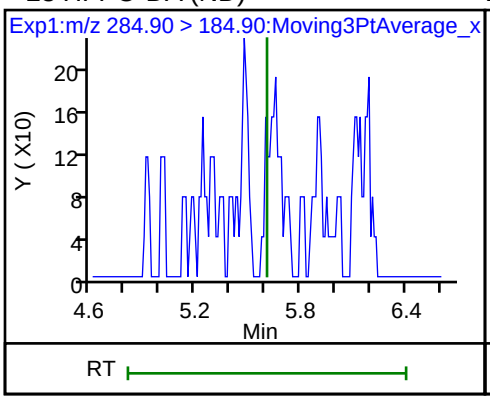
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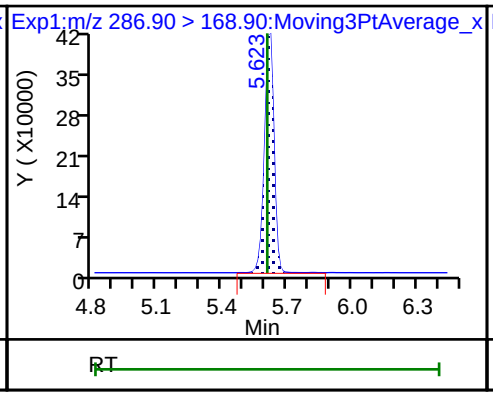
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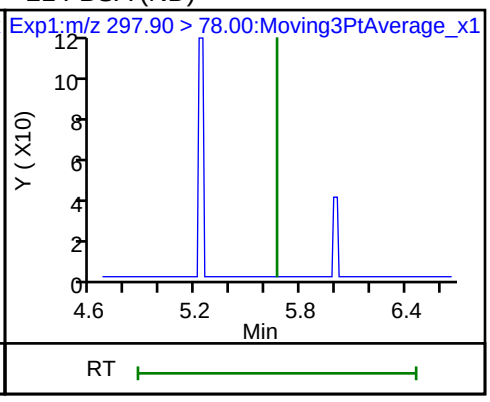
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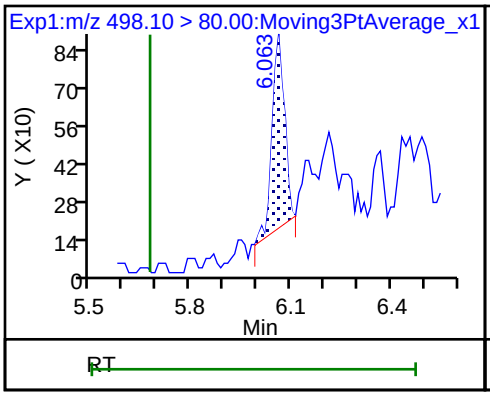
D 22 13C3 HFPO-DA



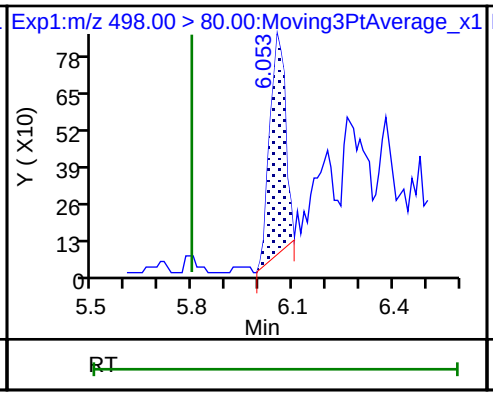
21 FBSA (ND)



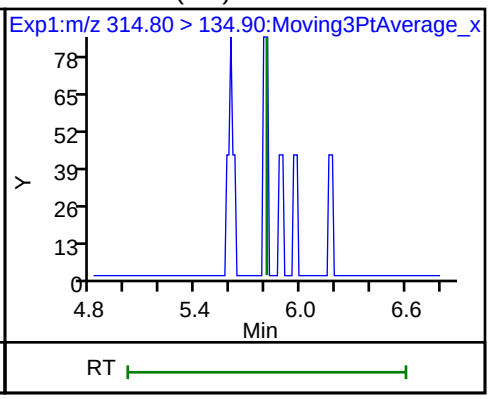
24 TCDCA



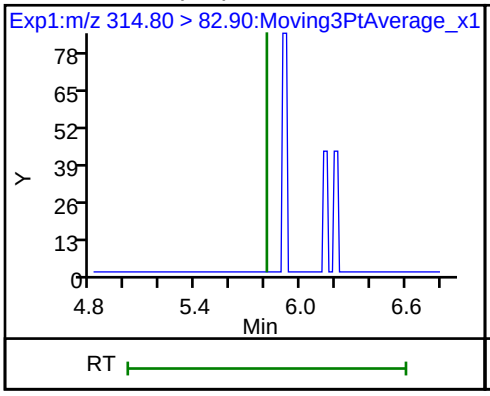
25 TDCA



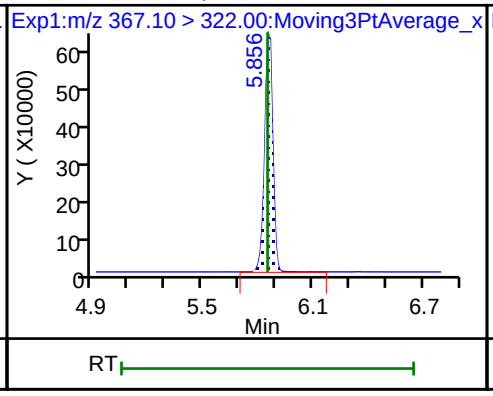
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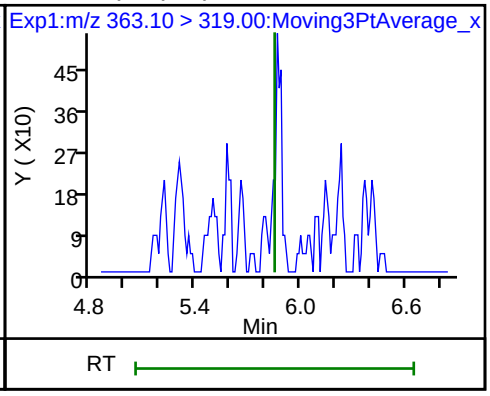
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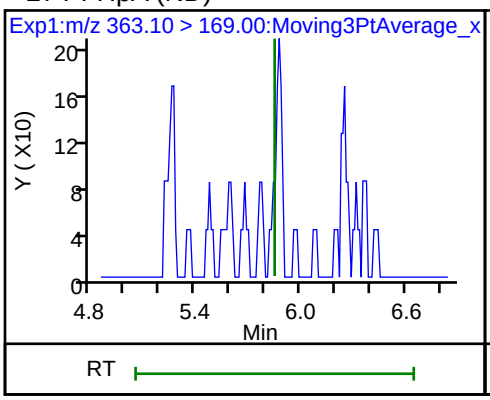
D 28 13C4 PFHpA



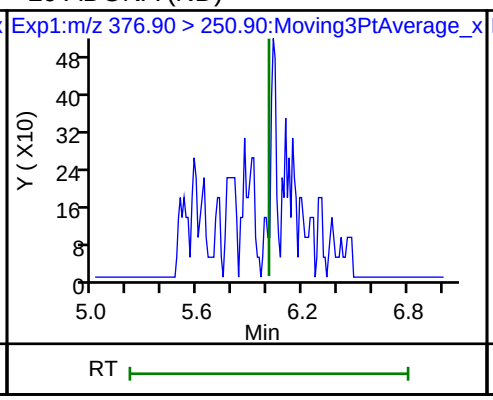
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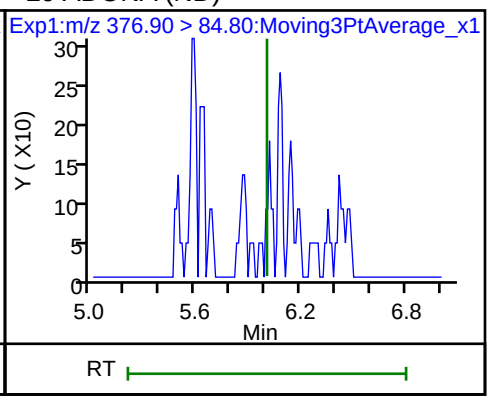
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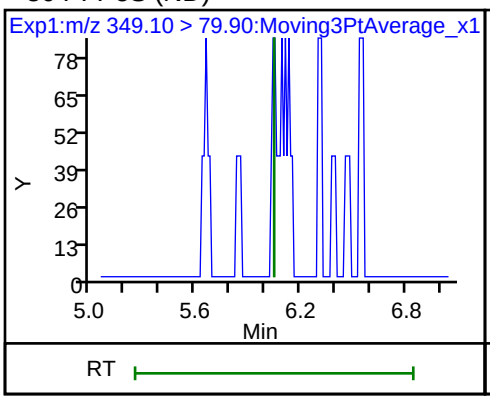
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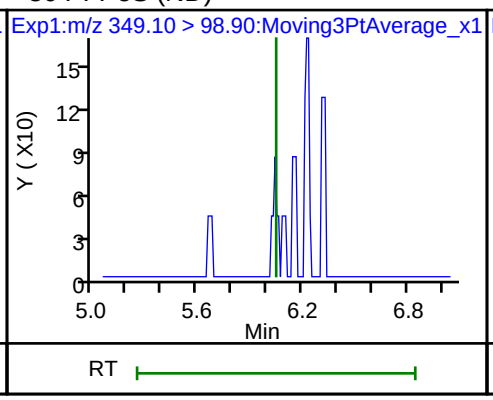
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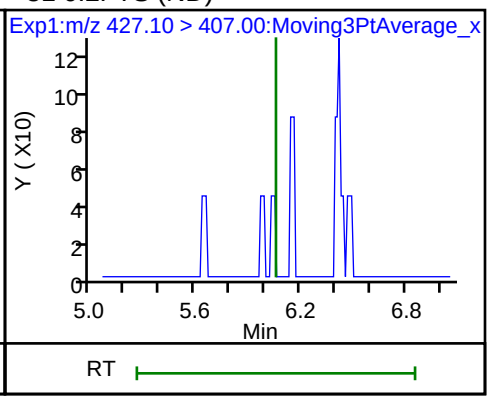
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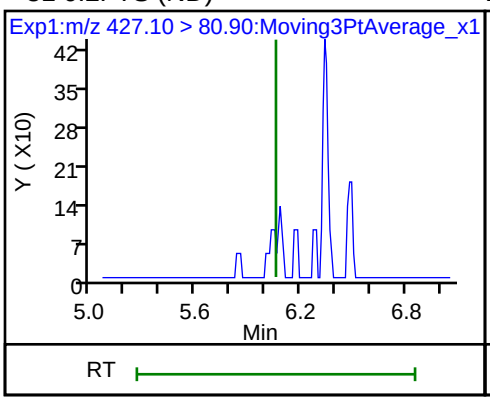
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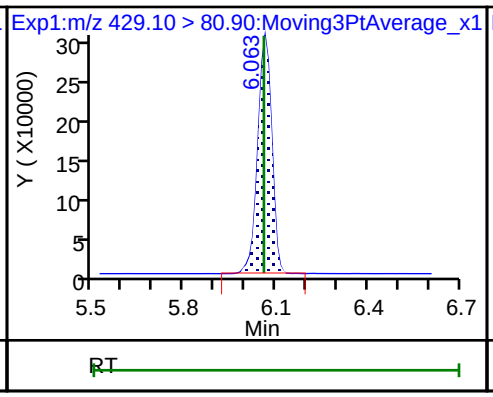
31 6:2FTS (ND)



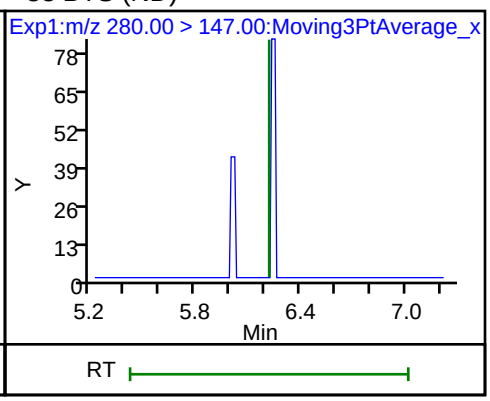
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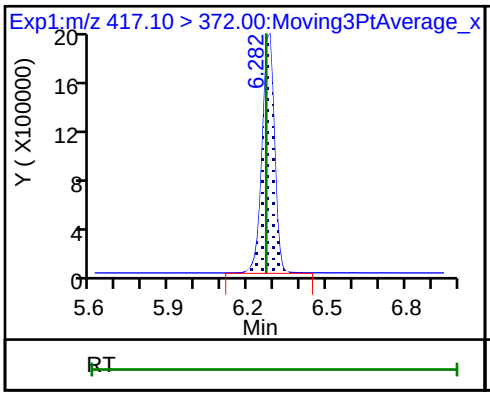
D 32 13C2-6:2FTS



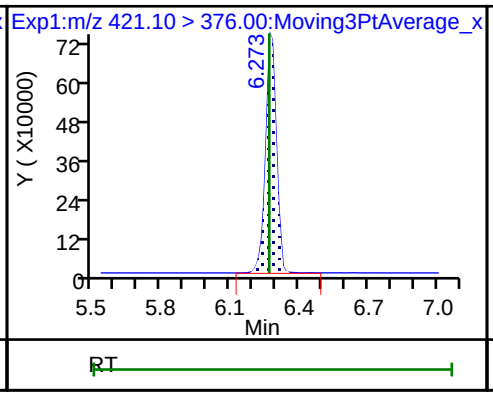
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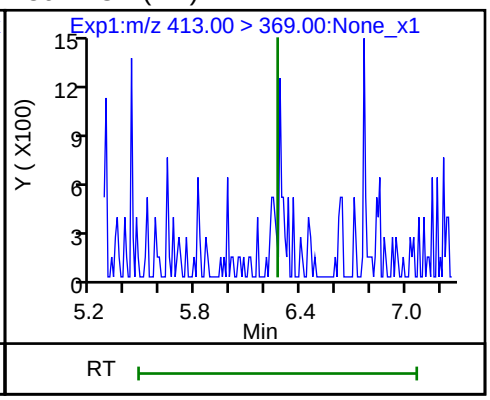
* 34 13C4 PFOA



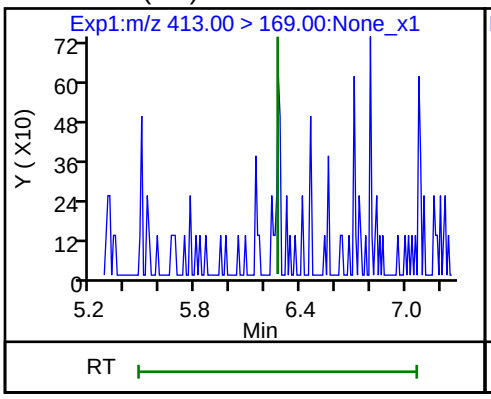
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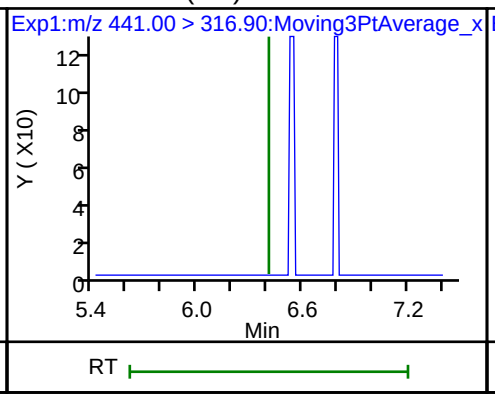
36 PFOA (ND)



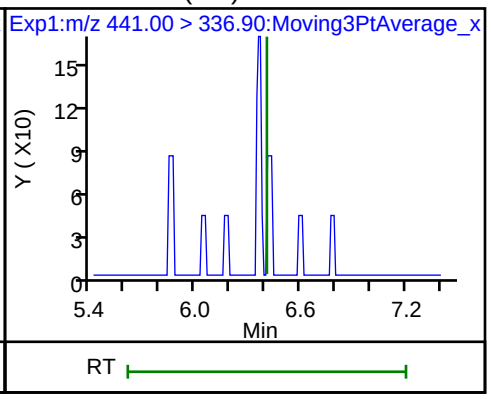
36 PFOA (ND)



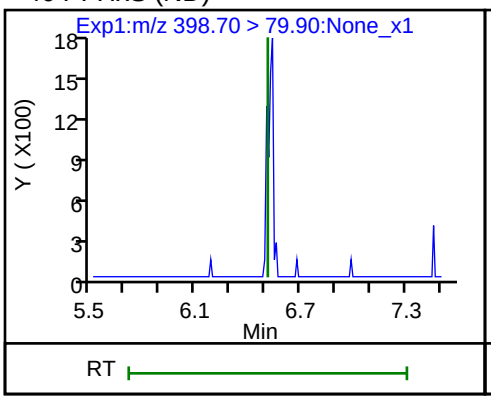
37 7:3 FTCA (ND)



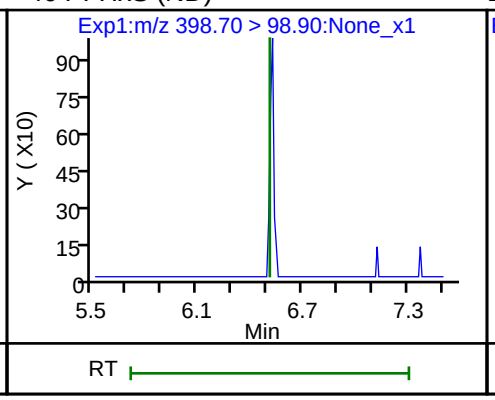
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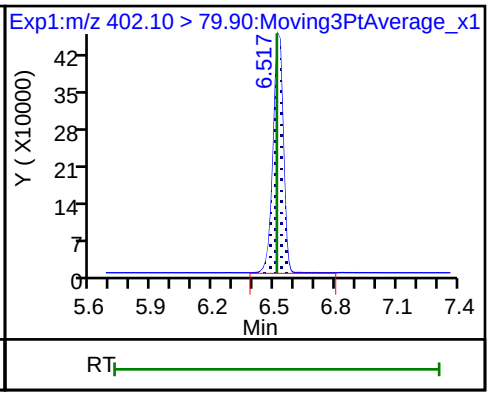
40 PFHxS (ND)



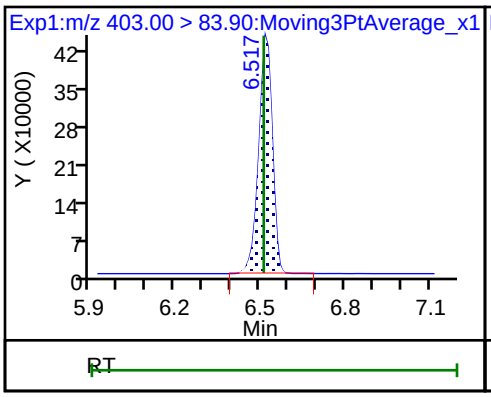
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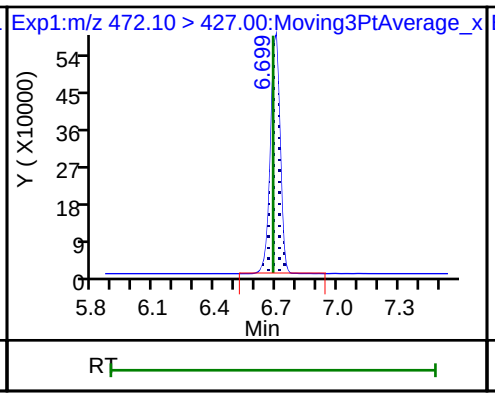
D 38 13C3 PFHxS



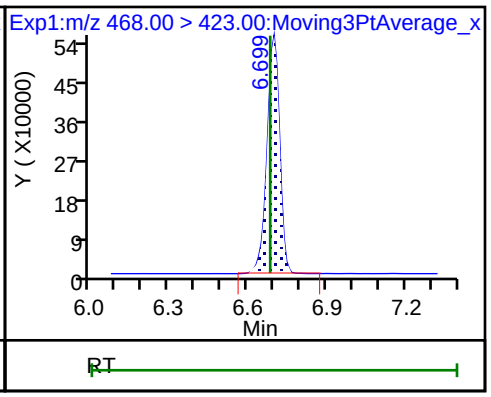
* 39 18O2 PFHxS



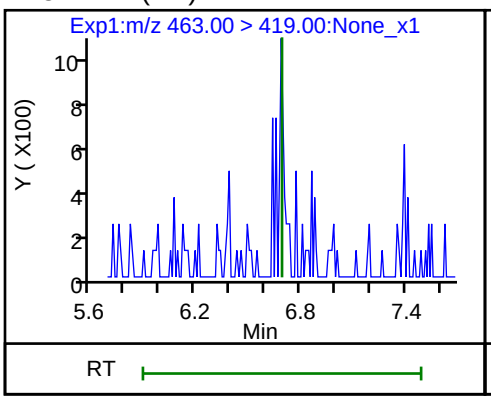
D 41 13C9 PFNA



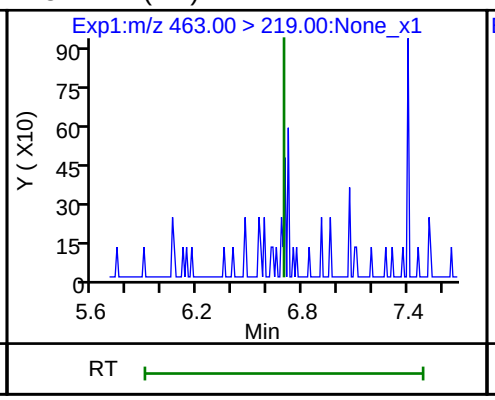
* 42 13C5 PFNA



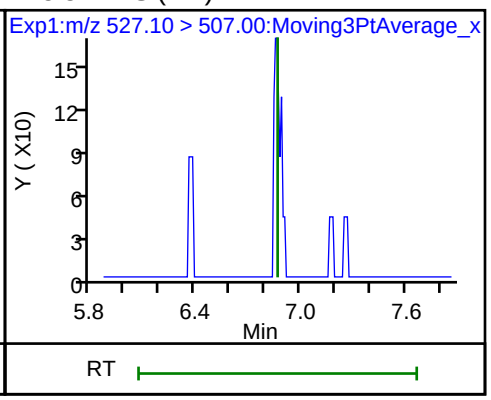
43 PFNA (ND)



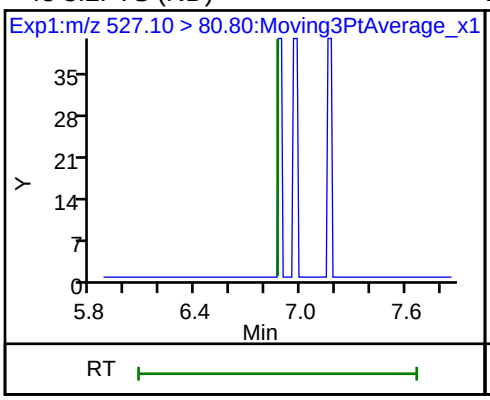
43 PFNA (ND)



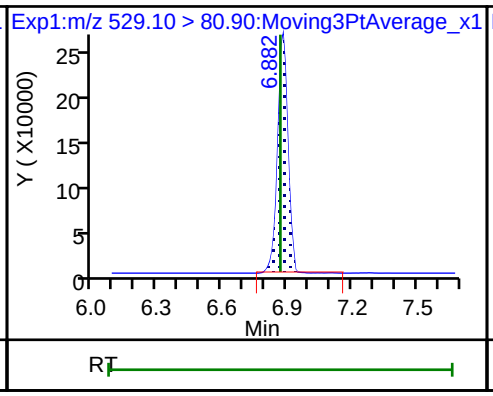
45 8:2FTS (ND)



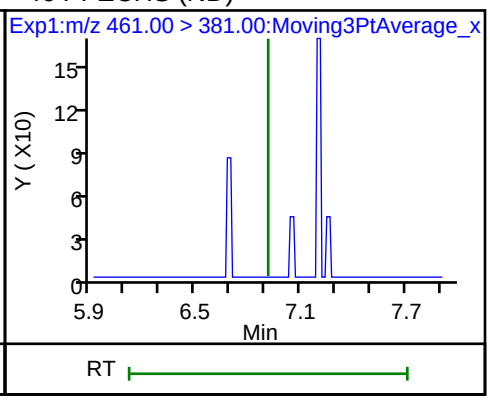
45 8:2FTS (ND)



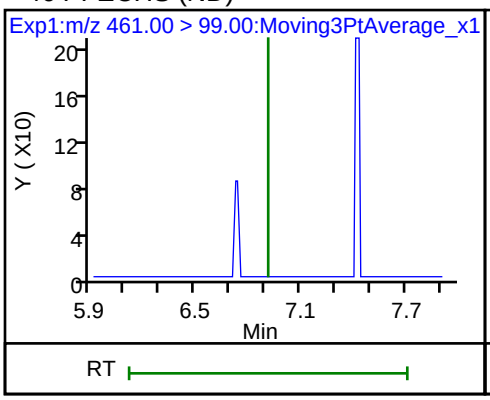
D 44 13C2-8:2FTS



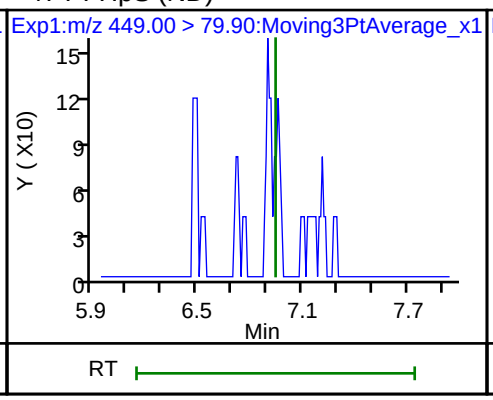
46 PFECHS (ND)



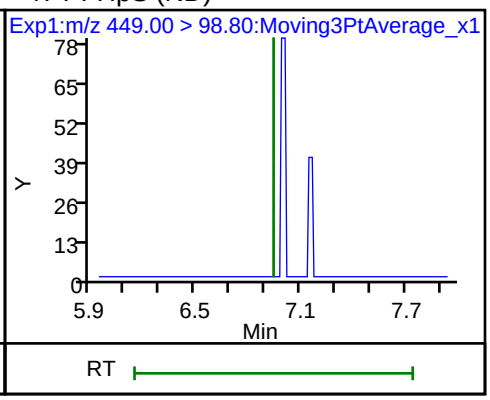
46 PFECHS (ND)



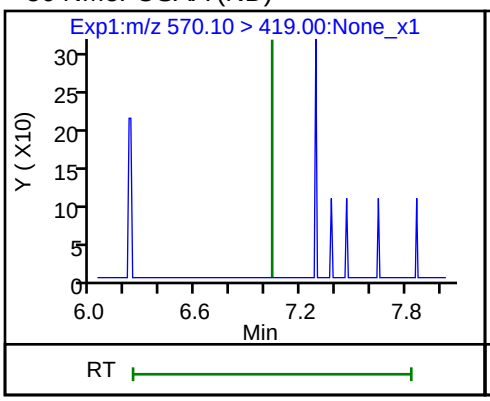
47 PFHpS (ND)



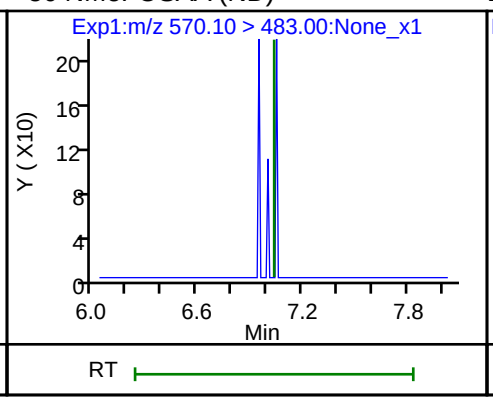
47 PFHpS (ND)



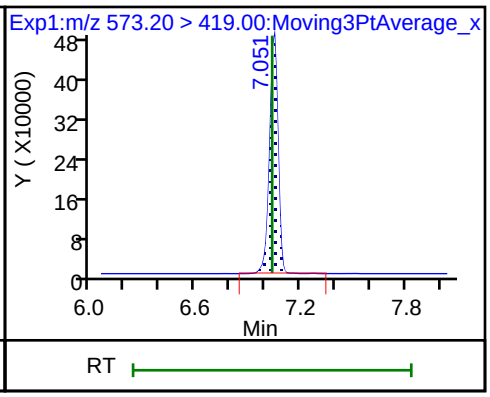
50 NMeFOSAA (ND)



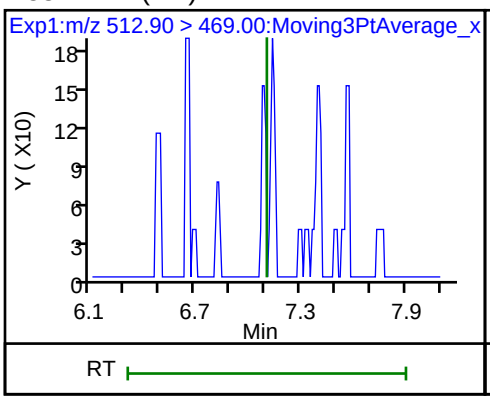
50 NMeFOSAA (ND)



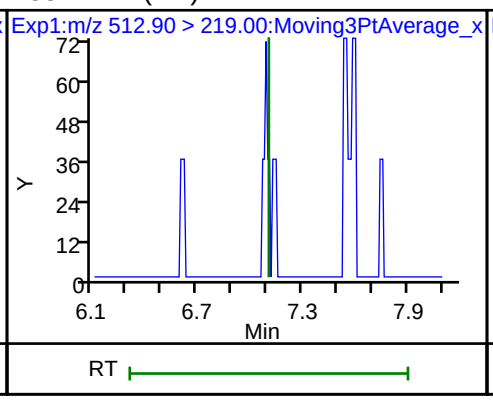
D 49 d3-NMeFOSAA



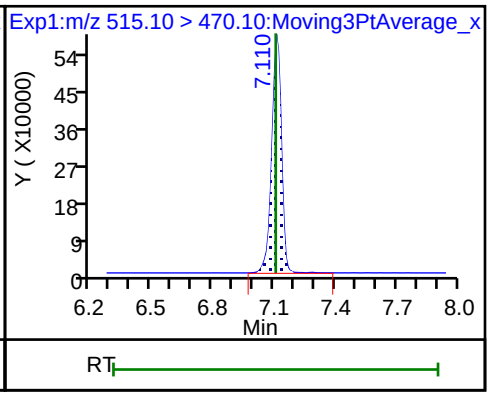
53 PFDA (ND)



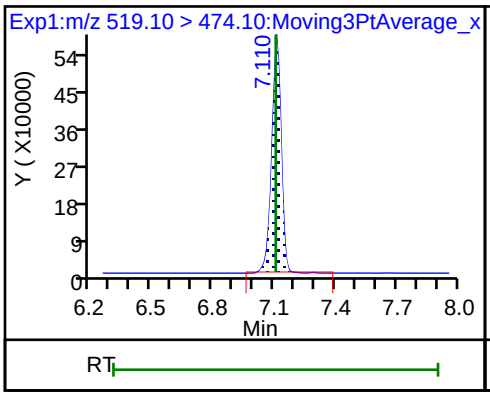
53 PFDA (ND)



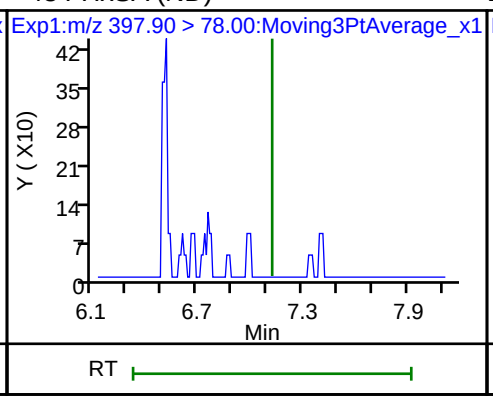
* 51 13C2 PFDA



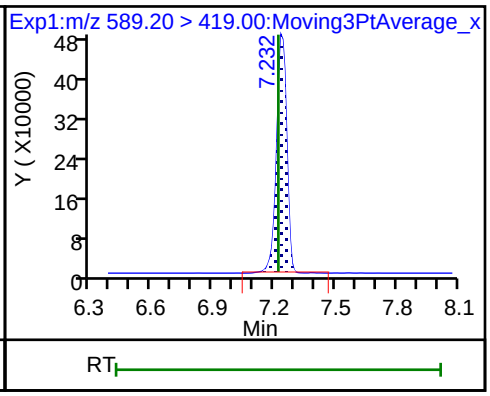
D 52 13C6 PFDA



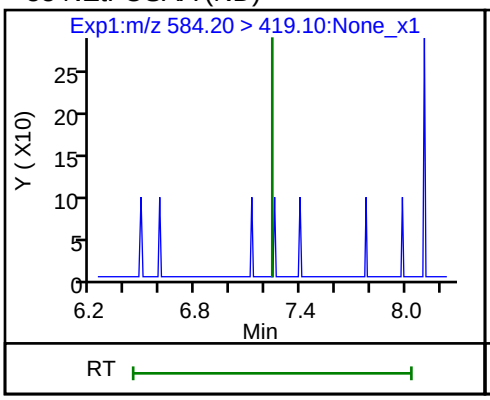
48 FHxSA (ND)



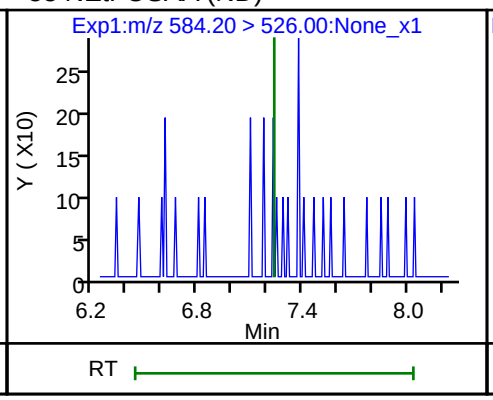
D 54 d5-NEtFOSAA



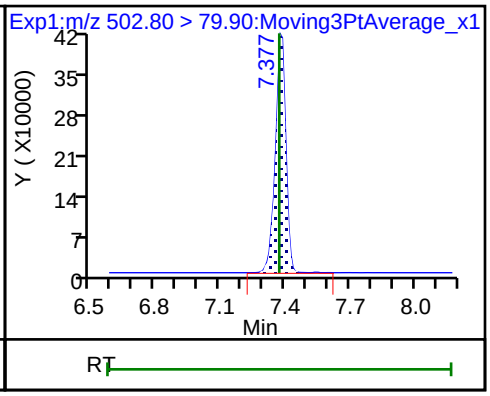
55 NEtFOSAA (ND)



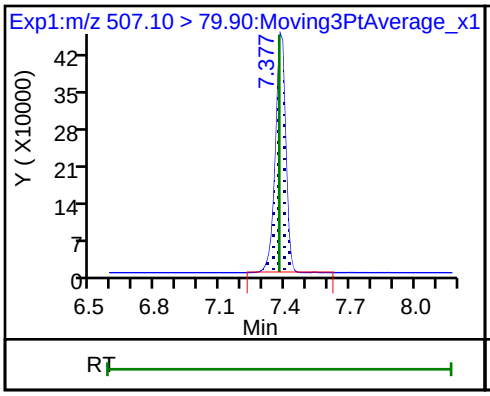
55 NEtFOSAA (ND)



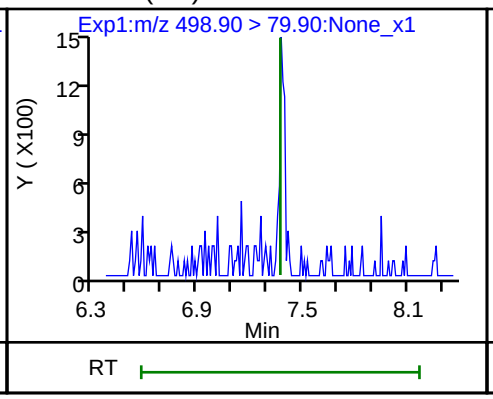
* 57 13C4 PFOS



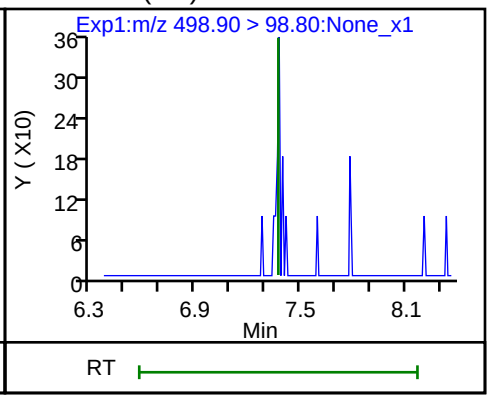
D 56 13C8 PFOS



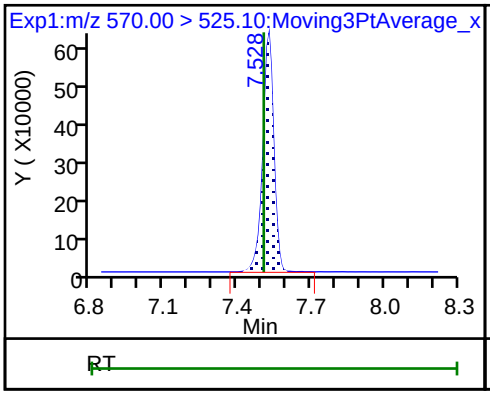
58 PFOS (ND)



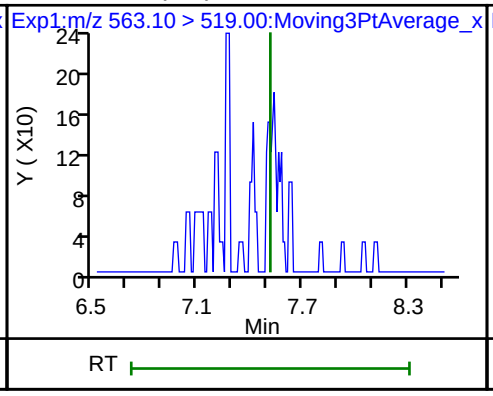
58 PFOS (ND)



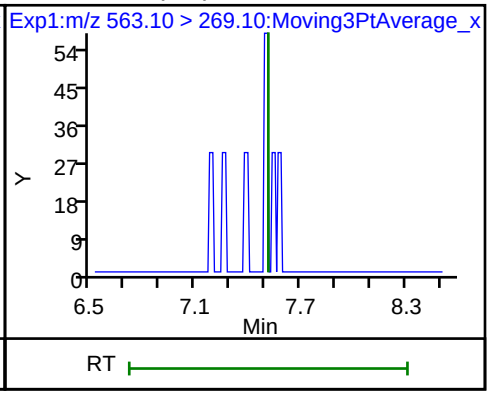
D 59 13C7 PFUnA



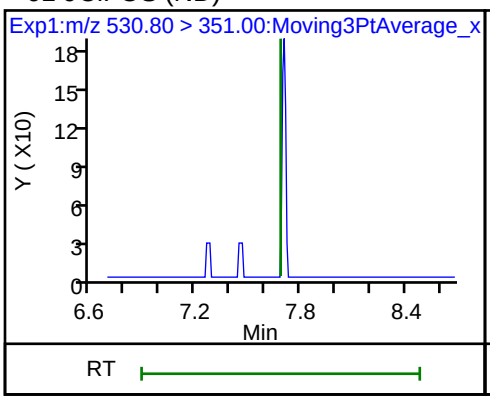
60 PFUnA (ND)



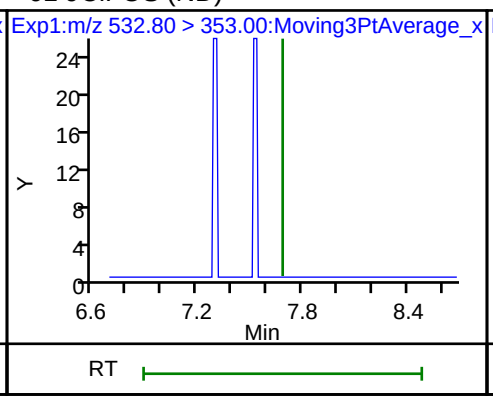
60 PFUnA (ND)



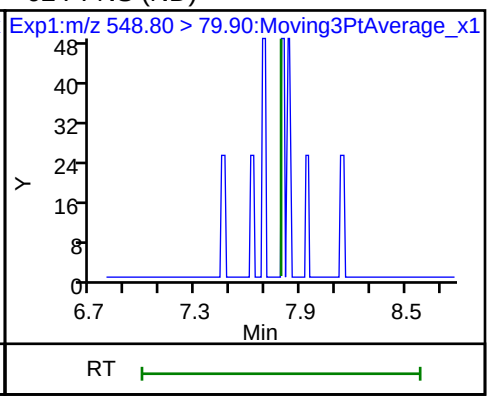
61 9ClFOS (ND)



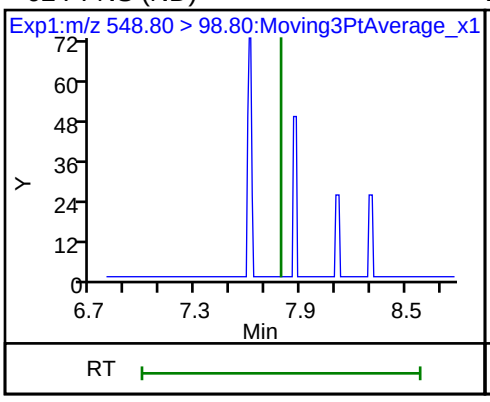
61 9ClFOS (ND)



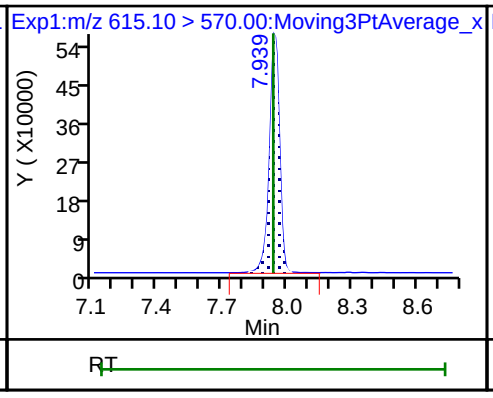
62 PFNS (ND)



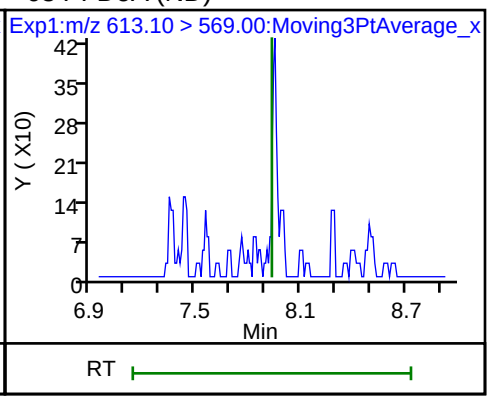
62 PFNS (ND)



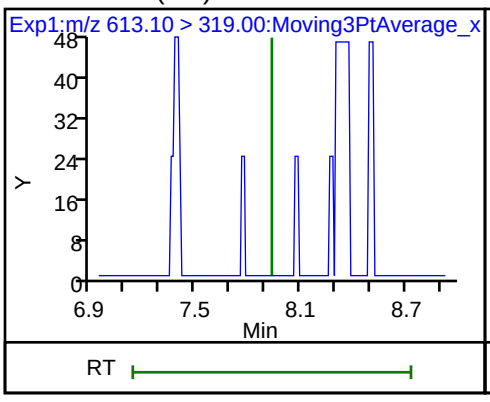
D 81 PFDoA



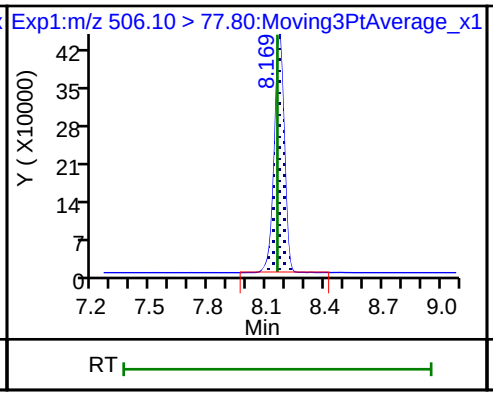
63 PFDoA (ND)



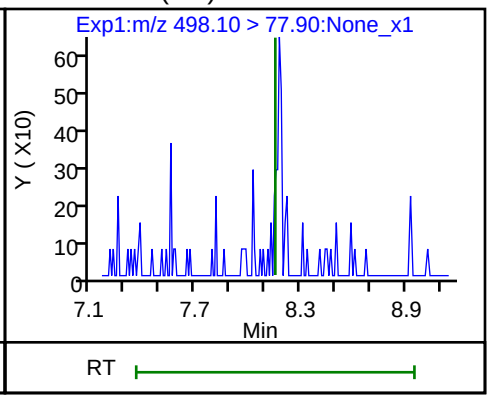
63 PFDoA (ND)



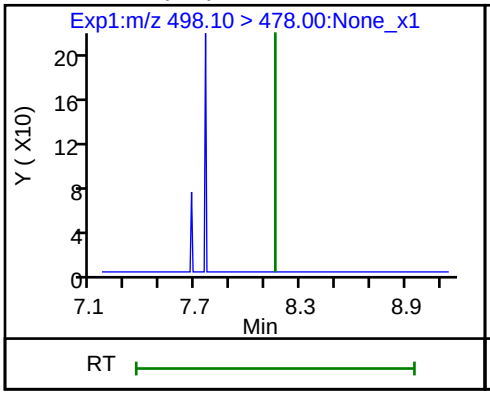
D 65 13C8 FOSA



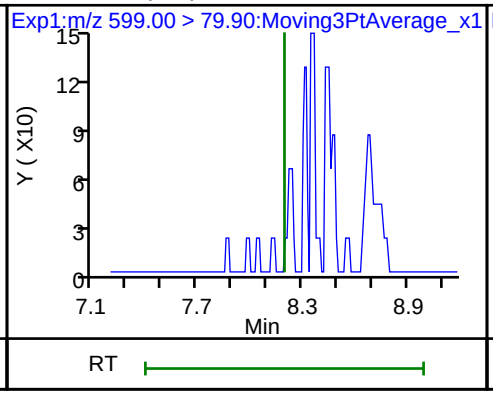
64 PFOSA (ND)



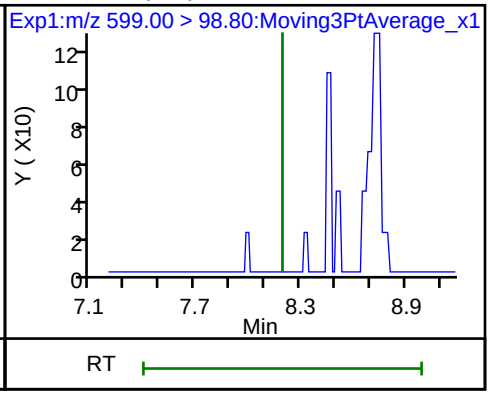
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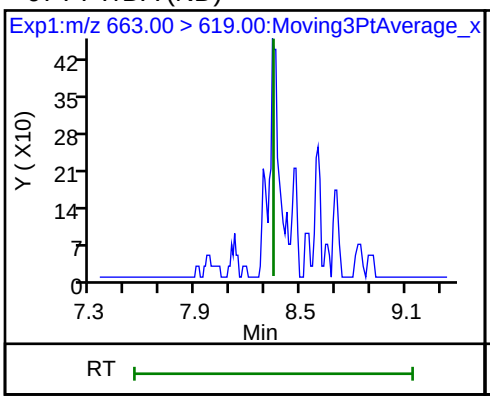
66 PFDS (ND)



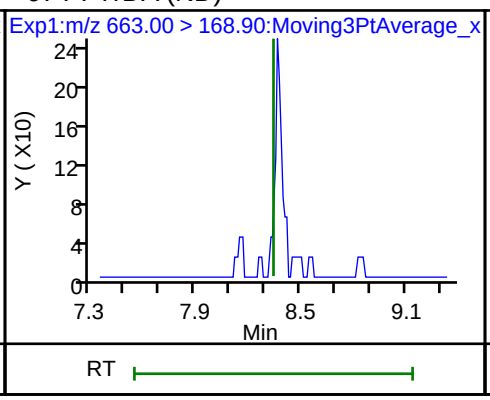
66 PFDS (ND)



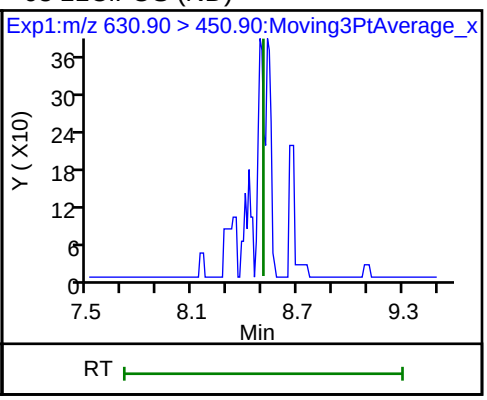
67 PFTrDA (ND)



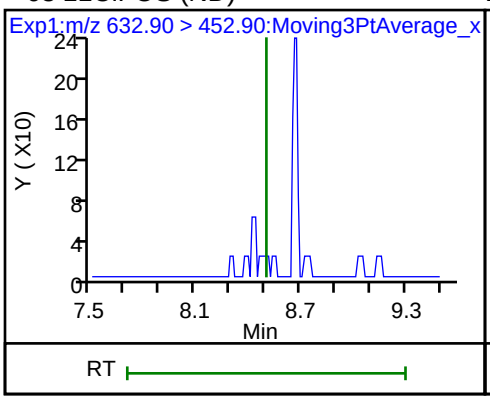
67 PFTrDA (ND)



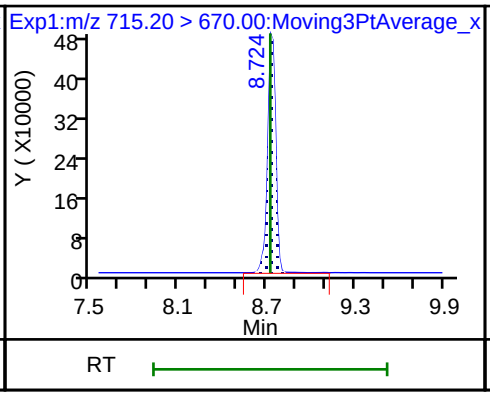
68 11ClFOS (ND)



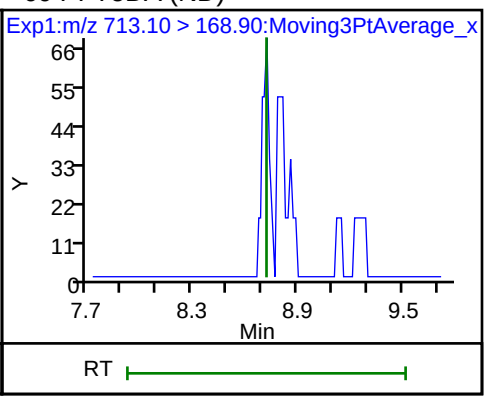
68 11ClFOS (ND)



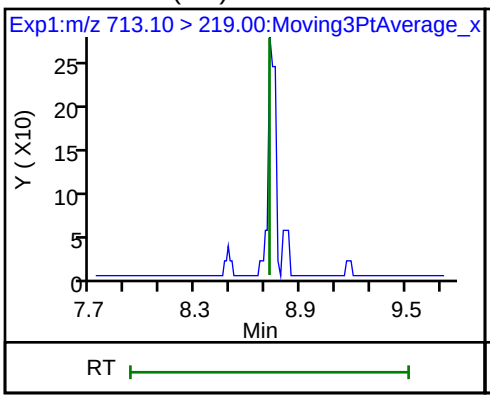
D 70 13C2 PFTeDA



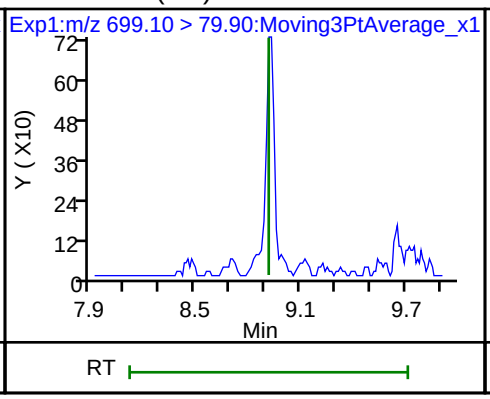
69 PFTeDA (ND)



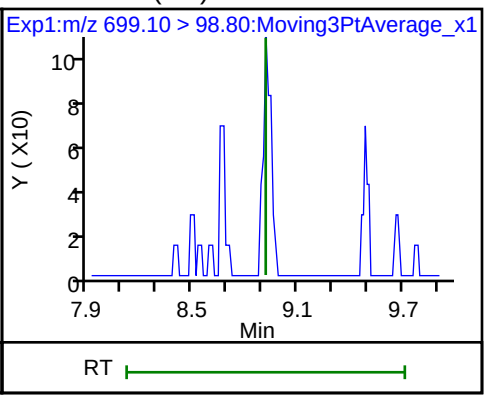
69 PFTeDA (ND)



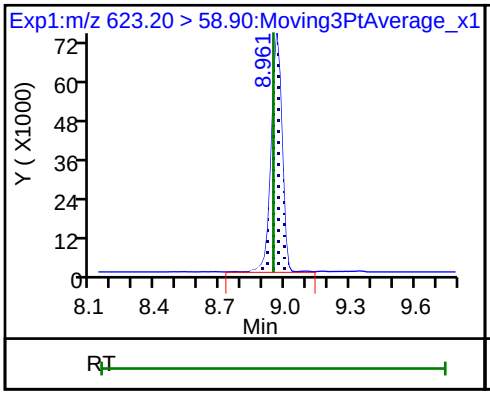
71 PFDoS (ND)



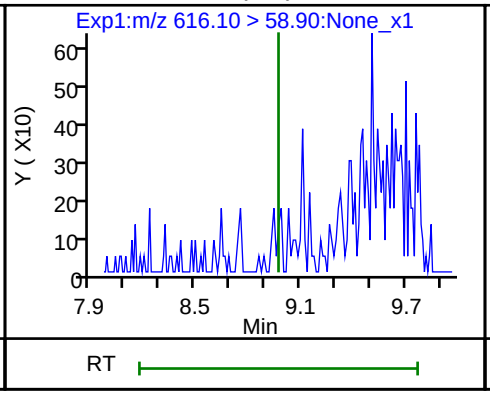
71 PFDoS (ND)



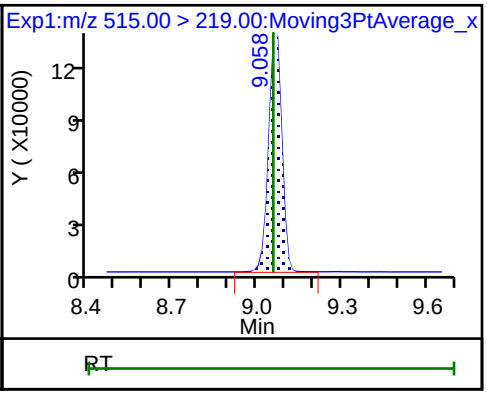
D 72 d7-N-Me-FOSE



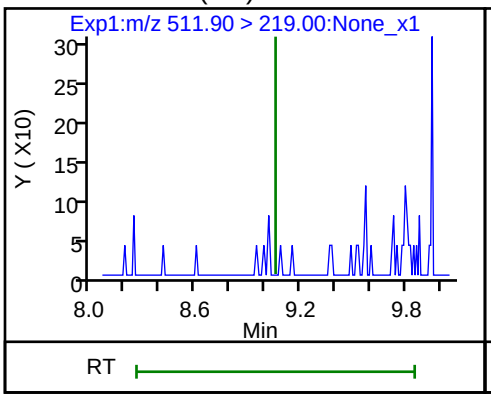
73 N-MeFOSE-M (ND)



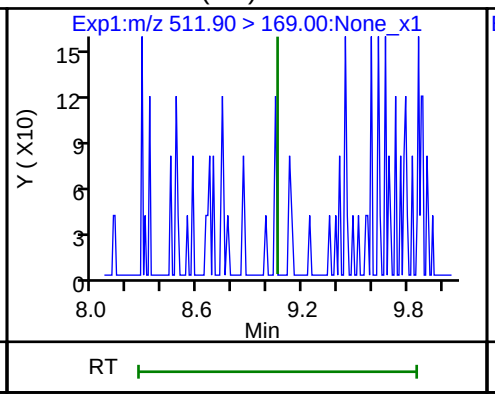
D 75 d3-NMePFOSA



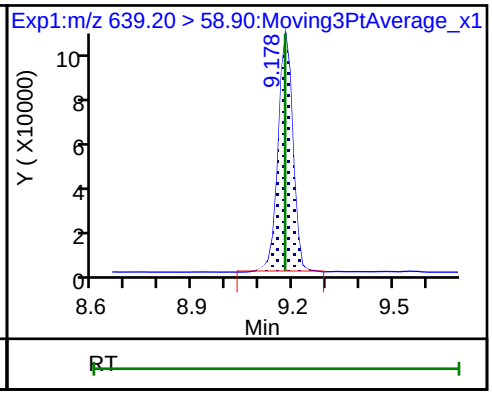
74 NMeFOSA (ND)



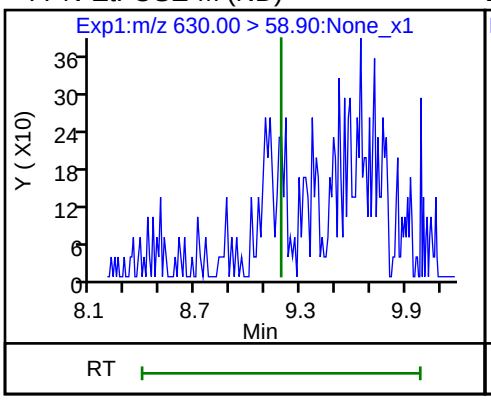
74 NMeFOSA (ND)



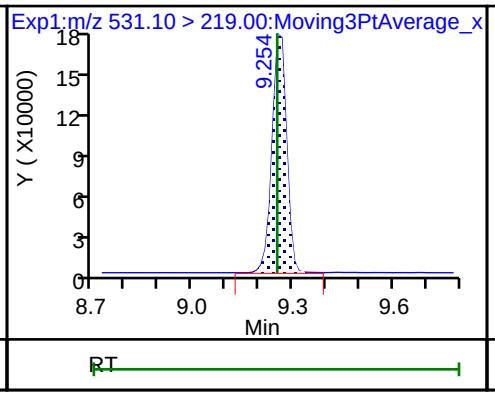
D 76 d9-N-EtFOSE



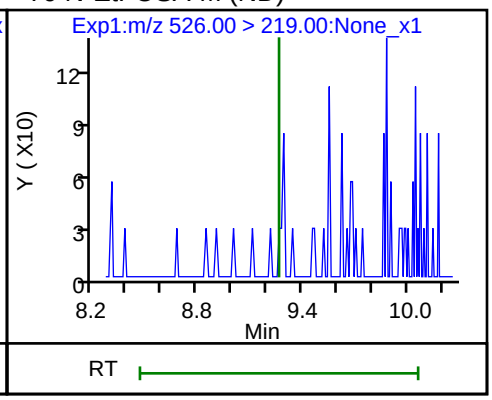
77 N-EtFOSE-M (ND)



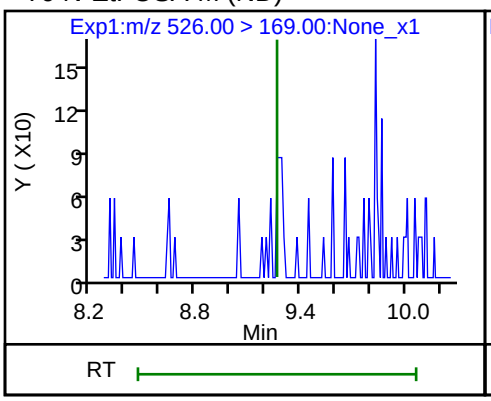
D 78 d5-NEtPFOSA



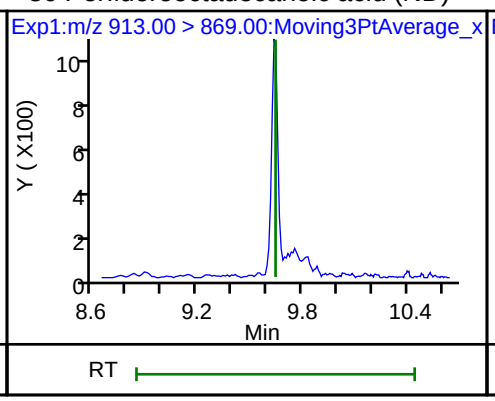
79 N-EtFOSA-M (ND)



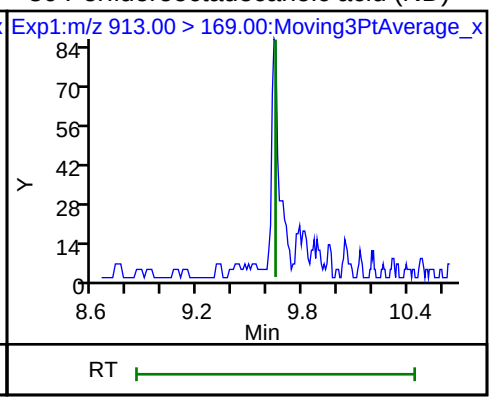
79 N-EtFOSA-M (ND)



80 Perfluorooctadecanoic acid (ND)



80 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-770909/2-A

Matrix: Water
Lab File ID: 26FEB19QC-50.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:30

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	68.72		4.00	1.10
2706-90-3	Perfluoropentanoic acid (PFPeA)	36.70		2.00	0.60
307-24-4	Perfluorohexanoic acid (PFHxA)	36.61		2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	35.57		2.00	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	36.58		2.00	0.90
375-95-1	Perfluorononanoic acid (PFNA)	36.37		2.00	0.50
335-76-2	Perfluorodecanoic acid (PFDA)	39.51		2.00	0.50
2058-94-8	Perfluoroundecanoic acid (PFUnA)	39.40		2.00	0.50
307-55-1	Perfluorododecanoic acid (PFDoA)	36.97		2.00	0.50
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	35.41		2.00	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	31.05		2.00	0.50
375-73-5	Perfluorobutanesulfonic acid (PFBS)	31.63		2.00	0.50
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	36.69		2.00	0.50
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	31.96		2.00	0.80
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	35.28		2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	35.70		2.00	1.30
68259-12-1	Perfluorononanesulfonic acid (PFNS)	31.81		2.00	0.50
335-77-3	Perfluorodecanesulfonic acid (PFDS)	31.02		2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	22.55		2.00	0.60
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	72.58		4.00	1.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	74.54		4.00	1.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	70.54		4.00	1.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	35.09		2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	38.83		2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	38.52		2.00	1.10

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-770909/2-A

Matrix: Water
Lab File ID: 26FEB19QC-50.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:30

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	33.51		2.00	0.50
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	35.99		2.00	0.50
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	190.6		10.0	4.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	198.7		10.0	4.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	28.63		2.00	1.40
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	35.18		2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	41.05		2.00	0.50
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	37.02		2.00	0.50
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	35.83		2.00	0.50
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	33.07		2.00	0.50
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	32.79		2.00	0.50
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	28.32		2.00	0.50
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	81.85		4.00	1.00
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	156.2		10.0	2.80
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	147.5		10.0	2.50

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-770909/2-A

Matrix: Water
Lab File ID: 26FEB19QC-50.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:30

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	122		5-130
2283397-79-3	13C5 PFPeA	116		40-130
2328024-54-8	13C5 PFHxA	121		40-130
2328024-55-9	13C4 PFHpA	121		40-130
1350614-84-4	13C8 PFOA	122		40-130
2283397-80-6	13C9 PFNA	107		40-130
2328024-56-0	13C6 PFDA	97.4		40-130
STL02580	13C7 PFUnA	94.0		30-130
STL02116	13C2 PFTeDA	80.3		10-130
2708218-83-9	13C3 PFBS	121		40-135
2708218-85-1	13C3 PFHxS	108		40-130
2265893-05-6	13C8 PFOS	106		40-130
STL01056	13C8 FOSA	130		40-130
1400690-70-1	d3-NMeFOSAA	118		40-170
1265205-97-7	d5-NEtFOSAA	113		25-135
STL02395	13C2 4:2 FTS	121		40-200
STL02279	13C2 6:2 FTS	118		40-200
STL02280	13C2 8:2 FTS	104		40-300
STL02255	13C3 HFPO-DA	112		40-130
STL02277	d7-N-MeFOSE-M	75.8		10-130
STL02278	d9-N-EtFOSE-M	71.6		10-130
STL02704	d5-NEtPFOSA	94.5		10-130
STL02705	d3-NMePFOSA	98.6		10-130
960315-52-0	13C2 PFDoA	86.0		10-130

Report Date: 19-Feb-2026 21:19:15 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-50.d
Lims ID: LCS 410-770909/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Feb-2026 20:30:12 ALS Bottle#: 50 Worklist Smp#: 50
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: LCS770909
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 50
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:18:51 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 21:17:52
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.914	1.983	-0.069	0.472	2699981	2.57		128	1334	
2 Perfluoropropionic acid										
163.0 > 119.0	1.923	2.000	-0.077	1.004	6178436	4.92		98.3	160	
D 3 13C4-PFBA										
216.8 > 171.9	4.056	4.087	-0.031	1.000	3031001	2.45		122	6152	
* 4 13C3PFBA										
216.0 > 172.0	4.056	4.087	-0.031		2128250	2.00			5953	
5 PFBA										
212.8 > 168.9	4.064	4.094	-0.030	1.002	218987	1.72		85.9	552	
6 PFMPA										
229.0 > 84.9	4.390	4.412	-0.022	0.931	1791270	1.03		103	6281	
7 3:3 FTCA										
241.0 > 177.0	4.409	4.422	-0.013	0.934	127577	2.05	Target=1.04	102	2173	
241.0 > 117.0	4.409	4.422	-0.013	0.934	116665		1.09(0.52-1.56)		1019	
D 8 13C5 PFPeA										
268.0 > 223.0	4.718	4.747	-0.029	0.911	3096210	2.32		116	5802	
9 PFPA										
263.0 > 219.0	4.730	4.747	-0.017	1.003	1269313	0.9175		91.8	2074	
10 PFMBA										
279.0 > 84.9	4.881	4.895	-0.014	1.035	1967939	0.9256		92.6	6962	
D 11 13C2-4:2FTS										
329.0 > 80.9	5.003	5.018	-0.015	0.806	1014501	5.66		121	4229	
12 4:2FTS										
327.1 > 307.0	5.003	5.028	-0.025	1.000	680980	1.81	Target=1.64	96.7	4182	
327.1 > 80.9	5.003	5.028	-0.025	1.000	430465		1.58(0.82-2.46)		980	

Report Date: 19-Feb-2026 21:19:15 Chrom Revision: 2.3 16-Feb-2026 12:47:50
Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-50.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
14 NFDHA										
295.0 > 201.0	5.140	5.165	-0.025	0.992	729633	0.8958	Target=1.37	89.6	3834	
295.0 > 84.9	5.140	5.165	-0.025	0.992	543462		1.34(0.69-2.06)		4968	
D 15 13C5 PFHxA										
318.0 > 273.0	5.180	5.206	-0.026	1.000	3863954	2.42		121	9012	
* 16 13C2 PFHxA										
315.1 > 270.0	5.180	5.206	-0.026		5331584	5.00			13812	
17 PFHxA										
313.0 > 269.0	5.191	5.216	-0.025	1.002	1856189	0.9153	Target=17.00	91.5	2843	
313.0 > 118.9	5.191	5.216	-0.025	1.002	108929		17.04(8.50-25.50)		552	
18 5:3 FTCA										
341.0 > 237.1	5.275	5.303	-0.028	1.018	910305	3.90	Target=1.07	78.1	1979	
341.0 > 217.0	5.275	5.303	-0.028	1.018	923012		0.99(0.53-1.60)		1211	
D 19 13C3 PFBS										
302.1 > 79.9	5.309	5.337	-0.028	0.855	2219656	2.25		121	6409	
20 PFBS										
298.7 > 79.9	5.320	5.348	-0.028	1.002	941609	0.7908	Target=3.26	89.1	4634	
298.7 > 98.8	5.309	5.348	-0.039	1.000	254379		3.70(1.63-4.90)		1312	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.365	5.381	-0.016	1.036	2025365	2.24		112	4760	
22 HFPO-DA										
284.9 > 168.9	5.365	5.393	-0.028	1.000	755472	0.7157	Target=1.71	95.4	2164	
284.9 > 184.9	5.365	5.393	-0.028	1.000	441026		1.71(0.86-2.57)		1819	
23 FBSA										
298.0 > 78.0	5.376	5.427	-0.051	1.013	1130953	1.02		102	1420	
25 PFEESA										
314.8 > 134.9	5.547	5.574	-0.027	1.071	2325971	0.7081	Target=9.87	79.4	8128	
314.8 > 82.9	5.547	5.574	-0.027	1.071	237370		9.80(4.93-14.80)		1418	
D 27 13C4 PFHpA										
367.0 > 322.0	5.603	5.631	-0.028	1.082	3574476	2.43		121	7108	
28 PFHpA										
363.1 > 319.0	5.614	5.631	-0.017	1.002	1776104	0.8892	Target=3.06	88.9	2587	
363.1 > 169.0	5.614	5.631	-0.017	1.002	587751		3.02(1.53-4.59)		1738	
29 ADONA										
376.9 > 250.9	5.763	5.779	-0.016	1.074	3229864	0.8795	Target=2.15	93.0	5103	
376.9 > 84.8	5.752	5.779	-0.027	1.072	1534503		2.10(1.08-3.23)		4866	
30 PFPeS										
349.0 > 79.9	5.786	5.814	-0.028	0.932	1077913	0.9172	Target=3.62	97.6	3986	
349.0 > 98.8	5.786	5.814	-0.028	0.932	297985		3.62(1.81-5.42)		1836	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.797	5.825	-0.028	0.934	872154	5.62		118	2555	
32 6:2FTS										
427.1 > 407.0	5.809	5.825	-0.016	1.002	570086	1.86	Target=1.50	97.9	2024	
427.1 > 80.9	5.809	5.825	-0.016	1.002	354929		1.61(0.75-2.25)		1100	
33 BTS										
280.0 > 147.0	5.935	5.974	-0.039	0.956	1991506	0.99		98.9	6499	
D 34 13C8 PFOA										
421.0 > 376.0	5.992	6.020	-0.028	1.000	3859161	2.45		122	5397	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	5.992	6.020	-0.028		5177605	5.00			5959	
36 PFOA										
413.0 > 369.0	6.004	6.032	-0.028	1.002	1572962	0.9144	Target=2.55	91.4	1052	
413.0 > 169.0	6.004	6.032	-0.028	1.002	618894		2.54(1.27-3.82)		745	
37 7:3 FTCA										
441.0 > 316.9	6.086	6.114	-0.028	1.175	502063	3.69	Target=0.54	73.7	1278	
441.0 > 336.9	6.086	6.114	-0.028	1.175	927040		0.54(0.27-0.81)		1320	
D 38 13C3 PFHxS										
402.0 > 79.9	6.207	6.233	-0.026	1.000	1826561	2.04		108	4185	
* 39 18O2 PFHxS										
403.0 > 83.9	6.207	6.233	-0.026		1522404	1.90			4045	
40 PFHxS										
398.7 > 79.9	6.207	6.243	-0.036	1.000	683655	0.7989	Target=4.54	87.6	2444	
398.7 > 98.8	6.207	6.243	-0.036	1.000	155637		4.39(2.27-6.81)		646	
D 41 13C9 PFNA										
472.0 > 427.0	6.383	6.413	-0.030	1.000	3217421	2.14		107	6022	
* 42 13C5 PFNA										
468.0 > 423.0	6.383	6.413	-0.030		3057647	2.00			5922	
43 PFNA										
463.0 > 419.0	6.395	6.424	-0.029	1.002	1325000	0.9092	Target=2.78	90.9	2135	
463.0 > 219.0	6.395	6.424	-0.029	1.002	458616		2.89(1.39-4.17)		1470	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.560	6.588	-0.028	1.057	768885	5.00		104	1503	
45 8:2FTS										
527.1 > 507.0	6.560	6.588	-0.028	1.000	385497	1.76	Target=1.45	91.9	1168	
527.1 > 80.9	6.560	6.588	-0.028	1.000	274625		1.40(0.73-2.18)		1045	
46 PFECHS										
461.0 > 381.0	6.572	6.611	-0.039	1.059	1477720	0.8748	Target=1.67	94.7	3902	
461.0 > 99.0	6.572	6.611	-0.039	1.059	916706		1.61(0.84-2.51)		2647	
47 PFHpS										
449.0 > 79.9	6.617	6.654	-0.037	0.944	860832	0.8819	Target=4.71	92.4	2685	
449.0 > 98.8	6.617	6.654	-0.037	0.944	193010		4.46(2.36-7.07)		855	
48 FHxSA										
398.0 > 78.0	6.683	6.709	-0.026	1.077	1721609	1.12		112	1864	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.715	6.741	-0.026	0.958	1212999	5.90		118	2788	
50 NMeFOSAA										
570.0 > 419.0	6.715	6.751	-0.036	1.000	230862	0.8378	Target=1.26	83.8	54693	
570.0 > 483.0	6.715	6.751	-0.036	1.000	193937		1.19(0.63-1.89)		960	
D 51 13C6 PFDA										
519.0 > 474.0	6.768	6.804	-0.036	1.000	2969663	1.95		97.4	7575	
* 52 13C2 PFDA										
515.1 > 470.1	6.768	6.804	-0.036		2730393	2.00			3249	
53 PFDA										
512.9 > 469.0	6.778	6.804	-0.026	1.002	1462055	0.9878	Target=6.81	98.8	3810	
512.9 > 219.0	6.778	6.804	-0.026	1.002	218745		6.68(3.40-10.21)		1404	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.883	6.921	-0.038	0.982	1458027	5.63		113	1891	
55 NEtFOSAA										
584.0 > 419.0	6.894	6.921	-0.027	1.002	299238	0.8997	Target=1.64	90.0	70119	
584.0 > 526.0	6.894	6.921	-0.027	1.002	177396		1.69(0.82-2.45)		1337	
D 56 13C8 PFOS										
507.0 > 79.9	7.009	7.053	-0.044	1.000	1742893	2.04		106	1492	
* 57 13C4 PFOS										
502.8 > 79.9	7.009	7.053	-0.044		1182366	1.92			3833	
58 PFOS										
498.9 > 79.9	7.018	7.053	-0.035	1.001	943412	0.8924	Target=5.55	96.0	2336	
498.9 > 98.8	7.018	7.053	-0.035	1.001	165259		5.71(2.77-8.32)		1263	
D 59 13C7 PFUnA										
570.0 > 525.0	7.159	7.195	-0.036	1.058	2863126	1.88		94.0	5437	
60 PFUnA										
563.1 > 519.0	7.169	7.205	-0.036	1.001	1259433	0.9851	Target=5.71	98.5	5539	
563.1 > 269.1	7.169	7.205	-0.036	1.001	220815		5.70(2.85-8.56)		1225	
61 9ClFOS										
530.8 > 351.0	7.320	7.367	-0.047	1.044	1580990	0.8269	Target=3.10	88.5	5752	
532.8 > 353.0	7.320	7.367	-0.047	1.044	540393		2.93(1.55-4.65)		2718	
62 PFNS										
548.8 > 79.9	7.423	7.455	-0.032	1.059	635821	0.7953	Target=4.40	82.7	3501	
548.8 > 98.8	7.423	7.455	-0.032	1.059	137409		4.63(2.20-6.60)		1190	
D 63 13C2 PFDoA										
615.0 > 570.0	7.552	7.603	-0.051	1.116	2478480	1.72		86.0	3390	
64 PFDoA										
613.0 > 569.0	7.563	7.603	-0.040	1.001	1233389	0.9242	Target=6.25	92.4	4264	
613.0 > 319.0	7.563	7.603	-0.040	1.001	206062		5.99(3.12-9.37)		1481	
D 65 13C8 FOSA										
506.1 > 77.8	7.825	7.842	-0.017	1.116	2228478	2.60		130	6458	
66 PFOSA										
498.1 > 77.9	7.825	7.842	-0.017	1.000	811451	0.8772	Target=44.01	87.7	1869	
498.1 > 478.0	7.825	7.842	-0.017	1.000	19092		42.50(22.00-66.01)		145	
67 PFDS										
599.0 > 79.9	7.803	7.853	-0.050	1.113	785633	0.7755	Target=4.97	80.5	3906	
599.0 > 98.8	7.803	7.853	-0.050	1.113	160745		4.89(2.49-7.46)		1891	
68 PFTrDA										
663.0 > 619.0	7.954	8.007	-0.053	0.955	1209286	0.8853	Target=7.34	88.5	2755	
663.0 > 168.9	7.954	8.007	-0.053	0.955	164549		7.35(3.67-11.01)		1456	
69 11ClFOS										
630.9 > 450.9	8.109	8.150	-0.041	1.157	1369885	0.8199	Target=3.07	86.8	3494	
632.9 > 452.9	8.109	8.150	-0.041	1.157	437396		3.13(1.54-4.61)		4283	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.330	8.382	-0.052	1.231	1388818	1.61		80.3	2854	
71 PFTeDA										
713.1 > 168.9	8.330	8.397	-0.067	1.000	116576	0.7761	Target=1.18	77.6	1186	
713.1 > 219.0	8.330	8.397	-0.067	1.000	87235		1.34(0.59-1.77)		558	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.539	8.599	-0.060	1.218	529822	0.5639	Target=5.61	58.1	2992	
699.1 > 98.8	8.539	8.599	-0.060	1.218	93293		5.68(2.81-8.42)		1230	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.740	8.749	-0.009	1.247	829542	3.79		75.8	373	
74 N-MeFOSE-M										
616.1 > 58.9	8.752	8.761	-0.009	1.001	1764920	4.77		95.3	1230	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.850	8.858	-0.008	1.263	422450	1.97		98.6	2524	
76 NMeFOSA										
511.9 > 219.0	8.862	8.870	-0.008	1.001	190877	0.9708	Target=0.75	97.1	1381	
511.9 > 169.0	8.862	8.870	-0.008	1.001	245378		0.78(0.38-1.13)		1047	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.979	8.988	-0.009	1.281	1047813	3.58		71.6	410	
78 N-EtFOSE-M										
630.0 > 58.9	8.991	8.999	-0.008	1.001	3186762	4.97		99.4	1337	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.062	9.070	-0.008	1.293	552691	1.89		94.5	2156	
80 N-EtFOSA-M										
526.0 > 219.0	9.073	9.082	-0.009	1.001	224085	0.9630	Target=0.82	96.3	1317	
526.0 > 169.0	9.073	9.082	-0.009	1.001	262861		0.85(0.41-1.23)		985	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.248	9.308	-0.060	1.110	465702	0.2390	Target=9.64	23.9	11296	
913.0 > 169.0	9.237	9.308	-0.071	1.109	49650		9.38(4.82-14.45)		2320	

QC Flag Legend

Processing Flags

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 21:19:15 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-50.d

Injection Date: 19-Feb-2026 20:30:12 Instrument ID: 30637

Lims ID: LCS 410-770909/2-A

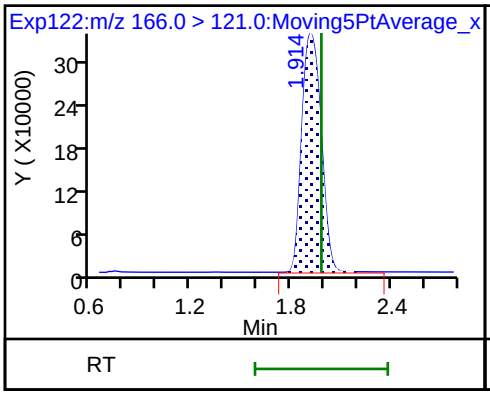
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 50 Worklist Smp#: 50

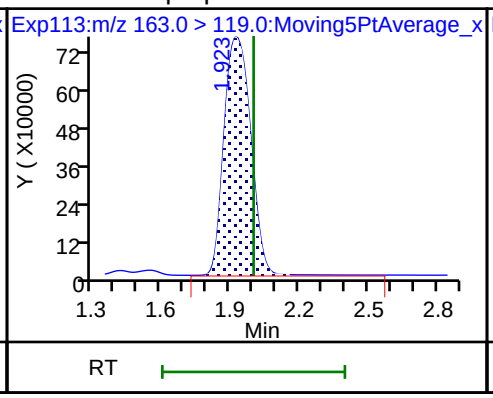
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

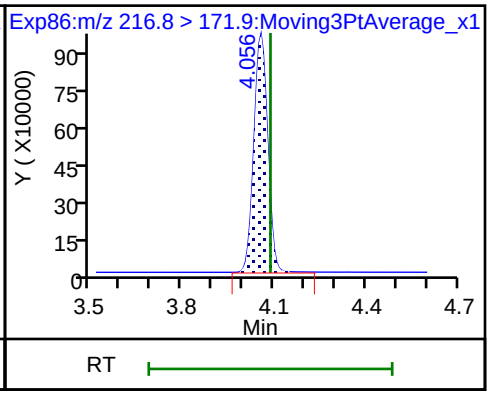
D 1 13C3PFPrA



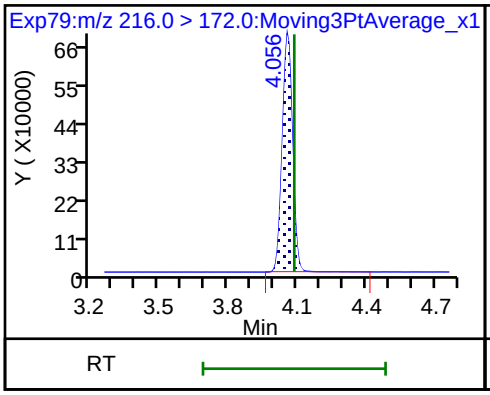
2 Perfluoropropionic acid



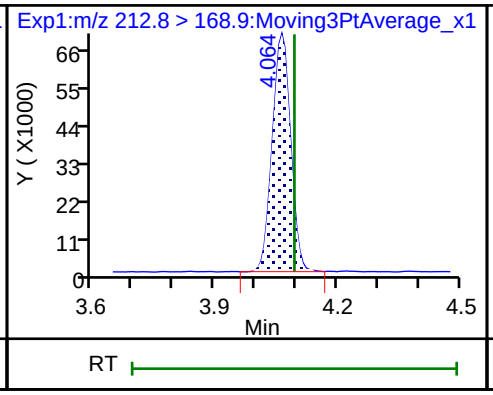
D 3 13C4-PFBA



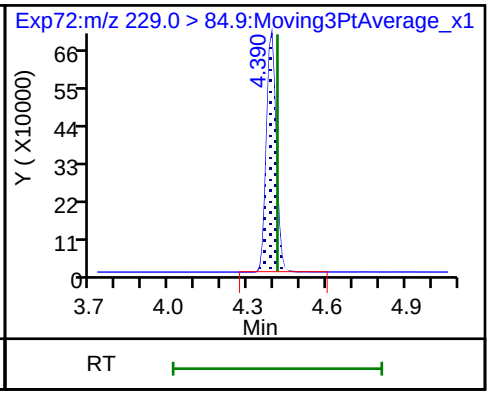
* 4 13C3PFBA



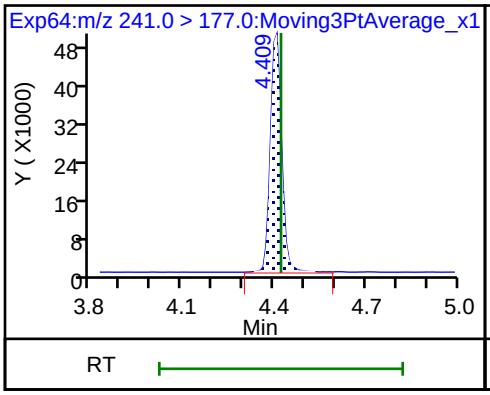
5 PFBA



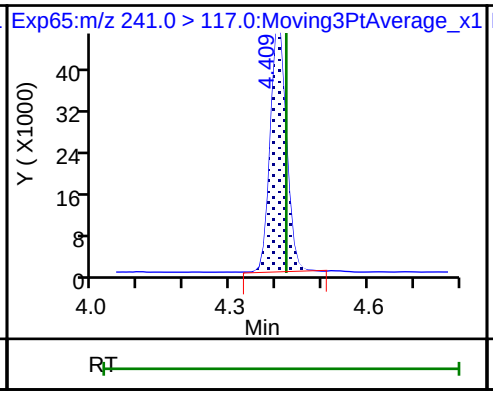
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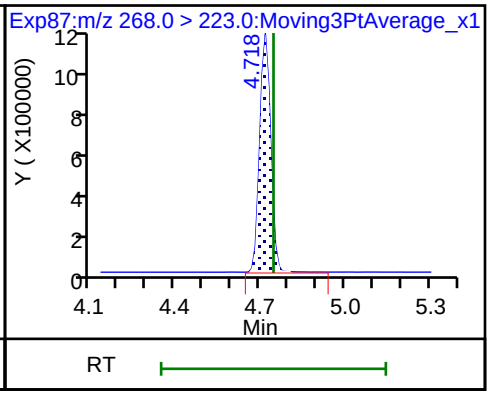
7 3:3 FTCA



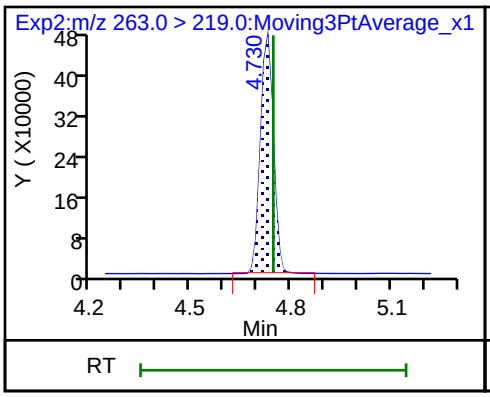
7 3:3 FTCA



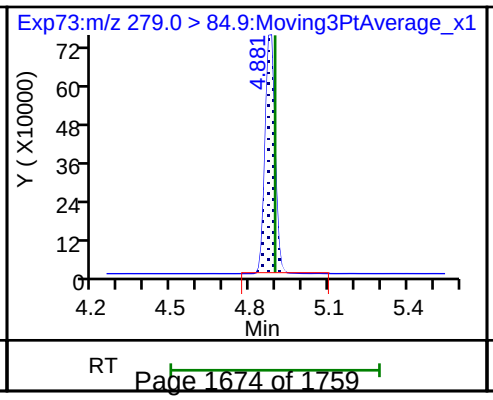
D 8 13C5 PFPeA



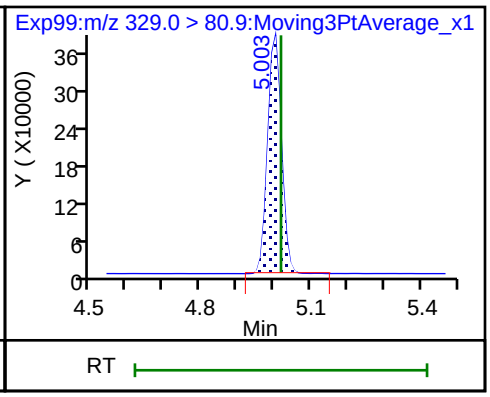
9 PFPA



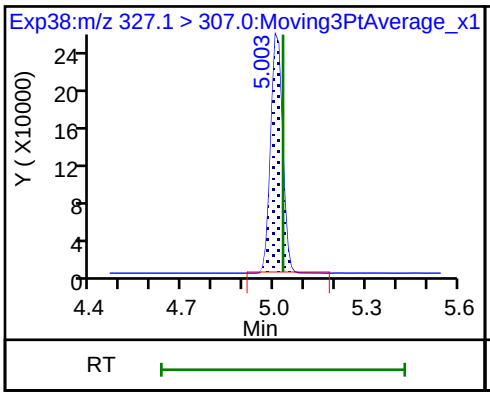
10 PFMBA



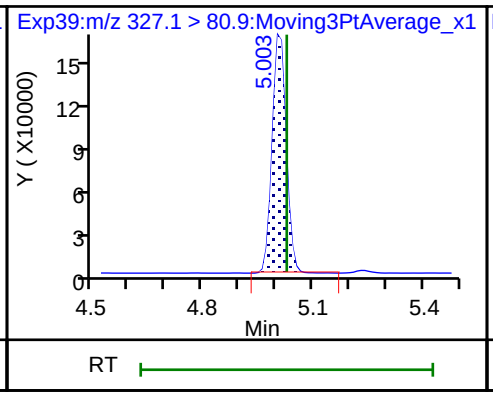
D 11 13C2-4:2FTS



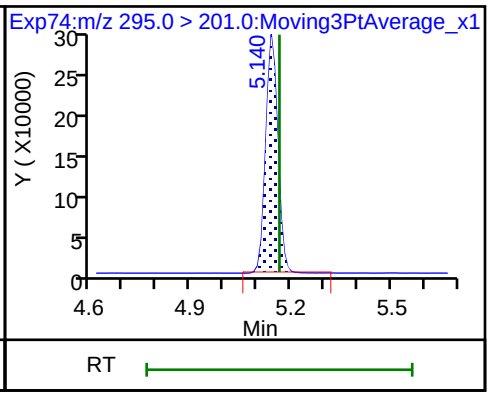
12 4:2FTS



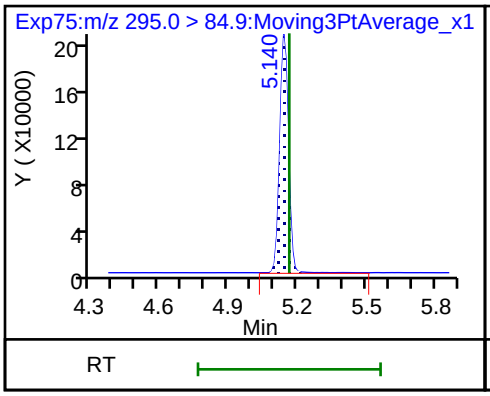
12 4:2FTS



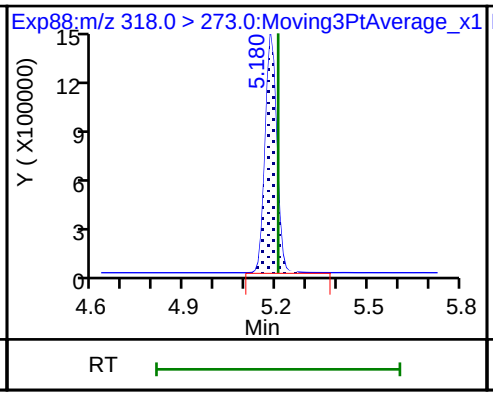
14 NFDHA



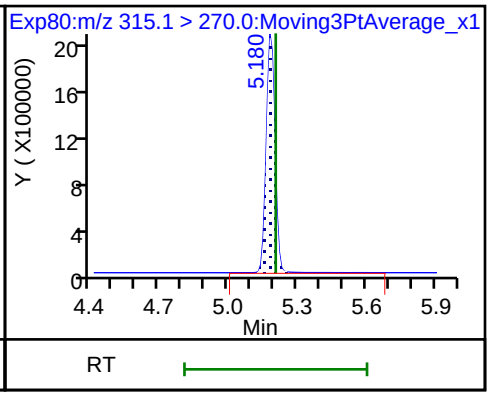
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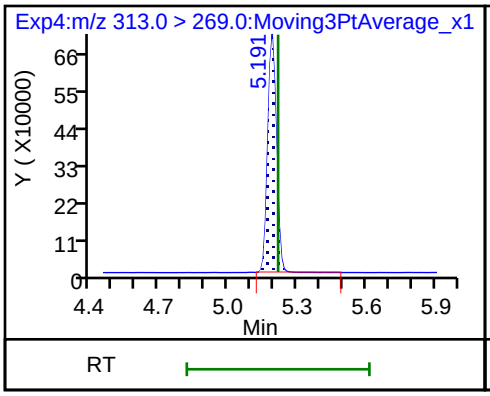
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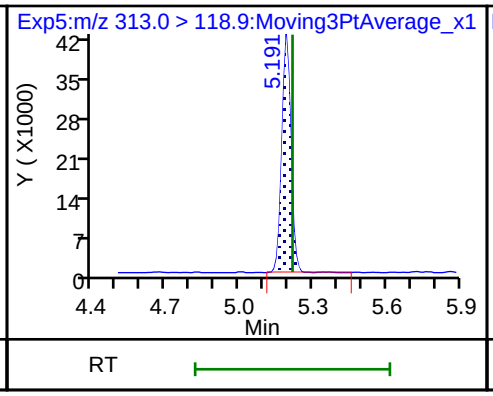
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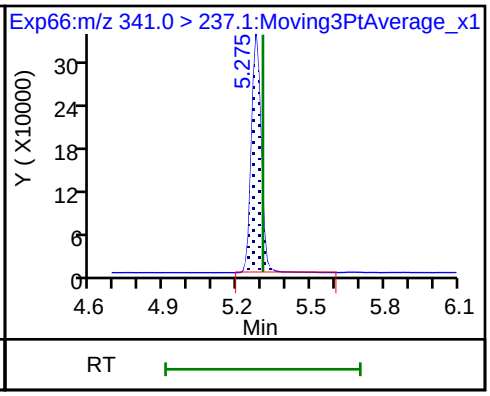
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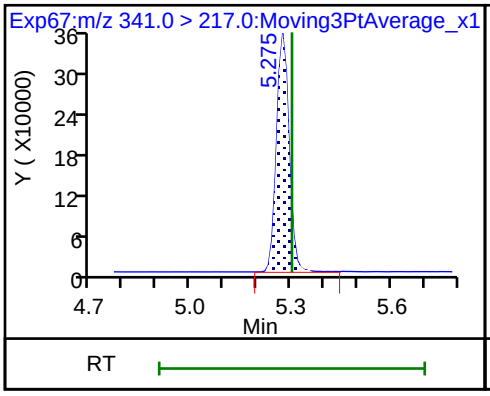
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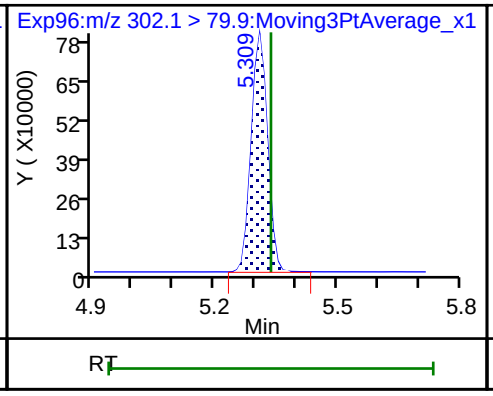
18 5:3 FTCA



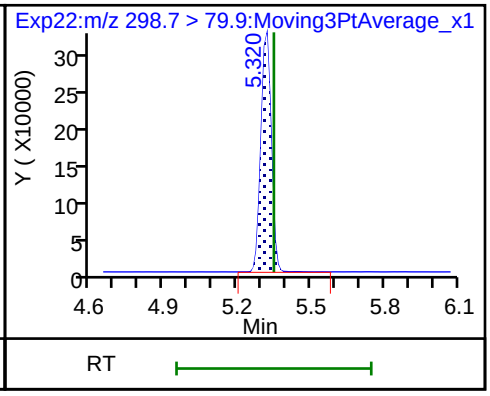
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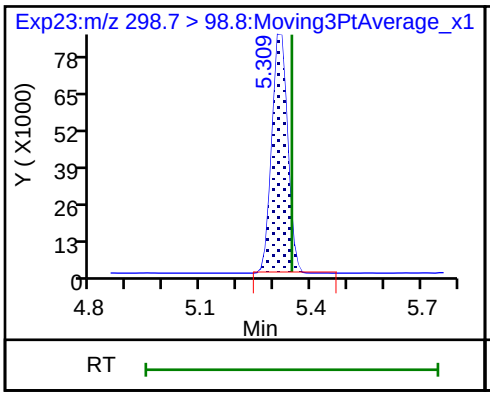
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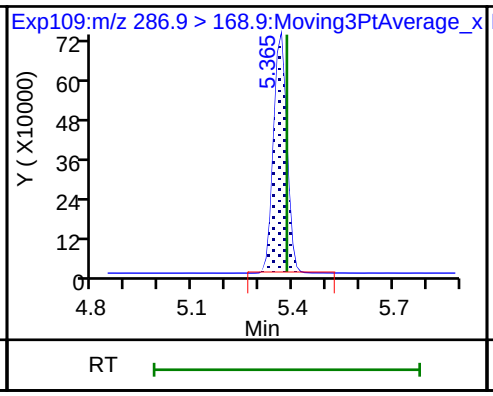
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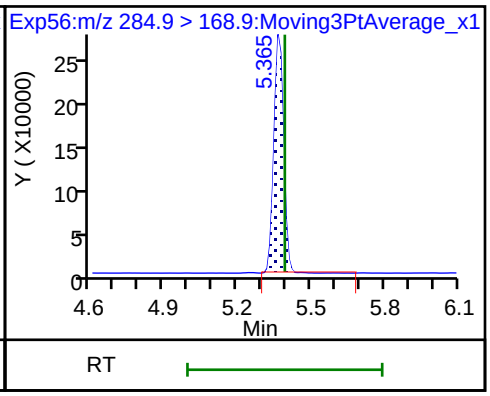
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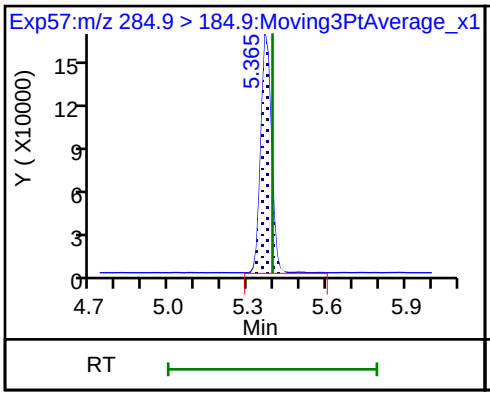
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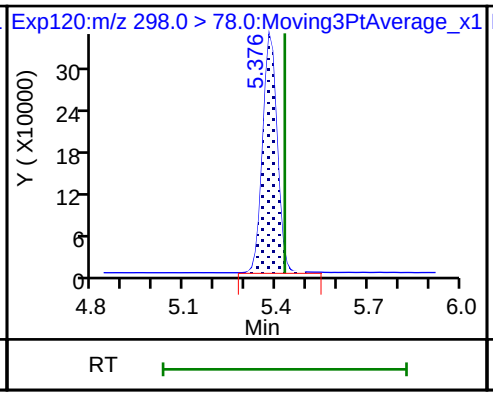
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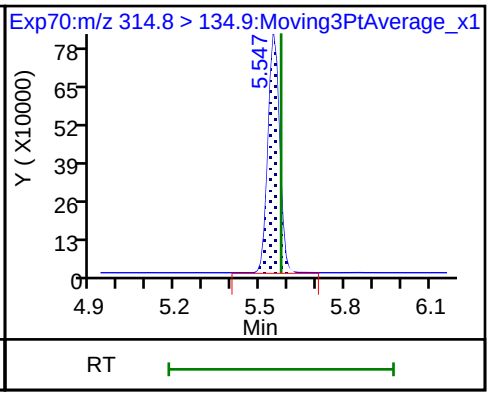
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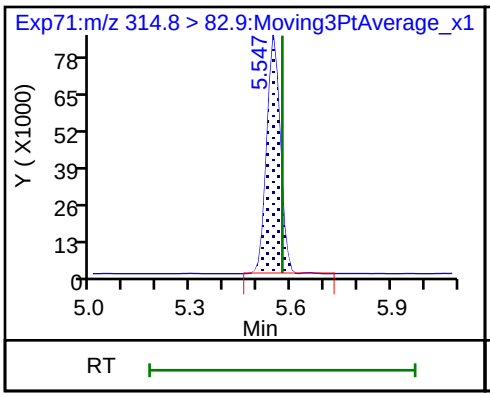
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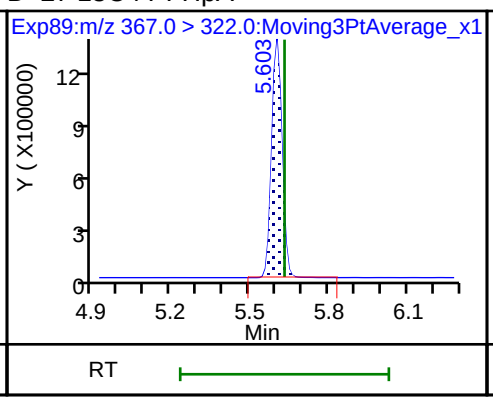
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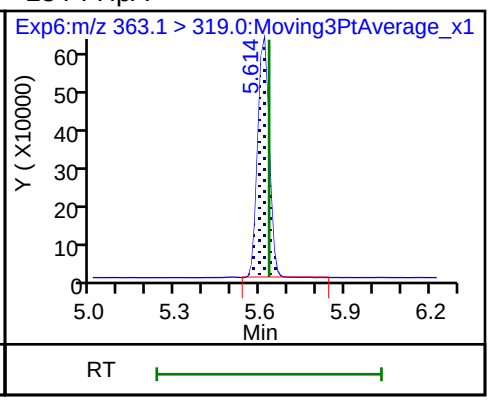
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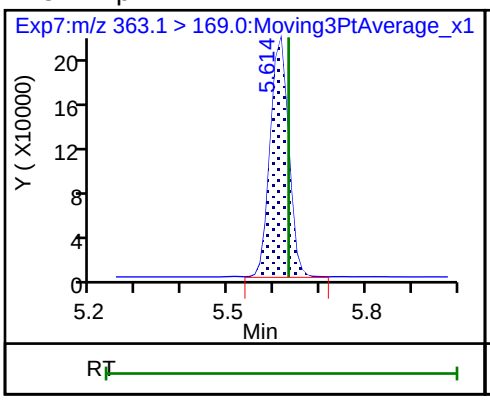
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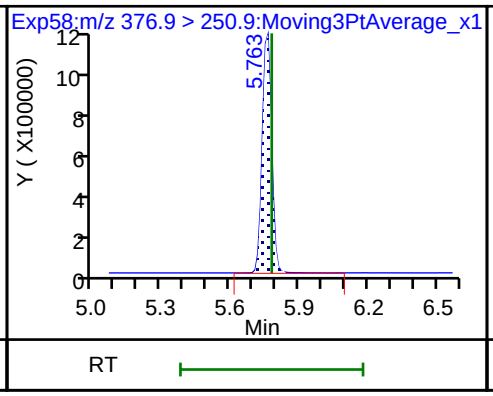
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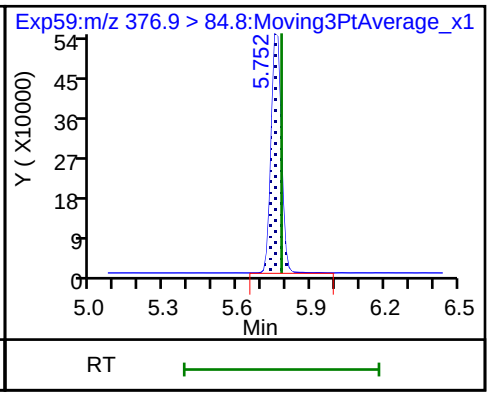
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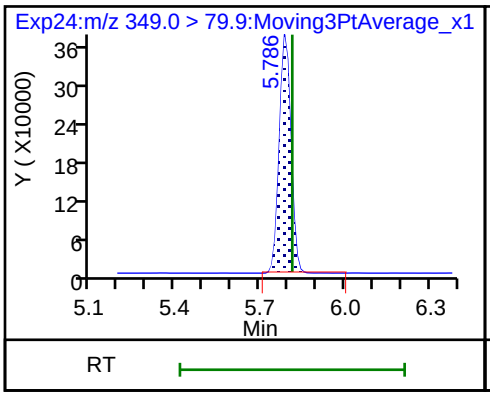
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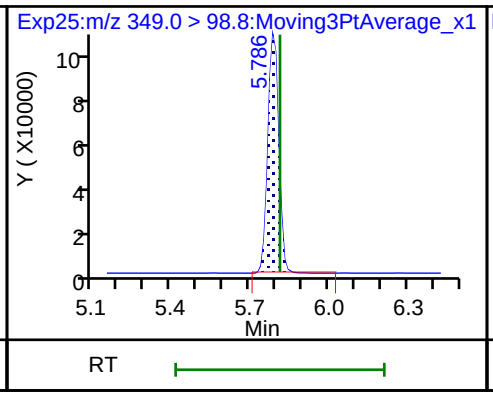
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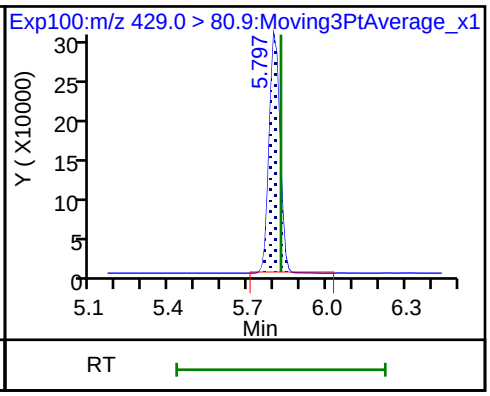
30 PFPeS



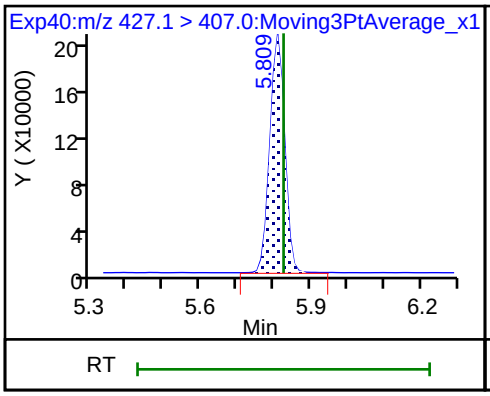
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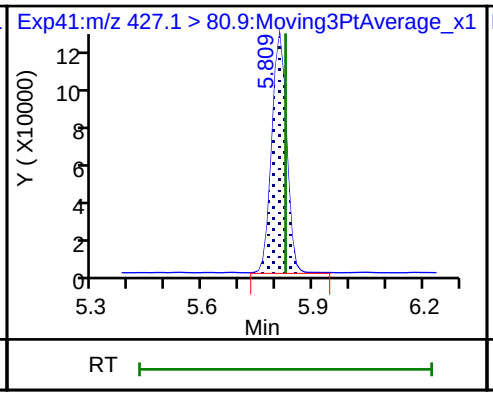
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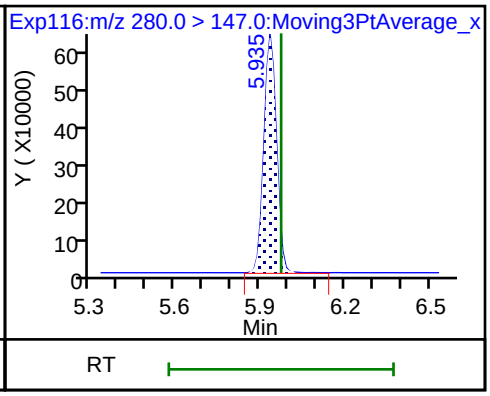
32 6:2FTS



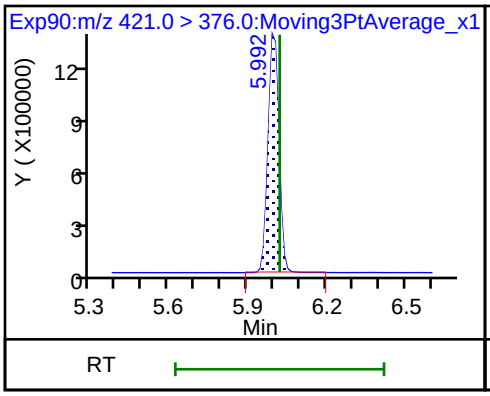
32 6:2FTS



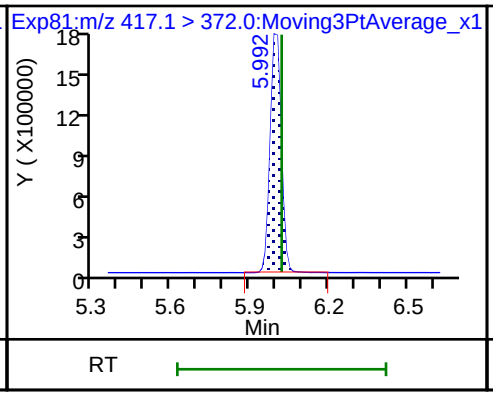
33 BTS



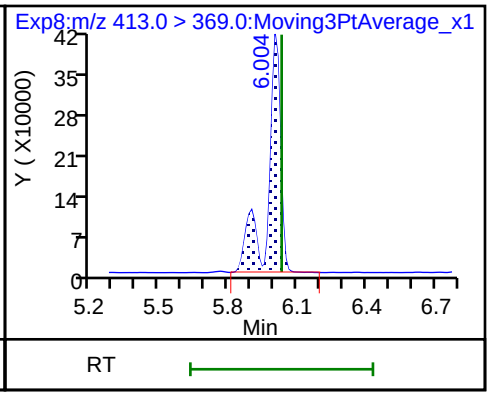
D 34 13C8 PFOA



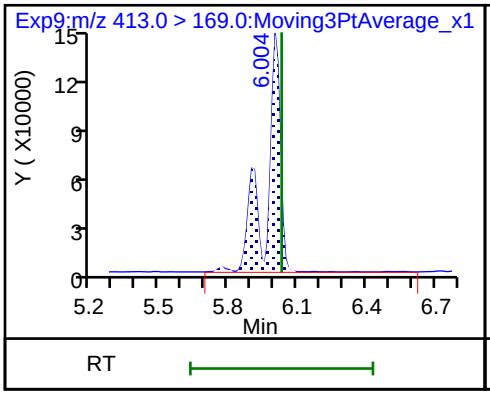
* 35 13C4 PFOA



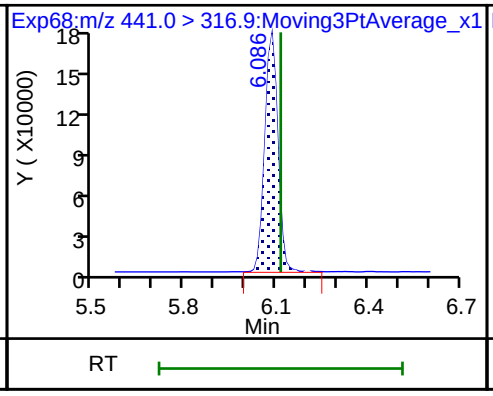
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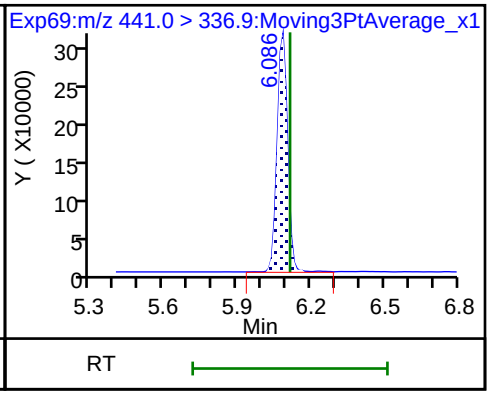
36 PFOA



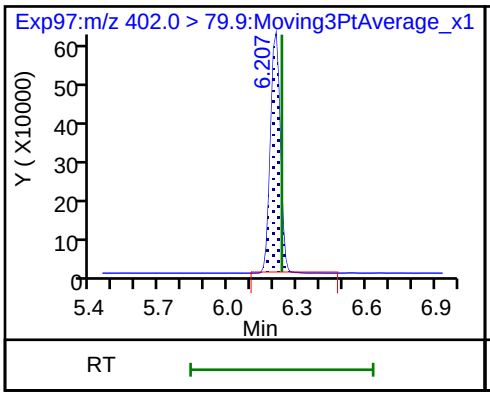
37 7:3 FTCA



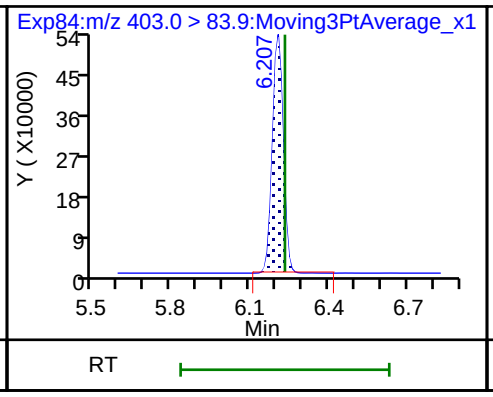
37 7:3 FTCA



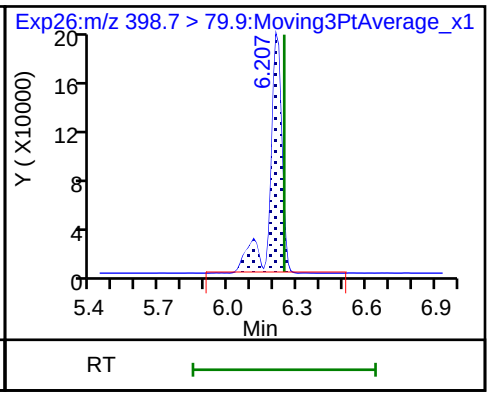
D 38 13C3 PFHxS



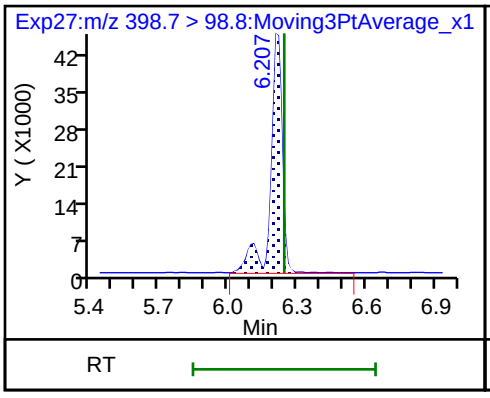
* 39 18O2 PFHxS



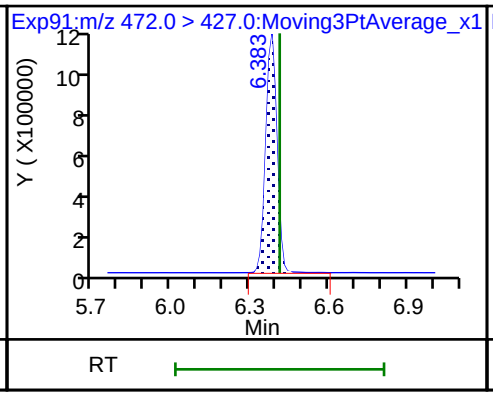
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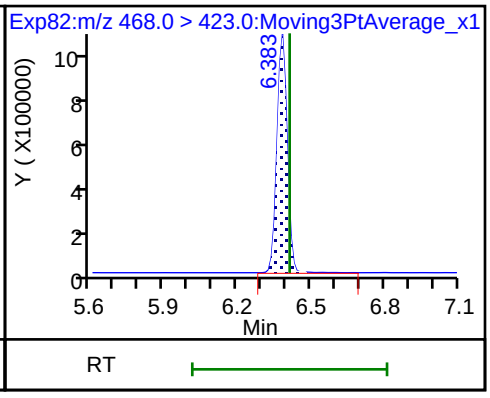
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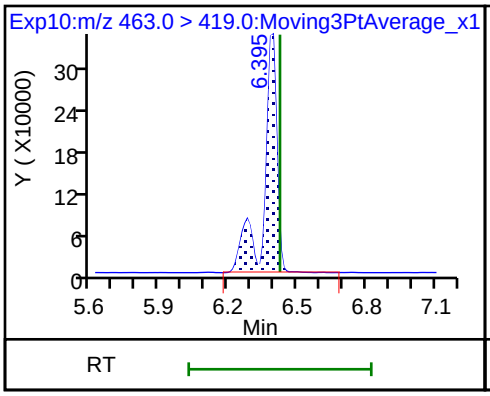
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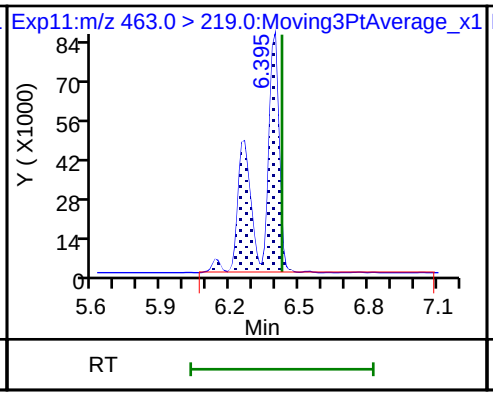
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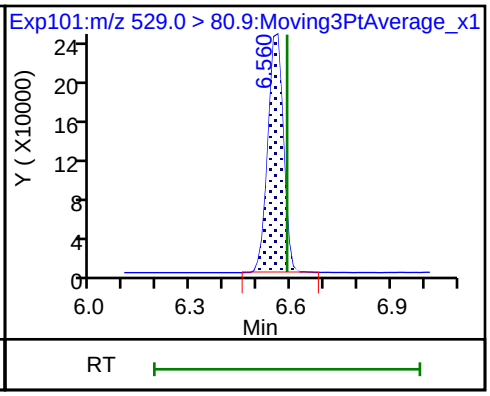
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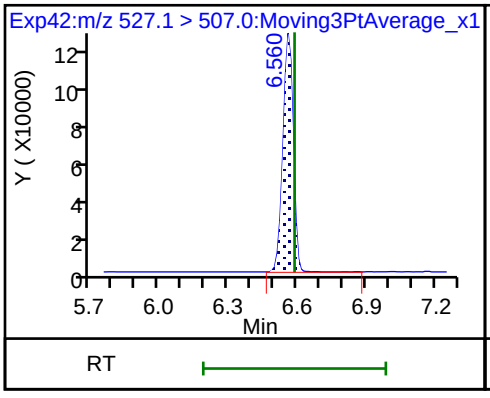
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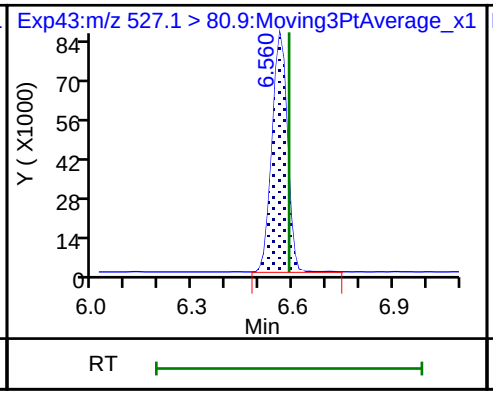
D 44 13C2-8:2FTS



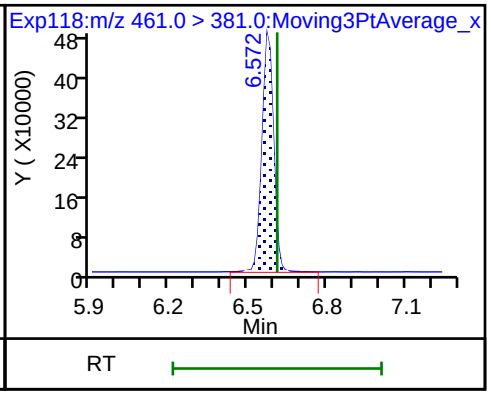
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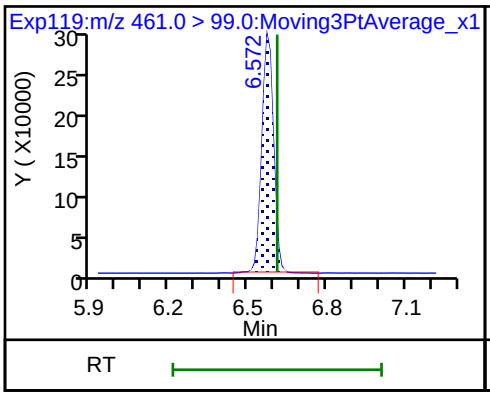
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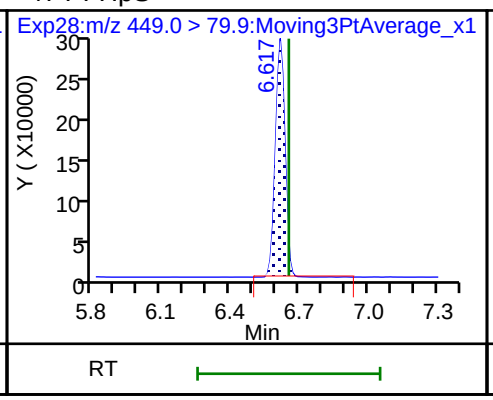
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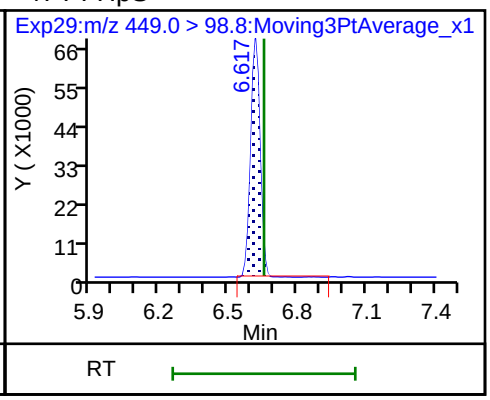
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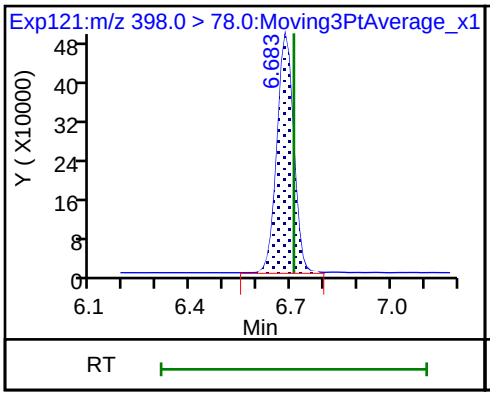
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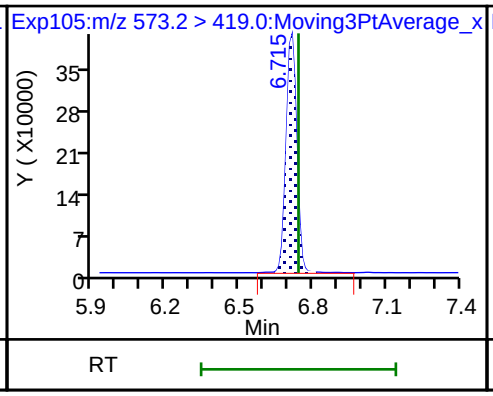
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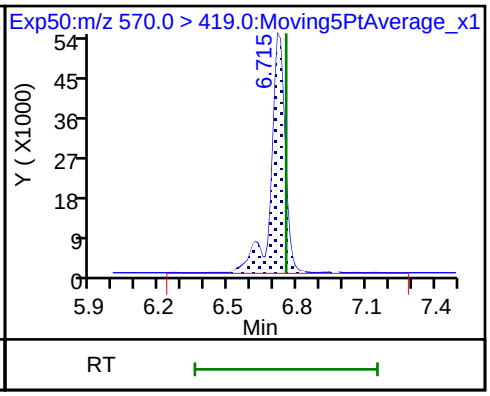
48 FHxSA



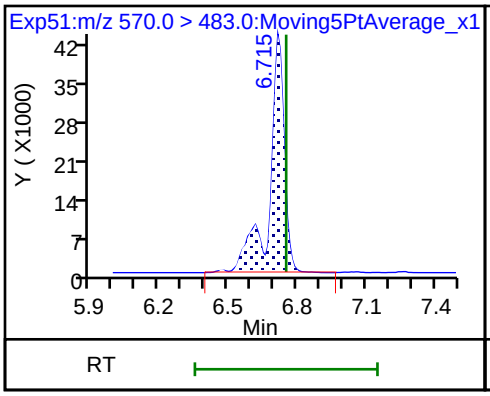
D 49 d3-NMeFOSAA



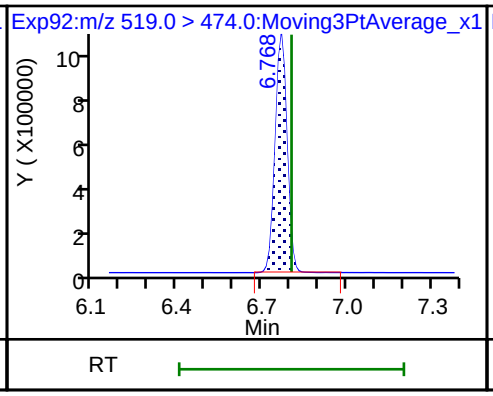
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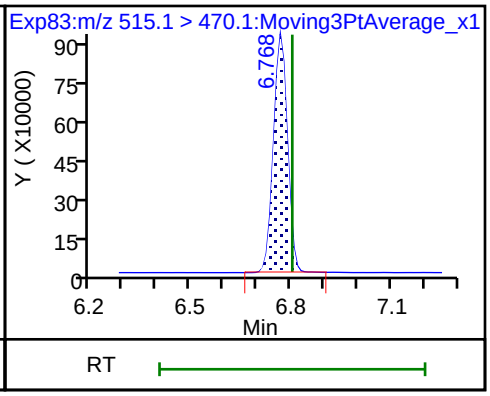
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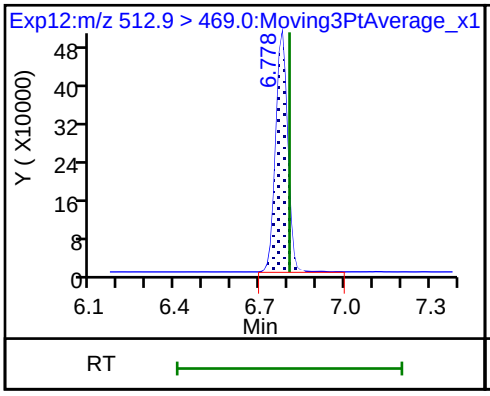
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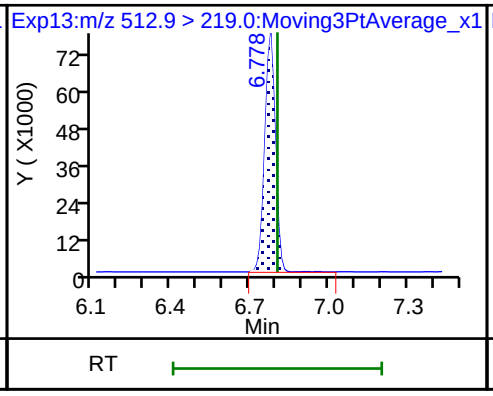
* 52 13C2 PFDA



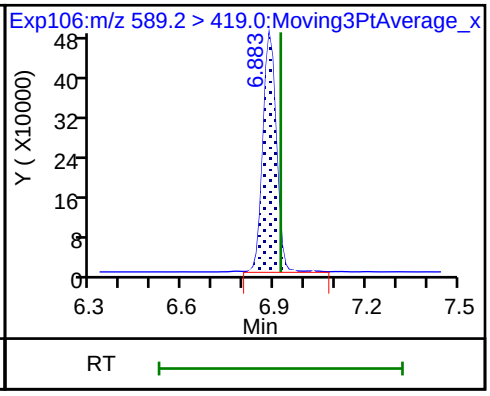
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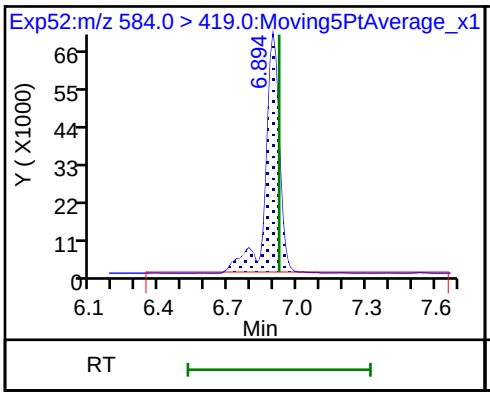
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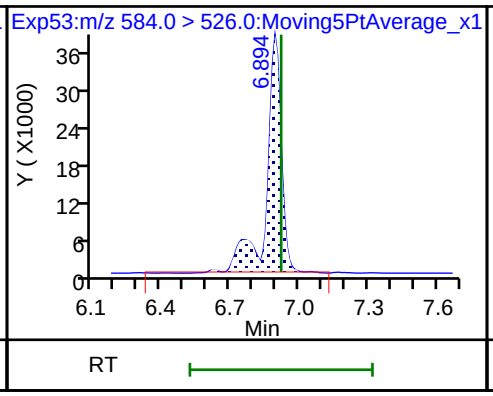
D 54 d5-NEtFOSAA



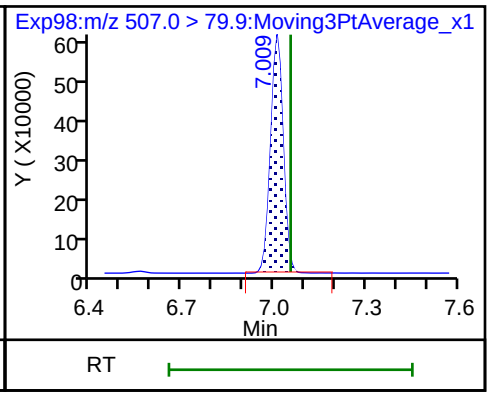
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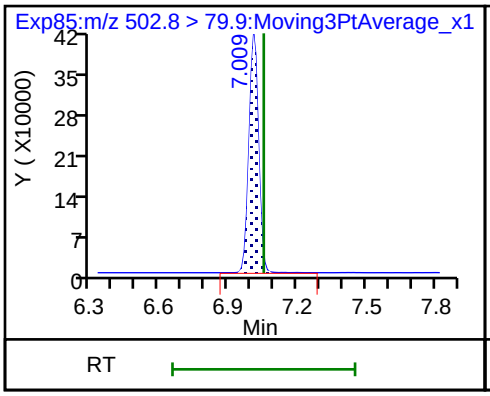
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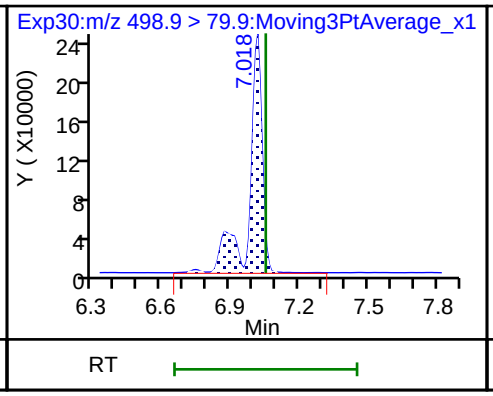
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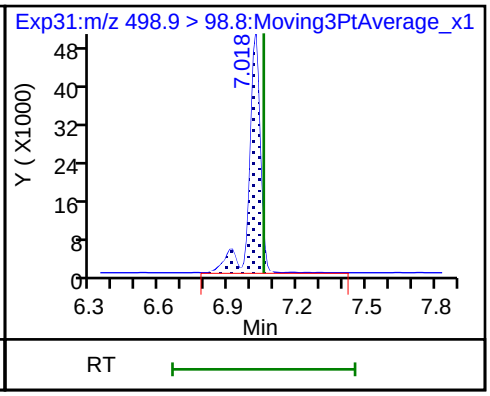
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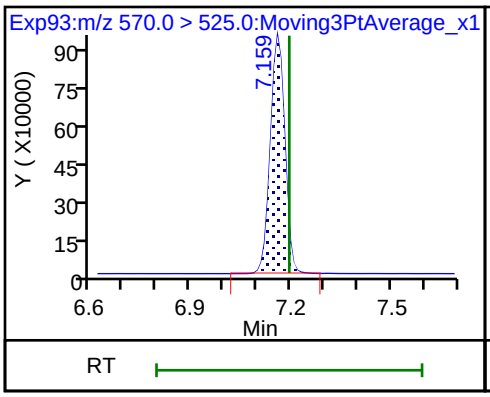
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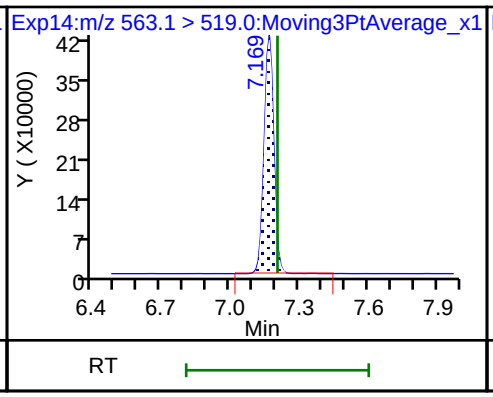
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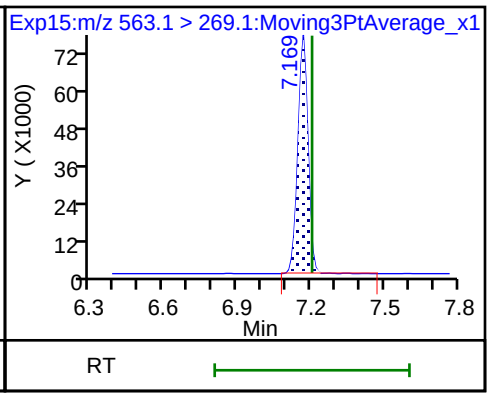
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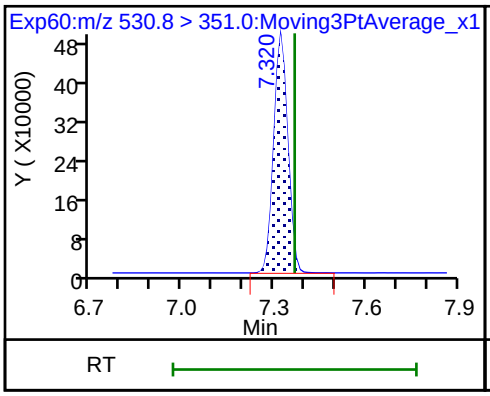
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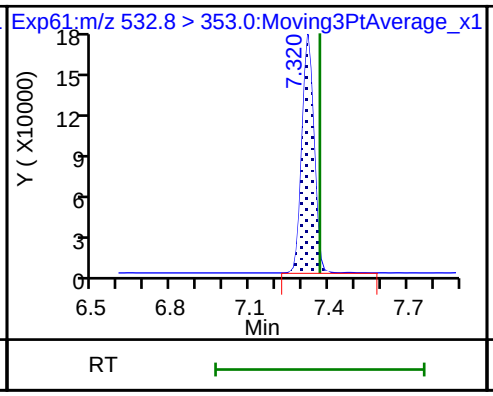
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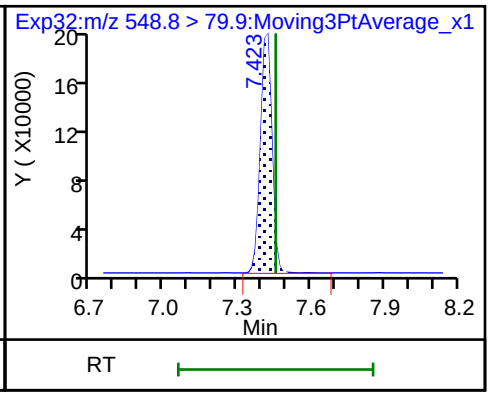
61 9ClFOS



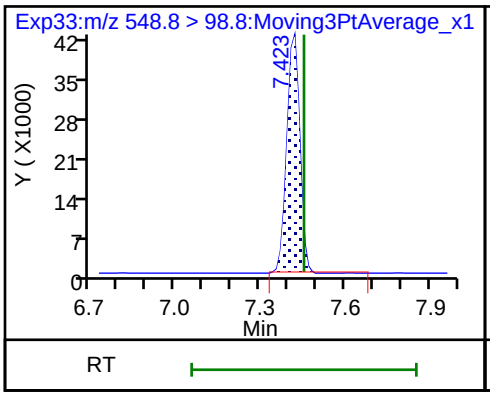
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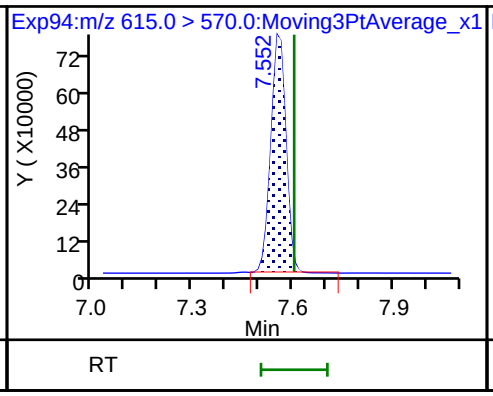
62 PFNS



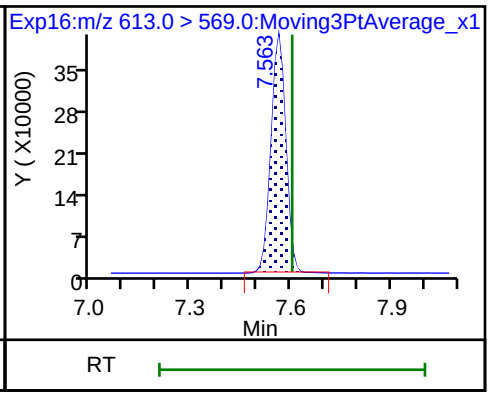
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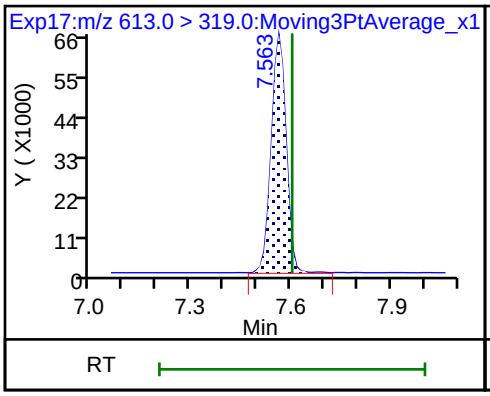
D 63 13C2 PFDoA



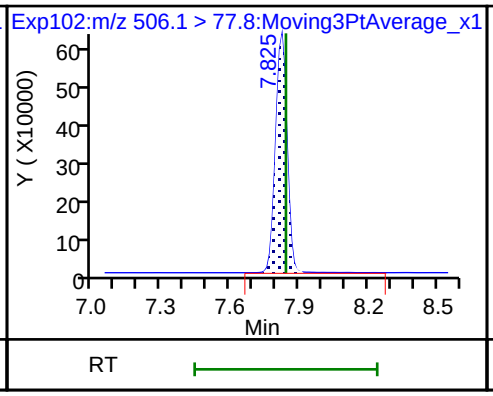
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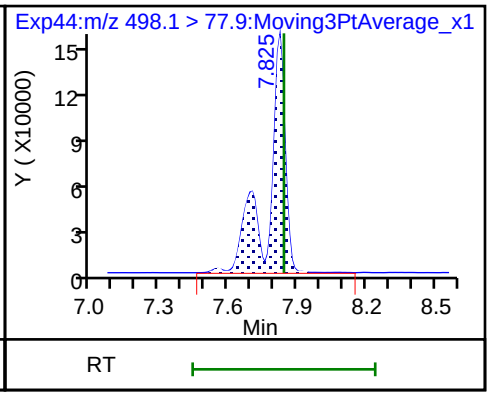
64 PFDoA



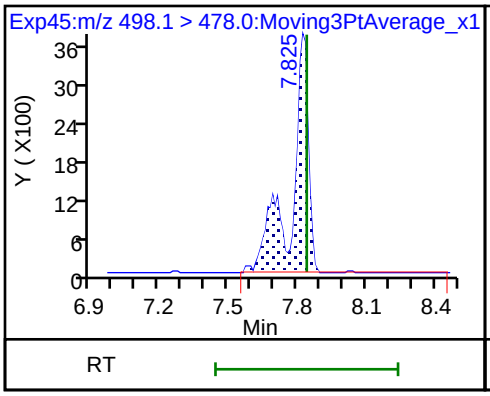
D 65 13C8 FOSA



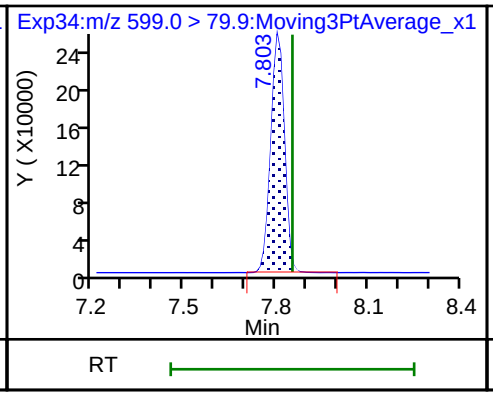
66 PFOSA



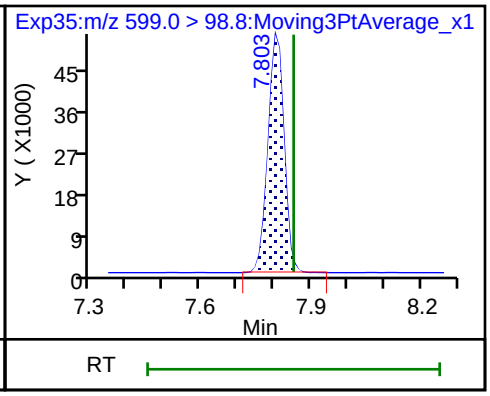
66 PFOSA



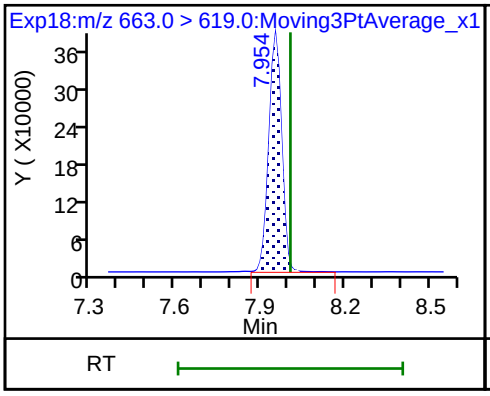
67 PFDS



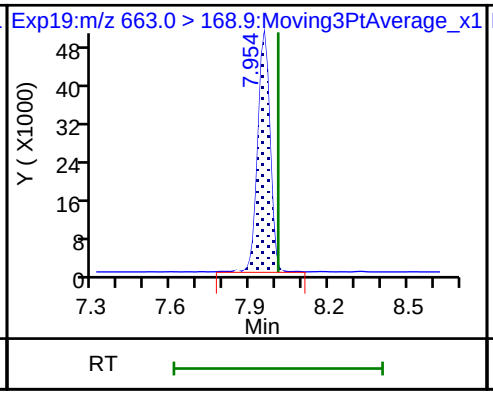
67 PFDS



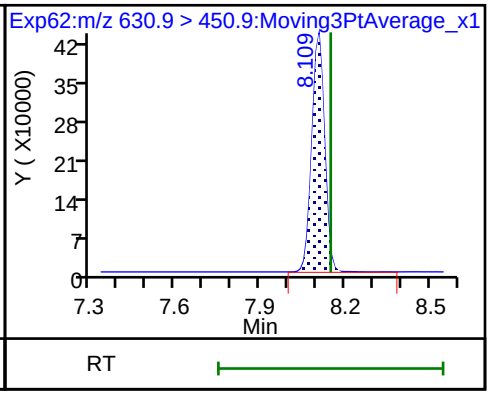
68 PFTrDA



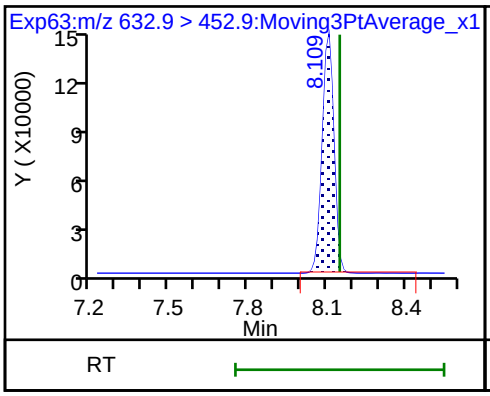
68 PFTrDA



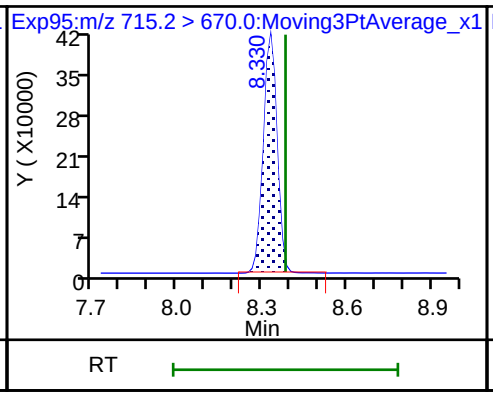
69 11ClFOS



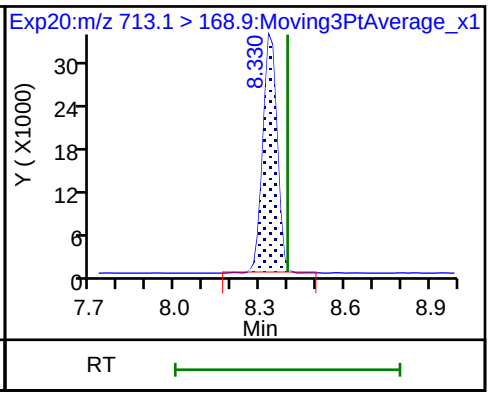
69 11ClFOS



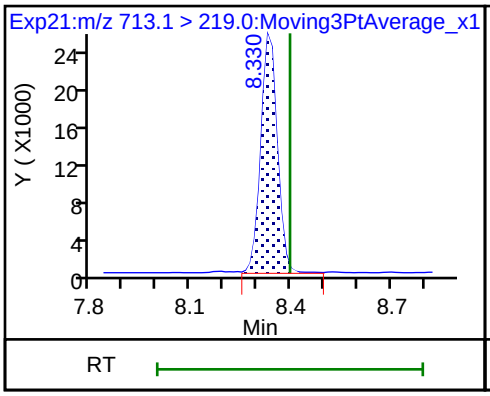
D 70 13C2 PFTeDA



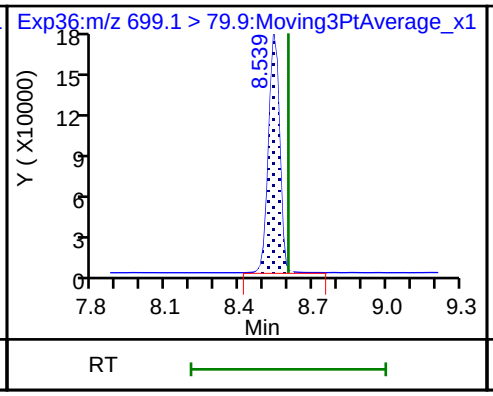
71 PFTeDA



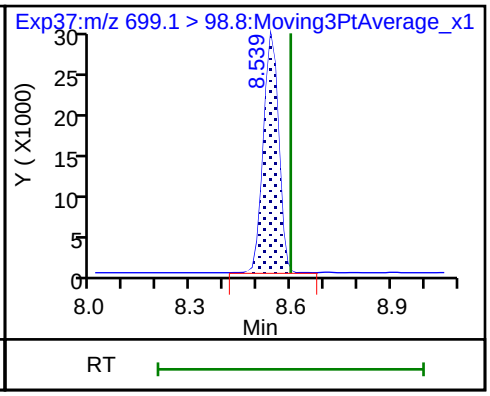
71 PFTeDA



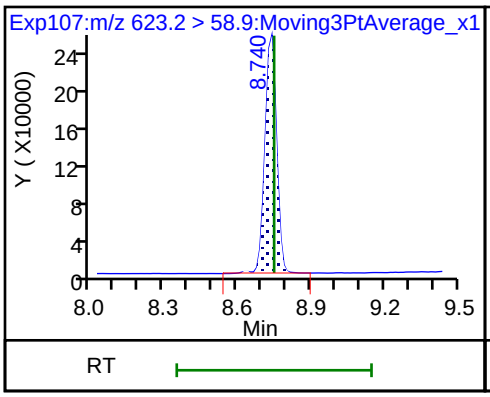
72 PFDoS



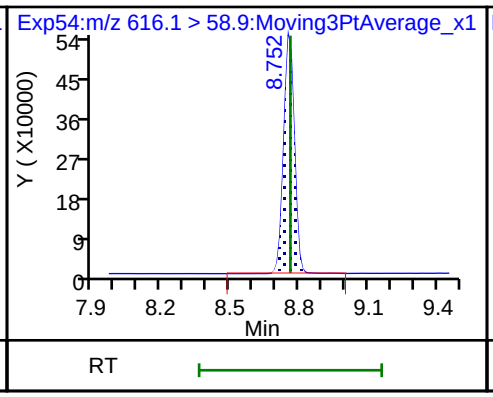
72 PFDoS



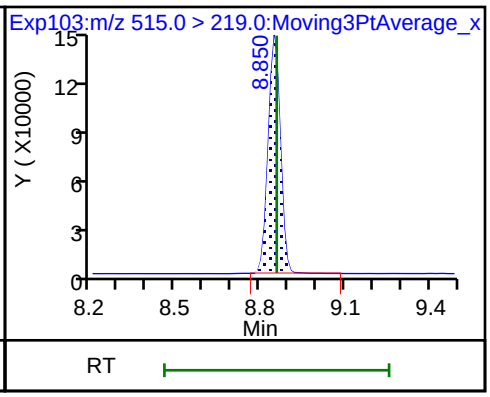
D 73 d7-N-Me-FOSE



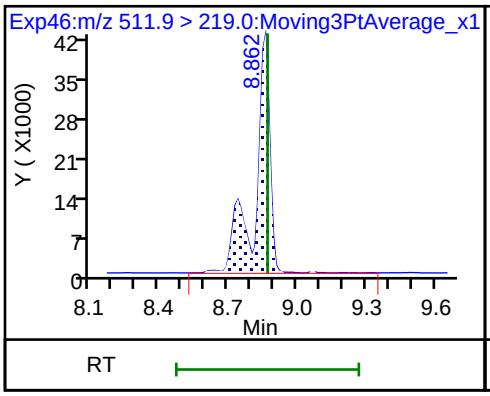
74 N-MeFOSE-M



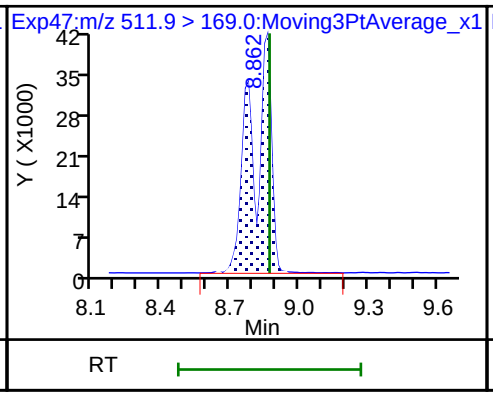
D 75 d3-NMePFOSA



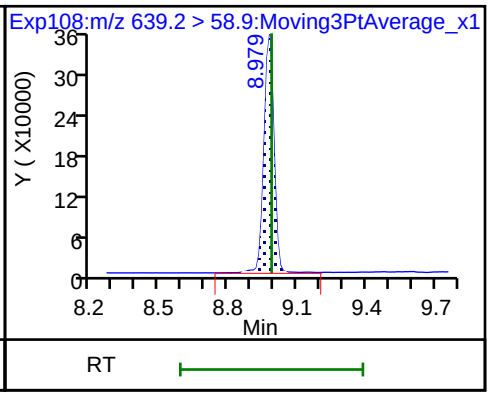
76 NMeFOSA



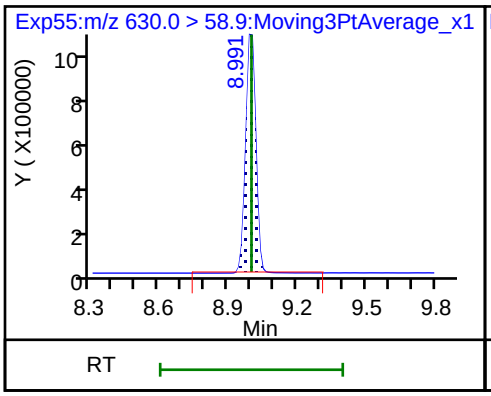
76 NMeFOSA



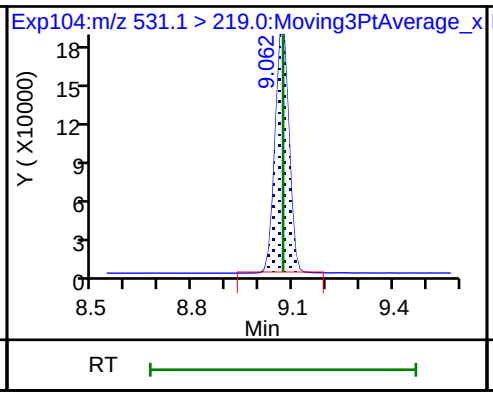
D 77 d9-N-EtFOSE



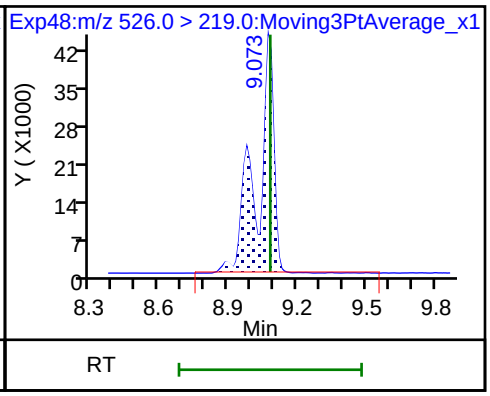
78 N-EtFOSE-M



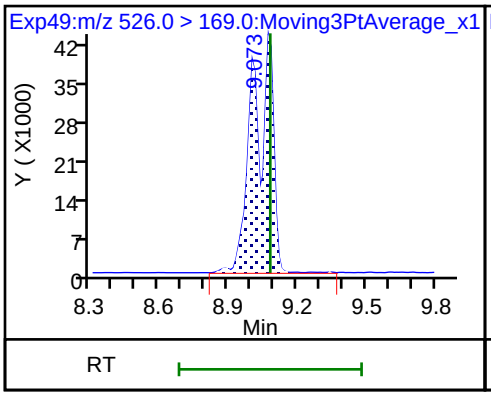
D 79 d5-NEtPFOSA



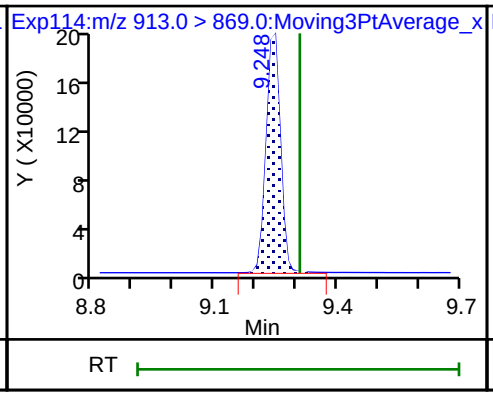
80 N-EtFOSA-M



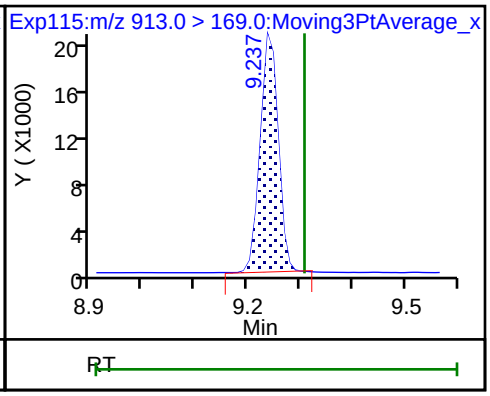
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LLCS 410-770909/3-A

Matrix: Water
Lab File ID: 26FEB19QC-51.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:43

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	7.545		4.00	1.10
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.148		2.00	0.60
307-24-4	Perfluorohexanoic acid (PFHxA)	4.361		2.00	0.50
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.995		2.00	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	4.242		2.00	0.90
375-95-1	Perfluorononanoic acid (PFNA)	3.747		2.00	0.50
335-76-2	Perfluorodecanoic acid (PFDA)	4.139		2.00	0.50
2058-94-8	Perfluoroundecanoic acid (PFUnA)	4.307		2.00	0.50
307-55-1	Perfluorododecanoic acid (PFDoA)	3.891		2.00	0.50
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	3.981		2.00	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	3.391		2.00	0.50
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.456		2.00	0.50
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	4.140		2.00	0.50
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	3.517		2.00	0.80
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	3.762		2.00	0.50
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	3.678		2.00	1.30
68259-12-1	Perfluorononanesulfonic acid (PFNS)	3.324		2.00	0.50
335-77-3	Perfluorodecanesulfonic acid (PFDS)	3.078		2.00	0.50
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	2.310		2.00	0.60
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.689		4.00	1.00
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	8.178		4.00	1.00
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	8.948		4.00	1.00
754-91-6	Perfluorooctanesulfonamide (PFOSA)	3.967		2.00	0.50
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	3.993		2.00	0.50
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	3.922		2.00	1.10

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LLCS 410-770909/3-A

Matrix: Water
Lab File ID: 26FEB19QC-51.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:43

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	3.677		2.00	0.50
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.384		2.00	0.50
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	21.70		10.0	4.00
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	21.63		10.0	4.00
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.296		2.00	1.40
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.862		2.00	0.50
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	4.404		2.00	0.50
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	3.947		2.00	0.50
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.162		2.00	0.50
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	3.660		2.00	0.50
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	3.179		2.00	0.50
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.004		2.00	0.50
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	10.66		4.00	1.00
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	22.70		10.0	2.80
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.92		10.0	2.50

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID:
Lab Sample ID: LLCS 410-770909/3-A

Matrix: Water
Lab File ID: 26FEB19QC-51.d

Analysis Method: 1633A
Date Collected:

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 125(mL)
Date Analyzed: 02/19/2026 20:43

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 771230
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30637

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	122		5-130
2283397-79-3	13C5 PFPeA	123		40-130
2328024-54-8	13C5 PFHxA	123		40-130
2328024-55-9	13C4 PFHpA	130		40-130
1350614-84-4	13C8 PFOA	124		40-130
2283397-80-6	13C9 PFNA	112		40-130
2328024-56-0	13C6 PFDA	95.2		40-130
STL02580	13C7 PFUnA	91.5		30-130
STL02116	13C2 PFTeDA	75.5		10-130
2708218-83-9	13C3 PFBS	125		40-135
2708218-85-1	13C3 PFHxS	113		40-130
2265893-05-6	13C8 PFOS	109		40-130
STL01056	13C8 FOSA	125		40-130
1400690-70-1	d3-NMeFOSAA	117		40-170
1265205-97-7	d5-NEtFOSAA	112		25-135
STL02395	13C2 4:2 FTS	128		40-200
STL02279	13C2 6:2 FTS	126		40-200
STL02280	13C2 8:2 FTS	110		40-300
STL02255	13C3 HFPO-DA	125		40-130
STL02277	d7-N-MeFOSE-M	68.1		10-130
STL02278	d9-N-EtFOSE-M	62.5		10-130
STL02704	d5-NEtPFOSA	94.8		10-130
STL02705	d3-NMePFOSA	99.1		10-130
960315-52-0	13C2 PFDoA	81.9		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-51.d
Lims ID: LLCS 410-770909/3-A
Client ID:
Sample Type: LLCS
Inject. Date: 19-Feb-2026 20:43:45 ALS Bottle#: 51 Worklist Smp#: 51
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: LLCS770909
Misc. Info.: Plate: 1.5mL VT54 (54 vial) Rack: SIL-40 Drawer Vial: 51
Operator ID: ETUS023_USR_INS00050 Instrument ID: 30637

Method: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\30637_1633Final.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 21:18:51 Calib Date: 04-Feb-2026 14:06:05
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30637\20260204-174629.b\26FEB04CAL-08.d

Column 1 : Det: Sciex2 QQQ
Process Host: CTX1651

First Level Reviewer: XBL5 Date: 19-Feb-2026 21:18:12
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C3PFPrA										
166.0 > 121.0	1.923	1.983	-0.060	0.475	2705554	2.57		128	1481	
2 Perfluoropropionic acid										
163.0 > 119.0	1.923	2.000	-0.077	1.000	665178	0.5282		106	27.1	
D 3 13C4-PFBA										
216.8 > 171.9	4.043	4.087	-0.044	0.998	3030497	2.44		122	6978	
* 4 13C3PFBA										
216.0 > 172.0	4.050	4.087	-0.037		2133956	2.00			4931	
5 PFBA										
212.8 > 168.9	4.050	4.094	-0.044	1.002	24041	0.1886		94.3	51.1	
6 PFMPA										
229.0 > 84.9	4.374	4.412	-0.038	0.929	192022	0.1101		110	1154	
7 3:3 FTCA										
241.0 > 177.0	4.393	4.422	-0.029	0.933	16602	0.2665	Target=1.04	133	495	
241.0 > 117.0	4.393	4.422	-0.029	0.933	14712		1.13(0.52-1.56)		143	
D 8 13C5 PFPeA										
268.0 > 223.0	4.710	4.747	-0.037	0.912	3093968	2.46		123	4477	
9 PFPA										
263.0 > 219.0	4.722	4.747	-0.025	1.003	143361	0.1037		104	225	
10 PFMBA										
279.0 > 84.9	4.866	4.895	-0.029	1.033	209666	0.0987		98.7	1732	
D 11 13C2-4:2FTS										
329.0 > 80.9	4.987	5.018	-0.031	0.806	1051683	5.99		128	4589	
12 4:2FTS										
327.1 > 307.0	4.997	5.028	-0.031	1.002	74789	0.1922	Target=1.64	102	964	
327.1 > 80.9	4.997	5.028	-0.031	1.002	48617		1.54(0.82-2.46)		149	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.0 > 201.0	5.125	5.165	-0.040	0.992	81742	0.1040	Target=1.37	104	455	
295.0 > 84.9	5.125	5.165	-0.040	0.992	59397		1.38(0.69-2.06)		361	
D 15 13C5 PFHxA										
318.0 > 273.0	5.165	5.206	-0.041	1.000	3727177	2.47		123	7029	
* 16 13C2 PFHxA										
315.1 > 270.0	5.165	5.206	-0.041		5035339	5.00			7007	
17 PFHxA										
313.0 > 269.0	5.175	5.216	-0.041	1.002	213254	0.1090	Target=17.00	109	518	
313.0 > 118.9	5.175	5.216	-0.041	1.002	12696		16.80(8.50-25.50)		120	
18 5:3 FTCA										
341.0 > 237.1	5.258	5.303	-0.045	1.018	127636	0.5675	Target=1.07	113	603	
341.0 > 217.0	5.258	5.303	-0.045	1.018	111180		1.15(0.53-1.60)		193	
D 19 13C3 PFBS										
302.1 > 79.9	5.291	5.337	-0.046	0.855	2243683	2.33		125	10185	
20 PFBS										
298.7 > 79.9	5.303	5.348	-0.045	1.002	103980	0.0864	Target=3.26	97.3	706	
298.7 > 98.8	5.303	5.348	-0.045	1.002	29642		3.51(1.63-4.90)		167	
D 21 13C3 HFPO-DA										
286.9 > 168.9	5.348	5.381	-0.033	1.035	2127896	2.49		125	6232	
22 HFPO-DA										
284.9 > 168.9	5.348	5.393	-0.045	1.000	91378	0.0824	Target=1.71	110	378	
284.9 > 184.9	5.348	5.393	-0.045	1.000	42708		2.14(0.86-2.57)		170	
23 FBSA										
298.0 > 78.0	5.359	5.427	-0.068	1.013	127439	0.1139		114	469	
25 PFEESA										
314.8 > 134.9	5.529	5.574	-0.045	1.071	237949	0.0751	Target=9.87	84.2	1569	
314.8 > 82.9	5.529	5.574	-0.045	1.071	24345		9.77(4.93-14.80)		152	
D 27 13C4 PFHpA										
367.0 > 322.0	5.585	5.631	-0.046	1.081	3618367	2.60		130	5893	
28 PFHpA										
363.1 > 319.0	5.596	5.631	-0.035	1.002	201946	0.0999	Target=3.06	99.9	437	
363.1 > 169.0	5.596	5.631	-0.035	1.002	57104		3.54(1.53-4.59)		254	
29 ADONA										
376.9 > 250.9	5.745	5.779	-0.034	1.074	372492	0.0965	Target=2.15	102	1568	
376.9 > 84.8	5.745	5.779	-0.034	1.074	159764		2.33(1.08-3.23)		652	
30 PFPeS										
349.0 > 79.9	5.779	5.814	-0.035	0.934	124637	0.1035	Target=3.62	110	614	
349.0 > 98.8	5.779	5.814	-0.035	0.934	31426		3.97(1.81-5.42)		140	
D 31 13C2-6:2FTS										
429.0 > 80.9	5.779	5.825	-0.046	0.934	914208	6.02		126	3525	
32 6:2FTS										
427.1 > 407.0	5.791	5.825	-0.034	1.002	65561	0.2044	Target=1.50	107	180	
427.1 > 80.9	5.791	5.825	-0.034	1.002	45923		1.43(0.75-2.25)		168	
33 BTS										
280.0 > 147.0	5.917	5.974	-0.057	0.956	220702	0.1071		107	1074	
D 34 13C8 PFOA										
421.0 > 376.0	5.985	6.020	-0.035	1.000	3890656	2.49		124	7886	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 35 13C4 PFOA										
417.1 > 372.0	5.985	6.020	-0.035		5133260	5.00			5767	
36 PFOA										
413.0 > 369.0	5.985	6.032	-0.047	1.000	183916	0.1061	Target=2.55	106	196	
413.0 > 169.0	5.985	6.032	-0.047	1.000	71247		2.58(1.27-3.82)		137	
37 7:3 FTCA										
441.0 > 316.9	6.067	6.114	-0.047	1.175	68688	0.5229	Target=0.54	105	240	
441.0 > 336.9	6.067	6.114	-0.047	1.175	121374		0.57(0.27-0.81)		597	
D 38 13C3 PFHxS										
402.0 > 79.9	6.190	6.233	-0.043	1.000	1871570	2.14		113	5115	
* 39 18O2 PFHxS										
403.0 > 83.9	6.190	6.233	-0.043		1490827	1.90			4583	
40 PFHxS										
398.7 > 79.9	6.190	6.243	-0.053	1.000	77093	0.0879	Target=4.54	96.4	246	
398.7 > 98.8	6.201	6.243	-0.042	1.002	18846		4.09(2.27-6.81)		4848	
D 41 13C9 PFNA										
472.0 > 427.0	6.366	6.413	-0.047	1.000	3517877	2.25		112	3971	
* 42 13C5 PFNA										
468.0 > 423.0	6.366	6.413	-0.047		3183682	2.00			7554	
43 PFNA										
463.0 > 419.0	6.377	6.424	-0.047	1.002	149284	0.0937	Target=2.78	93.7	398	
463.0 > 219.0	6.366	6.424	-0.058	1.000	53946		2.77(1.39-4.17)		169	
D 44 13C2-8:2FTS										
529.0 > 80.9	6.541	6.588	-0.047	1.057	796023	5.29		110	1619	
45 8:2FTS										
527.1 > 507.0	6.541	6.588	-0.047	1.000	50627	0.2237	Target=1.45	117	208	
527.1 > 80.9	6.553	6.588	-0.035	1.002	30480		1.66(0.73-2.18)		114	
46 PFECHS										
461.0 > 381.0	6.565	6.611	-0.046	1.061	156325	0.0903	Target=1.67	97.7	584	
461.0 > 99.0	6.553	6.611	-0.058	1.059	99561		1.57(0.84-2.51)		450	
47 PFHpS										
449.0 > 79.9	6.600	6.654	-0.054	0.944	97910	0.0940	Target=4.71	98.6	393	
449.0 > 98.8	6.600	6.654	-0.054	0.944	19431		5.04(2.36-7.07)		116	
48 FHxSA										
398.0 > 78.0	6.665	6.709	-0.044	1.077	208210	0.1326		133	748	
D 49 d3-NMeFOSAA										
573.2 > 419.0	6.698	6.741	-0.043	0.958	1249712	5.84		117	1585	
50 NMeFOSAA										
570.0 > 419.0	6.709	6.751	-0.043	1.002	26097	0.0919	Target=1.26	91.9	253	
570.0 > 483.0	6.698	6.751	-0.053	1.000	26618		0.98(0.63-1.89)		5375	
D 51 13C6 PFDA										
519.0 > 474.0	6.751	6.804	-0.053	1.000	3133754	1.90		95.2	4387	
* 52 13C2 PFDA										
515.1 > 470.1	6.751	6.804	-0.053		2948979	2.00			4872	
53 PFDA										
512.9 > 469.0	6.762	6.804	-0.042	1.002	161610	0.1035	Target=6.81	103	526	
512.9 > 219.0	6.762	6.804	-0.042	1.002	27073		5.97(3.40-10.21)		103	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.2 > 419.0	6.867	6.921	-0.054	0.982	1505445	5.59		112	1452	
55 NEtFOSAA										
584.0 > 419.0	6.877	6.921	-0.044	1.002	37642	0.1096	Target=1.64	110	834	
584.0 > 526.0	6.877	6.921	-0.044	1.002	22979		1.64(0.82-2.45)		164	
D 56 13C8 PFOS										
507.0 > 79.9	6.993	7.053	-0.060	1.000	1859031	2.09		109	2434	
* 57 13C4 PFOS										
502.8 > 79.9	6.993	7.053	-0.060		1229842	1.92			4219	
58 PFOS										
498.9 > 79.9	7.004	7.053	-0.049	1.001	103688	0.0920	Target=5.55	98.9	407	
498.9 > 98.8	7.004	7.053	-0.049	1.001	20297		5.11(2.77-8.32)		156	
D 59 13C7 PFUnA										
570.0 > 525.0	7.146	7.195	-0.049	1.058	3009043	1.83		91.5	5582	
60 PFUnA										
563.1 > 519.0	7.155	7.205	-0.050	1.001	144681	0.1077	Target=5.71	108	791	
563.1 > 269.1	7.155	7.205	-0.050	1.001	31583		4.58(2.85-8.56)		173	
61 9ClFOS										
530.8 > 351.0	7.304	7.367	-0.063	1.044	186617	0.0915	Target=3.10	98.0	1512	
532.8 > 353.0	7.304	7.367	-0.063	1.044	57815		3.23(1.55-4.65)		447	
62 PFNS										
548.8 > 79.9	7.406	7.455	-0.049	1.059	70857	0.0831	Target=4.40	86.4	651	
548.8 > 98.8	7.406	7.455	-0.049	1.059	14491		4.89(2.20-6.60)		127	
D 63 13C2 PFDoA										
615.0 > 570.0	7.537	7.603	-0.066	1.116	2550710	1.64		81.9	3806	
64 PFDoA										
613.0 > 569.0	7.548	7.603	-0.055	1.001	133595	0.0973	Target=6.25	97.3	896	
613.0 > 319.0	7.548	7.603	-0.055	1.001	24238		5.51(3.12-9.37)		245	
D 65 13C8 FOSA										
506.1 > 77.8	7.810	7.842	-0.032	1.117	2236365	2.51		125	5598	
66 PFOSA										
498.1 > 77.9	7.799	7.842	-0.043	0.999	92055	0.0992	Target=44.01	99.2	508	
498.1 > 478.0	7.799	7.842	-0.043	0.999	2468		37.30(22.00-66.01)		26.0	
67 PFDS										
599.0 > 79.9	7.788	7.853	-0.065	1.114	83133	0.0769	Target=4.97	79.8	668	
599.0 > 98.8	7.788	7.853	-0.065	1.114	17442		4.77(2.49-7.46)		190	
68 PFTrDA										
663.0 > 619.0	7.939	8.007	-0.068	0.955	138048	0.0995	Target=7.34	99.5	1080	
663.0 > 168.9	7.939	8.007	-0.068	0.955	19866		6.95(3.67-11.01)		212	
69 11ClFOS										
630.9 > 450.9	8.095	8.150	-0.055	1.158	141626	0.0795	Target=3.07	84.2	1615	
632.9 > 452.9	8.095	8.150	-0.055	1.158	48934		2.89(1.54-4.61)		448	
D 70 13C2 PFTeDA										
715.2 > 670.0	8.313	8.382	-0.069	1.231	1410321	1.51		75.5	2894	
71 PFTeDA										
713.1 > 168.9	8.326	8.397	-0.071	1.002	12932	0.0848	Target=1.18	84.8	158	
713.1 > 219.0	8.313	8.397	-0.084	1.000	10943		1.18(0.59-1.77)		95.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
72 PFDoS										
699.1 > 79.9	8.534	8.599	-0.065	1.220	57879	0.0578	Target=5.61	59.5	503	
699.1 > 98.8	8.534	8.599	-0.065	1.220	11444		5.06(2.81-8.42)		134	
D 73 d7-N-Me-FOSE										
623.2 > 58.9	8.723	8.749	-0.026	1.247	774926	3.40		68.1	367	
74 N-MeFOSE-M										
616.1 > 58.9	8.748	8.761	-0.013	1.003	187699	0.5425		109	181	
D 75 d3-NMePFOSA										
515.0 > 219.0	8.834	8.858	-0.024	1.263	441688	1.98		99.1	3300	
76 NMeFOSA										
511.9 > 219.0	8.846	8.870	-0.024	1.001	20519	0.0998	Target=0.75	99.8	299	
511.9 > 169.0	8.846	8.870	-0.024	1.001	28510		0.72(0.38-1.13)		172	
D 77 d9-N-EtFOSE										
639.2 > 58.9	8.963	8.988	-0.025	1.282	950688	3.12		62.5	394	
78 N-EtFOSE-M										
630.0 > 58.9	8.987	8.999	-0.012	1.003	314700	0.5407		108	158	
D 79 d5-NEtPFOSA										
531.1 > 219.0	9.057	9.070	-0.013	1.295	576704	1.90		94.8	2330	
80 N-EtFOSA-M										
526.0 > 219.0	9.069	9.082	-0.013	1.001	23807	0.0980	Target=0.82	98.0	237	
526.0 > 169.0	9.069	9.082	-0.013	1.001	30745		0.77(0.41-1.23)		233	
81 Perfluorooctadecanoic acid										
913.0 > 869.0	9.233	9.308	-0.075	1.111	46689	0.0236	Target=9.64	23.6	2170	
913.0 > 169.0	9.233	9.308	-0.075	1.111	4838		9.65(4.82-14.45)		390	

QC Flag Legend

Processing Flags

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 21:19:29 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30637\20260219-176161.b\26FEB19QC-51.d

Injection Date: 19-Feb-2026 20:43:45 Instrument ID: 30637

Lims ID: LLCS 410-770909/3-A

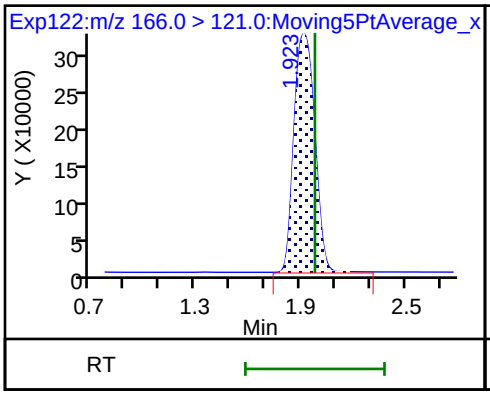
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Operator ID: ETUS023_USR_INS00050 ALS Bottle#: 51 Worklist Smp#: 51

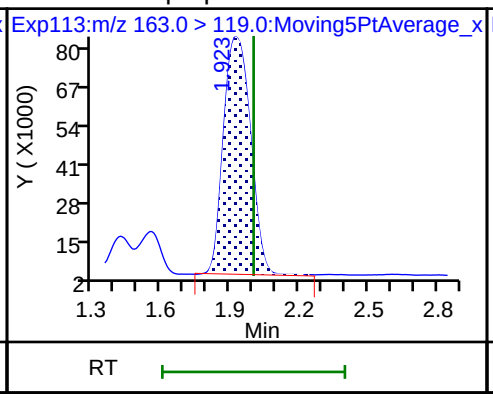
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Method: 30637_1633Final Limit Group: LC - 1633 LVI- ICAL

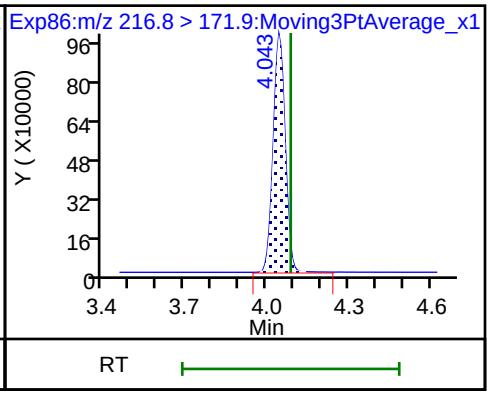
D 1 13C3PFPrA



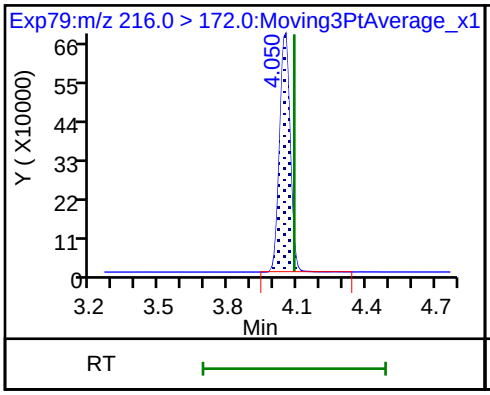
2 Perfluoropropionic acid



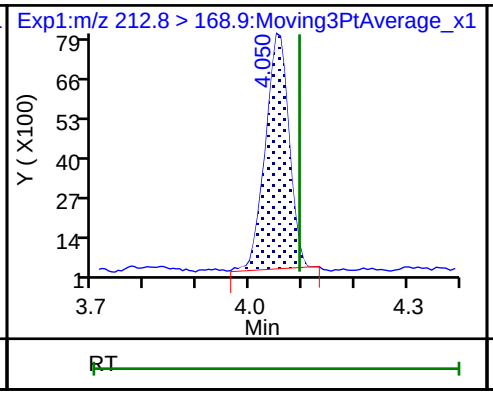
D 3 13C4-PFBA



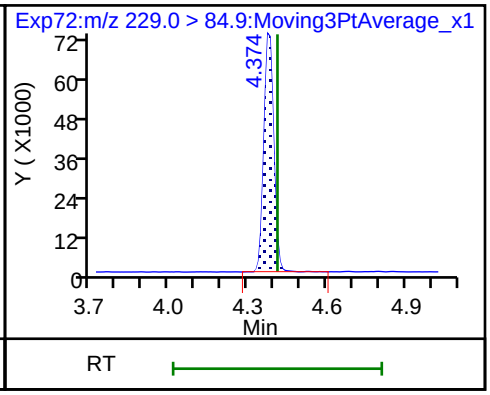
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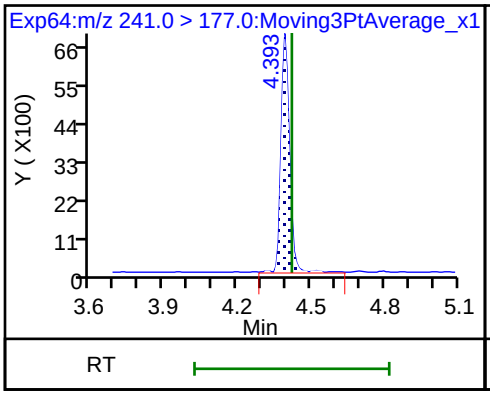
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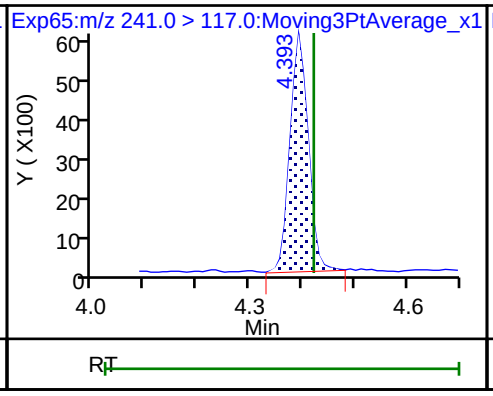
6 PFMPA



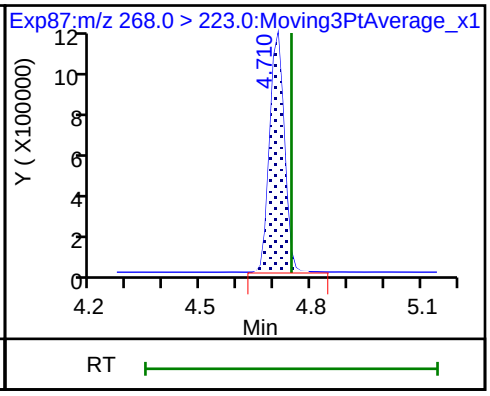
7 3:3 FTCA



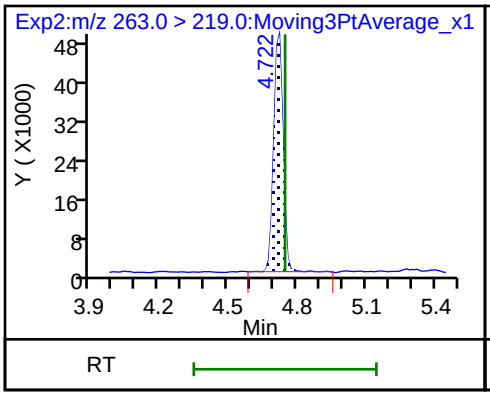
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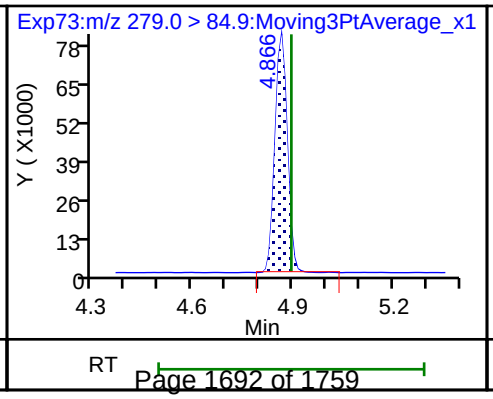
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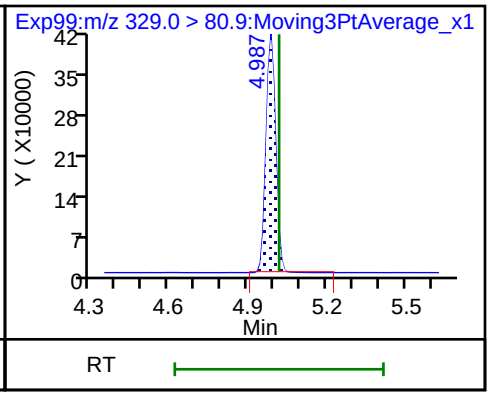
9 PFPA



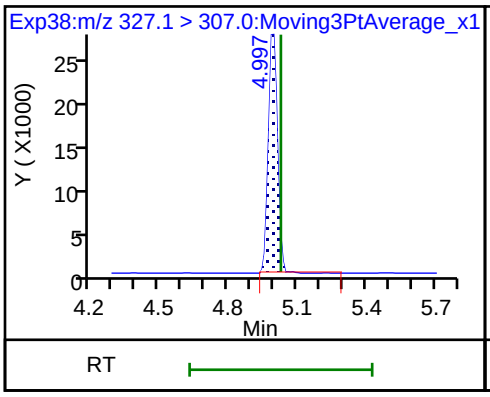
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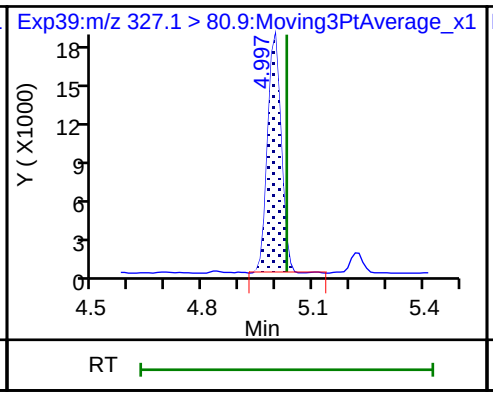
D 11 13C2-4:2FTS



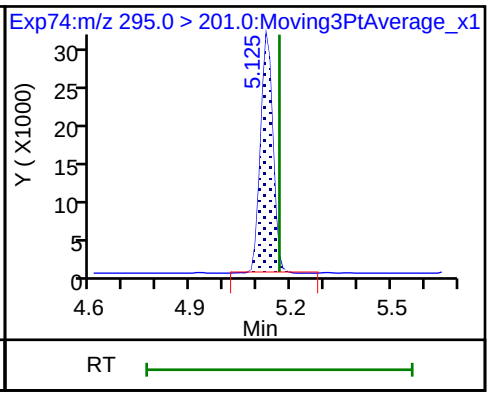
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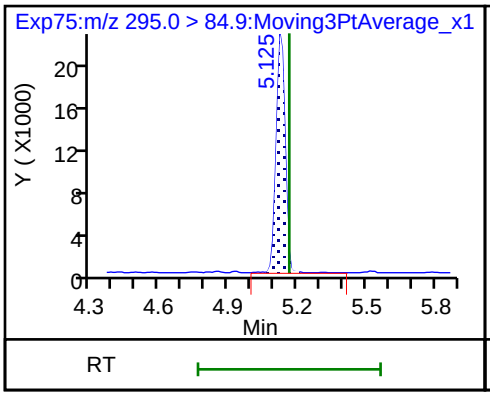
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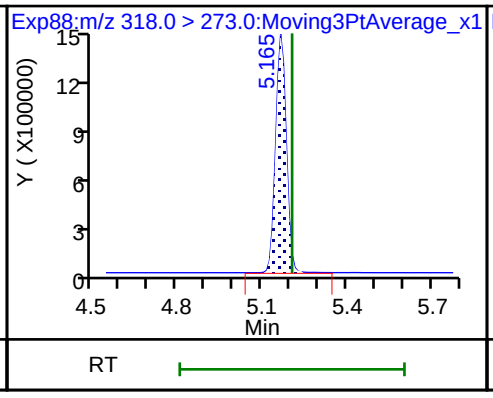
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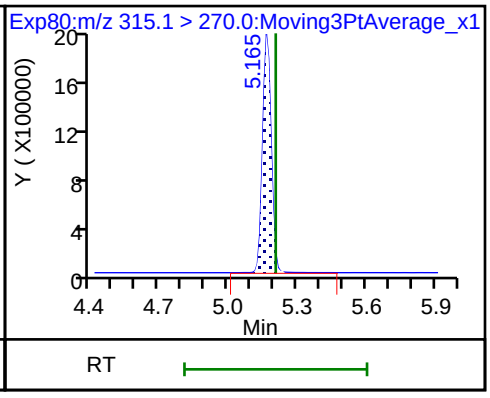
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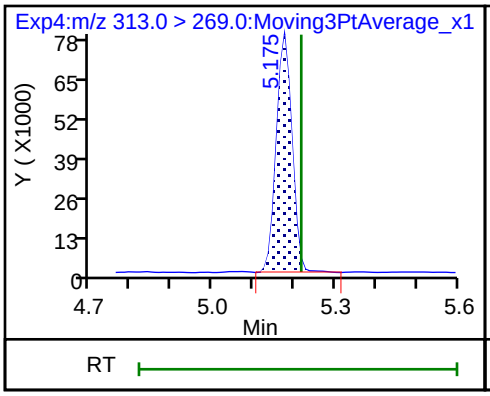
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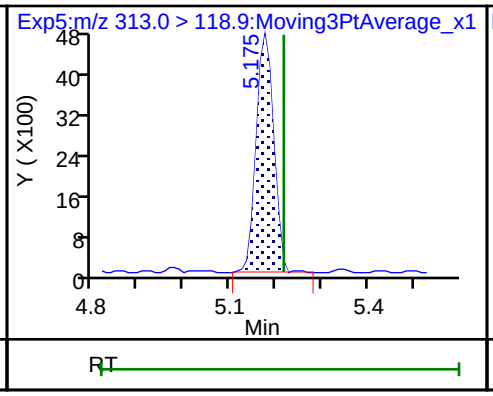
* 16 13C2 PFHxA



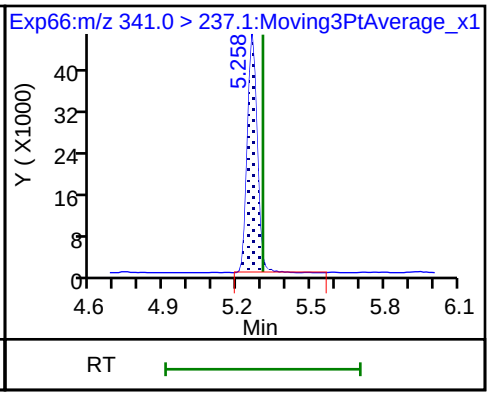
17 PFHxA



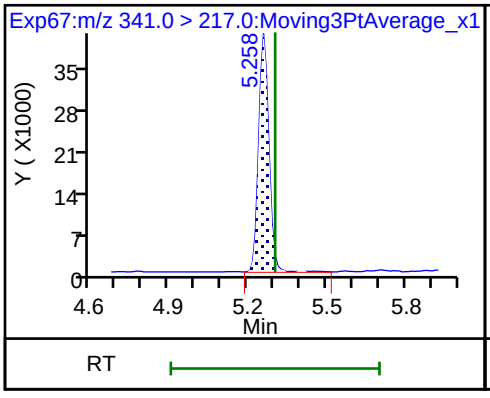
17 PFHxA



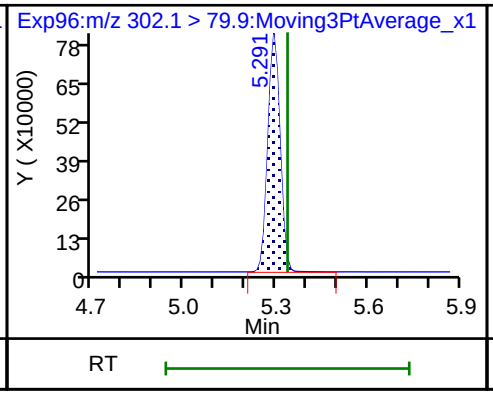
18 5:3 FTCA



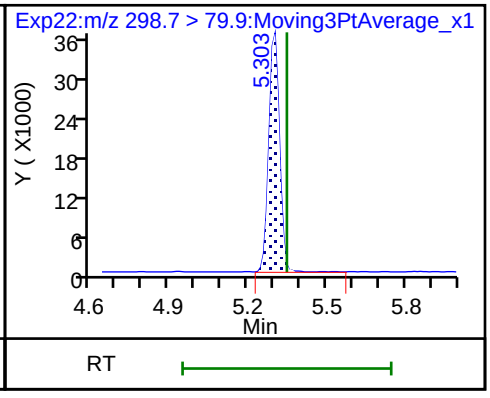
18 5:3 FTCA



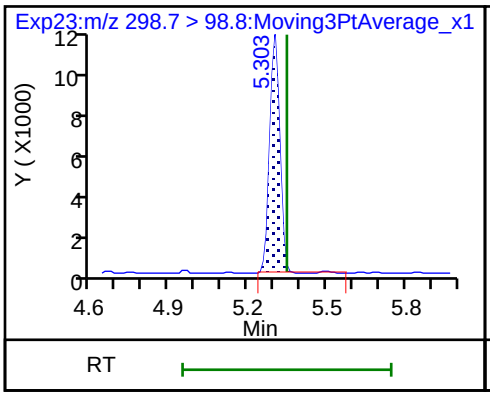
D 19 13C3 PFBS



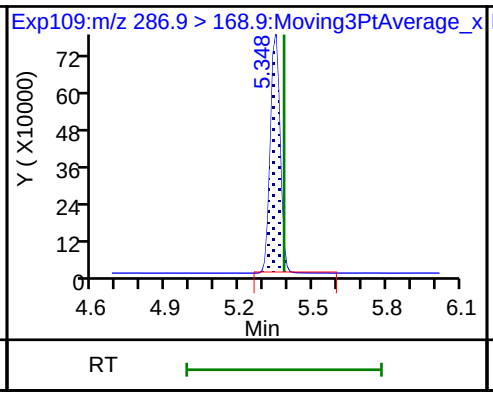
20 PFBS



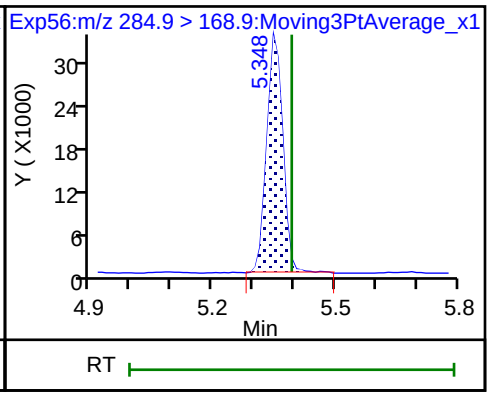
20 PFBS



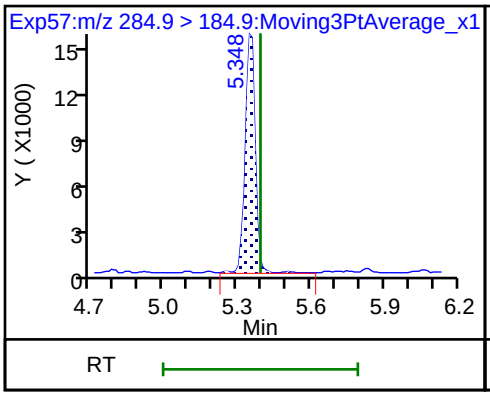
D 21 13C3 HFPO-DA



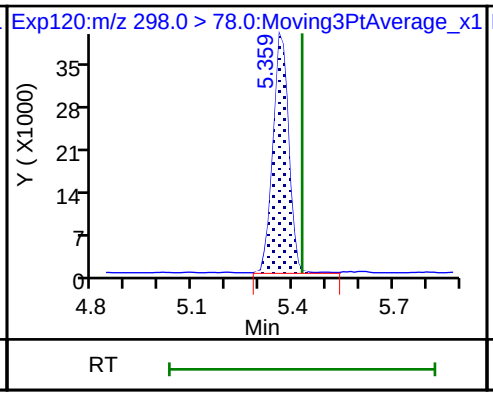
22 HFPO-DA



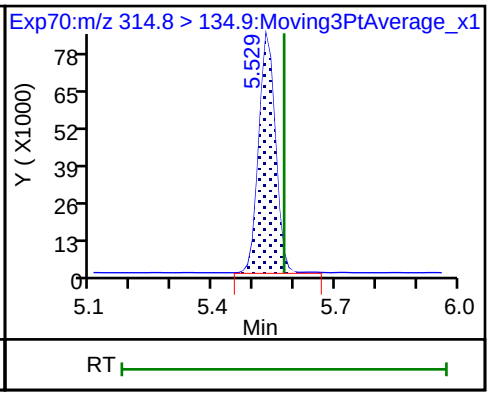
22 HFPO-DA



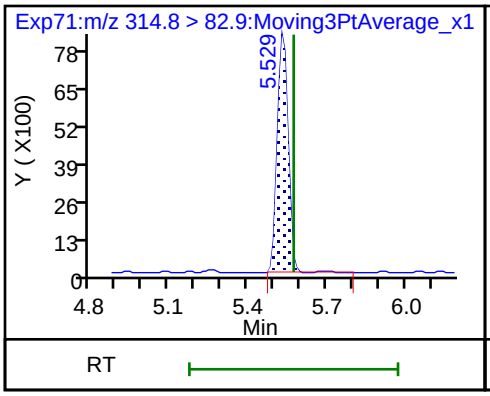
23 FBSA



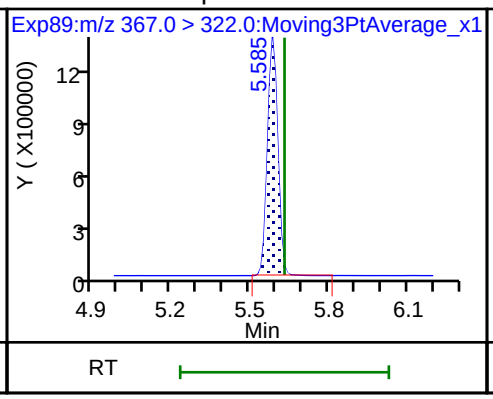
25 PFEESA



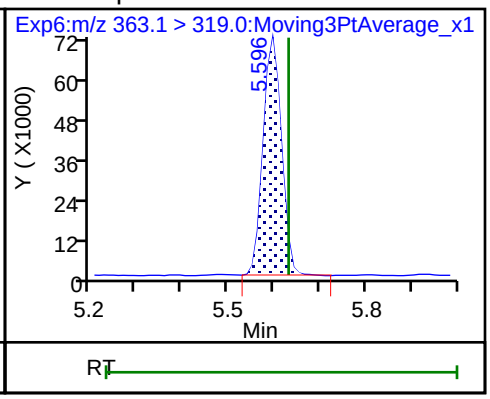
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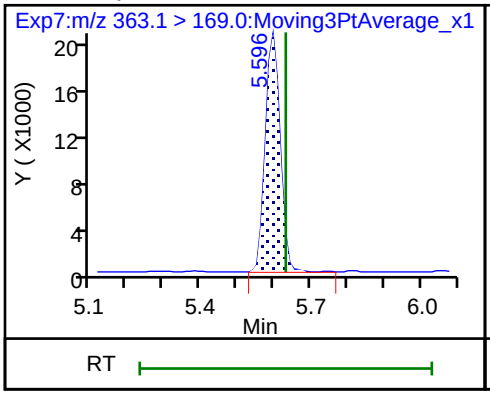
D 27 13C4 PFHpA



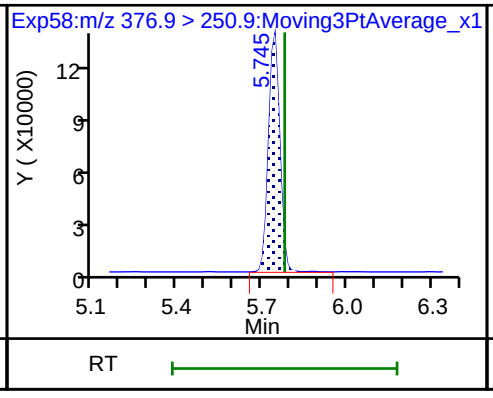
28 PFHpA



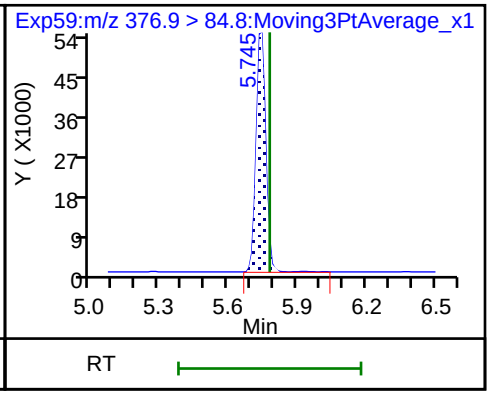
28 PFHpA



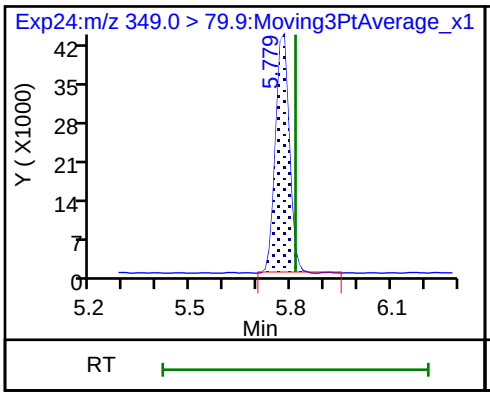
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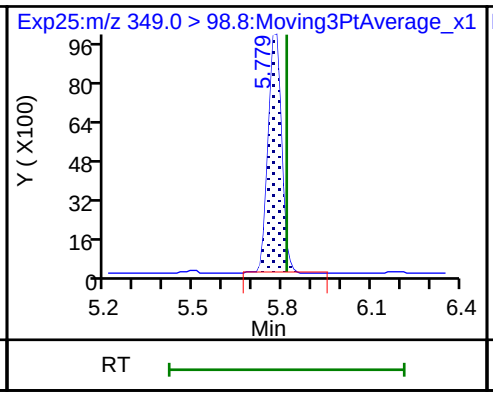
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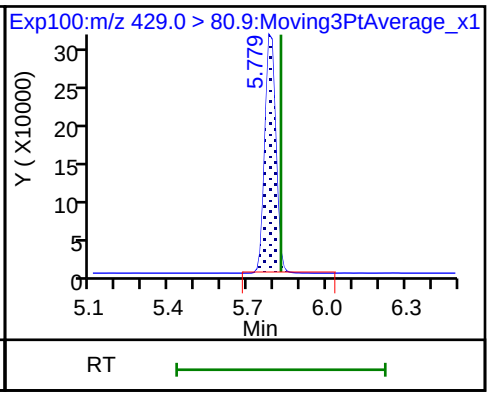
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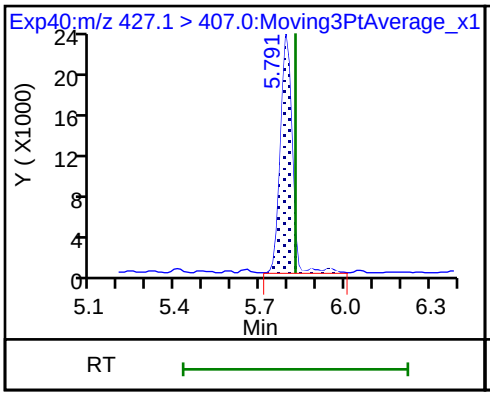
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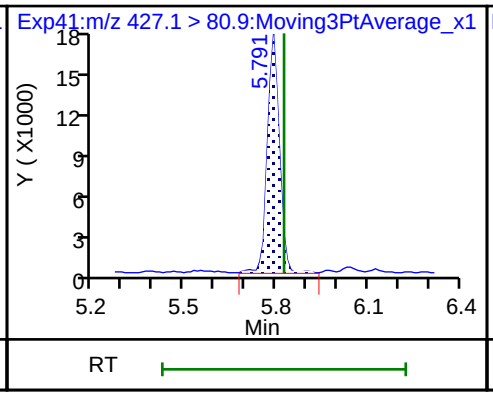
D 31 13C2-6:2FTS



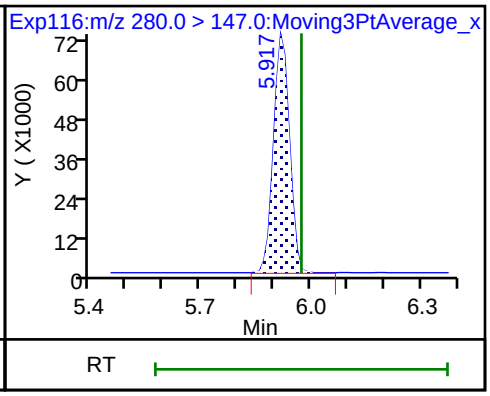
32 6:2FTS



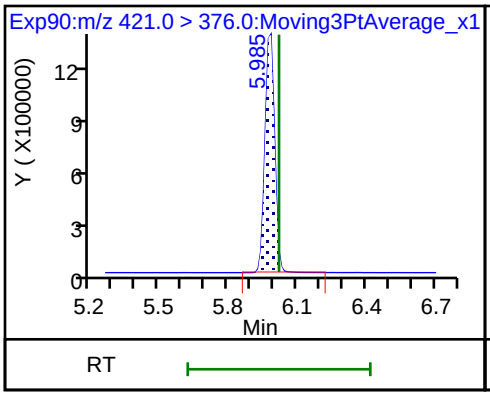
32 6:2FTS



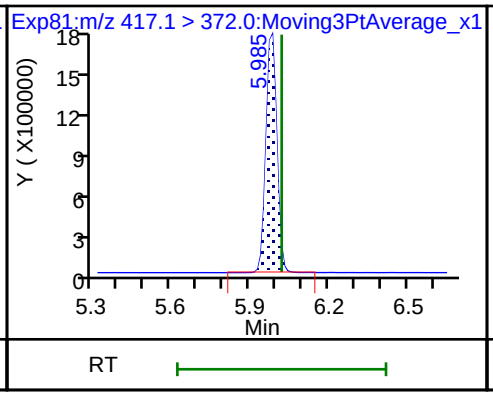
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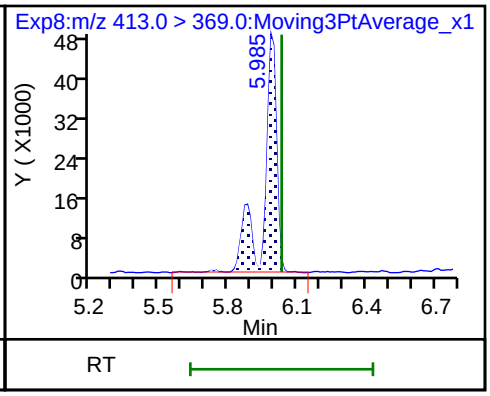
D 34 13C8 PFOA



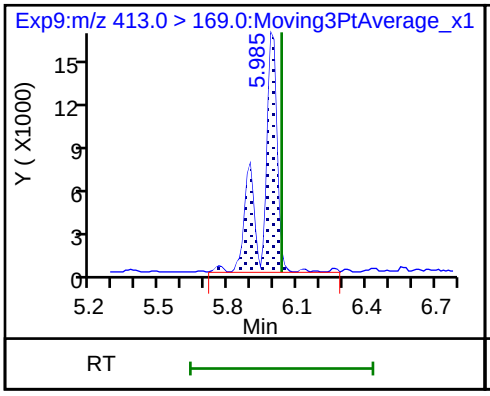
* 35 13C4 PFOA



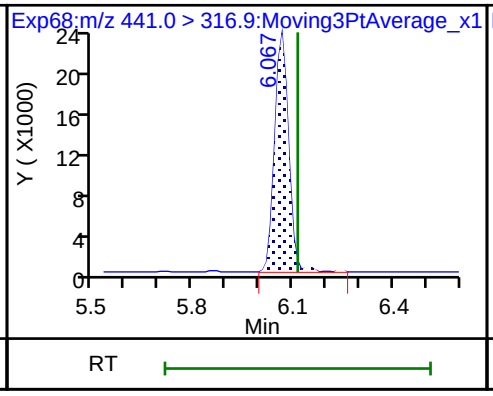
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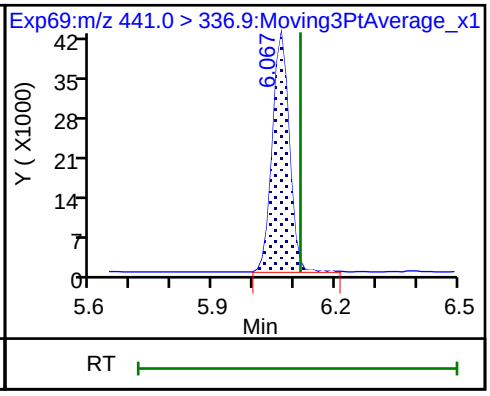
36 PFOA



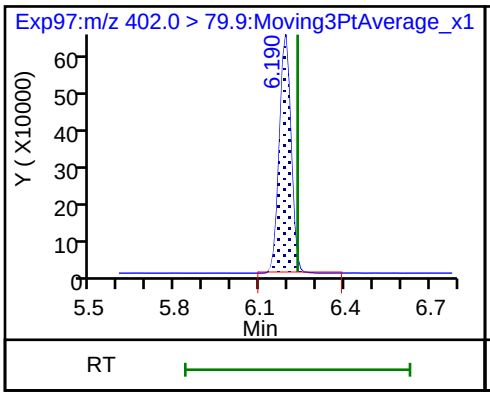
37 7:3 FTCA



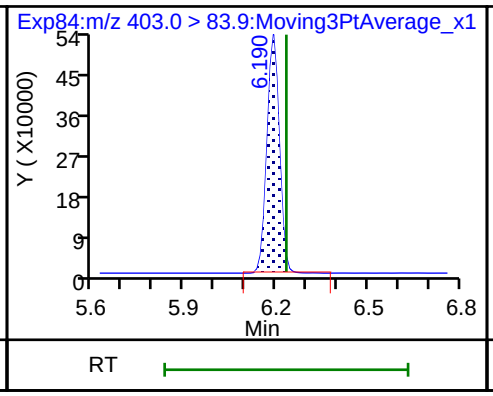
37 7:3 FTCA



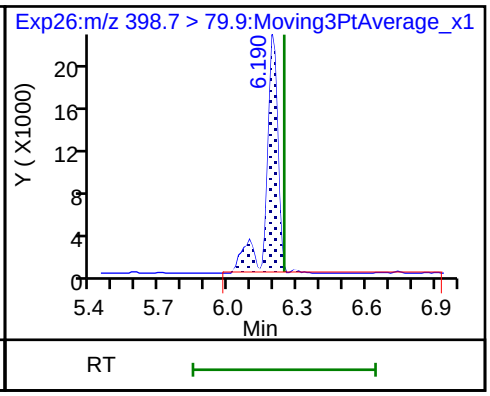
D 38 13C3 PFHxS



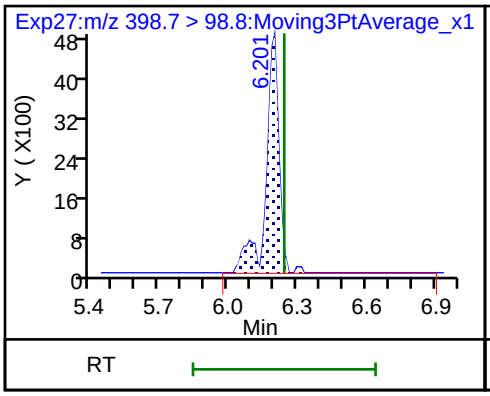
* 39 18O2 PFHxS



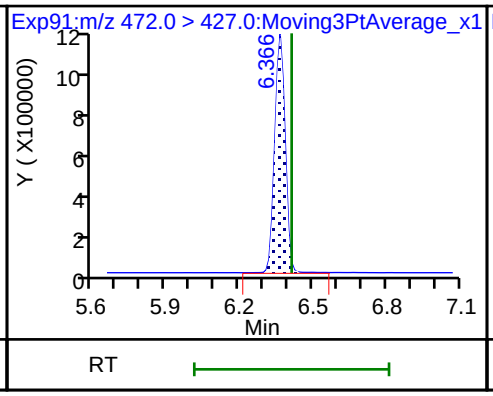
40 PFHxS



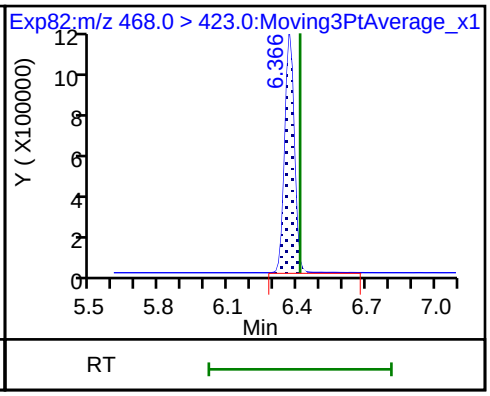
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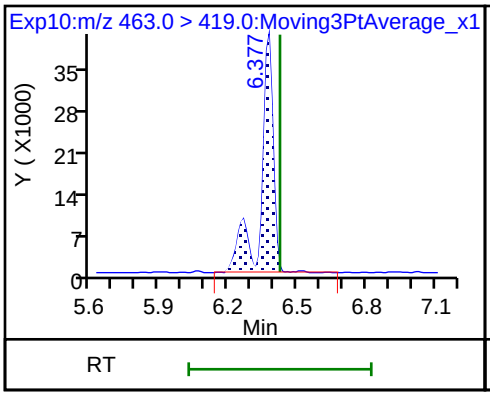
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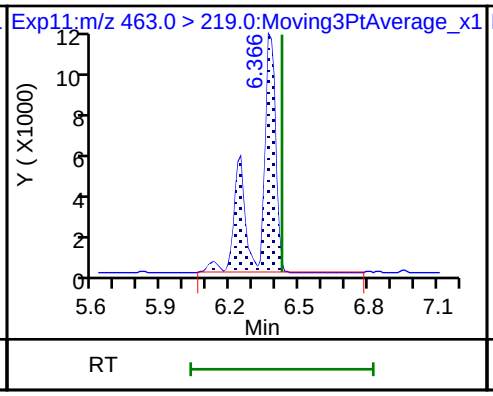
* 42 13C5 PFNA



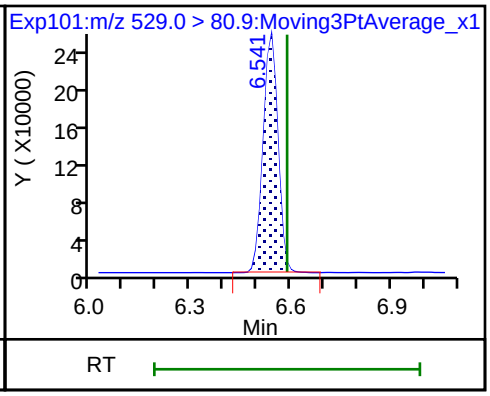
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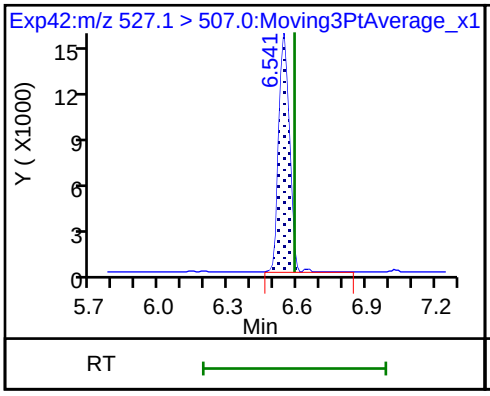
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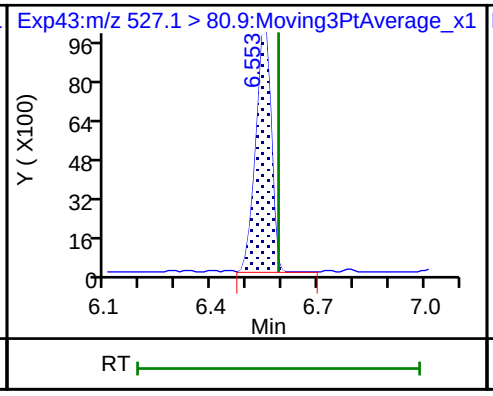
D 44 13C2-8:2FTS



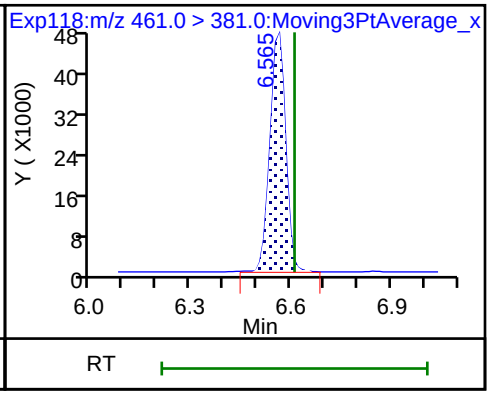
45 8:2FTS



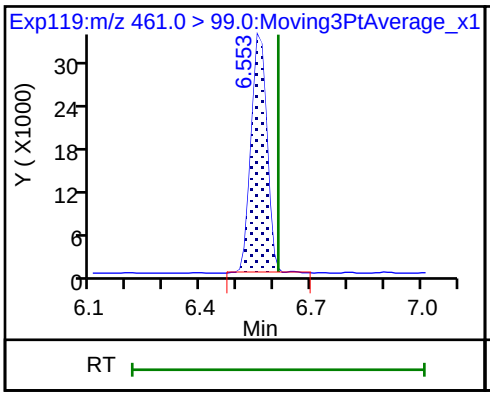
45 8:2FTS



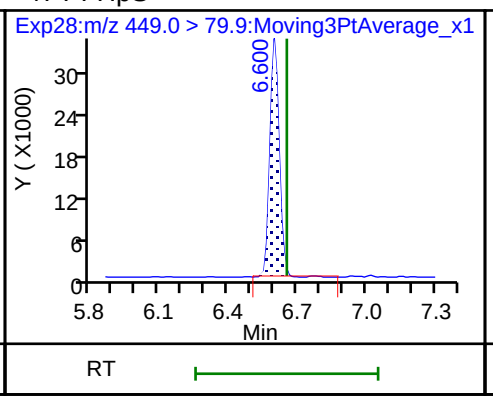
46 PFECHS



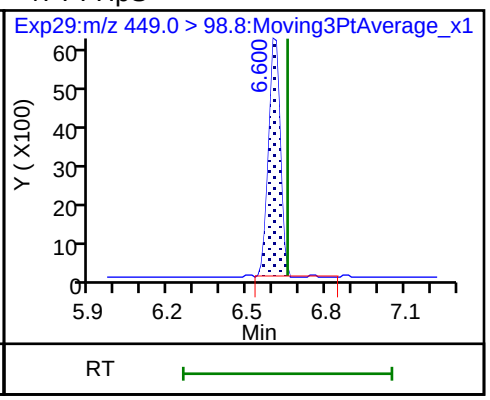
46 PFECHS



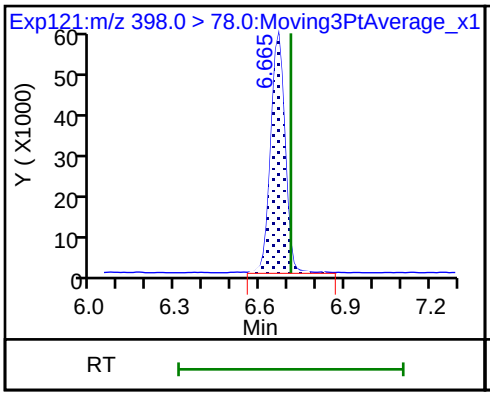
47 PFHpS



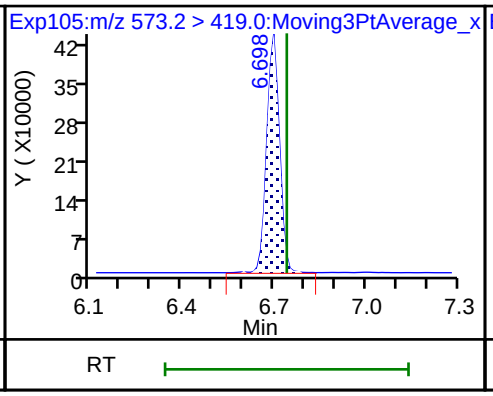
47 PFHpS



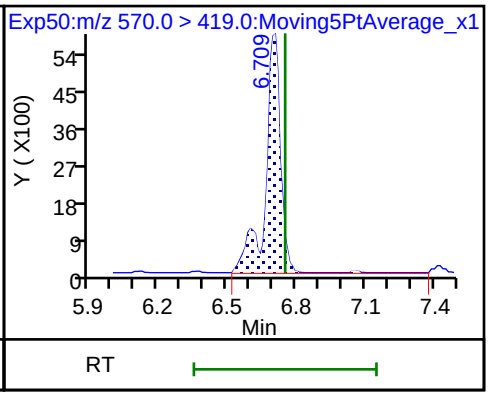
48 FHxSA



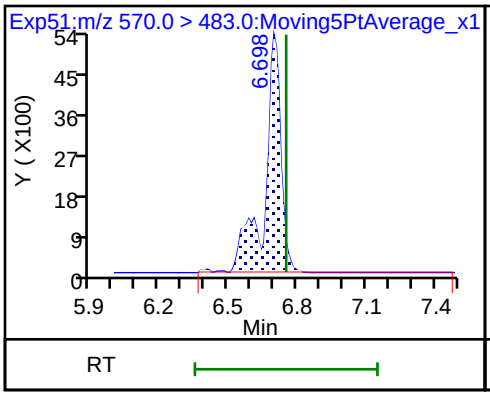
D 49 d3-NMeFOSAA



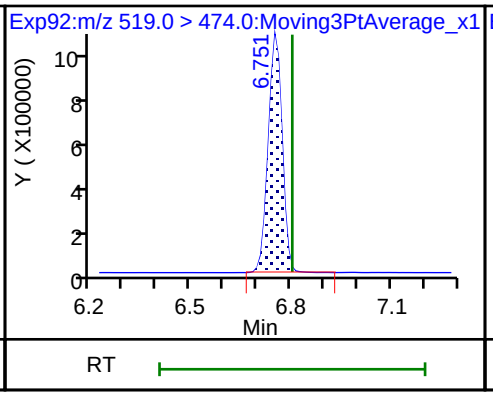
50 NMeFOSAA



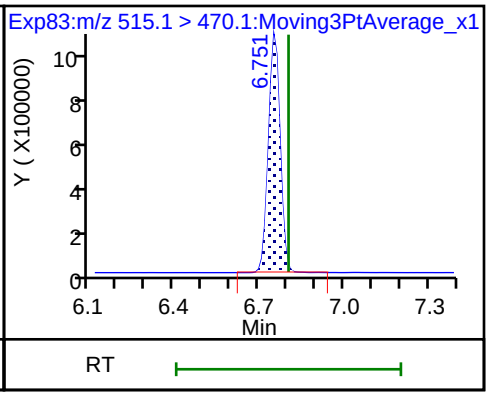
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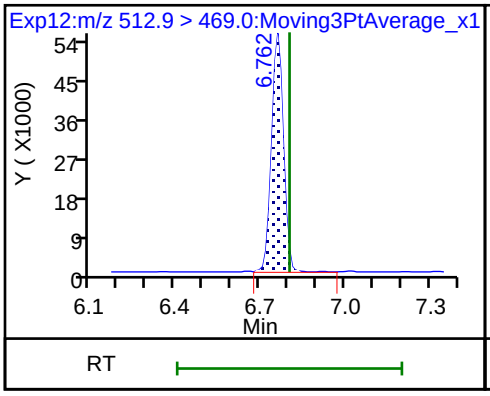
D 51 13C6 PFDA



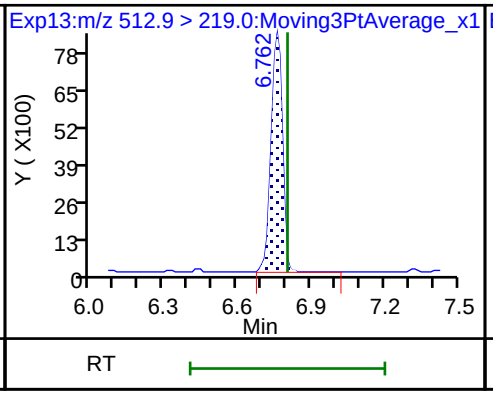
* 52 13C2 PFDA



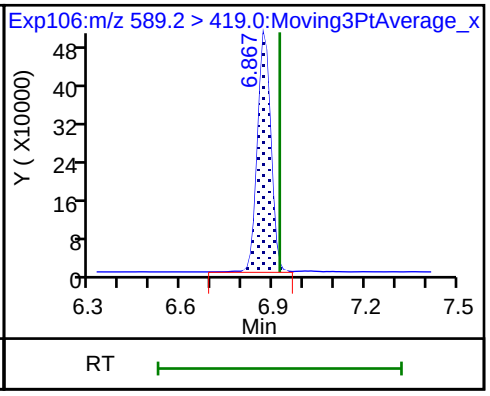
53 PFDA



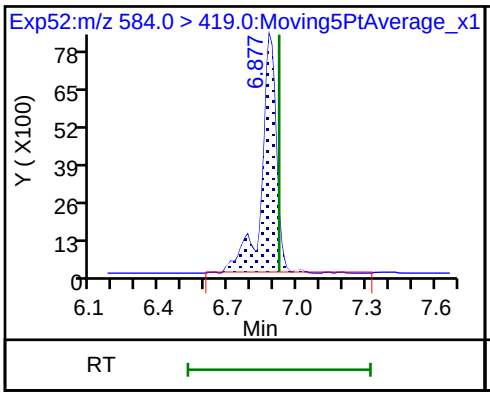
53 PFDA



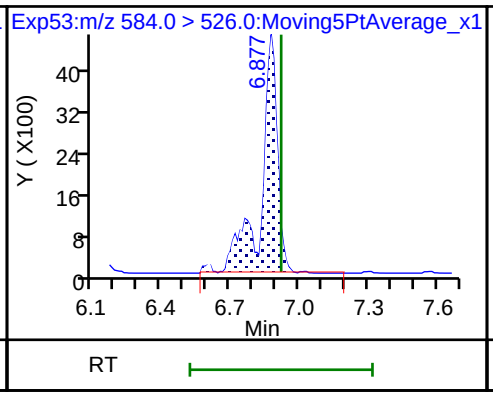
D 54 d5-NEtFOSAA



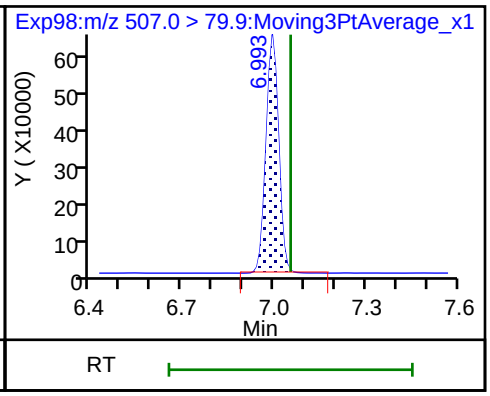
55 NEtFOSAA



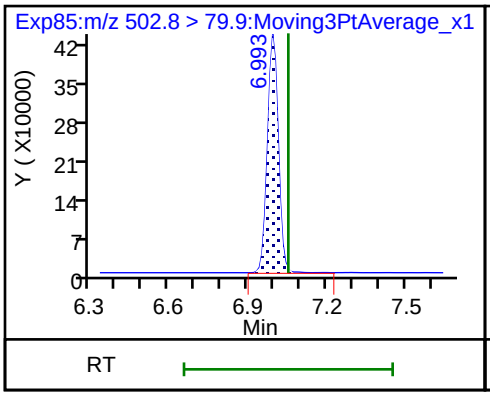
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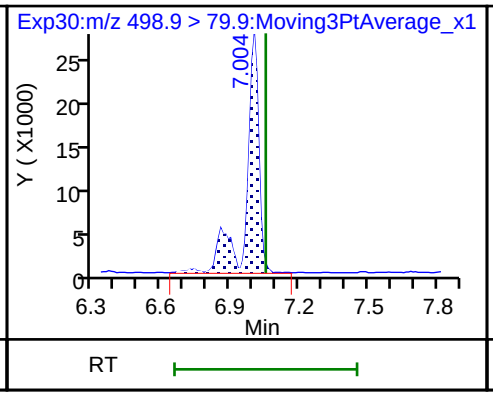
D 56 13C8 PFOS



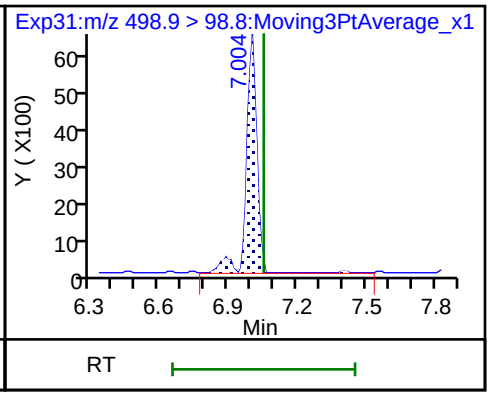
* 57 13C4 PFOS



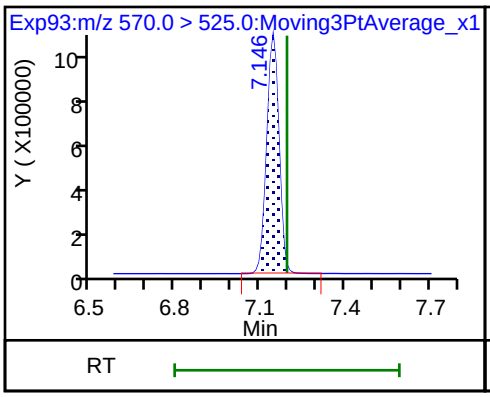
58 PFOS



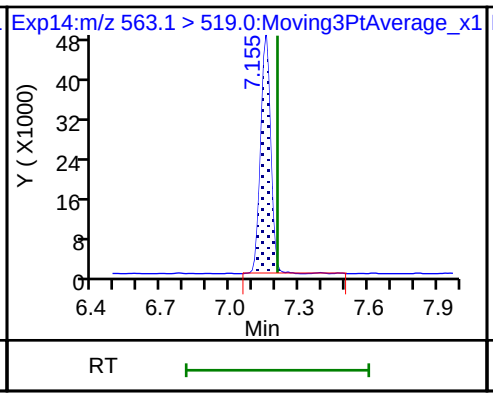
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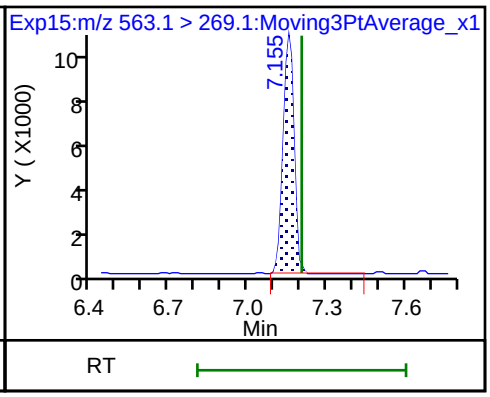
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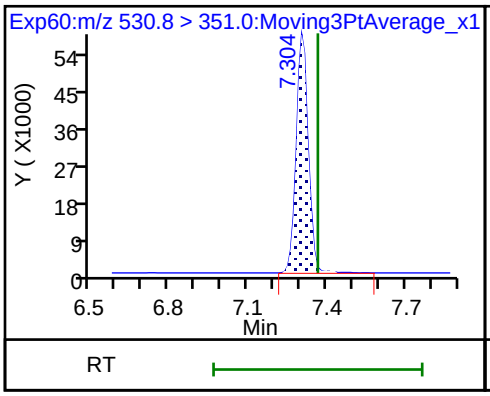
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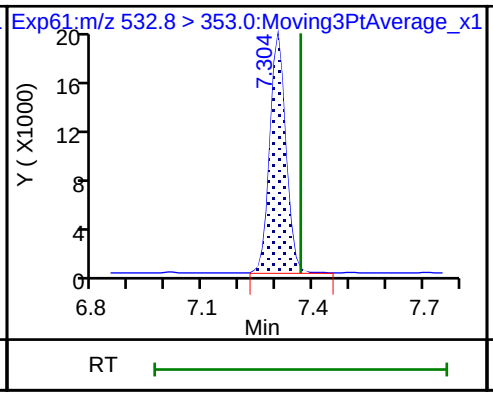
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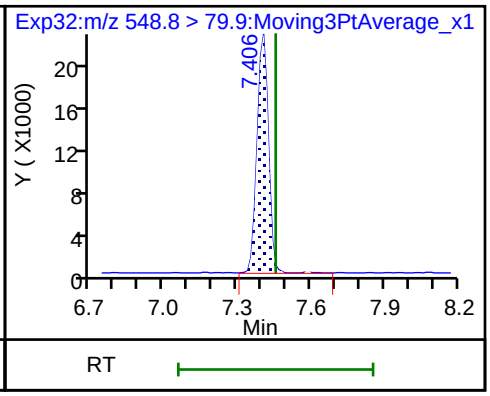
61 9ClFOS



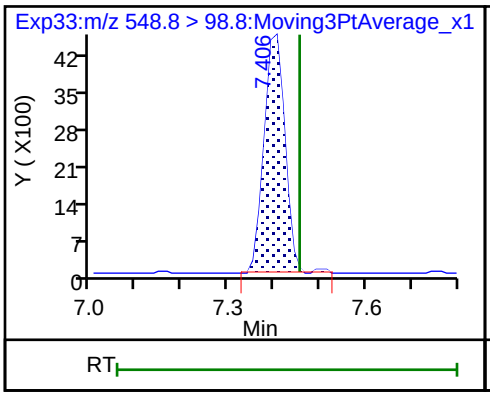
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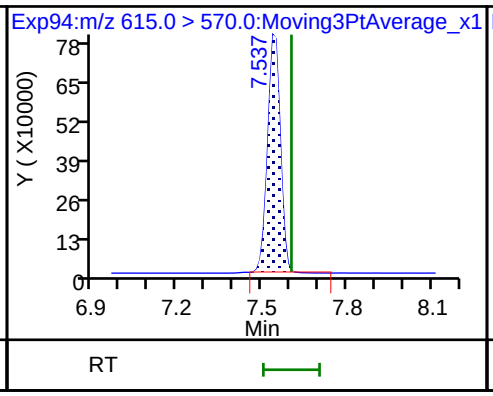
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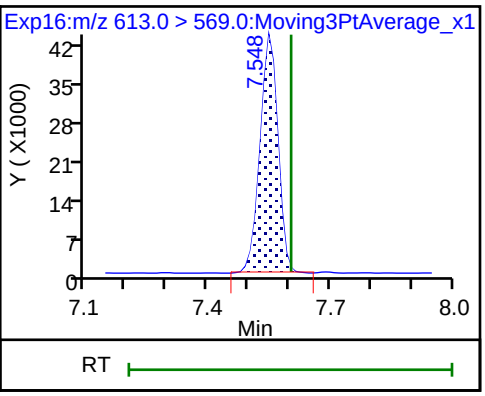
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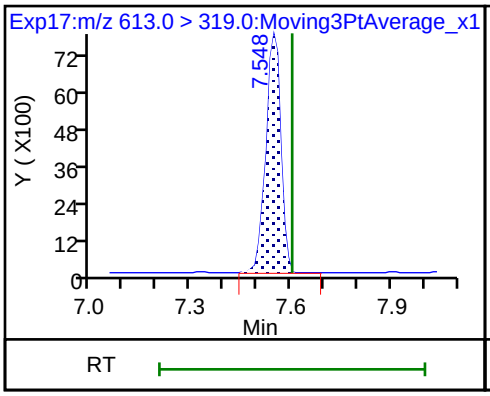
D 63 13C2 PFDoA



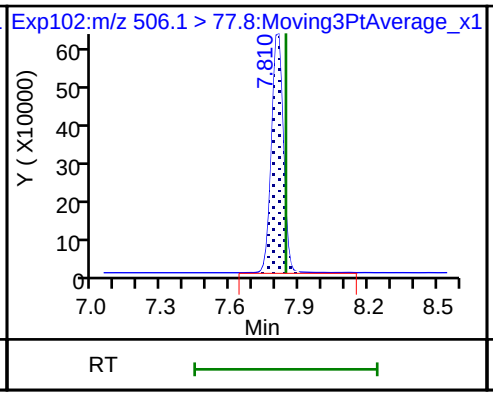
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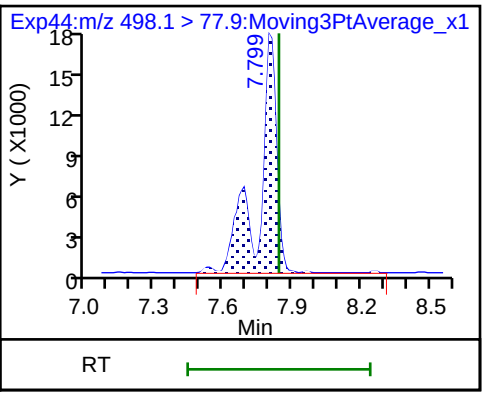
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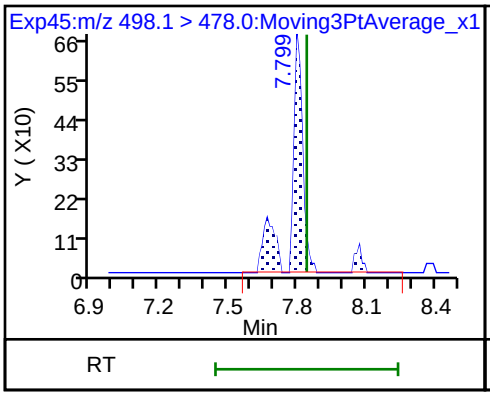
D 65 13C8 FOSA



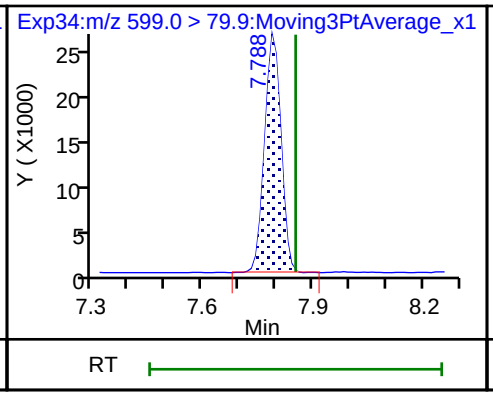
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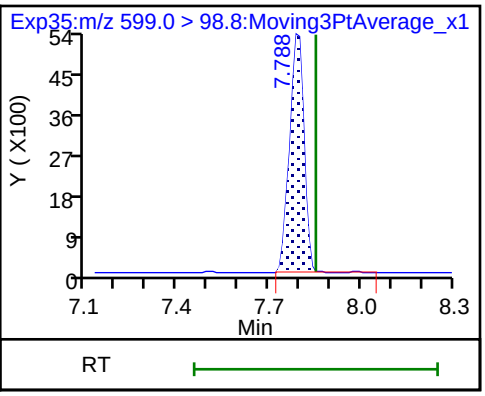
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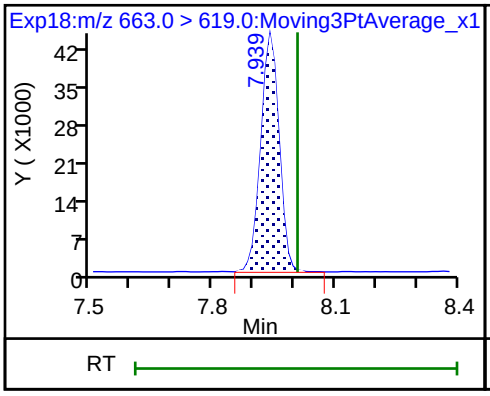
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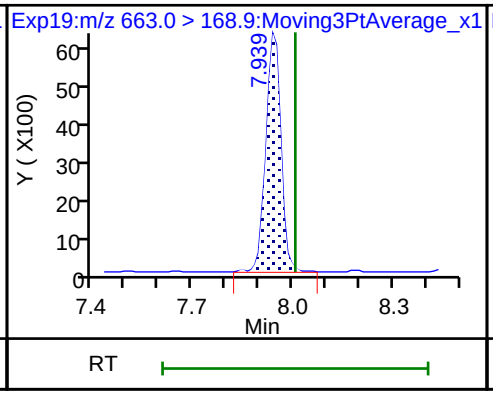
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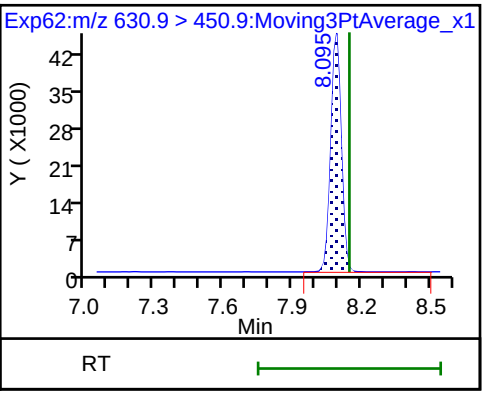
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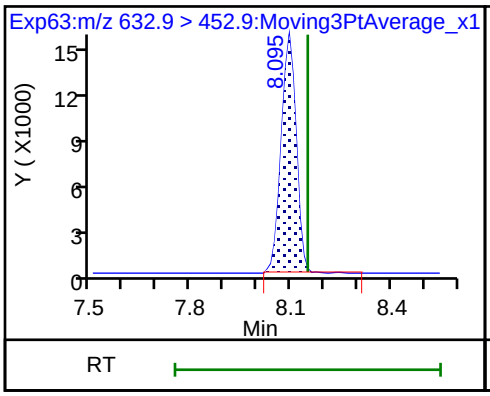
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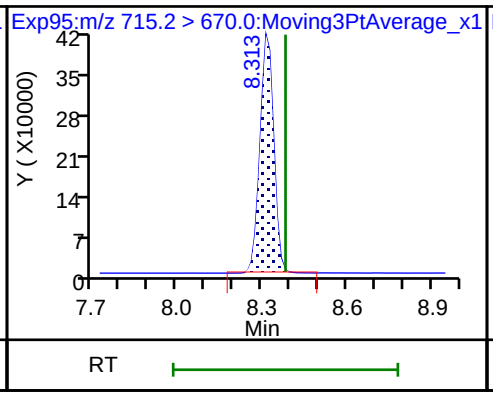
69 11ClFOS



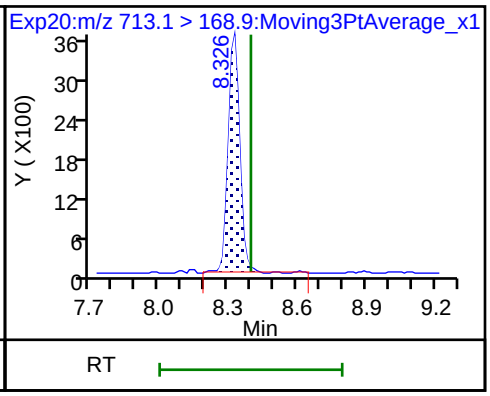
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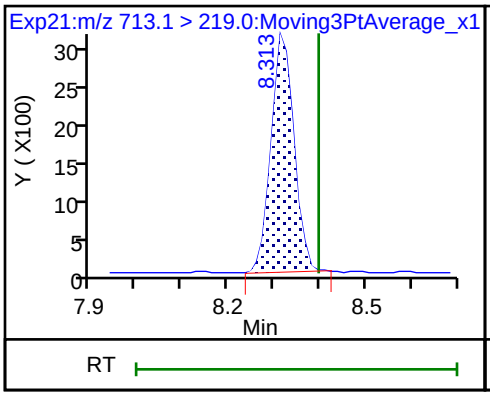
D 70 13C2 PFTeDA



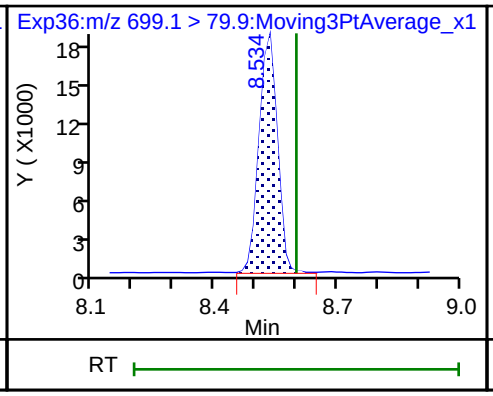
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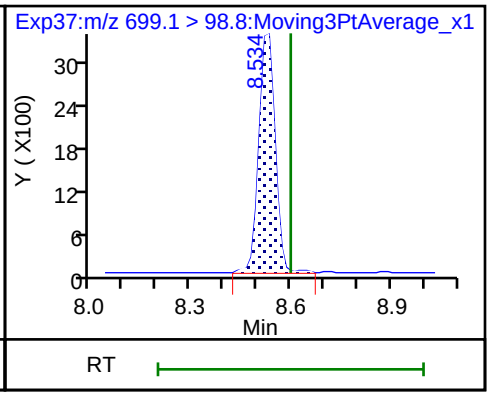
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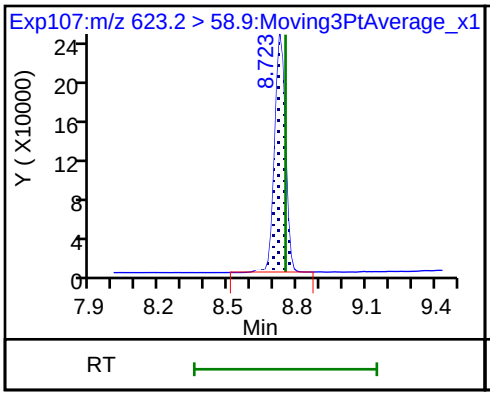
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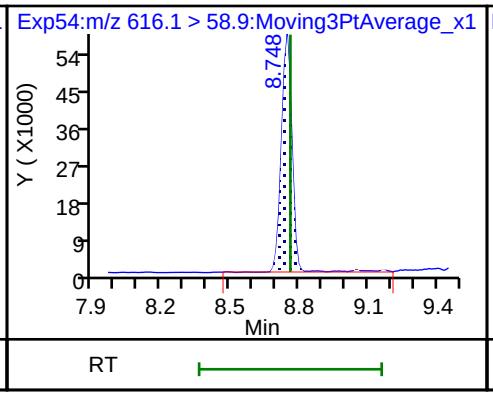
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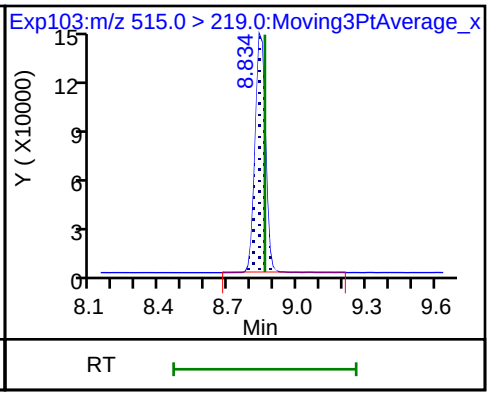
D 73 d7-N-Me-FOSE



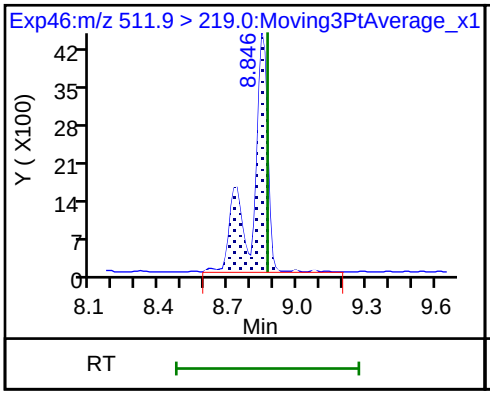
74 N-MeFOSE-M



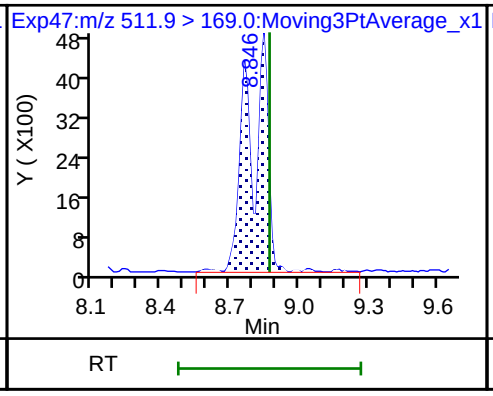
D 75 d3-NMePFOSA



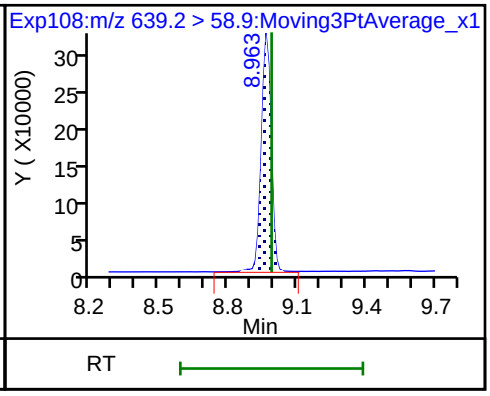
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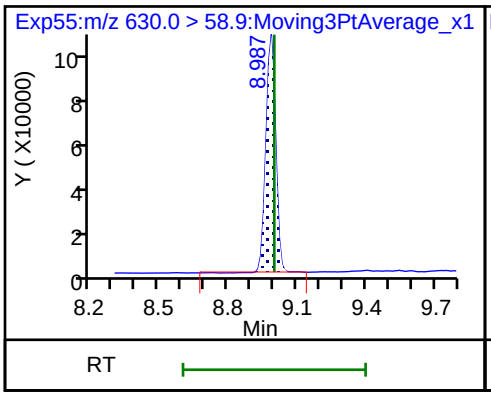
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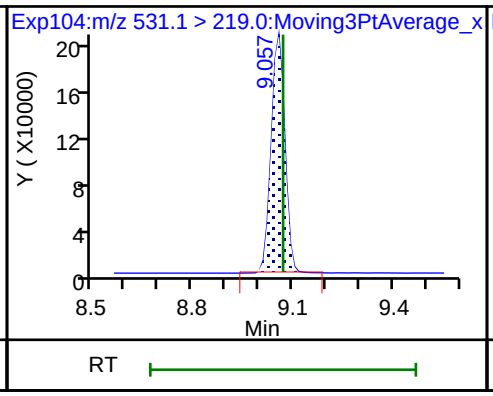
D 77 d9-N-EtFOSE



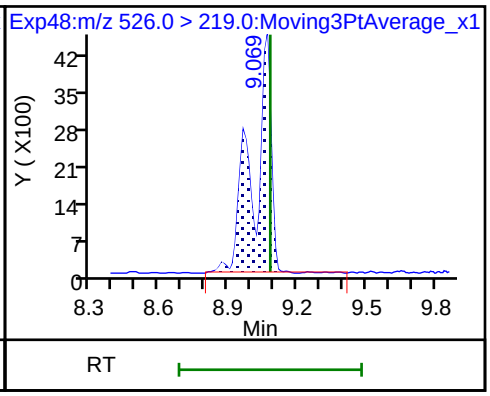
78 N-EtFOSE-M



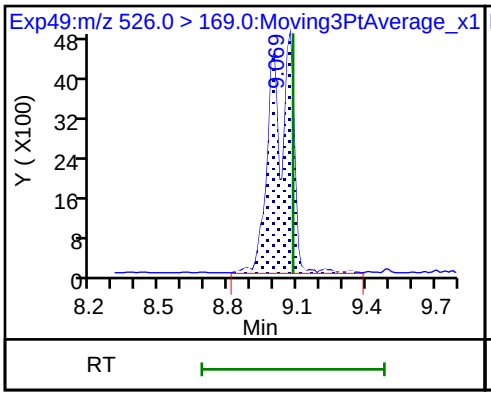
D 79 d5-NEtPFOSA



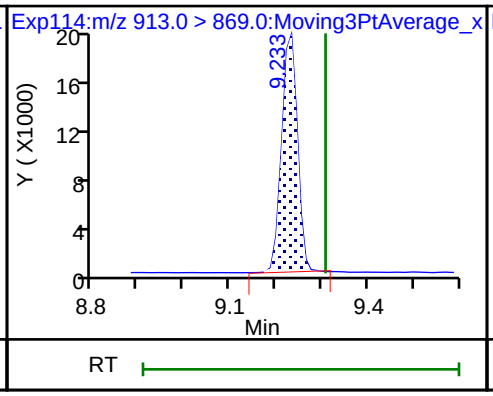
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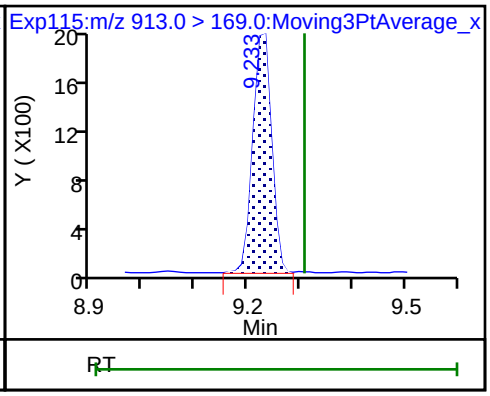
80 N-EtFOSA-M



81 Perfluorooctadecanoic acid



81 Perfluorooctadecanoic acid



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MS
Lab Sample ID: 460-344895-1 MS

Matrix: Water
Lab File ID: 26FEB18JO-74.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 166.1(mL)
Date Analyzed: 02/19/2026 04:46

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	62.97		3.01	0.83
2706-90-3	Perfluoropentanoic acid (PFPeA)	31.27		1.51	0.45
307-24-4	Perfluorohexanoic acid (PFHxA)	33.97		1.51	0.38
375-85-9	Perfluoroheptanoic acid (PFHpA)	34.89		1.51	0.60
335-67-1	Perfluorooctanoic acid (PFOA)	42.31		1.51	0.68
375-95-1	Perfluorononanoic acid (PFNA)	28.23		1.51	0.38
335-76-2	Perfluorodecanoic acid (PFDA)	27.88		1.51	0.38
2058-94-8	Perfluoroundecanoic acid (PFUnA)	33.94		1.51	0.38
307-55-1	Perfluorododecanoic acid (PFDoA)	32.25		1.51	0.38
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	27.82		1.51	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	26.45		1.51	0.38
375-73-5	Perfluorobutanesulfonic acid (PFBS)	24.39		1.51	0.38
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	25.68		1.51	0.38
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	25.78		1.51	0.60
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	25.98		1.51	0.38
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	39.32		1.51	0.98
68259-12-1	Perfluorononanesulfonic acid (PFNS)	23.96		1.51	0.38
335-77-3	Perfluorodecanesulfonic acid (PFDS)	24.30		1.51	0.38
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	21.43		1.51	0.45
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	53.75		3.01	0.75
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	52.41		3.01	0.75
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	56.33		3.01	0.75
754-91-6	Perfluorooctanesulfonamide (PFOSA)	26.36		1.51	0.38
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	29.18		1.51	0.38
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	27.61		1.51	0.83

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MS
Lab Sample ID: 460-344895-1 MS

Matrix: Water
Lab File ID: 26FEB18JO-74.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 166.1(mL)
Date Analyzed: 02/19/2026 04:46

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	26.30		1.51	0.38
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	27.44		1.51	0.38
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	140.0		7.53	3.01
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	137.1		7.53	3.01
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	21.66		1.51	1.05
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	29.68		1.51	0.38
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	29.75		1.51	0.38
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	28.22		1.51	0.38
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	26.31		1.51	0.38
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	23.79		1.51	0.38
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	23.09		1.51	0.38
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	23.56		1.51	0.38
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	54.54		3.01	0.75
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	152.6		7.53	2.11
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	140.9		7.53	1.88

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MS Lab Sample ID: 460-344895-1 MS

Matrix: Water Lab File ID: 26FEB18JO-74.d

Analysis Method: 1633A Date Collected: 02/16/2026 13:00

Extraction Method: 1633A Date Extracted: 02/18/2026 15:35

Sample wt/vol: 166.1(mL) Date Analyzed: 02/19/2026 04:46

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716 Units: ng/L

Preparation Batch No.: 770909 Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	65.5		5-130
2283397-79-3	13C5 PFPeA	66.1		40-130
2328024-54-8	13C5 PFHxA	73.1		40-130
2328024-55-9	13C4 PFHpA	81.6		40-130
1350614-84-4	13C8 PFOA	93.5		40-130
2283397-80-6	13C9 PFNA	91.0		40-130
2328024-56-0	13C6 PFDA	83.3		40-130
STL02580	13C7 PFUnA	79.8		30-130
STL02116	13C2 PFTeDA	75.5		10-130
2708218-83-9	13C3 PFBS	77.5		40-135
2708218-85-1	13C3 PFHxS	85.6		40-130
2265893-05-6	13C8 PFOS	93.1		40-130
STL01056	13C8 FOSA	82.2		40-130
1400690-70-1	d3-NMeFOSAA	91.4		40-170
1265205-97-7	d5-NEtFOSAA	109		25-135
STL02395	13C2 4:2 FTS	117		40-200
STL02279	13C2 6:2 FTS	110		40-200
STL02280	13C2 8:2 FTS	80.7		40-300
STL02255	13C3 HFPO-DA	69.9		40-130
STL02277	d7-N-MeFOSE-M	74.2		10-130
STL02278	d9-N-EtFOSE-M	84.8		10-130
STL02704	d5-NEtPFOSA	74.2		10-130
STL02705	d3-NMePFOSA	72.0		10-130
960315-52-0	13C2 PFDoA	74.5		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-74.d
Lims ID: 460-344895-A-1-C MS
Client ID: RXMW-6_P
Sample Type: MS
Inject. Date: 19-Feb-2026 04:46:15 ALS Bottle#: 38 Worklist Smp#: 70
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: 460-344895-A-1-C MS
Misc. Info.: Plate: 1 Rack: 1 410-0176047-070
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:30:48 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:28:30
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.159	2.133	0.026	1.004	1923596	5.36		107	4452	
D 1 13C3PFPrA										
166.00 > 121.00	2.150	2.133	0.017	0.498	784253	1.30		65.2	819	
3 PFBA										
212.80 > 168.90	4.310	4.302	0.008	0.998	1071155	2.09		105	10204	
D 4 13C4-PFBA										
216.80 > 171.90	4.318	4.309	0.009	1.000	1118221	1.31		65.5	5830	
* 5 13C3PFBA										
216.00 > 172.00	4.318	4.309	0.009		1733833	2.00			3398	
6 PFMPA										
229.00 > 84.90	4.632	4.622	0.010	0.933	630890	0.9883		98.8	2573	
7 3:3 FTCA										
241.00 > 177.00	4.641	4.631	0.010	0.935	59326	1.81	Target=1.15	90.6	505	
241.00 > 117.00	4.641	4.631	0.010	0.935	49682		1.19(0.57-1.72)		604	
D 8 13C5 PFPeA										
268.30 > 223.00	4.964	4.959	0.005	0.916	1268940	1.32		66.1	4926	
9 PFPA										
263.00 > 219.00	4.964	4.959	0.005	1.000	756981	1.04		104	256	
10 PFMBA										
279.00 > 85.10	5.111	5.107	0.004	1.030	801285	0.9374		93.7	2892	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.239	5.235	0.004	0.807	1320234	5.48		117	342	
12 4:2FTS										
327.10 > 307.00	5.239	5.235	0.004	1.000	923523	1.79	Target=1.67	95.2	4614	
327.10 > 80.90	5.239	5.235	0.004	1.000	563857		1.64(0.84-2.51)		237	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.379	5.386	-0.007	0.993	206594	0.8741	Target=1.43	87.4	1060	
295.00 > 84.90	5.379	5.386	-0.007	0.993	139936		1.48(0.71-2.14)		484	
* 16 13C2 PFHxA										
315.10 > 270.00	5.418	5.424	-0.006		5413857	5.00			7609	
D 15 13C5 PFHxA										
318.00 > 273.00	5.418	5.424	-0.006	1.000	1724168	1.46		73.1	11289	
17 PFHxA										
313.00 > 269.00	5.428	5.424	0.004	1.002	725168	1.13	Target=9.36	113	338	
313.00 > 118.90	5.418	5.424	-0.006	1.000	66954		10.83(4.68-14.05)		486	
18 5:3 FTCA										
341.00 > 237.10	5.507	5.503	0.004	1.016	434023	5.07	Target=0.64	101	1698	
341.00 > 217.00	5.507	5.503	0.004	1.016	561411		0.77(0.32-0.97)		878	
D 19 13C3 PFBS										
302.10 > 79.90	5.565	5.561	0.004	0.857	1662616	1.44		77.5	1406	
20 PFBS										
298.70 > 79.90	5.565	5.561	0.004	1.000	645616	0.8103	Target=3.13	91.2	660	
298.70 > 98.80	5.565	5.561	0.004	1.000	213459		3.02(1.56-4.69)		1019	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.611	5.607	0.004	1.036	1073836	1.40		69.9	2855	
23 HFPO-DA										
284.90 > 168.90	5.611	5.607	0.004	1.000	418418	0.7196	Target=2.49	95.9	1541	
284.90 > 184.90	5.611	5.607	0.004	1.000	156004		2.68(1.24-3.73)		770	
21 FBSA										
297.90 > 78.00	5.622	5.665	-0.043	1.010	582796	0.9194		91.9	1586	
24 TCDCA										
498.10 > 80.00	5.991	5.677	0.314	0.817	4098	NR		0.0	2.3	
25 TDCA										
498.00 > 80.00	5.950	5.797	0.153	0.811	2303	NR		0.0	2.1	
26 PFEESA										
314.80 > 134.90	5.799	5.807	-0.008	1.070	1635303	0.7827	Target=11.82	87.7	3966	
314.80 > 82.90	5.799	5.807	-0.008	1.070	141644		11.55(5.91-17.73)		669	
D 28 13C4 PFHpA										
367.10 > 322.00	5.844	5.851	-0.007	1.079	1882414	1.63		81.6	4397	
27 PFHpA										
363.10 > 319.00	5.844	5.851	-0.007	1.000	765515	1.16	Target=1.51	116	486	
363.10 > 169.00	5.855	5.851	0.004	1.002	386499		1.98(0.75-2.26)		1140	
29 ADONA										
376.90 > 250.90	6.001	6.007	-0.006	1.069	1821495	0.9861	Target=2.22	104	4411	
376.90 > 84.80	6.001	6.007	-0.006	1.069	808100		2.25(1.11-3.33)		2813	
30 PFPeS										M
349.10 > 79.90	6.042	6.049	-0.007	0.930	805298	0.8531	Target=3.28	90.8	682	M
349.10 > 98.90	6.042	6.049	-0.007	0.930	240941		3.34(1.64-4.91)		1044	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.052	6.059	-0.007	0.932	1044960	5.21		110	2229	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
31 6:2FTS										
427.10 > 407.00	6.052	6.059	-0.007	1.000	705748	1.74	Target=1.56	91.4	2599	
427.10 > 80.90	6.052	6.059	-0.007	1.000	447280		1.58(0.78-2.35)		978	
33 BTS										
280.00 > 147.00	6.204	6.220	-0.016	0.955	1307597	0.8495		84.9	2725	
* 34 13C4 PFOA										
417.10 > 372.00	6.263	6.269	-0.006		6879319	5.00			3629	
D 35 13C8 PFOA										
421.10 > 376.00	6.263	6.269	-0.006	1.000	2466390	1.87		93.5	3620	
36 PFOA										
413.00 > 369.00	6.253	6.269	-0.016	0.998	912696	1.41	Target=1.59	141	503	
413.00 > 169.00	6.253	6.269	-0.016	0.998	493291		1.85(0.80-2.39)		639	
37 7:3 FTCA										
441.00 > 316.90	6.400	6.407	-0.007	1.181	204568	4.68	Target=0.24	93.6	454	
441.00 > 336.90	6.400	6.407	-0.007	1.181	746252		0.27(0.12-0.36)		1758	
D 38 13C3 PFHxS										
402.10 > 79.90	6.494	6.512	-0.018	1.000	1581263	1.62		85.6	6288	
* 39 18O2 PFHxS										
403.00 > 83.90	6.494	6.512	-0.018		1692048	1.90			6241	
40 PFHxS										
398.70 > 79.90	6.494	6.512	-0.018	1.000	543033	0.8564	Target=3.08	93.9	693	
398.70 > 98.90	6.494	6.512	-0.018	1.000	163762		3.32(1.54-4.62)		196	
* 42 13C5 PFNA										
468.00 > 423.00	6.669	6.684	-0.015		2220965	2.00			3869	
D 41 13C9 PFNA										
472.10 > 427.00	6.669	6.684	-0.015	1.000	2022118	1.82		91.0	3312	
43 PFNA										
463.00 > 419.00	6.669	6.694	-0.025	1.000	862102	0.9379	Target=1.95	93.8	1011	
463.00 > 219.00	6.679	6.694	-0.015	1.001	398484		2.16(0.97-2.92)		435	
45 8:2FTS										
527.10 > 507.00	6.856	6.868	-0.012	1.000	520887	1.87	Target=1.86	97.5	1762	
527.10 > 80.80	6.856	6.868	-0.012	1.000	251652		2.07(0.93-2.79)		1050	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.856	6.868	-0.012	1.056	799484	3.87		80.7	2038	
46 PFECHS										
461.00 > 381.00	6.890	6.914	-0.024	1.061	171819	0.9013	Target=0.18	97.5	1064	
461.00 > 99.00	6.890	6.914	-0.024	1.061	943307		0.18(0.09-0.27)		4282	
47 PFHpS										
449.00 > 79.90	6.929	6.945	-0.016	0.945	811220	0.8631	Target=3.60	90.5	1567	
449.00 > 98.80	6.929	6.945	-0.016	0.945	240006		3.38(1.80-5.40)		1196	
50 NMeFOSAA										
570.10 > 419.00	7.031	7.037	-0.006	1.001	271603	0.8736	Target=1.80	87.4	256	
570.10 > 483.00	7.021	7.037	-0.016	1.000	148042		1.83(0.90-2.71)		212	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.021	7.037	-0.016	0.957	1581854	4.57		91.4	3737	
D 52 13C6 PFDA										
519.10 > 474.10	7.080	7.107	-0.026	1.000	1970330	1.67		83.3	5542	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
53 PFDA										
512.90 > 469.00	7.080	7.107	-0.026	1.000	507443	0.9261	Target=2.75	92.6	1176	
512.90 > 219.00	7.080	7.107	-0.026	1.000	178112		2.85(1.37-4.12)		960	
* 51 13C2 PFDA										
515.10 > 470.10	7.080	7.107	-0.026		2377577	2.00			6255	
48 FHxSA										
397.90 > 78.00	7.129	7.126	0.003	1.098	915632	0.8249		82.5	5999	
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.204	7.219	-0.015	0.982	1721824	5.43		109	3404	
55 NEtFOSAA										
584.20 > 419.10	7.214	7.238	-0.024	1.001	276797	0.9115	Target=1.26	91.1	497	
584.20 > 526.00	7.214	7.238	-0.024	1.001	216457		1.28(0.63-1.89)		344	
* 57 13C4 PFOS										
502.80 > 79.90	7.335	7.373	-0.038		1386150	1.92			6802	
D 56 13C8 PFOS										
507.10 > 79.90	7.335	7.373	-0.038	1.000	1433331	1.78		93.1	6557	
58 PFOS										
498.90 > 79.90	7.345	7.373	-0.028	1.001	1347641	1.31	Target=4.39	140	2347	
498.90 > 98.80	7.335	7.373	-0.038	1.000	275767		4.89(2.19-6.58)		773	
D 59 13C7 PFUnA										
570.00 > 525.10	7.493	7.506	-0.013	1.058	1972385	1.60		79.8	4209	
60 PFUnA										
563.10 > 519.00	7.484	7.515	-0.031	0.999	604979	1.13	Target=3.76	113	1854	
563.10 > 269.10	7.493	7.515	-0.022	1.000	135674		4.46(1.88-5.63)		653	
61 9ClFOS										
530.80 > 351.00	7.656	7.686	-0.030	1.044	1681133	0.7903	Target=3.06	84.6	6849	
532.80 > 353.00	7.656	7.686	-0.030	1.044	544121		3.09(1.53-4.59)		3486	
62 PFNS										
548.80 > 79.90	7.754	7.788	-0.034	1.057	512477	0.7958	Target=3.67	82.7	3737	
548.80 > 98.80	7.754	7.788	-0.034	1.057	147278		3.48(1.83-5.50)		1400	
D 81 PFDoA										
615.10 > 570.00	7.899	7.935	-0.036	1.116	1840587	1.49		74.5	3430	
63 PFDoA										
613.10 > 569.00	7.899	7.935	-0.036		679475	1.07	Target=4.73	107	2970	
613.10 > 319.00	7.899	7.935	-0.036		143771		4.73(2.36-7.09)		719	
D 65 13C8 FOSA										
506.10 > 77.80	8.158	8.155	0.003	1.112	1412577	1.64		82.2	6974	
64 PFOSA										
498.10 > 77.90	8.168	8.155	0.013	1.001	702913	0.8757	Target=41.75	87.6	1512	
498.10 > 478.00	8.168	8.155	0.013	1.001	16716		42.05(20.87-62.62)		49.7	
66 PFDS										
599.00 > 79.90	8.148	8.196	-0.048	1.111	651477	0.8072	Target=3.69	83.7	3649	
599.00 > 98.80	8.148	8.196	-0.048	1.111	168797		3.86(1.84-5.53)		1217	
67 PFTrDA										
663.00 > 619.00	8.294	8.345	-0.051	0.956	697937	0.9243	Target=5.83	92.4	2435	
663.00 > 168.90	8.294	8.345	-0.051	0.956	108754		6.42(2.91-8.74)		1021	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
68 11ClFOS										
630.90 > 450.90	8.452	8.504	-0.052	1.152	1026380	0.7670	Target=3.21	81.3	5148	
632.90 > 452.90	8.452	8.504	-0.052	1.152	341792		3.00(1.60-4.81)		3802	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.677	8.722	-0.045	1.225	1712994	1.51		75.5	3914	
69 PFTeDA										
713.10 > 168.90	8.677	8.722	-0.045	1.000	87075	0.8787	Target=0.83	87.9	762	
713.10 > 219.00	8.677	8.722	-0.045	1.000	89665		0.97(0.41-1.24)		906	
71 PFDoS										
699.10 > 79.90	8.860	8.917	-0.057	1.208	590366	0.7118	Target=4.20	73.4	2815	
699.10 > 98.80	8.860	8.917	-0.057	1.208	143948		4.10(2.10-6.30)		1634	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.960	8.945	0.015	1.222	210849	3.71		74.2	855	
73 N-MeFOSE-M										
616.10 > 58.90	8.989	8.974	0.015	1.003	525322	4.65		93.0	1221	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.071	9.057	0.014	1.237	358643	1.44		72.0	2984	
74 NMeFOSA										
511.90 > 219.00	9.071	9.057	0.014	1.000	154594	0.9693	Target=0.68	96.9	799	
511.90 > 169.00	9.071	9.057	0.014	1.000	222261		0.70(0.34-1.03)		607	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.177	9.176	0.001	1.251	275253	4.24		84.8	679	
77 N-EtFOSE-M										
630.00 > 58.90	9.203	9.189	0.014	1.003	778338	4.55		91.1	1859	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.266	9.252	0.014	1.263	451080	1.48		74.2	2517	
79 N-EtFOSA-M										
526.00 > 219.00	9.266	9.265	0.001	1.000	176574	0.9173	Target=0.85	91.7	832	
526.00 > 169.00	9.266	9.265	0.001	1.000	208319		0.85(0.43-1.28)		825	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.521	9.645	-0.124	1.097	412747	0.6517	Target=16.56	65.2	7565	
913.00 > 169.00	9.521	9.645	-0.124	1.097	26154		15.78(8.28-24.84)		1475	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
M - Manually Integrated

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 12:32:49 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-74.d

Injection Date: 19-Feb-2026 04:46:15 Instrument ID: 30577

Lims ID: 460-344895-A-1-C MS

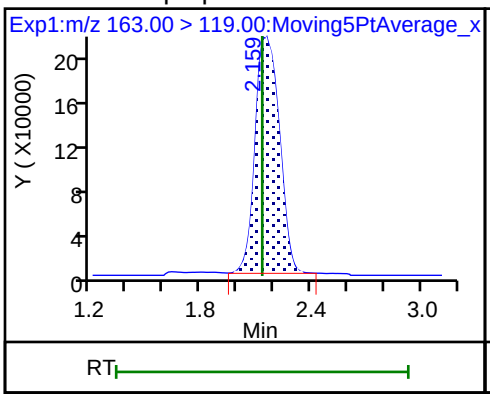
Client ID: RXMW-6_P

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 38 Worklist Smp#: 70

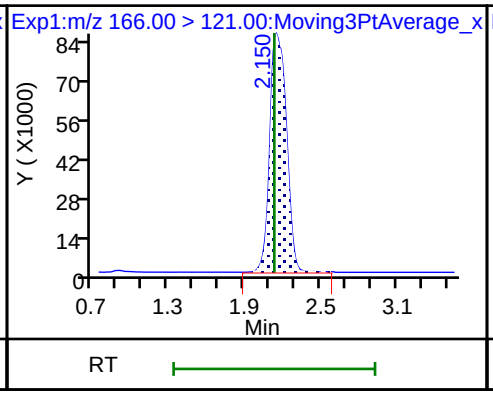
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

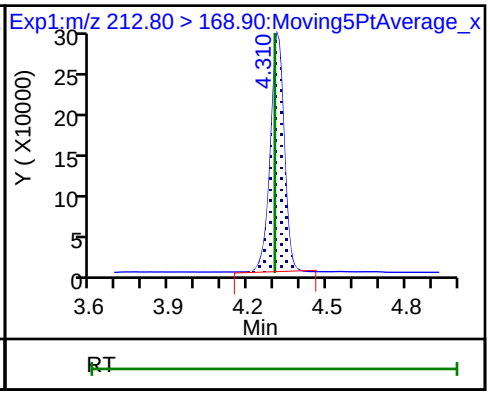
2 Perfluoropropionic acid



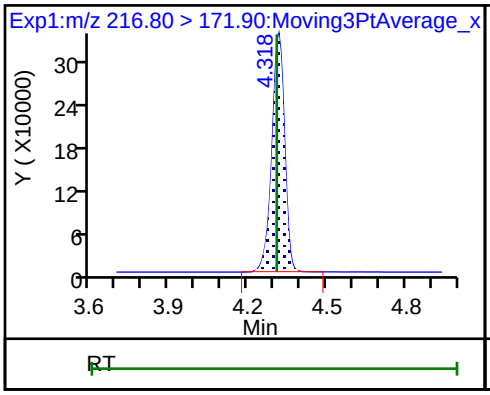
D 1 13C3PFPrA



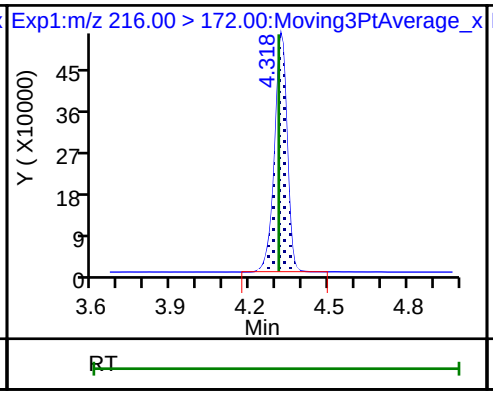
3 PFBA



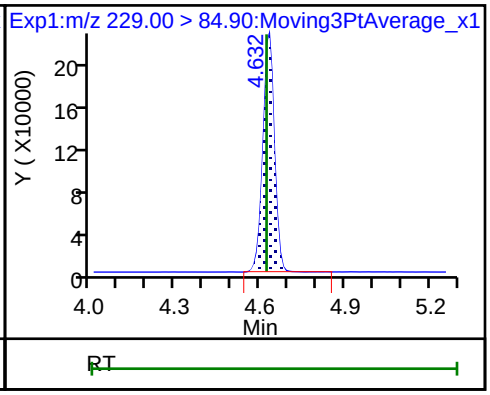
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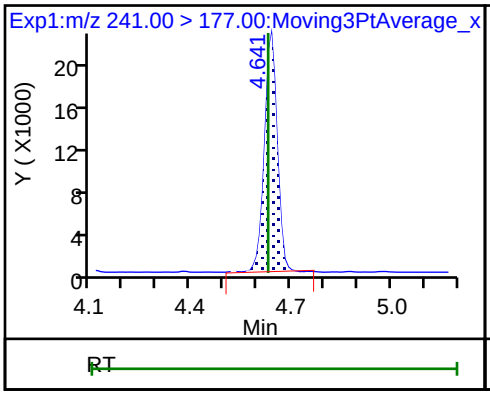
* 5 13C3PFBA



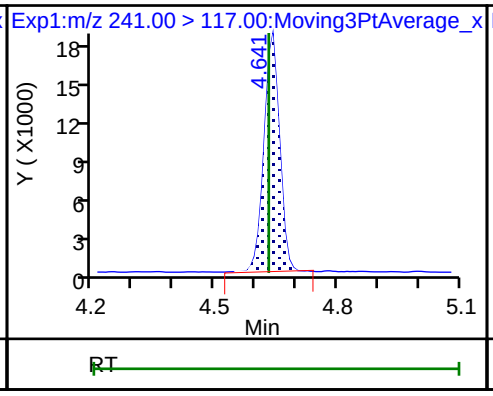
6 PFMPA



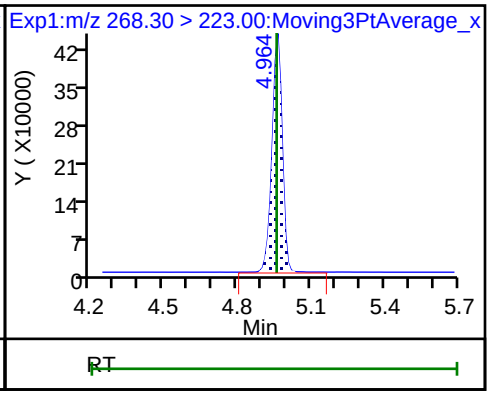
7 3:3 FTCA



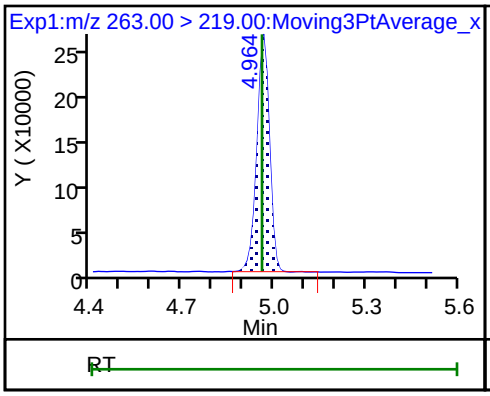
7 3:3 FTCA



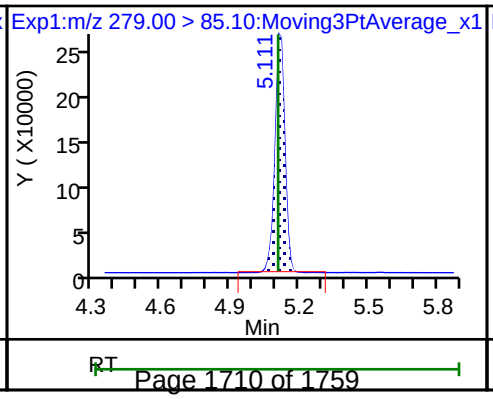
D 8 13C5 PFPeA



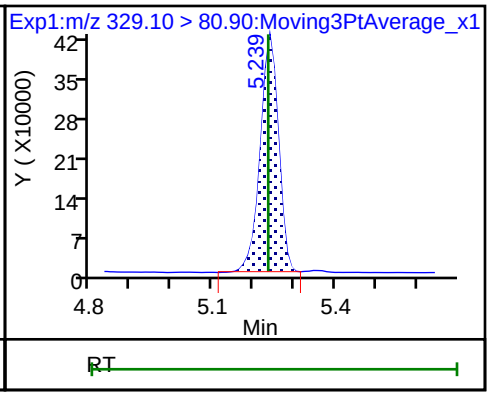
9 PFPA



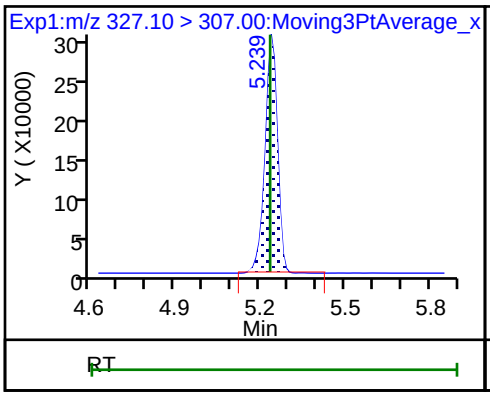
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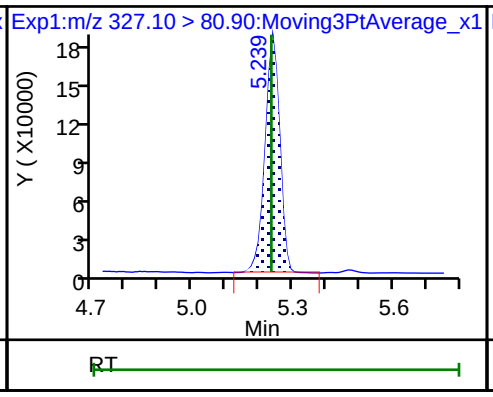
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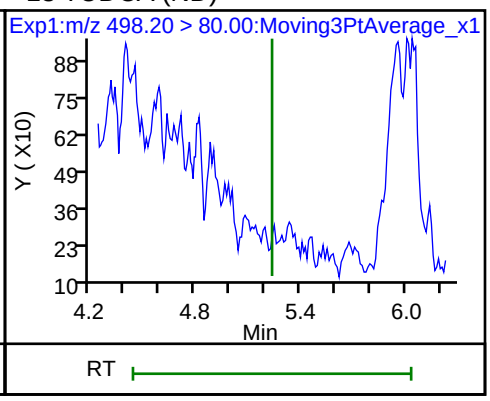
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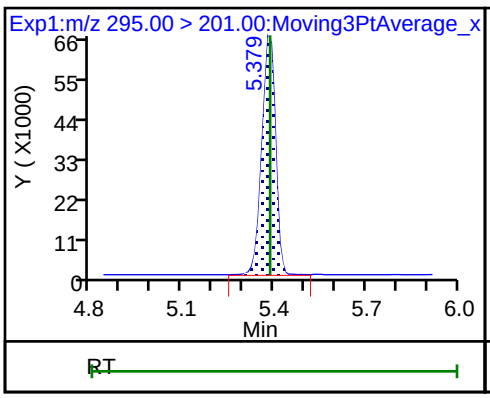
12 4:2FTS



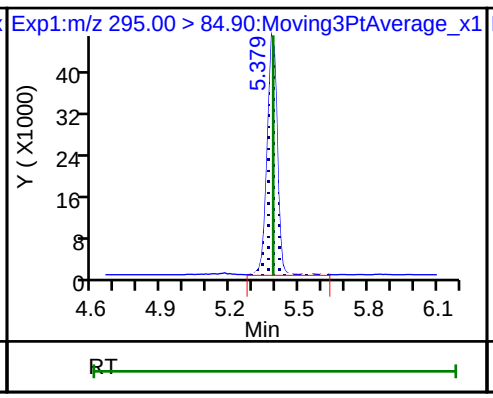
13 TUDCA (ND)



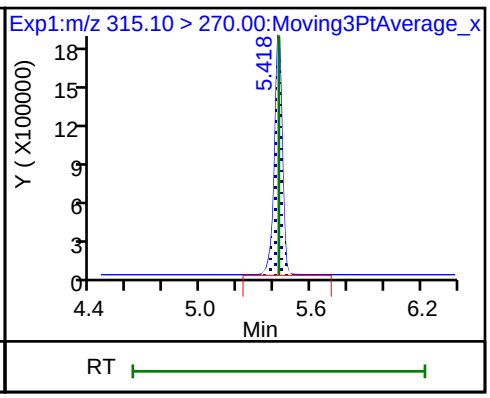
14 NFDHA



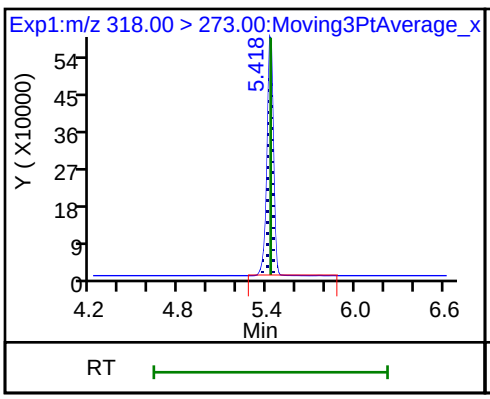
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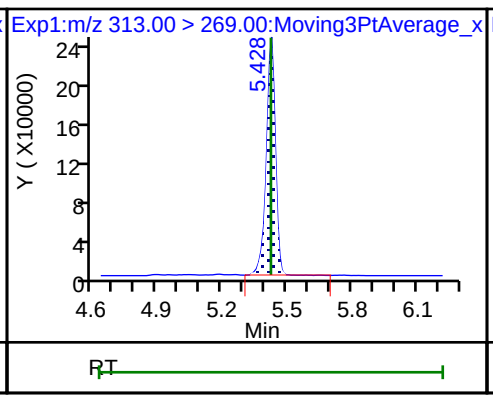
* 16 13C2 PFHxA



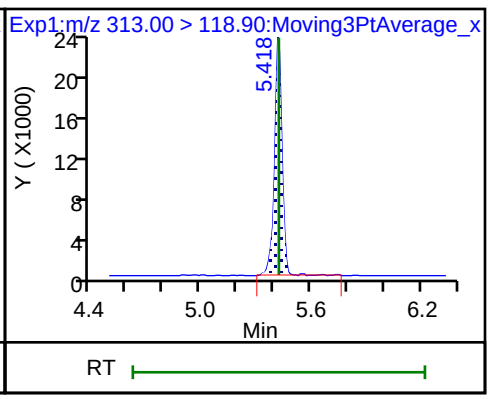
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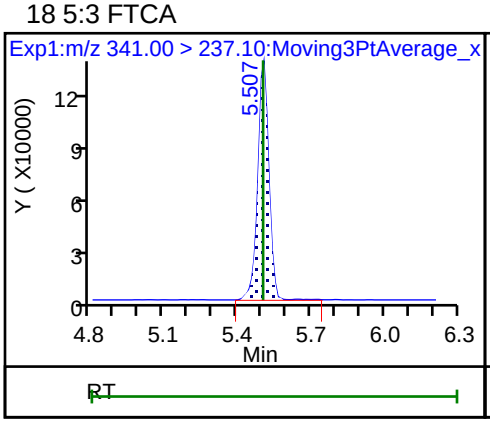
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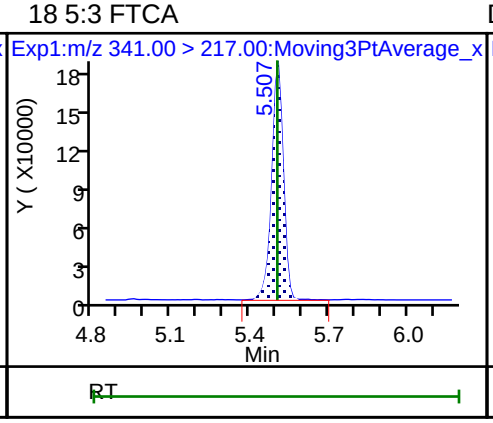
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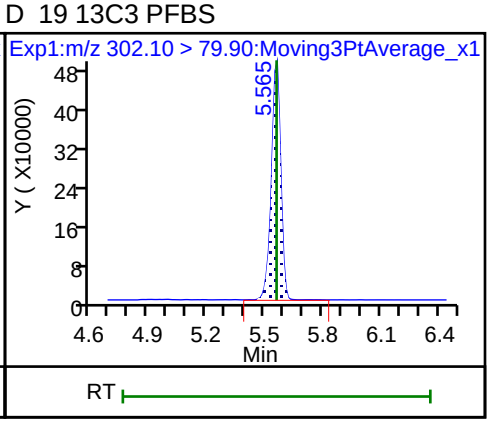
18 5:3 FTCA



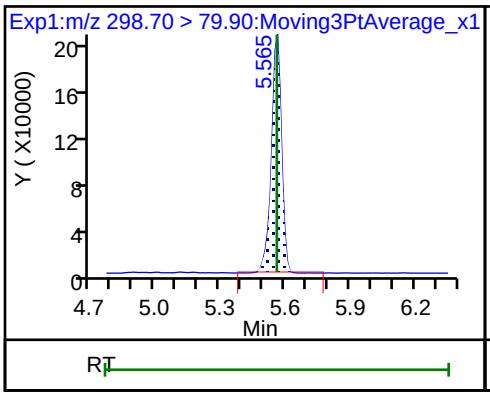
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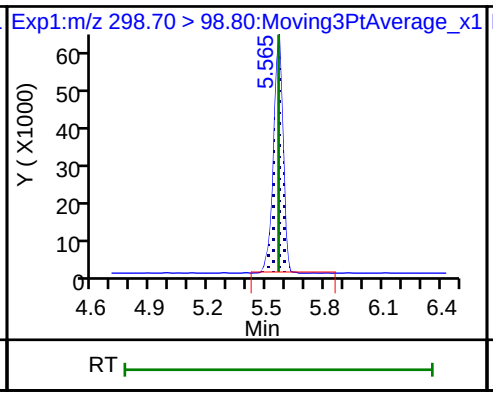
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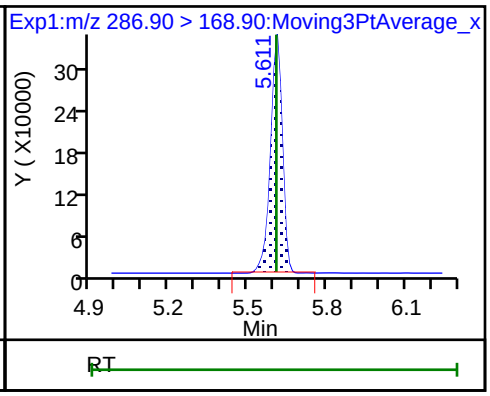
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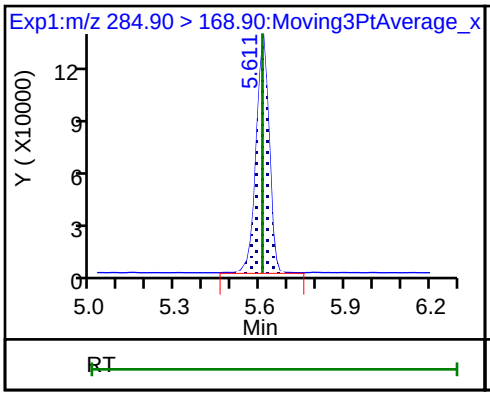
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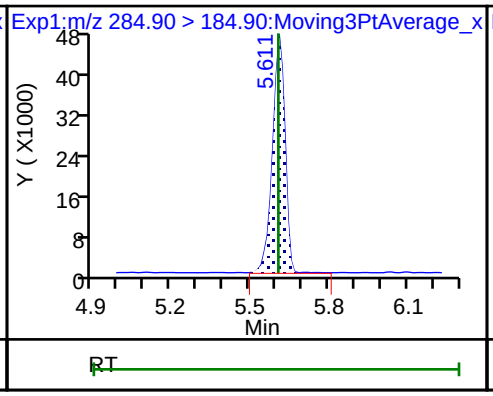
D 22 13C3 HFPO-DA



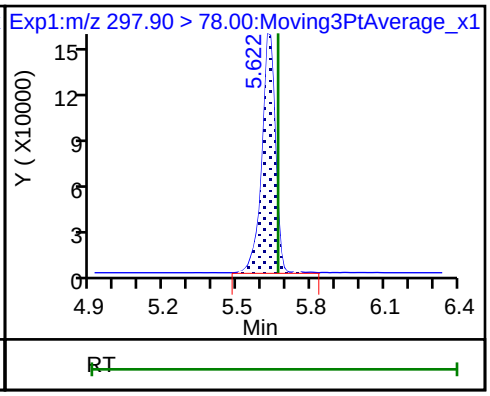
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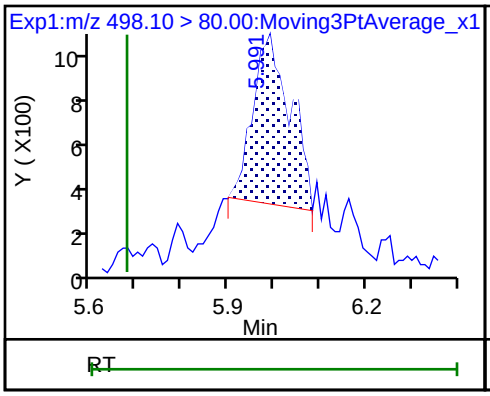
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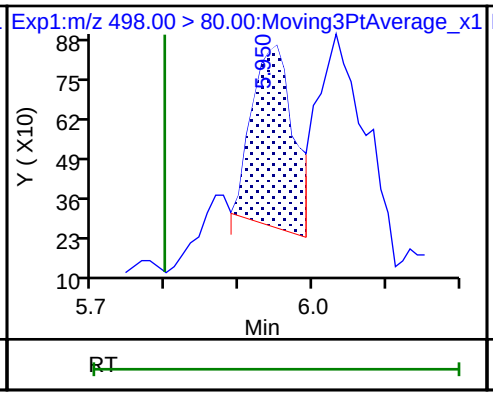
21 FBSA



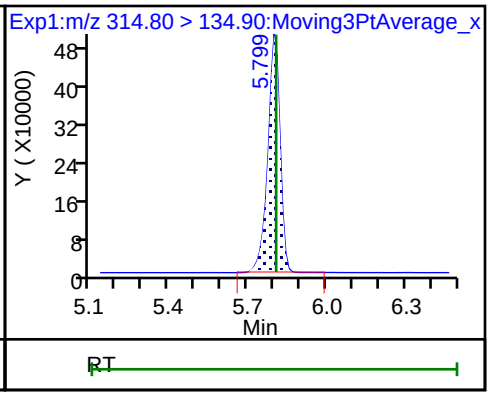
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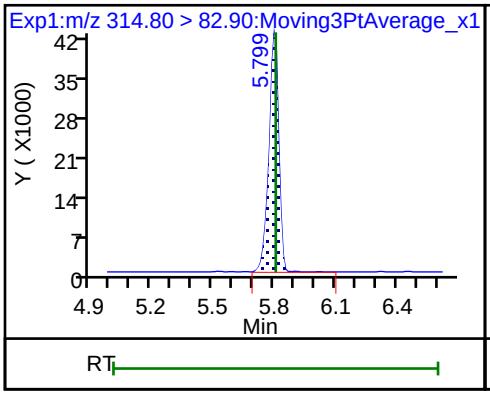
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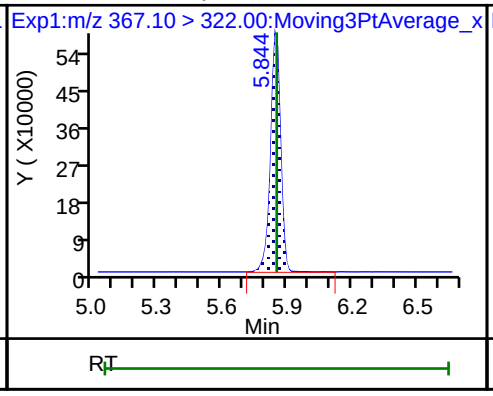
26 PFEESA



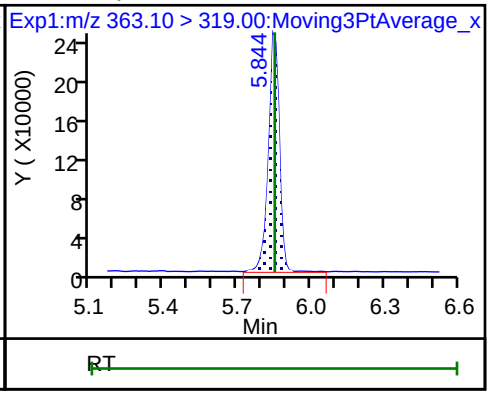
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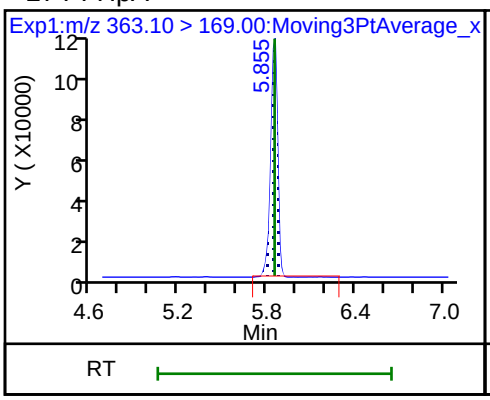
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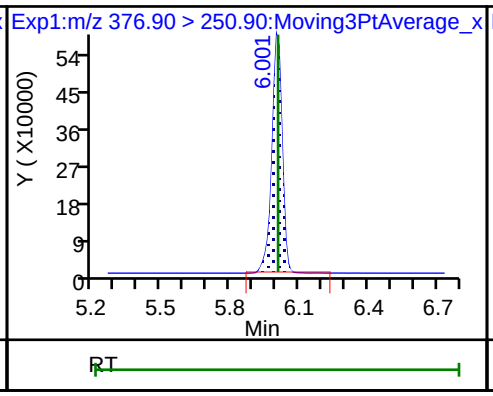
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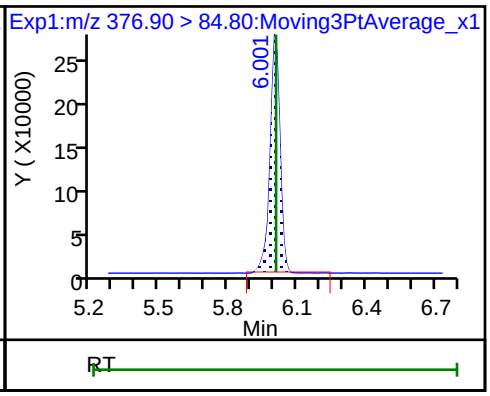
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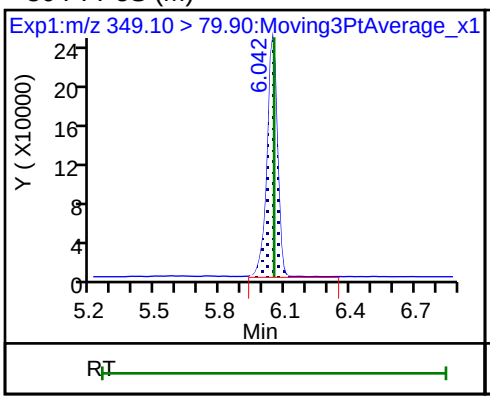
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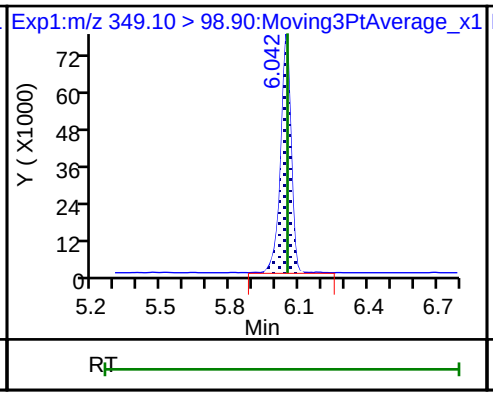
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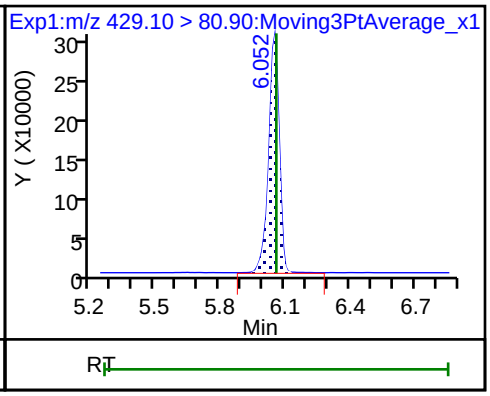
30 PFPeS (M)



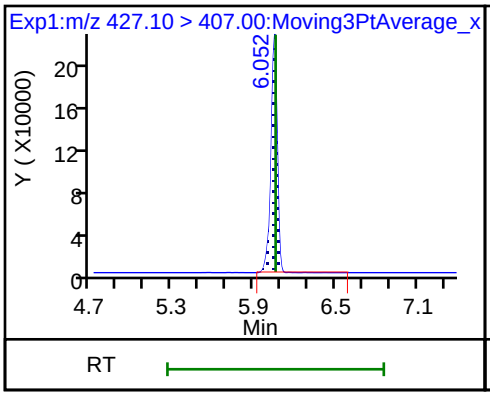
30 PFPeS



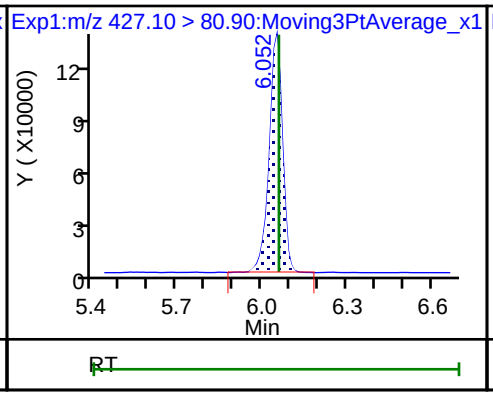
D 32 13C2-6:2FTS



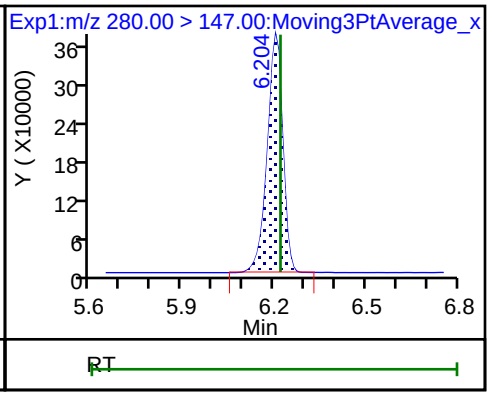
31 6:2FTS



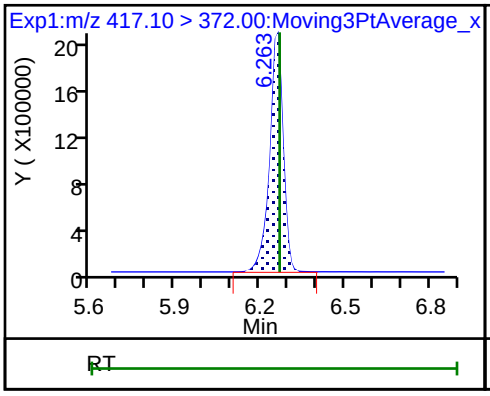
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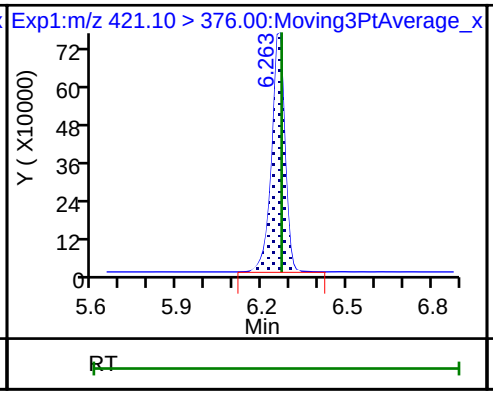
33 BTS



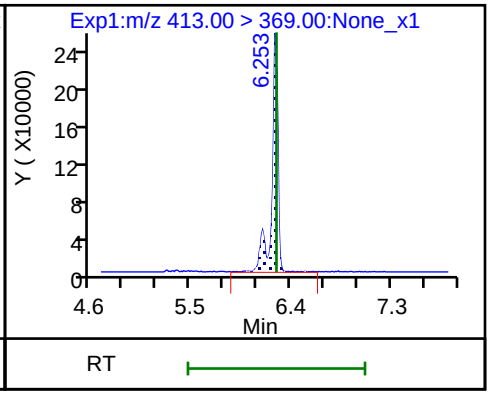
* 34 13C4 PFOA



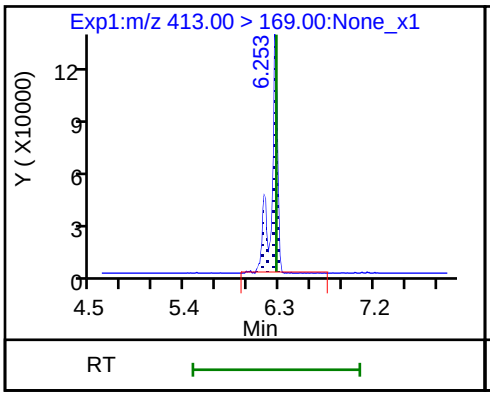
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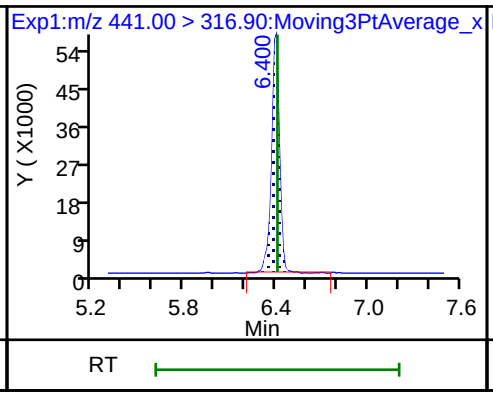
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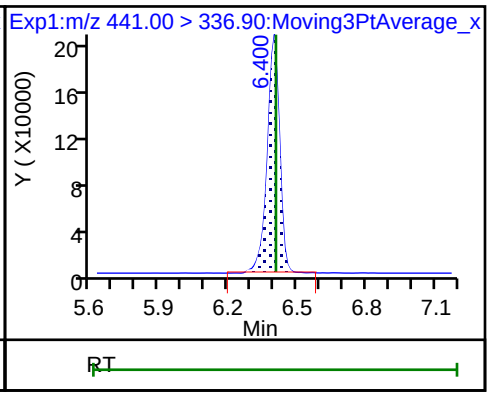
36 PFOA



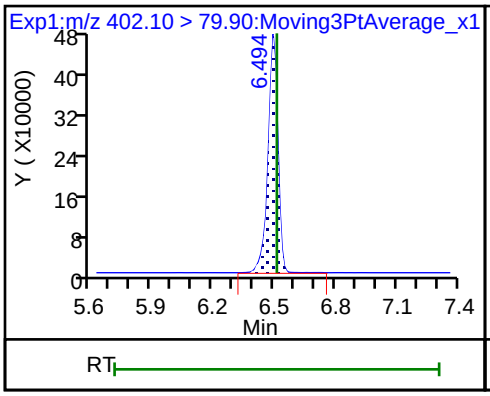
37 7:3 FTCA



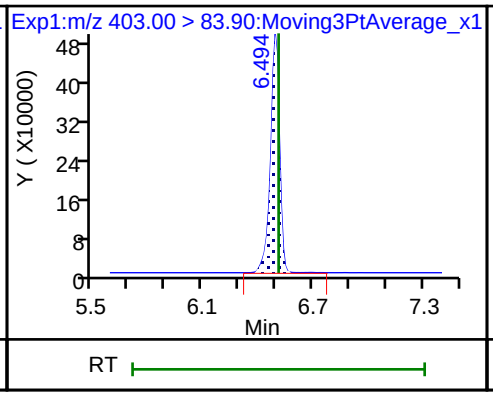
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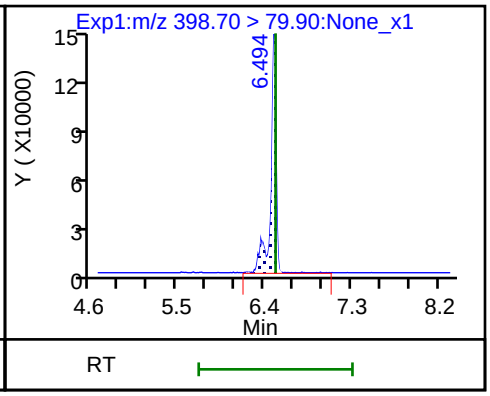
D 38 13C3 PFHxS



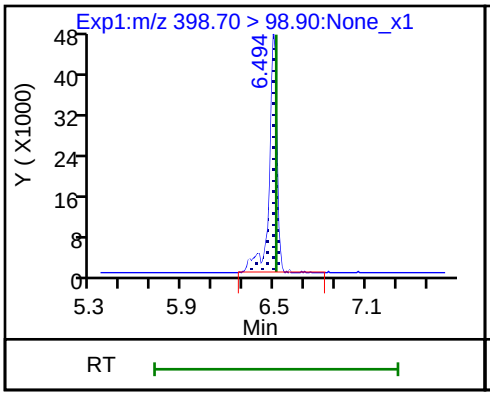
* 39 18O2 PFHxS



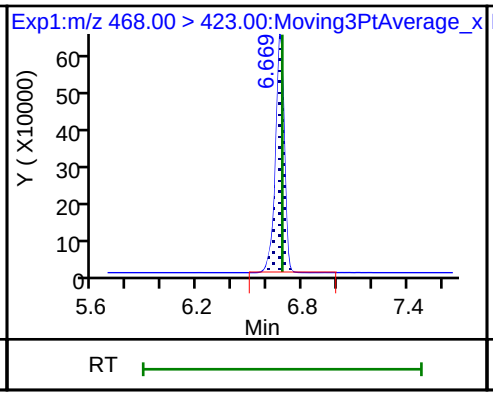
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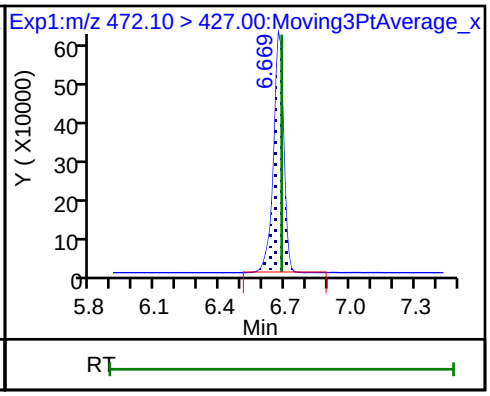
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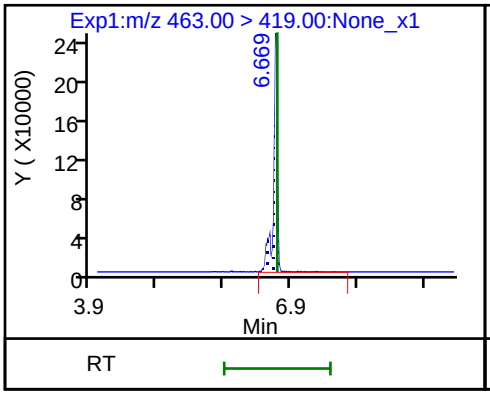
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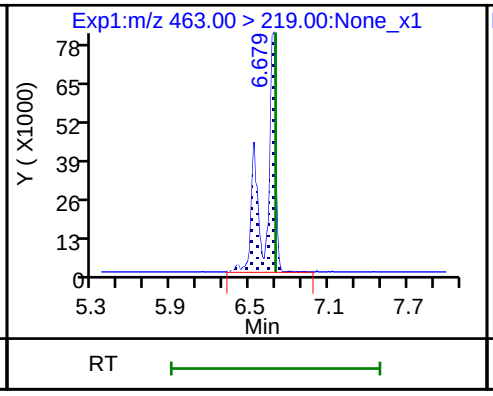
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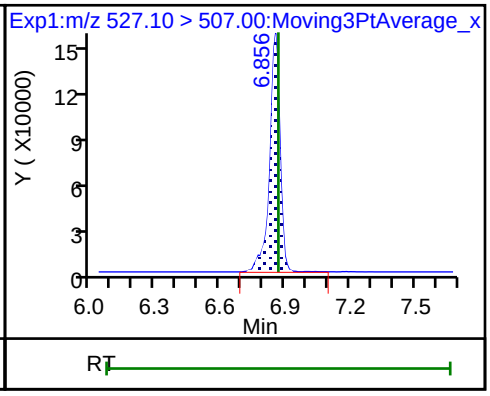
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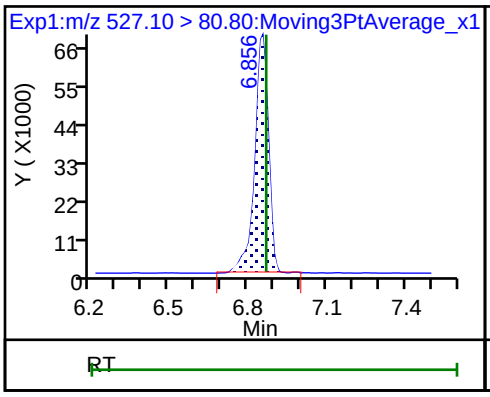
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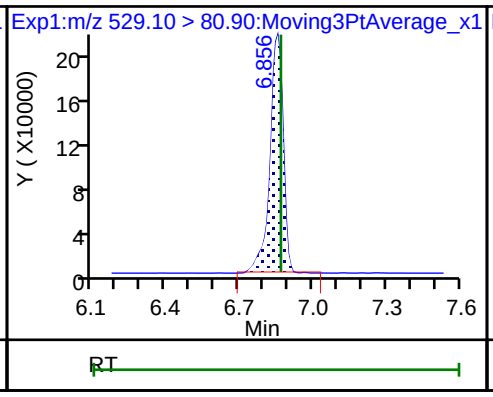
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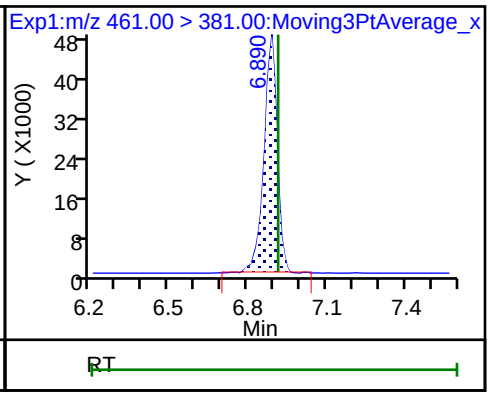
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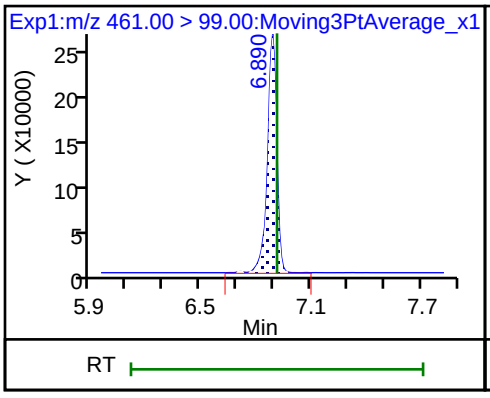
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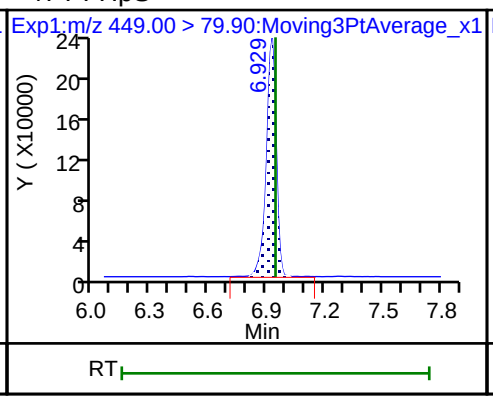
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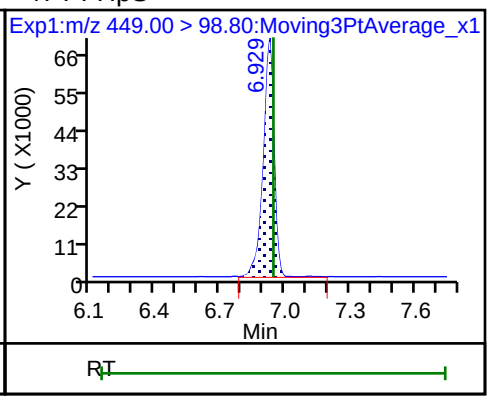
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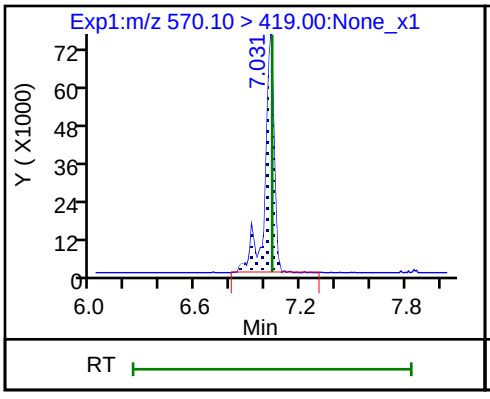
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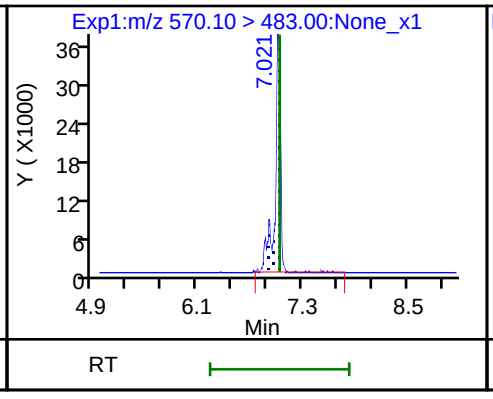
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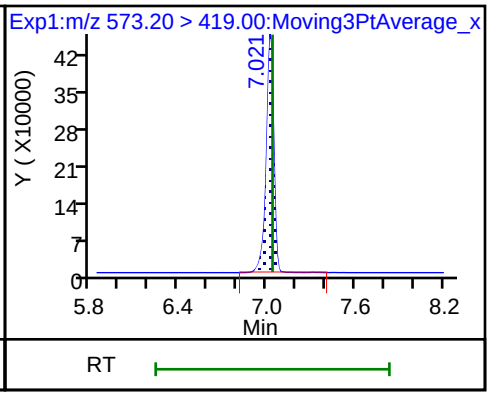
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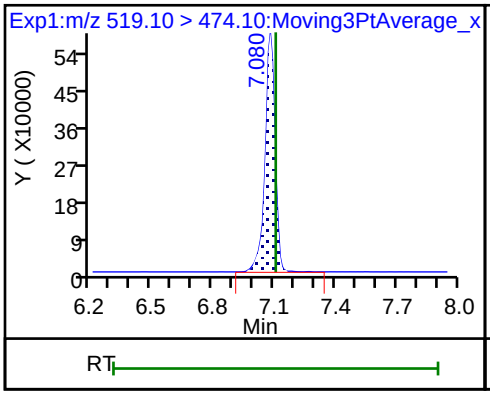
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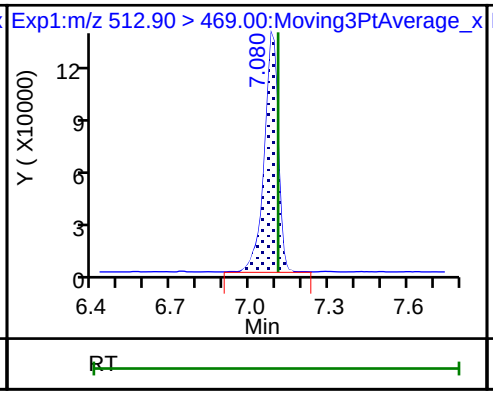
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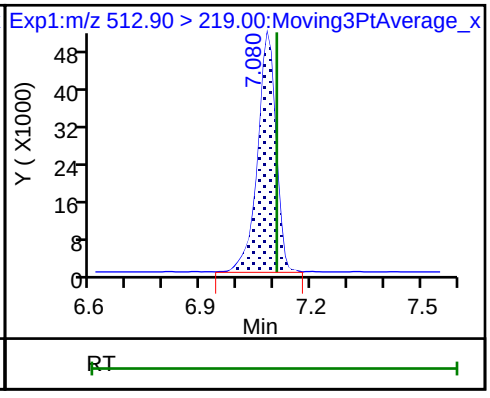
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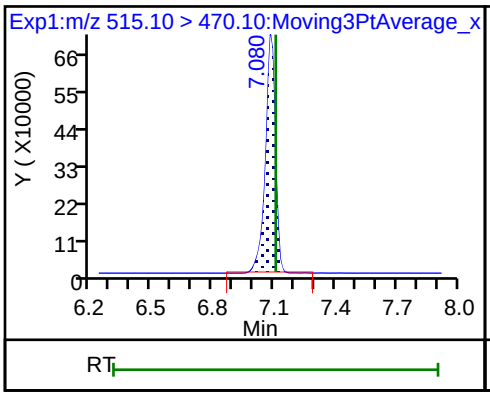
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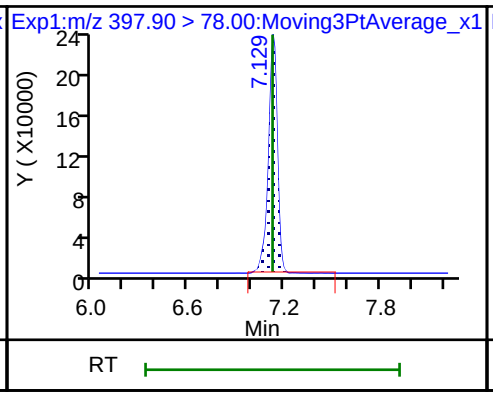
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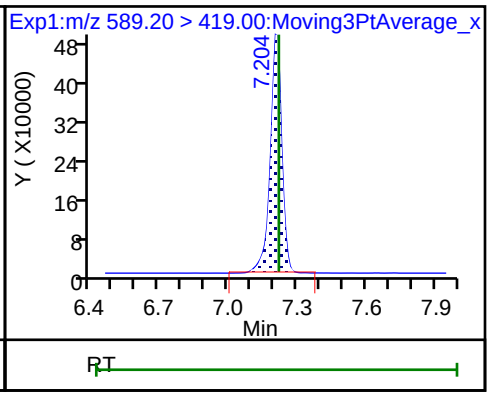
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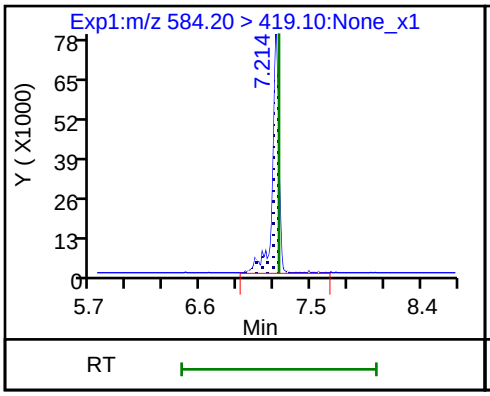
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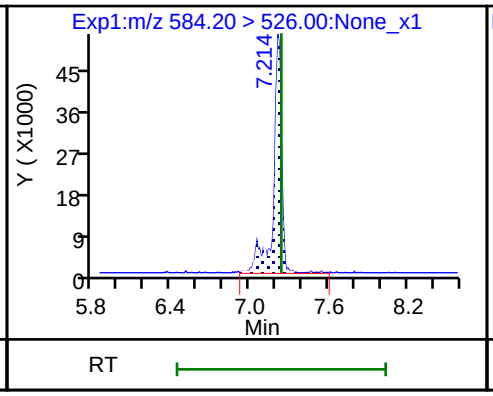
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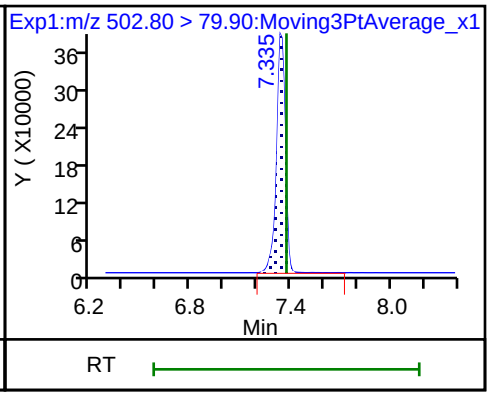
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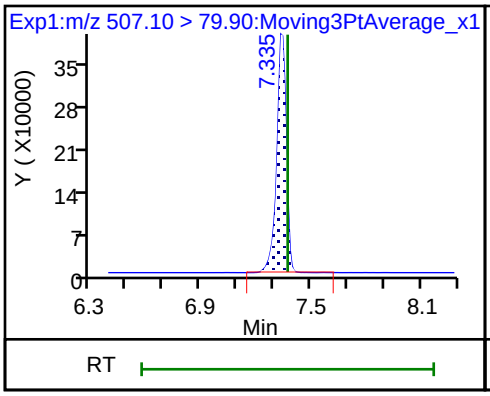
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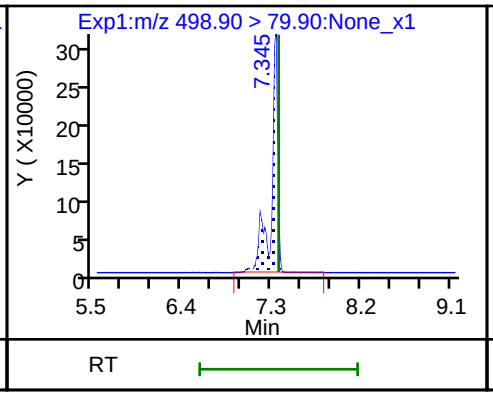
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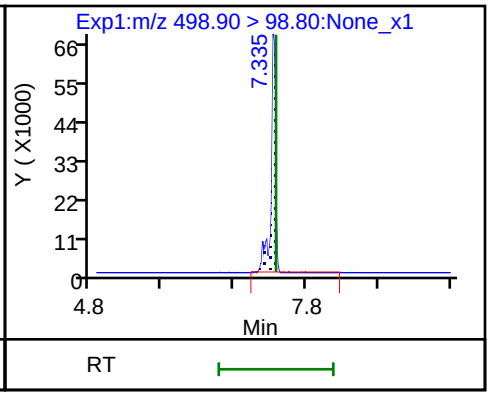
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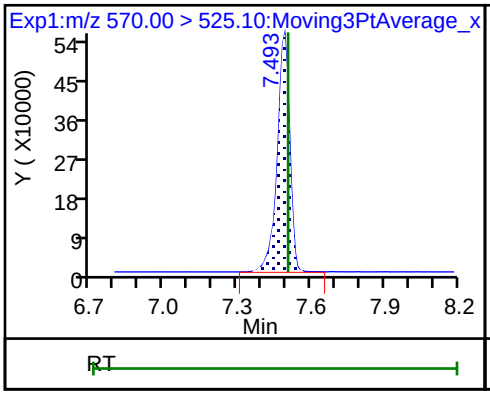
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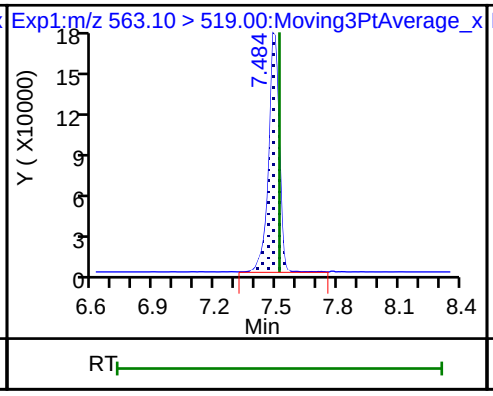
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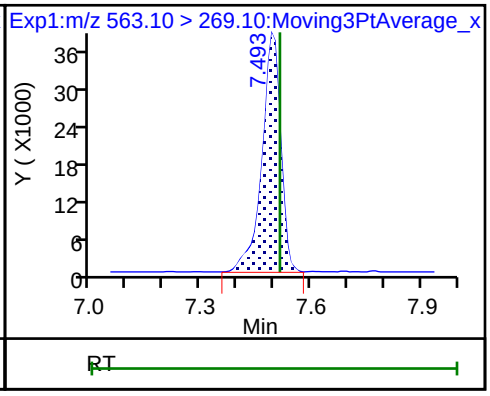
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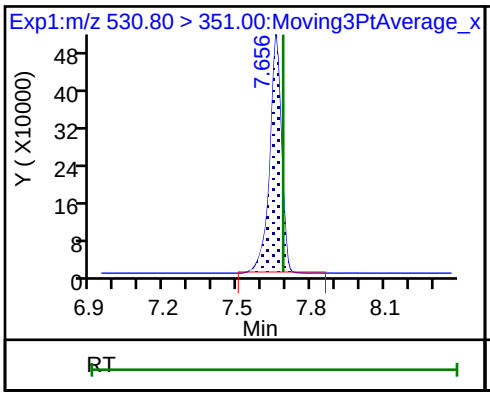
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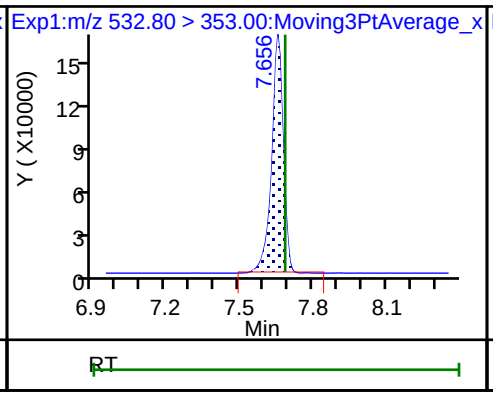
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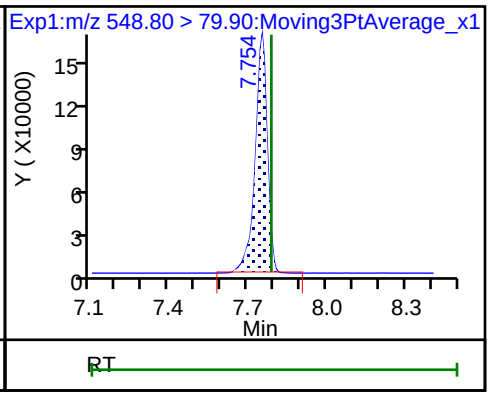
61 9ClFOS



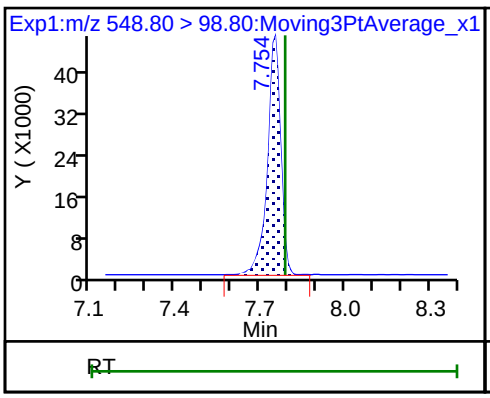
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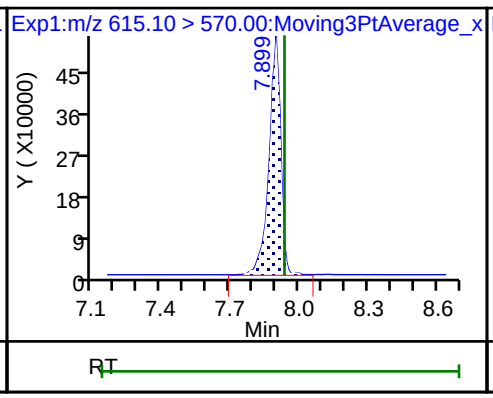
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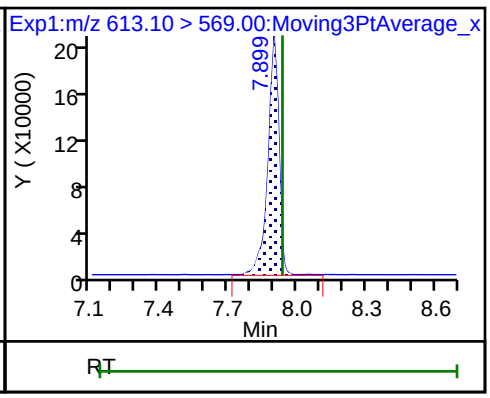
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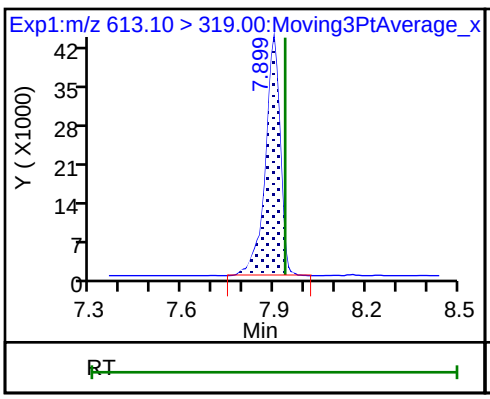
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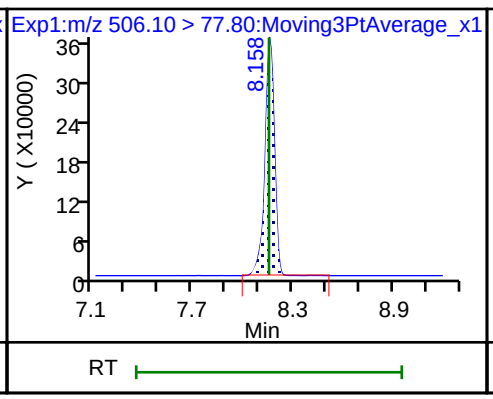
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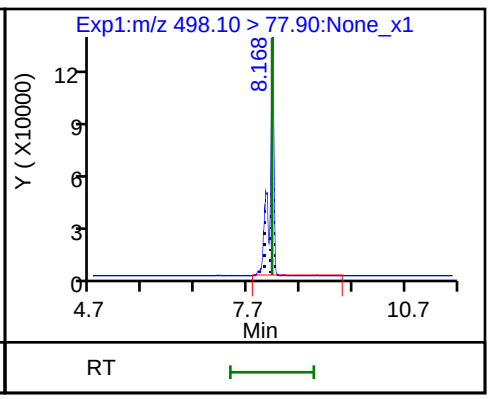
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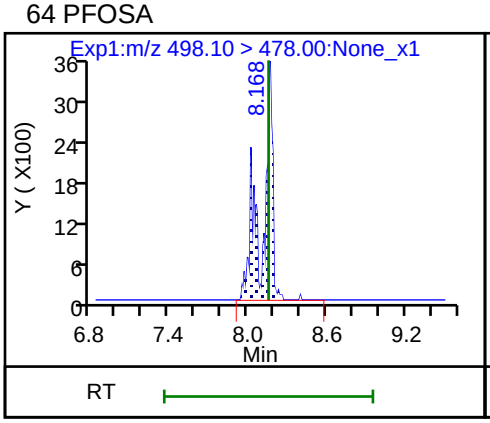
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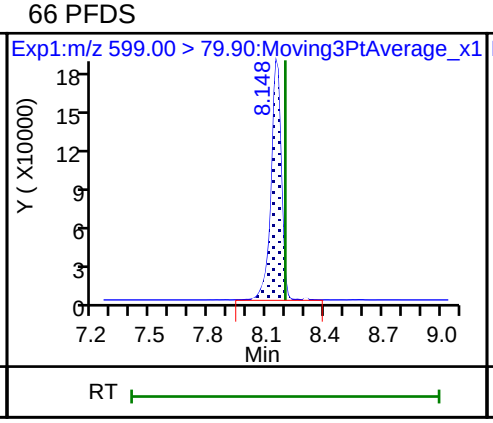
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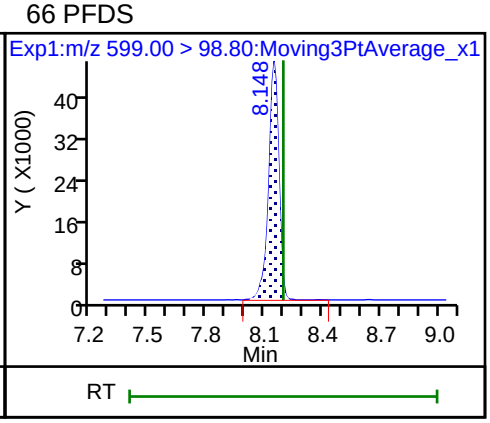
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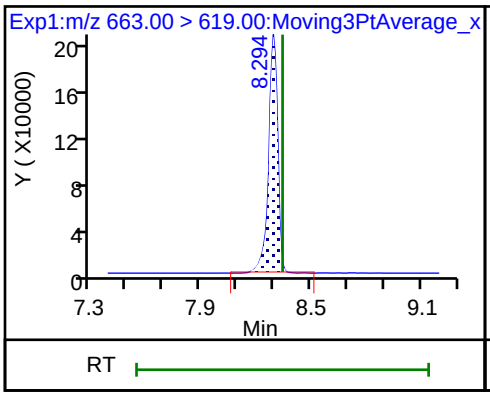
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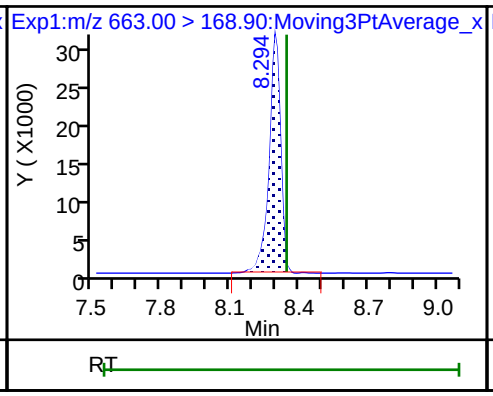
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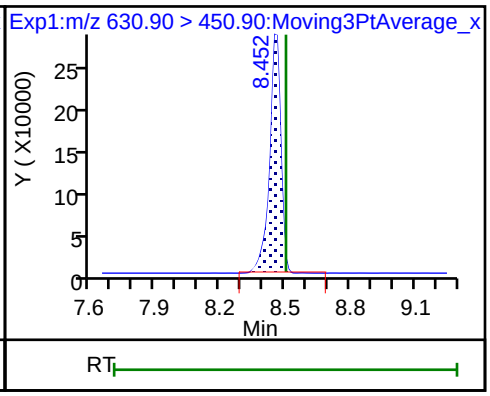
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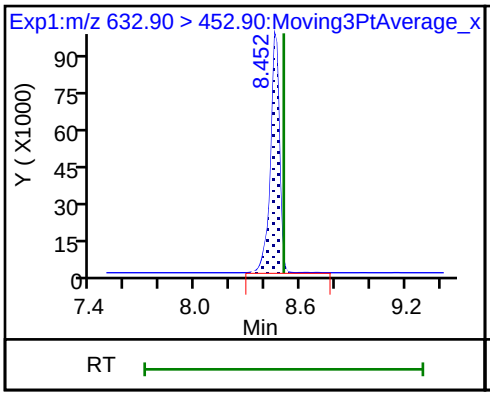
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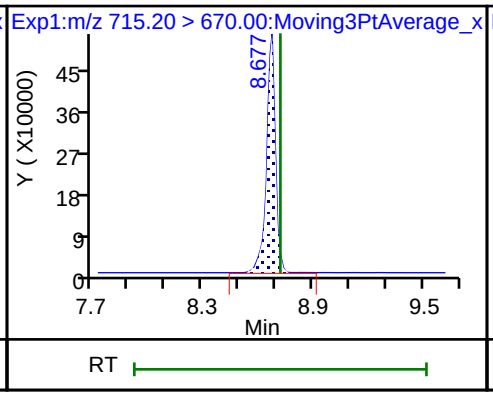
68 11ClFOS



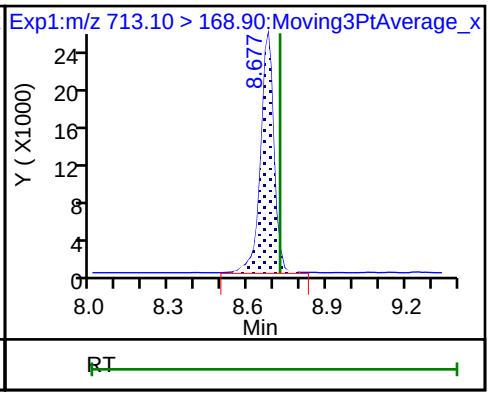
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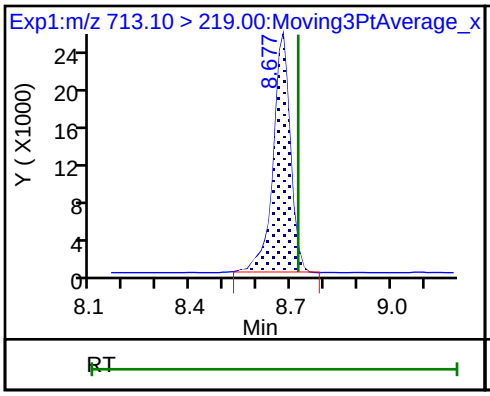
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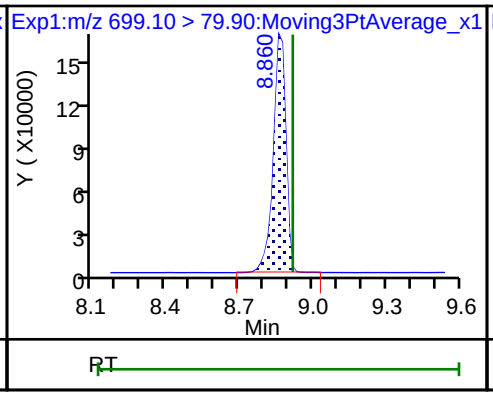
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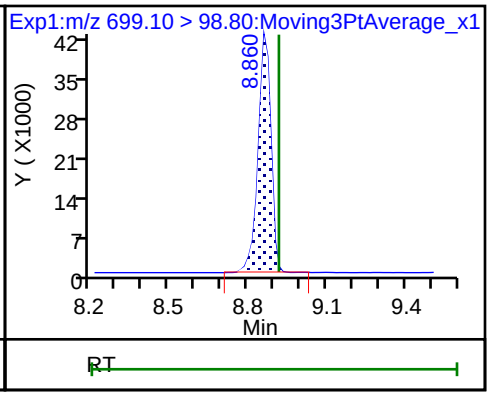
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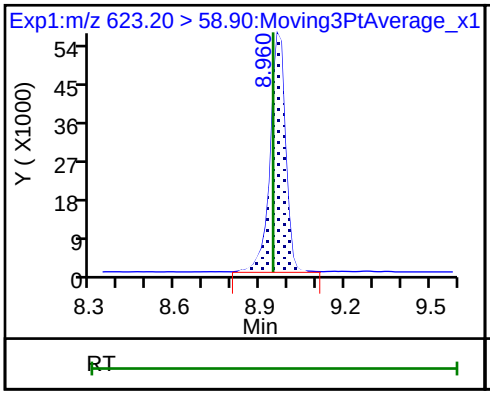
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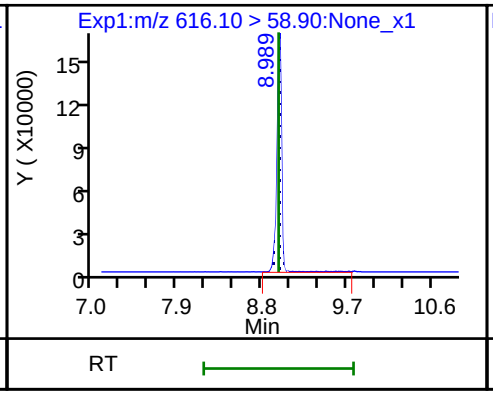
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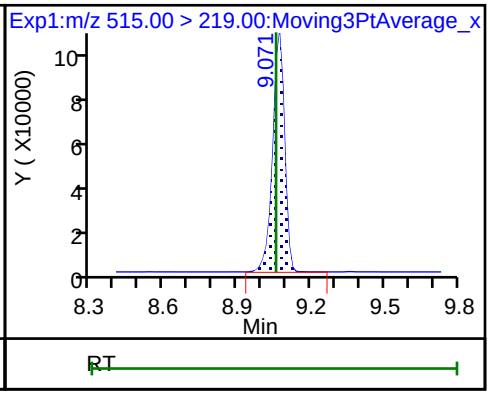
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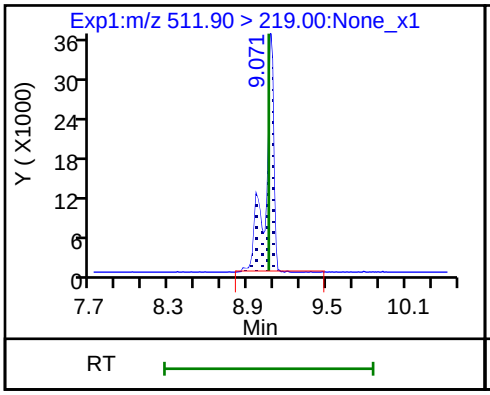
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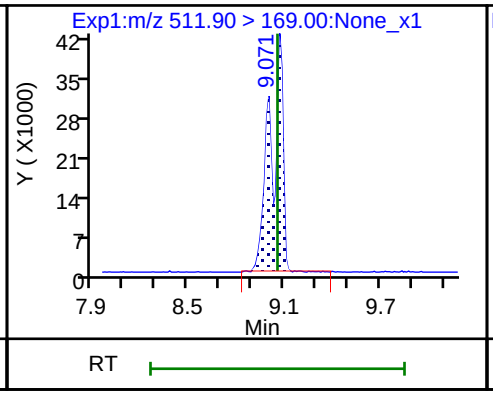
D 75 d3-NMePFOSA



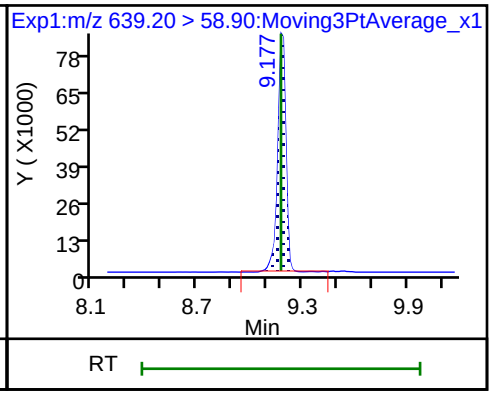
74 NMeFOSA



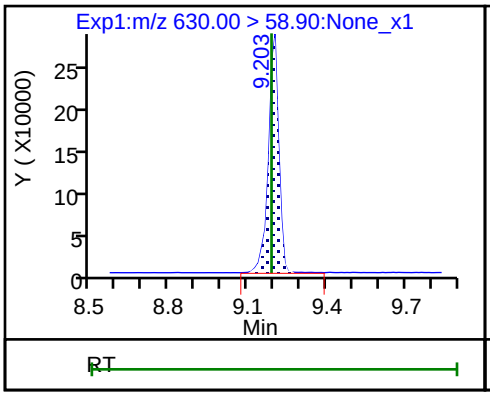
74 NMeFOSA



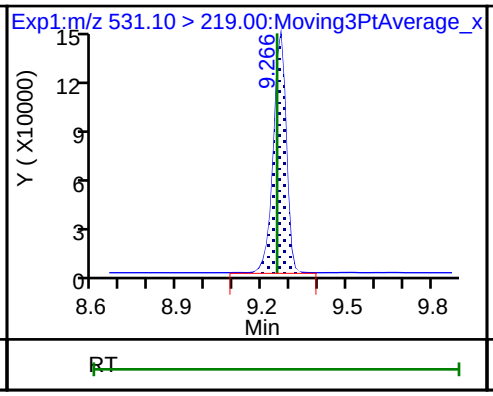
D 76 d9-N-EtFOSE



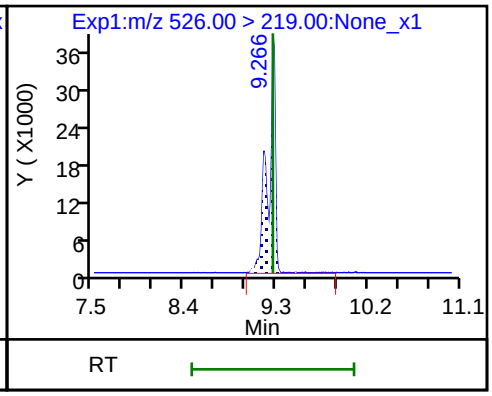
77 N-EtFOSE-M



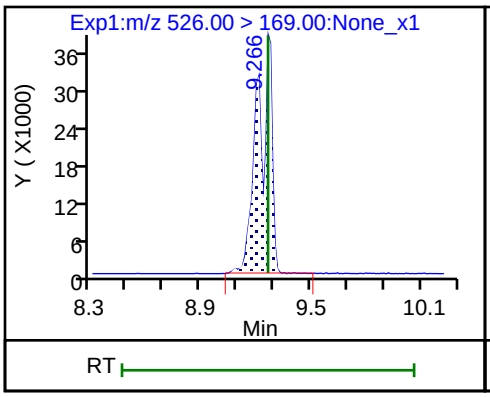
D 78 d5-NEtPFOSA



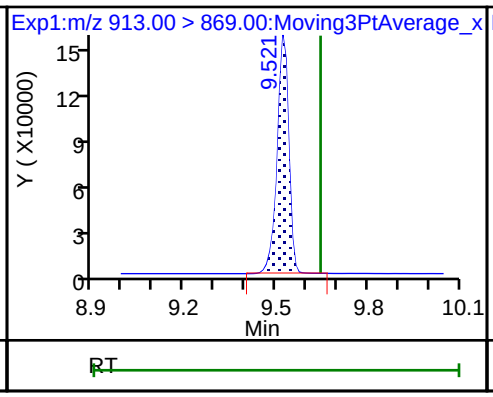
79 N-EtFOSA-M



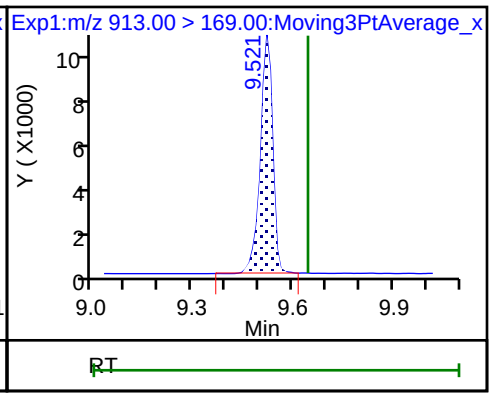
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

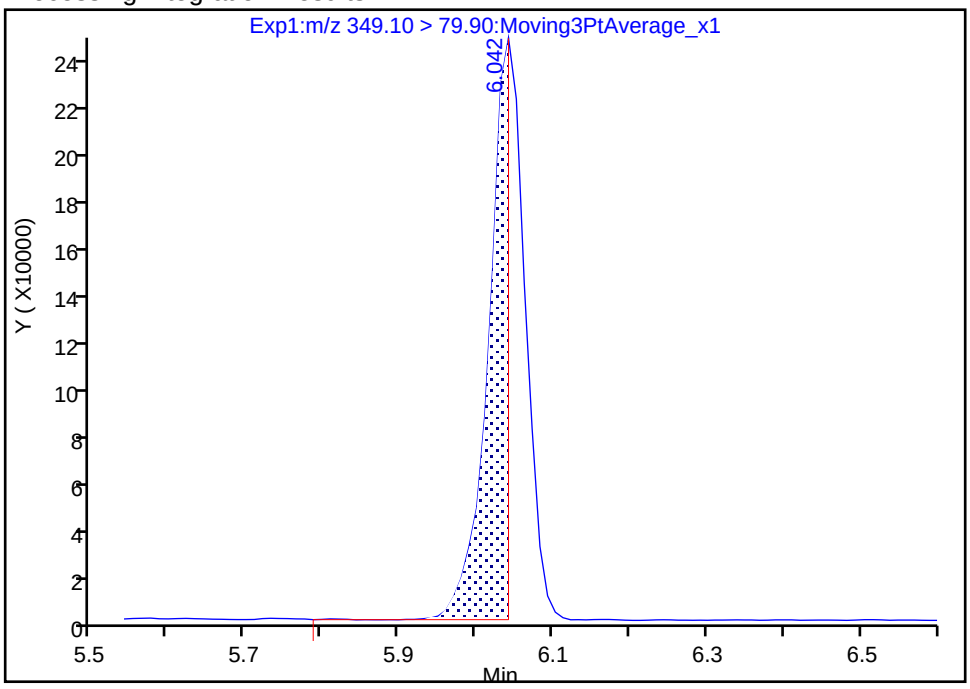
Data File:	\\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-74.d				
Injection Date:	19-Feb-2026 04:46:15	Instrument ID:	30577		
Lims ID:	460-344895-A-1-C MS				
Client ID:	RXMW-6_P				
Operator ID:	ETUS023_USR_INS00009	ALS Bottle#:	38	Worklist Smp#:	70
Injection Vol:	7.0 ul	Dil. Factor:	1.0000		
Method:	30577-1633-125	Limit Group:	LC - 1633 LVI- ICAL		
Column:		Detector	EXP1		

30 PFPeS, CAS: 2706-91-4

Signal: 1

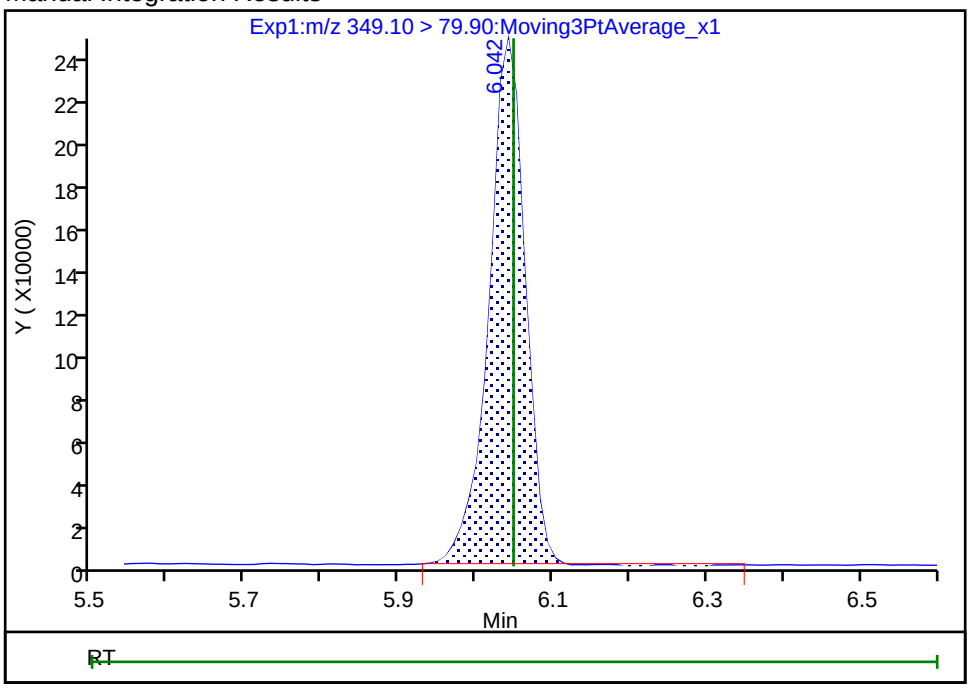
Processing Integration Results

RT: 6.04
Area: 435549
Amount: 0.461421
Amount Units: ng/ml



Manual Integration Results

RT: 6.04
Area: 805298
Amount: 0.853134
Amount Units: ng/ml



Reviewer: DX7G, 19-Feb-2026 12:28:10 -05:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MSD
Lab Sample ID: 460-344895-1 MSD

Matrix: Water
Lab File ID: 26FEB18JO-75.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 164.9(mL)
Date Analyzed: 02/19/2026 04:59

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	62.07		3.03	0.83
2706-90-3	Perfluoropentanoic acid (PFPeA)	29.95		1.52	0.45
307-24-4	Perfluorohexanoic acid (PFHxA)	35.51		1.52	0.38
375-85-9	Perfluoroheptanoic acid (PFHpA)	32.72		1.52	0.61
335-67-1	Perfluorooctanoic acid (PFOA)	41.56		1.52	0.68
375-95-1	Perfluorononanoic acid (PFNA)	26.00		1.52	0.38
335-76-2	Perfluorodecanoic acid (PFDA)	33.74		1.52	0.38
2058-94-8	Perfluoroundecanoic acid (PFUnA)	30.48		1.52	0.38
307-55-1	Perfluorododecanoic acid (PFDoA)	30.73		1.52	0.38
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	24.88		1.52	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	24.74		1.52	0.38
375-73-5	Perfluorobutanesulfonic acid (PFBS)	25.03		1.52	0.38
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	21.45		1.52	0.38
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	23.42		1.52	0.61
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	25.49		1.52	0.38
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	39.37		1.52	0.99
68259-12-1	Perfluorononanesulfonic acid (PFNS)	25.42		1.52	0.38
335-77-3	Perfluorodecanesulfonic acid (PFDS)	25.76		1.52	0.38
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)	21.15		1.52	0.45
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	52.62		3.03	0.76
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	51.51		3.03	0.76
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	55.36		3.03	0.76
754-91-6	Perfluorooctanesulfonamide (PFOSA)	26.43		1.52	0.38
31506-32-8	N-methylperfluorooctane sulfonamide (NMeFOSA)	28.57		1.52	0.38
4151-50-2	N-ethylperfluorooctane sulfonamide (NEtFOSA)	27.48		1.52	0.83

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MSD
Lab Sample ID: 460-344895-1 MSD

Matrix: Water
Lab File ID: 26FEB18JO-75.d

Analysis Method: 1633A
Date Collected: 02/16/2026 13:00

Extraction Method: 1633A
Date Extracted: 02/18/2026 15:35

Sample wt/vol: 164.9(mL)
Date Analyzed: 02/19/2026 04:59

Con. Extract Vol.: 5(mL)
Dilution Factor: 1

Injection Volume: 7(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716
Units: ng/L

Preparation Batch No.: 770909
Instrument ID: 30577

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.72		1.52	0.38
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	26.34		1.52	0.38
24448-09-7	N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	132.8		7.58	3.03
1691-99-2	N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	131.7		7.58	3.03
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	21.10		1.52	1.06
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	27.21		1.52	0.38
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	28.26		1.52	0.38
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)	26.37		1.52	0.38
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	29.35		1.52	0.38
756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	24.26		1.52	0.38
763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	24.41		1.52	0.38
113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	24.01		1.52	0.38
356-02-5	3-Perfluoropropylpropanoic acid (3:3 FTCA)	55.15		3.03	0.76
914637-49-3	3-Perfluoropentylpropanoic acid (5:3 FTCA)	156.9		7.58	2.12
812-70-4	3-Perfluoroheptylpropanoic acid (7:3 FTCA)	182.3		7.58	1.90

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Client Sample ID: RXMW-6_P MSD Lab Sample ID: 460-344895-1 MSD

Matrix: Water Lab File ID: 26FEB18JO-75.d

Analysis Method: 1633A Date Collected: 02/16/2026 13:00

Extraction Method: 1633A Date Extracted: 02/18/2026 15:35

Sample wt/vol: 164.9(mL) Date Analyzed: 02/19/2026 04:59

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 7(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770716 Units: ng/L

Preparation Batch No.: 770909 Instrument ID: 30577

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
1017281-29-6	13C4 PFBA	60.2		5-130
2283397-79-3	13C5 PFPeA	69.2		40-130
2328024-54-8	13C5 PFHxA	70.7		40-130
2328024-55-9	13C4 PFHpA	81.5		40-130
1350614-84-4	13C8 PFOA	86.4		40-130
2283397-80-6	13C9 PFNA	98.7		40-130
2328024-56-0	13C6 PFDA	102		40-130
STL02580	13C7 PFUnA	104		30-130
STL02116	13C2 PFTeDA	100		10-130
2708218-83-9	13C3 PFBS	66.6		40-135
2708218-85-1	13C3 PFHxS	81.5		40-130
2265893-05-6	13C8 PFOS	108		40-130
STL01056	13C8 FOSA	101		40-130
1400690-70-1	d3-NMeFOSAA	114		40-170
1265205-97-7	d5-NEtFOSAA	122		25-135
STL02395	13C2 4:2 FTS	111		40-200
STL02279	13C2 6:2 FTS	111		40-200
STL02280	13C2 8:2 FTS	110		40-300
STL02255	13C3 HFPO-DA	71.4		40-130
STL02277	d7-N-MeFOSE-M	86.3		10-130
STL02278	d9-N-EtFOSE-M	77.8		10-130
STL02704	d5-NEtPFOSA	92.8		10-130
STL02705	d3-NMePFOSA	94.1		10-130
960315-52-0	13C2 PFDoA	92.4		10-130

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-75.d
Lims ID: 460-344895-A-1-D MSD
Client ID: RXMW-6_P
Sample Type: MSD
Inject. Date: 19-Feb-2026 04:59:50 ALS Bottle#: 39 Worklist Smp#: 71
Injection Vol: 7.0 ul Dil. Factor: 1.0000
Sample Info: 460-344895-A-1-D MSD
Misc. Info.: Plate: 1 Rack: 1 410-0176047-071
Operator ID: ETUS023_USR_INS00009 Instrument ID: 30577

Method: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\30577-1633-125.m
Limit Group: LC - 1633 LVI- ICAL
Last Update: 19-Feb-2026 12:30:48 Calib Date: 16-Feb-2026 21:57:13
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\30577\20260216-175852.b\26FEB16CAL-08.d

Column 1 : Det: EXP1
Process Host: CTX1683

First Level Reviewer: DX7G Date: 19-Feb-2026 12:29:05
Ratio Calibration: Initial Calibration Level: 5

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluoropropionic acid										
163.00 > 119.00	2.108	2.133	-0.025	1.000	1658655	5.24		105	3880	
D 1 13C3PFPrA										
166.00 > 121.00	2.108	2.133	-0.025	0.486	692055	1.14		56.8	707	
3 PFBA										
212.80 > 168.90	4.338	4.302	0.036	1.000	975177	2.05		102	9129	
D 4 13C4-PFBA										
216.80 > 171.90	4.338	4.309	0.029	1.000	1040276	1.20		60.2	4326	
* 5 13C3PFBA										
216.00 > 172.00	4.338	4.309	0.029		1756601	2.00			3425	
6 PFMPA										
229.00 > 84.90	4.649	4.622	0.027	0.932	565692	0.9320		93.2	2532	
7 3:3 FTCA										
241.00 > 177.00	4.658	4.631	0.027	0.934	56632	1.82	Target=1.15	90.9	697	
241.00 > 117.00	4.658	4.631	0.027	0.934	46816		1.21(0.57-1.72)		592	
D 8 13C5 PFPeA										
268.30 > 223.00	4.987	4.959	0.027	0.915	1206631	1.38		69.2	4621	
9 PFPA										
263.00 > 219.00	4.987	4.959	0.027	1.000	684393	0.9878		98.8	189	
10 PFMBA										
279.00 > 85.10	5.142	5.107	0.035	1.031	706823	0.8696		87.0	2567	
D 11 13C2-4:2FTS										
329.10 > 80.90	5.261	5.235	0.026	0.807	1298395	5.22		111	361	
12 4:2FTS										
327.10 > 307.00	5.261	5.235	0.026	1.000	882763	1.74	Target=1.67	92.5	5810	
327.10 > 80.90	5.261	5.235	0.026	1.000	508244		1.74(0.84-2.51)		211	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
14 NFDHA										
295.00 > 201.00	5.409	5.386	0.023	0.993	200640	0.9680	Target=1.43	96.8	1273	
295.00 > 84.90	5.409	5.386	0.023	0.993	128208		1.56(0.71-2.14)		423	
* 16 13C2 PFHxA										
315.10 > 270.00	5.447	5.424	0.023		4913040	5.00			4537	
D 15 13C5 PFHxA										
318.00 > 273.00	5.447	5.424	0.023	1.000	1512041	1.41		70.7	4612	
17 PFHxA										
313.00 > 269.00	5.447	5.424	0.023	1.000	660024	1.17	Target=9.36	117	292	
313.00 > 118.90	5.447	5.424	0.023	1.000	61242		10.78(4.68-14.05)		360	
18 5:3 FTCA										
341.00 > 237.10	5.530	5.503	0.027	1.015	388536	5.18	Target=0.64	104	1077	
341.00 > 217.00	5.530	5.503	0.027	1.015	521888		0.74(0.32-0.97)		1149	
D 19 13C3 PFBS										
302.10 > 79.90	5.588	5.561	0.027	0.857	1475491	1.24		66.6	1068	
20 PFBS										
298.70 > 79.90	5.588	5.561	0.027	1.000	583593	0.8253	Target=3.13	92.9	631	
298.70 > 98.80	5.588	5.561	0.027	1.000	184823		3.16(1.56-4.69)		1262	
D 22 13C3 HFPO-DA										
286.90 > 168.90	5.634	5.607	0.027	1.034	995365	1.43		71.4	3740	
23 HFPO-DA										
284.90 > 168.90	5.634	5.607	0.027	1.000	375075	0.6959	Target=2.49	92.8	1908	
284.90 > 184.90	5.634	5.607	0.027	1.000	156130		2.40(1.24-3.73)		1102	
21 FBSA										
297.90 > 78.00	5.657	5.665	-0.008	1.012	529882	0.9420		94.2	1428	
26 PFEESA										
314.80 > 134.90	5.822	5.807	0.015	1.069	1451095	0.7920	Target=11.82	88.8	5612	
314.80 > 82.90	5.822	5.807	0.015	1.069	115805		12.53(5.91-17.73)		785	
D 28 13C4 PFHpA										
367.10 > 322.00	5.878	5.851	0.027	1.079	1706231	1.63		81.5	5545	
27 PFHpA										
363.10 > 319.00	5.878	5.851	0.027	1.000	645921	1.08	Target=1.51	108	252	
363.10 > 169.00	5.878	5.851	0.027	1.000	365594		1.77(0.75-2.26)		1332	
29 ADONA										
376.90 > 250.90	6.032	6.007	0.025	1.071	1536736	0.8975	Target=2.22	94.9	4663	
376.90 > 84.80	6.032	6.007	0.025	1.071	660269		2.33(1.11-3.33)		1598	
30 PFPeS										
349.10 > 79.90	6.073	6.049	0.024	0.932	655863	0.7074	Target=3.28	75.3	414	
349.10 > 98.90	6.073	6.049	0.024	0.932	204487		3.21(1.64-4.91)		620	
D 32 13C2-6:2FTS										
429.10 > 80.90	6.073	6.059	0.014	0.932	1094307	5.29		111	2053	
31 6:2FTS										
427.10 > 407.00	6.073	6.059	0.014	1.000	721172	1.70	Target=1.56	89.2	2535	
427.10 > 80.90	6.073	6.059	0.014	1.000	472108		1.53(0.78-2.35)		608	
33 BTS										
280.00 > 147.00	6.224	6.220	0.004	0.955	1198801	0.7929		79.2	5160	
* 34 13C4 PFOA										
417.10 > 372.00	6.282	6.269	0.013		6920997	5.00			5467	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 35 13C8 PFOA										
421.10 > 376.00	6.282	6.269	0.013	1.000	2291762	1.73		86.4	6420	
36 PFOA										
413.00 > 369.00	6.282	6.269	0.013	1.000	826998	1.37	Target=1.59	137	283	
413.00 > 169.00	6.273	6.269	0.004	0.998	453508		1.82(0.80-2.39)		415	
37 7:3 FTCA										
441.00 > 316.90	6.422	6.407	0.015	1.179	230488	6.01	Target=0.24	120	553	
441.00 > 336.90	6.422	6.407	0.015	1.179	843025		0.27(0.12-0.36)		1119	
D 38 13C3 PFHxS										
402.10 > 79.90	6.517	6.512	0.005	1.000	1553194	1.54		81.5	5739	
* 39 18O2 PFHxS										
403.00 > 83.90	6.517	6.512	0.005		1746735	1.90			5804	
40 PFHxS										
398.70 > 79.90	6.517	6.512	0.005	1.000	481049	0.7724	Target=3.08	84.7	691	
398.70 > 98.90	6.528	6.512	0.016	1.002	160633		2.99(1.54-4.62)		348	
* 42 13C5 PFNA										
468.00 > 423.00	6.699	6.684	0.015		2338766	2.00			5231	
D 41 13C9 PFNA										
472.10 > 427.00	6.699	6.684	0.015	1.000	2308818	1.97		98.7	3577	
43 PFNA										
463.00 > 419.00	6.699	6.694	0.005	1.000	899935	0.8575	Target=1.95	85.7	996	
463.00 > 219.00	6.699	6.694	0.005	1.000	418663		2.15(0.97-2.92)		562	
45 8:2FTS										
527.10 > 507.00	6.882	6.868	0.014	1.000	712719	1.83	Target=1.86	95.1	1625	
527.10 > 80.80	6.882	6.868	0.014	1.000	352666		2.02(0.93-2.79)		1357	
D 44 13C2-8:2FTS										
529.10 > 80.90	6.882	6.868	0.014	1.056	1121110	5.26		110	2280	
46 PFECHS										
461.00 > 381.00	6.919	6.914	0.005	1.062	179543	0.9589	Target=0.18	104	817	
461.00 > 99.00	6.919	6.914	0.005	1.062	1056946		0.17(0.09-0.27)		4420	
47 PFHpS										
449.00 > 79.90	6.950	6.945	0.005	0.943	919688	0.8407	Target=3.60	88.1	1832	
449.00 > 98.80	6.950	6.945	0.005	0.943	251346		3.66(1.80-5.40)		1261	
50 NMeFOSAA										
570.10 > 419.00	7.051	7.037	0.014	1.000	316937	0.8151	Target=1.80	81.5	383	
570.10 > 483.00	7.051	7.037	0.014	1.000	204911		1.55(0.90-2.71)		406	
D 49 d3-NMeFOSAA										
573.20 > 419.00	7.051	7.037	0.014	0.957	1978256	5.71		114	1383	
D 52 13C6 PFDA										
519.10 > 474.10	7.110	7.107	0.004	1.000	2314445	2.03		102	4341	
53 PFDA										
512.90 > 469.00	7.110	7.107	0.004	1.000	716168	1.11	Target=2.75	111	2234	
512.90 > 219.00	7.110	7.107	0.004	1.000	219058		3.27(1.37-4.12)		866	
* 51 13C2 PFDA										
515.10 > 470.10	7.110	7.107	0.004		2291494	2.00			3231	
48 FHxSA										
397.90 > 78.00	7.158	7.126	0.032	1.098	834539	0.7654		76.5	5269	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 54 d5-NEtFOSAA										
589.20 > 419.00	7.232	7.219	0.013	0.982	1939711	6.12		122	3443	
55 NEtFOSAA										
584.20 > 419.10	7.241	7.238	0.003	1.001	297236	0.8689	Target=1.26	86.9	457	
584.20 > 526.00	7.232	7.238	-0.006	1.000	227991		1.30(0.63-1.89)		349	
* 57 13C4 PFOS										
502.80 > 79.90	7.367	7.373	-0.006		1387268	1.92			4228	
D 56 13C8 PFOS										
507.10 > 79.90	7.367	7.373	-0.006	1.000	1668375	2.07		108	4335	
58 PFOS										
498.90 > 79.90	7.367	7.373	-0.006	1.000	1559112	1.30	Target=4.39	140	2872	
498.90 > 98.80	7.367	7.373	-0.006	1.000	318989		4.89(2.19-6.58)		774	
D 59 13C7 PFUnA										
570.00 > 525.10	7.520	7.506	0.014	1.058	2486313	2.09		104	4386	
60 PFUnA										
563.10 > 519.00	7.511	7.515	-0.004	0.999	679904	1.01	Target=3.76	101	2268	
563.10 > 269.10	7.520	7.515	0.005	1.000	158973		4.28(1.88-5.63)		714	
61 9ClFOS										
530.80 > 351.00	7.682	7.686	-0.004	1.043	1980597	0.7999	Target=3.06	85.6	3760	
532.80 > 353.00	7.682	7.686	-0.004	1.043	664491		2.98(1.53-4.59)		4114	
62 PFNS										
548.80 > 79.90	7.777	7.788	-0.011	1.056	628378	0.8383	Target=3.67	87.1	3469	
548.80 > 98.80	7.777	7.788	-0.011	1.056	172043		3.65(1.83-5.50)		1582	
D 81 PFDoA										
615.10 > 570.00	7.916	7.935	-0.019	1.113	2200083	1.85		92.4	4222	
63 PFDoA										
613.10 > 569.00	7.924	7.935	-0.011		768238	1.01	Target=4.73	101	3621	
613.10 > 319.00	7.924	7.935	-0.011		157612		4.87(2.36-7.09)		920	
D 65 13C8 FOSA										
506.10 > 77.80	8.189	8.155	0.034	1.112	1735175	2.02		101	8104	
64 PFOSA										
498.10 > 77.90	8.189	8.155	0.034	1.000	859455	0.8717	Target=41.75	87.2	2199	
498.10 > 478.00	8.200	8.155	0.045	1.001	20943		41.04(20.87-62.62)		49.1	
66 PFDS										
599.00 > 79.90	8.178	8.196	-0.018	1.110	798169	0.8496	Target=3.69	88.1	2841	
599.00 > 98.80	8.178	8.196	-0.018	1.110	211130		3.78(1.84-5.53)		945	
67 PFTrDA										
663.00 > 619.00	8.321	8.345	-0.024	0.957	766355	0.8205	Target=5.83	82.0	2766	
663.00 > 168.90	8.321	8.345	-0.024	0.957	126757		6.05(2.91-8.74)		1273	
68 11ClFOS										
630.90 > 450.90	8.485	8.504	-0.019	1.152	1253708	0.8049	Target=3.21	85.3	5546	
632.90 > 452.90	8.485	8.504	-0.019	1.152	391132		3.21(1.60-4.81)		506	
D 70 13C2 PFTeDA										
715.20 > 670.00	8.698	8.722	-0.024	1.223	2195532	2.01		100	3753	
69 PFTeDA										
713.10 > 168.90	8.698	8.722	-0.024	1.000	103641	0.8160	Target=0.83	81.6	1142	
713.10 > 219.00	8.698	8.722	-0.024	1.000	114959		0.90(0.41-1.24)		940	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
71 PFDoS										
699.10 > 79.90	8.875	8.917	-0.042	1.205	673493	0.6976	Target=4.20	71.9	2044	
699.10 > 98.80	8.875	8.917	-0.042	1.205	160158		4.21(2.10-6.30)		1595	
D 72 d7-N-Me-FOSE										
623.20 > 58.90	8.989	8.945	0.044	1.220	245582	4.32		86.3	614	
73 N-MeFOSE-M										
616.10 > 58.90	9.003	8.974	0.029	1.002	576505	4.38		87.6	1181	
D 75 d3-NMePFOSA										
515.00 > 219.00	9.085	9.057	0.028	1.233	469358	1.88		94.1	2746	
74 NMeFOSA										
511.90 > 219.00	9.085	9.057	0.028	1.000	196656	0.9422	Target=0.68	94.2	1064	
511.90 > 169.00	9.085	9.057	0.028	1.000	284271		0.69(0.34-1.03)		747	
D 76 d9-N-EtFOSE										
639.20 > 58.90	9.190	9.176	0.014	1.247	252521	3.89		77.8	548	
77 N-EtFOSE-M										
630.00 > 58.90	9.216	9.189	0.027	1.003	681116	4.34		86.9	1529	
D 78 d5-NEtPFOSA										
531.10 > 219.00	9.279	9.252	0.027	1.260	564738	1.86		92.8	2243	
79 N-EtFOSA-M										
526.00 > 219.00	9.292	9.265	0.027	1.001	218383	0.9062	Target=0.85	90.6	973	
526.00 > 169.00	9.279	9.265	0.014	1.000	256122		0.85(0.43-1.28)		931	
80 Perfluorooctadecanoic acid										
913.00 > 869.00	9.522	9.645	-0.123	1.095	439335	0.5377	Target=16.56	53.8	7458	
913.00 > 169.00	9.522	9.645	-0.123	1.095	25683		17.11(8.28-24.84)		1689	

QC Flag Legend

Processing Flags

Reagents:

1633_125_IS_V_00610 Amount Added: 50.00 Units: uL

Report Date: 19-Feb-2026 12:33:02 Chrom Revision: 2.3 16-Feb-2026 12:47:50

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\30577\20260218-176047.b\26FEB18JO-75.d

Injection Date: 19-Feb-2026 04:59:50 Instrument ID: 30577

Lims ID: 460-344895-A-1-D MSD

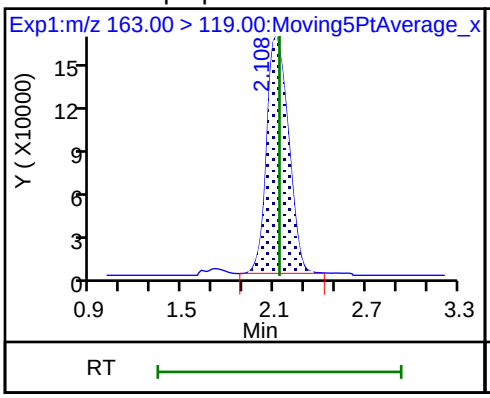
Client ID: RXMW-6_P

Operator ID: ETUS023_USR_INS00009 ALS Bottle#: 39 Worklist Smp#: 71

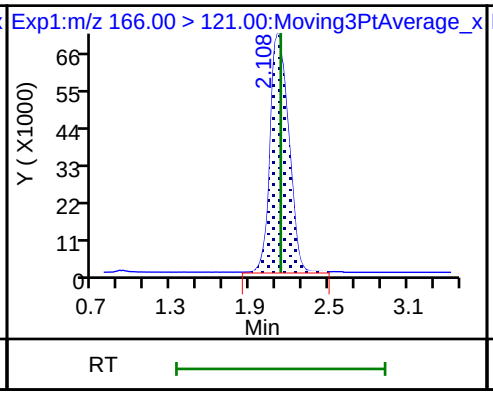
Injection Vol: 7.0 ul Dil. Factor: 1.0000

Method: 30577-1633-125 Limit Group: LC - 1633 LVI- ICAL

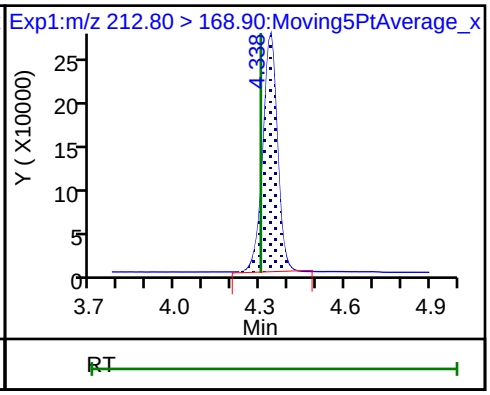
2 Perfluoropropionic acid



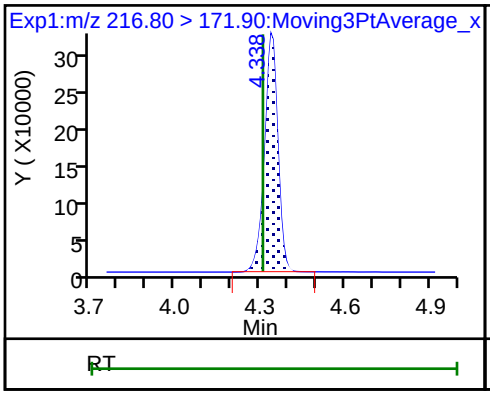
D 1 13C3PFPrA



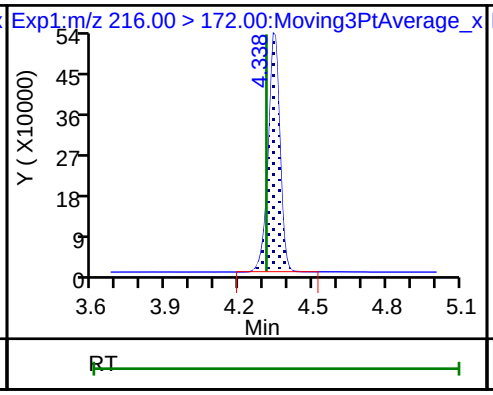
3 PFBA



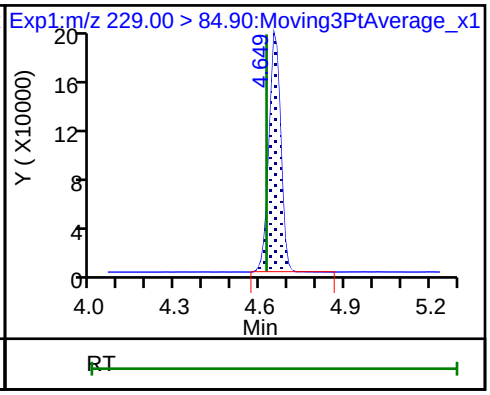
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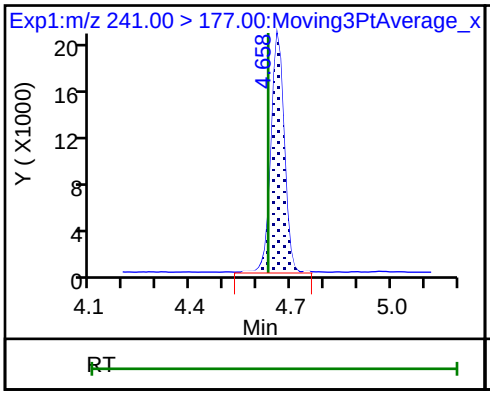
* 5 13C3PFBA



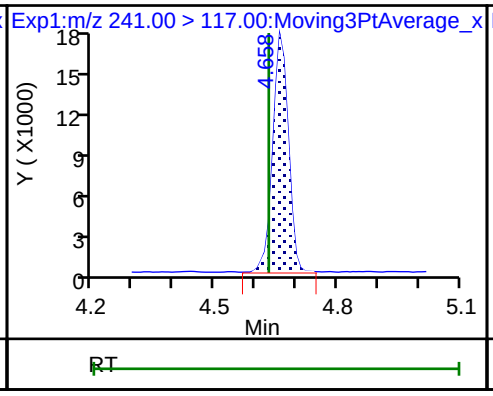
6 PFMPA



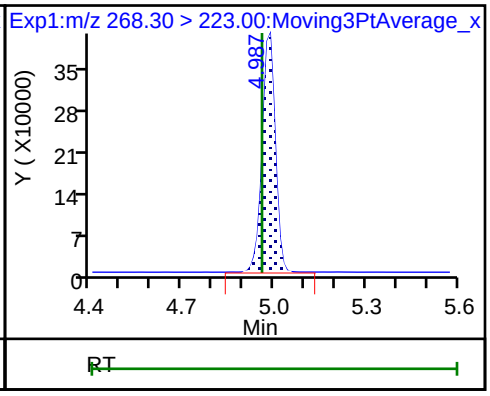
7 3:3 FTCA



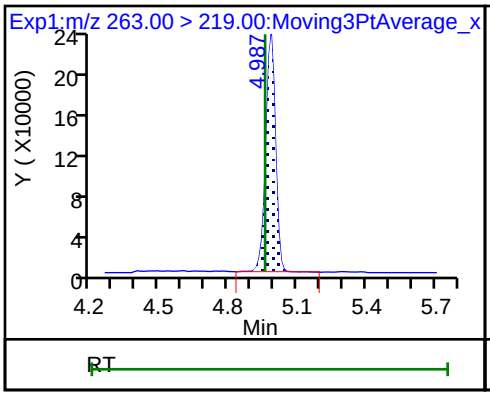
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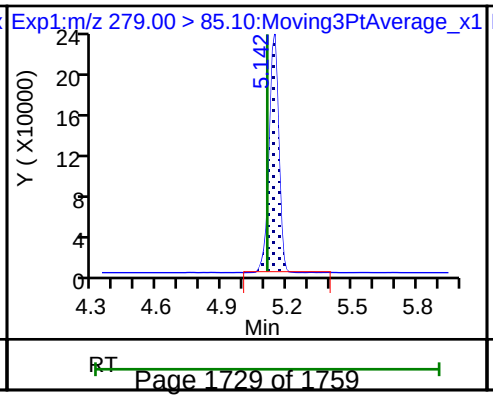
D 8 13C5 PFPeA



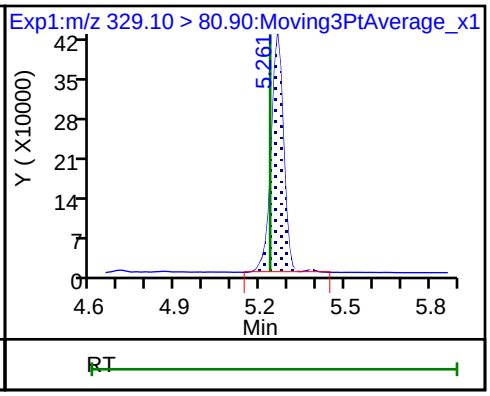
9 PFPA



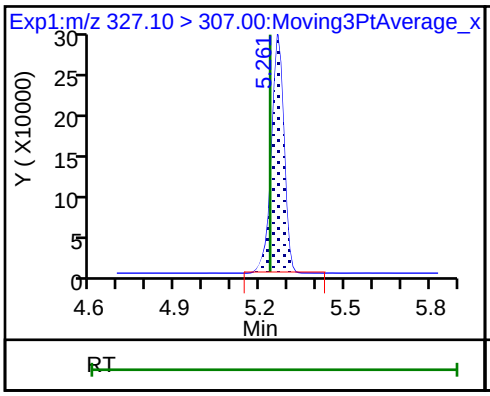
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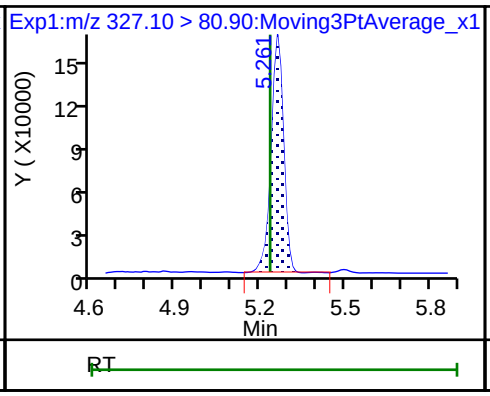
D 11 13C2-4:2FTS



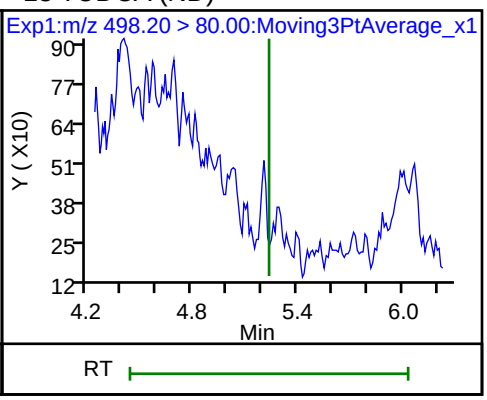
12 4:2FTS



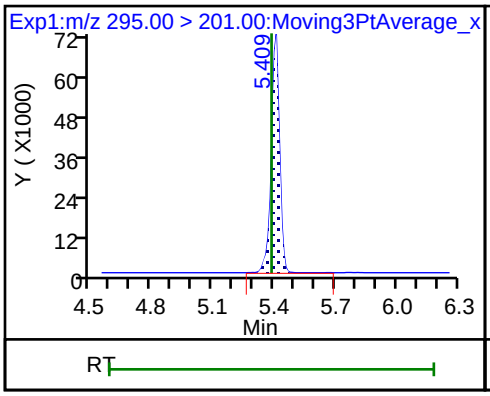
12 4:2FTS



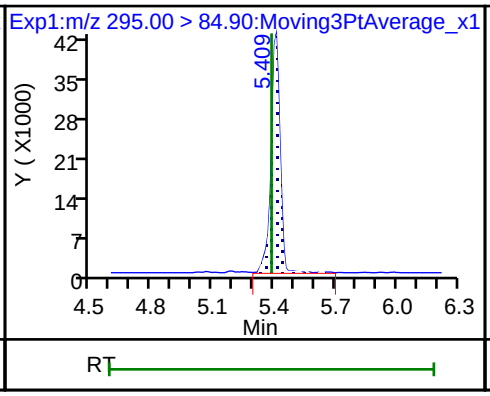
13 TUDCA (ND)



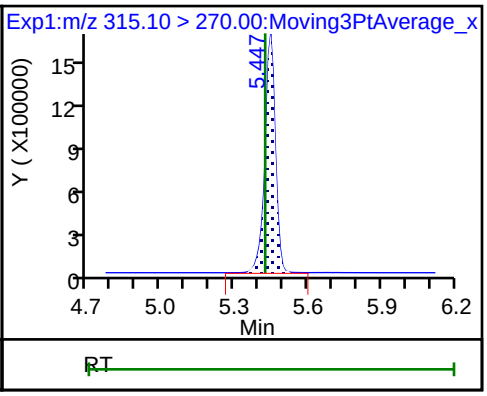
14 NFDHA



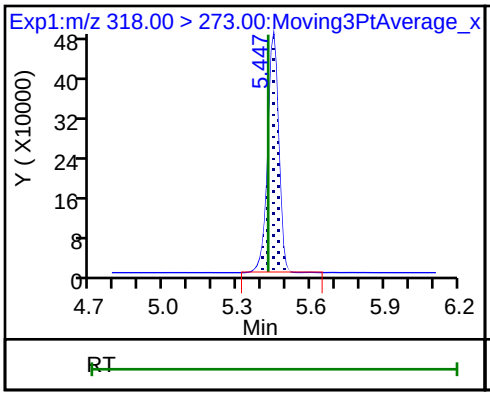
14 NFDHA



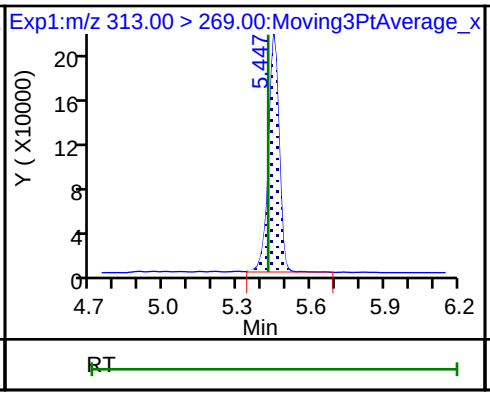
* 16 13C2 PFHxA



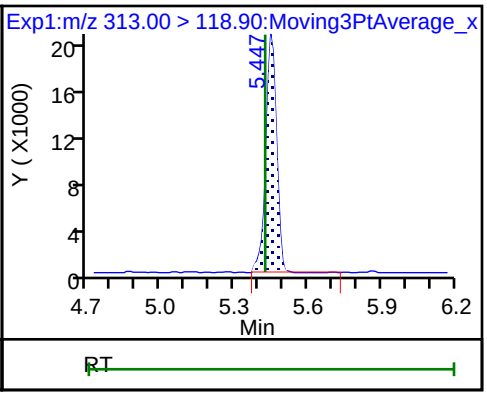
D 15 13C5 PFHxA



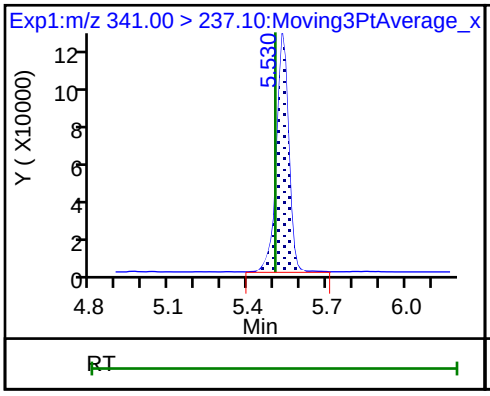
17 PFHxA



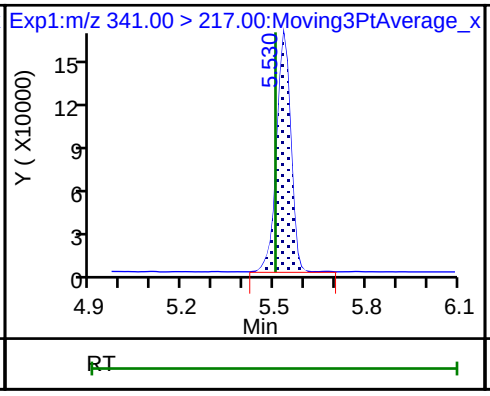
17 PFHxA



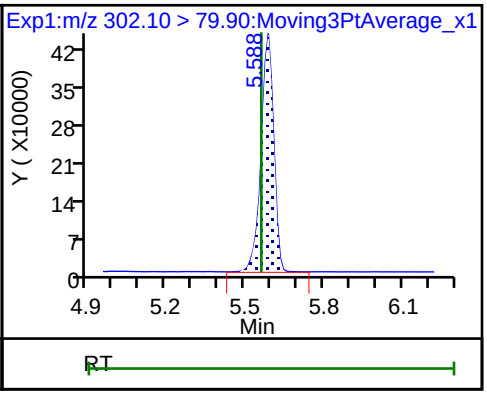
18 5:3 FTCA



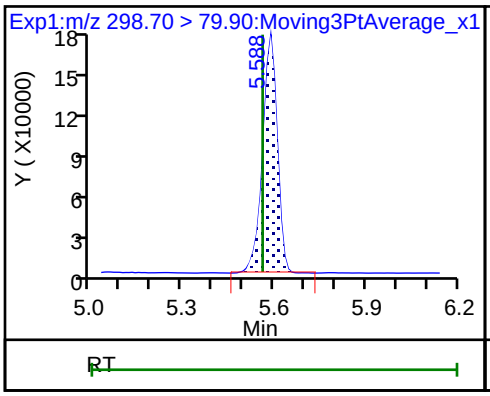
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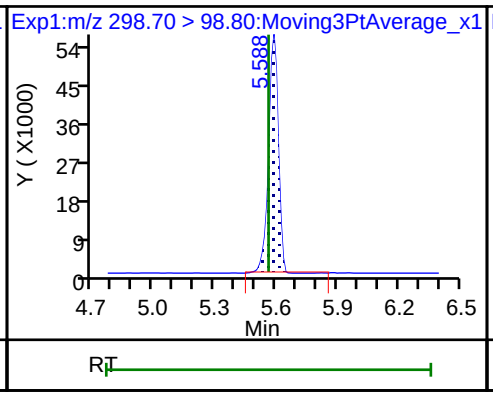
D 19 13C3 PFBS



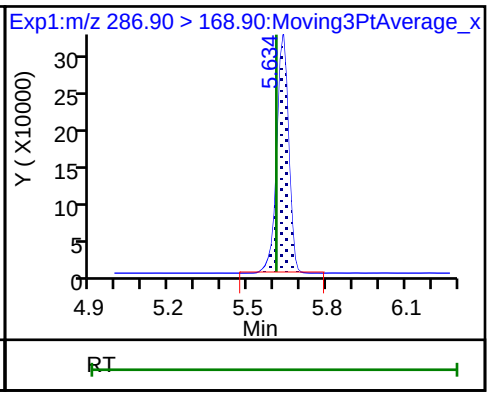
20 PFBS



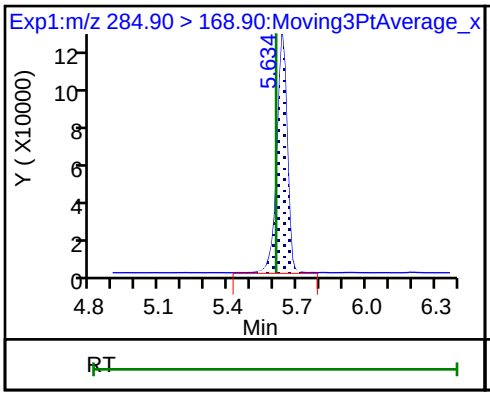
20 PFBS



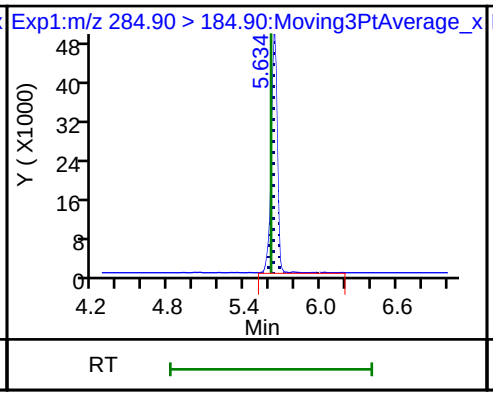
D 22 13C3 HFPO-DA



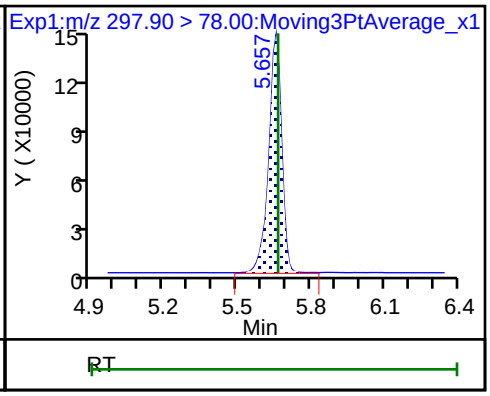
23 HFPO-DA



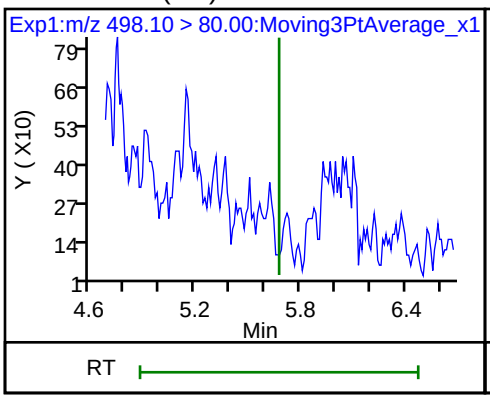
23 HFPO-DA



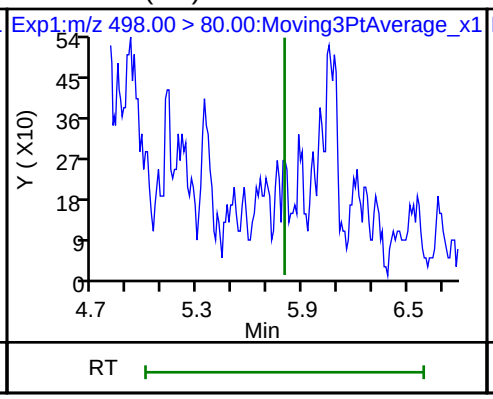
21 FBSA



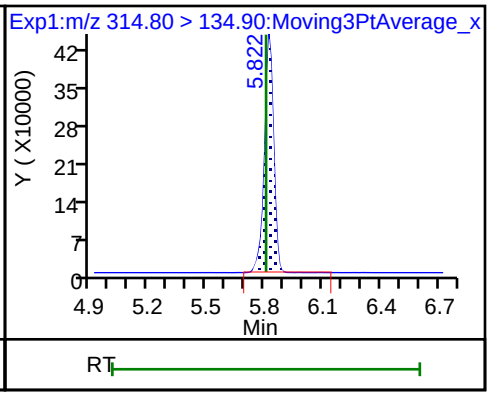
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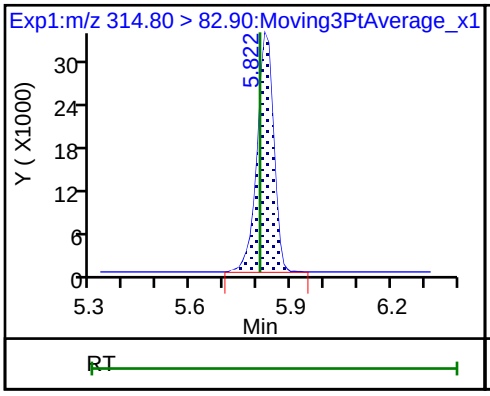
25 TDCA (ND)



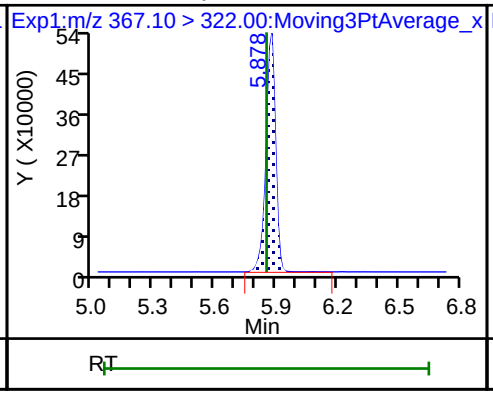
26 PFEESA



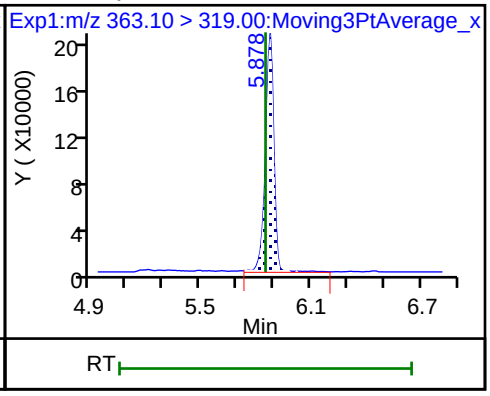
26 PFEESA



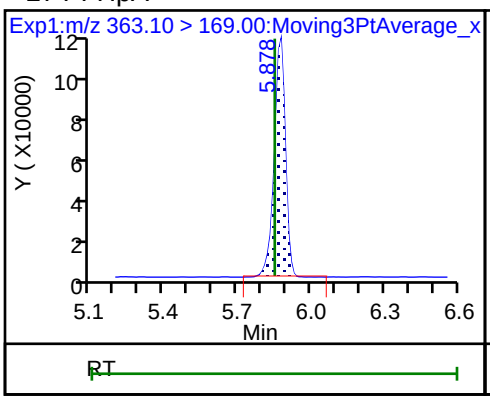
D 28 13C4 PFHpA



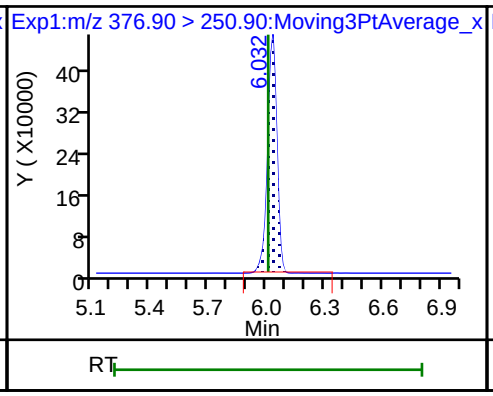
27 PFHpA



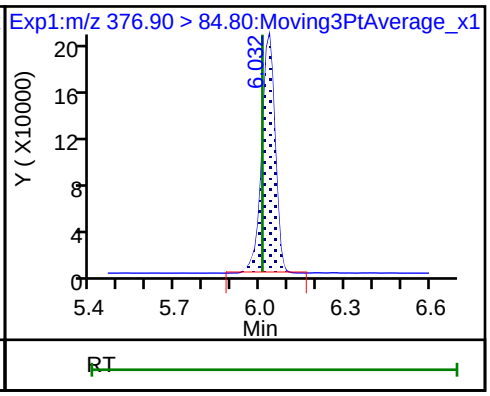
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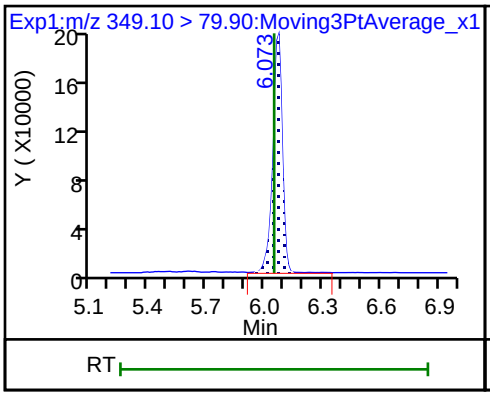
29 ADONA



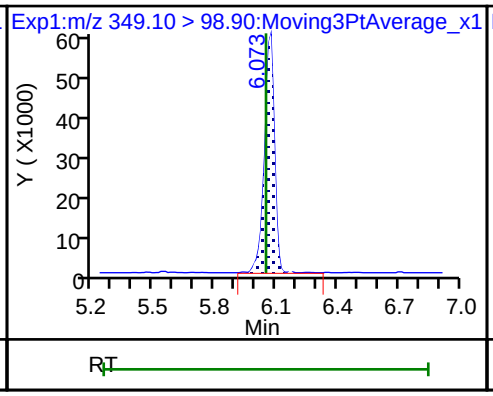
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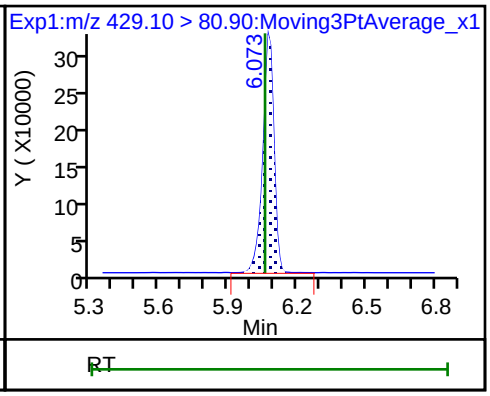
30 PFPeS



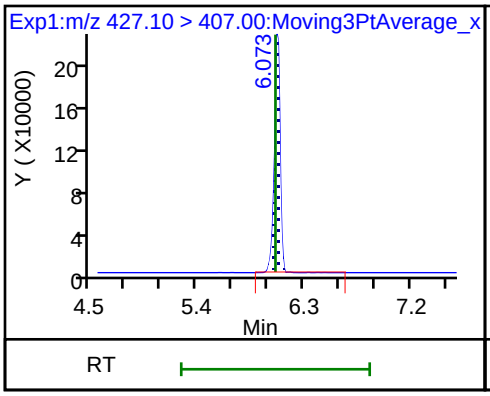
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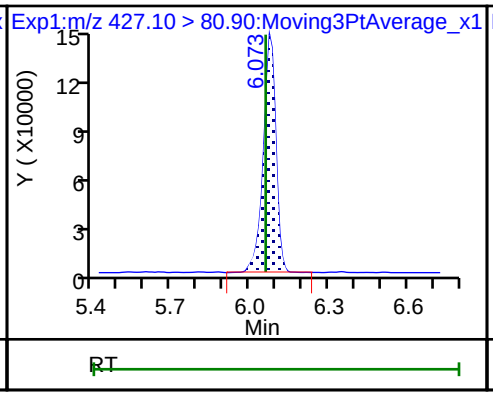
D 32 13C2-6:2FTS



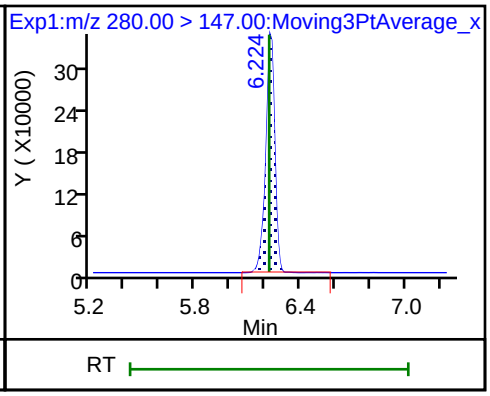
31 6:2FTS



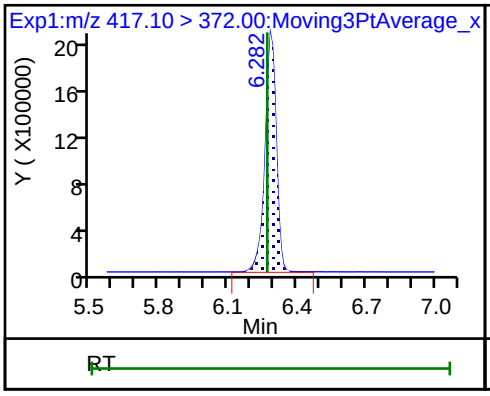
31 6:2FTS



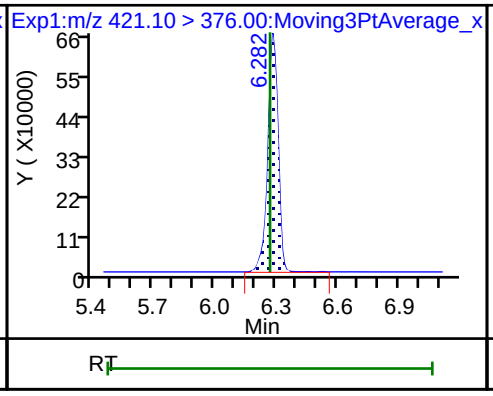
33 BTS



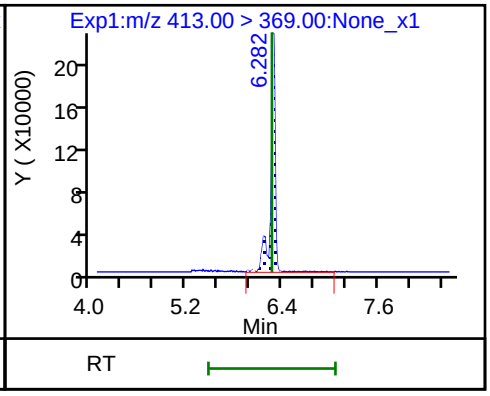
* 34 13C4 PFOA



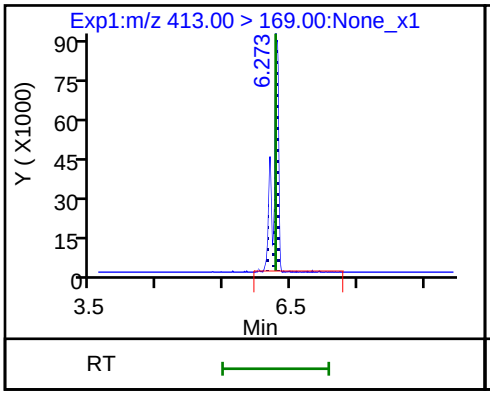
D 35 13C8 PFOA



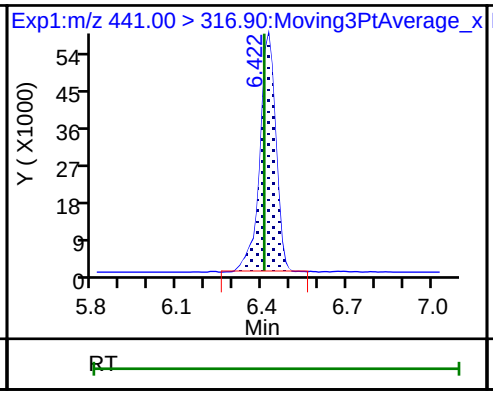
36 PFOA



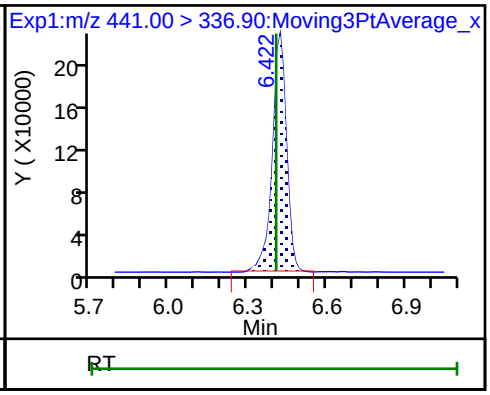
36 PFOA



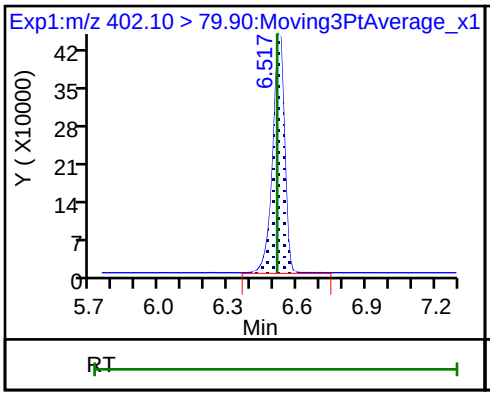
37 7:3 FTCA



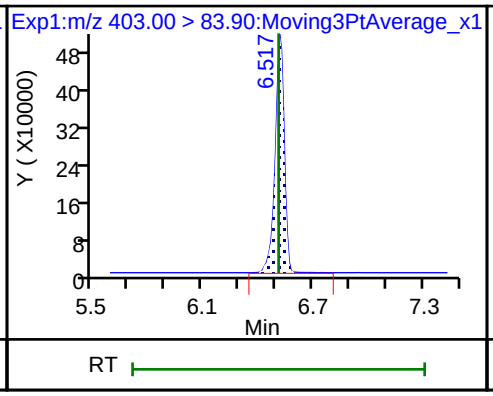
37 7:3 FTCA



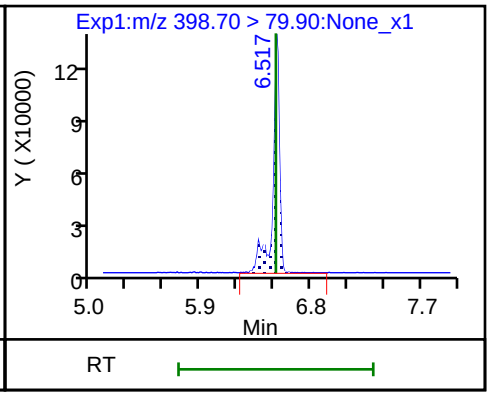
D 38 13C3 PFHxS



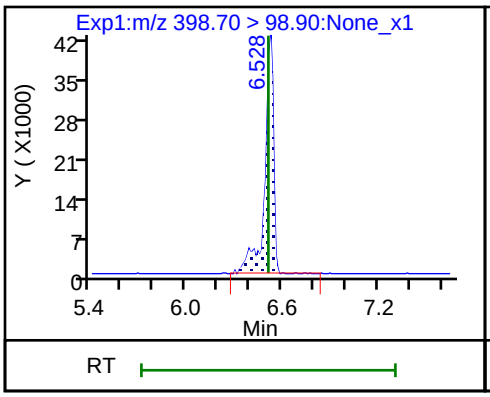
* 39 18O2 PFHxS



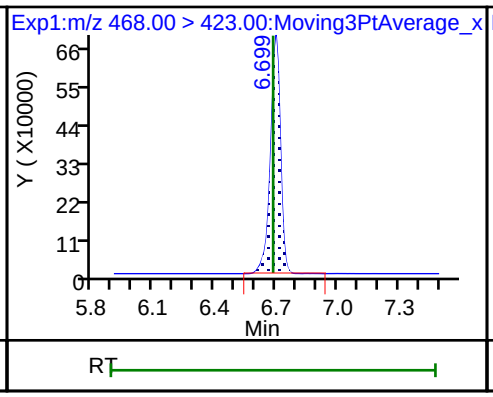
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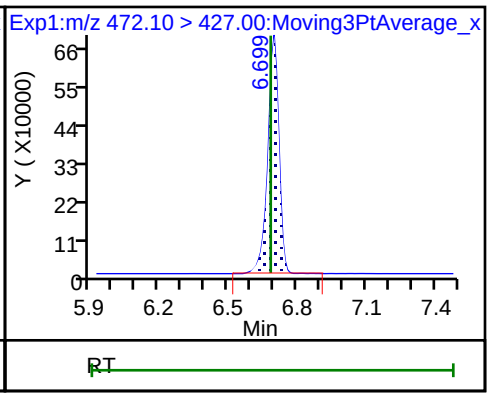
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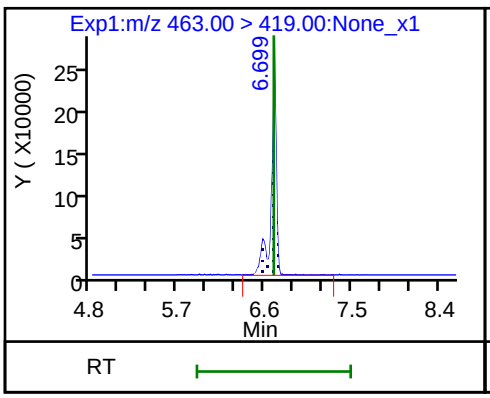
* 42 13C5 PFNA



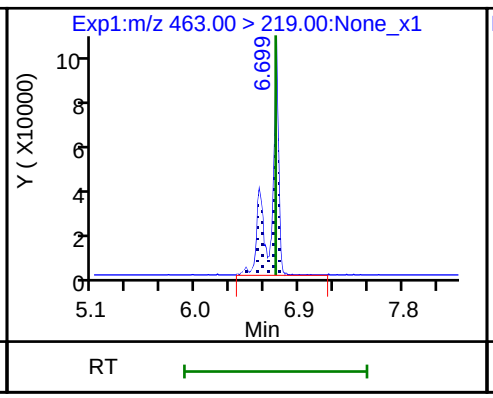
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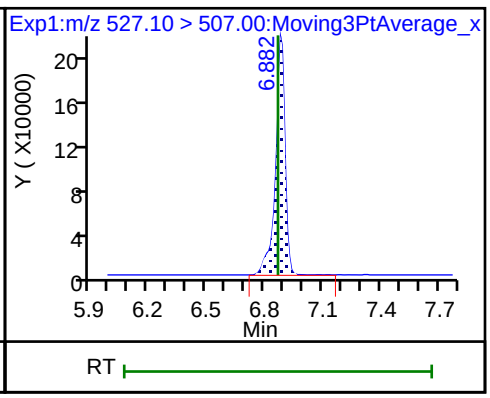
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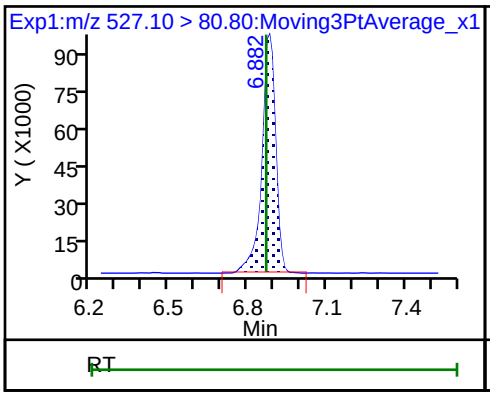
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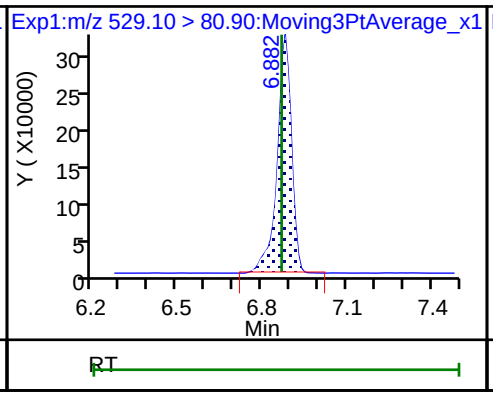
45 8:2FTS



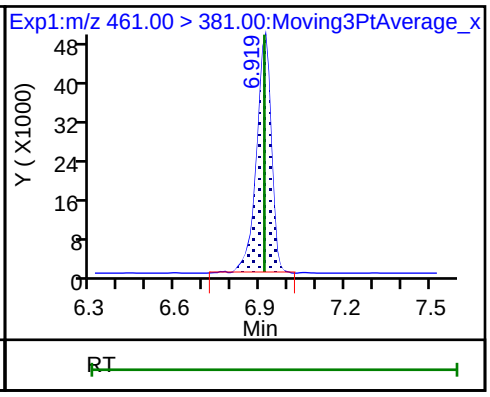
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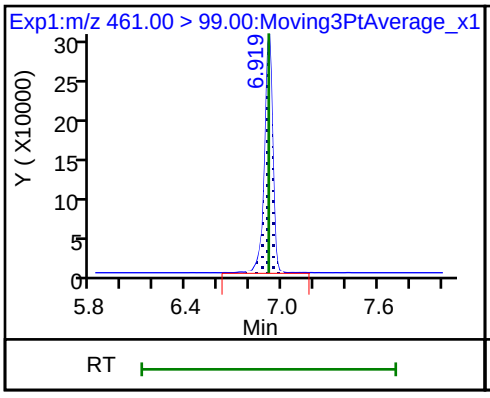
D 44 13C2-8:2FTS



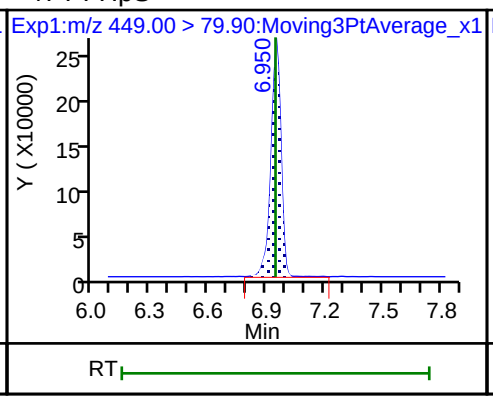
46 PFECHS



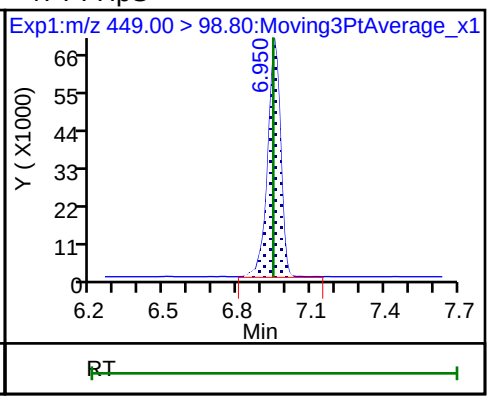
46 PFECHS



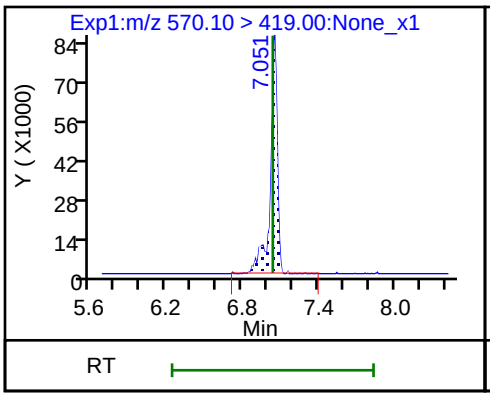
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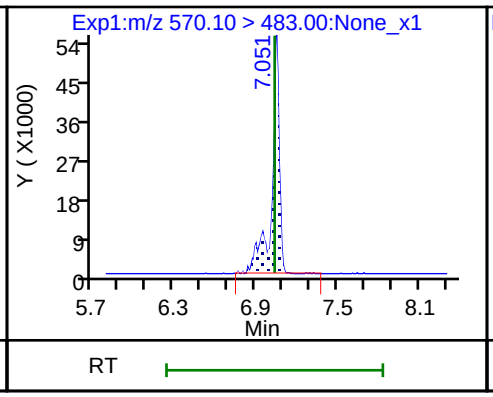
47 PFHpS



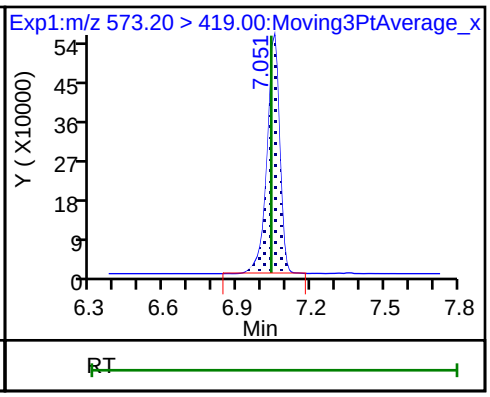
50 NMeFOSAA



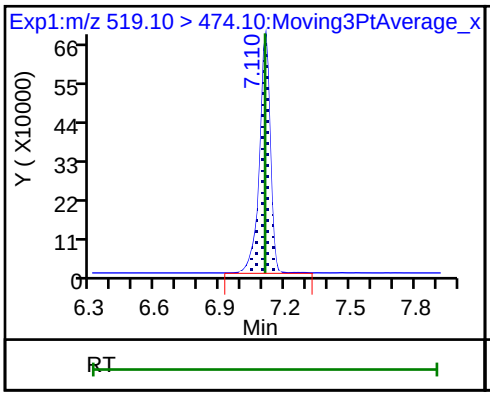
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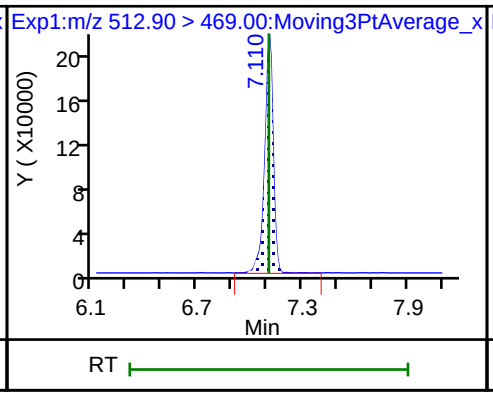
D 49 d3-NMeFOSAA



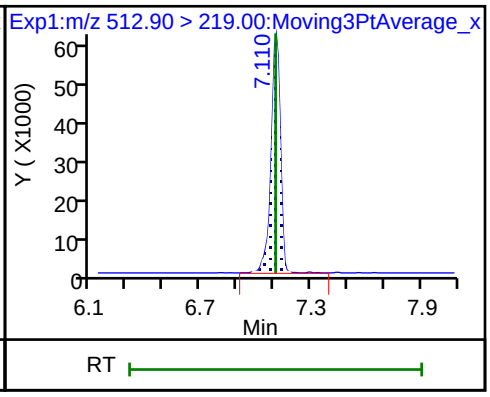
D 52 13C6 PFDA



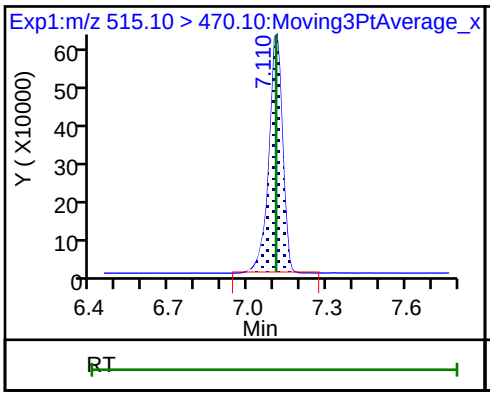
53 PFDA



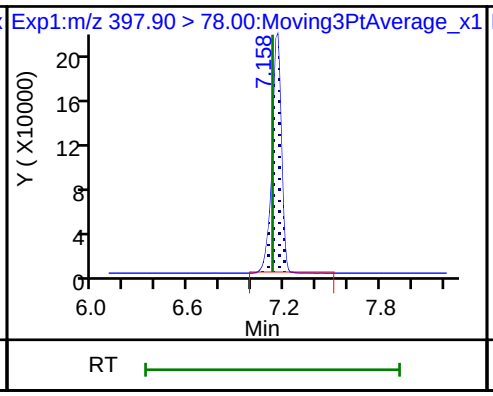
53 PFDA



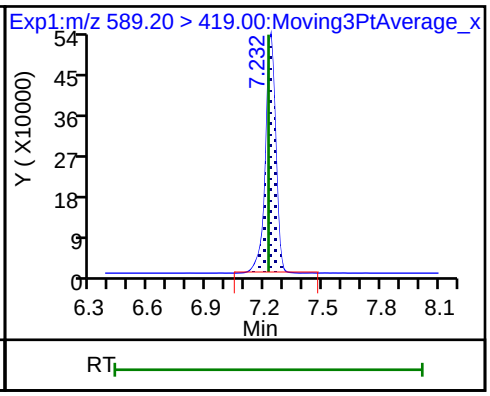
* 51 13C2 PFDA



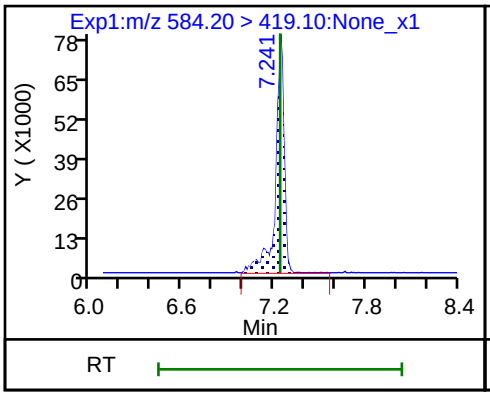
48 FHxSA



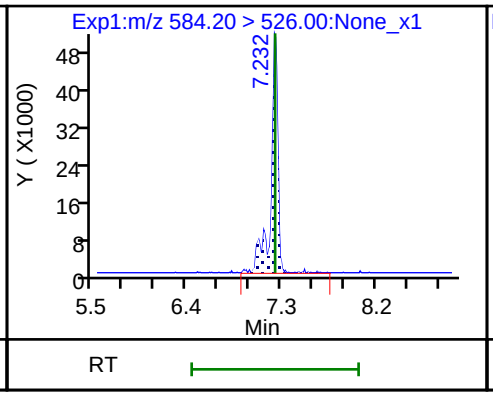
D 54 d5-NEtFOSAA



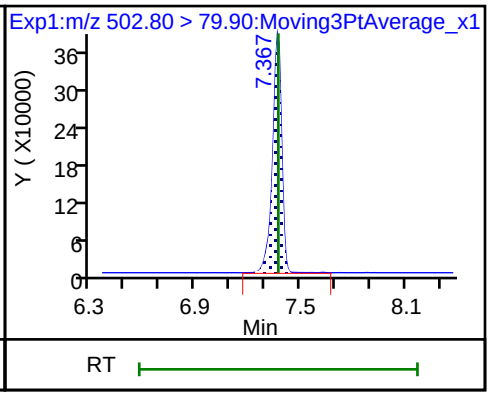
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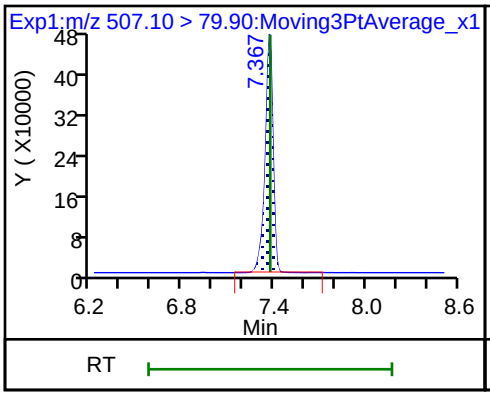
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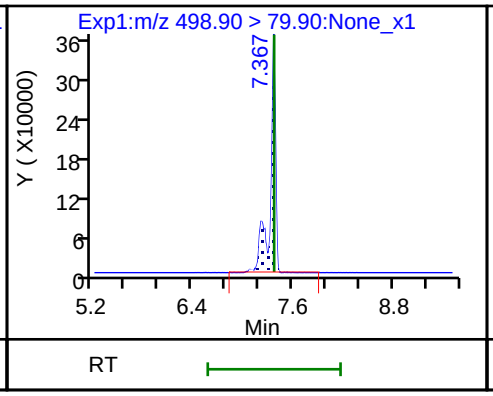
* 57 13C4 PFOS



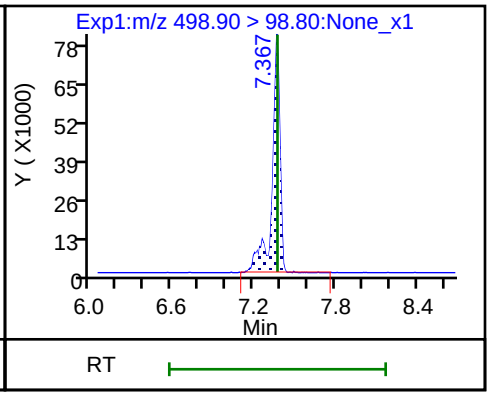
D 56 13C8 PFOS



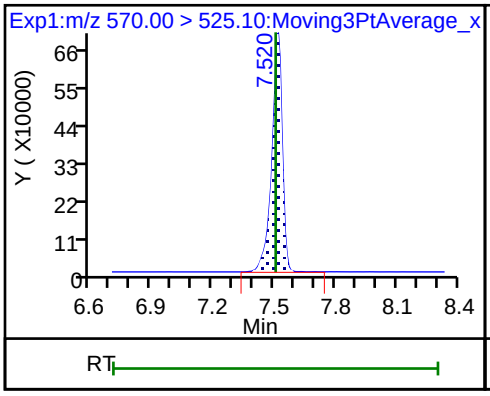
58 PFOS



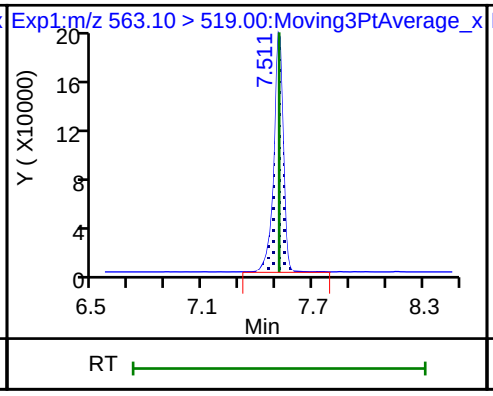
58 PFOS



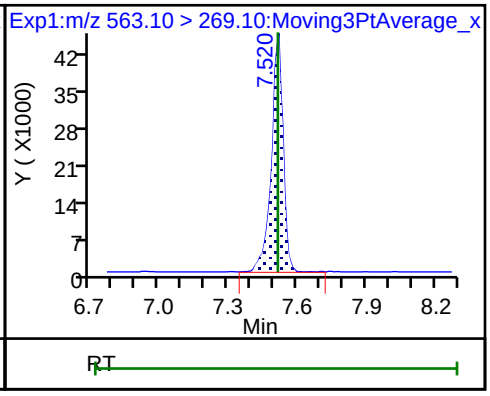
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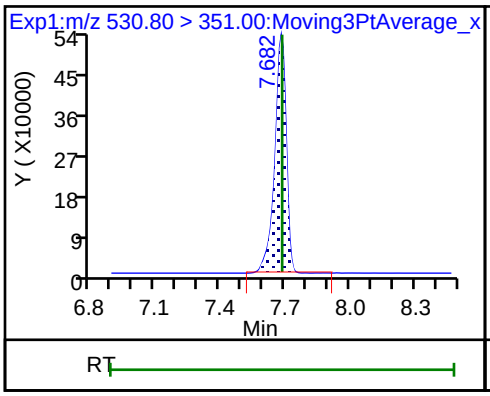
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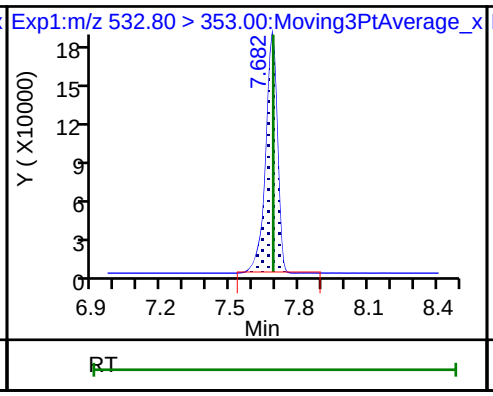
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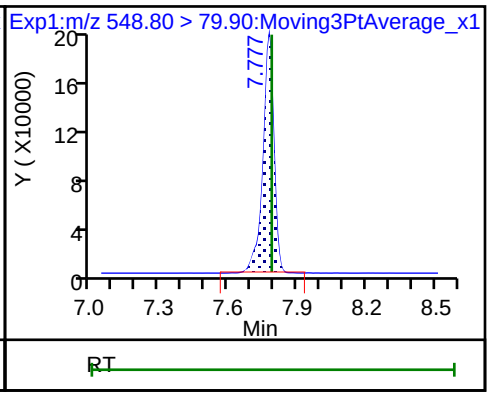
61 9ClFOS



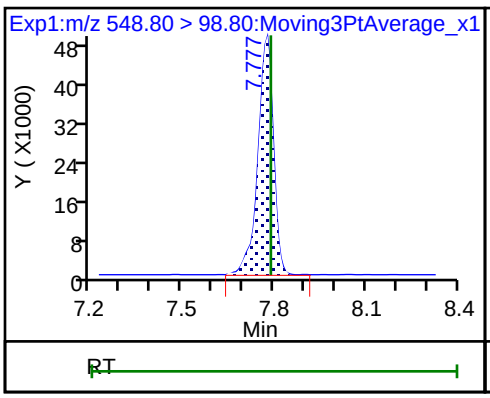
61 9ClFOS



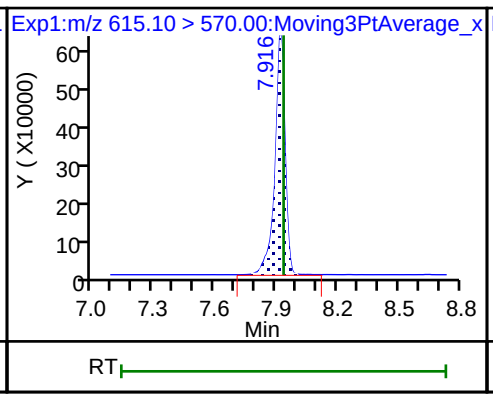
62 PFNS



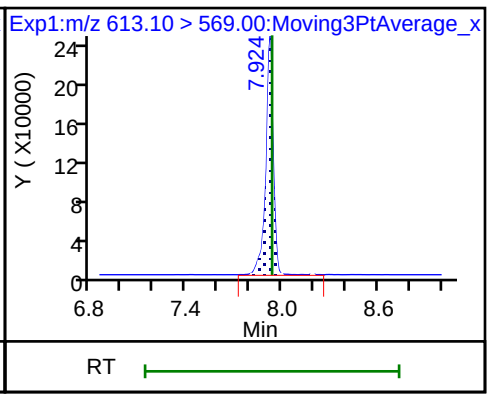
62 PFNS



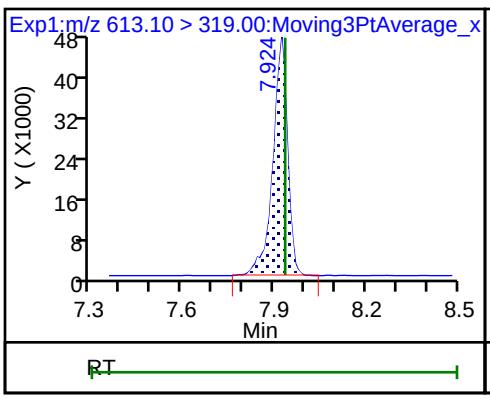
D 81 PFDoA



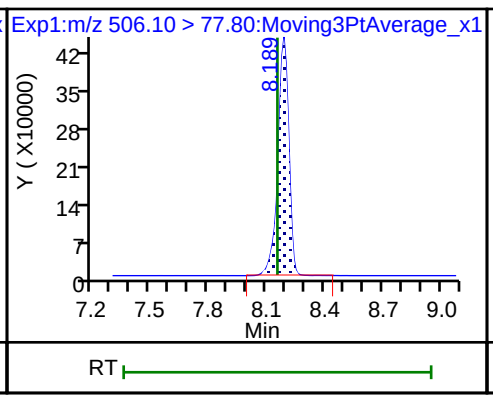
63 PFDoA



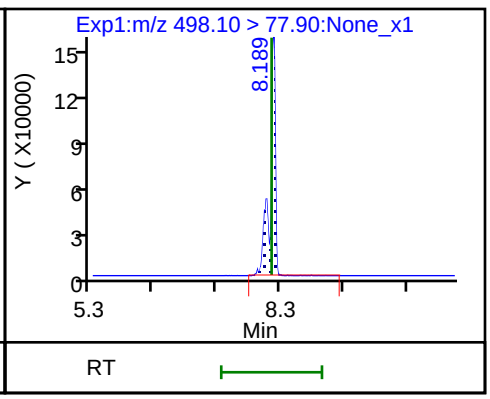
63 PFDoA



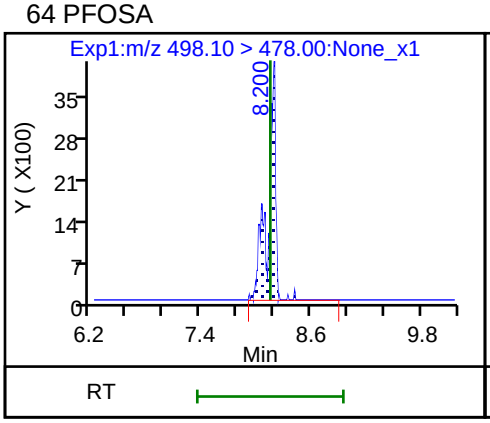
D 65 13C8 FOSA



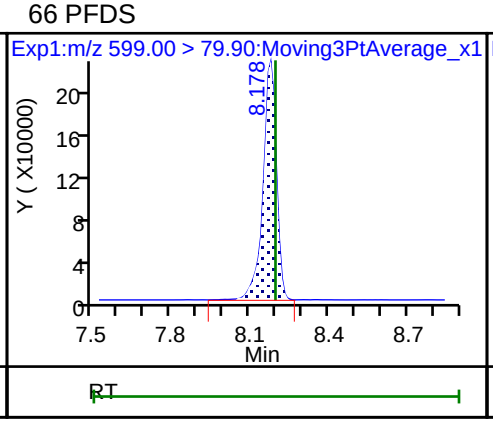
64 PFOSA



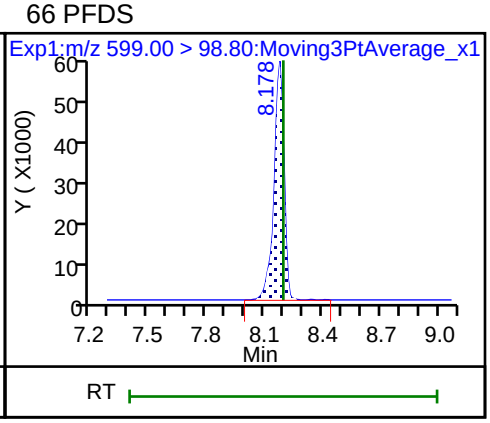
64 PFOSA



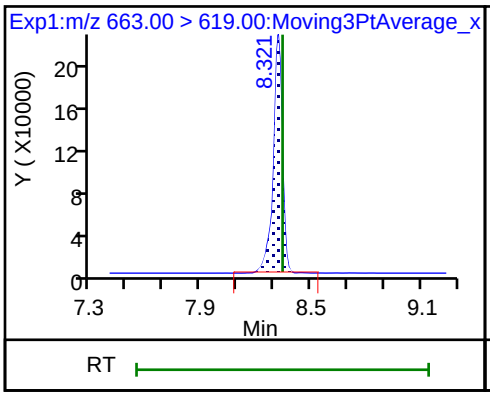
66 PFDS



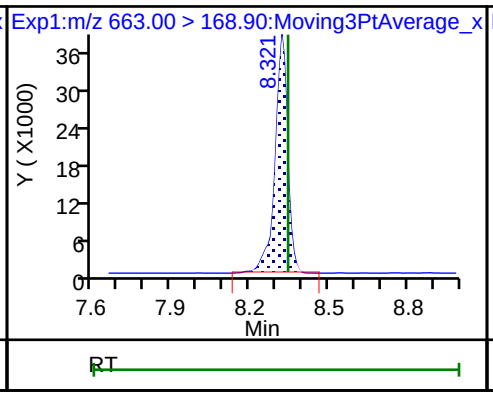
66 PFDS



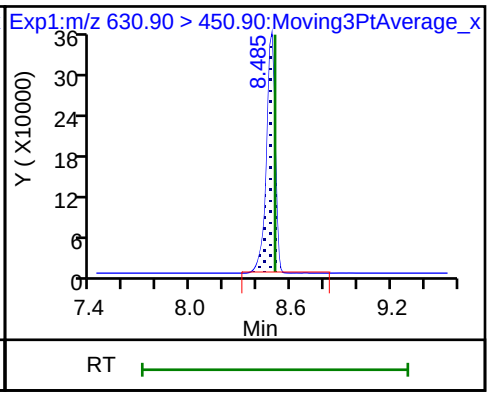
67 PFTrDA



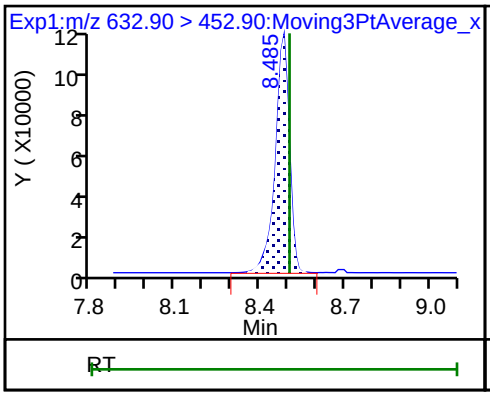
67 PFTrDA



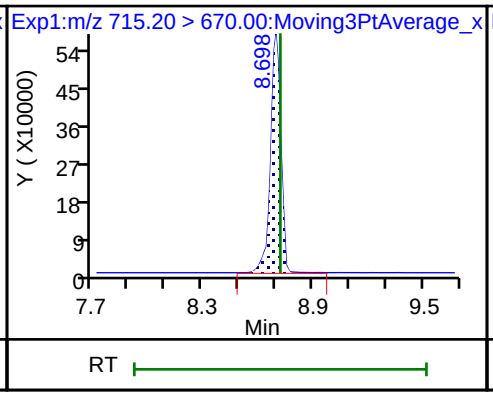
68 11ClFOS



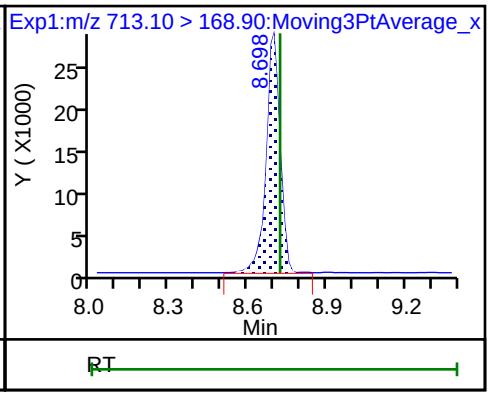
68 11ClFOS



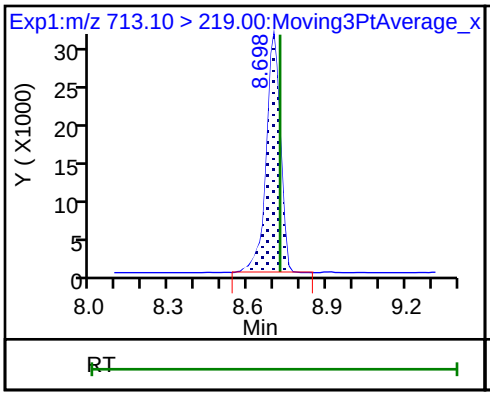
D 70 13C2 PFTeDA



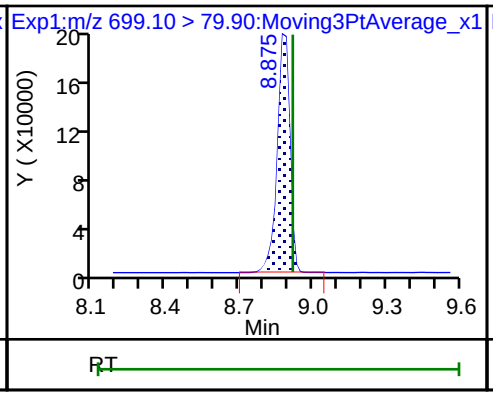
69 PFTeDA



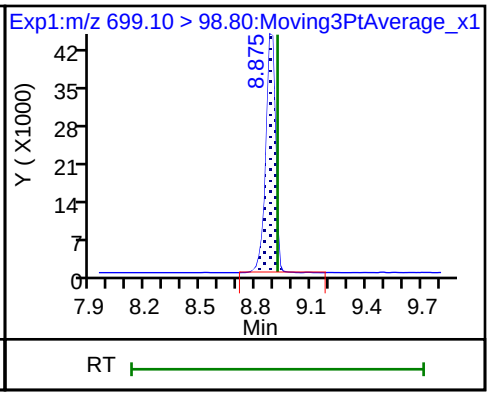
69 PFTeDA



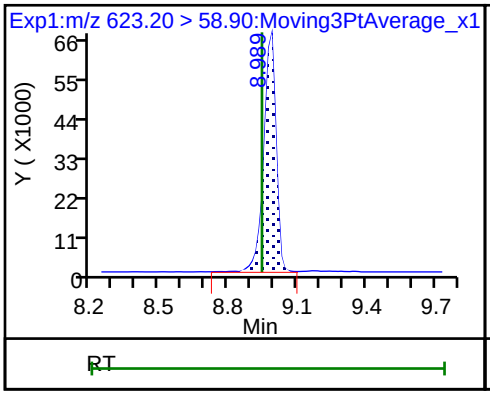
71 PFDoS



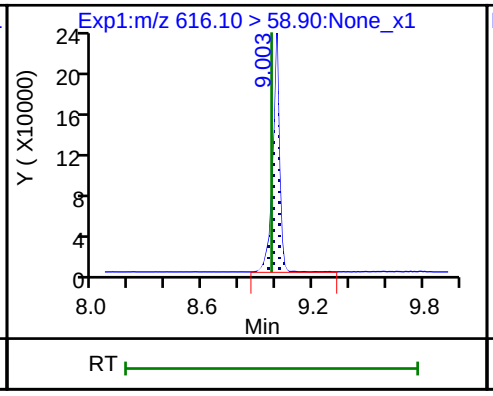
71 PFDoS



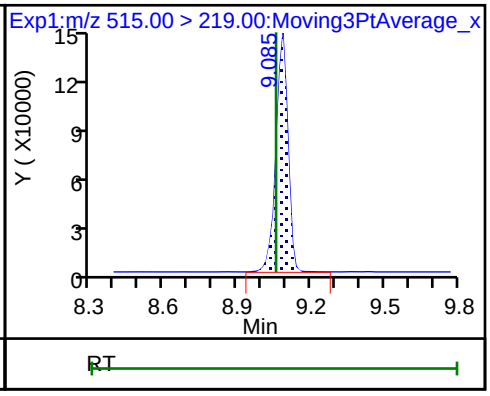
D 72 d7-N-Me-FOSE



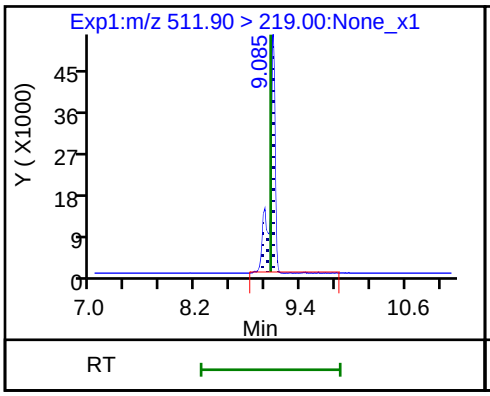
73 N-MeFOSE-M



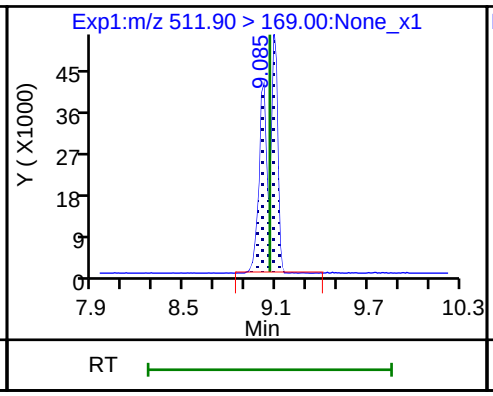
D 75 d3-NMePFOSA



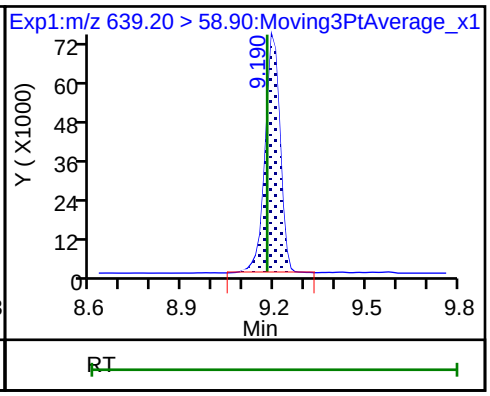
74 NMeFOSA



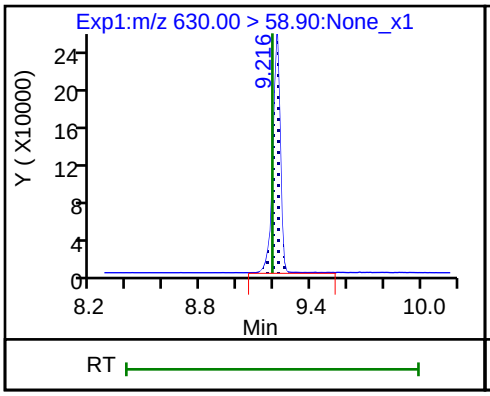
74 NMeFOSA



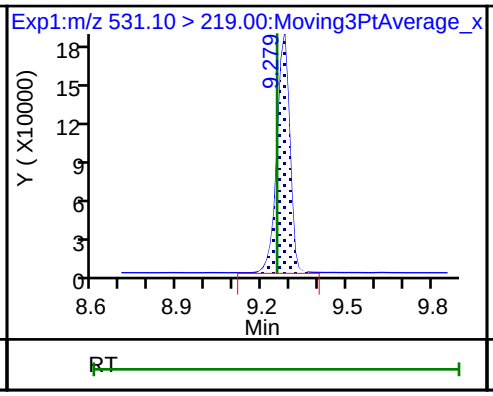
D 76 d9-N-EtFOSE



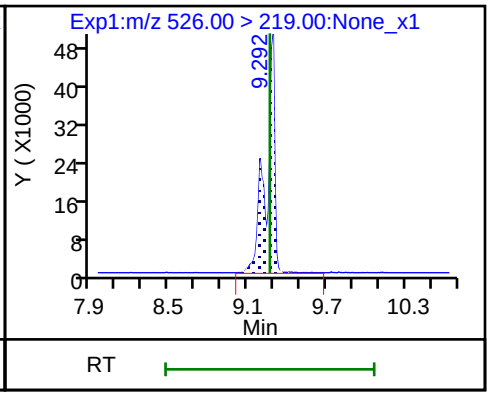
77 N-EtFOSE-M



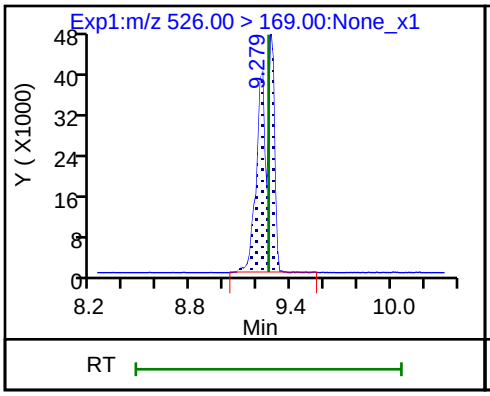
D 78 d5-NEtPFOSA



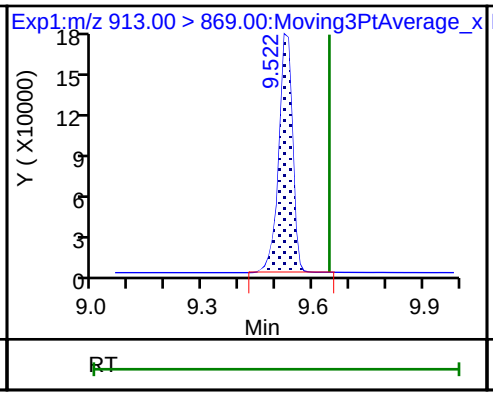
79 N-EtFOSA-M



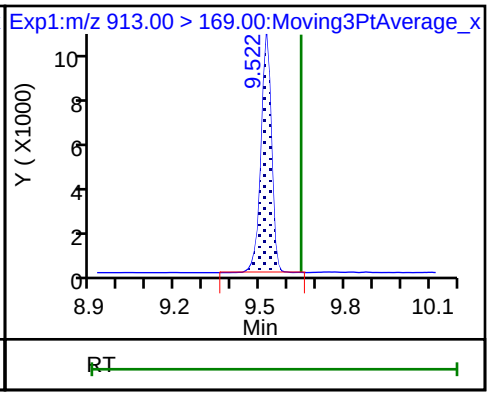
79 N-EtFOSA-M



80 Perfluorooctadecanoic acid



80 Perfluorooctadecanoic acid



PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Start Date: 02/16/2026 20:22

Analysis Batch Number: 769782 End Date: 02/16/2026 22:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-769782/1		02/16/2026 20:22	1	26FEB16CAL-01.d	Gemini C18 50mm 3(mm)
IC 410-769782/2		02/16/2026 20:35	1	26FEB16CAL-02.d	Gemini C18 50mm 3(mm)
IC 410-769782/3		02/16/2026 20:49	1	26FEB16CAL-03.d	Gemini C18 50mm 3(mm)
IC 410-769782/4		02/16/2026 21:02	1	26FEB16CAL-04.d	Gemini C18 50mm 3(mm)
ICISAV 410-769782/5		02/16/2026 21:16	1	26FEB16CAL-05.d	Gemini C18 50mm 3(mm)
IC 410-769782/6		02/16/2026 21:30	1	26FEB16CAL-06.d	Gemini C18 50mm 3(mm)
IC 410-769782/7		02/16/2026 21:43	1	26FEB16CAL-07.d	Gemini C18 50mm 3(mm)
IC 410-769782/8		02/16/2026 21:57	1	26FEB16CAL-08.d	Gemini C18 50mm 3(mm)
ICB 410-769782/9		02/16/2026 22:10	1	26FEB16CAL-09.d	Gemini C18 50mm 3(mm)
ICV 410-769782/10		02/16/2026 22:24	1	26FEB16CAL-10.d	Gemini C18 50mm 3(mm)
WDM 410-769782/11		02/16/2026 22:37	1	26FEB16CAL-11.d	Gemini C18 50mm 3(mm)

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Start Date: 02/18/2026 09:44

Analysis Batch Number: 770716 End Date: 02/19/2026 17:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVO 410-770716/1		02/18/2026 09:44	1	26Feb18-01.d	Gemini C18 50mm 3(mm)
CCV 410-770716/2		02/18/2026 10:25	1		Gemini C18 50mm 3(mm)
CCB 410-770716/3		02/18/2026 10:38	1		Gemini C18 50mm 3(mm)
WDM 410-770716/4		02/18/2026 10:52	1	26Feb18-04.d	Gemini C18 50mm 3(mm)
CCV 410-770716/15		02/18/2026 13:08	1		Gemini C18 50mm 3(mm)
CCB 410-770716/14		02/18/2026 13:22	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/18/2026 15:51	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/18/2026 16:05	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/18/2026 16:18	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/18/2026 16:32	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/18/2026 16:46	1		Gemini C18 50mm 3(mm)
CCV 410-770716/41		02/18/2026 16:59	1		Gemini C18 50mm 3(mm)
CCB 410-770716/42		02/18/2026 17:13	1		Gemini C18 50mm 3(mm)
CCV 410-770716/32		02/18/2026 19:42	1		Gemini C18 50mm 3(mm)
CCB 410-770716/31		02/18/2026 19:56	1		Gemini C18 50mm 3(mm)
CCV 410-770716/73		02/18/2026 23:20	1		Gemini C18 50mm 3(mm)
CCB 410-770716/74		02/18/2026 23:33	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 00:28	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 00:41	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 00:55	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 01:08	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 01:22	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 01:36	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 01:49	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 02:03	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 02:16	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 02:30	1		Gemini C18 50mm 3(mm)
CCV 410-770716/75		02/19/2026 02:43	1	26FEB18JO-65.d	Gemini C18 50mm 3(mm)
CCB 410-770716/76		02/19/2026 02:57	1	26FEB18JO-66.d	Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 03:11	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 03:24	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 03:38	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 03:51	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 04:05	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 04:19	1		Gemini C18 50mm 3(mm)
460-344895-1	RXMW-6_P	02/19/2026 04:32	1	26FEB18JO-73.d	Gemini C18 50mm 3(mm)
460-344895-1 MS	RXMW-6_P MS	02/19/2026 04:46	1	26FEB18JO-74.d	Gemini C18 50mm 3(mm)
460-344895-1 MSD	RXMW-6_P MSD	02/19/2026 04:59	1	26FEB18JO-75.d	Gemini C18 50mm 3(mm)
460-344895-2	FB_02162026_P	02/19/2026 05:13	1	26FEB18JO-76.d	Gemini C18 50mm 3(mm)
CCV 410-770716/77		02/19/2026 05:27	1	26FEB18JO-77.d	Gemini C18 50mm 3(mm)
CCB 410-770716/78		02/19/2026 05:40	1	26FEB18JO-78.d	Gemini C18 50mm 3(mm)
WDM 410-770716/79		02/19/2026 06:48	1		Gemini C18 50mm 3(mm)
CCVO 410-770716/80		02/19/2026 07:02	1		Gemini C18 50mm 3(mm)
CCV 410-770716/104		02/19/2026 10:12	1		Gemini C18 50mm 3(mm)

1633A

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30577 Start Date: 02/18/2026 09:44

Analysis Batch Number: 770716 End Date: 02/19/2026 17:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCB 410-770716/105		02/19/2026 10:25	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 10:39	1		Gemini C18 50mm 3(mm)
CCV 410-770716/106		02/19/2026 13:09	1		Gemini C18 50mm 3(mm)
CCB 410-770716/107		02/19/2026 13:22	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 15:11	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 15:24	1		Gemini C18 50mm 3(mm)
CCV 410-770716/129		02/19/2026 17:27	1		Gemini C18 50mm 3(mm)
CCB 410-770716/127		02/19/2026 17:40	1		Gemini C18 50mm 3(mm)

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Start Date: 02/04/2026 12:31

Analysis Batch Number: 764556 End Date: 02/04/2026 14:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 410-764556/1		02/04/2026 12:31	1	26FEB04CAL-01.d	Gemini C18 50mm 3(mm)
IC 410-764556/2		02/04/2026 12:44	1	26FEB04CAL-02.d	Gemini C18 50mm 3(mm)
IC 410-764556/3		02/04/2026 12:58	1	26FEB04CAL-03.d	Gemini C18 50mm 3(mm)
IC 410-764556/4		02/04/2026 13:11	1	26FEB04CAL-04.d	Gemini C18 50mm 3(mm)
ICISAV 410-764556/5		02/04/2026 13:25	1	26FEB04CAL-05.d	Gemini C18 50mm 3(mm)
IC 410-764556/6		02/04/2026 13:39	1	26FEB04CAL-06.d	Gemini C18 50mm 3(mm)
IC 410-764556/7		02/04/2026 13:52	1	26FEB04CAL-07.d	Gemini C18 50mm 3(mm)
IC 410-764556/8		02/04/2026 14:06	1	26FEB04CAL-08.d	Gemini C18 50mm 3(mm)
ICB 410-764556/9		02/04/2026 14:19	1	26FEB04CAL-09.d	Gemini C18 50mm 3(mm)
ICV 410-764556/10		02/04/2026 14:33	1	26FEB04CAL-10.d	Gemini C18 50mm 3(mm)
WDM 410-764556/11		02/04/2026 14:46	1	26FEB04CAL-11.d	Gemini C18 50mm 3(mm)

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Start Date: 02/19/2026 09:12

Analysis Batch Number: 771230 End Date: 02/20/2026 04:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVO 410-771230/1		02/19/2026 09:12	1	26Feb19a-01.d	Gemini C18 50mm 3(mm)
CCV 410-771230/2		02/19/2026 09:39	1		Gemini C18 50mm 3(mm)
CCB 410-771230/3		02/19/2026 09:53	1		Gemini C18 50mm 3(mm)
WDM 410-771230/4		02/19/2026 10:07	1	26Feb19a-04.d	Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 11:28	1		Gemini C18 50mm 3(mm)
CCV 410-771230/17		02/19/2026 11:55	1		Gemini C18 50mm 3(mm)
CCB 410-771230/18		02/19/2026 12:09	1		Gemini C18 50mm 3(mm)
CCV 410-771230/19		02/19/2026 14:24	1		Gemini C18 50mm 3(mm)
CCB 410-771230/20		02/19/2026 14:38	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 15:32	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 15:45	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 15:59	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 16:12	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 16:26	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 16:40	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 16:53	1		Gemini C18 50mm 3(mm)
CCV 410-771230/44		02/19/2026 18:01	1	26FEB19E-35.d	Gemini C18 50mm 3(mm)
CCB 410-771230/42		02/19/2026 18:14	1	26FEB19E-36.d	Gemini C18 50mm 3(mm)
MB 410-770909/1-A		02/19/2026 20:16	1	26FEB19QC-49.d	Gemini C18 50mm 3(mm)
LCS 410-770909/2-A		02/19/2026 20:30	1	26FEB19QC-50.d	Gemini C18 50mm 3(mm)
LLCS 410-770909/3-A		02/19/2026 20:43	1	26FEB19QC-51.d	Gemini C18 50mm 3(mm)
CCV 410-771230/45		02/19/2026 21:24	1	26FEB19E-47.d	Gemini C18 50mm 3(mm)
CCB 410-771230/43		02/19/2026 21:37	1	26FEB19E-48.d	Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 22:59	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 23:12	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 23:26	1		Gemini C18 50mm 3(mm)
ZZZZZ (QC)		02/19/2026 23:39	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/19/2026 23:53	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 00:07	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 00:20	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 00:34	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 00:47	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 01:01	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 01:14	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 01:28	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 01:41	1		Gemini C18 50mm 3(mm)
CCV 410-771230/75		02/20/2026 01:55	1		Gemini C18 50mm 3(mm)
CCB 410-771230/76		02/20/2026 02:08	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 02:22	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 02:35	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 02:49	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 03:03	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 03:16	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 03:30	1		Gemini C18 50mm 3(mm)

1633A

PFAS ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 460-344895-1

SDG No.:

Instrument ID: 30637 Start Date: 02/19/2026 09:12

Analysis Batch Number: 771230 End Date: 02/20/2026 04:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ (Client)		02/20/2026 03:43	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 03:57	1		Gemini C18 50mm 3(mm)
ZZZZZ (Client)		02/20/2026 04:10	1		Gemini C18 50mm 3(mm)
CCV 410-771230/77		02/20/2026 04:24	1		Gemini C18 50mm 3(mm)
CCB 410-771230/78		02/20/2026 04:37	1		Gemini C18 50mm 3(mm)

PFAS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 764556 Batch Start Date: 02/04/26 12:31 Batch Analyst: Miller, Nicole

Batch Method: 1633A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	1633_125_CAL1 00080	1633_125_CAL2 00036	1633_125_CAL3 00036	1633_125_CAL4 00083	1633_125_CAL5 00038	1633_125_CAL6 00037
IC 410-764556/1		1633A			200 uL					
IC 410-764556/2		1633A				200 uL				
IC 410-764556/3		1633A					200 uL			
IC 410-764556/4		1633A						200 uL		
ICISAV 410-764556/5		1633A							200 uL	
IC 410-764556/6		1633A								200 uL
IC 410-764556/7		1633A								
IC 410-764556/8		1633A								
ICB 410-764556/9		1633A								
ICV 410-764556/10		1633A								
WDM 410-764556/11		1633A								

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	1633_125_CAL7 00039	1633_125_CAL8 00034	1633_125_ICV 00034	1633_125_IS_V 00511	1633_125_SS 00191	1633_125_WDM 00018
IC 410-764556/1		1633A								
IC 410-764556/2		1633A								
IC 410-764556/3		1633A								
IC 410-764556/4		1633A								
ICISAV 410-764556/5		1633A								
IC 410-764556/6		1633A								
IC 410-764556/7		1633A			200 uL					
IC 410-764556/8		1633A				200 uL				
ICB 410-764556/9		1633A						50 uL	5 uL	
ICV 410-764556/10		1633A					200 uL			
WDM 410-764556/11		1633A								200 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 764556 Batch Start Date: 02/04/26 12:31 Batch Analyst: Miller, Nicole

Batch Method: 1633A Batch End Date:

Batch Notes	
Mobile Phase ID	4422102032633A/25G2461018
Dilution Solution ID	10922301072633B

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 Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 769782 Batch Start Date: 02/16/26 20:22 Batch Analyst: Bacilio-Guerrero, Elizabe

Batch Method: 1633A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	1633_125_CAL1 00080	1633_125_CAL2 00036	1633_125_CAL3 00036	1633_125_CAL4 00083	1633_125_CAL5 00038	1633_125_CAL6 00037
IC 410-769782/1		1633A			1 mL					
IC 410-769782/2		1633A				1 mL				
IC 410-769782/3		1633A					1 mL			
IC 410-769782/4		1633A						1 mL		
ICISAV 410-769782/5		1633A							1 mL	
IC 410-769782/6		1633A								1 mL
IC 410-769782/7		1633A								
IC 410-769782/8		1633A								
ICB 410-769782/9		1633A								
ICV 410-769782/10		1633A								
WDM 410-769782/11		1633A								

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	1633_125_CAL7 00039	1633_125_CAL8 00034	1633_125_ICV 00034	1633_125_IS_V 00511	1633_125_SS 00162	1633_125_WDM 00019
IC 410-769782/1		1633A								
IC 410-769782/2		1633A								
IC 410-769782/3		1633A								
IC 410-769782/4		1633A								
ICISAV 410-769782/5		1633A								
IC 410-769782/6		1633A								
IC 410-769782/7		1633A			1 mL					
IC 410-769782/8		1633A				1 mL				
ICB 410-769782/9		1633A						50 uL	5 uL	
ICV 410-769782/10		1633A					1 mL			
WDM 410-769782/11		1633A								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 Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 769782 Batch Start Date: 02/16/26 20:22 Batch Analyst: Bacilio-Guerrero, Elizabe

Batch Method: 1633A Batch End Date:

Batch Notes	
Mobile Phase ID	10179802162633A/25K1061059

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 Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 770909 Batch Start Date: 02/18/26 15:34 Batch Analyst: Mauger, Amber

Batch Method: 1633A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	AdjustedpH
MB 410-770909/1		1633A, 1633A			150 g	25 g	125 mL	5 mL	7.0 SU	6.0 SU
LCS 410-770909/2		1633A, 1633A			150 g	25 g	125 mL	5 mL	7.0 SU	6.0 SU
LLCS 410-770909/3		1633A, 1633A			150 g	25 g	125 mL	5 mL	7.0 SU	6.0 SU
460-344895-A-1	RXMW-6_P	1633A, 1633A	Water	T	190.27 g	21.64 g	168.6 mL	5 mL	6.5 SU	5.5 SU
460-344895-A-1 MS	RXMW-6_P	1633A, 1633A	Water	T	187.73 g	21.60 g	166.1 mL	5 mL	6.5 SU	5.5 SU
460-344895-A-1 MSD	RXMW-6_P	1633A, 1633A	Water	T	186.42 g	21.54 g	164.9 mL	5 mL	6.5 SU	5.5 SU
460-344895-A-2	FB_02162026_P	1633A, 1633A	Water	T	172.60 g	21.42 g	151.2 mL	5 mL	7.0 SU	6.0 SU

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	5%FormicAmt	CalcMsg	TSS Assessment	1633_125_MS_L 00127	1633_125_MS_M 00150	1633_125_SS 00224
MB 410-770909/1		1633A, 1633A			1 drops	OK	Yes			25 uL
LCS 410-770909/2		1633A, 1633A			1 drops	OK	Yes		50 uL	25 uL
LLCS 410-770909/3		1633A, 1633A			1 drops	OK	Yes	40 uL		25 uL
460-344895-A-1	RXMW-6_P	1633A, 1633A	Water	T	10 drops	OK	Yes			25 uL
460-344895-A-1 MS	RXMW-6_P	1633A, 1633A	Water	T	10 drops	OK	Yes		50 uL	25 uL
460-344895-A-1 MSD	RXMW-6_P	1633A, 1633A	Water	T	10 drops	OK	Yes		50 uL	25 uL
460-344895-A-2	FB_02162026_P	1633A, 1633A	Water	T	1 drops	OK	Yes			25 uL

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	AnalysisComment					
MB 410-770909/1		1633A, 1633A			PC 37 port 1					
LCS 410-770909/2		1633A, 1633A								
LLCS 410-770909/3		1633A, 1633A								
460-344895-A-1	RXMW-6_P	1633A, 1633A	Water	T						
460-344895-A-1 MS	RXMW-6_P	1633A, 1633A	Water	T						
460-344895-A-1 MSD	RXMW-6_P	1633A, 1633A	Water	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 770909 Batch Start Date: 02/18/26 15:34 Batch Analyst: Mauger, Amber

Batch Method: 1633A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	AnalysisComment					
460-344895-A-2	FB_02162026_P	1633A, 1633A	Water	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 770909 Batch Start Date: 02/18/26 15:34 Batch Analyst: Mauger, Amber

Batch Method: 1633A Batch End Date:

Batch Notes	
95:5 Methanol Milli-Q Water ID	10194202172633A
Extraction Filter ID #	2510280513
pH Indicator ID	20BDH40251
Manifold ID	PC 37, 38, 39
SPE Cartridge Type	WAX 200mg
SPE Cartridge Lot ID	S25-004452
Balance ID	C447113547
Pipette/Syringe/Dispenser ID	PFAS 16, 20
Transfer Pipette Lot #	25420385
H2O ID	House A372
Solvent Name	1% NH4OH:MeOH
Solvent Lot #	11757002102633C
Rinse Solvent Name	30:70 MeOH:MQ
Rinse Solvent Lot	10217502132633A
5% Formic Acid Reagent ID	11757002172633B
SPE Cartridge Conditioner #1 ID	12177402162633A
SPE Cartridge Conditioner #2 ID	11757002102633A
Analyst ID - Reagent Drop	AAM 102175
Analyst ID - Reagent Drop Witness	SL 121774
Analyst ID - IS Reagent Drop	AAM 102175
Centrifuge Tube ID	20250319-058
QC Bottle Lot ID	0420501K
Carbon ID	H03461
Pipette ID	P1000-7
Vial Lot Number	8000061168
Caps	00370976
Tube Check	SL 121774, RM 113888
P1000 Tip ID	5G0826F
Analyst ID - Label Check	AAM 102175

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 Lancaster Laboratorie Job No.: 460-344895-1

SDG No.:

Batch Number: 770909 Batch Start Date: 02/18/26 15:34 Batch Analyst: Mauger, Amber

Batch Method: 1633A Batch End Date:

Drip Rate Assessment (Y/N)	Yes
Batch Comment	Extracts vialed @ 8:50pm 2/18/26 stored on tray 98

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

Chain of Custody Record

eurofins

Client Information	Sampler: Maggie Sawlie	Lab PM: Flannery Elizabeth J	Carrier Tracking No(s):	COC No: 460-206253-134779 1
Client Contact: Ms. Julia Michaels	Phone: 516-660-2664	E-Mail: Elizabeth.Flannery@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Roux Environmental Eng & Geology DPC	PWSID:			Job #: 344895
Address: 209 Shafter St	Due Date Requested:			
City: Islandia	TAT Requested (days): 5 day			
State, Zip: NY 11749	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 3868.0006Y000			
Email: jmichaels@rouxinc.com	WO #: 2828 W 28th Street, Brooklyn			
Project Name: 2828 W 28th Street	Project #: 46044510			
Site: SPN	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1633 Standard List of 40 1633	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	X	
RXMW-6_P	2/16/26	1300	G	Water	X	X		9	
FB_021626_P	2/16/26	500	G	Water			X	3	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

Preservation Codes: N None; Other:

460-344895 Chain of Custody

NYD22

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) Cat-B

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company		Date/Time:	Company
Relinquished by: Maggie Sawlie	2/16/26	ROUX	Received by:	2/16/26	Eurofins
Relinquished by:	Date/Time:	Company	Received by:	2/16/26 1700	Company ET
Relinquished by:	Date/Time: 2/16/26 1750	Company ET	Received by:	2/16 1750	Company ETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: NO CS

Cooler Temperature(s) °C and Other Remarks: IR#9 0.8 - 0.3

Ver: 06/06/2024

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Eurofins Edison
Receipt Temperature and pH Log

Job Number: 344895

Number of Coolers: 1 IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	0.8 °C	0.3 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°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)	1,4-Dioxane (pH<4)	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.

EDS-WI-038, Rev 5
9/5/2025

Initials MM Date: 2/14/26

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: N/A	Lab PM: Flannery, Elizabeth J	Carrier Tracking No(s): N/A	COC No: 460-76883.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Elizabeth.Flannery@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - New York		Job #: 460-344895-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 2/23/2026			Preservation Codes: -
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Sea Park North - 2828 W 28th Street	Project #: 46044510			
Site: N/A	SSOW#: N/A			Other: N/A

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)	1633A/1633A_SPE1633 Standard List of 40	PRE_SCREEN_PFAS/PFAS_PreScn_W_PPrescreening Procedure	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
RXMW-6_P (460-344895-1)	2/16/26	13:00 Eastern	G	Water			X	X	3	
RXMW-6_P (460-344895-1MS)	2/16/26	13:00 Eastern	G	Water			X	X	3	
RXMW-6_P (460-344895-1MSD)	2/16/26	13:00 Eastern	G	Water			X	X	3	
FB_02162026_P (460-344895-2)	2/16/26	15:00 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: 2/17/26 16:03	Company ELE	Received by:	Date/Time: 2/17/26 16:03	Company ELE
Relinquished by:	Date/Time: 2/17/26 20:15	Company ELE	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 2/17/26 2005	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.6 1.5

Login Sample Receipt Checklist

Client: Roux Environmental Eng & Geology DPC

Job Number: 460-344895-1

Login Number: 344895
List Number: 1
Creator: Nelson, Rose E

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	

Login Sample Receipt Checklist

Client: Roux Environmental Eng & Geology DPC

Job Number: 460-344895-1

Login Number: 344895
List Number: 2
Creator: Kanagy, Nicholas

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 02/17/26 10:48 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	